California Independent
System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Charles A. King, P.E., Vice President, Market Development & Program Management

Date: August 29, 2007

Re: **MRTU Compliance Filing: Decision on Proposal to Address Potential Load Underscheduling Until Implementation of Convergence Bidding**

This memorandum requires Board action.

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission ("FERC") has directed the CAISO to develop interim measures to mitigate the potential economic incentive for Load Serving Entities ("LSEs") to underschedule in the Day-Ahead Market. These interim measures are designed to address incentives for underscheduling that may exist prior to implementation of Convergence Bidding. While the CAISO was required to submit this compliance filing no later than 180 days prior to implementation of MRTU, the CAISO requested an extension to work with stakeholders to seek resolution on final details of the proposal.

To develop these interim measures, the CAISO conducted a five-month stakeholder process that considered several proposals, ranging from simple reporting mechanisms to automated penalty structures. To address the diverse stakeholder perspective on the design of an appropriate interim measure, Management recommends adoption of an approach that is generally consistent with the recommendations of the Market Surveillance Committee ("MSC"). This approach involves the creation of confidential weekly reports by the CAISO, a bright line rule to define persistent underscheduling, and the ability to apply an Interim Scheduling Charge. The charge would be triggered if the CAISO determines that a particular Scheduling Coordinator is persistently underscheduling. This bright line rule provides a clearly defined standard for the application of this charge which would leave little room for varying interpretation.

In designing the proposal, the CAISO has worked within tight implementation constraints and has diligently considered stakeholder input to balance interests among both the load and supplier communities to present thresholds and rates that are fair, meet the intent of the FERC directive, and do not jeopardize the integrity of the MRTU markets and reliability. The proposed design of the Interim Scheduling Charge is intended to be simple and address the potential incentives for loads to underschedule in the Day-Ahead Market. Underscheduling has the effect of depressing Day-Ahead prices in a manner inconsistent with efficient market operation. Once convergence bidding is implemented, on the first anniversary of MRTU, the interim measures would end.

Though the CAISO is not typically required to bring issues of a compliance nature before the Board of Governors for decision, the controversial nature of this feature was deemed to be worthy of a thorough stakeholder process, and subsequent Board decision, as a means of building a complete public record to forward on to the FERC for its consideration.

MOTION

> ***Moved, that the ISO Board of Governors approve the "*Proposal to Address Potential Load Underscheduling Until Implementation of Convergence Bidding*," as outlined in this memorandum, and related attachments; and***
>
> ***That the ISO Board of Governors authorize Management to make all the necessary and appropriate filings with the Federal Energy Regulatory Commission to implement this proposal.***

ISSUE STATEMENT

In the FERC proceeding on MRTU, a number of market participants have argued that the lack of convergence bidding in Release 1 could allow LSEs to strategically under-schedule and artificially suppress the Day-Ahead energy price. These entities contend that the penalties for under-scheduling implicit in the Residual Unit Commitment (RUC) process may not be sufficient to prevent under-scheduling particularly since Resource Adequacy generation units are required to bid zero into the RUC process.

Other stakeholders are not in favor of additional mechanisms to limit under-scheduling under MRTU, and have argued that the CAISO's new market design has sufficient financial incentives that discourage under-scheduling because RUC costs are allocated to the load-serving entities that under-schedule in the Day-Ahead Market. In addition to the RUC charges that are assigned to LSEs, there are also several other Real Time uplift charges that are assessed to under-scheduled Demand, as well as significant forward contracting in place by LSEs today as required under California's Resource Adequacy program that further reduces the incentives for LSEs to under-schedule in the Day-Ahead Market.

In response to these opposing viewpoints, FERC has required the CAISO to develop interim measures (until convergence bidding is in place) to prevent "uneconomic behavior" that specifically deals with "persistent under-scheduling" in the Day-Ahead time frame. The issue on which the CAISO has worked with stakeholders over the past few months is to define the nature and applicability of these short-term measures under the tight MRTU implementation constraints.

Although the CAISO believes there are already sufficient mechanisms and financial disincentives built into the new market design to deter Day-Ahead under-scheduling, the CAISO has developed an administrative solution that meets the FERC's directives, provides clear thresholds and exemptions so that LSEs can submit economic bids in the Day-Ahead Market, yet provides for a reasonable but effective charge if those thresholds on under-scheduling are crossed in a manner that is deemed to be persistent..

OPTIONS TO SOLVE FERC'S REQUIREMENT TO ADDRESS UNDER-SCHEDULING

During the stakeholder process, several options of enforcement mechanisms were reviewed with varying levels of complexity and severity. **Attachment A** includes a summary of the options analyzed, which include mandatory self scheduling of load, submittal of forecast data, bidding requirements, and issuance of reports to FERC.

After considering many different approaches, Management recommends an approach that includes an Interim Scheduling Report, a Bright Line Rule, and an Interim Scheduling Charge that could be imposed upon specific Scheduling Coordinators if necessary. This proposal is similar in many respects to the recommendation of the Market Surveillance Committee ("MSC") and is described generally in this memorandum and more specifically in **Attachment B**.

ATTRIBUTES AND PRINCIPLES CONSIDERED IN THE DEVELOPMENT OF A SOLUTION

Throughout the stakeholder process, the CAISO has considered the following principles for addressing the issue of potential Day-Ahead underscheduling under MRTU until Convergence Bidding is implemented. The first five principles directly address FERC's concerns. The last two are additional goals that have been added by the CAISO.

1) The measures can be implemented at the start of MRTU. As such, any system requirements cannot be overly complex and cause a delay in the start of MRTU. The CAISO does not have supplemental resources to assign to this initiative. The interim measures, therefore, must not deter from other critical projects supporting the implementation of MRTU.

2) The measures are "interim" until Convergence Bidding is implemented. Again, simplicity is encouraged, as the measures are meant to be temporary.

3) They do not prevent LSEs from taking steps to reduce the costs of serving load.

4) They strive to prevent uneconomic behavior.

5) They address "persistent" underscheduling in the Day-Ahead Market on occasions when energy prices suggest that it would be economic to buy in the Day-Ahead Market (The exact intent of the term "persistent" has been debated throughout the stakeholder process, as it is not a defined term in the MRTU tariff).

6) They do not produce a situation where there is the potential for the exercise of market power on the supply side.

7) The rules do not negatively influence the integrity of the CAISO markets and grid reliability.

MANAGEMENT RECOMMENDATION

Management recommends that the CAISO implement an Interim Scheduling Charge that would be assessed to load serving scheduling coordinators that breach explicit Day-Ahead Market scheduling thresholds. The CAISO will implement the Interim Scheduling Charge when a particular Scheduling Coordinator is engaging in persistent and uneconomic load under-scheduling as defined by the bright line rule. The CAISO would provide load serving SCs with a confidential weekly "Interim Scheduling Report" to inform them of their performance in relation to the scheduling charge thresholds.

The Interim Scheduling Charge would consist of a rate of $150/MWh when metered load is 15% greater than a Scheduling Coordinator's cleared Day-Ahead demand, and increase to $250/MWh when metered load exceeds 20% of cleared demand in the Day-Ahead Market. The CAISO Management also proposes targeted exemptions to this charge so as not to unfairly penalize LSEs for load forecast error or participation in the Real Time Market for legitimate economic reasons and to keep the design simple and implementable for the period of time when these scheduling requirements are in place.

Once triggered, any Interim Scheduling Charges would be assessed on a going forward basis, rather than being imposed on a retroactive basis. The revenues collected from this charge would reduce a component of the CAISO's Grid Management Charge (GMC) so that all market participants would benefit, and not just load which pays most of the GMC.

The specific characteristics of the charge, which would be assessed monthly, are included as Attachment B. These measures would be terminated at the initiation of convergence bidding. The proposed design of this new charge is intended to be straight-forward and capable of being implemented at the start of MRTU.

RECOMMENDATIONS FROM THE MSC AND THE DEPARTMENT OF MARKET MONITORING

Members of the MSC have participated in the stakeholder process and considered the competing proposals. On July 2, the MSC unanimously adopted a formal opinion recommending a hybrid approach. The opinion is provided to the Board in conjunction with this memorandum.

The Department of Market Monitoring (DMM) also provided written comments that helped inform Management's decision, and are included as part of their monthly report to the Board.

POSITIONS OF THE PARTIES

A matrix that summarizes stakeholder views on the options that were considered and the various features of this proposal is included as **Attachment D**. General comments related to the design of the Interim Scheduling Charge include:

Thresholds and Rates The design of the charge does not completely satisfy all concerns raised by stakeholders. Some have conveyed that the threshold should be 5% to prevent any potential leverage of prices in the Day-Ahead Market. LSEs, on the other hand, have conveyed that the bandwidth should be much larger so as not to deter legitimate economic bidding, and to better address only "persistent" underscheduling. LSEs are concerned that with strict rules, they would be forced to Self Schedule to avoid the charge, thus resulting in unpredictable and economically inefficient outcomes. With regard to the proposed $/MWh rates, they are perceived as too high by LSEs, and too low by the supplier community.

Management's recommended approach strikes a balance between these perspectives. The combination of a threshold of 15% in conjunction with a high $/MWh charge provides a strong incentive to schedule load in the Day-Ahead Market while providing enough flexibility for LSEs to economically bid their load requirements.

Bright Line Rule: After the July Board of Governors meeting, the CAISO sought stakeholder input to develop a bright line rule to define "persistent" underscheduling. Creation of the bright line rule would alleviate the potential for any ambiguity and uncertainty, and would be a clearly defined standard which would leave little room for varying interpretation. The CAISO considered stakeholder feedback on two proposed options for the bright line trigger. Ultimately, the CAISO recommends a value of 36 hours per month (which equates to five percent of the hours per month) to limit scheduling behavior outside of the charge threshold.

Small Load: Energy Service Providers (ESPs) contend that the thresholds should be based on system-wide net load deviations, and not by Load Aggregation Point (LAP). ESPs, in particular, schedule in all three LAPS, and therefore believe the threshold should be system-wide. Since prices under MRTU are computed on a LAP basis, the CAISO does not believe that it is appropriate to net deviations on a system wide basis. An SC could significantly underschedule in one LAP in an attempt to lower the price while overscheduling in another LAP to prevent the application of the charge. However, the CAISO acknowledges that small LSEs have limited ability to influence prices in the Day-Ahead Market. Therefore, in working through the stakeholder process and conducting analysis on historical data, the CAISO has proposed a small load exemption of 500 MW per hour per LAP. The CAISO's analysis has shown that such an exemption would not limit the effectiveness of the Interim Scheduling Charge and would ensure that small LSEs are not unfairly penalized where a relatively small MW deviation could result in a large percentage of underscheduled load.

Further explanation and justification of this new value is included as **Attachment C.**

Load Forecast Exemption: Many LSEs conveyed that the load forecast exemption should be by Utility Distribution Company ,not system wide. Often, the regional load forecast data does not coincide with the CAISO-system wide forecast, making the system wide exemption ineffective. The CAISO agrees that a system-wide load forecast error exemption creates too much risk for LSEs, and has therefore, modified its proposal to include the exemption by region.

Price Exemption: The CAISO also added an exemption in its last round of stakeholder meetings to exempt hours when the Real Time Market price is less than the Day-Ahead Market price, so as not to prevent participation in the Real Time Market for true economic reasons.

Some stakeholders have conveyed that they do not prefer the Interim Scheduling Charge, and would prefer other options such as an Interim Scheduling Report to be provided to FERC. Others continued to emphasize that the CAISO should pursue a "market solution" and should rely on financial incentives already built into the MRTU design.

The CAISO agrees that the current financial incentives built into the MRTU design, as well as the RUC process are sufficient tools for maintaining grid reliability and market efficiency. As discussed earlier in this memorandum, however, Management has concluded that additional interim measures are required to meet the intent of the FERC Orders. The management proposal brought forth in this recommendation strikes a just and reasonable balance among a variety of competing alternatives and stakeholder positions, while achieving all of the guidelines articulated by the FERC in this regard.

CONCLUSION

Management recommends that the Board approve this proposal and authorize Management to file the associated tariff changes with FERC, and to implement these changes as needed to achieve the scheduled startup of MRTU.