Stakeholder Comments
Resource Adequacy Enhancements Straw Proposal Part 2

Submitted by	Company	Date Submitted
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SCE appreciates the opportunity to provide the following comments on the CAISO Resource Adequacy (RA) Enhancements Straw Proposal Part 2 (the Proposal) dated Feb 27, 2019.[1]

1. **<u>Depending on how detailed rules are formed</u>, the Proposal to pursue an unforced capacity (UCAP) construct appears to be a move in the right direction in addressing disincentive issues under the existing program.**

There are significant disincentive issues associated with the Resource Adequacy Availability Incentive Mechanism (RAAIM) today. Those issues impede the liquidity in the RA market, prevent LSEs from showing all available RA capacity, and discourage individual resources' participation in the RA program.[2] The proposed UCAP concept is potentially an improvement over the existing RAAIM and SCE applauds the CAISO's effort in reviewing best practices in other markets. By establishing a UCAP-based RA construct, as contemplated by the Proposal, the existing RAAIM can be eliminated, along with complex resource substitution rules for planned and forced outages. Depending on how detailed rules are formed, the Proposal appears to be a move in the right direction as it has the potential to address the disincentives noted above. SCE supports the CAISO's further exploration of UCAP and offers further comments on specific aspects of the Proposal in Section 4 below.

Finally, SCE believes that the examination of a UCAP methodology holds more promise to improving the RA program than the elements included in Part 1 of the RA Enhancements proposal. As such, SCE believes that the elements of Part 1 should be placed on hold while the CAISO and stakeholders focus on the Part 2 solutions as, if developed and implemented appropriately, may obviate the need for the elements contained in Part 1 of this initiative.

2. **The RA design should avoid two RA frameworks. The CAISO should coordinate with CPUC, other local regulatory authorities (LRAs), the CEC, and the stakeholders, to ensure a single RA framework.**

In the Proposal, the CAISO proposes "a new framework to assess the forced outage rates for resources and conduct RA adequacy assessment based on both the unforced capacity of resources and

[1] Resource Adequacy Enhancements Straw Proposal Part 2, dated Feb 27, 2019, http://www.caiso.com/Documents/StrawProposalPart2-ResourceAdequacyEnhancements.pdf

[2] The Straw Proposal Part 2, 16. Comments on Straw Proposal Part 1, for example, from SCE, 1-2, PG&E, 4, and Calpine, 4; available at http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=46BAF81C-89CE-472A-B645-7D0966E65DE7

RA portfolio's ability".[3] Load serving entities (LSEs) are required to meet RA obligations under the existing RA framework of planning reserve margin (PRM) and Net Qualifying Capacity (NQC). The Proposal put forth another RA framework with significantly different requirements, i.e., the one that would be based on UCAP requirements. The result is that LSEs now would have to meet the requirements from both RA frameworks. Besides added administrative and compliance complexities, LSEs would always have to meet the more stringent requirement arising from the two frameworks created for the same RA program. This can bring significant inefficiencies to the RA program and additional costs to LSEs. This is unacceptable. SCE understands the Proposal is still at an early stage. However, even at this stage, the CAISO should coordinate with CPUC, to ensure a single framework for the RA program. For this purpose, SCE believes the CAISO should work closely with stakeholders including Local Regulatory Authorities (LRA) to ensure that the program is sufficient, efficient with respect to the reliability need, and administratively simple. Further, the CAISO may need to coordinate with other LRAs, and potentially CEC, to make it a state-wide uniform program for all LSEs in the state.

3. Empirical analysis is needed for setting appropriate UCAP requirements

Compared to the PRM requirement today, the Proposal implies a UCAP requirement[4] that may not be consistent with the exiting PRM requirement. The proposed approach of setting the UCAP requirement must be justified based on empirical analysis, not solely from a theoretical view point. Unless specific issues are identified with the current planning reserve margin, the transition to a UCAP methodology should start with having a UCAP planning reserve margin that is the equivalent to the current planning reserve margin under an NQC methodology. As noted in the proposal, the CAISO has expressed concern with the efficacy of the load forecast and the potential for load forecast error. Such an issue deserves to have its own separate discussion as it appears to be identifying an issue with the current construct of a 1 in 2 year load forecast and is not an element that must be changed due to the implementation of a UCAP methodology. Therefore, SCE suggests that the discussion of an estimate for the appropriate amount of load forecast error become its own element of this process and is contemplated apart from the switch from NQC to UCAP. In addition, SCE requests the CAISO provide empirical analysis as the basis for setting the UCAP requirement at an appropriate level including any empirical evidence to demonstrate that the current load forecast standard is no longer sufficient. SCE provides further comment on this topic in Section 4.2 below.

[3] The Proposal, at 14.

[4] The Proposal, at 21, "today the CAISO must carry reserves for three percent of load and three percent of generation or the Most Severe Single Contingency according to BAL-002. Additionally, the CAISO must have sufficient capacity to provide regulation and flexible ramping product. Therefore, the CAISO proposes to develop a minimum UCAP requirement that all LSEs must meet and show as RA. If the CAISO had perfect foresight, then this UCAP requirement would be, for example, equal to the forecasted peak plus all other ancillary serves and flexible ramping needs, or about 109 percent of the 1:2 year peak load forecast. However, the CAISO does not have perfect foresight. Therefore, the CAISO is considering an additional factor for observed year-ahead forecast error (*i.e.*, if the 1:2 year peak load forecast was 40,000 MW, but observed was 42,000)."

4. Comments on specific aspects of the Proposal

4.1 Calculating NQC, UCAP, and EFC values

SCE believes that there are many open questions around the calculation of UCAP, Effective Forced Outage Rate of Demand (EFORd) and EFC that should be addressed when detailed rules are developed.

While SCE has not yet developed a position, it believes that the following items warrant further discussion:

- Data sampling period used to determine the UCAP (both length and time of day)
- UCAP calculations for resources without a history
- Whether and if so, how resource investment and improvements should impact UCAP
- Which historical data is utilized to calculate UCAP (e.g. NERC GADS, OMS, a combination of the two, or a new to be developed measure)
- EFC methodology based upon the submission of bids including which markets are necessary and sufficient to fulfill the obligation

This list is not meant to be all inclusive and there are likely to be other elements that should be discussed as well.

4.2 Determining System, Local, and Flexible RA requirements

As commented above, SCE does not support a RA design with two separate RA frameworks. The CAISO should coordinate with the CPUC, LRAs, the CEC and stakeholders to ensure a single RA framework.

The proposed UCAP requirement[5] appears inconsistent with existing requirements under the PRM. The PRM today, which is 15% under CPUC rules, accounts for forced outage rates and reserves. Since UCAP would essentially account for forced outage rates; it then seems what needs to be accounted for in setting the UCAP requirement would be contingency reserve requirements, which are usually set around 6% of load. Therefore, any proposed UCAP requirement should be based on these assumptions and should be consistent with the existing requirement under the PRM and any deviation to the existing requirement must be based on empirical analysis. The CAISO should further investigate in this area. To the extent that the CAISO believes additional factor is needed for observed year-ahead forecast error, SCE suggests that the CAISO should address year-ahead forecast error, i.e., whether 1:2 or 1:5 forecasted peak load should be adopted, as an explicit subject within this stakeholder process rather than comingling load forecasting issues with UCAP calculation. This will make the process more transparent.

[5] See Footnote 4.

4.3 RA showings, supply plans, and assessments

This aspect of the Proposal needs further discussion, in particular, given multiple entities involved (the CAISO, LSEs, Scheduling Coordinators, and generation owners), the process should best align the different needs of these entities. It's important that the different needs of entities that are involved be discussed and fully considered. SCE encourages the CAISO to review more completely the evaluation of the fleet, the outage process, and if a substitution process is therefore necessary.

4.4 Backstop capacity procurement

In an instance with sufficient UCAP at the system but an individual LSE fails to cure in meeting its UCAP requirement, the Proposal lists 3 options, i.e. 1) LSE specific UCAP test, 2) system UCAP test, and 3) capacity inventive option. SCE prefers Option 2 given that Option 1 is likely overly conservative while Option 3 can be challenging to implement. Further, SCE believes that the CAISO can largely address the concerns regarding leaning by reporting such instances to the applicable LRA which can then determine if the incident is a single isolated case or a routine reliance on others to meet its own obligation.