

**Stakeholder Comments Template**

**Resource Adequacy (RA) Enhancement Initiative: Second Revised Straw Proposal**

Submitted by	Organization	Date Submitted
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SCE appreciates the opportunity to provide the following comments on the CAISO Resource Adequacy (RA) Enhancements Second Revised Straw Proposal (the Proposal) and the workshop held on Oct 9, 2019.<sup>1</sup>

**Overall comments:**

SCE continues to support the CAISO in this re-examination of the efficacy of the RA program. The proposed unforced capacity (UCAP) methodology will likely encourage the offering of resources. While the UCAP proposal is promising, as explained in detail below, SCE suggests that the CAISO consider continuing the use of the net qualifying capacity (NQC) terminology for RA showing and counting (i.e., to replace the proposed term UCAP with NQC, and existing NQC with a new term like installed capacity (ICAP)) to minimize potential impacts to existing long-term RA contracts. Otherwise, when the RA counting is switched to UCAP, only the UCAP portion of an NQC would be considered as RA capacity, while those contracts would continue to pay sellers based on the NQC, which will likely cause cost shifting among contracting parties.

The proposed approach to setting the UCAP requirement also requires further exploration. While the CAISO has presented a preliminary analysis on forced outage rates and seems to conclude that the current RA requirements may be insufficient to address forced outages based on the analysis,<sup>2</sup> the analysis itself raises many questions. For example, it is unclear how forced outages for use-limited resources (ULRs) were treated in the analysis. In addition, resource owners and scheduling coordinators may choose not to substitute for some forced outages, likely due to the complexity of the RA availability incentive mechanism (RAAIM) design. The forced outage rate in the study may be higher than what it would be under the proposed UCAP methodology because the proposed UCAP methodology will likely incentivize better outage planning and could result in fewer planned outages transitioning to forced outages (which would otherwise affect the capacity qualifying for RA for future years). Nevertheless, if the CAISO believes that the issue is the forced

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<sup>1</sup> Resource Adequacy Enhancements Second Revised Proposal (Proposal), dated Oct 3, 2019, available at <http://www.caiso.com/Documents/SecondRevisedStrawProposal-ResourceAdequacyEnhancements.pdf>; Oct 9, 2019 Workshop Presentation (Presentation), available at <http://www.caiso.com/Documents/Presentation-ResourceAdequacyEnhancements-SecondRevisedStrawProposal.pdf>.

<sup>2</sup> Presentation, at 16.

outage rates are higher than what is being anticipated or expected by the CAISO, then the issue will be addressed by the proposed UCAP methodology, which counts the capacity of each unit based on their individual forced outage rates. However, if CAISO's view is that, based on the analysis, the remainder planning reserve margin (PRM) (i.e., the 15% PRM minus the portion representing expected forced outage rate) may not be sufficient to cover load needs (i.e., consisting of forecasted peak load, reserves and forecast error), then the methodology used in this type of analysis may not be appropriate. In particular, the current PRM is to cover the combined need for reserves, forced outages and forecast error, recognizing that the highest need for reserves may not be coincident with the highest need for forced outages, or highest need for forecast error, and vice versa. Without considering the combined effect, the resultant RA requirement can be unnecessarily high, imposing unnecessary costs to customers.<sup>3</sup>

The proposed standard must-offer-obligation (MOO), i.e. resources will not have a MOO in the real-time market (RTM) unless receiving a day-ahead market (DAM) award, is problematic for internal RA resources and inconsistent with the design of the RA program. Under the RA program, load-serving entities (LSEs) procure and pay for resources (including those under long-term RA contracts) that provide RA capacity to be available for CAISO needs up to and including real-time. Under the current CAISO market design, although the CAISO can economically commit and schedule resources in the integrated forward market and commit additional resources in the residual unit commitment (RUC) process, RA resources still have a MOO up to and including the RTM. While the CAISO is proposing a new product, i.e., the imbalance reserve product (IRP), under the DAM Enhancements proposal, the IRP is to replace RUC. Just as the RT MOO exists along with the RUC process today, the RT MOO should be retained when the RUC is replaced by the IRP.<sup>4</sup>

SCE continues to find significant issues with the proposed requirement that non-resource specific (NRS) import RA must specify the source balance authority (BA) area and the specification must be included in the monthly RA showings. The proposal would prevent the firm energy product that is commonly traded today, which specifies interties (on its e-tag), but not the source BA, from being an RA resource despite those resources backing the product meeting every other requirement for being an RA resource. This can impact the intertie liquidity and can lead to a lower level of imports being available to the CAISO. If the underlying issue is related to the Energy Imbalance Market (EIM) sufficiency test (or extended DAM (EDAM) sufficiency test), SCE recommends that the CAISO should address the issue there by enhancing the EIM or EDAM

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<sup>3</sup> For example, if one assumes a 10% forced outage and continues to keep the RA requirement at a high level without subtracting the 10% from the PRM, e.g., a requirement that is above 105% of peak load, will result in additional costs to customers compared to today under the existing 115% PRM.

<sup>4</sup> The proposed removal of the RT MOO under the IRP can have several other market implications as well. While the IRP is intended to procure capacity to hedge post-DAM uncertainty needs, there may be instances that resources awarded for the IRP may not be the most economic or competitive resources to provide incremental energy in the RTM when the uncertainty realizes. It is also possible that those resources may not be accessible to the CAISO in the RTM, for example, due to forced transmission outages or congestion, which can result in supply shortage in the RTM. Supply shortage can also occur if the uncertainty is under forecasted in the DAM.

sufficiency test for more accurate resource counting for that purpose, without disqualifying legitimate intertie transactions from meeting the RA requirement.

Regarding the proposed flexible RA product and the local RA UCAP proposal, SCE believes that key information should be provided for stakeholders in the next iteration of the Proposal, including how the proposals in these areas would impact LSEs' RA positions in complying with the RA program. Such information is critical in assessing the proposals given that the RA program is mainly designed to procure capacity in a relatively short time window as compared to other programs that may be designed for the purpose of incentivizing new resources.

SCE supports the CAISO's commitment to fully coordinate with the local regulatory agencies for full program alignment. To that end, the earlier the CAISO proposes the UCAP counting rules and related flexible RA product in the California Public Utilities Commission (CPUC) RA proceeding, the better the parties will be engaged in both processes.

## **System Resource Adequacy**

### **1. Determining System RA Requirements**

In the Proposal, the CAISO has presented some data to show that the total RA capacity after "forced outages" may not meet the monthly 1-in-2 peak load plus 6% for reserves in some instances historically, and that "forced outage rates" being analyzed by the CAISO can be in excess of 10%. Based on the data analysis, the CAISO proposes to use a bottom-up approach to set the RA requirement under the UCAP proposal, i.e., the requirement looks at forecasted load need and examines each unit individually. The CAISO proposes to set the UCAP requirement at 106% of forecasted peak (which is forecasted peak plus 6% for reserves), plus any additional capacity needed to account for forecast error.<sup>5</sup> The CAISO also considers using a higher load forecast to address load forecast error (e.g., 1-in-5 for shoulder months or more extremely a 1-in-10 forecast where no additional error included in need).<sup>6</sup>

As commented above, this area needs further exploration. During the workshop, stakeholders raised questions around treatment of forced outages of ULR resources, treatment of behind-the-meter (BTM) solar resources, and how a daily analysis conforms with the fact that the RA program has monthly compliance. All these questions should be fully considered before one draws a conclusion, solely based on the study, that the current RA requirements may be insufficient. In addition, the approach of comparing the total RA capacity after "forced outages" to the monthly 1-in-2 peak load plus 6% for reserves plus a portion for load forecast error may not be appropriate.

In the contrast to the proposal of using a bottom-up approach, SCE believes that a top-down approach is preferable. Under the bottom-up approach suggested by the CAISO, a

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<sup>5</sup> Proposal, at 15.

<sup>6</sup> Proposal, at 15; Presentation, at 22-24.

new RA requirement would have to be based on historical data, a process that would bring many open questions, including:

- What the length of the historic period should be;
- what the amount of capacity to cover load forecast error should be;
- what types of forced outages should be or should not be included (e.g., those transitioned from planned outages); and
- how the incentives of the proposed UCAP mechanism to potentially lower forced outage rates should be considered.

In comparison, under a top-down approach, one would only need to subtract the component corresponding to forced outages (i.e., a forced outage rate) from the total RA requirement, which is set at 1-in-2 peak load plus the 15% PRM. If the CAISO is concerned with forecast load error, SCE suggests this concern should be addressed through examining the load forecast standards (e.g., 1-in-2 or 1-in-5),<sup>7</sup> rather than adding additional margin into the existing PRM.

## **2. Forced Outage Rates Data and RA Capacity Counting**

SCE concurs with the CAISO that forced outages of resources that fall below 20 MW should be correctly counted given a growing number of those resources. The approach of leveraging the CAISO outage management system is generally reasonable. The CAISO should assess this approach, including any modification or improvements necessary to support forced outage rate calculation required under the Proposal.

## **3. Proposed Forced Outage Rate Assessment Interval**

The proposal of using a 16-hour period (between 5AM and 9PM) is reasonable, as compared to a 24-hour assessment window. Using the same assessment window for all RA products (system, flex, and local), as proposed by the CAISO, will simplify the process in calculating a forced outage rate that can be used across the RA products.

## **4. System RA Showings and Sufficiency Testing**

As this part of the Proposal stays the same from the last iteration, SCE would like to reiterate its position and comments submitted previously. While SCE understands the objective of a portfolio deficiency test, the efficacy of such a process on the overall RA program needs further evaluation. In order for the RA program to function as a whole, LSEs will need to have sufficient information prior to soliciting for RA to ensure that their procurement will adequately address RA needs and mitigate the potential for backstop procurement. This issue is also present for local RA, and in the discussions regarding

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<sup>7</sup> While examining a different load forecast standard, it should be recognized that the 15% PRM already includes a portion to cover load forecast error.

multi-year local RA requirements, many comments have been provided asking that the CAISO make available to LSEs the need for specific resources, as well as effectiveness factors of the local resources. With that information in hand, LSEs can undertake bilateral contracting with reasonable assurance that their procurement will result in a portfolio that effectively addresses the reliability need.

For system and flex RA in a UCAP environment, the same consideration will need to be made. LSEs need to be provided with as much information as practical to help guide their procurement decisions so that they can minimize the need for CAISO backstop procurement. This is particularly important since the CAISO has proposed the timing of the test to occur after monthly showings and there is a tight time window for LSEs to cure<sup>8</sup> for the portfolio deficiency. It is unclear how the cure process would function (e.g. when each LSE meets its own UCAP requirement but there is a collective portfolio deficiency). The CAISO should provide further details on the cure process. The proposed cost allocation, based on load ratio, should be further examined under the cost causation principle, since the deficiency amount may arise from issues (e.g., ramping and duration requirements) other than meeting peak load.

The CAISO has expressed a concern that meeting a peak load or peak net load need under an environment of increased reliance on resources with some form of use limitation is not sufficient to meet reliability needs. As discussed above, now is the time to evaluate the efficacy of the RA program overall. This should include evaluation of existing mechanisms designed to ensure that not only are peak load needs met, but there is sufficient capacity to meet the load needs in non-peak hours as well. Given these issues, the CAISO should evaluate the existing Maximum Cumulative Capacity mechanism if the underlying need is to address hourly requirements associated with use limitation of resources.

## **5. Must Offer Obligation and Bid Insertion Modifications**

As noted above, the proposed standard MOO, i.e. resources would not have MOO in real-time unless receiving a day-ahead award, has several implications and can be problematic for internal resources. SCE does not support this aspect of the Proposal. SCE requests that the CAISO fully consider potential implications of the proposed MOO rules, as commented above, in the next iteration of the Proposal.

## **6. Planned Outage Process Enhancements**

With the intent to improve the current planned outage process, the CAISO should clarify the timeline and process for approving newly defined planned outages, i.e. those

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<sup>8</sup> Proposal, at 31, “[i]f the portfolio is unable to serve load under given load or net load conditions, then CAISO will declare a collective deficiency, provide a cure period, and will conduct backstop procurement.”

submitted 45 days prior to the RA month. In particular, the CAISO should clarify whether 45 days prior to the RA month is the timeline for the CAISO to receive and approve those outages. The CAISO should also provide detailed information, potentially with illustrative examples, regarding how those outages may or may not be approved.

In addition, the CAISO should consider moving the 45-day deadline forward. Since the CAISO has stated that any resource under a planned outage cannot be shown in an RA showing, moving the date forward will allow an entity to include the resource in its RA showing if the CAISO denies the outage. It would not be appropriate to remove a resource from an RA showing in anticipation of a planned outage only to have such a request denied in an untimely manner.

The Proposal, as related to planned outage substitution, should make it clear that, no “false information” would be deemed in cases when a requested planned outage becomes a forced outage. This clarification is needed to make the process more transparent. This issue was discussed during the workshop and SCE agrees with the statement from the CAISO during the workshop that the UCAP methodology will incentivize better outage scheduling and address this issue. As such, SCE requests that this issue be followed up with the CAISO legal team to ensure any gap be filled under the Proposal.

## **7. RA Imports Provisions**

### *On source BA specification*

The Proposal requires that NRS import RA must specify the source BA on monthly showings and allows switching BA source prior to the DAM. SCE continues to oppose this aspect of the Proposal.

Requiring the source BA specification on monthly showings appears unnecessary, because: 1) there is no EIM sufficiency test conducted on a month-ahead basis, and 2) all imports into the CAISO BA must be accompanied by e-tags that provide sourcing information. As demonstrated by the CAISO, the level of non-delivery import RA is low and generally consistent with expected forced outage rates of internal RA resources.<sup>9</sup> The self-scheduling requirement established in a recent decision from the CPUC will further ensure NRS import RA resources will be available to the CAISO BA, alleviating any concern that the CAISO BA may not have access to those resources due to any perceived issue of double counting.

The proposed requirement of specifying the source BA can be problematic. It has the potential to significantly affect the liquidity of imports that are necessary to serve CAISO load. The proposal would prevent the firm energy product that is commonly traded today, which specifies interties (on its e-tag), but not the source BA, from being an RA resource

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<sup>9</sup> Proposal, at 49.

despite the resources backing the product meeting every other requirement for being an RA resource.

As SCE commented previously, given that the CAISO's proposal of requiring source BA is intended to prevent double counting, SCE requests the CAISO provide further details on the issue of double counting, including illustrative examples. If the underlying issue is related to imperfections in the existing EIM sufficiency test (or extended DAM sufficiency test), SCE recommends that the CAISO should address the issue there by enhancing the EIM or EDAM sufficiency tests for more accurate resource counting for that purpose, without disqualifying legitimate interstate transactions from meeting the RA requirement.

*On firm energy language & documentation*

The CAISO also proposes to incorporate the same CPUC language on firm energy requirements in the CAISO Tariff, and require submission of supporting documentation for NRS import RA. While not necessarily objecting to this aspect of the Proposal, SCE opposes the idea that CPUC-jurisdictional LSEs are required to submit to the CAISO the same information that is submitted to CPUC. Submitting the same information to both the CPUC and CAISO is redundant and can be unduly burdensome.

*On the requirement of carrying operating/spinning reserves*

The Proposal references a CPUC decision (D.05-10-042) that requires NRS import RA be backed by spinning reserves.<sup>10</sup> The Proposal also references another CPUC decision (D.04-10-035) that requires NRS import RA be backed by operating reserves.<sup>11</sup> For this aspect of the Proposal, SCE offers the following comments that were also submitted in the CPUC's RA proceeding:<sup>12</sup>

As the PD notes, D.05-10-042 states: "Firm import [liquidated damages ('LD')] contracts do not raise issues of double counting and deliverability that led us to conclude that other LD contracts should be phased out for purposes of RAR. We note that firm import contracts are backed by spinning reserves." Since 2005, when D.05-10-042 was issued, the NERC reliability standards have changed, resulting in imports automatically meeting this Commission requirement. The term "spinning reserve" is outdated. Today, the NERC standards instead utilize the term "contingency reserve," which includes spinning reserve and other reserves in its definition.

In addition, the NERC reliability standard with respect to the provision of Contingency Reserves essentially requires each Balancing Authority to maintain a minimum amount of Contingency Reserve that is the greater of either:

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<sup>10</sup> Proposal, at 52.

<sup>11</sup> Id.

<sup>12</sup> SCE Opening Comments on CPUC Proposed Decision Clarifying RA Import Rules, September 26, 2019, R.17-09-020, at 5-7.

- The amount of Contingency Reserve equal to the loss of the most severe single contingency;
- The amount of Contingency Reserve equal to the sum of three percent of hourly integrated Load plus three percent of hourly integrated generation.

For purposes of this discussion, we can skip over the first provision of the single largest contingency as it will only be binding if that single largest contingency is greater than the minimum amount of contingency reserve for load and for generation.

This latter requirement specifies that each Balancing Authority shall carry Contingency Reserves equal to 3% of load and 3% of generation. In the circumstance where a Balancing Authority is importing power, it will continue to have an obligation to carry 3% Contingency Reserve for all of its load, including any portion of load that will be served by an import. The exporting Balancing Authority would then have to carry 3% Contingency Reserve for all of its generation, including the amount exported. Based on this reliability standard, all load and generation will have 3% Contingency Reserve provided. The Balancing Authority carrying that reserve depends on which Balancing Authority is serving the load and which is exporting power. Thus, through the NERC standards and CAISO market processes, the 3% of load is guaranteed and the contract does not need to address this portion. Further, by nature of an import, the neighboring Balancing Authority is required to carry 3% of the generation serving their export (an import to CAISO). On this basis, all import RA is covered by Contingency Reserve.

In short, based upon these rules, SCE believes that imports for RA continue to be backed by Contingency Reserves as contemplated by D.05-10-042. For this reason, (1) the term Spinning Reserve should be replaced with Contingency Reserve, and (2) the requirement that firm imports for RA must be backed by Spinning Reserve/Contingency Reserve as a separate RA requirement is redundant and should be removed, because this requirement is already covered under the pertinent NERC reliability standard.

## **Flexible Resource Adequacy**

### **8. Identifying Flexible Capacity Needs and Requirements**

In assessing the proposal of a new flexible RA product, SCE requests that the CAISO provide information on how the proposal may affect the sufficiency of the existing RA fleet in meeting the flexible RA requirement under the new product. In particular, the RA program is mainly designed to procure capacity in a relatively short time window as compared to other programs that may be designed for the purpose of building and



installing new resources. Such information is key to understand potential impacts of the proposal and should include the following at a monthly granularity:<sup>13</sup>

- What is the MW amount of the flexible RA requirement under the new product; and
- What is the MW amount of existing eligible resources providing the flexible RA.

## **9. Setting Flexible RA Requirements**

Please see the comments in Section 8 above.

## **10. Establishing Flexible RA Counting Rules: Effective Flexible Capacity Values and Eligibility**

The proposal to disallow a Conditionally Available Resource (CAR) to be eligible for providing flexible RA<sup>14</sup> is problematic. Resources that count as both CARs and ULRs are currently allowed to provide flexible RA. If under the CAISO Proposal those resources are no longer eligible to provide flexible RA, it would impact a significant portion of flexible RA capacity that is currently provided by those resources, which include hydro resources and new peakers that are flexible in nature and comprise the most flexible portion of the CAISO fleet. Blanket exclusion of all CARs from being eligible to provide flexible RA is inappropriate. The CAISO should allow resources such as hydro and peakers that are flexible in nature to provide flexible RA.

SCE does not understand why a CAR or ULR can provide local and system RA but the nature of being a CAR or ULR somehow prevents the resource from providing flexible RA. Indeed, the only differences are the calculation of the amount of capacity that qualifies and the MOO (bid only for flexible and bid or self-schedule for system/local). While SCE appreciates that use limitations (for ULR and CAR alike) have impacts on the ability of the CAISO to utilize a resource at some points for reliability purposes, it is not clear how the impact to flexible RA is more significant than the impact to system and local RA such that it requires the exclusion of the resource.

The CAISO should reconcile the aspect of the Proposal that allows RA imports to provide flexible RA with the firm energy requirement for NRS RA imports. In addition, would an RA import be allowed to provide just flexible RA without providing system RA and without firm energy delivery? Similarly, the CAISO should clarify its expectation of bidding requirements (e.g., is there a certain price range that the RA import must bid) for RA imports that provide flexible RA.

## **11. Flexible RA Allocations, Showings, and Sufficiency Tests**

Please see the comments in Section 8 above.

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<sup>13</sup> The CAISO could consider determining what the flexible RA requirement would be under the proposed flexible RA product for past years, such as RA year 2018 and RA year 2019.

<sup>14</sup> Proposal, at 59.

## 12. Flexible RA Must Offer Obligation Modifications

The Proposal states that “[a]s a starting point, the CAISO proposes that any resource providing any flexible capacity must submit economic bids for energy, ancillary services, and imbalance reserves to the CAISO’s markets from 5:00 AM to 9:00 PM for all shown flexible RA capacity.<sup>15</sup>” (emphasis added). The CAISO should clarify how this proposal will work given that an energy award from the DAM is generally treated as a self-schedule in the RTM, and that the proposed imbalance reserve product will only exist in the DAM while a flexibility requirement can be in both DAM and RTM.

## Local Resource Adequacy

### 13. UCAP for Local RA

SCE is supportive of the CAISO effort in evaluating whether the UCAP methodology can be extended to local RA. Maintaining two sets of different RA counting rules (i.e., UCAP for system and NQC for local) can lead to various inefficiencies.<sup>16</sup>

In the Proposal, the CAISO listed two options on how local RA requirements can be determined following the UCAP methodology: 1) run existing studies and convert local capacity requirements into a UCAP value based on the average forced outage rate of all resources in the local area, and 2) determine the local capacity requirements using resource-specific UCAP values in the study process. Discussions during the workshop on Option 1, which is the option that the CAISO prefers, indicate there is significant confusion among the participants on exactly how this option will work. In particular, some participants believe local capacity requirements will be equivalent to the existing requirement under this option, while others believe the requirements will go up. The CAISO should clarify the conflicting views in the next iteration of the Proposal. SCE suggests that the CAISO should reconstruct the local capacity requirements under this option and compare the new requirements to the existing requirements for previous RA year(s); this information will help illustrate the potential impacts of the Proposal.

## Additional comments

Since the term “UCAP” will be new to the existing RA program, this term will likely create confusion and challenges in enforcing existing long-term RA contracts. Specifically, NQC is the currency for the RA counting today in that financial arrangements are based on NQC. In the future, when the RA counting is switched to UCAP, there will be financial implications to parties under existing long-term RA contracts. Specifically, purchasers (mostly LSEs) that continue to pay out on NQC will see an implicit financial loss because

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<sup>15</sup> Proposal, at 62.

<sup>16</sup> SCE Comments on RA Enhancements Revised Straw Proposal, July 24, 2019, at 1-2, available at <http://www.caiso.com/Documents/SCEComments-ResourceAdequacyEnhancements-RevisedStrawProposal.pdf>.

under the Proposal, only the UCAP portion of an NQC is considered as RA capacity and the contract is structured to procure a capacity that can meet RA compliance. Further, the term NQC will continue to exist (but mean a different thing, i.e., only pertaining to the MOO for RA purposes). This will create confusion and make it difficult to amend a contract to state UCAP will be the successor of NQC. One option to address this issue is to continue the use of the term "NQC" as the currency for RA showing and counting (i.e., replace the proposed term UCAP with NQC, and the existing term NQC with a new term like ICAP) to minimize potential impacts to existing RA contracts.