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# **Draft Final Proposals on Congestion Revenue Rights**

**Covering Topics to be Filed in July 2007**

**June 25, 2007**

## **Draft Final Proposals on Congestion Revenue Rights Topics for July 2007 Filing**

### **Introduction and Executive Summary**

This document provides the CAISO's draft final proposals on the four issues related to Congestion Revenue Rights (CRRs) that were described in the CAISO's May 18, 2007 CRR Issues Paper for discussion at the May 29 stakeholder conference call, and on which the CAISO offered its straw proposal in a follow-up paper dated June 7 for discussion at the June 14 stakeholder meeting. For additional background on these issues please refer to the previous papers, related CAISO presentations and posted comments.<sup>1</sup> The CAISO will hold a conference call with stakeholders to discuss these proposals on Thursday, June 28. Please consult the calendar at [www.aiso.com](http://www.aiso.com) to find out the time and call-in information for this call.

These "draft final" proposals reflect the final proposals the CAISO expects to submit to its Board of Governors at the July 18-19 meeting and to file at FERC as soon as possible after receiving Board approval. These proposals were developed through the CAISO's careful consideration of the discussions held to date, the submitted written comments, the objectives these proposals are trying to achieve, and the pros and cons of the various alternatives. As the CAISO continues to receive comments on these proposals, the CAISO will also continue to consider modifications as appropriate in light of new insights and information presented following the release of this document. The June 28 conference call will provide an opportunity for a final round of stakeholder discussion of the issues addressed herein.

Following the June 28 conference call the next important milestones and dates are:

- 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

In most respects, the CAISO's current proposals on these four issues are similar to those in the CAISO's June 7 Straw Proposal. In this document the CAISO provides additional explanation of

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<sup>1</sup> Available from the CAISO web site at <http://www.aiso.com/1b8c/1b8cdf25138a0.html>

its proposals where needed for clarity. Highlights of the CAISO's proposals concerning each issue are:

- A. Transfer of CRRs between Load Serving Entities to reflect load migration: Central concepts of the CAISO's proposal are that the CAISO 1) will obtain data about load migration directly from the Direct Access enrollment process that is managed by the Utility Distribution Companies (UDCs), and 2) use the data to allocate new, offsetting CRRs to the load-losing and load-gaining Load Serving Entities (LSEs), to ensure that the value of CRRs that are transferred is proportional to the amount of load that has transferred between LSEs. This Draft Final Proposal presents the result of the CAISO's consideration of certain issues that have been raised during discussions with stakeholders, in particular:
- At the time of the June 14 stakeholder meeting, the CAISO had identified issues but not yet developed a proposal for instances where a load-losing LSE does not meet an increased credit requirement that results from the allocation of counterflow CRRs, after selling a portion of its previously allocated CRRs. After considering stakeholder comments, the CAISO has concluded that there is no need for a prohibition on selling allocated CRRs, and no need for a LSE that sells allocated CRRs to face an increased credit requirement to cover the possibility that it will lose the load that supported the CRR allocation. The CAISO tariff already contains terms for ensuring that market participants meet their credit requirements. The LSE's credit requirement will be determined from its current CRR portfolio at the time of each credit review.
  - A process is outlined to adjust the initial allocation of Seasonal CRRs for the cumulative load migration that occurs between the start of the allocation process and the start of the MRTU market's operation, as a single cumulative step.
- B. Ensuring consistency between LSE load forecasts used for CRR eligibility and for Resource Adequacy Requirements: The CAISO will receive a forecast of hourly load values for each monthly allocation process from each participating LSE. Each California Public Utilities Commission (CPUC) jurisdictional LSE also submits monthly forecasts of its non-coincident peak to the California Energy Commission (CEC), which validates these forecasts to achieve consistency. The CEC will supply its results to the CAISO, which will use the CEC results to adjust the LSEs' hourly data.
- This updates the CAISO's Straw Proposal, which included an adjustment of the LSE-submitted values for Direct Access load migration. The CEC is already adjusting for load migration, so the CAISO does not need to duplicate this step.
- C. Modeling transmission outages in the CRR network model for monthly CRR releases: The CRR program under MRTU is committed to maintaining revenue adequacy (i.e., revenue collected from congestion rents in the Day Ahead market equals or exceeds the money paid out to CRR Holders). The CAISO proposes that "significant facilities" are those facilities that, if derated or out of service, would increase the risk of revenue inadequacy if not accounted for in the network model for the CRR allocation and auction processes. The CAISO provides a description for the methodology to determine which facilities fall in this category and which will be used later this year to formulate a complete list of the significant facilities to which the 30-day rule applies. This procedure will reside in the Business Practice Manual (BPM).

Outages are considered both in the annual and monthly processes.

### Annual Processes:

Under this draft final proposal, all facilities will be assumed to be in service at normal ratings unless planned outages of one or more “significant facilities” are expected at the time the CAISO runs the annual CRR process.

### Monthly Processes:

The CAISO will consider two category of outages in its modeling of network conditions to be used in its Simultaneous Feasibility Test (SFT), which is used to ensure that the distributed sets CRRs are feasible. The two categories of outages consist of 1) what the CAISO is classifying as outages on “significant facilities” and 2) all other outages. Facilities rated at or above 200 kV, facilities that are part of defined flow limits, and facilities for which recent outages caused temporary flow limits to be enforced, are “significant” facilities

The CAISO requires proposed schedules of planned outages of significant facilities, before the start of each monthly CRR Allocation process (30-day advance notice requirement already conditionally accepted in the MRTU Tariff). Under the 30-day rule, requests for planned outages of such facilities must be submitted to the CAISO at least 30 days prior to the start of the month for which the outage is planned to occur, regardless of the planned duration of the outage. The CAISO emphasizes that this rule is not intended to prevent PTOs from conducting needed maintenance on significant facilities in circumstances where 30-day advance requests were not submitted.

All other outages are not subject to the 30-day rule.

Planned outages that are requested by the PTO with at least 72 hours advance notice but less than 30 days, and unplanned outages and derates which are not predictable, are not known to the CAISO in time to be represented in the monthly CRR network model. Since such outages may still affect revenue adequacy because they were not explicitly considered in the CRR release process, they need to be considered through an approach that is statistical in nature rather than facility-specific. The CAISO proposes a system-wide derate that will have the effect of reducing the network capacity available for CRRs slightly, resulting in excess congestion revenues during hours when such outages are minimal to balance against revenue shortfalls that occur when such outages are more severe. The CAISO will conduct a study to determine the appropriate derate amount in time to apply it to the CRR network model for the October 2007 running of the first monthly CRR process.

### The First Annual and Monthly CRR Allocation and Auction:

The first annual CRR allocation and auction process will begin in July 2007, and the monthly CRR allocation and auction process for February 2008 will take place in October 2007. For the monthly allocation and auction runs, since the usual outage information will not be available for the 2008 time period, all flow limits will be derated to account for both planned and unplanned outages. The CAISO will determine the appropriate derates through a process to be defined in its BPM before running the first monthly CRR process.

This Draft Final Proposal contains additional description of the CAISO’s plans, but does not change the Straw Proposal.

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

Converted Rights (CVRs) are transmission rights that have been placed under CAISO Operational Control by New Participating Transmission Owners. Day-Ahead Schedules using CVRs receive a “perfect hedge” reimbursement of congestion charges. A CVR holder has proposed an option to relinquish some CVRs if it can later “reclaim” the CVR as CRRs in the CRR Allocation’s Priority Nomination Tier (PNT). If this were granted to CVR holders, some LSEs would also want to reclaim their previous CRRs that they had not renewed. Since the purpose of the PNT is to provide year-to-year continuity in Seasonal CRR holdings, as discussed in the last stakeholder meeting, this proposal would be discriminatory if limited to only CVR holders and if extended to all, would undermine the intent of the PNT.

This Draft Final Proposal is the same as the Straw Proposal offered on June 7.

## **A. Transfer of CRRs Between Load Serving Entities to Reflect Load Migration**

### **1. Background**

Section 36.8.5.1.1 of the filed MRTU tariff, as revised November 20, 2006, requires a Load Serving Entity (LSE) that loses load through direct access load migration during the annual CRR allocation cycle to transfer a portion of its allocated Seasonal CRRs for the remainder of the annual cycle, or the financial equivalent, to the LSE that gained the load.<sup>2</sup> Section 36.8.5.1.1 recognizes that processes must be in place for load migration, and states this would be a requirement on the LSEs. The FERC September 21 MRTU Order directs the CAISO to articulate the mechanics for CRR transfers due to load migration.

The January 29, 2007 Long Term CRR filing has established that the CAISO will develop the procedures, in consultation with stakeholders, to perform the responsibility of tracking the transfer of Long Term CRRs due to load migration. This is part of the CAISO's compliance with Guideline 6 of FERC's Final Rule on Long-Term Firm Transmission Rights (Order 681), which requires that a Long Term CRR held by an LSE to support a service obligation should be re-assignable to another entity that acquires that service obligation. This reflects the basic principle that CRRs are assigned to load serving entities as custodians for the load they serve.

The CAISO's Long Term CRR filing proposed to apply the same requirement to allocated Long Term CRRs, with two modifications:

- First, the option to transfer the financial equivalent of Long Term CRRs rather than the CRRs themselves would be limited to the calendar year in which the load transfers, or to the next calendar year if the annual CRR allocation process for that year's Seasonal CRRs has already been completed. For the years of a Long Term CRR beyond the period just described, the LSE who loses load would be required to transfer the actual CRRs and could not transfer a financial equivalent. This rule is consistent with a limitation that Long Term CRRs cannot be transferred as bilateral sales via the Secondary Registration System (SRS) for years beyond the calendar year covered by the most recent annual CRR allocation and auction process. This limitation has been intended to ensure that Long Term CRRs will be available to be transferred in association with load migration, consistent with Guideline 6 of FERC's Order 681.<sup>3</sup>
- The second modification is that the CAISO committed to take on the role of executing the required transfers for load migration in the CAISO systems, according to clearly specified procedures, and to develop the details and mechanics of such a proposal with stakeholders.

The CAISO's MRTU proposals have not included transfers of allocated Monthly CRRs.

### **2. Process**

In light of its commitment to track load migration in the context of CRR holdings, the CAISO has developed the details and mechanics of the procedures proposed herein to adequately track the migration of load, through a stakeholder process. The CAISO intends to further develop these

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<sup>2</sup> The CAISO's 1/29/2007 Long-Term CRR filing has renumbered section 36.8.5.1.1 to be section 36.8.5.2.

<sup>3</sup> Transfers of CRRs' benefits between LSEs can alternatively occur through bilateral transactions outside of SRS, but the "holder of record" and its obligations would not change, and the CAISO would be unable to track these transactions.

details through updates to the Business Practice Manual for CRRs, since such provisions will reside in that manual.

The CAISO's development of its initial Issue Paper was developed through consultation with stakeholder representatives that have previously expressed interest in the topic of CRR transfers due to load migration. The involved parties were the California Public Utilities Commission (Energy Division), Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric, Alliance for Retail Markets, and Energy Users Forum. The intent of this consultation was to ensure that issues and alternatives have been sufficiently developed for presentation to the broader group of stakeholders, but not to resolve issues since this has been the purpose of the broader stakeholder process that followed.

The CAISO's initial discussions with stakeholders led to detailed understanding of the issues of importance to these stakeholders and an initial identification of alternatives, as well as to identifying the following objectives and principles:

1. CRRs belong to the Load (subject to developing the details).
2. A share of the actual CRR value should be transferred.
3. The process should be fair to all LSEs.
4. LSEs receiving CRRs need to qualify as Candidate CRR Holders or already be CRR Holders. This may require some transfers to be financial equivalents instead of actual CRRs.
5. LSE can desire retention of Long Term CRRs that are still needed by their resource portfolios.
6. There should be fair access to recover lost CRRs.
7. The CAISO should be responsible for tracking CRR migration.
8. A percentage of load migration should have an equal percentage of CRR transfer.
9. The process for transfer cannot advantage or disadvantage either the losing or gaining LSE. Financial and actual transfers must be equivalent, and neither LSE should be forced into an undesirable option.
10. The process should be supportive of new investment in generation (at least, not create disincentives).
11. The solution must be practical and workable.

It is recognized that not all of these objectives and principles have unanimous support among stakeholders. Some of these objectives and criteria may be difficult to balance, but the criteria for successful solutions follow from meeting the objectives and principles.

The CAISO's Issues Paper was published on May 18, 2007, and discussed in a stakeholder conference call on May 29. Input from the conference call, and from written comments submitted by stakeholders on June 4, were key inputs to the CAISO's straw proposal that was published on June 7 and discussed in a stakeholder meeting on June 14. Finally, the CAISO has considered written stakeholder comments that were filed on June 20 in the preparation of this final proposal.

### **3. CAISO-Proposed Requirements for CRR Transfers Due To Load Migration**

As noted above, Section 36.8.5.1.1 of the filed MRTU tariff requires an LSE that loses load through direct access load migration during the annual CRR Allocation cycle to transfer a proportionate share of its allocated seasonal CRRs for the remainder of the annual cycle, or the financial equivalent, to the LSE that gained the load, and the CAISO proposes to apply the same requirement to allocated Long Term CRRs, with certain modifications.

As the CAISO worked through the details of implementing this requirement, several implementation issues have been identified. Some of these issues involve the alternative for transferring a financial equivalent of the CRRs:

- How is a financial equivalent implemented: a cash payment, or redirection of the future revenue stream?
- Is there a default mechanism between the transfer of actual CRRs and the financial equivalent, and how would LSEs determine that the non-default mechanism should be used?
- Would there be any way to extend the financial equivalent to Long Term CRRs?
- Is a financial equivalent that is transferred by a transfer of future settlements actually equivalent to transferring the actual CRRs, unless the receiving LSE also gets the eligibility for renewing the CRR?

The CAISO has concluded that it would be difficult to determine a value for a cash payment that would be acceptable to both the load-losing LSE and the load-gaining LSE, and therefore the financial equivalent should take the form of redirecting the CRR settlement stream from the load-losing LSE to the load-gaining LSE, which is the same financial result as transferring actual CRRs. Because the future CRR settlement stream is the basis of the credit requirement for CRRs, the credit requirement should be transferred along with the settlement stream. However, this financial equivalent would still not be equivalent to an actual transfer of CRRs, since the right to renew a CRR is part of its value, even though this value is difficult to quantify. If both the CRR settlement stream and the right to renew the CRR are transferred, there is no difference in outcome between the transfer of actual CRRs and the financial equivalent.

Issues were also recognized in the transfer of actual CRRs: one is how the required transfer can occur if the receiving LSE is ineligible to hold CRRs due to not completing a Candidate CRR Holder agreement, and another is that the receiving LSE would need to meet a new credit requirement before a transfer of CRRs can occur.

The CAISO identified and invited discussion of another alternative during the May 29 stakeholder conference call, and discussed it further in the June 7 straw proposal and June 14 stakeholder meeting. Instead of a “transfer” that requires an actual change of CRR Holder, the CAISO will issue new CRRs to the load-gaining LSE for what it receives from the load-gaining LSE’s portfolio of allocated CRRs, and new CRRs in the opposite direction to the load-losing LSE, which offset the appropriate portion of its portfolio of allocated CRRs. Because the CRRs awarded to the load-losing and load-gaining LSEs offset each other, there is no impact on the simultaneous feasibility test that is normally required before new CRRs are issued.

This mechanism is proposed by the CAISO, as an effective resolution of the issues listed above. Because the creation of new CRRs produces the required future net revenue stream for both LSEs, there is no longer a need for the financial equivalent of a CRR transfer, there is no need to estimate the future value of CRRs, and no issues exist about which alternative mechanism is the default. There is no limitation on the CAISO’s ability to create Long Term CRRs whose term matches the ones originally held by the load-losing LSE, and the CAISO will be able to transfer both Seasonal CRRs and Long Term CRRs using the same mechanism. The CAISO can award the new CRRs to one of the affected LSEs even if the other is not yet qualified to receive its new CRRs.

Illustrations of the CAISO’s proposed mechanism are presented in later sections of this document.



#### (a) Alternative Requirements for CRR Transfers Due To Load Migration

During the CAISO's consultation with stakeholders who had previously commented on the topic of CRR transfers due to load migration, Pacific Gas and Electric (PG&E) proposed an alternative to the CAISO's proposed pro-rata process for reassignment of CRRs, in which Long Term CRRs would be comprised of two categories: (1) "eligible" Long Term CRRs that would be subject to pro-rata reassignment between LSEs, and (2) "ineligible" Long Term CRRs that would be shown by a verification process to still be required by the original LSE, and whose MW quantity would be replaced for transfer by annual CRRs.

A load losing LSEs would be able to retain those Long Term CRRs that it still believes it "needs", as "ineligible" CRRs, but would be required to make up the difference (MWs, not value) with transfer of additional Seasonal CRRs. Ineligible Long Term CRRs would be verified as being part of long-term resource plans (e.g., ownership of generation) with annual LSE officer-level declarations to the CAISO, which the CAISO would have the right to audit, and then would not be subject to reassignment. To the extent an LSE does not transfer "ineligible" Long Term CRRs, a commensurate increase in the amount of annual (seasonal) CRR would be provided. Seasonal CRRs would be re-assigned on a pro rata basis as currently directed in the FERC-conditionally accepted CAISO CRR Tariff, and in certain cases adjusted upwards as necessary to reflect the Long Term CRRs that are not transferred. Seasonal CRRs received by load-gaining LSEs through load migration reallocations would not be eligible for nomination in the Priority Nomination Tier (Tier 1). Load-losing and load-gaining LSEs would therefore be on equal footing in Tiers 2 and 3 to seek new CRRs to replace as necessary the previously re-assigned CRRs.

To the extent load migrates, Long Term CRR entitlements must be reassignable as directed by FERC's order on long-term firm transmission rights (Order 681). PG&E suggested that this should not require the automatic loss of the specific Long Term CRRs associated with verifiable and on-going supply arrangements that continue to be required by the existing Long Term CRR holder. PG&E has argued that the forced transfer of a fixed percentage of all Long Term CRRs including those linked to these retained supply resources would be both unnecessary from the perspective of the new LSE, because the new LSE would not have schedules from the existing LSE's resources, and potentially harmful to the existing LSE.

The CAISO's Issues Paper presents an example that illustrates PG&E's proposal.

PG&E's proposal would be a substantive change to the tariff provisions that the CAISO has already filed. The CAISO has stated concerns that PG&E's proposal contains no assurance that load-gaining LSEs would receive a proportionate amount of the value of the load-losing LSE's allocated CRR portfolio, and that PG&E's proposal would be susceptible to "cherry picking" by load-losing LSEs, who would declare their most valuable CRRs to be "ineligible" and their least valuable CRRs to be "eligible" for transfer to load-gaining LSEs. Representatives of Energy Service Providers and large customers have also expressed several concerns during the stakeholder process. The stakeholders have expressed concern that this process would not produce an equitable allocation of CRRs, and could be anti-competitive. PG&E acknowledged during the CAISO's initial consultation with stakeholders that its proposal could result in all of an LSE's original CRR holdings being designated as "ineligible."

Because of the concerns that the CAISO as well as Energy Service Providers and large customers have stated, the CAISO does not accept PG&E's proposal.

#### **4. General Principles And Design Concepts**

As described above, 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).

Following this 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.

This 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.

In order to fully reflect the value of the transferred CRRs, the CAISO anticipates that it will allow the load-gaining LSE to nominate the transferred CRRs in the Priority Nomination Tier (PNT, Tier 1) of the next annual CRR Allocation process. With the transfer executed as described in the example above, LSE-1 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. This change from the CAISO’s original CRR proposal reflects the CAISO’s subsequent work on validation of its CRR design during MRTU implementation. Originally, the CAISO had planned to insert CRRs in the PNT (and only in the PNT) that would be equivalent to the transferred CRRs, so that the capacity would be reserved for the load-losing or load-gaining LSE to receive in Tier 2 or 3. The CAISO has subsequently become concerned that if it were to insert these CRRs in Tier 1 and neither LSE subsequently requested them, other CRRs awarded in Tier 1 could be infeasible in Tiers 2 and 3. If the CAISO were to use an alternative approach of not allowing either the load-losing or load-gaining LSE to request the transferred CRR in the PNT, there would be a risk that other CRRs that are allocated in the PNT would make the transferred CRR infeasible after the PNT. Moreover, the load-gaining LSE would have to compete with other LSEs to obtain any transferred CRRs that remain feasible at the time of Tier 2 and might not be able to obtain the full amount of the transferred CRR, even with the explicit increase in its nomination limit to account for the gain in load. Fundamentally, the CRR belongs to the load that transferred between LSEs, and the surest way to ensure that the CRR remains available for serving the load is by allowing it to be requested by the LSE that now serves the load. If the load-gaining LSE were not allowed to nominate the transferred CRRs in the PNT, the loss in value to the load would need to be offset in some other way, such as an increase in the load-gaining LSE’s eligibility in the PNT. The load-losing LSE is not without options if it wants to regain the CRR, since it can arrange a bilateral sale of the new CRRs with the load-gaining LSE. However, at this time, the CAISO continues to examine options for achieving a balance between all parties’ interests, within the limits of feasibility of implementation in MRTU Release 1.

## 5. Tracking of Load Migration by CAISO

The tracking of load migration is highly dependent on the CAISO receiving adequate data regarding the movement of customers between LSEs. The CAISO has existing authority in its tariff to receive detailed data about the customers who are served by LSEs. For example, under section 4.5.1, the CAISO may require each Scheduling Coordinator (SC) to confirm that each of the End-Use Customers it represents is eligible for Direct Access, and section 4.5.1.1.3 provides authority for the CAISO to verify that each meter or Meter Point is served by only one SC, which is a task that can require detailed information about each End-Use Customer that is served by each SC. The CAISO could conceivably track load migration between LSEs by requiring each SC to provide periodic updates to the CAISO about each End-Use Customer that it serves, and explanations of differences between its periodic data submissions. However, for the purpose of tracking load migration and reallocating CRRs, the CAISO believes this process would amount to an unnecessary amount of work for both the CAISO and SCs.

A more workable method for the CAISO to obtain the necessary data will be for each Utility Distribution Company (UDC) or other entity that provides distribution service to the customer to provide information on migration of customers between LSEs directly to the CAISO, as part of the Direct Access enrollment process.<sup>4</sup> 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.

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.

The required data are available through the Direct Access Service Request (DASR) process that already exists when end-use customers in the UDCs' areas switch LSEs. The full DASR process is an interactive exchange between LSEs and the UDCs, in which Energy Service Providers request the switch of customers to their service, or return customers to default bundled service. Once the switch of a customer between LSEs is confirmed, the customer's billing history is exchanged. The CAISO does not need to participate in the interactive DASR information exchanges, but needs only the end result that a transfer has occurred. The CAISO is working with each of the UDCs in whose areas Direct Access transfers occur, to establish the logistical details of the information exchange.<sup>5</sup>

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<sup>4</sup> 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.

<sup>5</sup> Pending the outcome of the CAISO's working with the UDCs, the CAISO anticipates that (1) it will use the UDC's account number as the definition of what constitutes a "customer", (2) it will determine the customer class for each customer using the same methodology that the UDCs use in preparing monthly reports to the CPUC on Direct Access activity, and (3) it will obtain DASR and billing history information in the same format that LSEs use for tracking customer switches between LSEs, i.e., retrieval of data files from servers that are operated by the UDCs, in the Electronic Data Interchange (EDI) data format.

The CAISO will receive this information on an ongoing daily basis, but will perform the 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.<sup>6</sup>

CAISO will calculate, for each LSE 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.

For end-use customers over a certain size (e.g., industrial customers of 1 MW or more), 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 (determined by CAISO) for the Default LAP in which the UDC is located.<sup>7</sup> 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

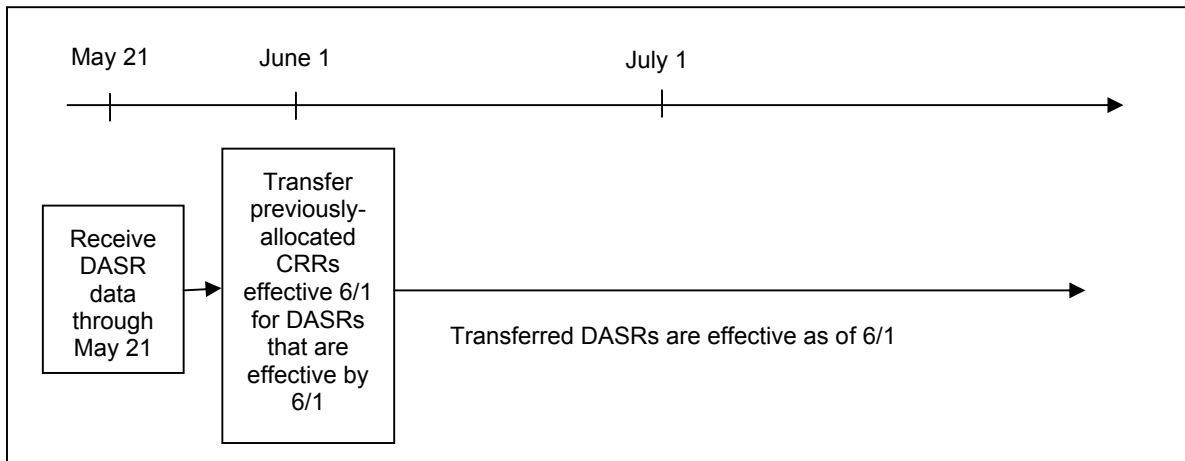
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<sup>6</sup> Monthly reallocations of CRRs are necessary during the first year of operation under MRTU due to a limitation in storage of data on LSEs' CRR holdings. The current capability of the CRR system is to store values that are rounded to the nearest 0.1 MW. If the CAISO were to attempt CRR reallocations more frequently than monthly, the loss in data tracking could be unacceptable. Nevertheless, daily receipt of load migration data is necessary so that the CAISO can move to more frequent reallocations at a later date, as Energy Service Providers have requested. Daily receipt of load migration data is also necessary to resolve the issue that was posed as a question during the June 14 stakeholder meeting. Suppose LSE-1 serves 10 MW of load at the start of a month, LSE-2 serves 20 MW of load, and LSE-3 serves no load. During a month, all of LSE-2's original load migrates to LSE-3, then all of LSE-1's original load migrates to LSE-2, and then 5 MW that first migrated from LSE-1 to LSE-2 migrates again to LSE-3 before the end of the month. LSE-1's original CRR allocations are reassigned to LSE-2, but the process that is outlined later in this proposal breaks down in tracking the combined LSE-2 to LSE-3 migration, since a total of 25 MW has moved from LSE-2 to LSE-3 but LSE-2 originally served only 20 MW of load. This situation would be rare, but must be accommodated nevertheless. With daily accounting of CRR reallocations, the solution would be straightforward. While monthly reallocations are necessary to avoid loss of data through rounding, the CAISO will use error-trapping to detect such situations. Because the CAISO will have daily load migration data available, the CAISO will be able to manually account for the series of load migration that has occurred, and determine the allocation that would have occurred if daily CRR reallocations had been in effect.

<sup>7</sup> More than one hour of load must be averaged for this purpose, since Seasonal CRR Eligible Quantities for each LSE are determined at the 99.5<sup>th</sup> percentile of the LSE's load duration curve instead of at its peak. Considering a large UDC area as a whole, suppose that its peak load for the summer on-peak period is 22,000 MW, and that the sum of LSEs' Seasonal CRR Eligible Quantities is 20,000 (based on the 99.5<sup>th</sup> percentile methodology). The peak load in this illustrative case is 10% more than the total Seasonal CRR Eligible Quantity. If the MW per customer value that is used to calculate CRR transfers were based on the UDC's peak load instead of a value that corresponds to the 99.5<sup>th</sup> percentile, the amount of CRRs being transferred would be 10% more than the proportional amount of the LSEs' Seasonal CRR Eligible Quantities. An additional benefit to using multiple hours to compute the MW of load transferred for each customer is that this process helps to avoid anomalous data that could affect single hours.

customer-specific hourly loads for transferring CRRs due to load migration if it is possible to do so.

This process is illustrated in the following diagram, using CRR transfers effective on June 1 as an example:



## 6. Calculation of Required CRR Transfers

The net load gained by LSE-2 from LSE-1 will be 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.

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:

### Step 1:

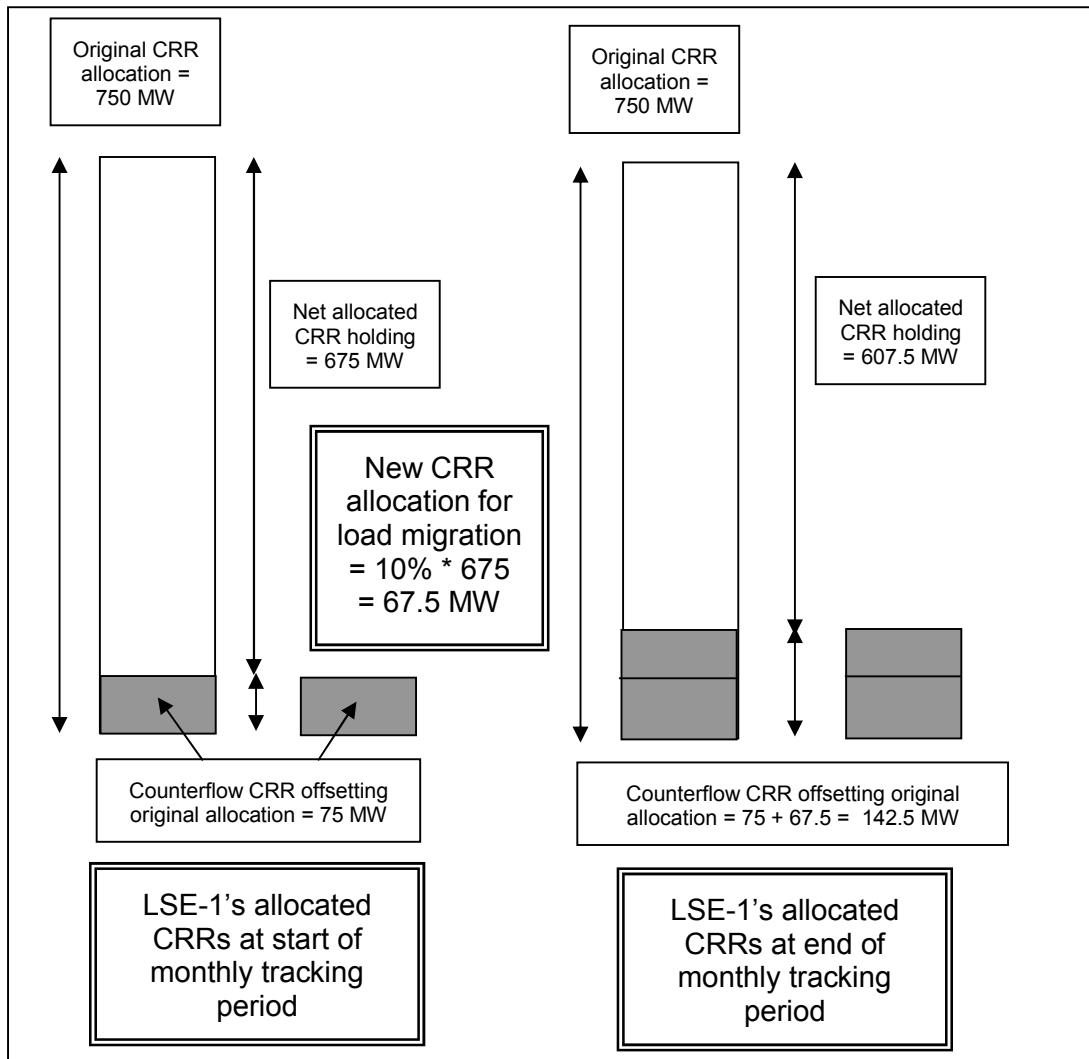
Base of allocated CRRs held by load-losing LSE-1 =

- (CRRs originally allocated to LSE-1 through CAISO allocation processes)
- + (New CRRs allocated to LSE-1 through previous months' load migration transfers)
- (Counterflow CRRs assigned to LSE-1 through previous months' load migration transfers)

Example: LSE-1's load metric was 1000 MW in the original annual CRR Allocation process, for which it was allocated 750 MW of CRRs from PNode A to LAP-1. LSE-1 previously lost 10% of its load, and thus was awarded 75 MW of counterflow CRRs from LAP-1 to PNode A. It has not gained load from other LSEs.

Its Monthly CRR Eligible Quantity at the start of this monthly tracking period is 900 MW, and its net holding of allocated CRRs is  $750 - 75 = 675$  MW. It is now losing another 10% of its load, and this time its transfer to load-gaining LSEs will be  $10\% * 675 \text{ MW} = 67.5 \text{ MW}$  (not 75 MW of its original allocation and 7.5 MW of the counterflow CRR).

Its Monthly CRR Eligible Quantity at the end of this monthly tracking period is  $900 - 90 = 810$  MW. Its net holding of allocated CRRs at the end of the monthly tracking period is  $675 - 67.5 = 607.5$  MW. This 607.5 MW is also  $75\% * 810$  MW, where 75% is the amount of its load metric for which it received CRRs in the annual allocation process.



**Step 2:**

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 Monthly CRR Eligible Quantity of load in previous month's CRR allocation process)

**Example:** LSE-1 is losing customers in multiple customer classes to other LSEs. The following table calculates the MW of load that LSE-1 is transferring to other LSEs during a monthly tracking period. The average kW per customer would be supplied by the

UDCs, and the CAISO would compute the load for industrial customers from hourly load data that is obtained from the DASR process. In this case, the average load per industrial customer with load over 1 MW amounts to 12.74 MW/customer. For consistency with the example in Step 1, LSE-1 has 900 MW of Monthly CRR Eligible Quantity at the start of this monthly tracking period, and is losing 10% of its load.

	Residential	Commercial < 20 kW	Commercial 20-500 kW	Agricultural	Industrial 500-999 kW	Industrial 1000+ kW
Number of Customers Transferring	100	40	50	20	25	5
Average kW / Customer	1	5	100	50	800	
Total MW of Load Transferred	0.1	0.2	5	1	20	63.7

The total load that is transferred is the sum across the final row, i.e., 90 MW.

**Step 3:**

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)

This calculation has been illustrated in the example for Step 1.

**Step 4:**

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, by season/TOU and expiration date. An important point is that the resulting number for computing the subsequent CRR transfer is the total allocated CRR value for each source to sink combination, including netting of counterflow CRRs, and that CRR transfers are not computed for each of the individual allocated CRRs that are combined to get the total. 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.<sup>8</sup> 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.

## 7. Credit Considerations

Credit issues involving CRR transfers due to load migration that have been addressed in stakeholder comments have included (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 requirements. To cover the possibility that a load-gaining LSE would be slow to respond to the change in its credit requirement, the CAISO will inform the load-gaining LSE of its change in credit requirement, and the CAISO will hold the newly allocated CRRs until the load-gaining LSE's credit requirement 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 requirement in accordance with tariff section 12, the CAISO may place the allocated CRRs into the annual or monthly CRR auctions.<sup>9</sup>

The CAISO's straw proposal raised additional issues for discussion at the June 14 stakeholder meeting. The 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.<sup>10</sup> A benefit of the present proposal is that the load-gaining LSE will still receive the CRRs it is supposed to receive, even if the load-losing LSE is unable to fulfill the payment responsibility of the counterflow CRRs. The CAISO described three alternatives for dealing with the situation where the load-losing LSE does not meet its new credit requirement:

1. The CAISO could prohibit the sale of allocated CRRs, so that the load-losing LSE always holds the CRRs that are subject to transfer.
2. The LSE needs to post a credit requirement for the sold allocated CRRs for the whole remaining term of the CRRs, just as if the LSE is still holding these CRRs. This would ensure that the LSE is able to cover the credit requirement that it would be assigned if it loses load. The specific credit requirement would remain to be determined, but it is

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<sup>8</sup> New customers who were not previously served by any LSE, and closing of customer accounts that are not transfers to other LSEs, are tracked through updates to the number of customers who are served, and are not tracked as load migration between LSEs. Instances where a customer moves within a UDC service area are the closing of one account and the opening of another account, and are not tracked as load migration between LSEs.

<sup>9</sup> In June 20 comments on the CAISO's straw proposal, the California Dept. of Water Resources (CDWR) suggests making the CRRs that are held by a load-gaining LSE that does not meet its credit obligation available to LSEs in the CRR allocation process. The CAISO has not had sufficient time to evaluate this alternative yet, and invites other stakeholders to comment on CDWR's suggestion.

<sup>10</sup> Although transfers of allocated CRRs from a load-losing LSE to a load-gaining LSE would generally reduce the load-losing LSE's credit obligation that is associated directly with its allocated CRRs, the load-losing LSE could have sold its highest-valued CRRs before the load transfer occurs. The load-losing LSE may also hold CRRs that it acquired through bilateral trades via SRS, or through the CRR auction. Because these additional CRRs could have altered the credit obligations of its allocated CRRs, the CRR transfer due to load migration could increase the load-losing LSE's credit obligation.



possible that this credit requirement would be similar to the value of the counterflow CRRs that would be assigned when load transfers occur, even if the LSE has not experienced any load loss, and indeed may be serving a growing amount of load.

3. The CAISO would rely on strong provisions that are already contained in the CAISO tariff, to ensure that market participants meet their credit requirements. The main circumstances in which non-performance of credit requirements that would affect CRR holdings are situations such as bankruptcy, which are generally rare. Just as the CAISO will hold CRRs that are allocated to load-gaining LSEs who are slow to meet their credit requirements, the CAISO would hold the counterflow CRRs that are allocated to load-losing LSEs until their credit requirements are met, and place the CRRs into auctions (or use other mechanisms) if the credit non-performance is persistent.

Alternative 1 would be contrary to the conclusions of previous CRR stakeholder processes and to the CAISO's previous tariff filings, and appears to have no support by stakeholders. After considering the stakeholder comments that were offered at the June 14 meeting regarding the other alternatives, the CAISO has concluded that the amount of credit requirement that alternative 2 would require far exceeds the risk to the market for the rare instances where an LSE would fail to meet its credit requirement. Therefore, the CAISO plans to implement the third alternative. By having the CAISO hold the counterflow CRRs that are allocated to a load-losing LSE until its credit requirement is met, any financial cost will become part of the CRR balancing account.

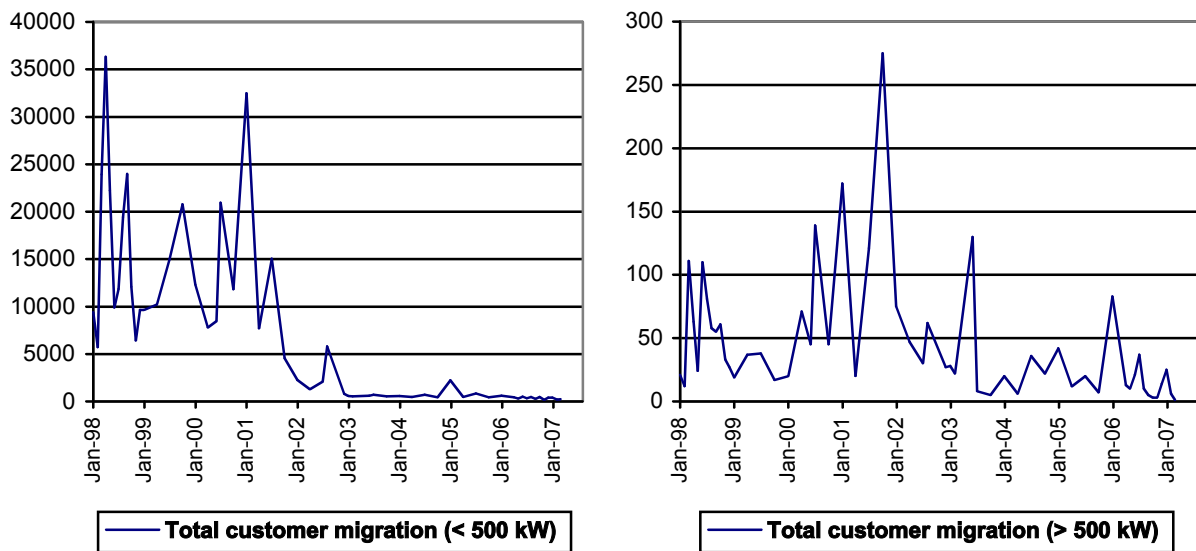
The second point that the CAISO introduced at the June 14 stakeholder meeting is the idea of "cancelling" for credit purposes the MW associated with equal and opposite CRR quantities, by netting the CRR quantities for each combination of source, sink, season/TOU, and duration. If a party holds 100 MW 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 developing the business specifications for implementing this feature in the credit calculation systems, and does not yet have a projected date for completion. As is addressed elsewhere in this proposal, the current volume of Direct Access load migration is limited. Until the netting of offsetting MW quantities can be implemented in the CAISO's CRR software, the CAISO anticipates that it will compute the required CRR transfers, potentially instruct LSEs to enter the required transfers using SRS, and manually execute the CRR transfers if the required transfers are not or cannot be performed through instructions to load-gaining and load-losing LSEs.

## **8. CRR Transfers Due to Cumulative Load Migration Prior to MRTU**

MRTU tariff Section 36.8.5.1 provides that an LSE who loses or gains net Load through Load migration in a given year will have its Seasonal CRR Eligible Quantities in the next Annual CRR Allocation reduced or increased, respectively, in proportion to the net Load lost or gained through Load migration. The CAISO anticipates that the Seasonal CRR Load Metric to be used for the initial CRR allocation will account for the load migration that has occurred by the time when the CRR allocation process begins, and will be performing data validation as part of the CRR allocation process. Because the initial CRR allocation is being done several months before the CRRs' effective date, the CAISO will need to account for load migration that occurs during these months. The CAISO anticipates that it will account for this cumulative load migration as a single adjustment to the initial CRR allocation. Just as CRR transfers due to load migration will be computed monthly after the MRTU market has begun operation, using cumulative load migration data during the previous month, the initial adjustment between the initial CRR allocation and the beginning of the MRTU market's operation will be computed for

the combined period of several months, using cumulative load migration data for the combined period.

The manual processing that will initially be required, as longer term software solutions are implemented, is feasible due to the relatively low current volume of Direct Access customer migration, due to a legislated freeze on Direct Access enrollments during recovery from California's energy crisis of 2000-2001. A history of DASR activity is as follows, combining all types of LSEs (UDC to ESP, ESP to ESP, and ESP to UDC, using summary reports of DASR activity that are available on the CPUC's web site. A limitation of this data is that the CPUC summary reports include all customers with peak demand over 500 kW in the "Industrial" customer class, while the CAISO is proposing to initially track load migration for industrial customers using individual customers' hourly loads only for customers over 1000 kW. Thus, the data used here has overstated the number of customers for whom the CAISO will use hourly load data.



### 9. Practices of Other ISOs

In developing its proposal as outlined above, the CAISO has contacted other ISOs through informal discussions to determine their processes that would be analogous to transfers of CRRs due to load migration. The results are summarized in the following table:

<b>ISO</b>	<b>Load Migration Methodology</b>
PJM Interconnection	PJM now uses Auction Revenue Rights (ARRs). Prior to ARRs, FTRs were allocated to LSEs. If an LSE lost load they would only have to reduce their FTR holding if the FTRs they held > Load. Load gaining LSE could go to PJM and request FTRs from one of their capacity resources, PJM would perform a separate SFT to see if the request was feasible.
New York ISO	In NY, the LSEs can only get Transmission Congestion Contracts (TCCs) through the auction process. Load migration was never an issue.
ISO-NE	Started with an FTR system with ARRs
Midwest ISO	Handle load migration with Pseudo ARRs

PJM, ISO-NE, and MISO use variations of Auction Revenue Rights, which are not comparable to the CRRs that the CAISO is using in MRTU. New York ISO uses an auction process for market participants to obtain Transmission Congestion Contracts, and allocates the auction proceeds among market participants through a reduction in their Transmission Service Charge. Thus, no other ISO currently has a commodity that is similar to the CRR that the CAISO has developed for MRTU, and the CAISO cannot copy features of their market designs to resolve the issues that are explored herein. During the time when PJM had FTRs, it created new FTRs instead of transferring the previously-awarded FTRs to reflect load migration.

## **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 each LSE submits to the CEC a set of twelve monthly non-coincident peak load forecasts. The CEC groups these forecasts by each of the three major IOU service territories, applies a coincidence adjustment to the forecasts, sums them for comparison against its own forecast for each IOU territory, and if the difference is beyond a specified tolerance bound the CEC applies an adjustment to the LSE peak forecasts to achieve consistency. The CEC has agreed to provide the non-coincident peak forecasts, adjusted if necessary for consistency with the CEC's IOU service territory forecasts, to the CAISO on a year-ahead basis.

For CPUC-jurisdictional LSEs (IOUs, retail Electric Service Providers or ESPs, and Community Choice Aggregators or CCAs) these year-ahead coincident peak forecast values are used 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). In addition to these year-ahead values, the CPUC-jurisdictional LSEs provide revised non-coincident peak load forecasts to the CEC on a monthly basis 60 days prior to the start of the relevant month. The only difference between the year-ahead forecasts and the 60-days ahead forecasts is an accounting for direct access load migration that occurred since

the year-ahead forecast was submitted. The CEC will also provide these 60-days ahead non-coincident peak forecasts to the CAISO.

For non-CPUC jurisdictional LSEs the CEC currently receives only the year-ahead monthly non-coincident peak load forecast values to support its annual supply adequacy report. The CEC does not receive updated monthly forecasts from these entities.

The CAISO proposes to use the 60-days ahead forecasts from the CEC for CPUC-jurisdictional LSEs, and the year-ahead forecasts from the CEC for the non-CPUC jurisdictional LSEs. The CAISO believes this is appropriate because all the monthly LSE forecast data submitted to the CAISO for CRR purposes should be consistent with the year-ahead CEC forecasts, except for the effect of direct access load migration. Since direct access load migration is the only source of change between the year-ahead and the 60-days ahead CEC forecasts for the jurisdictional LSEs, and the non-jurisdictional LSEs do not have direct access in their territories, the forecast data submitted to the CAISO by the two groups of LSEs will be treated in a consistent manner and subjected to the appropriate comparison.

The CAISO will utilize the CEC-provided non-coincident peak load forecasts in the following manner. Suppose the peak-hour value of an LSE's forecast hourly load data submitted to the CAISO for a particular month 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 multiply all the hourly values of the data submitted by the LSE by the factor  $Y/X$ , and use the resulting adjusted values for purposes of calculating the LSE's eligibility for allocation of Monthly CRRs.

### **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 guarantee the "full funding" of all CRRs and will aim to do so without relying 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 a necessary procedure 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 (IFM) for that hour is consistent with the network model that was used in conjunction with the SFT to release the CRRs.<sup>11</sup> 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 some transmission facilities are actually out of service or derated. Since transmission outages can result in revenue inadequacy if they are not

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<sup>11</sup> The Marginal Congestion Component of the LMPs calculated in the Integrated Forward Market will be used in CRR revenue calculation.

considered in the CRR SFT process, it is important to consider them to the extent possible.<sup>12</sup> The challenge in determining how best to consider such outages in the network model arises from the fact that the SFT for a given CRR term assumes a single snapshot of network conditions (i.e., the network topology and the ratings and service status of facilities), whereas in reality network conditions can change from hour to hour 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 this draft final proposal, all facilities will be assumed to be in service at normal ratings 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 increase the risk of revenue inadequacy if not accounted for in the network model for the CRR allocation and auction processes. The CAISO’s proposed approach for defining significant facilities is described in the next section.

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 considering the fraction of the CRR term that the facility will be out of service. For example, the CAISO would multiply the normal flow limit by the factor  $[1 - (\text{total days out of service})/(\text{total days in the season})]$ . 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.

There is no straightforward reliable rule for deciding whether to derate a thermal or flow limit versus removing a facility from the network model completely. Underlying the decision is the desire to fulfill a fundamental objective of CRR release, namely, to release as many CRRs to participants as possible without increasing the risk of revenue inadequacy. Depending on the network topology associated with a specific planned outage, this objective could better be served by either derating the facility or removing it from the model. The CAISO will exercise sound engineering judgment in dealing with each such instance, and will fully disclose how each such outage was modeled as part of the network model information provided to eligible parties.<sup>13</sup>

Finally, the CAISO notes that it is not aware of any planned outages that would need to be modeled in the CRR Year One annual allocation and auction processes, and therefore does not expect to apply this aspect of the proposal for the 2008 CRR release.

## **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,

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<sup>12</sup> Note: For the Long Term CRR allocation process, all lines will be considered in service at full normal ratings.

<sup>13</sup> The CAISO notes that some other ISOs have standard rules which require removing a facility from the network model if the duration of the planned outages exceeds a specified number of days. The CAISO is still considering whether such a rule would be appropriate here, and this question will be examined further in the context of the study the CAISO will conduct later this summer.

and which therefore are required to be submitted by the PTOs as outage requests to the CAISO at least 30 days prior to the month in which the outage is planned to occur (the “30-day rule”); and

2. Outages that either do not involve significant facilities, or do involve significant facilities but for reasons such as preserving system reliability, were not submitted 30 days prior to the month in which they occur and are therefore classified as forced outages. For facilities not classified as significant, planned outage requests may be submitted by the PTO to the CAISO with at least 72 hours advance notice. In addition there will normally be some unplanned outages and derates of these non-significant facilities which are not predictable.

For planned outages of significant facilities, in all but the first monthly CRR process covering February 2008, the CAISO expects to have specific information under the 30-day rules 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 in the CRR network model.

Under this proposal, the methodology for considering outages in the monthly process for the initial February 2008 monthly allocation and auction would be handled differently than that 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 requires the CAISO to prepare the CRR network model almost three months before planned 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 monthly allocation and auction for February 2008, a different outage criterion is proposed than may be used for subsequent monthly CRR processes when the timing of the CRR production process will be able to utilize information provided under the 30-day rule.

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. The precise factors used to derate these flow limits will be determined by the CAISO through empirical studies conducted later this summer. At the present time the CAISO expects that the approach taken will be very similar to the approach used in the CRR Dry Run, which is explained in the CRR Dry Run Report.<sup>14</sup>

### **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 and will be treated differently in the monthly CRR network model.

#### **1. Planned outages of significant facilities known 30 days in advance of the monthly CRR process**

There are two matters addressed by this section of the proposal: (a) a description of the types of facilities that will be classified as “significant” and the application of the 30-day rule to those facilities; and (b) the methodology for representing outages reported under the 30-day rule in the CRR network model.

**(a) Significant facilities.** The description provided in this proposal will be used later this year to formulate a complete list of the significant facilities to which the 30-day rule applies, and this list

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<sup>14</sup> The CRR Dry Run Report is available at <http://www.caiso.com/1bb4/1bb4f3562b4c0.pdf>

will be contained in either a Business Practice Manual (BPM) or an Operating Procedure. The CAISO intends that once such a list of facilities is created it will be stable and will not change except as new facilities may be added to the grid or determined by experience to have a significant impact on CRR revenue adequacy.

The CAISO proposes the following facilities to be classified as significant for purposes of the 30-day rule:

- 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 three years and for which the CAISO determined a special flow limit was needed for real-time operation.

Under the 30-day rule, requests for planned outages of such facilities must be submitted to the CAISO at least 30 days prior to the start of the month for which the outage is planned to occur, regardless of the planned duration of the outage.

The CAISO emphasizes that this rule is not intended to prevent PTOs from conducting needed maintenance on significant facilities in circumstances where 30-day advance requests were not submitted. When such a need arises, the PTO may submit an outage request to the CAISO and the CAISO Outage Coordination Department will grant the request if conditions permit, but the outage will be classified as forced rather than planned.

**(b) Reflecting planned outages in the monthly CRR network model.** The CAISO proposes the same approach to this problem as discussed above for modeling outages in the CRR network model for the annual CRR process. That is, the CAISO will decide whether to remove the facility completely from the model, or leave it in the model and reduce its associated flow limit. If the facility is retained in the model, the CAISO will derate its associated flow limit to reflect the fraction of the CRR term (month and time-of-use) for which the facility will be in service. Additional details regarding this approach will be developed on the basis of the study the CAISO will perform later this summer and will be reflected in the CRR Business Practice Manual.

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

Planned outages that are requested by the PTO with at least 72 hours advance notice but less than 30 days, and unplanned outages and derates which are not predictable, are obviously not known to the CAISO in time to be represented in the monthly CRR network model. Since such outages may still affect revenue adequacy because they were not explicitly considered in the CRR release process, they need to be considered through an approach that is statistical in nature rather than facility-specific.

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 in the CRR network model. Such a system-wide derate will have the effect of reducing the network capacity available for CRRs slightly, resulting in excess congestion revenues during hours when such outages are minimal to balance against revenue shortfalls that occur when such outages are more severe. The CAISO will conduct a study to determine the appropriate derate amount in time to apply it to the CRR network model for the October 2007 running of the first monthly CRR process. As noted earlier, the CAISO's choice of the derate percentage will have the objective of releasing as many CRRs to the participants as possible without increasing the risk of revenue inadequacy.

#### **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 draft final 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 and again at the June 14 stakeholder meeting, 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 adverse impact on the designed intent 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.