Summary of Stakeholder Comments on CRR Credit Policy

May 17, 2007

Issue	Comments	CAISO Response/Solution
1. Credit Requirement on Negative Bids in Auction	During the May 4, 2007 conference call, stakeholder raised concerns on not requiring credit posting for bidding negative prices in CRR auction.	1) $500,000 minimum requirement to participate in the auction; 2) bids are valid only if there is sufficient collateral to cover the absolute value of the bids.
2. Credit Margin	**<u>PG&E</u>** 5-percentile. **<u>CDWR</u>** 5-percentile.	CAISO's proposal provides setting the credit margin at the 5th percentile value of the CRR.
3. LT-CRR Credit Requirement	**<u>SCE</u>** 1) Requiring collateral for the full term of a LT-CRR (Option 1) could present significant barrier to holding a LT-CRR; 2) Risk exposure for positively-valued versus negatively-valued LT-CRRs is different, thus credit requirements should be different. <u>a. Negatively-Valued LT-CRRs</u> Collateral based on the remaining term of the LT-CRR. <u>b. Positively-Valued LT-CRRs</u> Collateral established on a rolling 12-month basis and re-evaluated at a regular basis. **<u>PG&E</u>** Supports Option 1 (the most conservative approach) and the use of 5-percentile to determine credit margin. PG&E supports a conservative approach in early years of MRTU and has explained several reasons for favoring a conservative approach in its comments submitted on May 11, 2007. **<u>CDWR</u>**	Response to SCE: 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. Response to AReM Proposal: 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. <u>Response to PG&E's Comments:</u> 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

	Either Option 2 or 4 with a slight preference towards Option 4. **<u>AReM</u>** Requests additional stakeholder discussion of the proposed options.	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. CAISO's final proposal is for Option 2 with a 5th percentile value for the CRR credit margin.
4. Netting of Credit Requirements for CRR Holders	**PG&E** Supports credit offset and credit evaluation based on a portfolio basis. **AReM** Strongly supports netting the credit requirement based on a holder's entire portfolio. **Commerce Energy** Supports credit offset and credit evaluation based on a portfolio basis. **CDWR** Favors assessing credit requirement for each individual CRRs.	1. "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." 2. In the April 27 proposal, "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."
5. Use of both the Expected Value and the Credit Margin for Credit Requirement	**AReM** Requests the CAISO use either the Expected Value or the Credit Margin as the sole credit requirement for CRR Holders.	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, if 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.
New Issues Raised in Comments Submitted on		

May 11, 2007		
6. Credit Requirement Prior to Allocation and Auction	**<u>SCE</u>** 1) Require credit requirement for negatively-valued CRRs at the absolute expected value of the right [prior to allocation and auction]; 2) Risk associated with **Load Migration** SCE asks the CAISO to require sufficient collateral to cover the risk associated with load migration. SCE is concerned about the potential default of a LSE that has sold off its positively-valued rights and later transfers its negatively-valued rights to load-gaining LSE through load migration. SCE asks for sufficient collateral to cover i) the expected payments for negatively-valued rights, and ii) the revenue stream for the positively-valued rights. 3) Conference call on May 11, 2007: Regarding there won't be initial credit requirement to participate in the allocation process, SCE raised concerns on default under the following two scenarios: i) a party defaults after obtaining negative rights through allocation; ii) a party originally expected to get a positively-valued right, but the right turns out to be negative based on actual market results, and the party is not able to pay and defaults. Even though default risk is relatively small for LSEs, SCE has pointed out that the 3rd tier allocation and allocation after year 1 are free choice in which non-LSEs can participate. **<u>PG&E</u>** PG&E prefers that CRR holders establish credit	Response to SCE: 1) CAISO has revised the proposal and made arrangements with the CRR software vendor to require collateral for negative bids as proposed by SCE. 2) 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. The load migration issue raised by SCE will be addressed under the load migration policy as being developed. CAISO will value the allocated CRRs for credit purposes immediately subsequent to the availability of price data for the CRRs after the

	requirement to the CAISO <u>prior to the allocation and auction and "at least before the results of allocations or auctions are made to the full market"</u>. PG&E is concerned about the default by a counter-flow provider which will result in award of CRRs in excess of transmission capacity.	auction process. The lack of data for credit valuation purposes need only be an issue in the first allocation. With respect to subsequent allocations, CAISO will be in a position to require pre-allocation credit availability. For the initial allocation, lack of CRR price information makes determination of credit requirements difficult. However, this first year problem presents minimal risk with the short time between the allocation and the auction, at which point information will be available to value the CRRs for credit purposes. Further, as this period is prior the effectiveness of the CRRs, there is no risk of changes in value of the CRRs contributing to financial difficulties of the holder. With respect to the auction, CAISO's CRR credit proposal now requires available credit for both positive and negative bids. <u>Response to PG&E:</u> 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 auction 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.
7. Frequency of CRR Credit Adjustment	**<u>SCE</u>** 1) Weekly; 2) Upon secondary transfer. **<u>PG&E</u>** 1) Weekly review and update; 2) Adjust credit requirements before secondary transfers are allowed through the SRS. **<u>AReM</u>** Monthly adjustment.	CAISO intends to recalculate credit requirements for a CRR holder upon the sale or receipt of additional registered CRRs. <u>Response to AReM:</u> 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, with the aim of using monthly auction data. Matters that affect this include: • Recognize constraints for MRTU startup involving system development timelines and budget availability • Overall aim of providing accurate CRR valuations-monthly data is more timely, but is it usable to the same extent as the

		annual data? <u>Response to PG&E:</u> 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. Matters that affect this include: • Recognize constraints for MRTU startup involving system development timelines and budget availability • Overall aim of providing accurate CRR valuations-monthly data is more timely, but is it usable to the same extent as the annual data? CAISO agrees that a credit check is necessary before transfers of CRRs will be officially

		registered, and plans such a check.
8. Default & Compliance Provisions	**<u>SCE</u>** 1) SCE asks for clarification of default provisions. 2) Regarding the 5-year ban on participation in the market in case of noncompliance with the CRR credit policy, SCE has raised the following concerns during the conference call on May 11, 2007: i) If a party defaults in the first year, but pays back its original obligation in the second year. Will it be allowed to play in the market in the second year? ii) A non-complied party may not show any action to comply, plays in the market again after the five-year ban, and repeats its history. SCE suggests not allowing the non-complied party to participate in the market until it pays back its original obligations. **<u>CDWR</u>** CDWR asks for clarification of the time horizon to meet the credit requirement and points out that a party may miss the payment deadline due to an administrative issue instead of insolvency.	<u>Response to SCE</u> 1) Revision to the 5-year ban: • 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. 2) Clarification of default provisions: 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.
9. Market Monitoring	**PG&E** PG&E proposes the Department of Marketing Monitoring (DMM) to review and screen bids into the auction before CRRs are being auctioned, and prohibit potential market abuse caused by "excessive" bids. PG&E is particularly concerned with "excessive bids" over inter-ties, i.e., bids over the transmission capacity on a path supported by counter-flows being held by an associated party. PG&E points out that market abuse over inter-ties has occurred during the initial years of the CAISO and the energy crisis.	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.
10. Potential for Anti-Competitive Effects	**AReM** "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."	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.
12. Method to Determine Credit Requirement	**<u>Commerce Energy</u>** 1) Suggests the CAISO calculate its risk exposure using a mark-to-market approach based on market values of the CRRs. 2) Credit requirement for LT-CRRs should use a realistic calculation of both current and potential exposures.	1) 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

	<u>Current Exposure</u> The dollar amount of CRRs realized in the current billing cycle that remains unpaid. <u>Potential Exposure</u> The value of the remaining term of the CRRs, using mark-to-market valuation methodology and discounted to present value.	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. 2) 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 this approach.