



## Stakeholder Comments Template

### Resource Adequacy Enhancements

This template has been created for submission of stakeholder comments on the Resource Adequacy Enhancements third revised straw proposal that was published on December 20, 2019. The proposal, stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at: <http://www.caiso.com/StakeholderProcesses/Resource-Adequacy-Enhancements>

Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on **January 27, 2020**.

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

#### 1. System Resource Adequacy

Please provide your organization's feedback on the System Resource Adequacy topic as described in section 5.1. Please explain your rationale and include examples if applicable.

- a) CDWR supports CAISO proposed minimum planning reserve margin (PRM) of 114% that consists of 110% for system RA using CAISO proposed unforced capacity (UCAP) requirement plus 4% for forecast errors. The UCAP may be updated with CAISO's analysis of forced outages.
- b) CAISO indicates that there will be no major change to the existing net qualifying capacity (NQC) methodology. Currently, NQC can be updated monthly for an increased NQC value. Since UCAP as proposed is equal to NQC value multiplied by weighted seasonal availability factor, will CAISO update UCAP value if the annual NQC value is updated? CDWR suggests that CAISO also updates UCAP if the monthly NQC is updated and with the same frequency.

Please confirm that the individual LRAs will continue to have their own counting criteria as a part of the NQC process. It is important for CDWR to retain this provision because of CDWR's unique operations and need for updating load and resource forecasts on a periodic basis.

- c) CAISO proposes to utilize two seasons for UCAP evaluations:
- i. On-peak: May-September (summer)
  - ii. Off-peak: October-April (winter)
- Please clarify that UCAP values may differ each season and every month if the NQC varies.
- d) CAISO proposes that it will calculate an hourly availability factor for each resource during the 100 “tightest system supply cushion hours” for the last five years. CDWR suggests that CAISO posts these historical hours on CAISO website for use by market participants in their own analysis.
- e) CAISO proposes the following formula for calculating hourly availability factor (HAF) and seasonal average availability factor (SAAF):

- CAISO will determine each resource’s Hourly Availability Factor (HAF) for each of the 100 tightest supply cushion hours per season

$$\text{Hourly Availability Factor} = \frac{\text{Derates} + \text{Forced Outage Impacts}}{\text{NQC}}$$

- CAISO will utilize the average of Hourly Availability Factors (HAF) for each season for each of the past five years to create a Seasonal Average Availability Factor (SAAF) for each resource

$$\text{Seasonal Average Availability Factor} = 1 - \frac{\sum \text{Hourly Availability Factors}}{\text{Number of Observed Hours}}$$

CDWR suggests changing the nomenclature of HAF to Hourly Unavailability Factor (HUF) because the numerator considers derates and forced outages which represents unavailability.

The 100 tightest supply cushion (TSC) hours may fall in different months of a season and NQC values may differ by month in that particular season. In the calculation of HAF (or HUF), how will NQC be represented in the above formula? Will the NQC be the monthly NQC value for any hour falling in that month of the season?

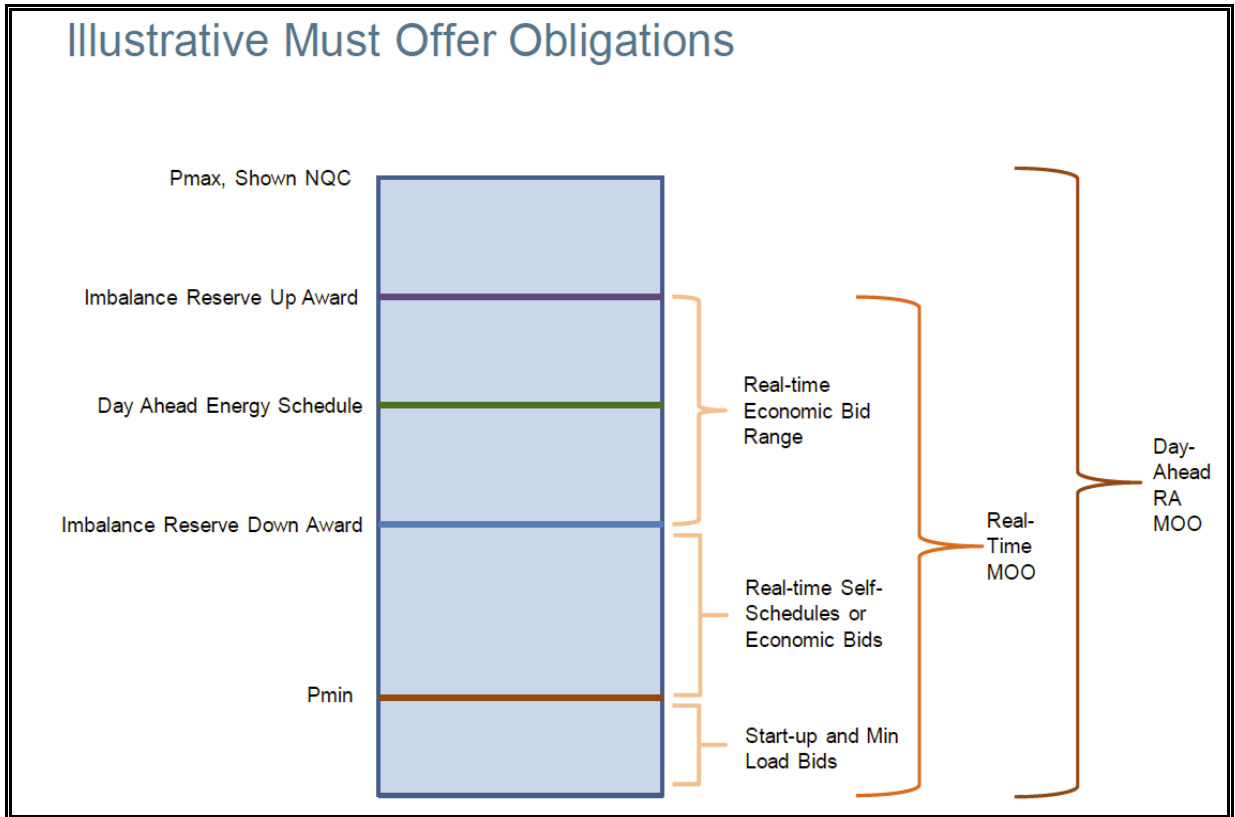
CAISO proposes that Demand Response (DR) and Qualifying Facilities (QF) resources that do not have effective load carrying capacity (ELCC) based NQC methodology will need to use an alternative UCAP determination approach. CAISO will evaluate resource performance relative to their dispatch instructions for periods when they received market awards. Participating Load (PL) is another resource that will need specific methodology to evaluate performance as there are no forced outage records for these resources. CDWR suggests following options for a PL performance evaluation in calculation of HAF (or HUF):

- i. CAISO certified non-spin capacity as its available capacity: Under this option, CAISO will always consider available capacity as the certified non-spin capacity because 1) availability during a dispatch event depends on a contingency occurrence, and 2) if there is no load at the TSC hour, it may

not be available to drop load as it may have already dropped load because of system supply tightness reflecting supply scarcity and higher energy prices, thereby helping the grid in a positive manner to address the supply tightness. NQC for a PL resource would be equal to certified non-spin, which is the eligible capacity to provide RA. Therefore, HAF (or HUF=0) and the seasonal availability factor would always be 1.

- ii. Evaluate resources performance relative to their dispatch instructions for periods when they received market awards: Under this option, the resource performance would be the resource capacity that is bid in RTM for DAM award of non-spin. It could be challenging to track whether the resource bid in RTM and whether the resource cleared the market for a dispatch in RTM. If it did not clear the RTM market for load drop, it would still be deemed available, and there would be no dispatch in RTM for the day ahead award. How will CAISO calculate availability in evaluating performance of a dispatch instruction for a PL resource relative to its DA awards?
  - iii. A PL's UCAP = NQC x PL seasonal availability factor: CAISO may determine if a PL resource RA capacity was dispatched during 100 TSC hours and if it was made available. If the PL resource was not dispatched, then its availability should be 100% for that hour. If the PL resource was dispatched and did not perform while pumping, that event could be interpreted as unavailable. If the PL resource could not be dispatched because it was not pumping at that hour, that event should be interpreted as available because pump load was already dropped and had already produced the intended final result. CAISO should determine a PL specific seasonality factor similar to SAAF for other resources.
- f) CAISO proposes to perform a “portfolio deficiency test” for system RA requirements for all hours. If a deficiency exists in any hour of a month, CAISO will allow a cure period, and if the deficiency is not cured during that period, CAISO will utilize backstop procurement authority to fill the deficiency. As proposed, CAISO will count only the available RA capacity. It appears that non-RA energy contracts that serve load during off-peak hours will not be considered as part of the resource portfolio to meet hourly energy need. To avoid exacerbating oversupply condition for that hour, it would be prudent to consider such non-RA energy contracts in hourly energy need analysis. CAISO may collect information on the quantity of such contracts that exist for any particular month and may consider certain proportion of those contracts (e.g., 80% of that physical contract capacity as the assumed certainty of availability). Including such contracts may reduce the cost of backstop procurement and avoid oversupply conditions in any given hour. If such contracts reduce the hourly energy deficiency, they may provide some form of credit for the LSE that can be reflected in backstop cost allocation.
- g) CAISO proposes that UCAP test for an LSE would be based on its coincident peak load determined by California Energy Commission (CEC). CDWR supports the continuation of this provision.

- h) Must offer obligation (MOO) and bid insertion: CAISO proposes the following illustrative example of MOO,



- i. Please clarify that requirement to provide imbalance reserve (IR) up and down bids for a resource providing generic RA will be voluntary only. A PL resource providing generic RA cannot provide IR.
  - ii. Please clarify that there will be no change to the way a PL resource provides generic RA today. That is, it will offer non-spin in day ahead market (DAM) and for any non-spin award received in the DAM it will be obligated to provide real time market bids for energy to drop load in accordance with existing model for a PL resource.
  - iii. CAISO proposes to exempt a number of resource types from standard MOO and bid insertion. CDWR supports exemptions for PL resources and run of the river hydro.
  - iv. Table 5 indicates bid insertion in day ahead time frame. Please confirm that bid insertion will not be applied in real time market.
- j) Planned outage process enhancements:
- i. CDWR supports the flexibility accorded in Option 1 where a resource could be shown for a subset of a month. It provides the opportunity to

- optimize resource utilization while on a planned outage during a month.
- ii. Short-term Opportunity Outages: CAISO proposes that the short-term opportunity outages are only permitted for a single day and participation in the subsequent day-ahead market is required. If, on the subsequent day, the resource again does not receive any day ahead awards, can it request a short-term opportunity outage again? Is CAISO specifying that a resource can only take one short-term opportunity outage in a set period of time, or can it do so in consecutive days as long as it does not receive awards in the day ahead?
  - iii. Planned Outage Outlook Transparency: How far ahead in time does CAISO envision showing the planned outage calendar? If the CAISO plans to only show headroom for a specified time range (example: 1 year), how would CAISO assess the planned outages beyond that period?

Please provide your organization's position on the System Resource Adequacy topic as described in section 5.1. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

CDWR could support the proposal with the caveat that the questions and concerns identified above be resolved in a way that preserves CDWR's ability to provide RA for its unique hydroelectric system.

## 2. Flexible Resource Adequacy

Please provide your organization's feedback on the Flexible Resource Adequacy topic as described in section 5.2. Please explain your rationale and include examples if applicable.

- a) Slide # 42 of the second day CAISO presentation indicates that there will be three types of flexible RA showings. The content of the slide is as shown below:

"CAISO will assess the showings for each requirement independently

- Showings should be submitted in terms of effective flexible capacity (EFC) for each requirement
- CAISO will assess the long-ramp showings independent of the fast-ramp, and uncertainty showings
- LSEs can have a resource on one, two, or all three of its flexible RA capacity showings"

However, slide #27-28 of the same presentation indicates that there will be a single flexible RA product to address uncertainty between day ahead and real time

market. The product will align with day ahead imbalance reserve product. Please clarify if there will be separate requirements (as indicated in slide #42) for long ramp, fast ramp and uncertainty ramping needs, and if these needs can be met by a single flexible product in their separate showings. If three types of needs exist, will CAISO use the same allocation methodology for all types of needs?

b) Flexible RA MOO:

- i. In addition to requiring economic bids for energy, ancillary services, and imbalance reserves into day-ahead market from 5:00 AM to 9:00 PM for all shown flexible RA capacity, the proposal also requires economic bids covering the entire range of the resource above Pmin. This requirement to offer economic bid on all EFC range above Pmin would be problematic for CDWR resources that provide flexible RA. A certain portion of the capacity range is needed for self-scheduling above Pmin to comply with environmental and water delivery requirements. Therefore, CDWR does not support this provision to have economic bid for entire EFC range above Pmin. CDWR suggests that economic bid requirement should be applied to the shown EFC similar to generic RA requirement to self-schedule or provide economic bid up to the shown NQC.
- ii. The proposal indicates that the day ahead IR award will have real time market (RTM) MOO. Please confirm that a flexible RA resource would be required to offer IR in DAM with economic bid, and if there is an award for IR, the resource will be required to provide economic bid of energy in RTM. A numerical example of how a flexible RA is bid in DAM and RTM would be helpful.
- iii. Currently, flexible RA capacity from use limited resources such as hydro is exempt from ancillary service must offer. The new proposal requires ancillary service bids from the flexible capacity. CDWR suggests maintaining the current exemption for the use limited resources.

Please provide your organization's position on the Flexible Resource Adequacy topic as described in section 5.2. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

Please see above for various comments seeking clarification.

### 3. Local Resource Adequacy

Please provide your organization's feedback on the Local Resource Adequacy topic as described in section 5.3. Please explain your rationale and include examples if applicable.

No comments at this time.

Please provide your organization's position on the Local Resource Adequacy topic as described in section 5.3. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

#### 4. Backstop Capacity Procurement Provisions

Please provide your organization's feedback on the Backstop Capacity Procurement Provisions topic as described in section 5.4. Please explain your rationale and include examples if applicable.

What would be the period of backstop procurement if a resource is procured for portfolio deficiency test or UCAP deficiency test? Will it be just for the deficient month?

Please provide your organization's position on the Backstop Capacity Procurement Provisions topic as described in section 5.4. (Please indicate Support, Support with caveats, Oppose, or Oppose with caveats)

#### Additional comments

Please offer any other feedback your organization would like to provide on the Resource Adequacy Enhancements third revised straw proposal.

CDWR has following comments on RA import provisions:

CAISO proposes to require specification of the Source BA for all RA imports on monthly showings. CAISO also proposes to adopt and codify provisions similar to current CPUC RA program rules and regulations for RA imports to provide physical capacity and firm transmission in CAISO tariff to ensure similar treatment among all LSEs. CAISO intends to reconsider resource specification requirement for RA imports.

The proposal requires LSEs to provide documentation to reflect unspecified imports being used to meet RA requirements have physical capacity with operating reserves behind them and firm transmission. Documentation can be contract language or an attestation from import provider that confirms RA import is supported by physical capacity and operating reserves. CDWR believes that DA e-tagging of import with firm energy backed up by identification of the source BAA as a measure to address CAISO's concerns on resource specification.