



## Submit comment on Straw proposal

Initiative: EIM resource sufficiency evaluation enhancements

### 1. Please provide a summary of your organization's comments on the straw proposal:

PG&E appreciates CAISO's efforts to build confidence in the accuracy of the resource sufficiency evaluation (RSE) tests and provide greater transparency and reporting of RSE performance to market participants. PG&E summarizes its comments and requests to the CAISO as the following:

- Ensure that the effect of excluding more capacity from the RSE calculations does not jeopardize reliability or limit access to emergency supply.
- Quantify the volume of CAISO import awards that may be eliminated from the RSE calculation.
- Evaluate the potential benefits of increased accuracy against increased costs that BAAs may incur in order to pass a more stringent RSE.
- Describe the mechanisms to ensure equitable administration of the RSE in all EIM areas.
- Confirm that CAISO market participants will receive the same quality of information as EIM Entities without divulging market-sensitive information.

### 2. Please provide a summary of your organization's comments on the section of the proposal related to the capacity test modifications – intertemporal constraints, specifically the use of the short-term unit commitment horizon:

This proposed change is part of phase 1.

The use of the STUC horizon is more appropriate than a shorter time horizon to accurately measure feasible capacity

PG&E agrees with CAISO's rationale that the capacity should be physically capable of being available during the hour of evaluation in order to count in the capacity test. PG&E also supports CAISO's recognition of economically displaced capacity, and that the RSE should not exclude offline capacity that bids in and could have been available if not for the impact of EIM transfers or other commitment decisions in previous intervals.

The straw proposal presents reasonable criteria to determine a resource's availability in the real-time horizon, including the resource's start-up time and the hours for which bids were received. The use of STUC (starting at T-270), as opposed to a shorter real-time horizon, is an appropriate time

horizon for considering capacity in the RSE. Proposals from EIM stakeholders to use a shorter time horizon than STUC could exclude capacity from some Short Start<sup>1</sup> units from the RSE, even in cases when these units could have been started up in the STUC horizon but were not needed at the time to meet forecasted demand.

STUC is also a proper horizon for evaluating dispatch decisions with cross-temporal aspects such as commitment or Non-Generator Resources (NGR) dispatch. Similarly to commitment decisions, NGR dispatch could possibly be reversed by the FMM or RTD, and/or require “counter-dispatch” (charging to support future discharge), but this should not exclude energy anticipated in the STUC from contributing to the RSE. Excluding capacity from the RSE that could have been available if not for the EIM or other economic decisions could create a false measure of scarcity that undermines the purpose and benefits of the EIM.

#### Interaction between CAISO’s optimization process and the RSE

It is PG&E’s understanding that the CAISO real-time optimization does not consider the RSE requirements and does not have a specific mechanism to cure deficiencies or ensure RSE success. The lack of such mechanisms seems to put the CAISO BAA at risk of RSE failures more than other EIM BAAs which have functions dedicated to passing the RSE. As a matter of equitability, this is an area where the CAISO BAA lacks the same opportunities as other EIM areas to pass the RSE.

If the CAISO’s market optimization does not consider the RSE requirements or the new rules to exclude temporally constrained resources, the risk of increased RSE failures seems to increase even further. PG&E asks CAISO to consider ways to include new mechanisms to ensure the CAISO BAA has the opportunity to cure a capacity test deficiency the way other BAAs do.

### **3. Please provide a summary of your organization's comments on the section of the proposal related to the flexible ramping test modifications:**

This proposed change is part of phase 1.

#### The quantity of the PBC relaxation adder to the flexible ramping test should be transparent and consistent among all EIM Entities

PG&E understands that the motivation for adjusting the initial reference point of the flexible ramping sufficiency test is to more accurately count available capacity when Power Balance Constraint (PBC) relaxations occur. However, PG&E requests clarifications from CAISO on whether the adder will be (a) the numeric value of the relaxed megawatt amount of the PBC, or (b) the actual megawatts that operators or certain market mechanisms would have secured after identifying the PBC violation. In practice, the two are not always equal in quantity, and it seems appropriate to use the latter. In the CAISO, operators may resort to exceptional dispatch to resolve feasibility issues, which is inapplicable to the other EIM entities. PG&E requests that the CAISO (i) confirm that this understanding is correct, and (ii) clarify how to count the actual megawatts secured in other EIM entities. PG&E believes that

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<sup>1</sup> CAISO’s recent tariff revisions define Short Start units as units with “Cycle Time with Zero to 240 minutes” and Long Start units as those with “Cycle Time greater than 240 minutes and Start-Up Time less than or equal to 1080 minutes.” Pg. 7 at <http://www.caiso.com/Documents/BusinessRequirementsSpecificationv11-Short-LongStartDefinitions.pdf>

it is important for CAISO to assure stakeholders that these modifications to the RSE following PBC relaxations are transparent and consistent among all EIM entities.

In addition, PG&E requests clarification from the CAISO whether the adder of PBC relaxation is only applicable to the flexible ramping test and why it is not applied to (or has been included) the capacity test.

**4. Please provide a summary of your organization's comments on the section of the proposal related to the balancing test modifications, including the potential for changes in revenue allocation:**

This proposed change is part of phase 1.

PG&E does not oppose excluding the CAISO BAA from over/under-scheduling revenue allocation from other EIM entities, but believes this issue should be monitored and reported by DMM

Under the straw proposal, CAISO proposes that EIM areas that are not subject to the balancing test should not receive the revenues that can result when other EIM areas fail the balancing test and incur subsequent over/under-scheduling penalties. In effect, the CAISO BAA would be excluded from receiving revenue from over/under-scheduling penalties on the basis that the CAISO BAA is not subject to those penalties. This appears to be a reasonable compromise that PG&E does not oppose at this time.

Although the CAISO BAA is not subject to the balance test, partly because of the differences in its scheduling practices from other EIM areas<sup>2</sup>, it should be noted that the CAISO BAA still incurs costs and operates its day-ahead and real-time markets to fulfill the purpose of the balancing test to accurately balance demand and protect against under- or over-scheduling. PG&E believes DMM should monitor and report the allocation of revenue from over/under-scheduling penalties so that this issue can be revisited in the future if needed.

**5. Please provide a summary of your organization's comments on the proposed ability for an EIM entity to represent demand response via adjustments to the forecasted demand requirement. Please provide feedback on if the existing penalty structure for under-delivery is sufficient to prevent misuse of this functionality:**

This proposed change is part of phase 1.

PG&E is open to greater participation of demand response in the RSE, but asks for equitable treatment of DR programs across the EIM footprint

PG&E is open to proposals to allow EIM entities to account for demand response (DR) load reduction in the RSE. The straw proposal introduces a new option for EIM entities to account for DR

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<sup>2</sup> In explaining why this test does not apply to the CAISO BAA, CAISO first notes that the balancing test is based on the base scheduling process, which non-CAISO EIM Entities use but the CAISO BAA does not. Further, CAISO explains that the CAISO's automated market processes do not give the CAISO the ability to game the market by over- or under-scheduling to take advantage of differences in congestion, obviating the need to apply this test to the CAISO BAA.

programs in the RSE by reducing their demand forecast by the amount of expected load reduction. To help disincentivize inaccurate DR counting in the RSE, the CAISO proposes to rely on existing under/overscheduling penalties that apply when the scheduling error exceeds 5% of actual demand.

### **Common Criteria**

The proposal does not contemplate common criteria or requirements among EIM participants to verify and measure DR resources. In the CAISO BAA, there are detailed requirements for resources to register as Proxy Demand Response and Reliability Demand Response Resources to participate in the CAISO's markets. In keeping with the initiative's goal of equitable administration of the RSE across the EIM footprint, CAISO should explore whether it is feasible or practical to develop a set of standard criteria for demand response programs to count in RSE calculations.

### **Equal RSE Standards**

The proposal does not mention whether the expected CAISO BAA load reduction (associated with the load-modifying / non-load-side DR inside of the CAISO BAA) would also be included in the RSE. Previously the CAISO has expressed hesitancy on relying on this type of DR for reliability processes. However, it may be appropriate to consider including these expected load reductions in the CAISO BAA's RSE to ensure that all EIM BAAs are treated equally.

## **6. Please provide a summary of your organization's comments on the proposed qualifications for import schedules the CAISO is able to use as an input to the RSE:**

This proposed change is part of phase 1.

### CAISO should quantify the volume of CAISO import awards that may be eliminated from the RSE calculation

To address the potential for overcounting speculative imports in the RSE, the straw proposal suggests that CAISO import schedules that do not submit a e-Tag with a valid transmission profile 40 minutes prior to the hour should not count toward the RSE. Currently, CAISO imports that fail to submit a transmission profile by the T-40 deadline are cancelled and subject to penalties for under/over delivery of their awarded schedule.

PG&E understands that new penalties resulting from the Intertie Deviation Settlement process have reduced the quantity of undelivered imports, but that the CAISO is still analyzing the impact of those changes. To help stakeholders better understand the implications of this proposal, PG&E requests more information about the magnitude of CAISO imports that may be disqualified from the RSE under this proposal.

### Cost impact due to additional RSE failures

PG&E is concerned about the increased risk of RSE failures if the new RSE rules exclude a significant amount of CAISO imports and the CAISO BAA does not have an opportunity to cure any deficiencies in the RSE timeframe. RSE failures can increase the cost of supply for CAISO and potentially contribute to reliability challenges. In the absence of more information about the magnitude of the problem, PG&E asks the CAISO to consider how the reduction in the availability of imports counted in the RSE could inflate the real-time prices.

**7. Please provide a summary of your organization's comments on the proposal to limit incremental EIM transfers when firm load is used as non-spin/spin reserves:**

This topic is included in phase 1.

CAISO should defer consideration of this reform to Phase 2's review of RSE failure consequences

The straw proposal suggests that EIM transfers should automatically be limited when a BAA is utilizing firm load as reserves. PG&E understands the motivation of this change is to avoid circumstances in which a BAA could erroneously pass the RSE when it is clearly experiencing real-time scarcity and has taken emergency actions to arm load. However, PG&E believes that this change should be addressed in Phase 2 of this initiative dealing with RSE failure consequences, since limiting EIM transfers could impose considerable physical and financial consequences on the CAISO and EIM entities.

PG&E continues to note its concern that abruptly limiting incremental EIM transfers during emergencies could exacerbate emergency conditions by limiting access to needed import supply that may be available. In keeping with CAISO's principles that consequences of EIM RSE should not harm reliability in any individual BAA,<sup>3</sup> PG&E believes that it is critical to ensure that the EIM failure consequences do not inadvertently or unnecessarily jeopardize reliability during emergency conditions.

PG&E supports continued consideration in this initiative of exploring targeted financial consequences, instead of imposing physical transfer limitations, for failure of the RSE in emergency circumstances, as noted above.

**8. Please provide a summary of your organization's comments on the section of the proposal related to additional transparency and data availability:**

This topic is included in phase 1.

PG&E appreciates and supports CAISO's effort to provide more granular and detailed metrics to EIM entities about their own RSE performance. PG&E understands that DMM will take over from CAISO regular reporting duties on issues such as RSE failures as well as new metrics on the performance and accuracy of the RSE. For each EIM BAA, CAISO will also provide detailed information on advisory and binding RSE results through CAISO Market Results Interface (CMRI).

In implementing these transparency improvements, CAISO and DMM should continue to protect proprietary and market-sensitive information to prevent any potential for market manipulation. PG&E asks CAISO for clarification and assurance that CAISO market participants such as CAISO LSEs should receive a comparable level and quality of BAA-level information as their counterparts who serve as EIM Entity SCs.

**9. Please provide a summary of your organization's comments on the additional metrics that the Department of Market Monitoring can develop for the RSE:**

This proposed change is part of phase 1.

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<sup>3</sup> "The consequences of resource sufficiency evaluation failures should not cause operational or reliability issues." CAISO Straw Proposal, p. 5. <http://www.caiso.com/InitiativeDocuments/StrawProposal-EIMResourceSufficiencyEvaluationEnhancements.pdf>

PG&E supports the straw proposal's direction for DMM to release after-the-fact metrics to assess RSE accuracy and performance for each EIM BAA.

**10. Please provide a summary of your organization's comments on the section of the proposal relating to the uncertainty calculation; specifically the use of the last 3 months of deviation data as well as the 95% confidence interval:**

This topic is included in phase 1.

PG&E appreciates stakeholders' discussion of the flaws with the current uncertainty calculation and looks forward to CAISO's implementation of the new quantile regression methodology. PG&E requests that the CAISO or DMM publish data in the future to demonstrate that the proposed quantile regression method is effective in correcting the flaws in the current method for setting the flexiramp requirement. PG&E agrees with the MSC that until the method for setting the uncertainty requirement is well tested, including the uncertainty requirement in the bid range capacity requirement could result in some number of unintended sufficiency test failures. PG&E believes that the CAISO should retain the ability to switch off the feature of adding uncertainties to the capacity requirements on short notice if needed.

**11. Please provide your organization's comments on the proposal to address the RSE failure consequences in the phase 2 of this initiative, including desired timelines for the start on phase 2 of the initiative.**

PG&E supports CAISO's proposal to defer consideration of failure consequences until after the RSE changes from this and other recent initiatives, including the Summer 2021 Readiness initiative, have been implemented and adequately reviewed.

PG&E would like to reiterate that it is worthwhile to explore whether the failure consequences should be more nuanced and depend on other conditions such as (i) the state of the EIM overall (*i.e.*, is the whole EIM short or just one BAA); (ii) are there economic transfers available; (iii) the magnitude and frequency of failure; *etc.*, as just three examples.

During normal conditions, it appears that the current operational penalties can work against the EIM's purpose to leverage regional diversity and allow entities to trade residual capacity that is voluntarily offered into the market. DMM has noted that "limiting transfers between balancing areas when an area fails a resource sufficiency test will often decrease the overall efficiency of the EIM market dispatch." PG&E supports further discussion of how well-designed consequences could deter inappropriate leaning and offer improved market efficiency and reliability benefits to the EIM as opposed to the current penalty.

PG&E would also like to better understand the importance of the current operational penalties in preventing cascading reliability challenges, and whether moving away from operational penalties and toward financial consequences could cause unacceptable reliability challenges. If financial consequences are pursued, PG&E believes they should be targeted, incorporated into the market optimization process, and that the revenue allocation methodology should minimize opportunities for gaming or the incentive to withhold.

When one imagines all the scenarios that might lead to a BAA failure of an RSE, there are large differences in the amount of inappropriate leaning and the effects on the reliability of EIM. Therefore, it is worth exploring how the penalties of failure can be refined to reflect those differences.

**12. Please provide your organization's comments on the proposal to address the load forecast adjustments topic in phase 2 of this initiative:**

PG&E does not support addressing load conformance adjustments in phase 2 of this initiative

PG&E agrees with CAISO's concerns with including operator load adjustment issues in the scope of this RSE initiative. PG&E also notes the Market Surveillance Committee's<sup>4</sup> objection to including this issue in the RSE initiative, stating that including CAISO load conformance adjustments in the RSE would overstate actual load and "cause the CAISO to fail the test when it should not."

**13. Please provide your organization's comments on the proposed EIM Governing Body classification to have primary authority to approve the EIM RSE final proposal:**

PG&E believes the current classification is consistent with the current governance rules. PG&E requests that CAISO confirm that, upon final implementation of the necessary changes to CAISO governance documents, and consistent with the recent Governance Review Committee Part Two approval, this initiative would be reclassified to the Joint Authority category.

**14. Please provide any additional comments on the EIM RSE Enhancements initiative that have not previously been addressed:**

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<sup>4</sup> "Load Conformance Adjustments and the Resource Sufficiency Test." Scott Harvey. Member, California ISO Market Surveillance Committee. August 27, 2021  
[http://www.caiso.com/Documents/LoadConformanceandResourceSufficiencyTests-Presentation-Aug27\\_2021.pdf](http://www.caiso.com/Documents/LoadConformanceandResourceSufficiencyTests-Presentation-Aug27_2021.pdf)