



California ISO
Your Link to Power

CAISO Proposal on Declined Real-Time Import And Export Bids

November 30, 2007

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Introduction

This document provides CAISO's proposal on the issue of declined real-time import and export bids that was described in the October 10, 2007 white paper¹. This CAISO proposal reflects CAISO's current thinking on this issue and will be discussed with stakeholders in a conference call to be held on December 3, 2007. Any points raised in the comments provided by stakeholders to the straw proposal and not addressed by this proposal may also be discussed at the December 3, 2007 conference call.

Following the December 3, 2007 conference call, the next important dates related to this issue are:

- December 12, 2007 - CAISO Board will meet and consider CAISO Proposal.
- If the Board approves the proposal, the CAISO will file Tariff amendment at FERC shortly thereafter.

Proposed design concept

On November 7, the CAISO had provided its straw proposal on the issue of decline of Real-Time import/export bids. Stakeholders' comments to the straw proposal were reviewed and CAISO has tried to incorporate those comments in this proposal to the extent possible.

Penalty Charge and Threshold

As per this proposal, the charge for both declined pre-dispatched import or export bids would be unchanged, with the exception of correcting typographical errors as follows²:

$$\text{Charge} = \text{Declined quantity} * 50\% * \max(\text{floor price, pre-dispatch price}^3)$$

However, based on stakeholder input and operational experience at the current level of declines, the CAISO is modifying the threshold value such that the charge will be assessed to the portion of an SC's declined pre-dispatched import or export bids that exceed 10% or 300 MWh, whichever is greater⁴, of the total MWh quantity of the SC's pre-dispatched bids over each calendar month. This is a monthly charge entirely separate

¹ Available from the CAISO website at <http://www.aiso.com/1c72/1c72db9160800.html>

² This charge would be applicable to any pre-dispatched bid quantity that was not accepted through ADS or for which the participant did not submit a valid e-tag.

³ The pre-dispatch price would be the market participant's bid price in the CAISO's current market. In MRTU, the pre-dispatch price would be the applicable HASP price.

⁴ Previously the threshold was 5% with no minimum value.

from UDP. However, if UDP is activated, UDP would therefore not apply to declined pre-dispatches.⁵

Some participants have suggested that the charge be based on the real-time price rather than the pre-dispatch price. The CAISO has considered these arguments but has not changed the price basis. Again, the rationale for basing the charge on the pre-dispatch price is that the real-time price can be significantly higher than the pre-dispatch price for reasons unrelated to declines, while the real-time price can also be lower than the pre-dispatch price even though declines have an adverse impact.

A minimum price i.e. floor price would also be established to reflect that a deterrent to declining pre-dispatched bids is needed during over-generation conditions when prices are low or negative. For example, declined export bids can be a significant problem during over-generation conditions. The CAISO's proposal remains that the floor price be \$10/MWh. Thus, regardless of the pre-dispatch price, participants would be charged based on minimum of \$10/MWh for declined pre-dispatched bids.

Regarding thresholds, some SC's have suggested that there be no threshold, however the dispatch quantity should be adjusted to reflect schedule cuts in real-time. Similarly, other SC's have requested that if a 5% threshold is used, exemptions be included for system conditions which are out of their control. In lieu of this, the threshold should be raised to 10%. Many SC's suggested a minimum threshold value to cover smaller participants who may be hit with a penalty for declining only one dispatch in a given month.

In considering these suggestions, the CAISO reviewed in more detail ADS data, its own logs as well as data supplied by stakeholders. In review of the exemption issue, the data provided by some stakeholders has confirmed that, on some occasions, Market Participants are unable to provide correct information on the reasons for declined dispatches, because root cause information is not available within the 5-minute window in which pre-dispatch instructions may be responded to. Furthermore, the CAISO does not have sufficient visibility to tally the entire universe of circumstances which are beyond a Market Participants control, such as real-time transmission issues in other control areas, even on a post process basis. Therefore, basing exemptions on ADS reason codes or on CAISO logs may not be an appropriate way to determine exemptions. Short of development of a more robust logging process for declines, the CAISO proposal remains that exemptions are not to be included. Instead, the CAISO has addressed concerns by increasing the threshold size as discussed below.

In review of the threshold size issue, the CAISO is aware of the possibility that some issues which are beyond the Market Participant control may exceed a threshold value of 5%, and therefore has revised its proposal upwards to 10%. In addition, the CAISO is sympathetic to the desire for penalties to be assessed on a single decline within a month period. Therefore, the CAISO has added a minimum threshold value of 300 MWh.

⁵ The CAISO plans to also propose modifications to the UDP provisions of the tariff to remove any existing UDP charges that would duplicate the new declines charge.

Based on ADS and log data reviewed by the CAISO and summarized in Appendix A, the CAISO is confident that the threat of penalties resulting from a single decline or from circumstances beyond the Market Participant's control will be drastically reduced by the final proposed threshold values. At the same time, the CAISO does not currently believe that the higher thresholds will result in significant operational issues or a significant increase in price volatility.

In the event that a Market Participant is assessed a charge due to curtailments by reliability authorities and the curtailments exceed 10% or 300 MWh, the Market Participants may dispute their charge and CAISO will reduce the charge by the amount in which the curtailments exceed 10% or 300 MWh provided the Market Participant provides sufficient proof.

The decline rate and the penalty amount would continue to be calculated separately for decline of import and export bids. An SC's decline of import and export bids would be tracked separately. The decline rate of an SC for import and export bids would be applied separately to the 10% threshold level or 300 MWh, whichever is greater and the penalty amount calculated accordingly.

Decline rate of an entity over a period of a calendar month would be calculated as:

Decline rate of an SC for import or export = Energy represented by all declined pre-dispatch import or export bids / Energy represented by all pre-dispatched import or export bids.

For example, if an SC had three pre-dispatch import bids of 50 MWh, 100 MWh and 100 MWh over a calendar month and it declined 50 MWh and 100 MWh bids. The SC's decline rate would be equal to $(50+100) / (50+100+100) = 150/250 = 60\%$.

As a result of the new threshold values, the formula for the decline charge changes slightly. As proposed before, the decline charge would be calculated for each pre-dispatched import or export bid declined over the month. Now, in order to account for the threshold level, the total of these charges over each calendar month would be multiplied by the proportion of the SC's pre-dispatched import or export bid MWhs declined in excess of 10 percent (or 300 MWh if greater) of the SC's total pre-dispatched respective import or export MWhs.

Example: If the charges calculated for all of an SC's declined pre-dispatched import bids over a calendar month total \$50,000, and the SC declined 23 % of its import bids, the SC's net charge from the decline of import bids for the calendar month would be $\$50,000 * ((23\% - 10\%) / 23\%) = \$28,260$.

Settlements

From settlements perspective, each entity will be informed of its decline rate and the penalty amount due after the end of each month. The exact allocation charge code has not

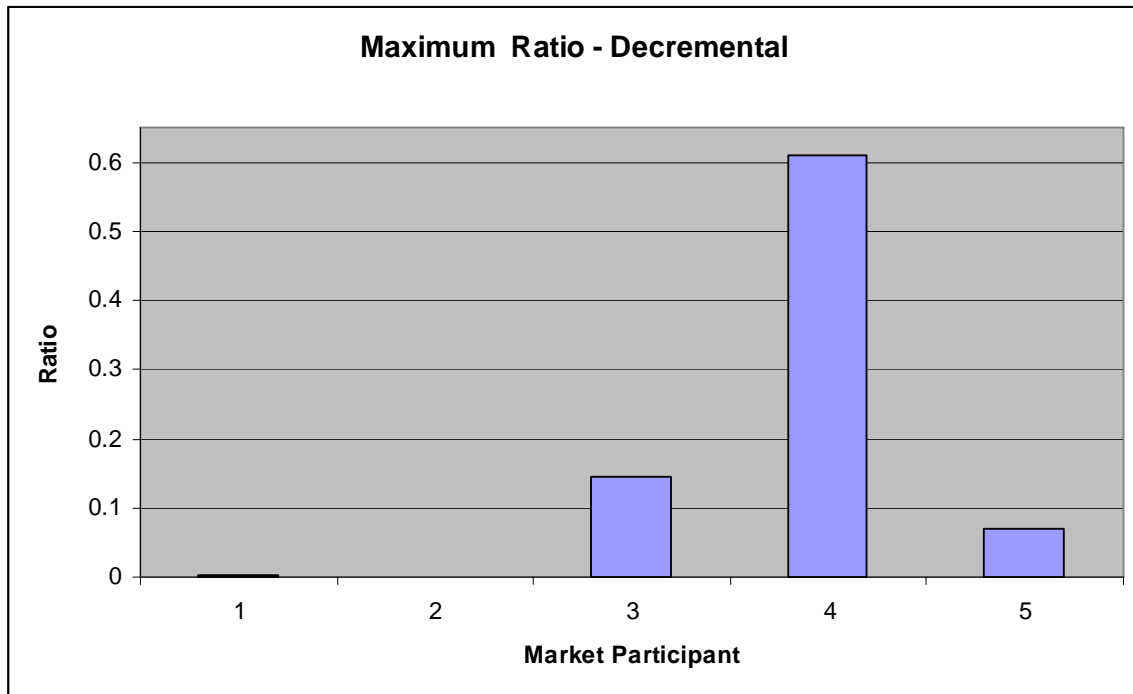
been determined; however the CAISO intends to allocate the money collected under this charge broadly to load and firm exports.

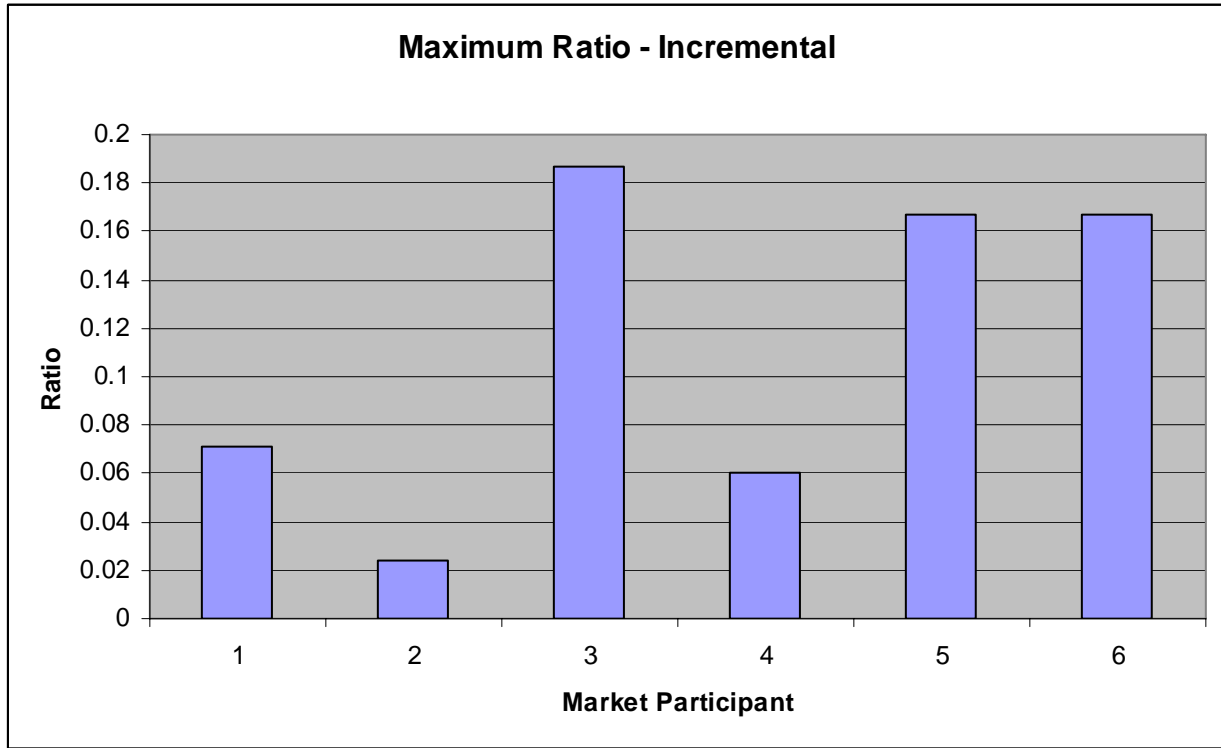
APPENDIX A

Determination of Percentage Threshold

Based on the available data related to real-time schedule cuts by CAISO, the CAISO found out that the number of declines of pre-dispatch instructions due to schedule cuts by CAISO will be minimal and would be substantially below the new threshold value of 10% or 300 MWh, whichever is greater, of the total MWh quantity of the SC's pre-dispatched bids over each calendar month.

Based on the available data, CAISO found out only twelve instances of real-time schedule cuts due to reasons like unscheduled flow during the period of October 2006 and November 2007. For analysis, the CAISO used this data as a proxy for the actual instances of cuts between the bidding deadline and the pre-dispatch approval process. It assumed that during these twelve instances the entire pre-dispatch amounts will be declined and then divided those dispatch amounts by the threshold value i.e. maximum of 10% of total monthly dispatch volume or 300MWh which ever is greater. CAISO found out that, except in one instance, this ratio was far less than 1 which means that based on the proxy data, schedule cuts have a minimal contribution to the threshold limit. This is illustrated in the two graphs below.





Determination of Minimum Threshold

As mentioned in the main body of the proposal, the CAISO is sensitive to smaller participants who may be unduly harmed by this proposal if they were to incur a penalty for declining only one dispatch due to circumstances out of their control. For example, an SC who was dispatched for 500 MWh in a month would have a threshold value of 50 MWh, and may pass that threshold if they decline an hourly dispatch for 100 MW. An appropriate mechanism to cover this would be to institute a minimum threshold value of a few hundred MWh. To determine an appropriate value, the CAISO came up with a value which minimized the chances of any SC being penalized for a single decline, based on a SC’s historical dispatch pattern, while at the same time ensuring that the minimum value does not “cost” a significant amount in terms of increasing the risk of declined dispatches due to elimination of the threat of penalty for smaller participants. To get this number, the CAISO first calculated a worst-case maximum single decline value for all SC’s for each month in which they received pre-dispatch instructions between November 2006 and October 2007. The maximum decline value is defined as the maximum of the sum of declined dispatches in a single hour, regardless of reason. For example, in December 2006, SC ‘A’ declined 600 MW over two hours:

12/5/06 HE 6

100 MWh at Palo Verde
 100 MWh at Malin
 Declined for HE 6: 200 MWh

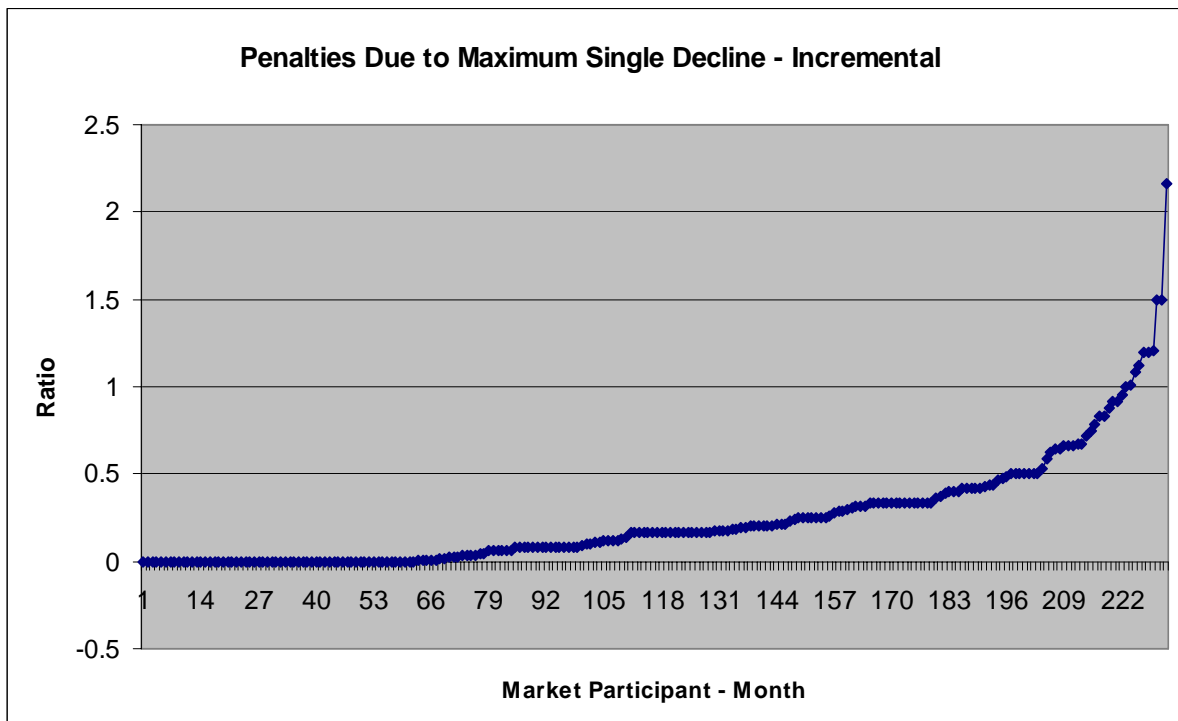
12/17/06 HE 12

100 MWh at Malin
 150 MWh at El Dorado
 150 MWh at NOB
 Declined for HE 12: 400 MWh

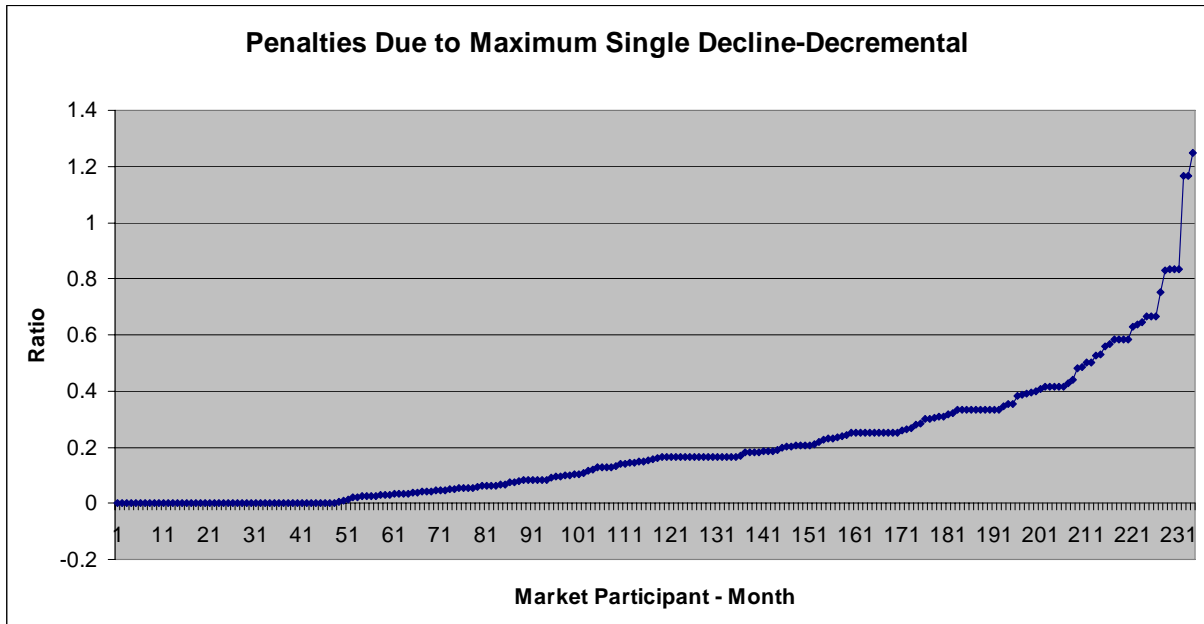
Maximum single decline = max (200, 400) = 400 MW.

A maximum single decline was calculated individually for inc and dec dispatches. The CAISO then divided this number by the threshold value, equal to the greater of 10% of the inc or dec pre-dispatches, or a variable minimum threshold. The CAISO plotted this resulting number for all SC's and all months at different threshold values. A number of 1.0 or greater indicates that a SC would incur a penalty if they declined dispatches equal to their maximum single decline number for the month.

The results for a minimum threshold value of 300 MWh are displayed below.



With a minimum threshold value of 300 MWh, there were 9 out of 232 cases on the incremental side exceeding a value of 1.0. This means that if this proposal was effective in the last year, there would have been penalty charges in 9 cases resulting from declines equal to a maximum single decline. This compares with seventy-five cases if the proposal did not consider a 300 MWh minimum in the threshold calculation.



Similarly, with a minimum threshold value of 300 MWh, there were 3 out of 234 cases on the decremental side exceeding a value of 1.0. This means that if this proposal was effective in the last year, there would have been penalty charges in 3 cases resulting from declines equal to a maximum single decline. This compares with thirty-six cases if the proposal did not consider a 300 MWh minimum in the threshold calculation.

With a 300 MWh minimum threshold value, the chances of market participants passing the penalty threshold for a single decline due to circumstance beyond their control is small. The likelihood of this happening should be even smaller than portrayed by the above data, because a single decline may be lower than the max decline value, and the methodology included all declines, whether or not they were beyond the control of the Market Participant.