

CRR Credit Policy

**March 20, 2007 paper (authored by LECG's Scott Harvey) on
"CAISO CRR Credit Requirements" is posted at:
<http://www.caiso.com/1ba7/1ba788da74450.pdf>**

Stakeholder Conference Call

March 27, 2007

Topics

- **Clarification: CRR Credit Requirements to participate in the allocation**
- **CRR Credit requirements to participate in the auction**
- **CRR Credit requirements for holding CRRs**
- **Adjustments to the CRR credit coverage**
- **Options to determine the credit requirements of LT-CRRs**
- **Additional credit requirements for LT-CRRs held by external LSEs**

CRR Credit Policy

- **Market Participants must have a combination of posted security and unsecured credit to cover their Estimated Aggregate Liability (EAL).**
- **CRR Credit requirement could increase EAL.**
- **CRR Credit requirement will be evaluated at the portfolio level.**
- **If the net valuation of a CRR portfolio is negative, it would increase EAL. If the net is positive it will not reduce EAL.**



CRR Credit Requirements to participate in the allocation

- **Initially, there is no credit requirement to participate in the CRR allocation.**
- **After the CRR allocation and auction processes are complete, holders of allocated CRRs will be subject to the CRR credit requirements.**
- **All CRRs, regardless of how they are obtained, will be subject to the same credit requirements.**

CRR Credit requirements to participate in the auction

- **All auction bidders must have sufficient credit for each bid to cover the pre-auction credit coverage margin.**
- **Positive priced CRRs: Auction bidders must have sufficient credit to cover the bid price of positively priced CRRs, if this exceeds the pre-auction credit coverage margin.**
- **Negatively priced CRRs: Before the buyer is paid to purchase negatively priced CRR, the buyer must have sufficient credit coverage to hold the CRR.**
- **CRRs will be paid for at the conclusion of the auction.**



CRR Credit requirements for holding CRRs

- **CRR Credit Requirement = Expected value + Credit Margin**
- **Expected Value will be based on the auction price.**
- **Credit Margin will be derived from the historical variance in congestion charges in Day Ahead market.**
- **Without historical LMP data, options to determine the CRR credit Margin at MRTU startup include:**
 - 1) **LMP Studies data**
 - 2) **Historical level of Path 15 congestion variation**
 - 3) **Historical CRR data of an eastern ISO**
- **Numerical value of Credit Margin will be recommended following the analysis of the 3 options above.**

Adjustments to the CRR credit coverage requirement

CRR credit coverage requirement will be adjusted to account for:

- **CRR termination date and updated auction prices**
- **Permanent CRR transfers through
Secondary Trades
Load Migration**
- **Partial CRR transfers through
Secondary Trades (the new owner would be responsible for
credit coverage). However, in case of default by the new
CRR owner, the original owner may be held responsible.**

Long Term CRR Credit Requirement

- CAISO requires credit coverage for the entire term of the CRRs.

Options to determine LT CRR credit requirements:

Option 1: $n * (1 \text{ year CRR expected value}) + n * (1 \text{ year CRR credit margin})$

Option 2: $n * (1 \text{ year CRR expected value}) + \sqrt{n} * (1 \text{ year CRR credit margin})$

Option 3: 1 year CRR credit requirement

(n: remaining years)

Long Term CRR Credit Requirement

Negative Valued CRR Example:

1 year expected value = $-\$500,000$

1 Year Credit Margin = $\$100,000$

1 Year CRR Credit Requirement = $\$500,000 + \$100,000 = \$600,000$

The 10 Year CRR Credit Requirement for this CRR under Options 1,2,3:

Option 1: $n * (1 \text{ year CRR expected value}) + n * (1 \text{ year CRR credit margin})$
 $10 (\$500,000) + 10 (\$100,000) = \$5,000,000 + \$1,000,000 = \$6,000,000$

Option 2: $n * (1 \text{ year CRR expected value}) + \sqrt{n} * (1 \text{ year CRR credit margin})$
 $10 (\$500,000) + \sqrt{10} (100,000) = \$5,000,000 + \$316,228 = \$5,316,228$

Option 3: 1 year CRR credit requirement
 $\$500,000 + \$100,000 = \$600,000$

Long Term CRR Credit Requirement

Positive Valued CRR Example:

1 year expected value = \$50,000

1 Year Credit Margin = \$75,000

1 Year CRR Credit Requirement = \$25,000

The 10 Year CRR Credit Requirement for this CRR under Options 1,2,3:

Option 1: $n * (1 \text{ year CRR expected value}) + n * (1 \text{ year CRR credit margin})$
 $10 (- \$50,000) + 10 (75,000) = 250,000$

Option 2: $n * (1 \text{ year CRR expected value}) + \sqrt{n} * (1 \text{ year CRR credit margin})$
 $10 (- \$50,000) + \sqrt{10} (75,000) = -\$262,829 \text{ offset}$

Option 3: 1 year CRR credit requirement
\$25,000

Additional credit requirements for LT-CRRs held by external LSEs

- **External LSEs are subject to the same credit requirements for holding LT-CRRs as other Market participants.**
- **Additionally, external LSEs will be required to maintain 1 year of credit coverage for their WAC prepayment beyond the current period.**

Next Steps

- **April 3 CRR Stakeholder meeting**
- **Stakeholder written comments requested by April 6**
- **Future conference call on the numerical value of the CRR credit margin.**
- **May 1st posting of the CAISO proposal.**

Post MRTU Discussion Topic

The following topic will be added to the Market Initiatives Roadmap:

Would the residual credit risk for CRRs that may exist with the valuation approaches discussed here warrant changes in CAISO's market clearing practices related to defaults?

- **Whether defaults by CRR holders should be treated differently than other market defaults.**
- **Evaluating the current procedure of “short-paying” only net creditors in the event of a payment default by a market participant vs another practice such as assessment of billings to all market participants or another approach as used by other ISOs.**