

Comments of Pacific Gas and Electric Company on Imbalance Conformance Enhancements Draft Final Proposal

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on CAISO's Imbalance Conformance Enhancements Draft Final Proposal, published January 30, 2018.

PG&E views the imbalance conformance limiter as an important tool to mitigate instances when operator imbalance conformance creates an artificial scarcity. While PG&E supports the continued use of the imbalance conformance limiter, PG&E supports CAISO efforts to reduce the need for and use of manual imbalance conformances and the imbalance conformance limiter.

PG&E offers the following comments:

1. PG&E supports methods that improve the use of imbalance conformance.

In its Draft Final Proposal, the CAISO proposes to improve the conformance process using forecasting enhancements, market enhancements, and operator tools to limit the need for the imbalance conformance limiter. The CAISO also proposes to seek clarity on its imbalance conformance authority and add the imbalance conformance limiter into its tariff. PG&E supports these actions. Reducing the coarse nature of the imbalance conformance is likely to significantly reduce the need for the imbalance conformance limiter. PG&E supports continued efforts to improve the imbalance conformance process.

2. PG&E does not support the removal of the imbalance conformance limiter in two years without significant evidence of the success of the CAISO's approaches to mitigate the need for the imbalance conformance limiter.

As a part of the broadening of the scope of the Imbalance Conformance Enhancements stakeholder process, the CAISO indicated that with the added tools it expects to provide operators, it will be able to sunset the imbalance conformance limiter in two years. Rather than setting a date certain, the CAISO should develop a set of criteria to determine when the imbalance conformance limiter will have such a negligible impact that its removal will not lead to unintended consequences. While setting a goal sunset date for the imbalance conformance limiter may be appropriate, PG&E does not support setting a sunset date in the CAISO Tariff.



3. To establish the evidence of success in mitigating the need for the imbalance conformance limiter, the CAISO should develop transparent metrics to measure the accuracy of imbalance conformance adjustments.

The underlying motivation for the imbalance conformance limiter is the concern that the imbalance conformance is having an undue impact on market prices. Unfortunately, PG&E and other stakeholders are unable to know whether the imbalance conformance is having an undue impact on market prices because an assessment of the accuracy of imbalance conformance adjustments is not available. If the imbalance conformance adjustments, even with the coarse nature of the adjustment, are accurate, then the imbalance conformance limiter should be designed to have a minimal impact. However, if the imbalance conformance adjustments are inaccurately reflecting forecasting errors, then the large impact of the imbalance conformance limiter should be considered appropriate. The lack of assessment also prevents a feedback loop for the operators to attempt to be more accurate with their adjustments.

PG&E recommends that the CAISO consider measuring the accuracy of imbalance conformance adjustment. A metric could be:

$$\frac{\text{imbalance conformance adjustment}}{\text{load forecast error} + \text{non-intermittent resource dispatch error} + \text{intermittent resource dispatch error}}$$

Where intermittent resource dispatch error is:

$$\frac{\text{Metered renewable output}}{\text{Forecasted non-curtailed intermittent resources} + \text{dispatch instructions for curtailed intermittent resources}}$$

While this metric may capture confounding elements such as non-market CAISO instructions, understanding what deviations occur due to CAISO instruction would be helpful to truly isolating the unexpected deviations which the imbalance conformance adjustment is designed to address.

4. The CAISO should clearly specify the conformance authority it seeks from FERC.

In its Draft Final Proposal, the CAISO proposes to make tariff changes clarifying the ISO's authority to conform in the real time and day ahead markets. As the CAISO states, the ISO Tariff does not explicitly specify the authority of the ISO to conform in the Real Time Market, but gives the ISO discretion to create a load forecast it deems appropriate to maintain grid reliability. Similarly, the ISO has the authority to set the CAISO Forecast of CAISO Demand as it deems appropriate. PG&E is concerned about the significant impact that imbalance conformance can have on market outcomes, and the potential that imbalance conformance can undermine market fundamentals. PG&E views this stakeholder process as an opportunity to seek the FERC's guidance on the proper balance between operator action and price formation. PG&E suggests the CAISO be more specific in what it means to "conform" in a market and the reasons for the need for imbalance conformance.



5. The impact of various types of forecast error on imbalance conformance should be more directly addressed.

In its Draft Final Proposal, the CAISO provided more detail on the magnitude and frequency of imbalance conformance and how it has changed over the past two years. PG&E appreciates the CAISO's efforts to provide stakeholders more data. However, the data does not easily communicate the drivers of the increase in magnitude and frequency of imbalance conformance. Further, the question of the degree to which Variable Energy Resource (VER) forecasts are contributing to imbalances in RT has not been answered. The CAISO should also investigate whether the imbalance conformance due to load deviations is closely correlated to the increase in customer-connected VERs. These topics highlight that not only does the conformance process need to be improved and made more transparent, but the underlying causes of the increase in magnitude and frequency should be closely analyzed and presented to stakeholders.

6. The CAISO should explain the interaction between imbalance conformance adjustments, load averages, Day Ahead Market enhancements, and the Flexible Ramping Product improvements.

In the CAISO's list of potential factors for which ISO and EIM balancing area authorities may conform for imbalance, the CAISO includes "Averages that do not reflect dramatic load increase or decrease". The CAISO should provide more detail on how these instances occur, how frequent these instances occur, and how large these instances are when they occur.

In describing the improvements to the conformance process, the CAISO states that Day Ahead Market enhancements will lead to a reduction in conformance in both the Day Ahead and Real Time Markets. It is not clear why a change in the granularity of the day ahead market or development of a Day Ahead flexible reserve product would reduce the need for imbalance conformance. Similarly, in describing the improvements to the conformance process, the CAISO states that Flexible Ramping Product improvements will lead to a reduction in conformance in the Real Time Markets. Since it is PG&E's understanding that the Flexible Ramping Product improvements are solely focused on deliverability amongst EIM areas and the CAISO BAA, it is not clear why this change would reduce the need for imbalance conformance. The CAISO should provide more detail on how the Day Ahead Market Enhancements and Flexible Ramping Product Improvements interact with imbalance conformance adjustments.