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.

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.

   NRG appreciates the CAISO's survey of counting rules and practices in other ISOs. Given that the CAISO is considering moving to a UCAP/EFORd paradigm, NRG notes that MISO uses "XEFORd", which excludes outages beyond the generator's control, such as due to extreme weather or transmission outages, and encourages the CAISO to consider a similar approach.

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.

   NRG appreciates the CAISO is not proposing to add a performance element to the Resource Availability Incentive Mechanism (RAAIM) at this time, but is instead focusing on examining a UCAP paradigm to account for forced outage performance.

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.

As an initial matter, NRG agrees that relying on a Planning Resrve Margin (PRM) derived from installed capacity (ICAP) values will be increasingly problematic unless reliable and dependable capacity values are assigned to variable energy resources. An installed capacity-based PRM would not be fatally flawed if that PRM incorporated a meaningful forced outage rate for the RA fleet and assigned rational, if not conservative, capacity values to variable energy resources. That said, NRG is not opposed to exploring an unforced capacity (UCAP) paradigm to better incorporate forced outage performance.

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

The CAISO is propsing to explore incorporating UCAP requirements into the RA program by calculating monthly UCAP values for resources and enforcing a UCAP procurement requqierment while requiring resources to offer up to their ICAP values.

In considering moving to a UCAP paradigm, the CAISO is also considering eliminating the requirement that generating unit owners provide substitute capacity for resources on forced outage. NRG agrees that the CAISO's substitution provisions are complex and supports further investigation along these lines. As the CAISO notes, most other ISOs use UCAP as the basis for ensuring resource adequacy. While the devil is always in the details, NRG supports exploring this paradigm shift.

With regards to the Resource Adequacy Availability Incentive Mechanism ("RAAIM"), the CAISO has offered that one shortcoming of RAAIM is that "RAAIM applies to RA resources and does not incentivize non-RA resources to conduct maintenance to enhance availability." (Straw Proposal – Part 2 at page 16.) Resources that the CAISO needs to remain available should be under an RA contract, a Capacity Procurement Mechanism (CPM) designation or a Reliablity Must-Run (RMR) agreement. The CAISO should not be relying on non-RA resources to ensure system reliability; this is a fundamental tenet of the RA paradigm. Any resources on which the CAISO wishes to rely and to subject to availability requirements should be under an RA contract or CAISO backstop mechanism.

On pages 17-18, the CAISO asserts that "ELCC calculations already takes into account the probability of forced outages for wind and solar resources." The CAISO qualified this in its presentation by adding the phrase "to some extent". NRG does not believe this to be correct. At the March 13 CPUC workshop on Track 3 issues, Energy Division staff indicated that they did not have the forced outage information for wind and solar resources to use in their ELCC models.

The CAISO is seeking stakeholder feedback on whether EFORd should be calculated seasonally. A peak (May-October) and off-peak (November – April) seasonal approach would be reasonable.

As noted above, if the CAISO adopts a EFORd paradigm, it should also adopt MISO's practice of excluding from the EFORd calculation forced outages beyond the generating unit owner's control – what MISO calls "XEFORd".

The CAISO is seeking stakeholder feedback regarding methods for calculating UCAP values for these resource types (DR, hydro, imports, QFs, new resources). With regards to new resources, using a technology-specific fleet average EFORd might be the best approach. NRG does not have specific proposals for the other resource types, but observes that because two of these (hydro and imports) make up a significant portion of the RA fleet, it is important to get the UCAP values for these resources right.

The CAISO is proposing that EFC be determined as EFC = UCAP * (Percent of available capacity economically bid into the CAISO's market). NRG is unsure how this would work for the forward showing of a new resource, where the amount of capacity economically bid into the CAISO market for the period to which the EFC value would apply is not yet known.

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

The CAISO proposing to require LSEs to show UCAP = peak demand plus Ancillary Services and ramping needs, which the CAISO projects will be approximately 109% of the 1-in-2 demand forecast. A number of parties, including the CAISO, called the continued use of the 1-in-2 peak demand forecast to set system RA requirements into question in light of (1) the 2017 peak demand that far outstripped even the 1-in-10 forecast for that year and (2) the general expectation that climate-change driven weather variability could continue to drive even sharper peaks going forward. Relatedly, the CAISO seeks input on whether it should consider incorporating a "load forecast error" (Straw Proposal at page 21). NRG offers that moving off the 1-in-2 load forecast would be one way to account for the potential for load forecast error. As the CAISO has noted, there is an asymmetric risk profile with regards to meeting reliablity needs; while having too much capacity impose a monetary cost, having too little capacity can impose both monetary and societal costs.

In light of the CAISO's proposal to extend the Availability Assessment Hours to from 5 AM to 9 PM, NRG does not object to the CAISO's proposal to eliminate the flexible ramping categories.

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

NRG questions the CAISO's proposal to "scale" UCAP for partial unit sales. The example the CAISO provided was that a 100 MW unit with a 10% EFORd that sold 50 MW of capacity would receive a UCAP value of 45 MW for its partial sale. This approach would be reasonable only if all of unit's forced outages were full-unit outages. To use the CAISO's numbers, if a 100 MW unit's 10% EFORd consisted entirely of constant 10% de-rates, reducing the UCAP of the 100 MW unit to 45 MW would not reflect the fact that the unit was always able to provide the 50 MW of capacity it had sold.

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

The CAISO is proposing to retain, at most, single-year backstop mechanisms despite the fact that the CPUC has decided to implement multi-year forward local RA requirements. NRG remains concerned that backstop mechanisms that do not align with the terms of forward RA procurement requirements will create incentives for LSEs to avoid procurement and rely on the CAISO backstop mechanisms.

The CAISO is also proposing to modify its Competitive Solicitation Process to allow generators to procure substitute capacity from the CSP (or, alternatively, self-provide substitute capacity) for as short as a single-day. As part of this proposal, the CAISO is also proposing to allow market participants to submit single-day bids into the CSP, subject to some restrictions (e.g., not modifying the single-day bids across a month).

NRG does not oppose exploring the use of the CSP to provide a source of substitute capacity for planned outages and to provide for shorter-duration bids as long as any CPM designations shorter than the current 30-day (for system needs) and 60-day (for local needs) terms are exclusively for the purpose of providing substitute capacity and done only in accordance with voluntarily-submitted single-day bids. Nothing in the CAISO's proposal should allow for the CAISO to use CPM for reliability needs shorter than for the currently-approved periods.

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.

NRG supports the CAISO's efforts to re-examine how the Maximum Import Capability is allocated.

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

NRG supports the CAISO's efforts to re-examine the Available Import Capability allocation process. As Table 3 indicates, there appears to be a significant surplus of remaining import capability that currently may not be allocated in an efficient way. Addditionally, Table 3 shows a significant reduction in RA imports from 2014 to 2019. As the CAISO conducts this re-evaluation, NRG respectfully encourages the CAISO to do so recognizing that, no matter how the "pipe" is sized or allocated, it is critically important also to ensure that there are adequate and reliable "sources" on the other side of the pipe.

Additional comments

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