

**Western Power Trading Forum on the CAISO's Price Performance Analysis Report**  
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### **The Western Power Trading Forum**

The Western Power Trading Forum (WPTF) is a California nonprofit, public benefit corporation. It is a broad-based membership organization dedicated to enhancing competition in Western electric markets while maintaining the current high level of system reliability. WPTF supports uniform rules and transparency to facilitate transactions among market participants. The membership of WPTF and the WPTF CAISO Committee responsible for providing these comments include CAISO and EIM entities, load serving entities, energy service providers, scheduling coordinators, generators, power marketers, financial institutions, and public utilities that are active participants in the California market, other regions in the West, and across the country.

### **Summary**

WPTF thanks the CAISO for this opportunity to provide comments on the Price Performance Analysis report discussed on the June 21 stakeholder call. WPTF commends the CAISO's efforts to date on conducting another robust and detailed assessment of the markets, this one focusing on price performance issues. The initial report provides valuable insights into what are some of the more persistent drivers of price divergence. As the CAISO and stakeholders continue through this analysis effort, it's important that we keep in mind that not all price divergence events are necessarily inappropriate. Rather, the concern is when prices are not reflective of market conditions or when out of market actions are being taken that dilute the appropriate price signal. WPTF recognizes why the CAISO's initial analysis focuses on price divergence as an initial metric and is looking forward to the next phase of the analysis that will ideally start connecting drivers of price performance with potential price formation concerns.

In this next phase of the analysis, WPTF encourages the CAISO to try and correlate the occurrence of the driving factors with price divergence events such that a cause and effect relationship can be established. The detailed comments below discuss additional analysis that WPTF believes would be beneficial in the ultimate objective of identifying those drivers that are persistently causing inappropriate price divergences between the markets and in the end diluting appropriate price signals.

### **Detailed Comments**

#### ***Load adjustments***

The initial analysis presented all seems to indicate that the CAISO actions (either within the market or via out of market actions) are impacting the ability of prices to reflect actual market conditions. The main action highlighted in the analysis is adjustments to load. Operator load adjustments, either via RUC Net Short adjustments or load conformance, seem to be a consistent theme throughout the analysis. One of the more interesting results from the analysis is that load adjustments across markets vary drastically and in some cases are in opposite

direction. For example, Figure 25 shows that when load is adjusted upward in the HASP and FMM markets that, oftentimes, its adjusted downward in the RTD market. As explained on the stakeholder call, operators may be adjusting HASP and FMM load to better position (and commit) resources for anticipated real-time conditions. However, this results in the HASP and FMM prices increasing and then due to additional unit commitments, suppressing real-time prices. Thus, WPTF is interested in better understanding the frequency and magnitude of price divergence between the markets due to load conformance and resulting unit commitments.

One potential way to assess the correlation is to further categorize the price point pairs in Figure 15 by load conformance magnitude. For example, a subset of the price point pairs may be associated with hours when the operators adjusted FMM load by 100 MWs - 500 MWs and another subset of the pairs associated with hours when operators adjusted FMM load by 500 MWs – 1,000 MWs.

Additionally, it would be informative to understand the impact of load conformance on unit commitments. When operators adjust load in the HASP/FMM markets, the market has the ability to clear additional imports and make additional unit commitments. In either case, the additional capacity procured in the HASP/FMM market runs as a result of the load adjustments then potentially suppresses the real-time market prices. Ideally, the CAISO would be able to conduct some sort of counterfactual that evaluates what the unit commitments and real-time prices would have been in the HASP/FMM/RTD markets absent the load conformance.

### ***Case Studies***

WPTF appreciates the CAISO conducting the case studies that were included in the analysis report and discussed on the stakeholder call. They are all extremely informative and help shed additional light on the various factors that may contribute to price divergence events between the markets. As previously noted, load conformance seems to be a consistent factor in all the case studies presented, which is why WPTF encourages the CAISO to further evaluate load conformance not just in extreme price divergence events but in all cases.

WPTF also asks that in the next phase of the analysis, the CAISO conduct a few more case studies that focus on events when the day-ahead prices were higher than real-time market prices. The overall trend presented in the analysis is that day-ahead prices have been, on average, higher than real-time. However, the case studies primarily focus on when real-time prices were higher than day-ahead.

WPTF would like to take this opportunity as well to emphasize the importance of evaluating factors that are consistently contributing to what may be considered less significant price divergence events. There will always be cases in which extreme events occur that are outside the CAISO's control occur, resulting in price divergence events (e.g., transmission and generation outages, other BAA events, fires, etc). In such cases as these extreme events, for example, one would anticipate prices in the real-time market to spike if there is an unexpected loss of generation; this would be considered appropriate price formation and price signal.

However, it's equally as important to determine what drivers may be consistently (albeit even at a lower magnitude) contributing to price divergence/price formation issues that the CAISO can address either through market design changes or operating procedures.

### ***Additional Analysis***

In addition to the analysis discussed under the Load Adjustments section, WPTF has two additional requests of the CAISO for the next phase of this analysis. First, the CAISO has included several charts and graphs throughout the report that compare prices across markets. WPTF asks that in the next phase, the CAISO expand those charts and graphs to also include a comparison between IFM and FMM prices; IFM prices are compared to HASP and HASP prices are compared to FMM, but IFM to FMM are not presented. Secondly, WPTF included in its last set of comments an assessment of transmission differences and again would like to reiterate this request. The impact on transmission differences could, at a minimum, be evaluated under one of the case studies that will be included in the next analysis phase of this effort.

### ***Summary of Findings and Recommendations***

WPTF appreciates that the goal of this effort is to provide robust analysis such that the CAISO can use the results to then determine if and what market design or operating procedure changes should be considered. Given the myriad of metrics included in this initial report, and the additional metrics likely to be added in the next phase of the analysis effort, it would be useful to have a summary of findings and recommendation section in the next iteration. WPTF envisions such a section would provide a discussion of the key findings based on the analysis that characterizes the price performance and price formation trends within the CAISO markets. Additionally, the section would provide some potential recommended changes for the CAISO and stakeholders to start contemplating that could address some of the price formation concerns/issues raised in the key findings.

WPTF thanks the CAISO for consideration of these comments.