California ISO

Stakeholder Comments Template

Resource Adequacy Enhancement Initiative: Second Revised Straw Proposal

This template has been created for submission of stakeholder comments on the **Resource Adequacy Enhancements Initiative, Second Revised Straw Proposal** that was held on October 9, 2019. The meeting material and other information related to this initiative may be found on the initiative webpage at: http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on October 24, 2019**.**

Submitted by	Organization	Date Submitted
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Please provide your organization's comments on the following topics. When applicable, please indicate your organization's position on the topics below (Support, Support with caveats, Oppose, or Oppose with caveats). Please provide examples and support for your positions in your responses.

System Resource Adequacy

1. Determining System RA Requirements

Please provide your organization's feedback on the System RA Requirements proposal as described in the second revised straw proposal.

SDG&E does not support the CAISO's proposal on System RA Requirements based on UCAP because it would create a separate compliance program which market participants would have to meet in addition to the current RA framework that is based on the net qualifying capacity (NQC) counting methodology. SDG&E believes this would create more complexity for market participants in the bilateral market. SDG&E believes the CAISO can accomplish its main objectives by working with the CPUC and other local regulatory authorities (LRAs) to update the current planning reserve margin (PRM) to meet the needs of the changing grid while keeping the existing NQC counting methodology.

If the CAISO wishes to continue its consideration of the UCAP framework, then SDG&E requests the CAISO to provide responses to the following questions. Responses to these questions will allow market participants to better understand the CAISO's proposals.

- Do import RA contracts have UCAP values that are based on an expected forced outage rate?
- If the CAISO must issue a capacity procurement mechanism (CPM) designation for System UCAP needs, is the CPM cost based on the NQC quantity or the UCAP quantity?
- Do market participants offer capacity to the CAISO for CPM, based on the resource's NQC or UCAP volume?
- Is there a difference in the definition of Forced Outages between the CAISO and Generating Availability Data System (GADS) in terms of definition, such as days of notice?

2. Forced Outage Rates Data and RA Capacity Counting

Please provide your organization's feedback on the Forced Outage Rates and RA Capacity Counting and Forced Outage Rate Data topics as described in the second revised straw proposal.

SDG&E agrees that the PRM should properly reflect expected forced outage rates of generation resources. SDG&E appreciates the inclusion of additional outage data in the current revision of the straw proposal. However, SDG&E questions whether the outage information is appropriately compared to the "approximately 4% to 6% of the 15% planning reserve margin."[1] Since the current PRM methodology was implemented, CAISO's definition of a forced outage has changed from less than 3 days notification to 7 days. This change has resulted in more planned outages being categorized as forced outages. Therefore the data CAISO presented includes additional forced outage information that would not have been included had the definition of forced outage not been changed. Thus, the need to change the forced outage assumption in the PRM would not have been justified. Moreover, CAISO's data in Figure 3 does not seem to align with data provided in the 2018 RAAIM Annual Report.[2] In reading the RAAIM report, it seems that the average actual availability of Generic RA was 95.44% or ~5% non-availability. This does not seem to match the "10-15 percent to reasonably address forced outages"[3] that the CAISO asserts. It would be helpful for the CAISO to explain this difference.

3. Proposed Forced Outage Rate Assessment Interval

[1] Second revised straw proposal at 11
[2] http://www.caiso.com/Documents/2018RAAIMAnnualReport.pdf
[3] Second revised straw proposal at 15

Please provide your organization's feedback on the Proposed Forced Outage Rate Assessment Interval topic as described in the second revised straw proposal.

SDG&E believes the CAISO should provide the outage data based on its proposed 16-hour assessment window in order to better align the problem statement with its proposal for UCAP. SDG&E understands the CAISO's justification and data provided so far is based on a 24-hour forced outage assessment.

SDG&E believes that one of the challenges for assessing the impact of the CAISO proposal is due to the fact that no criteria have been defined. SDG&E recommends that the CAISO provide either the outage criteria to be included in the UCAP calculation or propose to use the NERC GADS data in the next proposal. Once proposed, the CAISO should also provide either the average system or resource specific UCAP.

As the CAISO notes, other ISO/RTOs determine their UCAP values based on the installed capacity (ICAP) and not the NQC of the resource. This is primarily due to the fact that other ISO/RTOs do not have the NQC concept themselves. The ICAP rating equates to the plant maximum (PMAX) output of a resource and is not based on the deliverability of the resource. To the extent the Effective Forced Outage Rate is calculated based on the resource's derated MW from the PMAX, rather than the NQC, the resulting UCAP value would be lowered even further when it is multiplied by the NQC. SDG&E recommends that CAISO use the PMAX as the basis of the UCAP calculation rather than the NQC. This is due to the fact that NQCs are not solely based on the deliverability studied by the CAISO but also may be adjusted by each resource owner to accommodate for temperature variances throughout the year. Thus, applying a forced outage rate to the NQC value would double penalize a resource's UCAP rating. The following table provides an example of the double penalty issue.

	PMAX	NQC
Capacity	500	490
Effective Forced Outage Rate (EFORd)	10%	10%
UCAP	450MW	441MW

In the example above the UCAP formula would result in 441MW rather than 450MW. The CAISO can fix this double penalty by multiplying the forced outage rate by the PMAX rather than the NQC or calculating the forced outage rate by using the NQC of the resource rather than the PMAX.

If the CAISO is determining the Effective Forced Outage rate based on the resource's PMAX, it is possible that the calculated UCAP value is greater than the NQC of that month. In such instances, SDG&E believes the UCAP value should be capped at the resource's NQC value of that month.

Specifically, SDG&E's proposed calculation of UCAP would be as follows:

UCAP = min(NQC, (PMAX)*(1-EFORd))

4. System RA Showings and Sufficiency Testing

Please provide your organization's feedback on the System RA Showings and Sufficiency Testing proposal as described in the second revised straw proposal.

SDG&E does not support the proposed system sufficiency test at this time. SDG&E believes that the issue of sufficiency should be resolved by better defining the NQC itself. This would allow market participants to bilaterally transact capacity more efficiently without having to be concerned with failing the sufficiency test. SDG&E is uncertain whether the CAISO's proposed UCAP product would ensure that LSEs would be able to "serve load…during all hours of the day."[4] If UCAP only captures the resource's availability but not it's physical limitations, then LSEs may fail the sufficiency test even if they meet their UCAP System RA requirements.

SDG&E does not support the proposed UCAP deficiency tool. The proposal can allow one LSE to receive a windfall payment for showing surplus UCAP while other LSEs are deficient. Specifically, in Figure 21 of the proposal, LSE 3, which shows 5MW surplus UCAP, receives the entire penalty assessed on LSEs 1 and 2 for their combined 25MWs of shortage. However, if LSE 3 did not show any surplus, then there would not be any penalty assessed at all even though both LSEs 1 and 2 are still deficient.

5. Must Offer Obligation and Bid Insertion Modifications

Please provide your organization's feedback on the Must Offer Obligation and Bid Insertion Modifications proposal as described in the second revised straw proposal.

SDG&E does not support the elimination of the real time must offer obligation for resource adequacy resources that did not receive any day-ahead market awards. While SDG&E understands that the day-ahead market enhancements initiative will ultimately create the new imbalance reserve product and modifies the must offer obligations of all RA resources, removing the real-time must offer obligation would increase costs to ratepayers because the CAISO is effectively providing capacity payments to RA resources through the imbalance reserve award. Such payments may already be covered as part of an LSEs' long-term power purchase tolling agreements (PPTA) for which the LSEs procured such resources as RA. Additionally, this change may impact the CAISO's Reliability-Must-Run (RMR) and CPM initiatives because it would provide additional revenues that are already captured as part of the RMR or CPM payment. If so, then SDG&E believes the CAISO should consider the change the CAISO would need to make to the CPM or RMR initiatives.

6. Planned Outage Process Enhancements

Please provide your organization's feedback on the Planned Outage Process Enhancements proposal as described in the second revised straw proposal.

SDG&E appreciates the CAISO's consideration of enhancing the existing planned outage substitution obligation (POSO) process. However, SDG&E believes the

[4] Second revised straw proposal at 28

CAISO's proposed changes provides less flexibility to generators by limiting the generator's ability to make changes to their outage plans in a timely fashion.

But most significantly, the CAISO proposes to change the monthly RA requirement to a daily RA requirement. SDG&E believes this will significantly complicate the management of RA compliance for LSEs. Currently, when a resource has an outage, it manages its outage substitution with the CAISO through the CIRA system. This removes LSEs from being involved in the substitution process and minimizes the coordination between the CAISO and the resource. The current process was developed after the CAISO recognized the inefficiency of having multiple LSEs providing partial substitutions for resources. Now, the CAISO is proposing to revert the substitution process back to the LSEs. SDG&E does not support this change and believes the CAISO should keep the current substitution obligation with RA resources. SDG&E believes the CAISO should focus on improving liquidity in the bilateral markets to match suppliers to ensure substitute capacity can be provided.

7. RA Imports Provisions

Please provide your organization's feedback on the RA Imports Provisions proposal as described in the second revised straw proposal.

As SDG&E indicated in its comments on the CPUC's proceeding addressing RA import rules, SDG&E does not believe the CAISO's analysis of historical RA imports supports major changes the existing rules and processes governing RA imports. The CAISO's analysis (Figure 14) shows that the amount of non-delivery of unspecified RA imports was less than 10% of scheduled unspecified RA imports during the high-load summer months of August and September of year 2017. The amount non-delivery was under an average of 500 MW across all hours of these two months. However, Figure 14 does not show the amount of unspecified RA import non-delivery during Availability Assessment Hours (AAH), the hours when supply-reliability is typically tightest. Figure 15 shows non-delivery for all RA imports during AAH. Non-delivery is less than 125 MW, on average, during the AAH for all RA imports, so the portion of non-delivery attributable to unspecified RA imports during AAH is even less than 125 MW.

Considering the time periods when supply-reliability is most critical (i.e., summer months during AAH), SDG&E believes historical levels of non-delivery of unspecified RA imports is not alarming and is generally consistent with the unavailability of internal RA sources.

The CAISO proposes that "all LSEs must submit supporting documentation that any non-specified RA import resource shown on annual and monthly RA and Supply plans represent physical capacity and firm transmission."[5] The CAISO further proposes "to require RA imports to specify the source Balancing Area to ensure all RA import resources are fully available and dedicated to the CAISO for reliability."[6] As

[5] Pg 51
[6] Pg 52

indicated above, SDG&E does not believe there is a need for major changes to existing rules and processes governing RA imports.

SDG&E acknowledges that the CPUC has issued a decision which affirms the requirements adopted in D.04-10-035:

> "Qualifying capacity for import contracts is the contract amount, provided the contract: (1) is an Import Energy Product with operating reserves, (2) cannot be curtailed for economic reasons, and (3a) is delivered on transmission that cannot be curtailed in operating hours for economic reasons or bumped by higher priority transmission or (3b) specifies firm delivery point (i.e., not seller's choice)." (page 11)

This decision also provides that:

> "LSEs subject to the RA program should provide documentation as part of its annual and monthly compliance filings, in the form of either contract language or an attestation from the contracting import provider or the scheduling coordinator for the resource." (page 12)

To the extent LSEs are required to provide the CPUC with documentation, it would be acceptable to provide the same documentation to the CAISO. However, SDG&E opposes the CAISO proposal to the extent it would require LSEs to provide more documentation to the CAISO than LSEs are required to provide to the CPUC. For example, the CPUC's decision does not require LSEs to "specify the source Balancing Area" for unspecified RA imports in the LSE's annual and monthly compliance filings.

SDG&E questions the need to limit bids or schedules of import RA resources to only single hour blocks. It is unclear whether such limits accomplish the overall goal if scheduling coordinators are able to provide multi-one-hour block schedules that effectively link up to provide the same multi-block schedule. Additionally, SDG&E is concerned that not allowing the energy to flow as scheduled may conflict with the CPUC requirement to have non-resource specific import RA contracts deliver energy based on the terms of the contract rather than the CAISO's economic dispatches.

Flexible Resource Adequacy

8. Identifying Flexible Capacity Needs and Requirements

Please provide your organization's feedback on the Identifying Flexible Capacity Needs and Requirements topic as described in the second revised straw proposal.

SDG&E supports the CAISO in developing a new flexible RA framework. Given the close relationship with the day ahead market enhancements initiative, SDG&E believes the CAISO should create a separate initiative to develop the new flexible RA framework. SDG&E suggests the CAISO to consider a workshop to cover both topics and allow market participants to better understand the impacts of the proposals.

9. Setting Flexible RA Requirements

Please provide your organization's feedback on the Setting Flexible RA Requirements topic as described in the second revised straw proposal.

SDG&E's primary concern is whether the unpredictable ramping need is already met by the capacity procured to meet the System RA PRM requirements. The CAISO defines unpredictable ramping needs to include forecast error. While there are multiple types of forecast error, such as load or variable energy resources output, load forecast error is already included as part of the System RA PRM and therefore should not be included as part of the Flexible RA requirements. Doing so would cause LSEs to unnecessarily procure capacity to meet the same requirement.

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

Please provide your organization's feedback on the Establishing Flexible RA Counting Rules: Effective Flexible Capacity Values and Eligibility topic as described in the second revised straw proposal.

SDG&E believes additional discussion is required to further develop the CAISO's proposal. While a 15-minute ramping product may naturally be tied to the 15-minute ramping capability of a resource, it is unclear at this time how the must offer obligations would function to ensure the CAISO has such access to such capability in the form of bids.

11. Flexible RA Allocations, Showings, and Sufficiency Tests

Please provide your organization's feedback on the Flexible RA Allocations, Showings, and Sufficiency Tests topic as described in the second revised straw proposal.

SDG&E believes additional discussion is required to further develop the CAISO's proposal.

12. Flexible RA Must Offer Obligation Modifications

Please provide your organization's feedback on the Flexible RA Must Offer Obligation Modifications topic as described in the second revised straw proposal.

SDG&E believes additional discussion is required to further develop the CAISO's proposal.

Local Resource Adequacy

13. UCAP for Local RA

Please provide your organization's feedback on the UCAP for Local RA topic as described in the second revised straw proposal.

SDG&E does not support the UCAP Local RA concept. The Local Capacity Requirement (LCR) studies are performed using 1-in-10 loads which are higher than the 1-in-2 loads used during system assessments. Furthermore, LCR requirements are determined by assuming that major equipment (e.g. multiple transmission lines, generators, etc.) are out of service. Further applying a UCAP requirement on LCR will lead to overprocurment. Most importantly, the CAISO notes that its transmission planning process (TPP) would not assess the CAISO's needs based on UCAP in the future, but remain on installed capacity, or NQC. Therefore, in order to create a UCAP like local RA requirement, the CAISO would have to convert its annual LCR study process, either during or after the study process. Both options seem to create a disconnect with the TPP and creates unnecessary complexity for the hope of transitioning to a UCAP only product for bilateral procurement. SDG&E recommends the CAISO to consider eliminating the Local UCAP concept altogether and better develop refinements based on NQC.

Additional comments

Please offer any other feedback your organization would like to provide on the RA Enhancements Initiative.