

**Opinion on “Interim Measures to Address Day-Ahead
Underscheduling under MRTU”**

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We have been asked to comment on proposals by the California Independent System Operator (CAISO) for mitigating strategic underscheduling by load-serving entities (LSEs) in the day-ahead market (DAM) that will be established once the Market Redesign and Technology Update (MRTU) process is complete. These proposals are described in the in June 15, 2007 document entitled, “A Straw Proposal: Proposed Interim Measures to Address Day-Ahead Underscheduling under MRTU.”¹ These measures are meant to be interim procedures that would cease upon activation of explicit virtual (or convergence) bidding within the MRTU framework.

Load underscheduling represents one type of “implicit virtual bidding”--the misrepresentation of physical positions for financial trading purposes--that the implementation of explicit virtual bidding is intended to displace or counteract. Because MRTU Release 1 will operate without virtual bidding, in its September 21, 2006 MTRU Order the Federal Energy Regulatory Commission (FERC) has directed the CAISO to implement measures to deal with potential strategic underscheduling. This directive was further clarified in an April 20, 2007 FERC order which stated that

...these interim measures are not intended to prevent LSEs from taking steps to reduce the costs of serving load. More specifically, we expect that the interim measures should address the problem of persistent underscheduling in the DAM on occasions when energy prices suggest that it would be economic to buy in the DAM.

The CAISO is required to making a filing to FERC with its proposed measures no later than 180 days prior to the effective date of MRTU Release 1.

Although underscheduling may have been a problem in the California market during period June 2000 to June 2001, the financial incentives facing LSEs and suppliers have changed considerably since that time so that neither party currently have a financial incentive to engage in persistent underscheduling of the form described above. The problem with implementing mechanisms that attempt to punish persistent underscheduling is that the actions these regulations are intended to prevent are very hard to distinguish from legitimate and even beneficial trading practices. As such, any regulation put in place to address “bad” underscheduling practices runs a serious risk of

¹ Available from <http://www.caiso.com/1bfe/1bfeebd54b0e0.pdf>

capturing many legitimate practices in its net. The application of such regulations, as with all measures aimed at mitigating market power, must weigh the potential risks of inaction versus the risks of unintended consequences from the regulations themselves. In this case we feel that the risks of major efforts to depress day-ahead prices over the first few months of MRTU (before convergence bidding is implemented) is minimal if current levels of fixed-price forward contract coverage of final demand by California's larger LSEs are maintained. However, the impacts of the ISO's "Interim Scheduling Charge" proposal on the scheduling and trading practices of LSEs are difficult to predict. Thus there is a very real possibility that the cure here may be worse than the disease it is intended to combat.

For these reasons, we support a hybrid of the CAISO's first and second options—the "Interim Scheduling Report" to be backed up by a penalty schedule. The report would provide information on the scheduling practices of the LSEs to FERC, but does not initially impose penalties on market participants. Upon a finding by FERC that scheduling practices of an LSE are in fact abusive, the penalty structure described as the "Interim Scheduling Charge" would take effect. Although the "Interim Scheduling Charge" proposal is mindful of these concerns and does an admirable job of meeting FERC requirements while minimizing the risk of unintended consequences, we feel that no proposal can balance these opposing goals with total satisfaction. Therefore, we recommend that this proposal be held in reserve, to be implemented only upon the incidence of abusive violations by LSEs, rather than implemented preemptively.²

The Nature of the Problem and the Limited Incentive for it to Occur under MRTU

At issue is the potential for large load-serving entities to impact prices through their demand bidding into day-ahead markets. We note that LSEs currently have limited ability to impact the *total* quantity of electricity they purchase. This is in the hands of their end-users. LSEs do, however, have the ability to influence *where* they purchase their power. For example, an LSE with a large net short position going into the day-ahead market may find it profitable to shift demand out of that market and into the real-time market if by doing so it is able to lower the day-ahead clearing price on its purchases in the day-ahead market.

LSEs may have many legitimate economic reasons to shift purchases between day-ahead and real-time, including a predicted price imbalance, unexpected load, or the availability of additional supply from regional markets in the hour-ahead time frame. It is important to recognize that the LSE's decision of which market—day-ahead or real-time—to purchase energy from does not impact system reliability under MRTU. The ISO believes that other aspects of MRTU, notably the Residual Unit Commitment (RUC) process will ensure system reliability, even in the absence of any formal scheduling requirements. These same aspects of MRTU also create an additional cost to LSEs for leaning too heavily on the real-time market, because the costs of RUC unit commitments

² If the Interim Scheduling Charge approach is to be used only upon detection of abuse, it would be reasonable to tighten its provisions somewhat from the current proposal, but the penalty schedule should be decided beforehand as part of an overall enforcement strategy.

and other related services are assigned primarily to entities buying out of the real-time market.

The incentive of LSEs to attempt influence day-ahead prices through their unilateral actions depends on their exposure to short-term market prices and their size. To influence the day-ahead price an LSE must control a significant portion of total ISO load. It also has to have a sufficient fraction of final demand that is not already tied up under long-term contracts. If most of the energy purchased by an LSE is under a fixed-price long-term contract, that LSE has little incentive to influence either the day-ahead or real-time price--there isn't enough volume at stake to make it worth the cost.

There is little need for a requirement that an LSEs schedules 95% of its day-ahead demand forecast in the day-ahead market if that LSE has fixed-price forward contract coverage of at least of 95% of this day-ahead demand forecast. With this level of fixed-price forward contract coverage, the LSE is completely hedged against short-term electricity price fluctuations and has no financial incentive to schedule less than the quantity of energy covered by these fixed-price forward contracts in the day-ahead market. Thus, a major determinant of the need for a day-ahead scheduling requirement under MRTU is the extent to which California LSEs maintain their current percent of fixed-price forward contract coverage of final demand under MRTU. If these LSEs maintain this level of fixed-price forward contract coverage of their final demand obligation under MRTU, they will have no incentive to engage in the persistent underscheduling described in the April 20, 2007 FERC order. Therefore, we believe that the combination of additional penalties under MRTU for over-reliance on the real-time market and the high level of fixed-price forward contract coverage of the final demand of the large California LSEs minimizes the risk of this underscheduling strategy occurring in ISO markets.

Interim Scheduling Charge Proposal and Potential Unintended Consequences

The most recent version of the ISO's Interim Scheduling Charge proposal envisions assessing a penalty on LSEs based on the positive difference between their real-time consumption and their day-ahead cleared demand at the LAP level, subject to several exceptions. The penalty rates and underscheduling thresholds are:

\$150/MWh for Net Negative load deviations that are between 15%-20% of day-ahead cleared demand:

\$250/MWh for Net Negative load deviations that are greater than 20% of day-ahead cleared demand:

There are several reasons for exemptions from the application of these penalties. No penalties are assessed for any day when the ISO peak load forecast is more than 5% less than actual demand (on a LAP basis) or during any hour when the hourly real-time price was less than the day-ahead price during that hour. Scheduling Coordinators with hourly loads of 100 MW or less are exempt from the penalty. All participating loads and load-following metered subsystems (MSSs) are exempt from the penalty. The revenues

collected from these penalties would be used to reduce the ISO's grid management charge. This mechanism would be eliminated when convergence bidding is implemented.

There are a number of potential unintended consequences associated with this Interim Scheduling Charge that impose can impose costs on the large LSEs unrelated to their own bidding behavior. For example, if suppliers into the day-ahead market unexpectedly increased their offer prices for the same quantity of energy, unless the LSEs bid a significant fraction of their real-time consumption in the day-ahead market at an extremely high price, the day-ahead market could clear for each LSE at a quantity of energy that is far below its real-time demand. This outcome would imply under-scheduling penalty charges for all LSEs with no change in their bidding behavior. In short, these LSEs could be punished for a change in the offer behavior of suppliers, with no change in their bidding behavior. At least a portion of these charges would be borne by California consumers with no corresponding market efficiency benefits.

Another unintended consequence of the Interim Scheduling Charge is the result of the fact that often a significant amount of low-priced imports are available between the close of the day-ahead market and the real-time market. It could very easily be the case that certain LSEs could find it economic to purchase more than 10 percent of their real-time consumption from imports made available between the close of the day-ahead market and the real-time market. Although these imports are the least-cost source of incremental wholesale electricity for the LSE in the absence of the Interim Scheduling Charge, the magnitude of the scheduling charge would discourage the LSE from this procurement policy and unnecessarily raise the price of electricity to California consumers.

Because of these and other potential unintended consequences associated with the Interim Scheduling Charge proposal and limited incentives California's large LSEs have to engage in persistent underscheduling because of the high level of fixed-price forward contract coverage of final demand they expect to have under MRTU, we do not feel the costs of these unintended consequences exceed the expected benefits of implementing the Interim Scheduling Charge.

The Real Potential Problem with Large Purchasers on the Demand Side of the Market

In closing, we emphasize that that the day-ahead market is only one of several contexts in which large LSEs can take actions to reduce the price they pay for electricity. Large LSEs can achieve similar results by signing contracts with generators who might otherwise not be operating or simply running their own units a bit more than is optimal to depress short-term market prices. Thus a focus on day-ahead and real-time interactions is potentially missing a more far-reaching and challenging set of issues. As with the generation side, California is largely depending upon a dynamic of long-term contracting and a reasonably competitive regional market structure to mitigate such concerns, rather

than potentially distorting market rules.³ We see little reason not to rely on the existing structure of MRTU to deal with these issues between the day-ahead and real-time market, unless market outcomes provide substantial evidence that more formal interventions are needed.

³ It should be noted that the market structure is more concentrated on the demand side. If the regulatory and policy structure in California settles on a policy in which the large LSEs acquire and operate plants in a way that depresses wholesale prices, there is little that ISO market-power mitigation rules can do to change that.