



Stakeholder Comments Template

Resource Adequacy Enhancements

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 (RA) topic as described in section 5.1. Please explain your rationale and include examples if applicable.

Description of Unforced Capacity and data availability concerns

The primary purpose of this initiative is to explore the development of an Unforced Capacity (UCAP) method for valuing resources. In this Third Revised Straw Proposal, the California Independent System Operator (CAISO) describes UCAP as a megawatt (MW) expression of a resource's reliability value. The CAISO states that UCAP differs from the current Net Qualifying Capacity (NQC) system in that UCAP is a reliable deliverability value that also includes assumptions about forced outages.¹ Forced outages are typically unexpected events that make a resource partially or fully undeliverable, such as equipment failure. Forced outage assumptions are currently included in the Planning Reserve Margin (PRM)² and substitution rules for resources on outage are enforced through the CAISO's Resource Adequacy Availability Incentive Mechanism (RAAIM). In this Third Revised Straw Proposal, the CAISO proposes to replace the NQC-based system RA framework with a UCAP design and to make related and unrelated modifications to flexible and local RA requirements. Adoption of a UCAP system will also necessitate an adjustment to the PRM since forced outages will be assumed at the resource-level, rather than at

¹ Third Revised Straw Proposal, p. 11.

² The PRM is a buffer to account for forecast errors, forced outages, and other safety and uncertainty considerations that increases the system RA requirement by 15-17%. Forced outages have been calculated to make up 4-6% of this 15-17% amount, though CAISO has observed higher rates of forced outages beyond these assumptions. Third Revised Straw Proposal, p. 11.

the system requirement level. An alternative to UCAP will be used for solar, wind, and demand response resources due to their technical peculiarities.³

To determine each resource's forced outage rate, the CAISO proposes to use the past five years of forced outage data for each specific resource on the grid, subject to certain weighting, consideration of specific hours, and conditions of what constitutes a forced outage.⁴ This data may be sourced from the CAISO's own Outage Management System (OMS) and the Generation Availability Data System (GADS) controlled by the North American Electric Reliability Corporation (NERC). According to the CAISO, these sources are deficient for calculating forced outage rates as OMS "is not currently designed or easily converted to generate forced outage rates" and GADS information is difficult to compile and does not include resources smaller than 20 MW.⁵ The CAISO proposes to either (1) use GADS data and reconfigure OMS to provide data specific to UCAP calculations, or (2) use only GADS data.⁶

Both of these approaches are insufficient to establish resource-specific UCAP values by the CAISO's intended implementation date of RA-year 2023. Since GADS data does not count resources smaller than 20 MW, 246 UCAP-subject resources on the CAISO grid would not be considered in UCAP calculations.⁷ The CAISO may consider using class-averages for resources whose historical forced outage rates cannot be determined, but this would prevent equitable treatment of resources, as some resources would use class-averages while others would use resource-specific data. The current NQC system uses resource-specific data for all types of resources, therefore ensuring equitable and consistent allocation of reliability values across all resources.

Using class-average UCAP values would fail to incentivize individual generators to properly maintain and upgrade their existing or new resources to decrease forced outages. Thus, one of the goals of this initiative⁸ would be subject to failure by design. Class-average values would also fail to discriminate between generators that already prioritize maintenance and forced outage avoidance more than others. Class-average values would create the same problems faced by Effective Load Carrying Capability (ELCC)-subject resources which are given the same ELCC value regardless of whether they use technologies that provide more benefits in addressing reliability needs (such as tilting-panel solar rather than fixed-panel).

The CAISO should consider the immediate implementation of enhancements to OMS in order to begin collecting data to use in forced outage accounting for UCAP. UCAP implementation should be delayed until five years of resource-specific forced outage data is available. If the CAISO

³ Third Revised Straw Proposal, p. 20.

⁴ Third Revised Straw Proposal, Section 5.1.2.

⁵ Third Revised Straw Proposal, pp. 22-23.

⁶ Third Revised Straw Proposal, pp. 23-24.

⁷ There are 336 resources with a Net Dependable Capacity (also known as PMax) of 20 MW or above and 246 below 20 MW that would be subject to UCAP. Determined using the CAISO OASIS Master Control Area Generating Capability List as of January 18, 2020, removing solar and wind-fueled resources, "Other" type resources (mostly Demand Response, but some conventional facilities as well) and non-participating units.

⁸ Third Revised Straw Proposal, p. 28.

wishes to continue with a 2023 implementation of UCAP, a transitional solution using less than five years of this OMS data along with some other resource-specific data should be considered.

The CAISO should clarify if gross or net load will be studied for UCAP availability factors and the portfolio assessment

To calculate on-peak and off-peak (summer months and winter months) UCAP values, the CAISO proposes to calculate an hourly availability factor for each resource during the 100 tightest supply condition hours for each season based on hourly loads.² It is unclear if the CAISO will determine the 100 tightest supply condition hours based on net load or gross load.¹⁰

The CAISO's selection of net load or gross load to determine the 100 tightest supply condition hours used to calculate availability factors should also account for its proposed portfolio assessment modeling options, which may include net load, gross load, or both.¹¹ Since the proposed portfolio assessment test will determine if the shown RA resources across the CAISO grid are sufficient for reliability needs, the test should be consistent with the type of load each resource is measured against for calculation of the UCAP value of the resource.

The CAISO should allow adaptation and/or grandfathering of contracts

Changing the CAISO, and possibly the California Public Utilities Commission (Commission), RA requirements to use UCAP instead of NQC could render some existing contracts incapable of providing RA depending on the language of the contract. Currently, some RA contracts may avoid this issue if the contracts use language that may be independent of an NQC or UCAP system, such as by defining "Capacity Attributes" to mean, "any current or future defined characteristic... so that the full Contract Capacity of the Project may be counted toward a Resource Adequacy Requirement..."¹² Depending on the nature of changes implemented by this CAISO initiative, such contracts and language may not need to be altered. However, any contract that uses more specific definitions, or contracts for the partial rather than full capacity of a resource, will likely express obligations using terms of NQC. Such contracts will be unable to provide UCAP value without re-negotiations and a resulting amendment or termination of contract. The administrative process to modify contracts will result in associated costs to load-serving entities (LSEs) and may lead to adjustments of rates, both of which will increase ratepayer costs even though resource operations will not change with the move from an NQC to a UCAP RA system. Adopting UCAP would be even more problematic in light of the fact that the Commission has adopted multi-year

² Third Revised Straw Proposal, pp. 17-18.

¹⁰ Gross load is total generation needed to meet system demand. Net load is gross load with wind and solar resources discounted, since those resources are typically always generating to the grid as fuel is available (subject to curtailment or other occasional CAISO dispatch control).

¹¹ Third Revised Straw Proposal, pp. 29-30.

¹² This particular language is from a 2011 PG&E pro forma Power Purchase Agreement. See Section 1.29: https://www.pge.com/includes/docs/word_xls/b2b/wholesaleelectricssuppliersolicitation/RPS2011/Attachment_H1_PGE_RPS_PPA_05112011.doc.

RA requirements¹³ and will soon require 65% of RPS sales by LSEs to be sourced from contracts with ten-year or more terms.¹⁴ It will not be feasible for an LSE to wait for an NQC-specific contract to expire and to replace it with one adapted with UCAP consideration. Instead, LSEs would have to bear costs due to early termination or re-negotiation of contracts.

In its next proposal, the CAISO should discuss an approach to grandfather in existing contracts to apply towards an LSE's RA requirements using contractually termed NQC amounts in a UCAP system. Alternatively, the CAISO should abandon a transition to a UCAP system and continue to use the NQC framework with an alternative approach to consider the effects of forced outages on RA system requirements.

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)

The Public Advocates Office opposes the proposed changes to System RA. Implementation of a UCAP system would require the Commission to either adapt its RA requirements to work with the UCAP system or force its jurisdictional LSEs to meet both CAISO UCAP and Commission NQC requirements. The UCAP system would also require an adjustment of the PRM. It is unclear if this complex implementation is the best approach to meet the CAISO's goal to "assess the forced outage rates for resources and conduct RA adequacy assessments...to ensure CAISO can serve load and meet reliability standards."¹⁵ At this time, it is very likely that ratepayer costs would increase significantly due to administrative changes to meet the requirements of a UCAP system and due to increased procurement needs under UCAP. At the same time, it is not clear if the additional ratepayer costs would create a more reliable grid, therefore providing value to ratepayers. The Public Advocates Office recommends that the CAISO explore alternatives to UCAP in order to avoid such a comprehensive change to RA requirements. An alternative approach to address the CAISO's stated objective could include altering RAAIM.¹⁶

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.

Flexible RA requirement showings should remain 90% in the year-ahead and 100% in the month-ahead

The CAISO proposes to require LSEs to meet 100% of their flexible RA showings in both year-ahead and month-ahead showings.¹⁷ This is a change from the current Commission-adopted RA

¹³ D.19-02-022, Section 3.2 and Ordering Paragraph 2.

¹⁴ 65% of RPS sales must be from contracts with a term length of ten years or more for compliance period 2021-2024. D.17-06-026, Section 3.1.3 and Ordering Paragraph 1.

¹⁵ Third Revised Straw Proposal, p. 8.

¹⁶ The Western Power Trading Forum (WPTF) made this recommendation in comments and at the January 7-8 presentation. WPTF Comments on RA Enhancements Revised Straw Proposal, July 29, 2019, p. 1.

¹⁷ Third Revised Straw Proposal, p. 76.

requirement that LSEs demonstrate 90% of their RA requirements in year-ahead showings.¹⁸ The CAISO proposal did not provide a reason for this change. At the January 7-8 workshop, Southern California Edison Company (SCE) expressed concerns regarding ratepayer impacts due to this change. The CAISO responded that the change would allow for more certainty for the CAISO that flexible RA requirements will be met by LSEs.

The Public Advocates Office is concerned that a 100% year-ahead requirement may increase ratepayer costs. The current 90% year-ahead requirement gives LSEs final opportunities to procure RA capacity through optimal contracts, and grants a safety cushion for any unexpected changes in maintained contracts, load migration, or regulatory requirements. A 100% year-ahead requirement, as proposed by the CAISO, is likely to result in overprocurement of flexible RA and lead to unnecessary ratepayer costs.¹⁹

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)

The Public Advocates Office takes no position on the Flexible RA topic of this proposal.

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.

The Public Advocates Office has no comment concerning the Local RA topic 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)

The Public Advocates Office opposes the Local RA topic. The CAISO's proposal to convert NQC values from UCAP values to meet NQC requirements, despite the adoption of a UCAP system, creates an unnecessarily complex requirement framework and possible inconsistencies in how collective deficiencies are calculated.²⁰ The CAISO's proposal to change local RA to adapt it to a UCAP system is inconsistent with the CAISO's stated desire to reduce current complexities of the RA system.²¹

4. Backstop Capacity Procurement Provisions

¹⁸ CAISO Tariff 40.10.5.1.

¹⁹ The CAISO supported the current 90% year-ahead flexible RA requirement, adopted in D.13-06-024, p. 18.

²⁰ Third Revised Straw Proposal, p. 80.

²¹ Third Revised Straw Proposal, pp. 5, 28, 34, 44, and 77.

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.

Cost allocation for CPM designations should be clarified and simplified

Currently, when a CPM designation is made, the CAISO assigns the costs of that designation to LSEs that are deficient on their RA requirements to LSE-specific and/or collectively deficient LSEs depending on the type of CPM designation.²² The CAISO now proposes a cascading order of cost allocations that lacks specificity: “[T]he CAISO will first allocate the costs of system UCAP deficiencies, then to NQC system deficiencies, then to local individual deficiencies, then to local collective deficiencies, and finally to portfolio deficiencies.”²³

It is unclear how the final “portfolio deficiencies” differ from “system UCAP deficiencies” since the proposed portfolio deficiency test checks the system portfolio for UCAP deficiencies.²⁴ The CAISO should also clarify if allocation of costs for UCAP and NQC system deficiencies would first be allocated based on individual LSE deficiencies and then collective LSE deficiencies (as specified in regards to local deficiencies) or if the CAISO would only allocate such costs on a collective basis. The CAISO should also discuss the cost ratio amounts applied to each type of deficiency and the cost allocation for different types of CPM designations.²⁵ Finally, it is unclear why a “System NQC deficiency” test is necessary if the UCAP system replaces the current system NQC RA requirements, as proposed by the CAISO.

The CAISO should clarify how the CPM costs should be allocated to LSEs for different types of CPM designations and should also strive to simplify the proposed process.

The UCAP Deficiency Tool may discourage LSEs from selling excess RA

The CAISO proposes to “incentivize entities to show above individual UCAP requirements” through the use of a UCAP Deficiency Tool.²⁶ This tool would collect a financial penalty from LSEs that were deficient on their UCAP RA showings and distribute those penalty revenues “to entities that show above their UCAP, in proportion to the total amount shown above requirements for all entities.”²⁷ In other words, an LSE that showed far more RA resources than its requirements would collect a greater share of penalty revenue than an LSE that was only slightly above its RA requirement.

Although this penalty revenue may be small relative to RA procurement costs, the CAISO must not provide financial incentives for LSEs to show more RA than required. This incentive may

²² Certain CPM designations may also apply costs to a full transmission area independent of any shown LSE deficiency. CAISO Tariff 43A.8.

²³ Third Revised Straw Proposal, p. 83.

²⁴ Third Revised Straw Proposal, Section 5.1.3.

²⁵ Such as year-ahead versus month-ahead local deficiencies or CPM designations for significant events and other types described in CAISO Tariff 43A.8.

²⁶ Third Revised Straw Proposal, pp. 85-88.

²⁷ Third Revised Straw Proposal, pp. 85-86.

encourage LSEs to over-procure or otherwise maintain surplus RA capacity which would make it difficult for other LSEs to meet even their base requirements. RA resources are already relatively scarce and many LSEs have had difficulty procuring enough RA to meet their 2020 local RA requirements.²⁸ The CAISO's objective to increase RA showings should be systemwide, rather than for each LSE to increase their individual showings which can cause LSEs to hold surplus RA and prevent other LSEs from meeting their RA requirements. The CAISO proposal should be modified to either remove the UCAP Deficiency Tool that would collect penalty payments and distribute penalty revenue, or to spread penalty revenue by load-share ratio or RA requirement-share ratio to non-deficient LSEs regardless of how much surplus capacity is shown by those LSEs.

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)

The Public Advocates Office opposes the Backstop Capacity Procurement Provisions topic due to the issues discussed above.

Additional comments

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

The Public Advocates Office has no additional comments at this time.

²⁸ On October 31 through November 12, 2019, twenty LSEs across the state filed advice letters to the Commission requesting waivers for local RA requirements due to a failure to receive reasonable market offers for capacity. See Commission, The State of the RA Market – Revised, January 13, 2020, p. 35, available at <https://www.cpuc.ca.gov/RA/>.