



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. 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.

SDG&E does not support the CAISO's UCAP proposal because it does not resolve the root cause of the CAISO's identified problems. These problems are heavily interwoven and therefore difficult to clearly sort through.

The CAISO notes the fleet of resources currently operating on the grid has significantly changed the manner in which demand is met as well as when peak demand occurs. SDG&E agrees with this statement, as the fleet transitions to a decarbonized system, existing planning standards must also be refreshed to ensure reliability. The CAISO notes that existing planning reserve margin ("PRM"), typically set at 15%, incorporated an estimated forced outage rate of 4% to 6%. However, based on the CAISO's analysis of its own data, forced outages varied from below 5% to nearly 20%. The average forced outage rate seems to be around 10% as shown in Figure 3 of the CAISO's proposal paper.

The CAISO identifies later in its proposal that the resource adequacy availability incentive mechanism (“RAAIM”) “is not providing adequate incentive to provide substitute capacity for forced outages...”¹ While the CAISO does not differentiate the reasons as to why substitute capacity was not provided, SDG&E notes that there are several reasons.

1. RAAIM exempt resources do not have to provide substitute capacity
2. Insufficient capacity was made available in the bilateral market if supplier is concerned with its own potential future forced outages
3. Providing substitute capacity is not mandatory and is only voluntary in order to reduce RAAIM penalties
4. Penalty price is lower than the substitute capacity price offered in the bilateral market

Effectively, the CAISO is saying that the percentage of capacity on forced outage that is not providing sufficient substitute capacity is causing its data to be above the forced outage estimate that is currently embedded in the existing 15% PRM. During the workshops held on January 7th and 8th, 2020, the CAISO noted that its analysis includes only forced outages that were not substituted. Essentially, if more substituted capacity was provided, the CAISO would have sufficient capacity to meet the forecasted peak load plus the PRM. The CAISO’s solution is to eliminate RAAIM and incorporate the forced outage impact to the resources’ capacity counting under the new term Unforced Capacity (“UCAP”) and then create a CAISO specific PRM without an estimated average forced outage rate.

SDG&E is additionally concerned that the CAISO’s UCAP PRM is inconsistent with that of the CPUC’s PRM utilized not only in the RA proceeding but also in the Integrated Resource Plan (“IRP”) proceeding. In the IRP proceeding, the CPUC evaluates the aggregate LSE plans utilizing a 15% PRM. If the CAISO establishes its own PRM standards while the CPUC is establishing reference system plans based on a 15% PRM, then any LSE procurement as a result of the CPUC’s study process will not harmonize with the CAISO’s RA planning process once resources are built and delivering.

SDG&E does not believe this is the best solution because the UCAP proposal does not address the fundamental issue of ensuring capacity is available for market participants to procure for the purposes of finding substitute capacity in the cases of both planned and forced outages. Additionally, SDG&E believes the proposal continue to limit the amount of capacity available for procurement because LSEs are incentivized to “show” surplus capacity and compensated by the CAISO’s UCAP Deficient Tool.

SDG&E proposes the following highlevel framework to resolve the fundamental issue identified above:

¹ CAISO proposal, pg 28

1. RA resource outage substitutions, both planned and forced, would be procured through the CAISO markets based on the existing NQC construct. This mechanism would eliminate or substantially minimize the role of RAIM.
2. The CAISO would work with Local Regulatory Agencies (“LRA”) to update the PRM through a Loss of Load Expectation (“LOLE”) study that utilizes the current resource fleet.
3. Maintain the existing NQC counting framework for System and Local RA Requirements.

This proposed framework above is an alternative to the CAISO’s proposal below:

1. Establish UCAP counting methodology
2. Establish System RA PRM
3. Eliminate RAIM
4. Modify Planned Outage Substitution Obligation process
5. Modify CAISO’s Outage Management System
6. Establish Local RA UCAP Requirements
7. Establish UCAP System Sufficiency Test
8. Establish UCAP Deficiency Tool
9. Modify Capacity Procurement Mechanism Authority for UCAP

SDG&E believes its alternative proposal may be simpler to implement and would not significantly impact existing contracts that are highly dependent on NQC values. SDG&E would be interested in working with the CAISO as well as other stakeholders to flesh out the additional details of the framework in future workshops.

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.

SDG&E recommends the CAISO to postpone the Flexible RA framework enhancements until the Day-Ahead Market Enhancements initiative is implemented. This would allow the CAISO to better analyze and identify the Flexible RA needs, if any, with actual data. The addition of the imbalance reserve product is untested and may yield different results than expected for the new Flexible RA framework that is also new.

Additionally, RAIM was not simply about providing substitute capacity for forced outages. RAIM assessed RA resources with incentives and penalties for bidding or scheduling into the CAISO markets, particularly for Flexible RA. If CAISO fully eliminates RAIM, it is unclear how the CAISO will assess whether Flexible RA resources will meet their must offer obligations to bid and not self-schedule into the CAISO markets.

SDG&E strongly encourages the CAISO to consider Flexible RA enhancements in a second phase of the RA enhancements initiative that would start after implementation of the Day-Ahead Market Enhancements.

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.

SDG&E does not support the proposal to convert Local RA studies based on NQC into UCAP RA requirements and then reconverting the shown UCAP Local RA capacity back into NQC for the sole purpose of utilizing a single capacity product that’s based on UCAP. This conversion process unnecessarily complicates and disassociates the Local RA procurement and showings from the Local Technical Study process. The CAISO states that it will continue to study the Local Capacity Requirements (“LCR”) using the NQC values and then reconvert the shown UCAP back into NQC values in order to assess whether deficiencies caused by effectiveness factors and other additional criteria. It seems that it would actually be simpler to remain with the current NQC process in order to avoid this complication. Additionally, in Local areas where supply is constrained, an LSE may be required to transact for additional UCAP quantity even though the NQC of the resource is sufficient to meet its share of the CAISO’s true LCR need.

The table below provides an example of the issue. There are a total of 828 MW NQC in the TAC area with a total of 648 MW UCAP. If the LCR is also 828 MW NQC, then the UCAP LCR is 648 MWs as well.

	NQC (MW)	UCAP (MW)	UCAP Availability (%)
Thermal	100	90	90%
Storage	50	50	100%
Thermal	500	330	66%
Solar	45	45	100%
Solar	33	33	100%
Solar	50	50	100%
Wind	50	50	100%
Sum	828	648	94%

<--- Average

Assuming there are 2 LSEs, A and B, with the following peak load ratio shares, then the LCR for each LSE is listed below.

	Load Ratio Share	NQC LCR (MW)	UCAP LCR (MW)
LSE A	55%	455	356
LSE B	45%	373	292
	Total	828	648

LSE A has contracted with the 500 MW thermal unit then it has met its NQC LCR. However, LSE A has not met its UCAP LCR of 356 MWs because of the resource's lower than average availability yielding only 330 MW UCAP. In this instance, the CAISO would find LSE A deficient even though the conversion back to NQC LCR would mean that LSE A is more than sufficient.

If the CAISO moves forward with its UCAP proposal, SDG&E recommends the CAISO to remain with the NQC methodology for meeting Local RA requirements.

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.

As noted previously, SDG&E does not support modifying the current NQC construct to a new UCAP construct. Therefore, SDG&E does not believe the backstop capacity procurement proposals are necessary. Additionally, SDG&E wants to note that the proposed UCAP deficiency tool, where an LSE would be compensated for its surplus shown capacity in the event other LSE(s) may be deficient in order to prevent leaning, and could negatively impact the amount of capacity made available to other LSEs that are indeed deficient or buyers seeking to find replacement capacity for planned outage substitutions. If an LSE has surplus, considering that the deficiency tool would only be applicable to LSEs as suppliers do not have requirements and therefore would not have "surplus", it may not be willing to sell its surplus as substitute capacity for only a few days or weeks within a month if it has the incentive that it may receive "higher" compensation through the CAISO's UCAP deficiency tool. On the opposite end of the spectrum, an LSE may not show additional capacity because it may have to provide substitute capacity for purposes of planned outage replacement. If the surplus is shown, the LSE would have to procure additional substitute capacity in the bilateral market. Therefore, SDG&E would prefer the CAISO eliminate the UCAP deficiency tool from its proposal and work on other mechanisms to incentivize capacity to be made available to buyers and sellers in the bilateral market.

Additional comments

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

SDG&E believes the CAISO must reexamine the fundamental issue that is causing the problems that the CAISO identified. SDG&E believes the CAISO's solution is too complex and ultimately may not resolve the fundamental issue of capacity being made available to buyers in order to meet reliability needs. SDG&E has offered a simpler framework and believes that it could work without uprooting the entire RA program. This framework would maintain the existing NQC framework rather than requiring market participants manage two RA programs which would be burdensome, complex and less efficient. SDG&E believes there is still sufficient time for the CAISO to adjust its course and consider a simpler method for this initiative. If the CAISO does not wish to consider this alternative, then SDG&E requests the CAISO clearly state how the alternative fails to address the fundamental issue and why the CAISO's proposal is more appropriate. SDG&E appreciates the opportunity to provide comments on the CAISO's third revised straw proposal.