California ISO White Paper

Congestion Revenue Rights
Credit Policy

May 14, 2007

CAISO White Paper

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Table of Contents

CAISO White Paper

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Executive Summary

Congestion Revenue Rights (CRR), as a financial instrument to hedge transmission congestion charges, may bring revenue to its holder, but it may also become a financial obligation for the holder. In case of default by the CRR holder, the financial losses will be shared by other market participants. Effective credit policy to protect financial interests of market participants is therefore crucial to the success of the CAISO CRR market.

CRR credit policy must balance the interests of CRR holders that must demonstrate creditworthiness or provide Financial Security, on the one hand, and market participants that bear the risk of non-payment, on the other hand. In other words, the CAISO's credit requirements must limit the risk to market participants of non-payment but must not be excessive so as to discourage participation of credit worthy market participants.

After a series of stakeholder meetings, the CAISO has proposed the following CRR credit policies based on the feedback from stakeholders and internal consideration.

There will be no credit requirement for LSEs to participate in CRR allocation, as LSEs will not be required to pay for positively valued CRRs and will not be paid to hold negatively valued CRRs. These CRRs will be subsequently valued for credit purposes in the same manner as CRRs obtained through the auction. In order to bid in the CRR auction, each participant has to demonstrate a minimum $500,000 Available Credit with the CAISO. The actual requirement for Available Credit is the sum of absolute value of all bids by the participant or $500,000, whichever is larger. At the end of auction, once all payments due to the CAISO for CRRs have been paid for in full and the credit requirement for holding the CRRs is in place, the CAISO will release payments due to CRR buyers and sellers and any excess Available Credit will be released.

The credit requirement for holding a Short-Term CRR (with a term up to one year) consists of two components: auction price and a credit margin of the Short-Term CRR. It

is designed such that in case of default by the holder, the likelihood the credit requirement cannot fully cover the loss is 5 percent or less.

Credit requirement for holding Long-Term CRR (with a term of ten years) covers financial risk for the whole term of the Long-Term CRR. It is determined by the auction price of a one year CRR, the number of years of the Long-Term CRR, and a cumulative credit margin based on the Short-Term CRR credit margin.

If a holder owns more than one CRR, the overall credit requirement is assessed for the whole portfolio of CRRs of this holder. After each monthly CRR auction, the credit requirement will be reassessed using the new auction prices. Credit margin will be updated annually using the actual LMP data from market operation.

Out-of-Control Area Load Serving Entities must also maintain one year credit coverage of Wheeling Access Charge (WAC) prepayment. The CAISO will require prepayment of the WAC prior to trade month, consistent with the FERC April 20, 2007 Order.

The CAISO Department of Market Monitoring will provide a warning to participants about possible consequences of any apparent misconduct prior to the auction, and may refer any questionable conduct in the auction to FERC.

In case of default or bankruptcy, the CAISO will terminate all CRR contracts with the defaulting holders, retain any Financial Security or payments related to the CRRs until the CAISO determines that no sums are due, and resell the CRRs in subsequent auctions. Finally, the CAISO proposes to prohibit the defaulting holders from owning CRRs for five years

Introduction

Congestion Revenue Rights (CRR) are financial instruments introduced with the CAISO MRTU. They are designed to hedge transmission congestion charges under the locational marginal pricing (LMP) system. The CAISO distributes CRRs to market participants primarily through allocation and auction processes. Unlike Firm Transmission Rights in the CAISO's current market, CRRs are obligations.[1]

[1] The CAISO also allocate CRRs to sponsors of merchant transmission facilities or upgrades, which can be either CRR Obligation or CRR Option. There is no credit requirement with regard to CRR Option.

A CRR Obligation (CRR in short in the rest of this white paper) entitles its holder to receive a payment from the CAISO if the congestion in a given trading hour is in the same direction as the CRR, and requires the holder to pay a charge to the CAISO if the congestion in a given trading hour is in the opposite direction of the CRR. In case a CRR holder is unable or unwilling to make the required payment (default or bankruptcy) the uncovered financial loss will be shared by other market participants. In order to reduce the possibility such situation, credit policies governing the financial requirements for obtaining and holding CRRs need to be established and enforced.

The objective of the credit policy is to protect the financial interests of all market participants by reducing the likelihood of default and mitigating the losses to other market participants if a default happens. At the same time the policy should not create an inefficient barrier to entering the CRR market for credit worthy market participants. Policy defects in either way will discourage the participation of market participants and eventually reduce the liquidity and effectiveness of the CRR market.

The CAISO is committed to designing an effective CRR credit policy. In the past several months, the CAISO has held a series of stakeholder meetings and posted white papers and policy proposals on CRR credit policy.[2] The proposals were revised over time based on the feedbacks from stakeholders and continuous consideration by the CAISO. This white paper is the final policy proposal for CRR credit policy.

CRR Credit Policy

CRR credit risk exists in two separate phases, in the process of obtaining CRRs and in the process of holding CRRs. The corresponding credit policies needed to be designed to manage the two different kinds of risk.

I. Credit Requirement for Obtaining CRRs

There are two ways to obtain CRRs from the CAISO. One is through the CRR allocation process and the other is through the CRR auction.

CRR allocation is open to LSEs only. It is intended for the LSEs to hedge transmission congestion charges. The CRRs will be nominated by the LSEs and approved by the

[2] See References

CAISO. The nominated CRRs are subject to verification. The LSEs do not pay to the CAISO nor are paid by the CAISO to hold the CRRs. Therefore the LSEs do not need to have Available Credit[3] to participate in the CRR allocation. However, the LSEs do have to have sufficient Available Credit to assume the ownership of allocated CRRs.

On the other hand, all market participants can participate in auction, where they can bid for any CRRs up for sale. Absent credit requirements for participation in the CRR auction, a participant could potentially submit bids to purchase positively priced CRRs that would be beyond his financial capability to pay for. If such a participant were awarded the CRRs in the auction, he would not be able to pay for the awarded CRRs. A participant may also bid for negatively priced CRRs, take the payments by the CAISO and then default on subsequent payment obligations to the CAISO. Due to the fact that the volumes (MW) of CRRs are dependent on each other because of the special characteristics of the transmission system and the full-funding requirement, there would be opportunities for risky speculation absent appropriate credit requirements and gaming if market rules are not properly designed. In addition, while the purchase of negatively priced CRRs does not require a payment by the CRR purchaser at the conclusion of the auction, the holding of such CRRs will require satisfying a credit requirement for holding those CRRs. Absent some form of credit requirement for acquiring negatively priced CRRs in the auction, there would be a potential for a market participant to submit bids to buy negatively priced CRRs that would be beyond the market participants ability to satisfy the CAISO credit requirement for holding, leading to a default after being awarded the negatively priced CRRs in the auction. This default would expose the CAISO to a shortfall on the CRR Balancing Account from covering the positively priced CRRs made possible by the awarded of the negatively priced CRRs on which credit was not posted.

To reduce this potential the CAISO proposes the following credit policies.

There will be pre-auction credit requirements for participating in the CAISO CRR auction. Each participant has to demonstrate a $500,000 minimum Available Credit in order to submit a bid for either positively priced or negatively priced CRRs. Accordingly,

[3] Available Credit = Unsecured Credit Limit + Collateral – Estimated Aggregate Liability

the participant will need to have Available Credit greater than or equal to the sum of the absolute value of all his bids. Otherwise, all the bids made by the participant will be rejected. [4]

The $500,000 minimum Available Credit requirement and the absolute value of bids requirement are intended in combination to limit the likelihood that market participants will be awarded CRRs in the auction for which they would be unable to pay for or meet the credit requirement for holding the CRRs.

At the end of the auction, winners will pay full amounts (sum of auction market clearing price times MW quantities awarded) to the CAISO for the positively priced CRRs they were awarded in the auction. And the CAISO will pay full amounts to market participants awarded negatively priced CRRs.[5] However, these payments for the awarded of negatively priced CRRs will not be made until the credit requirements for holding the CRRs are satisfied. Failing to meet the credit requirement is considered a default and is subject to enforcement actions described under the compliance measures.

After the auction is settled, any excess of Available Credit used to support participant in the CRR auction will be released and be returned to the participant.

II. Credit Requirements for Holding Short-Term CRRs

The value embedded in a Short-Term CRR (ST-CRR, with a term up to one year) can be divided into two parts. The first part is the auction price.[6] For a negatively priced ST-CRR, the auction price equals the payment due to the CRR holder at the end of the auction in exchange for a stream of expected congestion revenue payments the holder will make to the CAISO. The auction price of a positively priced ST-CRR is the payment due to the CAISO at the end of the auction in exchange for a stream of expected congestion revenue payments to the holder.[7]

The second part is the congestion revenue of the ST-CRR. By definition, congestion revenue of a ST-CRR is the difference between the congestion component of the LMP at

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[4] The minimum Available Credit requirement and absolute value approach are proposed in responding to the request by SCE, PG&E, and CDWR. See Appendix for summary of stakeholder written comments.
[5] Commerce Energy suggest pay incrementally to reduce financial burden for participants. Considering only short-term CRRs will be sold in auction, the CAISO propose to pay in full amount.
[6] For CRRs directly allocated to LSEs auction price is the market clearing price calculated by the CRR auction model.
[7] For CRRs allocated to LSEs, this payment is waived.

sink and the LMP at source times the megawatt quantity of CRRs held. This entails a payment to the ST-CRR holder if the congestion revenue is positive. The holder is required to pay the CAISO if the congestion revenue is negative. Since the LMPs can be potentially very volatile, the congestion revenue of a ST-CRR can vary from one holding period to the next and swing from positive to negative from period to period. A positively priced ST-CRR is likely to have positive congestion revenue over the holding period, but it is also possible that it will have negative congestion revenue. A negatively priced ST-CRR is expected to have negative congestion revenues over the holding period, but it may turn out to have positive congestion revenues or congestion revenues that are much more negative than expected. The congestion revenue of a ST-CRR is a stochastic variable. In the long-run, the CAISO and its market participants will be able to analyze the distribution of congestion revenues through statistical analysis of historical LMP data.

The credit requirement for holding a ST-CRR must be designed to cover the value of the ST-CRR in the event that actual congestion revenues differ from those expected at the time of the auction. Since the value of the ST-CRR is very volatile the credit requirement should have corresponding probabilistic characteristics. The CAISO therefore proposes a method to determine the credit requirement for holding a ST-CRR that is similar to the Value-at-Risk (VaR) method that is widely used in risk management.

With the proposed method, the credit requirement for holding a ST-CRR consists of two components: the auction price and a credit margin for holding the ST-CRR.

The auction price component of the credit requirement takes account of the expected value of CRR payments, the expected value of payments to the holder in the case of a positively priced CRR and the expected value of payments by the holder in the case of a negatively priced CRR.

The credit margin is determined based on the probability distribution of congestion revenue of the ST-CRR and reflects the potential for the actual congestion revenues due to the holder to be less than the expected value and conversely for the actual congestion revenues due to the CAISO to be greater than the expected value. The combination of the auction price component and the credit margin component is designed such that in case of default by the holder, the likelihood the credit requirement will not fully cover the payments due from the CRR holder is 5 percent or less.

The credit requirement of a ST-CRR is defined as the negative of the auction price plus the credit margin of the ST-CRR. That is:

$$Credit\ Requirement = -CRR\ Auction\ Price + Credit\ Margin$$

The credit margin of a ST-CRR is defined as the difference between the expected value and the fifth percentile value of the ST-CRR congestion revenue.[8]

$$Credit\ Margin = Expected\ CRR\ Cong.Reven. - 5th\ Percentile\ CRR\ Cong.Reven.$$

5th Percentile ST-CRR Congestion Revenue is determined according to the probability distribution of the congestion revenue of the ST-CRR.

For the first year of the CAISO MRTU operation, there will be no historical LMP data available. The prices simulated in CAISO LMP studies will therefore be used initially to calculate credit margins for all ST-CRRs. In the future, actual LMP data will be used to revise the required credit margins.

If a holder owns more than one CRR, the overall credit requirement is assessed for the whole portfolio of CRRs of this holder. The excess credits (negative credit requirements according to the formula defined above) from CRRs with high positive auction price can offset up to the same amount of the credit requirements for other CRRs in the same portfolio. [9] This may reduce total credit requirements for some CRR holders. A positively valued CRR portfolio, however, will not offset a Market Participant's credit requirements for other CAISO liabilities. This is because it would be inappropriate to allow the use of uncertain future CRR revenues to offset more certainly known liabilities have been incurred for past trade days, and because a payment default today requires adequate credit coverage to provide settle historical trade months up until the default without waiting to collect potential future offsets that might be available through positive CRRs that the defaulting market participant holds.

[8] A percentile is a value on a scale of one hundred that indicates the percent of a distribution that is equal to or below it. For example, the probability the variable's value is less than or equal to the 5th percentile value is 5 percent.
PG&E CDWR support the use of 5th percentile value.
[9] This is requested by PG&E, AReM, and Commerce Energy. CDWR suggest assess credit requirement for each individual CRR.

After each monthly ST-CRR auction, the credit requirements for holding ST-CRRs will be reassessed using the new auction prices.[10] Credit margins will be recalculated periodically based on actual LMP data. Credit requirements will also be adjusted when the ownership of a CRR has changed through either secondary market trading or load migration. The new owner will be required to satisfy the CRR credit requirements prior to transfer of ownership, and the prior owner's CRR portfolio would be revalued without the transferred CRR and that owner would be subject to weekly collateral adjustments as required in the routine EAL-credit comparison performed by CAISO.

The same credit requirement criteria for holding CRRs apply to all CRR holders, regardless how the CRRs are obtained (through allocation or auction).

Out-of-Control Area Load Serving Entity (OCALSE) who is allocated ST-CRRs will be subject to the same credit requirements for holding ST-CRRs as other market participants. Additionally, OCALSE will be required to maintain one year of credit coverage for their Wheeling Access Charge (WAC) prepayment beyond the current period. Although the 1 year credit coverage for the WAC prepayment will increase the EAL, the OCALSE will not need to post additional collateral as long as they maintain an overall positive Available Credit position (Aggregate Credit Limit less EAL). Subsequently, they will be required to prepay the WAC on a monthly basis in advance of the trade month, consistent with the FERC April 20, 2007 Order.[11]

III. Credit Requirements for Holding Long-Term CRRs

All credit requirements for holding ST-CRRs apply for holding Long-Term CRR (LT-CRR, CRRs with terms longer than 1 year). In addition, there are some specific requirements designed for LT-CRR holders.

A LT-CRR has a multi-year term. In case of a default involving a LT-CRR, the CAISO may choose to resell it in the subsequent monthly auctions, but it may not be possible for a LT-CRR to be liquidated at the auction. If the CRR is not resold in an auction, the financial loss includes not only the current period congestion revenue payments of the defaulting LT-CRR, but also the congestion revenue payments due for the CRR for all

[10] SCE and PG&E suggest weekly update while AReM suggest monthly. The CAISO proposes monthly for auction price annual credit margin update based on data availability and technical feasibility.
[11] NCPA objected this requirement prior to the FERC April 20, 2007 Order, which allows OCALSE make WAC prepayment monthly.

the years in the remaining term of the defaulted LT-CRR. Therefore the one period credit requirement for holding a ST-CRR does not provide all necessary coverage for holding a LT-CRR. Instead, the credit requirement for holding a LT-CRR must cover financial risk over the whole term of the LT-CRR.[12]

The CAISO proposes the following method to determine the credit requirement for holding a LT-CRR:

$$\textit{Credit Requirment} = n * (-\textit{1 year CRR Auction Price}) + \sqrt{n} * (\textit{1 year Credit Margin})$$

where, *n* is the number of years remaining in the term of the LT-CRR. *1 year CRR Auction Price* is used because LT-CRRs are available only to LSEs through allocation. There is no auction price for LT-CRR available. *1 year Credit Margin* is calculated according to the ST-CRR credit margin definition. *1 year Credit Margin* times the square root of *n* is the cumulative credit margin of the LT-CRR.

This method is Option 2 of the four options proposed in the Straw Proposal.[13] It is an option that is not as conservative as Option 1, but does provide more coverage than Option 3 and 4 when credit offsetting within the CRR portfolio is allowed.[14]

The credit requirements for holding LT-CRRs will be adjusted not less than annually. The adjustment will account for the change of remaining terms of the LT-CRRs and the new auction prices of ST-CRRs. The credit margins will also be updated annually based on the actual LMP data from the market operation of the past year.

Credit requirements will also be adjusted when the ownership of a LT-CRR has changed through either secondary market trading or load migration. The new owner will be required to satisfy the LT-CRR credit requirements prior to the transfer of CRR ownership, and the prior owner's CRR portfolio would be revalued without the transferred CRR and that owner would be subject to weekly collateral adjustments as required in the routine EAL-credit comparison performed by CAISO.

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[12] SCE suggest require full-term credit coverage for CRRs with negative expected values and 12-month coverage for CRRs with positive expected value. Based on the consideration that a CRR with positive expected value does not always have a positive actual value due to the market volatilities and the complexities to implement different rules for different CRRs, the CAISO proposed to require credit coverage for full term.

[13] See References.

[14] PG&E prefer Option 1 while CDWR prefer Option 4.

IV. Compliance Measures

All CAISO market participants, including CRR holders are required to comply with the CAISO credit requirements as set forth in Section 12 of the Tariff, including meeting the CAISO calls for collateral to cover CRR and other market obligations. The CAISO requires entities that have an Estimated Aggregate Liability (EAL) in excess of their Aggregate Credit Limit (ACL, unsecured credit plus collateral) to post additional Financial Security within 5 business days. Entities that delay or default in making collateral or other payments are subject to escalating enforcement provisions (Tariff Section 12.5) including:

1. The CAISO may withhold a pending payment distribution.
2. The CAISO may limit trading, which may include rejection of Bids and/or limiting other CAISO market activity. In such case, the ISO shall notify the market participant of its action and the market participant shall not be entitled to submit further bids to the CAISO until the market participant posts an additional Financial Security Amount that is sufficient to ensure that the market participant's ACL is at least equal to its EAL.
3. The CAISO may require the market participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.
4. The CAISO may restrict, suspend, or terminate a market participant's Service Agreement or CRR Holder Agreement.

Entities that fail to comply with the CAISO credit requirements expose other market participants to potential default risk, as nonpayment by a CAISO debtor results in short-payments to the CAISO creditors. For an entity that holds CRRs, bankruptcy or other payment defaults can extend over multiple CAISO trade months for the length of the CRR term, resulting in continuing short-payments to other market participants. Due to the heightened credit risks that CRRs can therefore present, it is especially important that CRR holders comply with the CAISO credit requirements. CRR holders that do not comply with the CAISO credit requirements or otherwise default on payments will also be subject to the enforcement measures noted above, and the CAISO will, as appropriate:

- Retain Financial Security sufficient to cover the value of all of the market participant's liabilities including the future value of their CRR obligations
- Retain all payments related to the CRRs (or other market related payments otherwise due the market participant) and resell the CRRs in subsequent auctions
- Terminate all CRR agreements with the default holder
- Exclude CRR Holder from eligibility to participate in the allocation or auction until all defaults have been cured and require the CRR Holder to post additional Financial Security Amount in lieu of an Unsecured Credit Limit for future participation

V. Market Monitoring and Mitigation

The CAISO market rules prohibit Market Manipulation (37.7), including:

- Actions or transactions that are without legitimate business a purpose and that intended to or foreseeably could manipulate market prices, market conditions …" (37.7.1.1)
- Collusion with another party for purposes of manipulating market prices, market conditions …(37.7.4.2)

FERC's own market rules also prohibit provision of false information to and ISO, and make it unlawful to:

> (1) use or employ of any device, scheme, or artifice to defraud, (2) make material false statement or omit material facts, or (3) engage in any act, practice or course of business that operate or would operate as a fraud or deceit upon any person.

The CAISO Department of Market Monitoring will actively monitor any unusual activities in the CRR allocation and auction processes. A variety of action might be taken to deter or monitor the type of conduct described above, including:

- Require disclosure of affiliations.
- Explicitly warn participants that the CAISO will monitor and refer such behavior to FERC.
- Refer to FERC.

References

1. CAISO Straw Proposal for CRR Credit Policy: (4/27/07) http://www.caiso.com/1bcd/1bcd9f52296e0.pdf

2. Presentation - CRR Credit Policy: (5/2/07) http://www.caiso.com/1bd2/1bd2e3f41c7d0.pdf

3. CRR Stakeholder Meeting: (4/3/07) http://www.caiso.com/1bb5/1bb5875027a50.pdf

4. CRR Conference Call: (3/27/07) http://www.caiso.com/1bad/1badda6459b00.pdf

3. Revised Policy Proposal: Prepared by Scott Harvey of LECG (3/20/07) http://www.caiso.com/1ba7/1ba788da74450.pdf

4. Stakeholder Meeting Presentation: (2/27/07) http://www.caiso.com/1b92/1b928c9e2d2a0.pdf

5. CRR credit white paper prepared by Scott Harvey of LECG: (2/21/07) http://www.caiso.com/1b8c/1b8cdb4c74ab0.pdf

Stakeholder Written Comments and the CAISO Responses

May 9, 2007

Comments of Pacific Gas and Electric to CAISO
Regarding
CAISO Straw Proposal for CRR Credit Policy

PG&E appreciates the efforts of the CAISO to develop a Credit Policy for holders of Congestion Revenue Rights (CRRs) under MRTU. On April 27, 2007 the CAISO posted a straw proposal for CRR Credit Policy and on May 4, 2007 the CAISO conducted a stakeholder Conference Call to discuss the straw proposal. The CAISO has requested comments by May 11, 2007 and PG&E is pleased to offer the following comments on both the straw proposal and issues discussed during the conference call.

Long-Term CRR Credit Options

The CAISO's straw proposal outlined four alternatives for establishing the credit requirements for holding Long-Term CRRs. As the CAISO has observed, the value of CRRs in a newly established LMP market may be quite volatile. Accordingly, PG&E endorses Option 1, as a means of addressing uncertainties associated with valuation. PG&E feels it is prudent to establish an initial credit policy which is conservative. If, after some experience with MRTU and nodal pricing, it becomes clear that the initial policy is excessively conservative, the CAISO could explore less conservative options with stakeholders and a less conservative option could be implemented expeditiously. If, on the other hand, the CAISO initially chose a less conservative approach and in the future wanted to become more conservative it could negatively impact some market participants who would not, or could not, meet a more conservative credit requirement.

PG&E is concerned that CRR holders may take speculative positions and then not meet the obligations associated with the CRRs they hold. Failure to meet these obligations would then result in higher costs to the load serving entities.

The methodology for determining credit requirements is quite difficult because of lack of historic data and no reported market of transactions. Because of this lack of data and market information, the CAISO needs to be conservative.

Actual CRRs may be surprising to the CAISO and market participants. With no historic record of either 1) actual CRRs or 2) CRR auctions, the results could be quite different than what the CAISO might expect. Also, some CRRs may be fully allocated, thus leaving no bid prices for those CRRs from the auction. Also, it is possible counter flows of CRRs could be significantly different, hence resulting in "dual" prices which are not consistent. When the actual operation of MRTU occurs, market participants could schedule, or bid resources to impact their CRR revenues. As noted in the CRR training, market participants should not consider CRRs a sunk cost for their bidding or scheduling of a resource. Also, potentially a CRR could be "traded" for a period as short as 1 day. Because of this lack of CRRs and market participants in both the auction and in day ahead markets, the CAISO needs to be conservative.

The CAISO notes the CRRs could be quite volatile. This volatility could result in reversals of the value of CRRs which will impact the participant's total Estimated Aggregate Liability (EAL).

CAISO Response:

PG&E's comments focus on the need to adopt a conservative approach to CRRs given the uncertainty as to how volatile CRR prices may be and how entities may take actions that significantly affect costs for other market participants. CAISO agrees that given these uncertainties that a relatively conservative approach to credit standards is warranted.

With respect to the valuation alternatives for long-term CRRs, CAISO also believes that a relatively conservative approach is important given initial uncertainty as to volatility of CRR prices as compared to initial auction values, the potential for defaults to affect monthly CAISO settlements. There are several methods that can be used to provide for such conservative credit standards including:

1. Which of four alternatives to use for valuing long-term CRRs;
2. Which percentile to use for the setting the limit in the probability distribution of CRRs for setting the credit margin: (1%, 2.5%, 5%);
3. How frequently CAISO will value the CRR portfolio; and
4. Setting initial auction participation standards that ensure entities are reasonably creditworthy (for instance, minimum available credit limits to participate in auction)

Since publishing the initial draft credit whitepaper and receiving stakeholder feedback, CAISO has, with respect to the items above:

1. selected the more conservative approach of two alternatives originally put forward for consideration for long-term CRR valuation
2. Committed to investigate and attempt to implement more frequent use of CRR valuation information, such as information available from monthly auctions.
3. Set a minimum credit availability amount for entities that wish to participate in the CRR auction of $500,000.

Basis for Implementation of Credit Requirements

It is our belief that the CAISO should implement Option 1 on a portfolio basis rather than at the individual CRR level. This would conform to CAISO's practice of netting all market transactions to determine a participant's total EAL. Payments to a market participant are expected to be on a portfolio basis and the credit requirements should be made consistent with the cash flows. Additionally, if a market participant's negatively evaluated CRRs were separately required to post collateral, then the CAISO's credit requirements could essentially eliminate the holding of 10 year CRRs. Hence, for Long

Term CRR's, PG&E would recommend Option 1 with the 5 Percentile evaluation and Portfolio evaluation with Credit Offset.

CAISO Response:

CAISO's proposal provides for CRR valuation on a portfolio basis. We did raise for discussion the concept of not allowing positive CRRs to offset negative CRRs. In some cases, this would reduce risk. For example, a party acquires in the auction a positive one month CRR valued at $10, and a negative one year CRR valued at $10. As the two have offsetting values, there is no net credit requirement. At the end of the first month, the positive CRR is expired. For credit valuation purposes, only the value of the negative CRR remains in their portfolio. The party declares bankruptcy on the day CAISO asks for collateral for the value of that negative CRR, does not post such collateral, and defaults on subsequent payment obligations. This is the risk that CAISO raised for discussion. As FERC supports the concept of netting, and this is additionally the approach we use currently for other market charges, we are not proposing at this time to disallow netting for CRR portfolio valuation purposes for credit requirements.

Timeline for Establishing Credit

PG&E is also concerned with the timing of establishment of credit available to the CAISO. Entities acquiring CRRs should have credit available to the CAISO before they participate in CRRs allocations or auctions. To award a CRR to a participant, who may create counter flows in the allocation or auction, could result in CAISO awarding CRRs in excess of feasible amounts. For example, suppose Market Participant 1 obtained 1000 MW of CRRs for a counter flow, say PG&E Lap to COB. This would allow other participants to obtain 1000 MW in the normal flow direction. Now if Market Participant 1 did not post collateral and "walked away" from the obligation through bankruptcy or some other means, then the CAISO would have awarded CRRs in excess of the true transfer capability. The CAISO needs to ensure credit support early in the process. Preferably before the allocation or auction and at least before the results of allocations or auctions are made to the full market.

CAISO Response:

There will be pre-auction credit requirements for participating in the CAISO CRR auction. Each participant has to demonstrate a $500,000 minimum Available Credit in order to submit bids for either positively valued or negatively valued CRRs. Accordingly, the participant will need to have Available Credit greater than or equal to the sum of the absolute value of all his bids.

As for credit requirements for the allocation process, CAISO has not proposed to have pre-allocation credit requirements due to:

1. Lack of prices to value the CRRs allocated at the initial allocation

2. CRRs will only be allocated to load serving entities, and quantities allocated are constrained based on quantities of forecasted load.

3. No revenues will be paid out for negatively valued CRRs that have been allocated.

Rather, credit requirements will be established after CRR auction prices are available.

Review of CRR Auction Bids by Department of Market Monitoring

PG&E also proposes that the CAISO's Department of Market Monitoring (DMM) review bids into the auctions before the CAISO auctions CRRs. The DMM should disallow bids that are clearly excessive with the potential to cause market abuse. PG&E is particularly concerned with potentially excessive positions over interties and interties that have nomograms or special operating procedures. For example, bidding for capacity in excess on a path while having another associated party take the opposite position could, and should be considered a potentially excessive position. During the initial years of the CAISO and the "energy crisis" of the early part of this decade, there seemed to be particular abuse using the interties. Monitoring and potentially referring possible abuse to FERC is not adequate. Market abuse should not be allowed. There are examples of rules to prevent market abuse, such as bid caps. Hence, the DMM should develop screens to review bids in the auction, and disallow bids which did not meet the "screenings".

CAISO Response:

CAISO agrees that the concerned raised by PG&E are important, and CAISO's DMM will review tentative auction results before the results are finalized. CAISO welcomes PG&E's comments on the development appropriate screens to inappropriate bids.

Frequency of CRR Credit Review by CAISO

Lastly, while the most recent white papers did not indicate how frequently the CAISO would review and revise CRR credit requirements; PG&E would recommend a weekly update. Additionally, the White Paper indicates "credit requirements will also be adjusted when the ownership of a CRR has changed through either secondary market trading or load migration." The CAISO should not just adjust the requirements, but require the owners to revise their credit posting with the CAISO before the registrations of the changes are allowed.

CAISO Response:

CAISO currently calculates a market participant's Estimated Aggregate Liability on a weekly basis and expects to do so under MRTU as well. Under MRTU, the EAL will include the value of the CRR portfolio (if negative), and other market obligations. However, CAISO has not finalized the software and the principles related to the frequency of the valuation of the CRR portfolio. For example, the expectation of CAISO reflected in CRR credit whitepaper upon which PG&E provided these comments, was that annual auction prices would be used to value the CRR portfolio, and that CRRs would be updated based on expiration of terms perhaps weekly or monthly, but not necessary with respect to price. However, given concerns raised by PG&E and other market participants about potentially volatile CRR prices and their affect on participant creditworthiness, CAISO is exploring what would be involved in more frequent valuations of the CRR portfolio, including potential use of monthly CRR auction data.

CAISO agrees that a credit check is necessary before transfers of CRRs will be officially registered, and plans such a check.

Summary

Thank you for the opportunity to comment. In summary, PG&E prefers Option 1 of the four options from the May 4 conference call. PG&E also recommends the CAISO 1) establish credit available to the CAISO before markets are run, 2) evaluate credit requirements on a portfolio basis, 3) review bids in the auction and not allow speculative bidding, 4) regularly monitor and update the CRR credit requirements and 5) adjust credit requirements before transfers are allowed.

If you have any comments, please contact Brian Hitson (415-973-7720) or John Chiara at 415-973-1478.

COMMENTS OF THE ALLIANCE FOR RETAIL ENERGY MARKETS ON THE APRIL 27, 2007 CAISO STRAW PROPOSAL ON CRR CREDIT POLICY

The Alliance for Retail Energy Markets (AReM) appreciates the opportunity to provide comments on the CAISO's April 27th Straw Proposal on CRR credit policy. AReM is a coalition of Energy Service Providers (ESPs) who are each load-serving entities (LSEs) serving retail load in California.

Potential for Anti-Competitive Effects

CRRs are critical to the ESPs' ability to compete in the retail market and manage their congestion risk. Credit requirements that are unreasonably high will have anti-competitive effects: they could pose a barrier to entry for smaller LSEs and reduce liquidity in the CRR market in the long-run. The California Public Utilities Commission is poised to consider re-opening the retail market and these proposed credit policies must be viewed in the light of whether they will discourage retail competition or provide undue competitive advantage to certain classes of LSEs. Accordingly, AReM's comments are provided with the goal of creating a level playing field for all LSEs while reasonably balancing market risk.

CAISO Response:

CAISO agrees that finding the right balance of risk is the correct objective. CAISO is aiming for the right solution that falls somewhere in the middle of the continuum of alternatives represented by:

- no credit requirements that permit entities who are unable to meet payment obligations to hold instruments to the detriment of other market participants vs.
- onerous credit requirements that make CRRs uneconomic to holders..

The correct balance between these alternatives is where CRRs are accurately valued for credit adequacy purposes, specifically, where there is sufficient credit coverage that in the event of a default by the holder, other market participants are not adversely affected.

All Market Participants, including CRR Holders, are required to be creditworthy or have posted adequate Financial Security to cover their Estimated Aggregate Liability to the CAISO, including any liability for CRRs that require payments from CRR Holders. Non-payments by CRR Holders will be treated the same way under the MRTU Tariff as Non-payments by Scheduling Coordinators are treated under the currently effective ISO Tariff. These provisions are set forth in ISO Tariff Sections 11.12 through 11.16. In brief summary, after exhausting available options, any revenue shortfall resulting from non-payment will be applied pro rata to net ISO Creditors for the relevant settlement period.

Because of the significant adverse impact on the confidence of suppliers that such payment shortfalls would have (and the corresponding impact on market prices for buyers due to explicit or implicit risk premiums), CAISO aims to maintain credit standards for market participants to avoid this outcome.

Netting of Credit Requirements for CRR Holders

AReM strongly supports netting the credit requirements for the CRR Holders based on their entire portfolio of CRRs. AReM does not see any value in treating CRRs individually, without netting the portfolio, as described in the alternative presented in the April 27th paper (p. 5). The costs of the additional credit burden imposed on CRR Holders from this alternative would greatly outweigh any expected benefits from simplification or reduced risk of default.

CAISO Response:

CASIO raised for discussion only the concept of not allowing positive CRRs to offset negative CRRs. In some cases, this would reduce risk. For example, a party acquires in the auction a positive one month CRR valued at $10, and a negative one year CRR valued at $10. As the two have offsetting values, there is no net credit requirement. At the end of the first month, the positive CRR is expired. For credit valuation purposes, only the value of the negative CRR remains in their portfolio. They declare bankruptcy on the day CAISO asks for collateral for the value of that negative CRR, and this is the risk that we believe was worth raising for discussion. As FERC supports the concept of netting, and this is additionally the approach we use currently for other market charges, CAISO is not proposing at this time to disallow netting for CRR portfolio valuation purposes for credit requirements.

Additive Credit Requirement for CRR Holders

AReM questions the need for additive credit requirements for CRR Holders – the CRR Expected Value PLUS the Credit Margin (p. 5). AReM is concerned that this will over-burden all LSEs. AReM requests that the CAISO use either the Expected Value or the Credit Margin as the sole credit requirement for CRR Holders. AReM requests additional stakeholder discussions about how each should be calculated and which is the most appropriate measure for the credit requirement.

CAISO Response:

CAISO's aim in establishing credit standards it to protect market participants from the consequence of a payment default by another market participant. Accordingly, we require entities to demonstrate creditworthiness and/or post collateral to cover their obligations to the CAISO market. In establishing these requirements, the objective to ensure that there is sufficient credit coverage. CAISO is mindful of the costs of collateral to parties that are required to post it, and aims to develop valuations of market obligations that are accurate to avoid the unnecessary need to collateral in excess of actual exposure of the market participant.

With CRRs, is CAISO could look forward and determine the payment streams associated with CRRs, it would use that information to value each CRR today. In the absence of such a "crystal ball", other approaches are necessary. The "day-one" (recognizing that CAISO may later improve upon this approach) proposal is to rely on auction prices, recognizing that while auction prices represent the market's best view as to current value of the payment obligation, it is likely that the actual payment stream related to any CRR will differ to some extent from the auction price. It is here where the concept of the credit margin is necessary. As described in the whitepaper, CAISO will use LMP study data to reflect the extent to which LMP prices may vary and result in volatile CRR obligations that differ significantly from auction values.

The auction price and the credit margin and are not duplicative. Together, they represent the best expectation of the expected payment obligations related to the CRR.

LT-CRR Credit Requirement

AReM requests additional stakeholder discussion of the proposed options and any new options that may be proposed. AReM is again concerned that the burdens on smaller

LSEs may force them out of the LT-CRR market thereby disadvantaging them in the competitive retail market.

CAISO Response:

CAISO is committed to involving stakeholders in developing appropriate alternatives to address policy matters such as CRRs. While we have timing constraints that are tighter than we would prefer, we will aim to continue to provide opportunities for stakeholders to provide input and help craft the best solutions.

Adjustment to LT-CRR Credit Requirements

AReM acknowledges that LT-CRRs are meant to be held over a longer term. Nonetheless, each LSE has the ability to sell LT-CRRs during the course of a year. Therefore, an annual adjustment seems inadequate (p. 7). AReM suggests a monthly review as preferable.

CAISO Response:

CAISO has intended to revise credit requirements for a CRR holder upon the sale or receipt of additional registered CRRs.

CAISO has also heard from several stakeholders that apart from trades, valuations of portfolios more frequently than annually is preferred. CAISO is discussing this internally. Matters that affect this include:

- Recognize constraints for MRTU startup involving system development timelines and budget availability
- Aim of providing accurate CRR valuations

Requested Clarifications

AReM found the paper somewhat confusing and unclear. We would appreciate the following clarifications in the revised paper:

- If a CRR Holder's CRR portfolio has a net positive value – meaning that the CRR Holder will receive congestion revenue payments from the CAISO for its CRRs – is the CRR Holder's CRR credit requirement zero?

If not, please provide additional, explicit and clear examples explaining the credit requirements under varying scenarios.

CAISO Response:

In short, the yes, the credit requirement for the portfolio is zero. If the portfolio value, representing the sum of the values of each CRR including the credit margin for each is greater than zero, there is no credit requirement. Positively valued CRR portfolios, however, will not offset a Market Participant's other liabilities captured in the Estimated Aggregate Liablity.

- If a CRR Holder has no negatively-valued CRRs in its portfolio, is its CRR credit requirement equal to zero?

CAISO Response:

In all likelihood, yes. However, as discussed in the CRR whitepaper, a CRR with an expected value that is positive, but close to zero, with the addition of the credit margin, may have a value of less than zero. Accordingly, if the Holder had a portfolio of many such low value CRRs, there could be a credit requirement.

- How often will credit requirements be reviewed and adjusted for each LSE? On the May 4th call, the CAISO said that credit is reviewed daily. How does this fit in with the proposed annual adjustment for LT-CRRs?

CAISO Response:

For each market participant, CAISO compares credit limits versus their Estimated Aggregate Liability (which will include CRRs) on a weekly basis.
One matter that has not been resolved at present is how often the CRR portfolio will be revalued. While CAISO will recognize that the term of each CRR is declining over time and this will be taken into account in the valuation, another matter is still under discussion, specifically, how often CAISO should revalue each CRR. To date, CAISO has contemplated using annual auction data. However, stakeholders have requested use of more timely information if possible. Accordingly, CAISO is exploring the use of monthly auction data for valuation purposes.

- We understand that the CAISO will evaluate credit in total. Therefore, for each LSE, the CRR credit requirements will be calculated in conjunction with the credit requirements for the LSE's other activities. If the LSE has unused credit, it can be applied to any CRR credit requirements it may have. Please clarify if this understanding is inaccurate.

CAISO Response:

This is correct. Example:

A Market Participant has an Aggregate Credit Limit of $2 million. Their EAL excluding CRRs is $500,000. The difference is available to support the value of the CRR portfolio.

- The paper states that the expected value of the allocated CRRs is the "market clearing price calculated by the CRR auction model" (p. 5). What if there are no auction results applicable to the particular CRR? How does the "auction model" calculate a value for holding a CRR if there are no bids for that path?

CAISO Response:

The software used to conduct the allocation creates prices for all CRRs whether or not there are bids.

Submitted by AReM
May 11, 2007

COMMENTS OF COMMERCE ENERGY, INC. ON

CAISO STRAW PROPOSAL FOR CRR CREDIT POLICY

MAY 11, 2007

Commerce Energy, Inc. ("Commerce"), a load-serving entity, here comments on the CAISO's May 4, 2007 stakeholder conference call and the *CAISO Straw Proposal for CRR Credit Policy* dated April 27, 2007.

Commerce respectfully disagrees with the credit policy as proposed. Commerce asserts that credit requirements should be reasonable and proportional to the CAISO's risk exposure, and should compensate fairly in the event of default. Commerce offers some specific recommendations:

1. **CRRs should be paid for incrementally as used in each billing cycle, not at the conclusion of the auction.** We simply don't understand the statement on page 4 of the straw proposal that reads "CRRs will be paid for at the conclusion of the auction." If that were true, there would be zero credit exposure for CAISO, and thus no need for the credit policy as proposed. And – if that were true, few LSEs would have the financial means to pay for the CRR, in full, at the time of the auction, and would not participate. This appears anti-competitive. Please explain or delete this sentence.

   CAISO Response:

   At the conclusion of the auction, parties will pay the auction price for positive CRRs. Parties will be paid the auction price for negative CRRs subject to compliance with the CAISO's credit policies..

   Thereafter, holders of positive CRRs will receive payments related to the CRRs in the monthly settlement statements. Holders of negative CRRs will be required to make payments to CAISO in their monthly settlement statements. There is credit exposure related to these payment obligations. Accordingly, we will value the CRRs and require adequate credit coverage (collateral, or other assurance of creditworthiness as demonstrated by an Unsecured Credit Limit) to provide reasonable assurance that CRR holders can meet their prospective financial obligations.

2. **Credit requirements for holding all CRRs should use a "net position" calculation.** CAISO is proposing to add the absolute value of negatively-valued CRRs to the positively-valued CRRs in its credit requirement calculation. Negatively-valued CRRs lower the expected exposure for an LSE. However, CAISO is proposing to use the absolute value for the credit requirement calculation. This will result in artificial increases in the credit exposure calculation. Instead, CAISO should offset the holder's positively-valued CRRs with negatively-valued CRRs, for similar term durations, to calculate a portfolio-wide credit requirement.

CAISO Response:

We agree, and it appears there has been some confusion about our proposal. Negatively-valued CRRs (and low-priced positive CRRs) are the ones that can raise potential risks of holders not meeting their prospective financial obligations. We have proposed to allow positively valued obligations to be netted against these for determination of the value of the CRR portfolio for ongoing credit purposes. We believe there may be confusion on two points:

1. Parties have raised concern about allowing non-financially qualified entities to participate in the CRR auction, and then be unable to meet ongoing collateral requirements. If there were no up-front credit requirement for bidding on a negative CRR, an entity could successfully acquire these in the auction, then not be able to meet the credit requirements at the conclusion of the auction, which will be the auction value with an additional margin. While CAISO could retain the payment to the party for the negative CRR, we would still be short the margin amount. Accordingly, to provide additional assurance that only financially qualified entities will bid on negative CRRs, we will require that for purposes of determining creditworthiness during the auction process, that all bids will be checked against a pre-established credit limit for the participant. Accordingly, if the party wants to bid on 1 MW of positively valued CRR for $10, they would need to be approved for $10 of credit capacity, and, the same for a negative CRR with a bid of ($10), the would require credit capacity during the auction of $10.
2. We did raise for discussion the concept of not allowing positive CRRs to offset negative CRRs. In some cases, this would reduce risk. For example, a party acquires in the auction a positive one month CRR valued at $10, and a

negative one year CRR valued at $10. As the two have offsetting values, there is no net credit requirement. At the end of the first month, the positive CRR is expired. For credit valuation purposes, only the value of the negative CRR remains in their portfolio. They declare bankruptcy on the day CAISO asks for collateral for the value of that negative CRR, and this is the risk that we believe was worth raising for discussion. As FERC supports the concept of netting, and this is additionally the approach we use currently for other market charges, we are not proposing at this time to disallow netting for CRR portfolio valuation purposes for credit requirements.

3. **Credit requirements for holding short- and long-term CRRs should simply use a mark-to-market methodology, not a VaR-like probability calculation.** CAISO and Commerce both agree that the value of holding CRRs -- the risk exposure -- will change over time. However, the risk exposure for CAISO should be calculated from market values of the CRRs as commercially observed in the auction or absent that, in other markets including energy and capacity. CAISO should not use synthetically-determined values based on a probabilistic model. CRRs have no historical values for meaningful probability modelling. CAISO is simulating these values from a 2002-2005 study period, and this data is too outdated for practical use now.

   CAISO Response:
   CAISO recognizes that the ideal method of valuing the CRRs for credit purposes would be to have perfect insight into energy/LMP prices throughout the term of each CRR. Without that, is it appropriate to project today's (or prices over some longer historical period) energy prices throughout the term of the CRR to value each CRR? On day 1, such historical information will not be available in any event, so another method is required. Once such data becomes available, it may be practical to use it to determine projected energy values over CRR terms. CAISO anticipates examining this question in the future. As of now, given the constraints we face (lack of data, need to develop and computer software systems), the reliance on auction prices is the most viable approach.

4. **Credit requirements for long-term CRRs should use a realistic calculation of both current and potential exposures.** Current exposure is simply the amount of CRRs used (realized) in the current billing cycle that remains unpaid. Potential exposure is the value of the remaining unused CRRs, using mark-to-market valuation methodology and discounted to present value using long-term LIBOR.

In this manner, CAISO will not overburden the CRR holder, and will adequately cover the true risk. This calculation also meets standard industry practice as articulated by the Committee of Chief Risk Officers' Credit Risk Management Working Group in their whitepaper dated November 19, 2002.

CAISO Response:
CAISO agrees that this approach is conceptually appropriate. If there were a means to value the remaining unused CRRs using a realistic forecast of future market prices in a mark-to-market method, that would be the best approach. However, without such information at this time, CAISO's approach of relying on auction prices appropriately adjusted to reflect uncertainty through the margin concept, should approximate the results of this approach. We assume that we will have an efficient market and that prices parties pay for the CRRs represent the best estimate at that time of the value of the CRR.

5. **Default measures should only compensate CAISO for actual damages, not all monies collected.** CAISO's compliance measures are overly restrictive for the credit-event risk. CAISO is proposing to retain all CRR payments for the defaulting entity's positively-valued CRRs. This effectively becomes a gain for the CAISO, not merely compensation for their actual loss. And, CAISO has no provision for counterparties that leave the market – and the remaining collateral. CAISO stated during the conference call that in the event of a default on CRRs, CAISO would collect the CRRs and reallocate or re-auction them. Please clarify or articulate a policy for this situation.

CAISO Response:
To clarify, CAISO is not proposing to retain payments beyond that necessary to "close-out" the position of the defaulting party.

In conclusion, the credit requirements, as proposed by CAISO, over collateralize for the risks assumed. It poses unnecessarily high costs for market participants and ultimately, the retail load. Market participants without enough unsecured credit will have to post collateral with cash or credit facilities. This will effectively create a barrier for competitive entry, which will reduce liquidity in the CRR market. A CRR market without liquidity and robust participation will cause MRTU to fail as a model.

Commerce thanks the CAISO for considering its comments. Further questions or concerns should be directed to:

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May 11, 2007

SCE Comments on the CAISO Straw Proposal for CRR Credit dated April 27, 2007

SCE appreciates the opportunity to provide comment on the CAISO proposed credit treatment for CRRs. SCE notes that there are detailed issues relevant to the proposal that have yet to be clearly addressed. Additionally, there is an element of the proposal that SCE believes will present a very significant risk if left unaddressed.

Credit Must be Provided Prior to the Allocation and Auction

Currently, the CAISO only proposes to require credit or collateral for those rights that are positively valued. Auctioned or allocated rights that are expected to carry a negative value will not be treated similarly. For negatively valued auction rights, the CAISO proposes to simply withhold the payment of the auction revenues as collateral. For allocated rights, there is no similar treatment as there is no similar revenue to disburse. This methodology is insufficient for two reasons.

First, the methodology does not sufficiently protect against default. One can imagine a scenario in which an entity bids small negative amounts for all source sink combinations in hopes that one or more clears. The CAISO then holds the auction revenue and if at the end of the relevant CRR period, there is remaining value owed to the holder then, the holder takes the financial gain. If, on the other hand, the amount owed from congestion is greater than the amount held from the auction, then the CRR holder simply defaults and the CAISO is left with insufficient collateral to cover the damages.

Second, the methodology leaves the market vulnerable to manipulation. As an example, an LSE could execute the following strategy. Upon allocation, the LSE could sell and transfer via the Secondary Registration System (SRS) all positively valued rights leaving only a portfolio of negatively valued rights. The LSE then defaults turning all customer load back to their default provider. Since the LSE has sold all positively valued rights and only holds negatively valued rights, then the load returning to the default provider will not have CRRs sufficient to cover the expected congestion. In fact, any CRR transfer due to load migration at this point would cost the default service provider.

For these reasons, the CAISO must do the following:

1. Require credit/collateral for negatively valued CRRs at the absolute expected value of the right
2. Require the posting of sufficient collateral to address the potential of a default by an LSE that has sold off positively valued CRRs at the time of the SRS transfer including sufficient credit/collateral to cover the expected payments for negatively valued CRRs as well as to cover the revenue stream for the positively valued rights that would accrue to the load gaining LSE if load migration occurs.

CAISO Response:

The CAISO will not be requiring LSEs that obtain CRRs through the initial allocation to provide Financial Security for negatively values CRRs until the CAISO determines the credit requirements following the initial auction. LSEs are not required to pay for allocated CRRs that are positively valued and LSEs will not be paid for negatively valued CRRs. In addition, CRRs allocated in the initial auction cannot be transferred until credit requirements are in place and entities have sufficient Unsecured Credit or Financial Security to cover net liability for their CRR portfolio.

The CAISO will be requiring parties participating in the CRR auction to post the greater of $500,000 or the absolute value of their bids.

Default Provisions Need More Clarity

It is difficult to completely evaluate the proposed credit provisions given the uncertainty associated with how default will be treated. Currently, the CAISO tariff appears to deal with default through general provisions that would have all CAISO creditors receive a pro-rata reduction in their amounts owed by the CAISO. This would potentially mean that CRR holders as well as other market participants would be impacted by inadequate credit and collateral provisions for CRRs. Couple that with the full funding requirements for CRRs and the implications of a default by a CRR holder becomes further clouded.

For these reasons, SCE requests that the CAISO clarify how default of a CRR holder will be treated.

CAISO Response:

In response to the Commission's directive in its Order on long-term firm transmission rights to require full funding of long-term CRRs, the CAISO modified its tariff language pertaining to the operation of the CRR Balancing Account as part of its January 29, 2007 compliance filing in RM06-8. Under this latest proposal, the Balancing Account is cleared on a monthly basis with no carry over to subsequent months. The funds going into the Balancing Account are: (1) revenues from the CRR auctions (monthly shares of the annual auction proceeds, plus individual monthly auction proceeds); offset by (2) any hourly surplus or deficit from the hourly clearing of the IFM with respect to the congestion components of energy and CRR charges (i.e. congestion charges + charges for negatively valued CRRs – credits for positively valued CRRs).

An important objective of the CAISO with respect to the release of CRRs is to release the correct amount of CRRs such that item (2) be as close to zero as possible at the end of the month so that the auction revenues can be allocated back to Measured Demand as fully as possible at the end of the month. If the Balancing Account is nevertheless negative at the end of the month, there will be an uplift charge to Measured Demand for the month, so that the charges and credits invoiced to CRR Holders are at full value (except in cases of extraordinary events). In this way CRRs are "fully funded".

The full-funding requirement for CRRs does not guaranty that CRR Holders that have charges in any given settlement period pay their invoiced amounts, nor does it guaranty that CRR Holders that are owed money based on their entire settlement statement for any given settlement period, of which their CRR holdings are only one element, will receive 100% of that amount. The CAISO's credit policies are intended to guard against these occurrences. Accordingly, all Market Participants, including CRR Holders, are required to be creditworthy or have an adequate Unsecured Credit Limit or posted adequate Financial Security to cover their Estimated Aggregate Liability to the CAISO, including any liability for CRRs that require payments from CRR Holders. Non-payments by CRR Holders will be treated the same way under the MRTU Tariff as Non-payments by Scheduling Coordinators are treated under the currently effective ISO Tariff. These provisions are set forth in ISO Tariff Sections 11.12 through 11.16. In brief summary, after exhausting available options, any revenue shortfall resulting from non-payment will be applied pro rata to net ISO Creditors for the relevant settlement period.

The Commission asked the CAISO to clarify this issue in its September 21, 2006 MRTU Order at P 854. The CAISO has not yet made this compliance filing but has posted draft MRTU tariff language at http://www.caiso.com/1bbb/1bbb13cef298f0.doc that clarifies that defaults by CRR Holders are handled like defaults by Scheduling Coordinators. See MRTU Tariff Sections 11.29.13 through 11.29.17.

Credit Requirements for Long-Term CRRs

CAISO has recognized that long-term CRRs are volatile, yet there is no true mechanism in place if there is any change in value of the long-term CRR over time. Given the value of these CRRs are volatile, the CAISO has not adequately stated how it will monitor changing credit requirements. CAISO has also not stated how frequently they will adjust the credit requirement, except for that it will happen at least once a year. Therefore, SCE recommends that credit and collateral related to LT-CRRs be evaluated on the same basis as that of annual and monthly CRRs. That is, the CAISO will re-evaluate the value and credit requirements weekly as well as upon any CRR transfers initiated in the Secondary Registration System.

Additionally, SCE is concerned with the amount of credit/collateral that must be provided for LT-CRRs. As one option, the CAISO has suggested that a CRR holder would be required to collateralize the full term of the LT-CRR. SCE believes that this could present significant barriers to holding a LT-CRR. Additionally, SCE believes that the risk exposure for a LT-CRR is very different if the value of the right is negative versus if the value is positive. Based upon this, SCE believes that the credit requirements should also therefore be different. SCE recommends that the CAISO base the credit/collateral for LT-CRRs with a positive expected value on a rolling 12 month basis. This would be re-evaluated at regular intervals. For negatively valued CRRs, the CAISO should base credit/collateral on the remaining term of the LT-CRR.

CAISO Response:

As noted above, the CAISO will be developing means to evaluate the projected value of CRRs more often than yearly and will likely evaluate them on a monthly basis using auction results.

May 9, 2007

Comments by California Department of Water Resources on CAISO Straw Proposal for CRR Credit Policy

The CDWR welcomes the opportunity to comment. We recognize and appreciate the need to strike a balance between financial requirements and risk tolerance. If left to choose between low or high financial requirements our preference leans more towards financial requirements that provide greater financial protection as opposed to a lower bar that allows ease of entry.

Credit requirement to bid on negative CRRs

During the May 4, 2007 conference call a large part of the discussion and commentary from market participates centered on the straw proposal treatment of not requiring a credit requirement to participate in bidding for negatively priced CRRs. While not having an explicit recommendation as to what is an appropriate credit requirement for bidding on negatively priced CRRs CDWR shares the same concerns of those that spoke during the conference call that some level of collateral should be posted prior to bidding on negative CRRs.

CAISO Response:

As noted above, the CAISO will be proposing that bidders provide security equal to the greater of $500,000 or the absolute value of their bids.

Short-term CRR credit requirements

With respect to the decision of which percentile value to use; 1, 2.5, or 5 CDWR is okay with using the fifth percentile.

Long-term CRR credit requirements

With respect to the four options proposed for determining long-term CRR credit requirements, CDWR agrees with the CAISO preference toward either Option 2 or 4 with a slight preference towards Option 4.

Compliance

The measures outlined seem sufficient though we are wondering what the time horizon is to meet the credit requirement. We wouldn't want to be excluded forever from holding and acquiring CRRs if we had a margin call and missed the payment deadline for some reason (an administrative issue on our end for instance) not due to insolvency.

Credit Offsets

CDWR favors assessing credit requirements fore each individual CRR.

CAISO Response:
Consistent with established FERC policy and CAISO policy, the CAISO will net the value of CRRs in a CRR Holder's portfolio. The CAISO will not net the positive value of a CRR portfolio against a Market Participant's other liabilities to determine their EAL.