CAISO Straw Proposals on Congestion Revenue Rights

Covering Topics to be Filed in July 2007

June 7, 2007

Straw Proposals on Congestion Revenue Rights
Topics for July 2007 Filing

Introduction

This document provides CAISO straw proposals on the four issues that were described in the CAISO's May 18, 2007 CRR Issues Paper.[1] For additional background discussion of those issues please refer to that paper. These straw proposals are not necessarily final CAISO proposals at this time, though they do reflect the CAISO's current thinking on these issues and are offered for discussion with stakeholders at a meeting to be held at the CAISO on June 14, 2007, from 10 AM to 4 PM. Any points raised in the comments submitted by stakeholders on June 4 and not covered in this document may also be discussed at the June 14 meeting.

Following the June 14 meeting the next important milestones and dates are:

- June 20 – Stakeholders are asked to submit written comments on these CAISO straw proposals and June 14 discussions.
- June 25 – CAISO will post Draft Final Proposal.
- June 28 – Conference call to discuss Draft Final Proposal.
- July 2 – CAISO will post draft tariff language.
- July 9 – Stakeholders are asked to submit written comments on draft tariff language.
- July 13 – Conference call to discuss draft tariff language.
- July 18-19 – CAISO Board will meet and consider Final CAISO Proposal.
- July 20 – CAISO will file Final CRR Proposal at FERC following Board approval.

This straw proposal addresses the following four issues:

A. Transfer of CRRs between Load Serving Entities to reflect load migration

B. Ensuring consistency between LSE load forecasts used for CRR eligibility and for Resource Adequacy Requirements

C. Modeling transmission outages in the CRR network model for monthly CRR releases

D. Provision for early release of transmission encumbrances associated with Converted Rights

[1] Available from the CAISO web site at http://www.caiso.com/1be2/1be2dd2449840.pdf

A. Transfer of CRRs between Load Serving Entities to reflect load migration

General principles and design concepts

1. Required transfer of CRRs between LSEs to reflect load migration will apply to allocated Seasonal and Long Term CRRs, and in the case of Seasonal CRRs, will also include the right to renew such transferred CRRs in the Priority Nomination Tier (PNT) of the next annual CRR allocation process. There will be no required transfer of allocated Monthly CRRs.
2. The required transfer will consist of proportional shares – to be calculated as described below – of all Seasonal and Long Term CRRs that have previously been allocated to the load-losing LSE as of the start of the monthly tracking period, and that have remaining validity (term) at the time of the transfer (at the end of the monthly tracking period). The CAISO does not propose to distinguish a subset of allocated Seasonal or Long Term CRRs that may be set aside as ineligible for load-migration related transfer by the LSE to which they were originally allocated.
3. Following the calculation, the CAISO will execute the CRR transfer by creating and allocating new, equal and offsetting CRRs to each of the load-losing and load-gaining LSEs. Load-gaining LSEs receive obligation CRRs in the same direction as those held by the load-losing LSE from which it has received transfers of load, while load-losing LSEs receive the same quantity of offsetting obligation CRRs in the opposite direction ("counterflow CRRs"). The required transfer is illustrated by the following example. Suppose the CAISO calculates that a quantity X MW of CRRs from PNode A to LAP-1 (for a particular season/TOU, and either Seasonal or Long Term) should be transferred from LSE-1 to LSE-2. The CAISO will create two new equal and opposite CRRs, one CRR for X MW from A to LAP-1 to be allocated to LSE-2 and another CRR for X MW from LAP-1 to A to be allocated to LSE-1.

   Note that this approach makes it unnecessary to distinguish between transfer of the actual CRR instrument versus payment of a financial equivalent, because the approach provides for the appropriate CRR revenue stream to be transferred without LSE-1 having to give up any of its allocated CRRs. This approach also is not affected by LSE-1's prior bilateral or auction sale of some of its allocated CRRs, because the new CRRs can still be created based on the CRRs that were allocated to LSE-1, not on the CRRs it actually holds at the time of the transfer.
4. With the transfer executed as described above, LSE-1 also loses – and LSE-2 gains – the eligibility to nominate the X MW of A to LAP-1 CRRs in the next running of the PNT.

Tracking of load migration by CAISO, calculation of required CRR transfer and credit considerations

5. Information on migration of customers between LSEs will be provided to the CAISO directly by the Utility Distribution Company (UDC) or other entity that provides distribution service to the customer, as part of the Direct Access enrollment process.[2]

[2] Transfers of customers between LSEs may also occur through other mechanisms (e.g., changes in UDC boundaries), but such changes should be far less frequent than transfers of Direct Access customers. These other types of changes would be handled through administrative mechanisms, with the associated transfers of CRRs performed following the same principles that are described herein.

The CAISO recognizes that coordination will be required with the CPUC to ensure that the UDCs have the necessary authority to provide the data to the CAISO and receive rate recovery of the associated costs as a function of the UDC.

6. Information provided by the UDC will include, at a minimum: customer ID information, original and new LSE, effective date of transfer, and most recent 12 months of billing data.
7. CAISO will receive this information on an ongoing daily basis, but will perform calculations for CRR allocation purposes on a monthly basis, beginning approximately on the 21st of each month in preparation for the next monthly CRR allocation and auction. CRR transfers will be made effective on the first of the month for load migration that is effective by the first of the same month. This step will be performed prior to determining each LSE's eligibility for monthly CRR allocation. The CAISO will consider modifying this procedure to provide more frequent CRR transfers (e.g., daily) as an enhancement to the CRR systems for years beyond CRR Year One.
8. CAISO will calculate, for each LSE: (a) its net load migration MW between itself and each other LSE during the previous 30 days, for purposes of determining the required transfers of CRRs, and (b) its total net load migration MW between itself and all other LSEs during the previous 30 days, for purposes of calculating the LSE's load metric and associated eligible quantities for allocation of monthly CRRs. (Use (b) is the topic of the next section of this paper.)
9. For end-use customers over a certain size (e.g., industrial customers over 1 MW), the CAISO will track individual customers' hourly loads. For end-use customers under that size (e.g., 1 MW), the UDCs will determine a standard number of kW per customer in each customer class that is used in reporting Direct Access activity to the CPUC, e.g., residential, agricultural, small commercial, and medium commercial, based on an average of N peak hours for the Default LAP in which the UDC is located. By receiving the 12 months of billing history that is transferred between LSEs as part of the Direct Access enrollment process, the CAISO will have the ability to validate the UDCs' calculations of the standard kW per customer. The CAISO will consider reducing the threshold customer size for which it processes customer-specific hourly loads for transferring CRRs due to load migration if it is possible to do so.
10. The net load gained by LSE-2 from LSE-1 is tracked separately from the net load lost by LSE-2 to a different LSE-3 during the same month, using the formulas described below. This avoids needing to attribute load transfers between LSE-1 and LSE-3 when there were actually no transfers directly between these LSEs.
11. The general method of calculation treats the set of Seasonal and Long Term CRRs that resulted from each annual allocation process as a separate portfolio, and adjusts the portfolio as follows:

    Base of allocated CRRs held by load-losing LSE-1 =
    (CRRs originally allocated to LSE-1 through CAISO allocation processes)
    + (CRRs assigned to LSE-1 through previous months' load migration transfers)

    Percentage of CRRs to transfer from load-losing LSE-1 to load-gaining LSE-2 =
    (Sum of LSE-1's load that is transferred to LSE-2 during the month)
    / (LSE-1's eligible load in previous month's CRR allocation process)

CRRs allocated to load-gaining LSE-2 =
(Base of allocated CRRs held by load-losing LSE-1)
* (Percentage of CRRs to transfer from LSE-1 to LSE-2)

Counterflow CRRs allocated to LSE-1 =
-1 * (CRRs allocated to LSE-2)
(i.e., equal amount of MW in the opposite direction)

The calculation of (Base of allocated CRRs held by load-losing LSE-1) is computed for each source to sink combination in LSE-1's portfolio of allocated CRRs. The term (Percentage of CRRs to transfer from load-losing LSE-1 to load-gaining LSE-2) is the same for all CRRs in the (Base of allocated CRRs held by load-losing LSE-1) portfolio that have the same LAP as their sink. Calculation of the term (Percentage of CRRs to transfer from load-losing LSE-1 to load-gaining LSE-2) generally follows the process for each customer class that is illustrated in the example in section 3.5.3.1 of the CAISO's May 18 CRR Issues Paper. The term (LSE-1's eligible load in previous month's CRR allocation process) includes all customers who are served by LSE-1 at the time of the previous monthly CRR allocation, regardless of whether these were new or pre-existing customers at that time. This will require LSEs to include updates of the number of customers that they serve as part of their submission of load forecast data for the monthly CRR allocation process.

12. Credit issues involving CRR transfers due to load migration that are addressed in stakeholder comments include (a) qualification of the load-gaining LSE as a Candidate CRR Holder, and (b) the necessity of transferring the credit requirements associated with CRRs as their value is transferred. For CPUC-jurisdictional LSEs, a potential requirement that would address (a) is for the CPUC to require Energy Service Providers (ESPs) who serve Direct Access customers to execute a Candidate CRR Holder agreement as a part of qualification as an ESP. Regarding (b) the CAISO's proposed solution of allocating new CRRs to both the load-losing and load-gaining LSEs, as the mechanism for tracking CRR transfers, inherently triggers an adjustment of both LSEs' credit obligations. To cover the possibility that a load-gaining LSE would be slow to respond to the change in its credit obligation, the CAISO will inform the load-gaining LSE of its change in credit obligation, and the CAISO will hold the newly allocated CRRs until the load-gaining LSE's credit obligation is satisfied, pursuant to MRTU tariff section 12.5.2. MRTU tariff section 12 describes additional restrictions that are placed on market participants for defaults in meeting credit requirements. If the load-gaining LSE does not satisfy its credit obligation in accordance with tariff section 12, the CAISO may place the allocated CRRs into the annual or monthly CRR auctions.

There are two specific points that this proposal does not yet address, which the CAISO will raise for discussion at the July 14 stakeholder meeting. First is the question of how to deal with a situation where the load-losing LSE does not have sufficient credit to assume the counterflow CRRs it is required to accept as a result of the load migration transfer. A benefit of the present proposal is that the load-gaining LSE will still receive the CRRs it is supposed to receive, but the load-losing LSE may be unable to fulfill the payment responsibility of the counterflow CRRs. The second point is the idea of "cancelling" for credit purposes the MW associated with equal and opposite CRR quantities. If a party holds 100 MW each of CRRs from A to B and from B to A, the market settlements associated with these will always net to zero, so it would make sense to "cancel" the CRR MW for purposes of calculating credit requirements. The same principle would apply to cancellation of offsetting portions of the original CRR quantity. The CAISO is still exploring whether it is possible to implement such a feature in the credit calculation systems.

B. Ensuring consistency between LSE load forecasts used for CRR eligibility and for Resource Adequacy Requirements

A monthly load forecast will be submitted to the CAISO by each LSE for each month in which the LSE wants to nominate Monthly CRRs in the allocation process. The monthly load forecast will consist of hourly load values for all hours of the month. The exact deadline for submitting such load forecasts will be specified in the CRR BPM, but will be at least 30 days prior to the start of the month for which CRRs will be nominated.

Independent of these LSE submissions to the CAISO, on an annual basis the CEC will provide the CAISO with a set of monthly non-coincident peak load forecasts for each LSE. For CPUC-jurisdictional LSEs (IOUs, ESPs and CCAs) these year-ahead forecast values are used, after a coincidence adjustment performed by the CEC, for establishing LSE Resource Adequacy Requirements (RAR) for which compliance must be demonstrated in the annual year-ahead RA showing, including compliance with Local Capacity Requirements (LCR). For non-CPUC jurisdictional LSEs the CEC will receive analogous year-ahead monthly non-coincident peak load forecast values to support its annual supply adequacy report.

The CAISO will utilize the CEC-provided peak load forecasts in the following manner. Suppose the peak-hour value of an LSE's forecast hourly load data for a particular month as submitted to the CAISO is X MWh, whereas the non-coincident peak forecast provided by the CEC for that LSE for the same month is Y MWh. The CAISO will first adjust the value Y to create a value Z that accounts for net load migration to or from the LSE that occurred between the time the year-ahead forecast was released by the CEC for RA purposes and the time the CAISO performs the CRR eligibility calculations for the monthly CRR allocation. The CAISO will then multiply all the hourly values of the data submitted by the LSE by the factor Z/X, and use the resulting adjusted values for purposes of calculating the LSE's eligibility for allocation of Monthly CRRs. Note that this calculation assumes that the effect of load migration will have already been incorporated by the LSE into the hourly load forecast data it submits to the CAISO, but was not reflected in the non-coincident peak load forecast from the CEC. To the extent expected net load migration was already incorporated in the CEC value, the adjustment from Y to Z may not be necessary.

C. Modeling transmission outages in the CRR network model

One of the important goals in operating the CRR program under MRTU is to maintain revenue adequacy. That is, the amount of revenue collected from congestion rents in the Day Ahead market should equal or exceed the amount of money paid out to CRR holders over the term of the CRRs. Further, as provided in the CAISO's January 29, 2007 Long Term CRR filing, the CAISO will not rely upon revenue generated from the CRR auctions to maintain revenue adequacy. Although the filed MRTU Tariff Section 11.2.4.3 specifies that the CAISO will continue to transfer net CRR auction revenues to the CRR Balancing Account, the CAISO will aim to release quantities of CRRs that are expected to be revenue adequate without relying on the auction revenues. Appropriate modeling of transmission outages and derates in the CRR network model used for the monthly CRR allocation and auction processes is an important requirement for achieving this objective.

The purpose of performing Simultaneous Feasibility Tests (SFT) as the basis of the CRR Allocation and Auction processes is to support revenue adequacy by releasing only sets of CRRs that are feasible for the modeled network conditions. Sets of CRRs released through an

SFT will be revenue adequate in any given hour as long as the network model used in running the day-ahead Integrated Forward Market for that hour is consistent with the network model that was used in conjunction with the SFT to release the CRRs.[3] If the two models are not sufficiently consistent, then revenue inadequacy can, but may not necessarily, result. An example of an inconsistency that might cause revenue inadequacy is if the CAISO assumes all transmission lines in the full network model will be in service during a particular month when running the monthly CRR process but in the IFM transmission facilities are actually out of service or derated. Since transmission outages can result in revenue inadequacy if they are not considered in the CRR SFT process, it is important to consider them to the extent possible.[4] The challenge in determining how best to consider such outages in the network model arises from the fact that the SFT for any given CRR term must utilize a single snapshot of network conditions, whereas in reality network conditions including the ratings and service status of facilities do not remain constant over the CRR term.

1. Annual CRR Process

CRR Tariff section 36.4 states that the CAISO will consider long-term scheduled outages in the annual CRR process. Under the present straw proposal, these facilities will be assumed to be in service unless planned outages of one or more "significant facilities" are expected at the time the CAISO runs the annual CRR process. A "significant facility "is one that, if derated or out of service, would be likely to cause revenue inadequacy if not accounted for in the network model for the CRR allocation and auction processes.

If the CAISO knows of an outage comprising significant facilities that is planned to occur during one or more of the seasonal terms of the annual CRR process, the CAISO will either remove each such facility from the CRR network model, or will keep the facility in the model and derate those flow limits or thermal limits relevant to the facility in question. If the CAISO decides to keep the facility in the network model and use the derate method, and if the facility is part of a flow limit definition, the CAISO will derate the flow limit in proportion to the portion of the CRR term that the facility will be out of service, for example, by the factor (total days out of service)/(total days in the season). If the facility is not part of a flow limit definition but has an impact on one or more flow limits that are electrically close, then the CAISO will also derate such flow limits by the same factor. If neither of these cases applies, then the CAISO will simply derate the facility's thermal limit by this factor.

2. Monthly CRR Process

Two categories of outages need to be reflected in the monthly CRR network model:

1. Outages of significant facilities as described above, which will potentially have a significant impact on revenue adequacy if not accounted for in the CRR network model, and which therefore are required to be reported by the PTOs to the CAISO at least 30 days prior to the month in which the outage is planned to occur; and
2. Other outages that either do not involve significant facilities, or for some reason could not be reported 30 days prior to the month in which they occur. For facilities not designated as significant, planned outages may be reported by the PTO to the CAISO with at least 72 hours advance notice. In addition there will typically be unplanned outages and derates which are not predictable.

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[3] The Marginal Congestion Component of the LMPs calculated in the Integrated Forward Market will be used in CRR revenue calculation.

[4] Note: For the Long Term CRR allocation process, all lines will be considered in service at full normal ratings.

For outages of significant facilities, in all but the first monthly CRR process covering February 2008, the CAISO will generally have specific information in a timely manner to reflect such outages explicitly in the CRR network model. For other outages and derates the CAISO will not have advance information and will have to utilize an estimation technique to reflect their expected impact.

Under this straw proposal, the methodology for considering outages in the monthly process for the initial February 2008 monthly allocation and auction would be handled differently than those for subsequent monthly allocations and auctions, as discussed below.

Monthly Process for February 2008

The first CRR allocation and auction covering the month of February 2008 will take place in October 2007. This is three months before outage information will be available to the CAISO from the PTOs under "the 30 day rule." Since outage information under the 30 day rule will not be available at the time of the allocation and auction for February 2008, a different outage criterion is proposed than may be used for subsequent monthly CRR processes when better information is available.

It is proposed that for the first monthly process, all flow limits (i.e., branch group limits and normal thermal limits) will be derated to account for both planned and unplanned outages that may occur in the month of February.

Monthly Process for March 2008 and subsequent months

For the monthly CRR allocations and auctions beyond February 2008, the two categories of outages identified above can be treated differently in the monthly CRR network model:

- ***Planned outages of significant facilities known 30 days in advance of the monthly CRR process***

There are two problems to be addressed. First, the CAISO will develop, in consultation with the Transmission Maintenance Coordinating Committee (TMCC) consisting of representatives of the Participating Transmission Owners and the CAISO's Outage Scheduling Department, a list of those facilities for which planned outages must be reported to the CAISO at least 30 days in advance. Based on initial discussions with the TMCC the CAISO expects that the criteria for this list will be straightforward and transparent, consisting of, for example:

- All transmission facilities rated at or above 200 kV.
- All transmission facilities that are part of any defined flow limit as described in a CAISO transmission operating procedure.
- Any transmission facility that was out of service in the last two or three years and for which the CAISO determined a special flow limit was needed for real-time operation.

Second, the CAISO must specify how such outages will be reflected in the monthly CRR network model. The fact that a significant facility is planned to be out of service for a portion of the month in question does not automatically mean that the facility should be removed from the network model. The impact of this outage on CRR revenue adequacy will depend on other factors, most importantly the expected duration of the outage and whether it is planned for on-peak or off-peak hours. At this time the CAISO is still reviewing the practices of other ISOs with regard to this question, and is considering whether an empirical study needs to be conducted prior to the October 2007 running of the first monthly CRR process.

- ***Planned and unplanned outages known less than 30 days in advance of the monthly CRR process***

These outages, including planned outages that may be reported by the PTO to the CAISO with at least 72 hours advance notice, and unplanned outages and derates which are not predictable, are not known to the CAISO during the monthly CRR process. Since they may still affect revenue adequacy because they were not explicitly considered in the CRR process, they should be considered through some less explicit approach.

Because these specific outages will not be known to the CAISO at the time of the start of the monthly allocation and auction process, it is proposed that certain categories of flow limits be derated by a certain percentage. The CAISO will conduct a study to determine the appropriate derate amount in time for the October 2007 running of the first monthly CRR process.

D. Provision for early release of transmission encumbrances associated with Converted Rights

Section 6.2 of the May 18 CRR Issues Paper lists five numbered provisions that are possibly misleadingly identified as "additional provisions." It is important to recognize that items 1, 2, 3 and 5 are not new items or provisions to the CRR allocation rules, but are fully consistent with the filed tariff provisions for LSEs serving load that is not covered by existing transmission rights (TOR, ETC or CVR). In particular, load that is served by an LSE that holds such existing rights but is over and above the quantity of load that is covered by those rights and is thus exposed to CAISO congestion charges – including load of a CVR-holding LSE that becomes exposed to CAISO congestion charges as a result of the CVR holder relinquishing some or all of its CVR – is eligible for CRR allocation in accordance with the same provisions that apply to all LSEs under the filed MRTU tariff. Provisions 1, 2, 3 and 5 of section 6.2 should be understood in this light. Thus the essence of the new proposal raised in section 6.2, to which the CAISO is now offering its straw proposal in response, is captured in provision 4, namely, the proposal to allow a CVR holder to "reclaim" some of its relinquished CVR by nominating new CRRs from a previously relinquished CVR source location in the PNT.

After careful consideration of the CVR holder proposal contained in provision 4 of section 6.2 of the May 18 CRR Issues Paper, the CAISO is concerned that there would not be a reasonable non-discriminatory basis to limit its use to CVR holders only. As was discussed during the May 29 conference call, some LSEs believe that this provision, if granted to CVR holders, should also be granted to all other LSEs so that they too would be permitted, for example, to utilize the PNT for Year 3 to nominate CRR Sources that they received in Year 1 but did not choose to renew in Year 2.

As provided in the filed MRTU Tariff and as intended by the design of the CRR allocation rules, the purpose of the PNT is to enable LSEs who were allocated particular Seasonal CRRs in one year to nominate them for renewal in the next year ahead of LSE nominations of new CRRs, thus to provide LSEs the ability to achieve year-to-year continuity in their holdings of Seasonal CRRs with reasonably high confidence of obtaining most of the CRRs they wish to renew. If eligibility to participate in the PNT is expanded significantly beyond what the filed rules specify, the CAISO believes this would undermine the intent of the PNT. Although granting the proposed provision to CVR holders alone may have relatively small impact on the designed purpose of the PNT, the CAISO does not see a valid basis to limit the provision to CVR holders only and therefore does not propose to adopt the additional CVR provision.