

Comments on Draft Final Proposal for Uneconomic Adjustment  
in MRTU Market Optimizations

Dynergy\*

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Dynergy appreciates the opportunity to submit these comments to the CAISO in response to the *Draft Final Proposal for Uneconomic Adjustment in MRTU Market Optimizations* and the discussion at the September 25, 2008 joint stakeholder – Market Surveillance Committee meeting.

**Summary of Issues:**

- Parameter tuning and administrative scarcity prices
- The CAISO’s proposal to set Ancillary Services prices at the last economic bid during Ancillary Service shortages
- Use of the offer cap as the penalty price for relaxing transmission constraints and for failing to satisfy the power balance equation in the MRTU optimization
- Role of operator discretion in triggering the current “limited” scarcity pricing in MRTU
- Maintenance of the optimization parameters
- Use of transmission ratings in the MRTU optimization

Dynergy’s comments follow.

**1. Parameter tuning and administrative scarcity prices**

Dynergy appreciates the CAISO’s candid discussion of how the MRTU “parameters” – i.e., the optimization’s numerical settings that determine the priorities of actions taken through the optimization – affect the results of the optimization and, consequently, the rates paid or charged to market participants. Dynergy understands the impetus behind the re-examination of the MRTU parameter, namely, that the broad requirement to use economic bids before taking any other measures could, in conjunction with the fundamental way Locational Marginal Pricing (“LMP”) works, may produce very high nodal prices under some circumstances. However, this effort to re-examine the optimization parameters to obviate unreasonably high prices has now taken on a different persona, namely, to modify the optimization parameters so that it would not produce any prices that could be perceived as “administrative scarcity prices.” This new persona is evident in the CAISO’s recommendations to (1) reduce the penalty price for relaxing transmission constraints and for violating the power balance equation to the MRTU offer cap of \$500/MWh; and (2) set the Ancillary Services (“AS”) price to the last economic bid and deem the AS procurement satisfied even when there are insufficient AS.

Yet the CAISO continues to assert that MRTU does, in fact, contain some form of scarcity pricing. When MRTU is implemented, the CAISO will bid in the energy from contingency-only reserves into the optimization at the \$500/MWh offer cap if the CAISO must deploy the energy from these contingency-only reserves to satisfy the power balance equation. As the CAISO perceives it, this kind of action is “administrative scarcity pricing.” Effectively, however, this action is no different than setting a penalty price of \$500/MWh for energy from contingency-only reserves.

There may be a distinction between setting optimization parameters and administrative scarcity prices, but there is no meaningful difference. Said another way, MRTU optimization penalty price parameters **are** administrative scarcity prices. Pretending or asserting that they are not does not change the way such parameters set prices within the MRTU optimization. Given that there is no legitimate distinction between MRTU optimization parameters and so-called “administrative” scarcity prices, the CAISO should not take irrational steps with the former to avoid the latter.

The CAISO originally set the MRTU parameter for pricing relaxed transmission constraints at three times the Energy bid cap. This is the level specified in Section 31.3.1.3 of the August 7, 2008 MRTU 4<sup>th</sup> Replacement Tariff. The CAISO understandably justified this level to prevent “unwarranted price impact in the IFM”. Relaxing transmission constraints at too low a level would undermine the purported primary benefits of MRTU – effective congestion management and nodal prices that reflect the true cost of serving load. Yet, now based on so-called “broad opposition” to any parameter that could “administratively” trigger prices above the bid cap, the CAISO has proposed to reduce this parameter for relaxing transmission constraints to the Energy bid cap. This change is unsupported and premature. The CAISO has not disclosed the nature of the “broad opposition” to prices above the Energy bid cap or justified why that opposition should dictate how the MRTU optimization parameters are set. Moreover, the CAISO acknowledges that using the Energy Bid cap as the penalty price for relaxing transmission constraints has lowered LMPs. Some parties appear to be challenging the CAISO’s commitment to producing accurate and operationally reliable LMP prices using the mistaken impression that there can be no “administrative” scarcity prices until 12 months after MRTU implementation, and the CAISO appears to be yielding to their challenge. Using the fear of “administrative” prices to blunt price signals is misplaced. As long as the MRTU optimization uses administrative parameters to establish various priorities of actions, the optimization will invariably produce “administrative” prices.

In its September 21, 2006 MRTU Order, the Federal Energy Regulatory Commission (“FERC”) ordered the CAISO to implement, **within** 12 months of the effective date of MRTU implementation, a scarcity pricing methodology that causes prices to increase whenever reserves or energy are short, both in the day-ahead and real-time markets.. FERC did not direct the CAISO to **avoid** all semblances of administrative scarcity pricing until 12 months **after** MRTU implementation. Consequently, the CAISO should take steps to ensure that reserve and energy prices reflect scarcity, operational realities and constraints. The CAISO can and should accomplish such responsible outcomes through the proper selection of MRTU optimization parameters.

**2. The CAISO's proposal to set Ancillary Services prices at the last economic bid during Ancillary Service shortages**

Dynegy objects to the CAISO's proposal to set the price at the last economic bid and deem the CAISO's AS obligations met, even if it cannot meet those obligations through its markets. The CAISO will bid in the energy from contingency-only reserves at the offer cap if the CAISO must do so to meet the power balance equation. Setting the AS price at the AS offer cap if the CAISO cannot procure its AS needs through its markets, therefore, would be consistent with the CAISO's response to energy shortages in MRTU. Such result ostensibly could be accomplished by setting the penalty price for failing to meet AS requirements at the AS offer cap upon MRTU implementation. The CAISO should continue to work with stakeholders to define level-of-shortage-specific "administrative" scarcity price increases for reserve shortages for implementation no later than 12 months after MRTU implementation. Meanwhile, the CAISO should send the same offer-cap based scarcity price signal through its AS markets as it does to its energy markets upon MRTU implementation.

**3. The use of the offer cap as the penalty price for relaxing transmission constraints and failing to satisfy the power balance equation in the MRTU optimization**

As noted above, the CAISO has softened its desire for operationally robust prices by reducing the penalty price thresholds from \$1500/MWh to \$500/MWh for violating transmission constraints and violating the power balance equation. It proposes to make this reduction despite acknowledging that such action will depress sensible nodal LMPs. This action is unwarranted. Under MRTU, relatively little load will be priced at nodal prices. The CAISO has already tempered the effects of high nodal prices by settling the vast majority of load at the LAP level. The CAISO has already *mitigated the effects* of high LMP prices on consumers by charging load on an aggregated basis. It should not *attempt to control* LMP prices by setting such low penalty prices for violating two of the most fundamental power system operating constraints. To ensure operationally robust prices, the CAISO should restore these penalty prices to their original levels.

The CAISO notes that the LMP prices could approach the shadow price of \$5000 before relaxation occurs (Final proposal at 6-7). At the current \$500 bid cap, the shadow price of \$5000 projects that the CAISO will use resources that are at least 10% effective before relaxing transmission constraints. Dynegy understands that other ISOs use 5% as the "effectiveness floor" before undertaking uneconomic adjustments in their optimizations. Dynegy requests that the CAISO confirm this understanding, and, if it is correct, indicate why the CAISO proposes to use only 10% as the "effectiveness floor" in the MRTU optimization.

**4. The role of operator discretion in triggering the current "limited" scarcity pricing in MRTU**

Section 34.8, which provides in part that “limited” scarcity pricing will be deployed at MRTU start-up, notes;

[...] If Contingency Only reserves are dispatched in response to a System Emergency that has occurred because the CAISO has run out of Economic Bids when no Contingency event has occurred, the RTED will Dispatch such Contingency Only reserves using maximum Bid prices as provided in Section 39.6.1 as the Energy Bids for such reserves and will set prices accordingly.

This language appears to provide for limited “scarcity pricing” although it is curiously drafted to refer to setting prices “accordingly” instead of “at the offer cap set forth in Section 39.6”. However, given that limited scarcity pricing takes place only if the CAISO dispatches contingency-only reserves, it is an open question whether the CAISO is authorized to dispatch such contingency-only reserves in response to a System Emergency, and whether this limited scarcity pricing will ever be deployed, even under conditions what would apparently warrant its triggering. First, it not at all clear that the CAISO will declare a System Emergency if it runs out of economic bids. Second, nothing in this section compels the CAISO to dispatch contingency-only bids even if it has run out of economic bids and declared a System Emergency. Consequently, the triggering of limited scarcity pricing that the CAISO has indicated is present in its MRTU design depends solely on CAISO operator discretion. This realization confirms the worst fears of several parties, repeatedly expressed in the scarcity pricing stakeholder process, of scarcity prices that depend entirely on CAISO operator discretion. If the CAISO is committed to making this limited scarcity pricing a dependable, unavoidable feature of its MRTU market design, it should propose scarcity pricing language that is narrower and more precise. .

Further, if the CAISO is interested in “cleaning up” the language in Section 34.8 prior to MRTU implementation, it should deal with what appears to be a complex sentence inadvertently separated into a sentence fragment and another sentence in this section, a few sentences above the language cited above:

If Contingency Only reserves are dispatched through the RTCD, which as described in Section 34.3.2, only Dispatches in the event of a Contingency. Such Dispatch and pricing will be based on the original Energy Bids.

## **5. Where the optimization parameters are maintained**

Dynergy appreciates that the CAISO will maintain the *status quo* of housing the optimization parameter related to the relaxation of transmission constraints in Section 31.3.1.3 of the MRTU tariff. As FERC noted in paragraph 618 of the September 2006 MRTU Order:

**We agree with PG&E that the [optimization penalty price] parameters that govern the CAISO’s use of MRTU Tariff section 31.3.1.2 could significantly impact rates** and find that the CAISO should provide further details on those parameters in MRTU Tariff section 31.3.1.2. This section currently states that “the CAISO will evaluate the validity of the binding constraints and if it is determined that the constraint can be relaxed based on the operating practices, will relax the constraint consistent with operating practices” and “the CAISO may ‘soften’ the Load Distribution Factor constraints on a node or sub-LAP basis, i.e., adjust load at individual nodes or, in aggregate, a group of nodes to relieve the constraint in such a way that minimizes the quantity of load curtailed.” **While the CAISO anticipates using these provisions only under rare conditions, the provisions must be fully developed and transparent.** Thus, the CAISO must revise this [tariff] section to include the parameters that would govern its use of MRTU Tariff section 31.3.1.2. (*emphasis added*)

Given that the MRTU optimization parameters and the penalty price for relaxing transmission constraints affect rates, the CAISO’s proposal to place other optimization parameters in the un-filed Business Practice Manuals remains an open issue. The CAISO’s recent proposal to locate these parameters in a BPM instead of in an operating procedure is a step in the right direction. Yet, given all of the last minute changes to MRTU, the notion of the CAISO putting these key optimization parameters in an un-filed BPM subject to an emergency change management process, engenders neither confidence in or transparency of the process.

## **6. How transmission ratings are used in the MRTU optimization**

As a result of an exchange that took place during the September 25 MSC/stakeholder meeting, Dynegy requests that the CAISO explain how different transmission ratings are used within the MRTU optimization. Specifically, does the optimization use “normal” or “continuous” ratings for circuit elements, or does the optimization use “emergency” ratings as well? If the optimization uses “emergency” ratings, under what conditions would such ratings be applied?

Dynegy thanks the CAISO for the opportunity to submit these comments and looks forward to the CAISO’s response.

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