



Stakeholder Comments Template

Price Performance Analysis

This template has been created for submission of stakeholder comments on the Price Performance Analysis white paper that was published on April 3, 2019. The paper, Stakeholder meeting presentation, and other information related to this initiative may be found on the Miscellaneous Stakeholder Meetings webpage at: <http://www.caCAISO.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>.

Upon completion of this template, please submit it to initiativecomments@caCAISO.com. **Submissions are requested by close of business April 18.**

Submitted by	Organization	Date Submitted
Ramon Mitchell	PacifiCorp	April 18, 2019

Please provide your organization's comments on the following issues and questions.

1. Scope

The Price Performance Analysis effort is intended to ensure California Independent System Operator ("CAISO") markets produce prices that incentivize performance and reflect system conditions. Please provide your organization's feedback on the scope of this effort. Specifically, what should be included, and what should be excluded. Please explain your rationale and include examples, if applicable.

PacifiCorp is supportive of the CAISO's intended effort to analyze whether its market produces prices that incentivize performance and reflect system conditions. More specifically, PacifiCorp's participation in the Energy Imbalance Market ("EIM") makes this an issue that is important to understand, given the current exposure that PacifiCorp faces in CAISO uplift costs and real-time pricing. One point that PacifiCorp would like further clarification is on the CAISO's following statement "[t]he outcome of this analysis will inform potential action items to address the identified price performance issues." PacifiCorp would like to understand what actions items the CAISO is proposing to address, e.g. Resource Adequacy ("RA") Enhancements, Day-

ahead market enhancements (“DAME”) or Extended Day-ahead Market Enhancements (“EDAM”).

With regard to the scope of the analysis, PacifiCorp believes it is appropriate to include Operator Interventions, including load bias, and the effect of the Residual Unit Commitment (“RUC”) process in its review of price performance in the CAISO markets. The introduction of variable energy resources into the CAISO market, and the majority of utility portfolios today, have changed the dynamics of market prices and, more specifically, price convergence. Today, when variable resources are forecast to produce higher levels of generation, prices are low on a day-ahead basis. Consequently, if the variable resources don’t produce as forecast, prices are higher in the real-time market than they were on a day-ahead basis and, conversely, if they produce more than forecast, prices are lower in real-time. In the CAISO market, virtual bidding is a tool that can be used to hedge against such an occurrence, and bring about price convergence. However, because the CAISO has a large out-of-market commitment process, bid cost recovery payments have made these virtual bids less attractive due to uncertainty related to bid cost recovery allocations as well as incorrect price formation on a day-ahead basis. As the CAISO’s renewable portfolio has grown, so has the CAISO’s manual process of committing resources to meet its flexibility needs on a real-time basis resulting in integrated forward market prices that do not reflect the actual cost to reliably serve load on a day-ahead basis. PacifiCorp is concerned about this issue in the context of an EDAM, as well as the fact that PacifiCorp is allocated bid cost recovery costs in the EIM that are likely related to insufficient price performance on a day-ahead basis.

Also within the scope of analysis, the CAISO stated it will review “the effect of having only the real-time market consider EIM transfers into the CAISO system and the resulting contribution to price divergence as compared to the day-ahead market.” While PacifiCorp agrees this is a point that parties have made in the past, this issue may be better viewed in the context of an EDAM paradigm, rather than considering simply “EIM supply” in the day-ahead time frame. What is missing from this “EIM supply” on a day-ahead basis are the bilateral transaction costs and day-ahead reserves that are not accounted for in the EIM. Similar to the CAISO, PacifiCorp has a large portfolio of variable energy resources for which it must hold forecast uncertainty reserves on a day-ahead basis. Procuring energy purchases in the bilateral market, to free up capacity on the PacifiCorp system, or not selling energy, results in a higher marginal cost than if PacifiCorp did not have to carry uncertainty reserves on a day-ahead basis. These day-ahead costs, including bilateral transactions to serve load, are not included in PacifiCorp’s marginal generation costs in the EIM, thus, in its analysis of EIM transfers and the impact on price convergence, PacifiCorp would like the CAISO to further look at this issue from an EDAM perspective, wherein PacifiCorp’s day-ahead resource adequacy costs may be a better context for this review.

2. Drivers

The Price Performance Analysis initiative white paper examined the potential drivers to be included within the analysis. Please provide additional drivers to consider, if any. Please explain your rationale and include examples, if applicable.

When analyzing each of the drivers in the context of this initiative, such as the expansion of the supply pool within the real-time market relative to the day-ahead market as several balancing areas are optimized with the EIM and the effect this has on price performance, PacifiCorp believes it is important to consider the counterfactual. In addition, PacifiCorp would like to stress that each of these drivers should not be viewed in isolation. The interaction of each of these variables, e.g. RUC, leading to high bid cost recovery and therefore low virtual bidding, is also an important point to consider.

3. Data Requests

Please provide your organization's feedback on any specific data requests. Please explain your rationale and include examples, if applicable.

Additional comments

Please offer any other feedback your organization would like to provide on the Price Performance Analysis white paper.