

Stakeholder Comments Template

Subject: Exceptional Dispatch White Paper and Meeting

This template has been created to help stakeholders submit written comments on topics related to the December 2, 2009 Exceptional Dispatch White Paper and December 9, 2009 Exceptional Dispatch Stakeholder Meeting. Please submit comments (in MS Word) to kjohnson@caiso.com

Submitted by	Company	Date Submitted
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no later than the close of business on December 30, 2009.

The CPUC staff appreciates the opportunity to participate in the stakeholder process and comment on the issues related to Exceptional Dispatch (ED), especially where the possibility exists to improve market efficiency, reduce ED, and minimize uplift costs to load.

Please share your views on the topics listed below.

1. Single Biggest Issue

If you have an issue or issues with exceptional dispatch, what is your single biggest issue? Do you see this issue as persistent, or does it come and go? Do you have a proposed solution for this issue?

The CPUC staff's review indicates that there is no "single biggest issue" regarding ED, but many issues, most of which relate to initiatives already identified by the ISO. In CPUC's staff's view, the CAISO should focus its resources on the design, development, testing and implementation of initiatives currently underway for improving the market systems used for modeling, and forecasting. Many of the "Actions Taken to Date" identified in the Issues Paper are still working through their maturation processes; at least ten projects directly targeting ED, as well as several others expected to have cross over benefits on ED, are currently being designed and developed.¹ In addition to waiting to determine the impacts of initiatives currently underway, CPUC Staff agrees with the ISO that at a minimum, a full year of operational data is needed before embarking on a discussion of specific new

¹ Initiatives underway or planned for the future that CPUC staff believes may reduce ED include: the Multi-Stage Generation Unit, Multi-Day scheduling, synchronizing Residual Unit Commitment process with the Integrated Forward Market optimization, and Dynamic Transfers.

products.² Therefore, CPUC staff concludes that it is premature at this time to propose new products expressly designed to address ED.

The CPUC staff recognizes that the ISO has made significant progress identifying and ameliorating the causes of ED since the new market went live in April. Even though much has been done to minimize instances of ED, CPUC staff agrees with the CAISO that additional effort is required to complete the list of ten “Actions to be Implemented in Future” noted in the Exceptional Dispatch White Paper.³ CPUC’s staff’s review of the data shows that taken together, the 14 “Actions Taken to Date” have had a positive effect on reducing instances of ED.⁴ Some of these actions were implemented as late as November 2009, indicating that systems and systems software are still going through the maturation process.

The CPUC staff is skeptical that the benefits of any new product will reduce ED without significant costs and risks of unintended consequences to market efficiency. In a similar vein to our comments last year, where the CPUC staff raised concerns over the 30-Minute AS product and advised “further discussion with concrete examples of the benefits and costs,” this also needs to be undertaken with regard to any new AS products designed specifically to address minimizing ED.⁵ Lastly, CPUC Staff cautions that any introduction of a new product should be consistent with the market design principles raised by the MSC in 1999 as well as by other stakeholders that creation of an overly segmented product market with inelastic demand should be avoided.⁶

2. *Product Attributes*

In your view, what constitutes a product? What factors or circumstances are necessary for a product to exist?

N/A

3. *Shortcomings of Existing Products*

To the extent that you believe that a new product (or products) is needed, to what degree do existing products such as Resource Adequacy (RA) capacity and Interim Capacity Procurement Mechanism (ICPM) capacity already cover the need, and, if not, what is not covered?

The CPUC staff does not perceive a shortage or insufficiency of products in the market. At this time the CPUC staff believes the ICPM designation has been used sparingly. As CPUC

² The CAISO Exceptional Dispatch White Paper (December 2, 2009) p. 35 (hereafter cited as “White Paper”).

³ White Paper, starting on p. 11- These actions include: Minimum Online Capacity Constraint, Automated Load Forecast System Five-Minute, Multi-Stage Generating Unit Modeling, Renewable Portfolio Standard Forecast, Better Modeling Shutdown Profile, Load Distribution Factor Forecasting, Multi-Day Commitment, Transmission Upgrade to Transmission System – T-129, Other Software Fixes, and Market Model Improvements.

⁴ White Paper, p. 9.

⁵ See for example, CPUC Staff Comments on the CAISO Issue Paper (November 4) on 30-Minute Ancillary Services (December 8, 2008) p. 2.

⁶ The Opinion of the CAISO Market Surveillance Committee on The Rational Buyer Protocol, 01/26/99, ¶3, pg 1, http://faculty-gsb.stanford.edu/wilson/archive/E542/classfiles/MS_C AS_RationalBuyer.pdf

staff explains below, the need for additional discrete capacity products over and above what is already available in the market does not appear to exist. If changes in RA related products are needed to address over use of ED, then these should be addressed in the relevant RA Stakeholder proceedings.

After reviewing the ED White Paper, the CPUC staff is concerned that the number of EDs attributed to capacity and ancillary services, which would indicate the potential for additional products, appears to be very small. For example, the study period focuses on the July through September period, where EDs averaged 1.2% of load. Assuming the MW's per ED are ratable, the capacity EDs during that period (identified as good examples for potential capacity products) only comprise 4% of the day ahead and 2% of the real time EDs; together they are about 0.03% of total load.⁷ Therefore, the potential capacity products that are suggested from this study period would affect less than one twentieth of one percent of load, and hardly warrants additional efforts to develop a new product to address capacity EDs.

In addition, the EDs identified as examples for a potential ancillary services products make up less than 8% of the real time EDs in the study period, and less than 0.08% of total load.⁸ This also appears to be an insignificant market impact. Moreover, when the ISO's "Actions to be implemented in Future" are implemented, in particular, the "Automated Load Forecast System - Every 5-minutes," "Load Distribution Factor Forecasting," "Other Software Fixes," and "Market Model Fixes," many of the Ancillary Service reasons for ED are expected to decrease significantly, further obviating the need for any new AS products.⁹

CPUC staff suggests that to alleviate AS related exceptional dispatches, the ISO should take heed of the following recommendations for AS outlined by the Department of Market Monitoring:¹⁰

- Consider accommodating both contingent and non-contingent reserve from an individual resource in the market software so that day-ahead awards are not automatically converted to contingent reserve when additional capacity is purchased in real-time.
- Consider – as a longer term design change – implementation of procurement of ancillary services in the 5-minute RTD market co-optimized with energy. We recognize that this may represent a significant software design change, and that the priority placed on making such a change would need to be based on consideration of the benefits and costs of such a change relative to other potential market and software enhancements.

4. Visibility of Exceptional Dispatch

⁷ The CPUC staff assumed that the MWh's per ED were ratable in order to estimate the impact of a new potential product on total load. For the study period (July – September), taking the average percent of EDs to total load and multiplying the proportion of EDs representing potential AS products to total EDs.

⁸ Ibid.

⁹ White Paper, p. 11.

¹⁰ California ISO, Quarterly Report on Market Issues and Performance, Department of Market Monitoring, (October 30, 2009) pp. 64 – 65.

What are your thoughts on incorporating more constraints and other operational elements into the operational software, such as the Minimum Online Capacity Constraint versus continuing to perform exceptional dispatch that may provide a different level of visibility than exceptional dispatch?

In general, the CPUC staff supports the ISO's efforts to integrate the "G" nomograms¹¹ into the Residual Unit Commitment (RUC) process, though at this time CPUC staff believes that more discussion is needed to fully understand the implications of implementing minimum capacity constraints into the Integrated Forward Market (IFM). In particular, CPUC staff offers the following questions regarding adding minimum online capacity constraints into the Day Ahead and Real Time energy markets that should be addressed:

- How would this affect the ISO tariff?
- How would this impact the ancillary services and RUC capacity markets?
- How would market efficiency be affected?
- How would market signals be impacted?
- How would this function differently than Residual Unit Commitment, where RUC is supposed to provide the minimum capacity deemed necessary based on the CAISO Forecast of CAISO Demand (CFCD)?
- Would this essentially side step the issue of the integration of the RUC optimization function with the day ahead market optimization?

Initially, the CPUC staff believes that incorporating *appropriate* constraints into the Integrated Forward Market (IFM) may help systematize dispatches and reduce manual and EDs. However, this may mean that the visibility of the issues and market conditions that formerly drove ED would be more difficult to discern. The CPUC staff is more concerned with the impacts on uplift costs from ED, and would like to see more discussion and a comparative analysis on the costs of procuring energy and capacity through the IFM versus the costs for these same products procured through ED.

5. *Other Comments*

Are there additional comments that you would like to provide?

N/A.

¹¹ The "G" nomograms for the G-217 and G-219 areas south of Lugo and Orange county associated with generation modeling limitations that arise from transmission maintenance, lack of voltage support or incomplete or incorrect information about the transmission network. The nomograms were added to the RUC optimization to commit capacity to address the generation commitment limitations that were previously mitigated with ED.