California ISO

Stakeholder Comments Template

RA Enhancements

Submitted by	Organization	Date Submitted
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Please provide your organization's comments on the Issue Paper scope items listed below and any additional comments using this template.

Scoping Items

The ISO's has identified the following items for the initial scope of this stakeholder process. Please provide comments on each of the scoping items.

1. **RA Counting and Eligibility Rules**

   a. **System RA**

   The ISO proposes to review the RA counting and eligibility provisions related to RA resource NQC adjustments in this initiative, including a review of the application of Effective Forced Outage Rate (EFOR) performance criteria and accompanying NQC reductions and a review and clarification of RA counting rules for RA resources. Please provide comments on this scope.

   Comments:

   Calpine supports the direction of this and the related Section 4 proposals. We agree that the current RAAIM, substitution and outage management systems introduce unnecessary and inefficient complexity. We support the "holistic review" of the interactions of these systems, including evaluation of a an entire redesign that eliminates these complex systems and replaces them with an EFOR adjustment to QC along with performance incentives targeting peak period, or absolute peak availability.

   We also recommend that the CAISO include in this stakeholder initiative, an evaluation of RA counting for behind-the-meter (BTM) solar. We understand that the impact of BTM PV on RA is being addressed by both the CPUC and the CEC, but should they fail to address this matter adequately, the CAISO may need to develop the types of adequacy algorithms described in section 3.5 of the Issue Paper. Just like in-front-of-the-meter PV, "the ELCC values derived for wind and solar are derived using a different fleet than the one that is shown for RA." Similarly, to the extent that BTM PV continues to be

treated as a load modifier, ELCC values for wind and solar may not reflect realistic assumptions about the volume of BTM PV and its impact on load. To the extent that this occurs, it will be critical for the CAISO's own adequacy tests to reflect realistic assumptions about the volume of BTM PV and its impact on load.

b. Flexible RA

The ISO proposes to continue exploring enhanced flexible RA counting rules started in the FRACMOO2 stakeholder process. More specifically, the ISO will continue assessing the operational capabilities required from the fleet to align with both the Day-Ahead Market Enhancements (DAME) and the Extended Day Ahead Market (EDAM) and what flexible RA counting rule changes may be needed. Please provide comments on this scope.

Comments:

Calpine supports the continued evaluation of flexible capacity needs, particularly with DAME and EDAM.

2. Review of Resource Adequacy Import Capability Provisions

The ISO proposes to conduct a comprehensive review of the ISO's Import Capability provisions, including; calculation methodologies, allocation process, and reassignment/trading provisions. The ISO believes that is may also be necessary to consider multi-year assessments and allocations. Please provide comments on this scope.

Comments:

Calpine supports the evaluation of MIC calculation methodologies as well as the availability of import allocations and trading opportunities. We support a MIC that allows for a reasonable estimate of simultaneous import capability and that has a very high likelihood of being available when needed by the system. This could require that the ISO evaluate historic imports over more than just two hours in each of the last two years.

Calpine also supports a review of the MIC allocation process particularly in the light of the trend to more fragmented procurement. Transaction costs increase as more and more buyers are granted smaller and smaller fractions of import rights. As such, Calpine recommends that the scope of this initiative revisit the MIC allocation rules and incentives. In particular, the CAISO should evaluate whether all Market Participants (not just LSEs) should have access to Import RA allocations and rights. In this way, the CAISO's needs can be aggregated and met with lower transaction costs and better efficiency.

3. Rules for RA imports

The ISO proposes to include a review of RA import rules and provisions in the scope of this initiative, including a reassessment of the requirements and rules for the sources behind RA imports. Please provide comments on this scope.

Comments:

Calpine supports the scope and direction of this element of RA Enhancements. We believe that an initial review of Eastern market capacity counting rules should be included in the next version of this initiative. There, we assert, the CAISO will find much more robust rules for counting imports and that these rules were formed to avoid the precise problem that the CAISO seeks to avoid – possible double counting of resources in other, external markets. The CAISO should consider whether import RA should include a demonstration of firm transmission to the import location and whether the importing entity should identify physical generation sources that they have under their control for the term of the associated import allocation.

4. Must Offer Obligations, Substitution Rules, and RAAIM

The ISO proposes to include a review of the following set of issues as a part of this stakeholder initiative; need for substitution rules and RAAIM, developing an emergency or event based RAAIM trigger, and must offer obligations for RA imports. Please provide comments on this scope.

Comments:

As stated above in section 1(a), Calpine supports further review of the RAAIM/substitution/outage management system – including consideration of a complete replacement with EFOR and performance incentives.

We also support consideration of a real-time MOO on import RA capacity. The MOO compliance mechanisms may need modification given the timing and structural differences of Order 888 OATT-based bilateral markets and inter-BAA transactions. However, a RT Import RA MOO better serves CAISO reliability needs and aligns Import RA with the RT obligations imposed upon internal generation.

5. System and Flexible Capacity Assessments and Adequacy Tests

As part of this stakeholder initiative, the ISO is considering a new tool to assess the adequacy of the system and flexible RA fleet. Please provide comments on this scope.

Comments:

Calpine supports the direction of both Sections 5 and 6. See below.

6. Meeting Local RA Needs

a. Local capacity assessments with availability limited resources

As part of this stakeholder initiative the ISO proposes to enhance the ISO's local capacity technical analysis to assess the impact of availability limited resources on local capacity needs. Please provide comments on this proposed scope.

Comments:

Calpine strongly supports further analysis of the CAISO's reliability needs and how different resources contribute to those needs. As proposed, the CAISO must establish the load shapes in local areas (or similarly, the duration of expected ramps) as a first step in

evaluating the mix of resources that can be useful in meeting those needs. Also, the CAISO needs to develop analytic tools to evaluate the particular performance of the mix of specific resources submitted in compliance with RA requirements.

For example, it is clear from Figure 1 of the Issues Paper that given the hourly load shape, higher penetrations of limited availability resources results in a marginal need for longer and longer duration availability. In fact, as seen in the Moorpark analysis, the current RA counting standard (minimum 4 hour BESS discharge) was insufficient to meet the reliability requirement.

Also, as it relates to locally constrained regions of the grid, BESS charging cycles must be evaluated because ill-timed charging could either exacerbate import energy limitations or, in the extreme, prohibit full charging in preparation for subsequent peak demands. The CAISO must develop tools that will allow for full evaluation of both generic resource requirements as well as evaluation of the particular portfolios of resources submitted in compliance with RA requirements.

Finally, as similarly suggested in the TPP scoping process, Calpine suggests that the scope of this initiative be expanded to ensure that the Local Capacity Technical studies be updated to address the same set of contingencies as those required under the revised NERC Transmission Planning (including TPL-001-4) standards. The CAISO Tariff explicitly and affirmatively requires that the CAISO include all identified NERC contingencies in Section 40.3.1.1:

> In performing the Local Capacity Technical Study, the CAISO will apply those methods for resolving Contingencies considered appropriate for the performance level that corresponds to a particular studied Contingency, as provided in NERC Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0, and TPL-004-0, as augmented by CAISO Reliability Criteria in accordance with the Transmission Control Agreement and Section 24.2.1.

However, in the scope documents of the Local Capacity Technical studies, the CAISO limits the list of contingencies to a subset[1] of those required by NERC. Specifically, as identified Table 1 of the 2020 Local Capacity Technical study, the excluded contingencies include Bus Section, Breaker Failures, sequential transformer outages, stuck breaker conditions and credible extreme events. As supply and demand tighten in these local areas, the CAISO must include all of these contingencies in the analysis of local area reliability.

[1] See Table 1 of the 2020 Local Capacity Requirements Draft Study Manual study at: http://www.caiso.com/Documents/2020LocalCapacityRequirementsDraftStudyManual.pdf

b. Meeting local capacity needs with slow demand response

Through this initiative, the ISO proposes to explore how to best operationalize slow DR through pre-contingency dispatch so these resources can mitigate local reliability concerns and qualify for local RA. Please provide comments on this scope.

Comments:

Calpine agrees that this issue should be included in the scope of this initiative. Resources that cannot respond within the NERC-required time horizon for a return to a secure state must either be pre-positioned or not counted.

7. CPM/RMR Review

Through this initiative, the ISO is planning to identify any needed changes to the capacity procurement mechanism (CPM) or reliability must run (RMR) mechanisms, particularly focusing on the existing cost allocation tools. Additionally, the ISO will specify the process for backstop procurement of essential reliability resources (ERRs) if they are not procured through the RA process. Please provide comments on this scope.

Comments:

No Comment.

Scope of Policy Examination

The ISO's has identified the initial scope for this stakeholder process as the items listed above. Please provide comments on the proposed scope. If there are specific items not already identified by the ISO that you believe should be considered, please provide specific rationale for why the ISO should consider it as part of this initiative.

Comments:

See comments above regarding the scope of the Local Capacity Technical studies.

Other

Please provide any comments not addressed above, including any comments on process or scope of the RA Enhancements initiative, here.

Comments:

No comments. Thank you.