California Independent
System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Charles A. King, Vice President, Market Development and Program Management
Anjali Sheffrin, Chief Economist / Director, Market and Product Development
Lorenzo Kristov, Principal Market Architect

Date: April 12, 2007

Re: ***Decision on Proposed Tariff Changes to Enhance Rules for the CRR Release Process***

This memorandum requires Board action.

INTRODUCTION

In developing a complete redesign of the ISO's markets to utilize a Locational Marginal Pricing ("LMP") from to the original zonal design the ISO started with, it was recognized that a new financial instrument for managing congestion costs would need to be a central component. Indeed, the three eastern ISOs and the Midwest ISO all use LMP as the basis of their markets and have financial transmission rights analogous to the Congestion Revenue Rights (CRR's) being developed for the California markets. The CRR component of the ISO's February 2006 Market Redesign and Technology Upgrade (MRTU) Tariff filing was developed through an extensive stakeholder process that ran from spring of 2005 to the end of the year, and featured regular meetings, ISO white papers with detailed examples, written comments by the parties, and even an in-depth simulation study in which the interested parties participated. In addition to ISO staff, the development of the CRR proposal benefited from full participation by consultants from the firm LECG who have been involved in developing or advising on the transmission right models used by the eastern ISOs and the Midwest ISO, as well as participation and advice from members of the Market Surveillance Committee.

CRR's are a key component of the ISO's market redesign being implemented under the MRTU project. CRRs are financial instruments that enable parties to manage the hour-to-hour variability in congestion charges to which they will be subject for their use of the transmission system under MRTU. Because the process for releasing CRRs to market participants is a multi-stage, multi-month process that must be concluded in advance of the February 2008 start-up of the MRTU markets, the ISO must begin this process in July 2007. The ISO must therefore file the CRR rule revisions discussed in this memorandum by May 2nd in order to obtain a FERC ruling on these revisions in time to start the CRR release process in July, and therefore Board approval is sought at this time.

Five areas for potential changes were identified and discussed with stakeholders over the past two and a half months. Of these five, Management is now proposing changes in three areas, and is recommending no change to the previously filed provisions for the other two. Management recognizes that in proposing no policy change in one of these areas (CRR Source Verification Rules), one party's concern about its expected allocation of CRRs remains open at this time. At the same time, Management understands that the concern may be addressed by agreement between this party and another LSE without requiring any change to the ISO's CRR rules. This matter is discussed further in the section on CRR Source Verification Rules later in this memorandum.

The itemized proposals were developed in the course of a stakeholder process conducted during February and March, but it should be noted that this two-month process was really an extension of a much longer stakeholder process that included the CRR Dry Run and Long Term CRR processes conducted over the second half of 2006. A timetable of key dates and milestones of the CRR stakeholder process and the overall CRR implementation process is provided in the "Stakeholder Process" section of this memorandum. As that timetable indicates, Management has scheduled some further aspects of the CRR rules for subsequent FERC filings and will be bringing these matters to the Board at a later date. In addition, a matrix summarizing stakeholder views as expressed in their written comments is attached to this memorandum.

The five items considered in the stakeholder process and the proposed changes for the first three items are summarized as follows;

THE SPECIFIC ITEMS FOR BOARD APPROVAL

1. Use of Trading Hubs as Sources for Allocated CRRs

During the CRR Dry Run certain undesirable but not unexpected effects were observed related to how the CRR software deals with competing CRR nominations from Trading Hubs versus individual generators when constraints become binding. Because this matter could not be thoroughly assessed and remedies explored by the time of the January 2007 Long Term CRR filing, the ISO's proposal on Long Term CRRs stipulated that Trading Hubs could not be used as sources for these CRRs. Not surprisingly this stipulation received numerous objections in parties' comments filed at FERC, but the ISO did not wait for these comments to begin exploring, with stakeholders, possible remedies that would allow Trading Hub nominations to participate in the Long Term CRR allocation without adverse impacts.

The remedy proposed involves disaggregating CRR nominations sourced at Trading Hubs, for purposes of running the CRR allocation process, into the individual generator CRRs that comprise each Trading Hub. This approach is in Management's judgment the best alternative for a number of reasons. First, this approach leads to the most efficient utilization of transmission capacity for CRRs because it avoids inefficient competition between Trading Hub CRRs versus individual generator CRRs. Second, this approach provides the most level playing field between parties who quality mostly for Trading Hub CRRs versus those who require mainly individual generator CRRs. Third, this approach does allow Trading Hub CRRs to participate in the Long Term CRR allocation without the adverse impacts that prompted the ISO's January 2007 stipulation not to allow them. Finally, there is broad support for this approach among stakeholders and it is recommended by the Market Surveillance Committee.

2. Ability to Renew Expiring Long Term CRRs, and to Transition Expiring Existing Transmission Contract Rights and Converted Rights to Long Term CRRs

The ISO's January 2007 Long Term CRR filing described a mechanism by which the holders of Long Term CRRs would be able to renew them for a second ten-year term. At the same time the ISO proposed to allow the holders of expiring rights under Existing Transmission Contracts and Converted Rights to transition them to Long Term CRRs under the same process by which holders of expiring Long Term CRRs can renew them. Certain parties who supported these provisions also pointed out a detail of their implementation that would reduce their effectiveness by allowing non-holders of the expiring rights a first opportunity to obtain CRRs utilizing the transmission capacity freed up by the expiring rights. Management now proposes a simple rule change that addresses this problem. The new rule allows holders of expiring rights to nominate them for Long Term CRRs one year earlier, i.e., in the year prior to the year of expiration, thereby to compete on an equal basis with non-holders of such rights for Long Term CRRs utilizing the capacity associated with the expiring rights the first time such capacity becomes fully available in the CRR network model. Management has not received any comments opposing this change.

3. Methodology for Allocating CRRs to Merchant Transmission Sponsors

The ISO's MRTU Tariff articulated the fundamental principle that parties who pay for the construction of transmission upgrades that are turned over to ISO operational control and do not recover their investment costs through the ISO's access charges or other regulatory cost-recovery mechanism are entitled to receive CRRs that reflect the incremental transfer capability their upgrade adds to the grid. Such parties are called "Merchant Transmission Sponsors" with respect to the upgrade project in question. FERC's September 2006 MRTU order approved this principle and directed the ISO to file additional details on how the Merchant Transmission Sponsor's CRR entitlement would be calculated. FERC's Order No. 681 on Long Term Financial Transmission Rights also included a requirement to include such provisions in the ISO's Long Term CRR proposal, and thus the proposal described in this memorandum complies with both orders.

The ISO's proposed CRR methodology for Merchant Transmission Upgrades has actually been publicly posted in an earlier draft form since 2005, but because of the higher priority to resolve other issues it has not been pushed to completion until now. The methodology is modeled closely on the one approved by FERC and currently in use by the PJM ISO, and as such has been successfully tested in practical applications. In addition, ISO staff had the expert support of a member of the Market Surveillance Committee and an LECG consultant who has worked on these matters for other ISOs. Finally, the stakeholders are generally supportive of the proposed approach. On one element where certain stakeholders have voiced concern – the need to prevent Merchant Transmission Sponsors from getting CRRs that utilize capacity that was previously unusable and was "awakened" by the merchant project – Management believes that the transmission planning process, which is still under development for FERC filings later this year, is the appropriate place to address this concern, rather than in the current filing. Management therefore believes that the proposed methodology will be an effective and robust mechanism for awarding CRRs to Merchant Transmission Sponsors and recommends it to the Board for approval.

4. Changes to CRR Source Verification Rules

(a) Expansion of the Set of Verified Sources

The ISO's filed MRTU Tariff proposes to allocate, for the first year of MRTU, CRRs whose sources are "verified" based on supporting verification submitted by eligible LSEs that the CRR sources they wish to nominate reflect actual locations where they received energy to serve their load during a specific historic reference period. The use of such a historic reference period in this manner is crucial to avoid certain inefficient contracting incentives that can arise when LSEs are allowed to enter new contractual arrangements and then submit them for CRR allocation – this point has been strongly emphasized by both the Market Surveillance Committee and the LECG consultants throughout the entire CRR development process, and was borne out by some experience in an eastern ISO before they adopted such a rule. At the same time, several LSEs have raised concerns about the possibility under this rule for an eligible LSE to obtain CRRs from source locations that are valuable as financial instruments but are no longer used by that LSE as a source of energy supply. In this manner the original LSE might "lock up" the CRRs from the valuable source location and thus make it difficult for another LSE who may be utilizing that energy supply source in the future to obtain the CRRs it wants to manage its congestion costs.

The ISO's CRR proposal as filed in the MRTU Tariff had some provisions to mitigate the concern expressed, specifically the incorporation of a "free choice" tier of the allocation in which LSEs can nominate CRRs from any source they choose without having to submit verification, as well as overall limits on the quantity of one-year seasonal CRRs that an LSE can renew from year to year, thus providing for a certain amount of turnover each year. The ISO believed – and FERC's September MRTU order agreed – that these provisions were acceptable.

Parties' concerns about this problem increased, however, with the introduction of Long Term CRRs into the MRTU design, because this meant that LSEs could obtain 10-year CRRs right at the outset and hold onto them with no requirement to submit to renewal feasibility test each year. In considering these arguments, the ISO recognized that in light of the introduction of Long Term CRRs it might be appropriate to modify the source verification rules somewhat, as long as the changes did not violate the incentive concern that led to the adoption of the historical verification period in the first place, nor any of the other fundamentals of the originally filed CRR design. After careful consideration of several approaches for expanding the eligible set of verified sources, Management is recommending not to change the previously filed rules, because all of the options considered and various variations of them were had significant undesirable side effects. In particular, the inclusion of future supply arrangements in the verified tiers of the allocation process would lead to CRR nomination patterns that do not realistically reflect how the grid is used to supply energy to load. This lack of realism could in turn adversely affect the ability of LSEs to obtain to be allocated the portfolio of CRRs they need for their immediate load-serving arrangements, or would need to be mitigated by additional complex rules, for example, to assign pro rata shares of specific resources utilized by different LSEs in different time periods. Management concluded therefore that it is preferable to limit source verification to a single historical reference year, as the original MRTU Tariff filing proposed, rather than risk the potentially adverse side effects or create additional complicated rules to mitigate such effects.

Management recognizes, as noted earlier, that there is one party for whom the filed CRR allocation rules may well yield a result where the allocated CRRs fall short of providing for its expected congestion exposure under MRTU. This instance arises due to circumstances related to the 2000-1 California power crisis, during which long-term power contracts were procured by the State of California on behalf of the CPUC-jurisdictional LSEs. Several of these contracts are still in effect and providing energy to these LSEs, and in the case of the party in question they comprise a significant share of the verified sources it can submit for CRR allocation purposes. In this case, however, the contract-based CRRs are associated with source locations that provide very little financial value to the LSE, yet occupy enough of this LSE's set of verified sources that it may be difficult for the LSE to obtain the more valuable CRRs it expects to need when it replaces the contract with new sources. Management believes that this is truly a unique situation, and therefore does not warrant risking the overly broad impacts that the solutions discussed above would have. At the same time, Management also recognizes that some remedy is appropriate for this LSE but understands that a remedy may be achievable through an arrangement outside the ISO between this party and another LSE, without requiring any changes to the ISO's filed CRR rules.

More generally, the support among stakeholders for the changes considered to this element has been limited, beyond the one concerned LSE mentioned above. The more dominant view expressed has been concern about one or more of the various undesirable side effects of such changes.

(b) Minimum Contract Length for Source Verification

The ISO's filed MRTU Tariff specifies that contracts submitted for source verification must be at least one month in duration. In preparation for the CRR Dry Run, however, several LSEs pointed out that this requirement does not fit well with their business models which tend to rely substantially on shorter term contracts. These LSEs raised the concern that their inability to offer a significant quantity of one-month or longer contracts would dramatically reduce their eligibility to receive CRRs in the source verified tiers of the allocation process. The ISO therefore adopted, for purposes of the CRR Dry Run, a rule that allowed LSEs to submit contracts as short as one day in duration, with the provision that the MW values of these and other contracts of duration less than the duration of the CRRs being sought would be prorated appropriately. Since the conclusion of the CRR Dry Run, however, there has been limited support for this change. Most parties have either expressed a preference to retain the one-month minimum requirement or have indicated no preference. Management therefore sees no need to change the previously filed provision.

5. Set-aside of Import Capacity for CRR Auctions

The ISO's filed MRTU Tariff provides for a certain quantity of the import capacity on each inter-tie between the ISO and neighboring control areas to be set-aside from the annual and monthly CRR allocation process to be made available in the corresponding CRR auctions. FERC approved this provision in its September 2006 MRTU order and directed the ISO to report on its effectiveness based on the experience of the CRR Dry Run. The CRR Dry Run demonstrated that for many interties and many time periods: (1) more import capacity was available for auctions than was initially set aside, due to the fact that LSEs often did not nominate as much as they were eligible for; (2) auction participants did not bid for much of the available capacity; and (3) the available capacity attracted significant quantities of bids and significant quantities of CRRs were awarded. There were some instances, however, where parties did bid for available import capacity but very small quantities cleared the auction, mainly due to "downstream" constraints within the ISO system that caused the import CRRs to be infeasible. Overall Management believes that these results demonstrate the viability and effectiveness of the MRTU Tariff provisions as originally filed.

It is important to note, however, that the set-aside calculation is based on the quantities of import supply sources the LSEs submit for the source verification process. One concern that has been raised, therefore, is that with the ISO's January 2007 proposal to change the historical verification period to calendar 2006 from the previously filed September 2004 to August 2005 period, the source verification data set could change significantly and the CRR Dry Run results might no longer be a good indicator of how much capacity the set-aside rule will make available for the auctions. Management expects, however, that the change of historical reference year should not have a large impact on the set-aside quantities because in general the reliance of LSEs on imports has not changed significantly from 2004 to 2006. Nevertheless, over the past two months ISO staff has explored with stakeholders some potential changes to the set-aside provision that could provide greater certainty regarding the set-aside quantities without waiting for the actual submission of source verification data and re-calculation of the set-aside quantities. None of the options considered, however, was sufficiently narrowly targeted to the concern at hand as to be implementable without having broader impacts on the CRR allocation design and therefore requiring much more extensive stakeholder discussion of some of the fundamentals of the CRR design. Management therefore does not recommend any change to the filed MRTU Tariff provision.

Among stakeholders the predominant – though not unanimous – view of entities serving load within the ISO control area agrees with Management's recommendation not to change the filed provisions. Among parties not eligible for CRR allocation, however, there is still a concern that the filed rules will not ensure sufficient capacity for CRRs is available in the auctions.

STAKEHOLDER PROCESS

The following dates and milestones provide an overview of the larger CRR stakeholder process ISO staff have been conducting since mid 2006, as well as an indication of certain key upcoming milestones in this process.

- CRR Dry Run – conducted from May 2006 to January 2007
- CRR Dry Run Report – filed at FERC on March 31, 2007
- Long Term CRR effort initiated – August 2006 in response to July 2006 FERC order
- Long Term CRR proposal filed – January 2007, the date required by FERC order

Stakeholder process on the specific proposals to be filed on May 2:

- All-day stakeholder meetings – February 27 and April 3
- Stakeholder Conference Calls – March 26, March 29 and April 12
- Stakeholder written comments submitted – March 9 and April 6, 2007

Some key upcoming milestones:

- Planned filing on CRR Credit Requirements – to be presented to Board in May and filed promptly thereafter
- Planned filing on Rules for Load Migration and Outage Modeling. – to be presented to Board in July and filed on August 3
- Production CRR release process to begin formally in July, with preparatory information gathering to begin late April.

MARKET SURVEILLANCE COMMITTEE OPINION

Members of the MSC have participated in the stakeholder process and in ISO staff discussions on these CRR matters. The MSC's formal written opinion is provided to the Board in conjunction with this memorandum.

MANAGEMENT RECOMMENDATION

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.

MOTION

Moved,

That the ISO Board of Governors approve the "Proposed Tariff Changes to Enhance Rules for the CRR Release Process," as outlined in the memorandum dated April 12, 2007, 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.