



## 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.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx>.

Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com).

**Submissions are requested by close of business April 18.**

Submitted by	Organization	Date Submitted
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**Please provide your organization's comments on the following issues and questions.**

#### 1. Scope

The Price Performance Analysis effort is intended to ensure ISO 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.

The CAISO's proposed scope of analysis is:

- a. Metrics to determine price performance
- b. Operator interventions on the supply side
- c. Divergence of load requirements between markets
- d. Divergence of supply capacity
- e. Market dynamics

NRG supports this proposed scope.

## 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.

NRG understands the “drivers” to be things such as VER forecasting; resource deviations, EIM transfers, and convergence bidding.

NRG asks that the CAISO, in particular, carefully analyze and report on how extra-market operator actions, such as exceptional dispatch, load conformance, and manual VER curtailment affect price performance. The CAISO should not simply recount trends and aggregated magnitudes of these actions, but thoroughly examine and report on why these actions are taken and how these actions impact price.

## 3. Data Requests

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

The CAISO has proposed focusing its price performance analysis on 2018. NRG offers that the CAISO should consider expanding that focus.

*First*, the resource mix has been changing annually due to the growth in VERs. To the extent that VERs contribute to pricing performance issues (e.g., by increasing VER deviations, or by corresponding changes in convergence bidding patterns), looking at more years than just 2018 will help confirm or refute and hypotheses and conclusions developed.

*Second*, the CAISO should also incorporate the near-record peak demand conditions from late August and early September 2017 in its analysis. The Market Surveillance Committee’s investigation into intertie pricing issues, which was focused on this same super-peak period, is what precipitated this effort.

*Finally*, there are other 2019 days that might warrant further examination – such as price performance during the record high curtailment days on March 30 and April 14, 2019.

## Additional comments

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

- **Data used in analysis.** To the extent the CAISO’s analysis uses data that is not available to market participants through normal channels (e.g., OASIS), the CAISO should make available to market participants the data that it used in its analysis, subject to confidentiality protections. The CAISO should post the data used on its web site and notify market participants of its availability through a market notice.
- **Presentation of results.** The CAISO should present the results of the analysis in ways that best capture the issue under consideration. In the white paper, the CAISO presented monthly aggregated data on load conformance (monthly distributions, Figures 5 and 6) and exceptional dispatch (monthly totals, Figure

7). These data, while interesting, do not show how load conformance and exceptional dispatch affected prices.

Digging into price performance issues will require understanding the interactions between various aspects of the CAISO's market processes – for example, how does biasing the HASP forecast to secure additional inertia supply affect FMM and real-time prices? The CAISO should present the results of its examinations as “case studies” which show how the interaction of various drivers (resource deviations, forecast errors, load conformance and exceptional dispatch) affect prices.

- **Initial review of results.** The CAISO should ensure there will be sufficient time to review the initial results and recalibrate the analysis, as necessary, based on that initial review. While NRG appreciates the CAISO's efforts to lay out the scope and scale of this analysis before the analysis begins, NRG expects that the first real test of the success and value of the analysis will be the review of the initial results. That review may suggest the need for additional analysis; the CAISO should account for that possibility in its process and schedule.