# Memorandum

**To:** ISO Board of Governors

**From:** Keith Casey, Vice President, Market and Infrastructure Development

**Date:** February 3, 2010

**Re:** **Decision on Price Correction Make-Whole Payment to Accepted Demand Bids**

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***This memorandum requires Board action.***

## EXECUTIVE SUMMARY

The California Independent System Operator Corporation may correct market prices whenever an invalid market solution occurs due to either a data input failure, a hardware or software failure, or a result that is inconsistent with the ISO tariff. Although price corrections are relatively infrequent, ex-post price corrections have led to instances in which demand bids (i.e., exports) that were cleared in the market are no longer economic when evaluated against the corrected price. For example, if a market participant that had submitted an offer to buy energy from the ISO (export bid) at $30/MWh, the bid would be dispatched if the market clears at a price equal to or less than the $30 offer. If the market price is subsequently corrected to a price higher than the market participants offer price, say $60/MWh, the participant would be charged the corrected price which was higher than its offer price. This can affect bids for internal demand, exports and virtual bids in the integrated forward market, as well as export demand in the hour-ahead scheduling process. Currently, the ISO does not have a policy or mechanism for compensating market participants when this occurs.

In order to compensate market participants for adverse financial impacts in cases when prices are corrected in a way that is not consistent with their accepted demand bids, Management proposes an ex post settlement adjustment that would compensate these market participants based on their bid costs. This proposal applies internal load, export demand, and virtual bids in the day-ahead market and exports in the hour-ahead scheduling process. The final settlement price will be resource level locational marginal prices calculated on the basis of the corrected price and the make-whole payment and apply to the affected load and export demand cleared schedules.

***Moved, that the ISO Board of Governors approves the proposed make-whole payment for price correction to cleared demand bids and virtual bids in the day-ahead market and exports in the hour-ahead scheduling process, as detailed in the memorandum dated February 3, 2010; and***

***Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.***

## BACKGROUND AND DISCUSSION

### *Make-Whole Payment for Price Correction to Cleared Demand Bids*

When market clearing prices are adjusted upward in the instance of price correction, demand bids that were originally cleared in the market may no longer be economic. For a market participant who has cleared demand (export) bids in the ISO market, when a price is corrected upward such that it is higher than a market participant's highest bid price, its entire cleared energy bid curve becomes uneconomic. When a price is corrected upward such that it is still within the range of the bid curve, a portion of its bid curve becomes uneconomic.

In recent months, Management worked with stakeholders to develop a make-whole payment approach to compensate market participants for adverse financial impacts in cases when prices are corrected in a way that is not consistent with their accepted demand bids. Under the proposed solution, if price is corrected upward, the ISO will calculate a make-whole payment on an hourly basis determined by the area between the demand bid curve and the corrected price. This solution applies to internal load, exports and virtual bids in the day-ahead market and applies to exports only in the hour-ahead scheduling process.

Stakeholders widely supported the proposal to calculate the make-whole payment on an hourly basis as opposed to netting revenues over a 24 hour basis. Some stakeholders argued that the make-whole payment should be determined by the market participant's last cleared demand bid instead of based on its demand bid curve. However, Management found that using the relevant bid segments will make the market participants whole and avoid creating incentives for demand to a segment of their bid curve at extremely low prices to take advantage of potential price corrections.

### *Make-Whole Payment Settlement*

Management proposes a simple settlement approach to incorporate the make-whole payment into the final settlement price by settling on the corrected price times the bid segment megawatts less the make whole payment amount. A historical analysis of the impact of price corrections and the potential magnitude of make-whole payments under this proposal show that potential make-whole payment is relatively small, has declined steadily over time and is likely to continue to decline. Given the small magnitude of these costs, Management proposes to simply recover these costs through the current neutrality charges in place. Although some stakeholders suggested allocating the cost of make-whole payment to supply through a separate uplift charge, given the small magnitude and the declining trend of potential make-whole payment, it is difficult to justify the cost of implementing such a separate uplift allocation. Therefore, Management recommends the simple settlement approach described above. This simple settlement approach avoids a separate allocation of make-whole payment and is cost effective from implementation perspective. Going forward, the ISO will continue to monitor the frequency of upward price corrections that affect demand and virtual bids and make changes to the make whole payment policy if necessary.

### *Make-Whole Payment for Virtual Bids*

Once convergence bidding is implemented, price corrections in the day-ahead market may also affect cleared virtual bids. Therefore, Management proposes to apply the make-whole payment approach described above to virtual bids in case of price correction in the day-ahead market. Management recommends applying the same methodology directly to virtual demand bids, and treat virtual supply bids as negative virtual demand bids for the purpose of determining make-whole payments due to price correction. Stakeholders did not express any opposition to these proposed rule changes.

## MANAGEMENT RECOMMENDATION

Management recommends the Board approve the proposal described in this memo for the settlement of make-whole payments to demand and virtual bids that result from price corrections. This proposal fairly compensates market participants for adverse financial impacts related to upward price corrections as set forth above.