California Independent
System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Laura Manz, Vice President, Market and Infrastructure Development

Lorenzo Kristov, Principal, Market Architect

Date: October 20, 2008

Re: ***Decision on Uneconomic Adjustment Policy***

This memorandum requires Board action.

EXECUTIVE SUMMARY

In this memorandum management proposes six further enhancements to the *uneconomic adjustment* policy for the markets being implemented under the market redesign and technology upgrade (MRTU) project. Upon Board approval of these enhancements management proposes to file the appropriate tariff changes with the Federal Energy Regulatory Commission (FERC).

In July the Board approved Management's proposal to modify the tariff to address the potential for extreme prices and schedule adjustments under certain rare circumstances. The approved modifications apply to a set of procedures referred to as uneconomic adjustment in the MRTU markets. Specifically, the Board approved Management's proposal to relax an overly inflexible MRTU tariff requirement to use *all* economic bids before adjusting a single self-schedule.

During the July Board discussion on this topic, several stakeholders raised concerns, either specifically about Management's narrow proposal or about the uneconomic adjustment procedures in general or other aspects of the policy. Management committed to conduct further analysis and discussions with stakeholders and to report back to the Board regarding how these concerns would be addressed. In the course of the subsequent stakeholder process Management identified and resolved six further policy enhancements to its approach for setting uneconomic adjustment scheduling and pricing parameters, which also require changes to the MRTU tariff to clarify and improve the rules for uneconomic adjustment. Management proposes these additional changes to the Board for approval at this time.

The six proposed policy enhancements that require further MRTU tariff changes are summarized as follows, and are explained more fully in the next section.

1. When there is a shortage of supply to meet load in the real-time market, use the energy bid cap (initially $500 per MWh, increasing to $1000 in two annual steps) as the pricing parameter for calculating five-minute interval prices.

2. Use a value of $5000 per MWh in both the integrated forward market and the real-time market as the scheduling parameter for the market to determine when to relax an internal transmission constraint rather than continue to adjust supply or demand bids or self-schedules to relieve congestion on the constrained facility. Use a value of $1250 per MWh in the residual unit commitment procedure.

3. When a transmission constraint is relaxed to achieve a feasible market solution, use the energy bid cap as the pricing parameter for calculating energy prices in the integrated forward market and the real-time market. Use the residual unit commitment maximum availability bid price ($250 per MW/hour) in the residual unit commitment procedure.

4. When an ancillary service procurement requirement cannot be fully met in the day-ahead market or the real-time market, use the ancillary services offer cap ($250 per MW/hour) as the pricing parameter for determining the price of the insufficient ancillary service.

5. In the integrated forward market set the value of the scheduling parameter associated with self-schedules submitted under existing rights [existing transmission contracts (ETC), converted rights (CVR) and transmission ownership rights (TOR)] to a level higher than the scheduling parameter associated with internal transmission constraints to ensure that existing rights self-schedules are not curtailed by uneconomic adjustments in the integrated forward market.

6. With the exception of the provisions described in items 1-5 above, which will be included in the MRTU tariff, maintain any other uneconomic adjustment implementation details and scheduling parameters in the *Market Operations Business Practices Manual* (BPM), and use the FERC-approved BPM change management process for making changes to these parameter values.

Finally, Management reiterates its commitment to publish final MRTU go-live values for the uneconomic adjustment parameters in the BPM no later than 45 days prior to go-live, and to incorporate these values into the MRTU software at that time for the final phase of market simulation and pre-production testing. Once these values are published in the BPM and incorporated into the software the ISO would revise a parameter value only in the event that that parameter value is found to be causing a significant unintended consequence in terms of either software performance or market results. Moreover, any scheduling or pricing parameters specifically approved by the Board today and subsequently filed with the FERC will remain as specified herein unless Management obtains Board and FERC approval of any proposed changes.

Motion

Moved, that the ISO Board of Governors approves the proposed rule changes regarding the setting of the scheduling and pricing parameters for uneconomic adjustments in the ISO market, as detailed in the memorandum, dated October 20, 2008, and

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

changes regarding the setting of scheduling and pricing parameters for uneconomic adjustment in the ISO market.

ISSUE STATEMENT AND MANAGEMENT PROPOSALS

In the course of the MRTU market design process, many participants expressed the need to schedule ISO grid use while minimizing their participation in the MRTU energy markets. In response to this need, the MRTU design allows scheduling coordinators (SCs) to submit *self-schedules* of supply and demand resources, i.e., price-taker quantities of supply or demand with no associated bid prices, as an alternative to *economic bids* which include bid prices associated with quantities of supply or demand. This policy was adopted to provide participants that choose to be price-takers greater scheduling certainty than participants that provide economic prices to be cleared in the market. The MRTU software can be configured to determine the degree to which it will rely exclusively on economic bids to arrive at a feasible solution before adjusting submitted self-schedules, as well as to provide different levels of scheduling priority to different classes of self-schedules. The feasible solution must balance supply and demand for energy and fully procure required ancillary services, subject to transmission and generator operating constraints and accounting for transmission losses.

Under some combinations of system conditions and SC bidding behavior, available economic bids may be insufficient to support a feasible solution, or may lead to a solution that is feasible but includes extreme schedule adjustments that violate prudent operating practice or extreme prices unrelated to economic fundamentals. Market participants can both help to avoid and protect themselves from the impacts of such outcomes by submitting economic bids as much as possible and using self-schedules only when necessary. In the rare situations where the software cannot determine a reasonable solution based on economic bids, the MRTU tariff and the market software provide for uneconomic adjustments – adjustments to self-schedules or to other software constraints such as transmission line limits or ancillary service procurement requirements to enable the market to reach a feasible solution.

Because the uneconomic adjustment procedures adjust elements of the market that do not have associated bid prices submitted by SCs, the ISO must specify the rules for uneconomic adjustment to direct the market software to adjust these elements in a manner that is consistent with good operating practice, economic efficiency, and FERC-approved scheduling priorities. In addition, once the market has made such adjustments, the rules direct the software to calculate prices appropriately to reflect the conditions that required the use of uneconomic adjustments.

In the memorandum dated July 1, 2008, Management requested and the Board approved a narrow provision requiring only that the ISO markets run out of *effective* economic bids – and need not run out of *all* economic bids – before modifying self-schedules in the event that the software cannot reach a feasible solution. This provision enables the market software to avoid solutions that are not consistent with prudent grid operations but that the software would otherwise be constrained to accept under the original requirement.

Management now seeks additional policy refinements and enhancements to provide greater specificity or clarity regarding how the software will make certain types of uneconomic adjustments and, upon making them, determine appropriate settlement prices in the markets.

1. When there is a shortage of supply to meet load in the real-time market, use the energy bid cap (initially $500 per MWh, increasing to $1000 in two annual steps) as the pricing parameter for calculating five-minute interval prices.

In the day-ahead, integrated forward market, when available supply is insufficient to meet all self-scheduled or price-taker demand, MRTU policy as reflected in the current tariff allows self-scheduled demand to be reduced and specifies, for price-setting purposes, that self-scheduled demand is deemed to be willing to pay the energy bid cap. The real-time market is different however, in that demand is fixed at the ISO load forecast and cannot be reduced unless and until the ISO declares emergency conditions. Nevertheless, in some conditions short of curtailing firm load, energy offers in the market may be insufficient to meet the load forecast, but actual physical demand can by met by the operators through other measures such as dispatching energy from some contingency-only operating reserves or using certain types of demand response resources. In these cases the need to use these other measures is signaled by the software in the form of an uneconomic adjustment to the supply-demand balance constraint, which then affects real-time prices in accordance with the setting of a pricing parameter. The MRTU tariff does not specify the value of this pricing parameter, which Management now proposes to set at the energy bid cap.

The energy bid cap is the appropriate value for this pricing parameter because it is consistent with:

- Pricing in the integrated forward market when self-scheduled demand is curtailed, which from an economic perspective is analogous to the real-time shortfall situation, and

- Pricing in the real-time market when operators decide to utilize some contingency-only operating reserves to provide energy in a supply shortfall.

Regarding the latter point, when there is an energy shortfall but no system contingency, operators will decide whether to use contingency-only reserves, based on current or anticipated system conditions. If the operators decide to use such reserves, the reserves will be made available to the market with energy bids set to the energy bid cap. Management believes that energy pricing should not vary significantly depending on whether or not the operators take this decision. Use of the energy bid cap as the pricing parameter will minimize any potential for such variation.

It is important to understand that setting this pricing parameter to the level of the energy bid cap does not prevent actual real-time energy prices (i.e., individual locational marginal prices) from rising above the bid cap. What this pricing parameter will do is ensure that the system-wide average energy price (that is, the load-weighted average of all locational marginal prices for that interval across the ISO grid) will be at least as high as the energy bid cap, thus reflecting the supply shortfall condition.

2. Use a value of $5000 per MWh in both the integrated forward market and the real-time market as the scheduling parameter for the market to determine when to relax an internal transmission constraint rather than continue to adjust supply or demand bids or self-schedules to relieve congestion on the constrained facility. Use a value of $1250 per MWh in the residual unit commitment procedure.

MRTU policy as reflected in the current MRTU tariff specifies several levels of scheduling priority for different types of self-schedules in the integrated forward market and the real-time market. As a result the MRTU software must use scheduling parameters ranging from the market bid cap up to many thousands of dollars in

order to maintain sufficient separation between consecutive priority levels. Although the tariff allows for uneconomic adjustments to self-schedules in order to enforce the flow limits of transmission facilities, there is a point at which very large MW adjustments costing thousands of dollars would be needed to obtain one MW of congestion relief on the constraint., at which point the software will relax the transmission constraint rather than incur higher costs. Management believes that this precise point should be set in the software to approximate as closely as possible the actions of prudent grid operators, i.e., to relax a transmission constraint at the point where further adjustment to bids and self-schedules would lead to a resource adjustments that grid operators following accepted good operating practice would not typically perform. As a result of staff's analysis of special test cases as well as market simulation cases, Management recommends using $5000 as the threshold value beyond which the software will relax a constraint rather than continue to re-dispatch resources to relieve congestion. One interpretation of the $5000 value is that it equals the cost of dispatching one MW of energy from a resource that is offering energy at the bid cap and is ten percent effective on the constraint in question.

To be clear, the $5000 value just discussed is used for scheduling purposes, as the cost threshold where the market software will cease trying to relieve congestion on a line through re-dispatch of supply and demand resources, and will instead relax the constraint. How this scheduling parameter affects the prices used for market settlement is discussed under item 3.

3. When a transmission constraint is relaxed to achieve a feasible market solution, use the energy bid cap as the pricing parameter for calculating energy prices in the integrated forward market and the real-time market. Use the residual unit commitment maximum availability bid price ($250 per MW/hour) in the residual unit commitment procedure.

A fundamental objective of MRTU is to ensure that day-ahead schedules and real-time dispatches are feasible in the sense of respecting the flow limits of transmission facilities and the operating limits of resources. In some instances, as discussed above, the market may need to adjust internal transmission limits through the uneconomic adjustment process to avoid scheduling or pricing outcomes that are inconsistent with prudent grid operating practice or economic dispatch principles. For example, in a situation where a transmission limit in the northern part of the system is overloaded and the only economic bids available to relieve the overload are in the extreme south, the market would need to adjust a high volume of the southern resources at extremely high cost in order to obtain a small amount of relief on the overloaded facility. Because such actions would not be consistent with good operating practice, the software includes an uneconomic adjustment parameter that allows an internal transmission limit to be relaxed somewhat when the cost of congestion relief exceeds a specified high threshold (i.e., the $5000 per MWh value discussed above). From an operational perspective such actions are warranted because they more closely resemble how the grid is operated in practice, where operators can regularly manage small magnitude flows in excess of normal limits for short periods of time. The open question that is addressed by the present proposal is: How should transmission constraint relaxation via uneconomic adjustment effect determination of prices in the integrated forward market and the real-time market?

Management proposes to use the energy bid cap as the pricing parameter associated with relaxed transmission constraints in the integrated forward market and the real-time market. The main reasons for this proposal are:

- Consistency between the integrated forward market and the real-time market, given an important reason explained below for using the energy bid cap as the pricing parameter in the real-time market

- Low likelihood that the energy bid cap will suppress the economic signals associated with constraint relaxation, and

- Consistency with the broader concept – which also applies to Management's proposals on items 1 and 4 of this memorandum – of not setting administrative pricing parameters greater than the approved bid caps for MRTU start-up.

Using the energy bid cap as the pricing parameter in the real-time market is necessary and appropriate to ensure consistency with the effects of the item 1 proposal, that is, the pricing parameter associated with shortage of supply, which is also the energy bid cap. In the real-time market, load for the most part cannot respond to prices; rather, the ISO operators must dispatch sufficient supply in the right locations to maintain system balance without curtailing firm load unless absolutely necessary. Therefore, in tight supply conditions the real-time market software will use all available supply to meet the load even if that requires relaxing transmission constraints for one or more five-minute intervals. If the pricing parameter for any relaxed transmission constraints is set to a higher level than the pricing parameter for supply-demand balance, the transmission constraint parameter could be the dominant factor in affecting real-time energy prices, instead of allowing the energy-balance parameter at the energy bid cap to play that role. Because the shortfall of supply is the driving factor behind the need for uneconomic adjustment, the pricing parameter on the energy balance constraint should be the primary parameter influencing price determination. Management therefore proposes the energy bid cap for the transmission constraint pricing parameter in the real-time market.

With regard to economic signals it is important to understand, just as with item 1, that setting the pricing parameter to the energy bid cap does not prevent individual locational marginal prices from going above the energy bid cap, which can occur even if no transmission constraints are relaxed. For transmission constraints internal to the ISO system, the $5000 scheduling parameter (discussed in item 3 below) will direct the market to accept economic bids at the energy bid cap that are at least 10 percent effective on a congestion constraint before relaxing the constraint. This means that the economic cost of relieving the constraint can approach $5000 before constraint relaxation occurs. If it turns out that the last MW of congestion relief before relaxing the constraint is higher than the pricing parameter value of $500, then the cost of that last MW of congestion relief will figure into the pricing calculations, not the $500 value. Alternatively, if a higher value is used for the pricing parameter, say $1500 instead of $500, the $1500 value will figure into the pricing calculations whenever the cost of the last MW of congestion relief is less than $1500. Thus this choice of parameter value does not suppress the economic signal associated with constraint relaxation; rather, it ensures that the value of the constraint for pricing purposes will be *no less than* the selected parameter value. Management therefore believes that it would not be appropriate at MRTU start-up to set an administrative floor that is above the energy bid cap for purposes of calculating market prices when an internal transmission constraint is relaxed.

At the same time, it is important to point out that for a transmission constraint that is part of a network, allowing the economic value of the constraint to approach the $5000 constraint relaxation parameter does not mean that there must be energy price differentials of that magnitude. The high economic value on the constraint will *influence* locational marginal prices in the neighborhood, but actual prices will not rise to the same level in a network because the energy flows to and from any given pricing location will travel over multiple lines. Typically only a fraction of the flows to and from any location will be over the constrained line, so the effect of the potentially high economic value of the constrained will be diluted by the multi-directional nature of energy flows in the network.

4. When an ancillary service procurement requirement cannot be fully met in the day-ahead market or the real-time market, use the ancillary services offer cap ($250 per MW/hour) as the pricing parameter for determining the price of the insufficient ancillary service.

Currently the MRTU tariff does not address the determination of ancillary services prices when there is not sufficient supply to meet all ancillary services procurement requirements. For such situations at MRTU start-up it is important to have a mechanism that allows the price of a deficient service to reflect the deficiency, while providing for a logical progression to the new reserve scarcity pricing mechanism to be implemented under the markets and performance (MAP) enhancements roughly a year after start-up.

Questions about this matter arose in discussions with stakeholders on the subject of uneconomic adjustment as well as on the design of the reserve scarcity pricing mechanism.[1] Under the reserve scarcity pricing mechanism to be implemented as part of the MAP initiative, the market software will apply a pre-specified price schedule that would be invoked when there is an ancillary service supply shortfall to establish scarcity prices for reserves that are a function of the magnitude of the supply shortfall.

For MRTU start-up, Management proposes that when supply of an ancillary service in the integrated forward market or the real-time market is not sufficient to meet ancillary service procurement requirements, the market will use the ancillary service offer cap ($250 per MW/hour) as the pricing parameter for determining the price of the deficient reserve. This pricing approach is consistent with how energy prices are determined when energy is in short supply, as discussed earlier in this memorandum. Management believes that this approach is appropriate for MRTU start-up because it provides a basis for a logical transition to the more refined MAP approach that uses tiered pricing, yet it will not artificially suppress ancillary service prices under supply shortfall because it will invoke the ancillary service offer cap as the pricing parameter for the deficient reserve. Moreover, as pointed out by the Market Surveillance Committee,[2] this approach will provide less incentive and opportunity for suppliers with potential ancillary service market power to try to inflate ancillary service prices in the integrated forward market, which at start-up does not require all certified, capable resources to offer ancillary services to the market. The MSC Opinion entitled *Uneconomic Adjustment in the MRTU Market Optimizations*, is included as Attachment A.

It must be understood that using the offer cap as the pricing parameter for a deficient service does not ensure that the ancillary service price will be limited by the bid cap. Higher ancillary service prices can occur because these prices include, in addition to the ancillary service offer price, an additional price component that reflects the opportunity cost a resource foregoes by providing reserves instead of energy. Ancillary service prices can also rise above the offer cap due to the nested structure of ancillary service procurement regions, which can experience supply shortfalls in more than one nested region in the same market interval.

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1 Management will bring a reserve scarcity pricing proposal to the Board for approval at a later date.

2 See "Comments on 'Uneconomic Adjustment in the MRTU Market Optimizations'" by the Market Surveillance Committee of the California ISO, October 8, 2008. In its comments the Committee also recommended lowering the ancillary service offer cap from the current $250 to $150 per MW/hour. Earlier in the MRTU market design process the ISO did propose a lower value in a filing to FERC, but that proposal was rejected by FERC. *See California Indep. Sys. Operator Corp.*, 100 FERC ¶ 61, 060 (2002). In its declaratory order on the ISO market redesign proposal the Commission rejected the ISO proposal for a bid cap of $108/MWh on bids into its real time markets including ancillary services. The Commission then agreed with concerns of the MSC that a $108/MWh bid cap will likely be more detrimental than helpful to California energy and ancillary service markets, finding that a market with a relatively low bid cap provides incentives for significant amounts of out of market purchases that will take the form of a non-transparent, pay-as-bid market, and thereby negating the effectiveness of market forces to limit prices. The Commission further stated that it believed that a "low bid cap would create a disincentive for out-of-state suppliers to bid into the California market." The Commission then concluded that their decision to establish a $250/MWh bid cap together with the other mitigation measures was "a careful balance of the need to provide incentive for market entry by new generation investment with the need to protect markets from the potential of market power abuse."

5. In the integrated forward market set the value of the scheduling parameter associated with self-schedules submitted under existing rights (existing transmission contracts (ETC), converted rights (CVR) and transmission ownership rights (TOR)) to a level higher than the scheduling parameter associated with internal transmission constraints to ensure that existing rights self-schedules are not curtailed by uneconomic adjustments in the integrated forward market.

At the July Board meeting several parties who hold existing ETC or TOR rights raised concerns that the uneconomic adjustment procedures would reduce the firmness of their scheduling ability under their rights or expose them to financial costs that diminish the value of their existing contracts. Although Management made it clear at the July meeting and in other discussions that uneconomic adjustment per se could never impede the ability of these parties to carry out real-time operations in accordance with statutory mandates (for example, to manage water deliveries for agricultural or environmental purposes), Management did agree to hold further discussions with the parties to explore potential enhancements to the uneconomic adjustment provisions to ensure the firmness of their rights and mitigate potential financial exposure that may result from uneconomic adjustment.

Following the July Board meeting ISO staff conducted further analysis using market simulation cases and specially crafted test cases to assess the impacts of different uneconomic adjustment parameter values on ETC, CVR and TOR self-schedules and market prices.[3] ISO staff then met directly with representatives of State Water Project, City and County of San Francisco and Metropolitan Water District to review ISO staff's test results, better understand the concerns and needs of these parties, and explore potential solutions. In a paper posted on September 19 the ISO provided a proposal for financial firmness of ETC and TOR self-schedules, which was designed to compensate them for any congestion charges resulting from unbalanced curtailment of their self-schedules in the integrated forward market. At the September 25 joint Stakeholder and Market Surveillance Committee meeting on uneconomic adjustment, ISO staff provided these parties an opportunity to make a presentation explaining their concerns, and devoted a substantial portion of the meeting discussing with the full stakeholder community the ISO staff's analytical results and various options for addressing the parties' concerns. Finally, following that meeting the parties offered additional comments and examples describing their concerns, as well as more detailed proposals for addressing them.

As a result of these efforts, after considering the various options presented, Management now proposes what it believes to be the simplest solution, one which effectively addresses the concerns expressed while being fully compatible with the current provisions for existing rights self-schedules and the MRTU software. Management proposes to increase the integrated forward market parameter values used for ETC, CVR and TOR self-schedules up to a value slightly above the parameter value for relaxing internal transmission constraints. Under such parameter settings in the integrated forward market, the software will see that adjusting existing rights self-schedules looks more expensive than relaxing transmission constraints. Therefore, when there is a binding transmission constraint near the location of a supply or load resource self-scheduled under an existing right, the integrated forward market software will relax the transmission constraint rather than curtail the existing right self-schedule. This simple proposal will guarantee that existing rights self-schedules are not curtailed by uneconomic adjustments in the integrated forward market, and will obviate the need for any financial adjustments for day-ahead schedule reductions because these day-ahead self-schedules will not be reduced.

[3] One set of parameters ISO staff analyzed was proposed by one of the parties in its written comments.

6. With the exception of the provisions described in items 1-5 above, which will be included in the MRTU tariff, maintain any other uneconomic adjustment scheduling parameters in the *Market Operations Business Practices Manual* (BPM), and utilize the FERC-approved BPM change management process for making changes to these parameter values.

During the stakeholder process on uneconomic adjustment policy, ISO staff and stakeholders discussed the appropriate process by which the parameter values implemented in MRTU software should be maintained. The following criteria guided Management's development of its proposal:

- Transparency and availability of the parameter values to market participants
- Stakeholder participation in the process for changing parameter values
- Publication of revised parameter values prior to implementation in the market software
- Flexibility of the ISO to modify a parameter value quickly if it is found to be causing a problem with either market performance or market results
- Sufficient detail and specificity in the MRTU tariff regarding the rules for determining market prices when uneconomic adjustment is invoked.

Based on these criteria Management proposes, first, to make the tariff changes discussed in items 1-5 above, which will specify the pricing parameter settings for the key uneconomic adjustment cases, the scheduling parameter for the important case of internal transmission constraint relaxation, and the elevation of existing rights priority in the integrated forward market to a level higher than the enforcement of internal transmission constraints. Second, we propose to publish in the *Market Operations Business Practices Manual* (BPM) the remaining scheduling parameters used to implement the self-schedule priorities for the integrated forward market and the real-time market as listed in Sections 31.4 and 34.10 of the MRTU tariff, respectively. With these parameter values specified in the BPM, the ISO will follow the FERC-approved BPM change management process for making changes to them. The BPM change management process does include an expedited process which will allow the ISO to make changes quickly if a parameter value is found to be causing a problem. Management therefore recommends this approach as providing the optimal balance of flexibility, transparency, stakeholder process and sufficient tariff detail on the rules for setting prices when uneconomic adjustments are invoked.

OPINION OF THE MARKET SURVEILLANCE COMMITTEE

In their "Comments on 'Uneconomic Adjustment in the MRTU Market Optimizations'" as formally adopted on October 8, 2008, the Market Surveillance Committee expressed the following positions:[4]

- Support for Management's proposal to use the energy bid cap as the pricing parameter associated with a supply shortfall in the real-time market (item 1 of this memorandum)
- Support for Management's proposal to use the ancillary services offer cap as the pricing parameter in both the integrated forward market and the real-time market when an ancillary service procurement target cannot be fully met (item 4 of this memorandum), with the additional recommendation that the ISO lower the ancillary services offer cap from the current $250 value to $150
- Support for Management's proposal to use the energy bid cap as the pricing parameter in both the integrated forward market and the real-time market when an internal transmission constraint must be relaxed (item 3 of this memorandum), with the additional recommendation that the ISO monitor for the

[4] The Market Surveillance Committee comments were based on the ISO's September 19 proposals, some of which have been revised in the preparation of this memorandum. Management has requested that a representative of the Committee be present at the Board discussion of the *uneconomic adjustment* topic to provide the Committee's views on Management's revised proposals.

occurrence of inefficient pricing outcomes due to this parameter value and be prepared to increase it if warranted
- Support for an approach to the concerns of existing rights holders that addresses the potential for curtailment directly (as Management now proposes in item 5 of this memorandum), due to the potential complexity of a financial solution that may require addressing the rights holders' exposure to several different charge types
- Support for Management's proposal to maintain the uneconomic adjustment parameters in the BPM (item 6 of this memorandum) to allow the ISO the flexibility to make changes to these values quickly if possible.

POSITIONS OF THE PARTIES

The following parties submitted written comments following the ISO's September 25 joint meeting with stakeholders and the Market Surveillance Committee:

- California Public Utilities Commission (CPUC)
- California Department of Water Resources – State Water Project (SWP)
- The Cities of Anaheim, Azusa, Banning, Colton, Pasadena, Riverside, CA (Six Cities)
- Citigroup Energy, Inc.
- City and County of San Francisco (CCSF)
- City and Count of Santa Clara, CA doing business as Silicon Valley Power (SWP)
- Dynegy
- EPIC Merchant Energy (EPIC)
- Imperial Irrigation District (IID)
- Metropolitan Water District of Southern California (MWD)
- Modesto Irrigation District (MID)
- Sacramento Municipal Utility District (SMUD)
- Southern California Edison (SCE)
- Transmission Agency of Northern California (TANC)
- Western Area Power Authority (Western)
- Western Power Trading Forum (WPTF).

The table below summarizes stakeholder comments on the six Management proposals presented for Board approval at this time. In some instances, which are described in footnotes to the table, the proposals in this memorandum reflect Management's revisions to the proposals that were published in the September 19 paper and discussed at the September 25 meeting, based on input received at that meeting or recommendations of the Market Surveillance Committee. In these cases we have tried to represent stakeholder views correctly as they relate to the proposals before the Board at this time. Additional stakeholder comments on other aspects of the uneconomic adjustment policy or stakeholder process are listed below the table.

Management Proposal	Support	Concern or Opposition
1. Energy bid cap as pricing parameter in real-time market when supply is short	CPUC, PG&E, SCE, Western	

Management Proposal	Support	Concern or Opposition
2. $5000 scheduling parameter in integrated forward market and real-time market as threshold for relaxation of an internal transmission constraint[5]		Dynegy suggests a higher value to allow less effective resource adjustments to be accepted.
3. Energy bid cap as pricing parameter in integrated forward market and real-time market when an internal transmission constraint is relaxed	CPUC, PG&E, SCE, Western	Citigroup concerned that prices will be muted Dynegy favors three times the energy bid cap WPTF recommends using $5000 scheduling parameter
4. Ancillary services offer cap as pricing parameter in integrated forward market and real-time market when an ancillary service procurement requirement cannot fully be met[6]	Dynegy, WPTF	PG&E
5. Raising scheduling parameter for ETC and TOR self-schedules in the integrated forward market above the threshold for relaxing internal transmission constraints.[7]	CCSF and SWP offered proposals for addressing the scheduling priority of existing rights self-schedules by modeling the load side of such self-schedules at the relevant default load aggregation point (DLAP) rather than the actual physical load location. Such an approach was supported, either outright or for further consideration, by CCSF, CPUC, MWD, SCE, SWP, SVP, and WPTF.	
6. Maintenance of scheduling parameters through the Business Practices Manual	CPUC, PG&E, SCE, WPTF	Dynegy, MID, SVP, TANC prefer to have all parameters in the MRTU tariff.

In addition to the above, stakeholders offered the following comments.

- Some parties raised concerns about the process for developing the *uneconomic adjustment* policies and the settings of the parameter values. MID, SWP, SVP and TANC want the ISO to finalize all parameter values before filing the policy-related tariff changes.
- SCE expressed concern about RUC pricing results in market simulation. These results are an ongoing topic of analysis and discussion with stakeholders in the market simulation process.

[5] Although this scheduling parameter value has been included in the published documents and stakeholder discussions on uneconomic adjustment for the past several months, Management only recently determined the need to specify this value in the MRTU tariff and therefore did not request stakeholder comments on this in the latest round of written comments. The summary of this item in the table reflects comments that have been offered unsolicited in the latest or earlier rounds.

[6] This issue was not raised for discussion in the September 19 paper because the ISO believed it had been settled based on prior discussions. Stakeholders and the MSC requested to re-open it at the September 25 meeting, however, and on that basis the ISO reconsidered and revised its earlier proposal.

[7] This specific Management proposal was not available for written stakeholder comments. In the September 19, 2008 white paper the ISO had proposed a different approach, based on financial adjustments for ETC and TOR holders when their self-schedules in the integrated forward market are reduced through uneconomic adjustments. The general reaction on the part of the existing rights holders as expressed at the September 25 meeting and in subsequent written comments was that the September 19 ISO financial firmness proposal was not sufficient to address their concerns. Some non-existing rights parties (CPUC, PG&E) agreed with the need to protect existing rights holders from financial impacts of uneconomic adjustments to their schedules, but expressed concern about the transparency and potential magnitude of the cost impacts of such protection on other market participants.

MANAGEMENT RECOMMENDATION

Based on the discussion provided in this memorandum, Management recommends that the Board approve its proposals and authorize Management to file necessary tariff changes with FERC to implement them.