Memorandum

To: ISO Board of Governors

From: Keith Casey, Director, Market Monitoring

Date: October 20, 2008

Re: ***Market Monitoring Report***

This memorandum does not require Board action.

EXECUTIVE SUMMARY

This memo provides an informational update on two issues:

- **Charge for declined inter-tie bids.** In December 2007, the Board approved a proposed penalty charge for declines of pre-dispatched import and export bids (i.e., inter-tie bids) in the real-time market. This charge was designed to mitigate the high rates of inter-tie bid declines that had been previously observed and which had the potential to significantly compromise both reliability and market efficiency. The proposed charge was approved by the Federal Energy Regulatory Commission (FERC) and was implemented by the California Independent System Operator Corporation (the ISO) starting in May 2008. At the time the Board approved the charge, some market participants expressed concerns that the charge structure was too lenient to be effective and others argued it would create a disincentive to offer imports to the ISO real-time market. This memo provides an analysis of trends in declined inter-tie bids before and after this charge went into effect. Results of this analysis suggest that over the first six months this charge has been in effect, rates of declined pre-dispatches have remained well below the relatively high levels that had been creating operational and market concerns in 2006 and early 2007. The Department of Market Monitoring (DMM) review also indicates that potential unintended consequences of the pre-dispatch decline charge have not occurred – such as market participants strategically declining pre-dispatches or unreasonably incurring the charge for large volumes of declines.

- **MRTU readiness activities.** This memo also provides a brief update on DMM's various market redesign and technology upgrade (MRTU) readiness activities. As part of its readiness preparation, DMM will be issuing a report on market performance of the MRTU market simulation for September. This report is scheduled to be publicly released on October 22, 2008, and will include a comprehensive review of general market performance as well as additional analysis of specific market issues.

CHARGE FOR DECLINED INTER-TIE BIDS

Background

The ISO pre-dispatches bids for imports and exports of supplemental energy by issuing dispatch instructions at about 45 minutes prior to the beginning of each operating hour. Supplemental energy bids for *incremental* energy represent *imports*, while bids for *decremental* energy represent *export* bids. If a market participant declines a pre-dispatched supplemental energy bid, there is not enough time to pre-dispatch other bids to replace the declined bid. Consequently, significant quantities of declined pre-dispatched bids can affect reliability and market efficiency in a variety of ways.[1]

After the ISO began to experience high rates of declined pre-dispatched bids, DMM contacted market participants in April 2007 to discuss the cause of the declines and to advise market participants about the detrimental impacts declined pre-dispatches can have on ISO operations and markets. Many participants attributed their high rates of declines to differences in timing between when the ISO issues pre-dispatches (about 45 minutes prior to the operating hour) and when commercial deals are consummated in the bilateral energy market. As a result of these discussions, market participants significantly reduced the amount of pre-dispatches they declined. However, market participants and Management felt it was appropriate to increase the clarity of the existing market rules and to provide an appropriate incentive against excessive amounts of declines.

Consequently, Management developed a settlement charge for high rates of pre-dispatch declines that was approved by the Board in December 2007 and approved by FERC on April 29, 2008. The ISO amended its tariff, effective May 2008, to establish a settlement charge for each market participant's volume of declines that exceeds a threshold amount:

- When applicable, the charge is equal to (a) the quantity of the declined import or export (i.e., MWh), multiplied by (b) 50 percent of the bid price of the declined bid.
- The charge for declined pre-dispatches applies to the extent the volume of a market participant's declines over a month exceed the greater of (a) 10 percent of the total monthly volume of its pre-dispatched bids, or 300 MWh.[2]

[1] Specifically, high rates of inter-tie bid declines can result in sub-optimal energy dispatch, increased reliance on internal generation to compensate for the declines, gaming opportunities, and market price distortions – particularly under MRTU.

[2] The 10 percent threshold was established to avoid unduly penalizing market participants for a limited portion of declined pre-dispatches that are likely to occur due to factors such as transmission derates, curtailments by control areas, etc. Because it is not feasible for the ISO to evaluate the reasons for declines, the 10 percent threshold was

The charge is calculated separately for imports and exports. Under MRTU, a similar charge, based on the hour-ahead scheduling process (HASP) price, will apply for HASP schedules that are not delivered.

Rates of declined pre-dispatches

Figure 1 summarizes declines of supplemental energy bids pre-dispatched as imports for the period January 2006 through September 2008. The left axis of Figure 1 shows the overall volume of pre-dispatched imports and declined pre-dispatches for each month, while the right axis shows the percentage of declined pre-dispatched imports.[3] Figure 2 summarizes this information for supplemental energy bids pre-dispatched as exports.

As shown in Figure 1, the rate at which market participants declined pre-dispatched imports in January to April 2007 ranged up to 20-25 percent of the overall volume dispatched, but has decreased to approximately 10 percent or less in each month since then. In a number of months since April 2007, the overall decline rate has been much lower than 10 percent. Figure 1 does show that the rate of pre-dispatched imports has increased somewhat since May 2008, when the declines charge went into effect. However, this is likely attributable to seasonal or month-to-month variation in decline rates.

Figure 2 shows a similar reduction in the rate at which market participants declined pre-dispatched exports. Prior to April 2007 market participants generally declined about six to seven percent of the total volume of pre-dispatched exports over a month. Since April 2007, they have generally declined an average of two to three percent of the pre-dispatched exports in each month, except for April 2008 when approximately six percent of the pre-dispatched exports were declined.

thought to be high enough to include all declines outside of a market participant's control in the vast majority of the time.

[3] The amounts of declines summarized in Figure 1 and Figure 2 in this memorandum are based on pre-dispatched imports and exports which market participants indicate through the ISO dispatch system that they will not deliver. The actual volumes on which the pre-dispatch declines charge is based are slightly higher, as they also include dispatch instructions for which market participants indicate through the dispatch system that they will accept, but then subsequently do not deliver or are curtailed in real-time.

Figure 1. Declined Pre-Dispatched Supplemental Energy - Imports (Jan 2006 – Sep 2008)

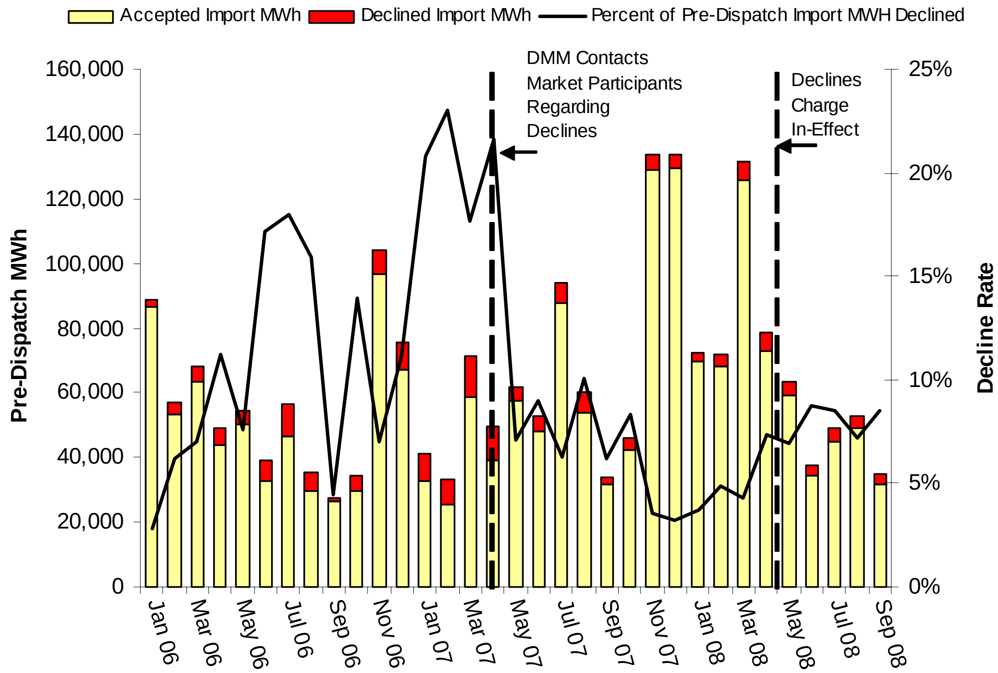
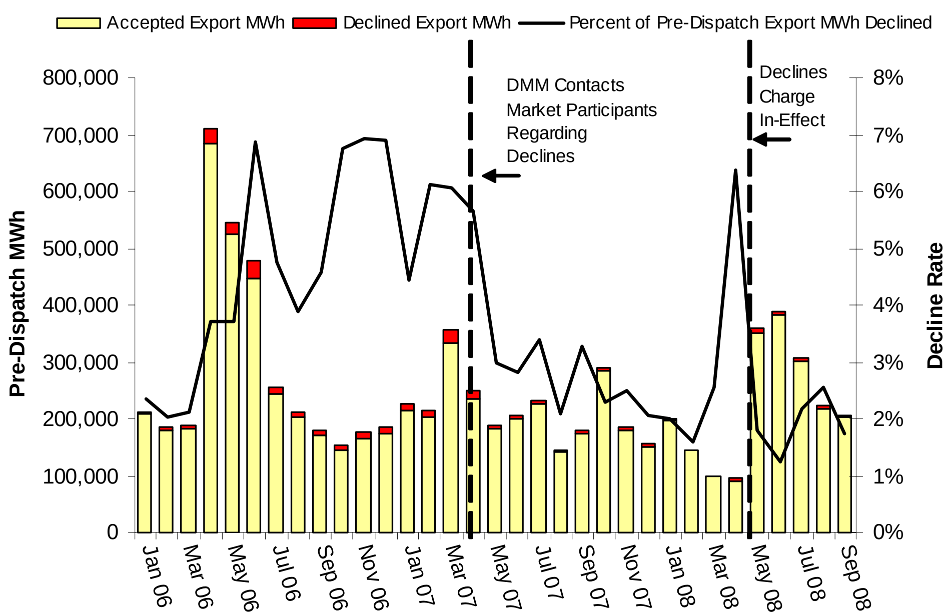


Figure 2. Declined Pre-Dispatched Supplemental Energy - Exports (Jan 2006 – Sep 2008)



DMM's review of declined pre-dispatches by individual market participants also does not indicate that any market participants have increased their rate of declines in an attempt to take advantage of the 10 percent threshold. In addition, DMM's review does not indicate that any market participants appear to "save up" their monthly allowance for declines in order to take advantage of the 10 percent threshold by strategically declining pre-dispatched bids near the end of each month. Both of these were raised as potential concerns with the proposed decline charge structure when it was presented to the Board for approval and DMM committed to monitoring for this potential behavior.

Import/Export volumes subject to charge for declined pre-dispatches

Due to the threshold for declined pre-dispatches allowed prior to assessment of the declines charge, the decline volume actually subject to this charge represents a relatively small portion of the overall volume of declined pre-dispatches. Figure 3 and Figure 4 summarize the overall volumes of import and export declines and the approximate portion that has been subject to the charge for declined pre-dispatches for May through July 2008.[4]

- As shown in Figure 3, declined pre-dispatches for imports subject to the declines charge represent six to 30 percent of the overall volume of declined pre-dispatched imports over each month.

- Figure 4 shows that declined pre-dispatched exports subject to the charge represent two to 13 percent of the overall volume of declined pre-dispatched exports declined over each month.

This suggests that the charge is not penalizing an excessive amount of declines, while providing an effective deterrent to declines.

[4] Declines charges for August and September 2008 had not yet been calculated by the Market Services Department as of the time this memorandum was prepared. The overall volume subject to the charge is the sum of each market participant's declines that exceeds the market participant's applicable threshold for the charge (the greater of 10 percent of the volume of the market participant's dispatched bids or 300 MWh).

Figure 3. Declined Import MWh Subject to Charge for Declined Pre-Dispatches (May – July 2008)

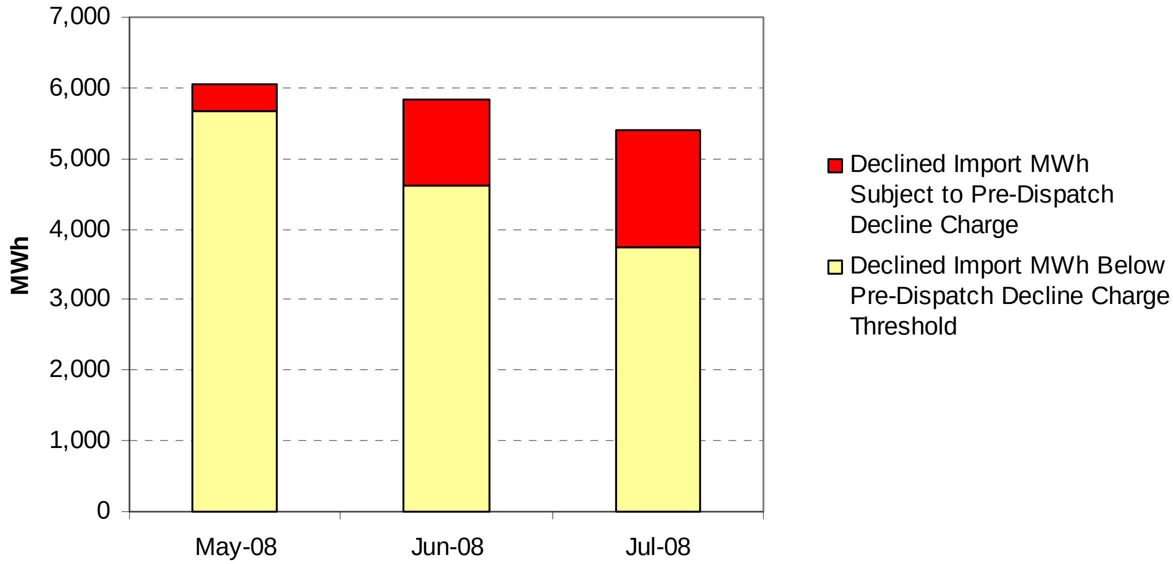
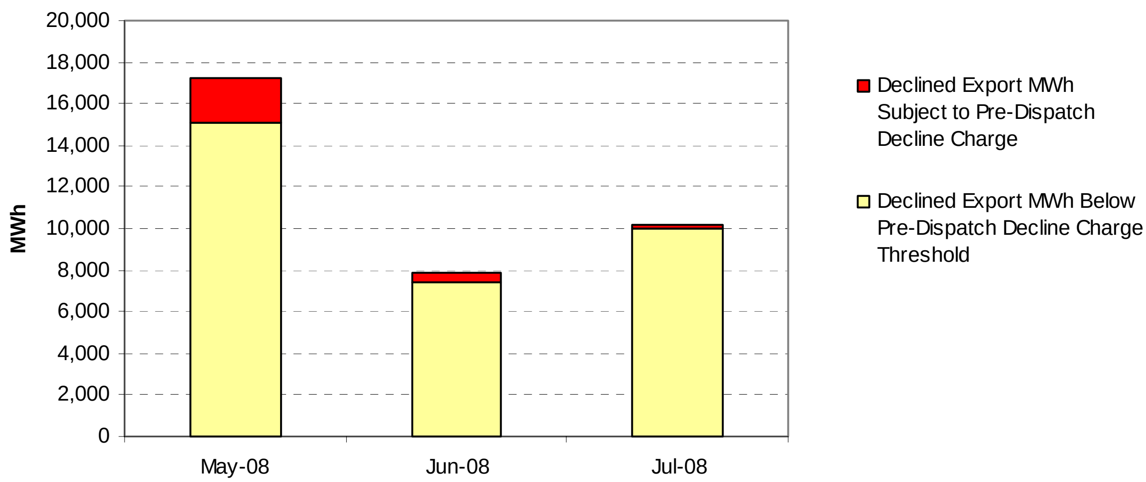


Figure 4. Declined Export MWh Subject to Charge for Declined Pre-Dispatches (May – July 2008)



MRTU MARKET MONITORING READINESS

As noted in our August 29, 2008 Board Memo, DMM has made significant progress in building its market monitoring capabilities for MRTU. Most of the capabilities (data, metrics, and analytic approaches) are currently in place and being tested and refined through shadow monitoring the MRTU market simulation. The remaining issues noted in the August memo (e.g., acquiring additional market data, developing additional metrics, and stabilizing the market simulation environment) are on track for resolution over the next two months. Additionally, the MRTU Rapid Response Team continues to routinely meet and refine its functions and processes. Overall, DMM is very confident it will have all the tools and resources it needs to effectively monitor the markets when MRTU goes live on February 1, 2009. A presentation on market monitoring readiness for MRTU will be provided at the October Board Meeting.

As part of our readiness activities, DMM is currently preparing a report on market performance of the MRTU market simulation for the month of September. This report is scheduled to be publicly released on October 22, 2008, and will include a comprehensive review of general market performance as well as additional analysis of specific market issues. While we caution against placing too much emphasis on the market simulation results (as being indicative of actual market performance), the DMM report will nonetheless provide some additional transparency and information on the market simulation outcomes that market participants should find useful. It will also demonstrate some of the metrics DMM has developed to assess market performance and provide an opportunity for market participant feedback.