



**Comments of Pacific Gas and Electric Company on Commitment Costs and Default Energy Bid Enhancements Revised Straw Proposal and 8/11 Stakeholder Meeting**

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on CAISO’s Commitment Costs and Default Energy Bid Enhancements (CCDEBE) Revised Straw Proposal and August 11<sup>th</sup> Technical Working Group. PG&E appreciates CAISO’s addition of technical and process details in the Revised Straw Proposal and thanks CAISO staff for being receptive to stakeholder concerns and requests for additional policy details.

PG&E supports components of CAISO’s Revised Straw Proposal, but has significant concerns about components of CAISO’s design package and requests additional detail be provided before a final policy can be supported. PG&E continues to have concerns about committing to move forward with a dynamic mitigation design while many questions remain regarding design details, feasibility, and cost. PG&E believes a dynamic commitment cost mitigation design requires further vetting before moving forward and continues to recommend bifurcating the design and implementation of dynamic mitigation from the rest of the CCDEBE policy. CAISO can pursue bid and reference design enhancements first and fully comply with FERC Order 831 without this design component. Additionally, PG&E believes potential market benefits of introducing dynamic commitment cost mitigation have not been demonstrated and subset of design changes proposed in CCDEBE will address the majority of stakeholder concerns that spurred the initiative. PG&E requests CAISO clearly lay out costs and benefits of pursuing a dynamic commitment cost mitigation design before moving to a Draft Final Proposal. PG&E also requests further detail and testing for reasonableness thresholds used for ex ante reference cost updates.

The following points are discussed in detail in the subsequent section:

- 1. PG&E believes CAISO can move forward with a smaller scope of design enhancements to address the core of stakeholder concerns regarding bid flexibility and adequate reflection of costs, and allow CAISO to comply with FERC Order 831**
- 2. PG&E has concerns about the implementation of dynamic commitment cost mitigation; PG&E encourages CAISO to phase the dynamic commitment cost mitigation design and implementation, allowing more time to study and evaluate design options while better aligning this effort with forthcoming Real-Time market changes**
- 3. PG&E supports CAISO’s proposed process and timeline for requesting ex ante reference cost updates, and ex post reference adjustment request reviews. However, additional detail is needed to support ex ante reasonableness thresholds used for the reference cost update functionality**



4. PG&E provides some considerations for Hourly Min Load Cost variation
5. PG&E provides additional comments on dynamic commitment cost mitigation

## Comments

1. **PG&E believes CAISO can move forward with a smaller scope of design enhancements to address the core of stakeholder concerns regarding bid flexibility and adequate reflection of costs, and allow CAISO to comply with FERC Order 831**

PG&E believes CAISO can move forward with smaller scope of design changes to address the core of stakeholder concerns and allow CAISO to comply with FERC Order 831 without the dynamic mitigation/market-based commitment cost components of the design package.

PG&E requests CAISO provide a quantification of the benefits dynamic mitigation will provide the market. In its Straw Proposal, CAISO states that “Effectively by only supporting cost-based commitment cost offers the CAISO design assumes uncompetitive conditions for every run which provides certainty that over-mitigation is occurring regularly.”<sup>1</sup> PG&E requests CAISO help stakeholders understand the magnitude of costs attributed to over-mitigation occurring in the market today. An understanding of the scope of the issues seen today will help in assessing whether implementation and resource costs to design dynamic commitment cost mitigation are warranted, especially when the smaller scope of design changes can mitigate many stakeholder concerns.

2. **PG&E has concerns about the implementation of dynamic commitment cost mitigation; PG&E encourages CAISO to phase dynamic commitment cost mitigation design and implementation, allowing more time to study and evaluate design options while better aligning this effort with forthcoming Real-Time market changes**

CAISO has made progress outlining details for a potential dynamic commitment cost mitigation framework. However, PG&E still has significant concerns about including this design component as part of the CCDEBE package. PG&E believes there are still core design details to work through, that feasibility of the design under a new Real-time market framework has not been proven, and that a discussion on costs and benefits is necessary before committing to move forward with this design. The CCDEBE initiative is currently on an expedited timeline, with a Draft Final Proposal expected August 18<sup>th</sup>. PG&E does not believe this is enough time to fully work out open issues and fully vet stakeholder concerns raised in comments. There are many details to work out still regarding design and feasibility. PG&E notes that the majority of dynamic commitment cost mitigation design details have been presented to stakeholders over the course of ~2 months. Design details and review timelines for stakeholders have been expedited and PG&E is concerned that participating stakeholders have not been given ample time to thoroughly review the proposed changes. This expedited timeline also prevents a wider stakeholder audience from becoming fully engaged in understanding and evaluating the proposed design thoroughly. Because lifting bid caps on

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<sup>1</sup> “Straw Proposal Commitment Costs and Default Energy Bid Enhancements”. California ISO. p34.



commitment costs has the potential to significantly increase out-of-market uplift costs, PG&E encourages that CAISO ensure the design dynamic commitment cost mitigation is proven effective and given adequate attention and scrutiny. As the design progresses, CAISO should also be continually testing new functionality, keeping stakeholders apprised of its evaluations.

PG&E believes the following design details need to be vetted further with stakeholders and detailed in a final proposal (additional comments on dynamic mitigation are detailed in item #5):

- How CAISO will apply dynamic commitment cost mitigation to exceptional dispatches
- More detail regarding applying mitigation to advisory intervals. PG&E suggests CAISO depict clearly what binding and advisory intervals are being evaluated for dynamic commitment cost mitigation and through what intervals mitigation would carry for each market run. PG&E also suggests CAISO detail how mitigation carries from market to market (e.g. STUC to FMM to RTD) and how the design is expected to work under forthcoming RT market changes
- CAISO should examine additional bid locking or settlement provisions for scenarios where resources are “forced” to be on or can force themselves to be committed or kept on. This includes when resources come out of self-scheduled periods, when resources can make themselves look very economic in early hours and force commitment for an extended period of time, or when resources can use physical operating characteristic (Min Run Time, Min Down Time) to extend commitment periods. CAISO should examine its bid and settlement provisions to ensure excessive uplift cannot be generated if bid caps are lifted.
- CAISO should consider locking commitment cost bids in Real-Time for resources that received a Day-ahead Non Spin schedule. To the extent that resources with Day-ahead Non Spin schedules are more likely to be committed or called upon in Real-Time, CAISO should lock commitment costs at Day-ahead levels.
- PG&E requests CAISO re-examine its proposal to use 300% as the circuit-breaker bid cap. CAISO chose this threshold after evaluating other ISO/RTO conduct thresholds. CAISO should consider that other markets may experience a greater level of fuel price volatility than is observed in the West, often warranting higher conduct thresholds. PG&E believes this cap may be too high, especially for resources that have high heat rates and high commitment costs.

PG&E believes the following implementation details should be vetted with stakeholders further:

- PG&E requests CAISO evaluate the feasibility of conducting dynamic commitment cost mitigation under the current market design and under forthcoming RT market changes. CAISO should test how much time the dynamic commitment cost mitigation design will add to all market runs while matching current solution quality.
- CAISO mentions in its Revised Straw Proposal that it will evaluate costs associated with implementing dynamic commitment cost mitigation<sup>2</sup>. PG&E would like to understand what level of effort and cost is required for CCDEBE implementation. These costs should be compared to the benefits to the market of implementing such a design.

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<sup>2</sup> “Revised Straw Proposal Commitment Costs and Default Energy Bid Enhancements”. California ISO. Page 44.



**3. PG&E supports CAISO’s proposed process and timeline for requesting ex ante reference cost updates, and ex post reference adjustment request reviews. However, additional detail is needed to support ex ante reasonableness thresholds used for the reference cost update functionality:**

PG&E appreciates CAISO providing details around process to request ex ante reference cost update, and ex post review process. PG&E supports the proposed timeline to request updates and process for ex ante requests and ex post reviews that CAISO laid out in its Revised Straw Proposal and associated process flowchart. PG&E also supports CAISO’s added language to request the authority to audit use of the reference cost update functionality, even for reference adjustments that pass the ex ante reasonableness thresholds. This will encourage suppliers use the reference cost update functionality appropriately.

**PG&E requests additional information, however, to fully support the reference cost update proposal, specifically as it relates to the calculation of reasonableness thresholds:**

- a) PG&E requests CAISO provide formulas and mock calculations to support its ex ante reasonableness threshold calculations. PG&E believes it will be beneficial for CAISO to provide sample calculations based on historical data and provide SCs with these numbers and formulations to help them gain an expectation of what reasonable tolerance bands may look like. Actual formulas for calculating reasonableness thresholds are also necessary to fully evaluate the proposed design. CAISO describes calculating “seasonally statistical expectations” of deltas between observed gas trades. PG&E requests CAISO provide exact formulations to calculate statistical expectations and parameters around these calculations such as how seasons will be defined and how outliers will be identified.
- b) CAISO should outline a process to revise or update reasonableness thresholds. This includes how often CAISO will update calculations or what conditions might trigger CAISO to update or revise calculations.
- c) CAISO describes the use of a “feedback loop” term to capture costs in reasonableness thresholds that have been verified in the ex post verification processes. PG&E requests more detail regarding this term. How frequently will this term be updated? What length of ex post cost verification is required before incorporating this term in the thresholds calculations? Does this only apply to fuel costs or are other costs also eligible to be included in the feedback loop?
- d) PG&E continues to support transparency in how reasonableness thresholds are calculated. CAISO outlines some methodology in its Revised Straw Proposal, but PG&E requests CAISO ultimately provide transparency into actual formulas used to calculate thresholds for various technology types. PG&E suggests this information be publicly available in either a BPM or separate public document.

**PG&E asks for further clarification on some items related to the reference update process:**

- e) **Documentation supporting reference adjustments**– PG&E believes setting a documentation minimum requirement of 5-10 price quotes may be too stringent. The number of quotes feasibly attainable varies with fuel availability/market liquidity. PG&E also notes that “quotes” should be considered either a price or statement of lack of availability. PG&E also



suggests maintaining a minimum 2-3 counterparty requirement for documentation. PG&E has the following clarifying questions regarding documentation:

- Regarding the documentation list on page 81 of the Revised Straw Proposal, are all documents required? Or will it be up to CAISO's discretion to determine adequate documentation from the list?
  - Could the 5-10 quote requirement be met by a single supply curve from a single counterparty at a point in time? Or is the requirement intended to capture different quotes from the same counterparty at different times of the day for the same volume? PG&E believes this requirement can be interpreted in different ways. Also, without a minimum counterparty requirement, these two examples may not reflect suppliers seeking the most economic fuel.
  - Regarding the "fuel market or transport availability conditions" documentation, will CAISO monitor and retain line pack level information or work with California Gas Transmission or SoCalGas to obtain this documentation? Or is it expected that the SC would provide this information?
  - Are the "conditions" (fuel market price conditions and fuel market or transport availability conditions) intended to serve as additional checks to verify if a supplier used the reference update functionality properly? Will suppliers be subject to clawbacks if any of these conditions are not met?
  - Regarding day-ahead conditions upon which a reference adjustment is warranted, CAISO notes on page 74 of the Revised Straw Proposal that "CAISO is still evaluating feasibility of whether CAISO can automate the inclusion of an approximation of the next day gas index in its day-ahead market on a routine basis." PG&E supports making this reference update process permanent.
- f) **Audit process clawback** – PG&E requests CAISO provide detail on how the clawback payment will be determined if CAISO were to find a supplier misused the reference cost update functionality and what behavior would constitute misuse of the reference update tool.

#### **4. PG&E provides some considerations for Hourly Min Load Cost variation**

- PG&E requests CAISO ensure that resources with no bids in place to complete Min Run Time who have proxy cost inserted through Min Run Time, cannot update their bids to a level greater than average of the bids in the STUC horizon.
- PG&E requests CAISO clarify at what level MLC bids will be locked through Min Run Time if there are missing bids in the STUC horizon and a resource gets committed. I.e. Will CAISO treat missing bids in the STUC horizon as null?
- Given non-RA resources will be able to select hours to participate in the market, CAISO should consider whether it needs to enforce new bid validation logic to ensure that suppliers submit bids that support physical operating parameters (eg. if a supplier has a 5 hour MRT, bids should be in place for at least 5 contiguous hours).



- If MLC is mitigated, and mitigation carries through Min Run Time, CAISO should consider developing hourly Min Load proxy costs that mirror the need to shape hourly MLC costs in the first place. If a daily proxy cost is used and a resource's MLC bids are mitigated, the mitigated offers may no longer reflect shaped costs

## 5. Additional comments on dynamic commitment cost mitigation

On the 8/11 Stakeholder Call, CAISO proposed to calculate expected shadow prices for non-binding constraints based on the following formula. This calculation should attempt to indicate the likelihood of a resource being committed to resolve a constraint.

$$\text{shadow price}_{\text{default}} = \text{SMEC} * \text{SR}$$

Where

$$\text{SR} = \frac{\max(\text{shadow price}_{\text{actual}})}{\text{SMEC}}$$

PG&E believes this method of calculating shadow prices may result in significant over and under mitigation in different scenarios. First, the maximum shadow price may be set under conditions that are very different from the current market run. This could be the case, for example, if the maximum shadow price occurred in an interval where a generation or transmission outage caused a line to bind severely. This type occurrence may be transient and not reflective of normal conditions, yet can impact mitigation for an unspecified amount of time going forward.

To depict where under-mitigation can occur, imagine a scenario with a 100MW limit transmission line feeding into a load pocket. Suppose Load is either 75MW or 150MW. A generator, (Gen1) resides on the opposite side of the constraint from Load. A generator (Gen2) with a 75MW Pmin resides on the same side of the constraint as Load. If Load is 75MW, Gen 2 is not committed, flow on the line is 75MW, and the constraint does not bind and will have a \$0 shadow price. If Load is 150MW, we must commit Gen 2 at least at Pmin (75MW) and flow on the line will still be below limit (<100MW) to serve Load. The constraint does not bind and still has a \$0 shadow price. In this scenario, commitment costs of Gen2 will never be mitigated though it has market power to raise its commitment costs to bid caps when load is 150MW. In this scenario CAISO's proposed default shadow price calculation would never capture the fact that Gen2 has market power.