

FINAL CAISO Proposal

Long-Term Congestion Revenue Rights

January 18, 2007

CONTENTS

- Introduction.....2
- 1 Objectives and Guiding Principles3
- 2 Overview of Proposed LT-CRR Release Process4
 - 2.1 The Proposed LT-CRR Product: Structure and Key Characteristics4
 - 2.2 Proposed LT-CRR Release Process: Key Characteristics6
- 3 Review of the Filed Annual Process for Allocating Seasonal CRRs6
 - 3.1 Year 1 Annual Allocation of One-Year CRRs to Load Serving Entities (LSEs).....7
 - 3.2 Year 1 and Subsequent Annual Auction of One-Year CRRs8
 - 3.3 Year 2 and Subsequent Annual Allocation of One-Year CRRs to LSEs9
 - 3.4 Year 3 and Subsequent Annual Allocation of One-Year CRRs to LSEs10
- 4 The Proposed LT-CRR Release Process for CRR Year 110
- 5 The Proposed LT-CRR Release Process After CRR Year 112
- 6 Proposal for Meeting the Full Funding Requirement.....15
- 7 Figure: Proposed Process for Annual and Long Term CRR Allocation16
- 8 Additional LT-CRR Issues17
 - 8.1 Exclusion of Trading Hubs as Eligible Sources for LT-CRR17
 - 8.2 Load Migration During the LT-CRR Term.....18
 - 8.3 Sale of Allocated LT-CRRs by LSEs19
 - 8.4 LT-CRR Allocation to Out-of-Control Area Load.....19
 - 8.5 Impacts of PTO Withdrawal from CAISO.....20
 - 8.5.1 Re-configuration of LT-CRRs20
 - 8.5.2 Simultaneous Feasibility Tests.....21
- 9 Transmission Planning21
 - 9.1 Ensuring Feasibility for the Full LT-CRR Term21
 - 9.2 Methodology for Determining Amount of CRRs for Merchant Transmission.....22
 - 9.3 Facilitating Transmission Expansion23

9.3.1 Informational Studies on Future Congestion and Transmission Upgrades23
9.3.2 Identifying Upgrades Needed for Requested LT-CRRs24
10 Summary of Stakeholder Activities.....26

Introduction

This paper presents a complete proposal by the California Independent System Operator (“CAISO”) for Long-Term Congestion Revenue Rights (LT-CRRs), which will be presented to the Board of Governors for approval on January 24 and file with FERC on January 29 in compliance with the Final Rule on Long-Term Firm Transmission Rights (Order No. 681).

The final proposal described here was reviewed with stakeholders initially during a public conference call on December 19. Additional and more in-depth review and discussion of this full proposal continued at an all-day stakeholder meeting on January 9. Stakeholder comments and questions that were submitted by January 5 were discussed at the January 9 meeting. An additional conference call was conducted to respond to any remaining questions on the following Tuesday, January 16th.

The foundation for this proposal was established through stakeholder meetings and conference calls between August and December 2006, including a Market Issues Forum on October 18th that featured a panel discussion highlighting various stakeholder perspectives. In preparing this Final Proposal, the CAISO staff and stakeholders have reviewed the FERC Final Rule, discussed goals and principles for long-term transmission rights and considered a number of options for the design and release of long-term rights.

Except for certain enhancements identified in this paper which cannot be implemented before the CRR Year 2 allocation and auction processes, this LT-CRR proposal is offered as a complete “end-state” design. The CAISO proposal described herein also provides the basis for draft tariff language that was circulated to stakeholders on January 8th and discussed in the January 16th conference call. Thus, this proposal is intended to provide the conceptual basis for implementing (with FERC approval) Long Term Firm Transmission Rights (“LT-FTRs”) within the CAISO’s market redesign, as required by FERC’s Final Rule on LT-FTRs, Order No. 681.

The CAISO’s initial assessment of the timeline for implementing this proposed LT-CRR process concludes that this proposed LT-CRR product and release process could be in place at the start of MRTU, now scheduled for January 31, 2008.

1 Objectives and Guiding Principles

This section reiterates the CAISO's objectives and proposed guiding principles for formulating the LT-CRR proposal as well as Professor Frank Wolak's suggested goals that were presented to stakeholders on November 29¹:

1. Comply with the seven guidelines required by FERC in the LT-FTR Final Rule. The specific guidelines are:
 - (1) The LT-FTR should specify a source, sink and MW quantity.
 - (2) The LT-FTR must provide a hedge against day-ahead LMP congestion charges for the period covered and quantity specified. Once allocated, the financial coverage provided by a financial long-term right should not be modified during its term except in the case of extraordinary circumstances or through voluntary agreement of both the holder of the right and the transmission organization.
 - (3) LT-FTRs made feasible by transmission upgrades or expansion must be available upon request to any party that pays for such upgrades or expansion.
 - (4) LT-FTRs must be made available with term lengths that are sufficient to meet the needs of LSEs to hedge long-term power supply arrangements.
 - (5) LSEs must have priority over non-LSEs in the allocation of LT-FTRs that are supported by existing capacity.
 - (6) A LT-FTR held by a LSE should be re-assignable to another entity.
 - (7) The initial allocation of LT-FTRs shall not require recipients to participate in an auction.
2. Utilize the flexibility offered by the Final Rule to develop a proposal that is most suited to the California context and the MRTU markets.
3. Promote efficient use of existing transmission and generation assets.
4. Promote efficient investment in transmission and generation.
5. Ensure rapid implementation at the start of MRTU.
6. Promote equitable allocation of LT-FTRs to entities that pay for the transmission network.
7. Ensure that ownership of LT-FTRs does not degrade energy and ancillary services market efficiency and system reliability.
8. Support secondary market activity for both short-term and long-term CRRs.

¹ This presentation is located at: <http://www.caiso.com/18bf/18bf97c06a6e0.pdf>

2 Overview of Proposed LT-CRR Release Process

The proposed LT-CRR release process builds upon the FERC-approved annual CRR allocation process by allowing LSEs to nominate as LT-CRR a subset of the CRRs they have received in Tiers 1 and 2 of the CRR Year 1 annual allocation process, or in Tier 1 of the CRR Year 2 or subsequent annual allocation process (i.e., the Priority Nomination Process or “PNP”). Since the allocation of LT-CRRs will be based on the annual CRR allocation to Load Serving Entities (“LSEs”), the LT-CRRs will be obligations, differentiated by season and time of use (“TOU” is on-peak or off-peak.).

Because of this proposed structure of LT-CRRs, it will be helpful to establish some terminology conventions up-front. This paper uses the generic term “CRR” to refer comprehensively to all CRRs the CAISO releases, including those defined for a particular season and time-of-use combination and valid over a 10-year horizon (“LT-CRRs”), those defined for a particular season and time-of-use combination within a single year (“seasonal CRRs”), and those defined for a particular month and time-of-use combination within a single year (“monthly CRRs”). Note that this paper does not discuss monthly CRRs. This LT-CRR proposal does not affect any features or characteristics of the filed monthly CRR instrument or monthly release processes.

To accomplish the release of LT-CRRs, the CAISO proposes to conduct an additional process including an associated Simultaneous Feasibility Test (“SFT”) for nominating, testing and awarding LT-CRRs. This process basically constitutes another tier, which will be designated “Tier LT.” Like other tiers, the “Tier LT” process would involve an exchange of information between the CAISO and eligible LSEs, as well as the performance of SFTs to assess the feasibility of those seasonal CRRs that are nominated as LT-CRRs.

An important advantage of embedding the LT-CRR allocation process within the annual CRR allocation process – in contrast to the creation of a “Tier 0” exclusively for LT-CRRs that would be conducted before the annual allocation process – is that parties who want to rely entirely on one-year and monthly rights would be competing on equal footing with parties who want Long Term rights.

With a “Tier 0” approach as described in the CAISO’s November 28 White Paper, LSEs who request LT-CRRs would have the opportunity to obtain those rights without having to compete for scarce transmission capacity with LSEs seeking only one-year CRRs. In contrast, the present proposal avoids disadvantaging entities that want only one-year CRRs because LT-CRRs are awarded from the subset of CRRs that are feasible in Tier 1 (Tiers 1 and 2 in the first year). It avoids a situation in which parties might feel forced to take LT-CRRs in preference to one-year CRRs in order to have an equitable opportunity to obtain a CRR of any kind.

A second advantage to embedding the LT-CRR release process within the annual CRR allocation process is that it simplifies the process for determining LSE eligibility for LT-CRRs. The proposal requires no source verification other than that already filed and approved for the annual allocation of CRRs, and builds off of the eligibility rules that were extensively discussed during the design of the tiers and PNP for the annual allocation.

The following sub-sections outline the characteristics of the LT-CRR product and explain in greater detail how the release process would work.

2.1 The Proposed LT-CRR Product: Structure and Key Characteristics

1. Consistent with CRRs in general, the LT-CRRs would be obligations. LSEs that are awarded these financial rights would maintain financial responsibilities throughout the term of these instruments, unless the CRR or LT-CRR were sold and registered to

another party through the CAISO's Secondary Registration System. (Certain limitations on the sale or transfer of allocated LT-CRR are discussed later in this paper.)

2. Consistent with CRRs in general and with Guideline 1 of the "Final Rule,"² each LT-CRR will have a specific source, sink and MW quantity.
3. Consistent with Guideline 4 of the Final Rule, the term for LT-CRRs would be ten years. Like seasonal CRRs, LT-CRRs would be differentiated by season and time-of-use (on-peak or off-peak). Thus, each LT-CRR will actually apply to a single season and TOU combination for a 10-year period, and eight separate LT-CRRs would be necessary to cover every hour of the year over a 10-year period.
4. Each LT-CRR that is awarded would be determined to be feasible and hence "MW firm" for a ten-year period over a transmission grid that is derated to 75% of its total capacity using the same network model used for seasonal CRRs awarded in the same year. That is, anticipated transmission upgrades would not be included in the network model for CRRs until they are actually in operation. As noted above, however, in CRR Year 2 and beyond this network model may have different previously allocated LT-CRRs modeled as fixed CRRs in different years of the 10-year horizon. This is the first of two aspects of the "firmness" of LT-CRRs required by Guideline 2 of the Final Rule.
5. Each LT-CRR would be fully funded, as explained below (in Section 6) within the Full Funding section, so that hourly revenue shortfalls due to grid conditions would be tracked in the CRR balancing account for eventual true-up at the end of each month. This is the second aspect of "firmness" as required by Guideline 2 of the Final Rule.
6. LT-CRRs may be subdivided and sold in annual or monthly auctions for the term covered by the auction. Thus, year 2010 of a summer on-peak LT-CRR could be sold in the regular auction for 2010 summer on-peak CRRs. Similarly, the August 2010 on-peak hours of a summer LT-CRR could be sold in the regular auction for the August 2010 on-peak period.

In addition, bilateral transfers of LT-CRRs via the CAISO's Secondary Registration System (SRS) will be limited to the same time constraint. That is, LT-CRRs cannot be transferred via the SRS for years beyond the year covered by the most recent annual CRR allocation and auction process. For example, suppose the CAISO conducts the annual allocation and auction process for 2012 in September of 2011. Then prior to the completion of this process, the LSE holding a LT-CRR cannot transfer through the SRS any portion of the LT-CRR beyond the year 2011. Once the annual allocation process for 2012 seasonal CRRs is complete, the LSE may offer 2012 segments of its LT-CRRs into the 2012 CRR auction and may transfer such segments via the SRS.

This limitation ensures that the subsequent-year portions of LT-CRRs continue to be held by the LSEs to which they were allocated, so that such portions will be available to be transferred in association with load migration consistent with Guideline 6 of the Final Rule.

The above limitation does not, of course, prevent an LSE who was allocated LT-CRRs from effecting the financial equivalent of a sale of its LT-CRRs, but it must do so outside of the CAISO's SRS. This limitation thus ensures that the original LSE remains the holder of record for CAISO settlement purposes until the LT-CRRs are transferred to

² The "Final Rule" is FERC Order No. 681, which is located on the CAISO website at: <http://www.caiso.com/1845/1845dd5e50d30.pdf>

reflect migration of load to another LSE. For the time period for which bilateral transfers via the SRS and auction sales are permitted as specified above, the transfer of CRRs to reflect load migration could be accomplished by the financial equivalent option for one-year CRRs per Section 36.9.5.1.1 of the filed and conditionally approved MRTU tariff.

In addition, the CAISO reiterates the caveat noted in the November 28th White Paper³ that the CRR system will not be immediately capable upon MRTU start-up to sell any CRRs back into a CAISO-managed auction. The CAISO intends to build capabilities for this feature sometime after MRTU start-up.

2.2 Proposed LT-CRR Release Process: Key Characteristics

1. The release of LT-CRRs would be incorporated within the process for allocating seasonal CRRs to eligible LSEs.
2. The LT-CRR release process would not change the requirement for source verification within the Year 1 annual allocation, nor does it add any additional need for source verification in Year 1 or later years.
3. LSEs would not be required to participate in an auction in order to acquire LT-CRRs.
4. Like the seasonal and monthly CRR product, LT-CRRs would be allocated to eligible LSEs who pay for use of the existing transmission grid.
5. Market participants who pay for transmission upgrades (also referred to as “merchant transmission projects”) will be allocated LT-CRRs that reflect the transfer capacity for CRRs added to the grid by the project. (This feature is already contained in the MRTU tariff filed in February 2006, and is reiterated here only for completeness.)
6. To hedge the congestion charges of their base load, LSEs could obtain LT-CRRs for up to 50% of their Adjusted Load Metric⁴. As explained further below, LSEs would therefore have a reasonable opportunity to obtain LT-CRRs in order to support their long-term energy supply arrangements.
7. The proposed release process does not predicate the award of LT-CRRs on the ownership of generation or the establishment of long-term energy contracts, except to the extent that source validation will be performed in CRR Year 1. This approach avoids the creation of potentially uneconomic incentives for future generation investment and contracting only to earn congestion revenues.
8. The proposed approach maintains the simultaneous feasibility of LT-CRRs and does not impact the simultaneous feasibility of the seasonal CRRs.

3 Review of the Filed Annual Process for Allocating Seasonal CRRs

The proposal described in this paper builds upon the CRR market rules conditionally approved by FERC in the September 21 MRTU Order. Specifically, the present proposal integrates the release of LT-CRR into the CAISO’s annual process for allocating seasonal CRRs. The CAISO

³ See footnote #2 in the document that is located at: <http://www.caiso.com/18bc/18bca6b7610c0.pdf>

⁴ See Section 3.1, which explains “Adjusted Load Metric.”

believes that this approach accomplishes the objectives and requirements of FERC's LT-FTR Final Rule and meets the needs of market participants in a manner that also balances the other objectives identified above.

The present section of this paper provides a summary review of the approved CRR design and annual CRR release process, to establish the basis on which the LT-CRR proposal is added in the next section.⁵

3.1 Year 1 Annual Allocation of One-Year CRRs to Load Serving Entities (LSEs)

Before MRTU start-up, seasonal CRR obligations that will be effective for CRR Year 1 (from MRTU start-up to 12/31/08) will be allocated based on LSE nominations. These LSE allocations will be subject to a test of simultaneous feasibility on a model using 75 percent of transmission capacity and accounting for any awards of CRRs to merchant transmission projects and capacity subject to existing contractual or ownership rights (ETCs, CVRs or TORs). These seasonal CRRs will be further differentiated by a time-of-use period (TOU, on-peak or off-peak).

The "Load Metric" for each LSE, for each season/TOU combination is the 99.5 percentile point of their previous year's load duration curve for that season and TOU period.⁶

The "Adjusted Load Metric" for an individual LSE is its Load Metric minus the megawatts of that LSE's load that is covered by ETCs, CVRs or TORs.

For the three tiers of the annual allocation, LSEs may nominate no more MW of CRR than 75% of their individual "Adjusted Load Metric."

The value 75% of the "Adjusted Load Metric," is the LSE's "Seasonal Eligible Quantity" (SEQ) for each season/TOU.

➤ Tier 1: Nominations from verified sources

For Tier 1 LSEs may nominate up to 50% of their SEQ, which represents 37.5% (= 50% times 75%) of each LSE's "Adjusted Load Metric" for a particular LAP, season and TOU.

The sources for these Tier 1 nominations must be verifiably tied to supply sources that were owned or under contract to the LSE during the period from September 1, 2004 through August 31, 2005.⁷ Such sources may include Generating Units,

⁵ NOTE: The material in this section is intended to reflect Section 36 of the filed MRTU tariff. In the event of any inadvertent discrepancy between this document and the filed tariff, readers should rely on the tariff as the definitive source.

⁶ For LSEs that utilize the Default LAP for load settlement and serve load in more than one Default LAP, this calculation is performed and CRRs are allocated separately for each Default LAP in which the LSE serves load.

⁷ In response to several stakeholder comments, the CAISO will update this historical reference period. The CAISO proposes the updated period for LSEs to demonstrate supply sources to be calendar year 2006. Stakeholders can anticipate further discussion on which sources will qualify during this 2006 time period. For the Dry Run, sources were verified upon demonstration of generation ownership or any contract that was valid during the 09/2004 through 08/2005 time period, with MWs prorated for contracts not in effect for the full length of this period. Some entities have constructively commented that the CAISO utilize information from the 2006 Resource Adequacy showings or the

Trading Hubs and Scheduling Points. LSEs may nominate up to 75% of the PMax of a verified generating unit or of the average hourly quantity of energy contractually delivered to a trading hub during this historical period.

LSEs may also nominate import CRR sources based on 75% of the Pmax for generators outside the CAISO control area that were verifiably owned or under contract during this 9/04 through 8/05 period, and for which the LSE demonstrates transmission arrangements to transport energy from the external generator to the CAISO Scheduling Point.

After the CAISO performs the Simultaneous Feasibility Test (SFT) and performs any needed prorationing of these nominations, LSEs will be notified of their awarded CRRs, which are then reserved within the SFTs for Tiers 2 and 3.

➤ **Tier 2: Nominations from verified sources**

This nomination round is similar to Tier 1, except that an LSE now may nominate up to 75% of its SEQ (equivalent to 56.25% (or 75% times 75%) of its “Adjusted Load Metric”) minus the quantity of seasonal CRRs awarded in Tier 1 for that season and time-of-use period.

➤ **Tier 3: Nominations from any source**

Each LSE may nominate up to 100% of its SEQ less the seasonal CRRs already awarded in Tiers 1 and 2.

CRR source nominations for this Tier are not verified; thus, LSEs may nominate from any generator P Node, Trading Hub or Scheduling Point.

Also, LSEs whose load is settled at a default LAP may nominate CRRs that sink at a sub-LAP of that Default LAP. This differs from Tiers 1 and 2, in which all CRR nominations by LSEs whose load is settled at a Default LAP must sink at the Default LAP.

3.2 Year 1 and Subsequent Annual Auction of One-Year CRRs

An auction for seasonal CRRs is conducted annually following the allocation of seasonal CRRs to LSEs. Entities may submit bids by season and time-of-use, and may utilize a broader set of CRR sources and sinks than was allowable in the allocation process.

The annual auction of seasonal CRRs, like the annual allocation, will be based on a grid model for each season and TOU period that uses 75 percent of transmission capacity and accounts for any awards of CRRs to merchant transmission projects and capacity subject to any applicable existing contractual, converted or ownership rights.

CPUC’s Long-Term Procurement proceeding to verify sources. These suggestions will be considered with stakeholders in the near future.

3.3 Year 2 and Subsequent Annual Allocation of One-Year CRRs to LSEs

After CRR Year 1, the CAISO will standardize CRR years to coincide with calendar years. Thus CRR Year 2 will begin on 1/1/09. After CRR Year 1, verification of sources for CRR nominations will not be performed. All annual allocations of seasonal CRRs will be based on a grid model that includes 75% of transmission capacity and that accounts for any awards of CRRs to merchant transmission projects and capacity subject to existing contractual or ownership rights.

➤ **Tier 1: Priority Nomination Process (PNP)**

In this tier, LSEs may nominate for renewal any of the seasonal CRRs they were awarded in the previous year's annual allocation process for the same season, TOU and sink location. Only renewal nominations will be accepted in the PNP, so as to provide the greatest likelihood that parties will be able to renew those CRRs they wish to retain.

Nominations of these high-priority seasonal CRRs are likely to be renewed because they were feasible in the previous year and they would be the first nominations run through the SFT for the annual allocation of seasonal CRRs.

Per the filed tariff, in Year 2's PNP each LSE may nominate up to 33% of its SEQ for each season and time period, equivalent to 25% of an LSE's "Adjusted Load Metric." FERC's September 21 MRTU Order asked the CAISO to reconsider the level of this upper bound,⁸ however, and in conjunction with this LT-CRR proposal the CAISO now proposes to increase this upper bound to 66.7% of the SEQ (or 50% of the "Adjusted Load Metric.")

(Similarly, the CAISO now proposes to change the upper bound in Tier 2 to 66.7% of the SEQ for each LSE.)

With these inter-related changes, the rules for the Year 2 annual CRR allocation process would be identical to the rules for subsequent years.

➤ **Tier 2: nomination from any source**

Under the currently filed MRTU Tariff, an LSE may nominate up to 50% of its SEQ minus the seasonal CRRs awarded in Tier 1.

As part of this LT-CRR proposal, the CAISO proposes to increase this upper bound to 66.7% of the SEQ for each LSE, minus the seasonal CRRs awarded in Tier 1.

An LSE also may nominate additional seasonal CRRs for up to 50% of the net load it has gained through load migration.

➤ **Tier 3: nomination from any source**

The Tier 3 in Year 2 is conducted by the same rules as Year 1.

Each LSE may nominate up to 100% of its SEQ (75% of its "Adjusted Load Metric") after taking into account the seasonal CRRs already allocated in Tiers 1 and 2.

⁸ At P 805.

LSEs may nominate from any permitted source; those LSEs whose load is settled at a default LAP may nominate CRRs that sink at a sub-LAP of the default LAP.

3.4 Year 3 and Subsequent Annual Allocation of One-Year CRRs to LSEs

In accordance with the filed MRTU tariff, in the Year 3 and subsequent annual allocation processes the rules for each Tier are identical to Year 2 except that up to 66.7% of each LSE's SEQ can be nominated as priority CRRs within Tier 1. As noted above, if the CAISO adopts the 66.7% limit in CRR Year 2 then there would be no difference between the CRR Year 2 rules and the subsequent year rules.

Following the annual allocation of seasonal CRRs, the remaining 25 percent of transmission capacity is allocated and auctioned monthly. The monthly processes will not be described here because they are not pertinent to the proposed process for releasing LT-CRRs.

4 The Proposed LT-CRR Release Process for CRR Year 1

1. For Year 1, the Tier LT process would be initiated immediately upon the completion of Tier 2,⁹ before LSEs submit nominations in the Tier 3 process. Note that the CAISO is not proposing any modifications to the FERC-approved CRR Year 1 Tier 1 and Tier 2 processes, including the requirements and procedures for source verification.
2. After LSEs are notified of the Tier 2 allocation results, LSEs could then submit requests to designate as 10-year LT-CRRs a certain percentage of the seasonal CRRs they have been awarded in Tiers 1 and 2. These designations would of course be specified for each season and TOU, consistent with the seasonal CRRs released in Tiers 1 and 2. There would be no further requirement for the LSE to demonstrate a supply arrangement or plant ownership to be eligible to request LT-CRRs in this manner.

In CRR Year 1 Trading Hubs would not be allowable sources for LT-CRR nominations, as explained in Section 8.1 of this White Paper.

3. Apart from the exclusion of Trading Hub CRRs noted above, the CAISO proposes that most of an LSE's Year 1 seasonal CRRs awarded in Tier 1 and Tier 2 would be eligible for LT-CRR nomination; specifically, the CAISO proposes a target cap of 50% of an LSE's "Adjusted Load Metric."¹⁰ (Recall that an LSE could have obtained seasonal CRRs for up to 56.25% of its "Adjusted Load Metric in Tiers 1-2.)

The rationale for a target cap of 50% is that based on historical hourly load data it appears that, on average, one-half of an LSE's peak hourly load for a particular season and TOU is a reasonable approximation for its base load, i.e., its minimum hourly load for that season and TOU. Linking LT-CRR eligibility to LSE base load is a principle that several stakeholders have advocated in the LT-CRR process and appears to be consistent with FERC's guidance in Order No. 681.

⁹ For CRR Year 1, the annual allocation of seasonal CRRs will be initiated several months before MRTU start-up.

¹⁰ To reiterate, an LSE's "Adjusted Load Metric" is its Load Metric for that season and TOU minus the LSE's coverage of ETCs, CVRs or TORs.

4. Note that for Year 1 the seasonal CRRs awarded in Tiers 1 and 2 are directly linked to verified sources, and therefore are likely to be associated with owned generation and long-term contracts that LSEs had in place during the historical reference period.
5. After receiving nominations for LT-CRRs within this new “Tier LT,” the CAISO then would test the feasibility of these nominated sources and sinks for the following 10-year period.¹¹ These additional SFTs are needed because the subset of the Tier 1 and Tier 2 CRR awards designated as LT-CRR may not be fully feasible in the absence of the other Tier 1 and Tier 2 CRR awards that were not designated as LT-CRR.

In order to ensure the “MW firmness” of the LT-CRR over future years, the CAISO must consider the fact that some of these other seasonal CRRs may not be nominated for renewal and, as a result, any counterflows they may have provided to support the LT-CRR would be absent in the later years. Thus the Tier LT SFT would test the simultaneous feasibility of just those awarded Tier 1-2 CRRs that are nominated as LT-CRRs, in the absence of the other awarded Tier 1-2 CRRs, and if necessary, the LT-CRR nominations may be prorated to achieve feasibility. For this initial allocation of LT-CRRs, the assessment would require the performance of 8 SFTs for the four seasons and two TOU periods.

6. The additional SFTs for Tier LT would be performed on a grid modeled for 60% of transmission capacity, which would be somewhat smaller than the 75% used for the SFTs to allocate seasonal CRRs in Tiers 1, 2 and 3.

A primary reason for modeling 60% of grid capacity for the Tier LT SFTs is to ensure that binding constraints occurring in Tier LT do not adversely impact future years’ allocation of one-year seasonal rights. Because the LT-CRRs awarded through Tier LT must be modeled as fixed CRRs in the network for the annual CRR processes in subsequent years, if Tier LT results in binding constraints at the 75% of grid capacity level it may excessively limit the availability of certain rights in subsequent year’s allocation process, particular the Tier 1 Priority Nomination Process (“PNP”) that will be used by LSEs who want to rely on year-to-year renewal of seasonal CRRs to meet their congestion hedging needs. Moreover, such impacts would endure for the entire 10-year horizon of the LT-CRRs, to be relieved only when and to the extent that new transmission capacity is added by upgrades. Derating grid capacity for Tier LT to 60% instead of utilizing the full 75% available for seasonal CRRs ensures that there will be an additional amount of capacity across the entire grid for each year’s annual CRR process, beyond the amount utilized by the fixed CRRs previously released.

The CAISO has incorporated this provision in its proposal after careful consideration of a point raised by several parties in the stakeholder discussion, namely, that if the LT-CRR awards in Year 1 are substantially different from parties’ expectations and do not meet their needs, these results should not preclude later opportunities to meet their needs via subsequent steps in the CRR process. The 60% limitation will provide some assurance that, at a minimum, the annual PNP for year-to-year renewal of seasonal CRRs will not be adversely affected by the LT-CRR awards. At the same time, the CAISO recognizes that several parties urged the CAISO to go further and implement an LT-CRR auction

¹¹ Of course, the SFT runs in Tiers 1 and 2 have already established feasibility for the first year of these LT-CRR nominations. Thus the 8 SFT runs for “Tier LT” in Year 1 would take out other seasonal CRRs from the model to test the feasibility of the LT-CRR nominations over the following nine years of the 10-year period. There are four seasons and two time-of-use periods, thus there are $4 \times 2 = 8$ SFTs.

process following the Tier LT allocation, in which the full 75% of the grid would be made available for all qualified bidders to obtain LT-CRRs. The CAISO cannot develop such a feature for the January 29 compliance filing, nor could it implement such at MRTU start-up. The CAISO will, however, entertain this idea with stakeholders in considering Year 2 enhancements to the CRR processes, and will in the same process evaluate the 60% limit to assess whether it should be revised for Year 2.

7. The CAISO intends to provide the results of the Tier LT SFT to those LSEs who made LT-CRR nominations, so they would know their LT-CRR awards before submitting their Tier 3 seasonal CRR nominations. A possible result of the LT-CRR feasibility tests is that some LT-CRR nominations could get pro-rated, but any proration would only affect the long-term aspect of the CRR, i.e., the last nine years of the nominated 10-year LT-CRR; the Tier 1-2 seasonal CRR awards for CRR Year 1 would not be affected.
8. Once the nominated LT-CRRs are awarded in Tier LT, they would be reserved as fixed CRRs in the SFTs for all allocation and auction processes for CRR Year 2 and future years throughout the term of the LT-CRR.
9. The MW amount of LT-CRRs awarded to each LSE would count towards its SEQ for the associated season/TOU in each year for the life of the LT-CRR, and in particular would count against its eligibility to nominate seasonal CRR for renewal in the PNP. The latter provision ensures that LSEs who prefer to utilize annual renewal of CRRs rather than acquire LT-CRRs are not unduly disadvantaged relative to those LSEs who prefer LT-CRRs.

5 The Proposed LT-CRR Release Process After CRR Year 1

1. For Year 2 and subsequent annual allocations, "Tier LT" would immediately follow Tier 1, the Priority Nomination Process (PNP). LSEs would be able to request designation of new LT-CRRs for any CRRs they receive in the PNP, as long as they remain within their total LT-CRR eligibility, i.e., a target cap of 50% of their Adjusted Load Metric.¹² In this way, new LT-CRRs could be designated for load growth.
2. Only the seasonal CRRs that are awarded as renewal CRRs within the Tier 1 (PNP) process could be nominated as new LT-CRRs. Note, however, that an LSE may nominate for renewal in the PNP any seasonal CRRs they were allocated in any tier of the previous year's annual CRR allocation process. Thus, an LSE in the Year 2 PNP could be awarded a renewal CRR that had previously been awarded either within Tiers 1 and 2 of Year 1, which require source verification, or within Tier 3 that does not require source verification.
3. Given the rules stated above, the way for an LSE to be allocated a LT-CRR from a CRR source for which it had not previously received a seasonal CRR (or to receive more seasonal CRRs from an existing source) is to (1) first request and receive a seasonal CRR from the new source in one of the free choice tiers – Tier 3 of Year 1 or Tiers 2-3 of Year 2 and beyond; then (2) request and receive a renewal of the seasonal CRR from that source in the next year's PNP and (3) request and receive the LT-CRR in Tier LT,

¹² The SEQ is 75% of the Adjusted Load Metric. Thus, the PNP limit of 66.7% of SEQ is equal to 50% of the "Adjusted Load Metric." If an LSE nominated 66.7% of its SEQ for LT-CRRs, there would be no sink upper bound left for that LSE within the PNP Tier.

which requires that after the request the quantity of LT-CRRs held by the LSE remain under 50% of its Adjusted Load Metric. As described elsewhere, all market participants also may obtain 30 year LT-CRRs from new sources by sponsoring upgrades of the transmission system, and obtaining incremental LT-CRRs.

Consistent with the CRR market rules conditionally approved by FERC in the September 21 MRTU Order there is no requirement for source validation for the LT-CRRs that LSEs request in Tier LT, other than the validation that is already included as part of Tiers 1 and 2 in Year One of the allocation of one-year CRRs. LSEs will not be assigned new LT-CRRs when they obtain or contract with new energy sources, nor will they lose LT-CRRs as a result of the termination of generation ownership or a generation contract. Neither the entitlement to request LT-CRRs or priority in the allocation of LT-CRRs is tied to LSE generation ownership nor generation contracts to avoid the incentive issues that were explained in the MRTU filing. A tie between CRR entitlement and an LSE's generation ownership or generation contracts would introduce inefficiency into the market for long-term generation investment.

The proposed rules for allocating LT-CRRs to LSEs allow LSEs to obtain LT-CRRs sourced at the location of new generation or at the injection location for a new generation contract, provided that they pass each of the steps listed above. At the same time, the rules provide protections to insure that: (i) all LSE requests for CRRs from new sources are considered on an equitable basis after giving priority to CRRs awarded in the validated Tier (Year 1) or the PNP tier (Year 2 and beyond); (ii) requests for LT-CRRs from new sources compete on an equal basis with requests for renewal of one-year CRRs in the PNP tier; and (iii) the requests for LT-CRRs from new sources do not lead to pro-rationing of previously allocated LT-CRRs.

- In order for an LSE to obtain a LT-CRR from a source from which it has not previously been allocated CRRs, it must first request and receive a seasonal CRR from the new source in one of the free choice tiers in the previous year – Tier 3 of Year 1 or Tier 2-3 of Year 2 and beyond. This means that the new LT-CRR must be found to be simultaneously feasible after providing priority to Tier 1 and Tier 2 CRRs (in Year 1) or PNP CRRs (In Year 2 and beyond), and existing LT-CRRs, since these seasonal CRRs will already have been allocated prior to the free choice tiers. All requests for seasonal CRRs will be considered at the same time in the free choice tiers, including those from new sources, and pro-rated as necessary to determine a simultaneously feasible set of awards in each tier.
- The second step that an LSE must take to obtain a LT-CRR from a new source is to request the seasonal CRR in the PNP tier in the following year. In the PNP tier, the LSE's request for the seasonal CRR will be evaluated for simultaneous feasibility along with all other LSE requests for PNP tier CRRs, while holding fixed all previously allocated LT-CRRs (as well as ETC and CVR). Year-by-year, all PNP requests for CRRs will be evaluated simultaneously, and pro-rated if necessary in determining a set of simultaneously feasible PNP tier CRR awards.
- The final step that an LSE must take to obtain a LT-CRR from a new source is to request and receive the LT-CRR in Tier LT, while remaining under its LT-CRR cap equal to 50% of its Adjusted Load Metric. In the simultaneous feasibility test for Tier LT, the model will include representation for all previously awarded LT-CRRs (as well as TOR, ETC and CVR), but will

exclude all PNP CRRs that are not nominated as LT-CRRs. In this final step, the ISO will consider all requests for new LT-CRRs at the same time, and pro-rate the requests as necessary in determining a set of simultaneously feasible set of LT-CRR awards that preserves the full quantity of all previously-awarded LT-CRRs. This final step insures that the award of LT-CRRs from new sources does not lead to the degradation of previously awarded LT-CRRs.

The steps described above are essential to maintaining an equitable balance between and among LSEs that desire to obtain new LT-CRRs and LSEs that wish to hedge their transmission congestion charges by relying on one-year CRRs obtained in the PNP or free choice tiers. These rules are particularly important in light of the decision not to require validation that requests for LT-CRRs from new sources are associated with LSE-owned generation or a long-term LSE contract for energy delivery at the source, although some version of the rules would be required even if validation were included as part of the LT-CRR proposal.

4. For Year 2 and subsequent annual allocations, the "Tier LT" process would become a regular part of the CRR production flow. LSEs could nominate new LT-CRRs by designating some of the seasonal CRRs that are awarded in the Tier 1 PNP. Once these new LT-CRR nominations are submitted to the CAISO, the CAISO would run the "Tier LT" SFTs for each season/TOU for the remaining nine years of the 10-year time horizon. These "Tier LT" SFTs would incorporate as fixed CRRs any LT-CRRs that were previously awarded for each season/TOU, but would not include the current year PNP awards that were not nominated as LT-CRR. Depending on the "Tier LT" SFT results, pro-rationing is possible for these newly nominated LT-CRRs, but such pro-rationing would not affect the LT-CRRs already released, nor would it affect any of the one-year renewal CRRs awarded in the current PNP. Thus the "MW firmness" of the previously released LT-CRRs is protected in this process.
5. At the end of the 10-year term of a LT-CRR, LSEs could nominate for renewal in the PNP the identical source, sink and MW terms of the expiring LT-CRR, so that the expiring LT-CRR would compete for PNP nomination on the same basis as other seasonal CRRs they were allocated in any tier of the previous year's annual CRR allocation process.¹³ Again, nominations for renewal within the PNP tier are not guaranteed but do have a high probability of being awarded. The SFT that is conducted for this PNP tier assesses only the following one-year period, but the CRRs that are awarded within the PNP tier could then be nominated as LT-CRRs through the Tier LT process. In this way, LSEs could be awarded identical LT-CRRs that cover one 10-year period, then the following 10-year period, and then future 10-year periods, and the only break in the continuity of MW firmness of these LT-CRRs would be an assessment of feasibility, once a decade, of the next 10-year term. Although this process would not

¹³ Similarly, the CAISO proposes that expiring Existing Transmission Contracts (ETCs) also would be eligible for nomination as seasonal CRR renewals in the Priority Nomination Process. The amount of grid capacity that had been reserved by the CAISO in the transmission grid to account for the "perfect hedge" settlement provisions would, upon the expiration of ETCs, revert to the transmission capacity available for CRR awards. The LSE holder of the expiring ETC would be eligible to nominate expiring ETC rights in the PNP subject to the same quantity limitations to their Adjusted Load Metric that apply to all other LSEs as described in Section 36 of the filed MRTU tariff. To the extent expiring ETC rights are awarded as seasonal CRRs in the PNP, the LSE can then nominate these as LT-CRRs in Tier LT, again subject to the same quantity limitations as other LSEs.

guarantee LT-CRR renewal, LSEs would be highly likely to be able to maintain the quality of LT-CRR coverage beyond a 10-year time period.

As an example, suppose LSE A is awarded a LT-CRR in Year 1, and seeks LT-CRR coverage for the following twenty years. During Year 10, the LSE could nominate its LT-CRR as a seasonal CRR (with a one-year term) within the PNP Tier of the annual allocation. Assuming this nomination is awarded, the LSE would then nominate this seasonal CRR as a LT-CRR. Subject to a 10-year SFT for that season and time-of-use, the LSE would be awarded a new LT-CRR to be effective from Year 11 through Year 20.

6. Note that for CRR Year 2 and beyond, the "Tier LT" SFT cannot be performed with only 8 distinct season/TOU SFTs, but will require some multiple of 8 SFTs to reflect the fact that different quantities and configurations of LT-CRR may have been allocated for the various future years. For example, in CRR Year 2 the LT-CRRs released in Year 1 will be in effect for years 2-10, but not year 11. Thus the "Tier LT" SFT process will effectively run one set of 8 SFTs for years 2-10 and another set for year 11. The quantity of LT-CRRs that can be released for any given season/TOU will have to be found to be feasible for all 10 years of the time horizon.

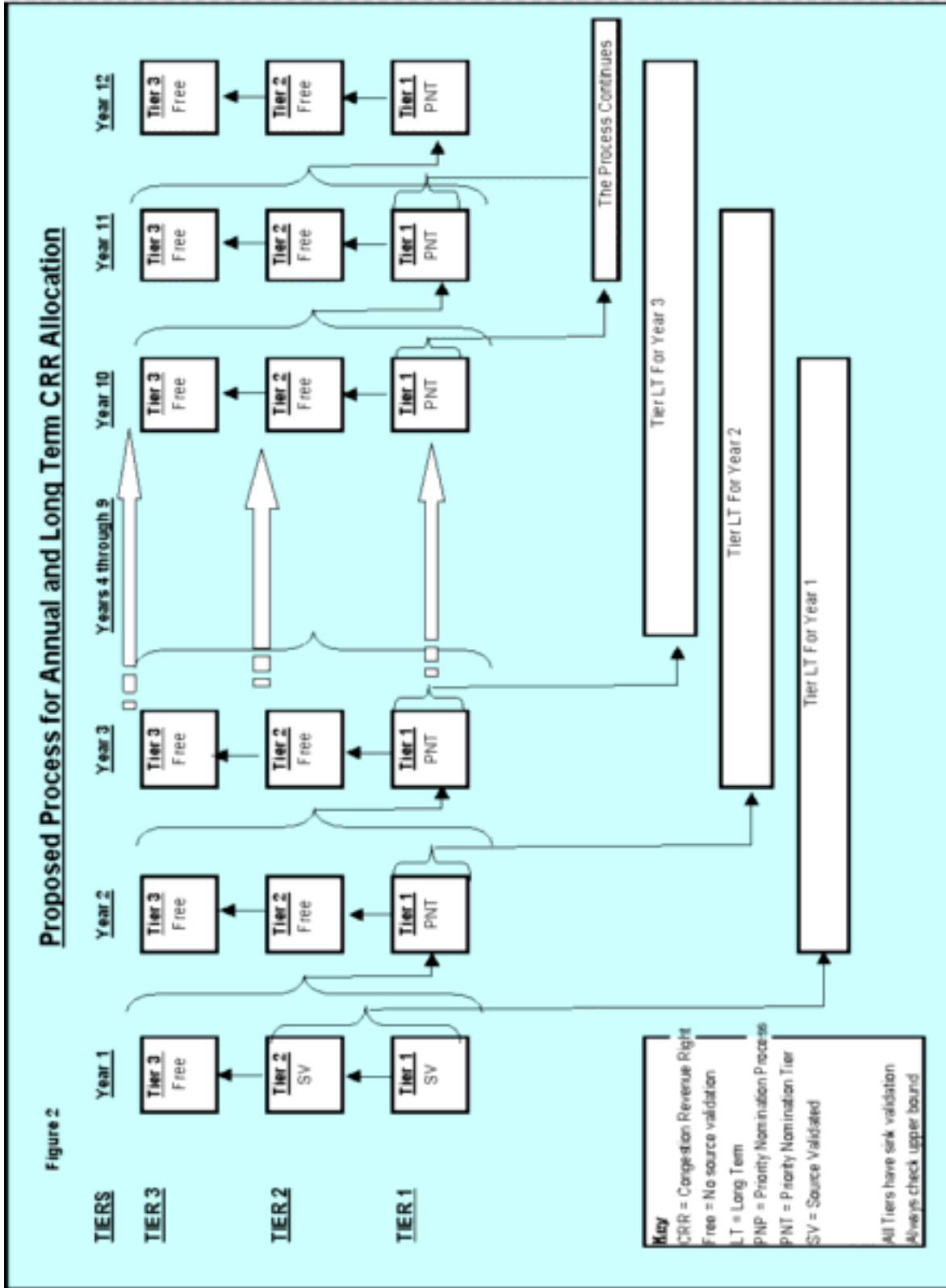
Additional Note: The implementation of these multiple sets of 8 SFTs may be efficiently implemented with the use of a "Multi-period" process. In this process, multiple periods (each period presents a particular season and TOU combination) can be defined with each defined period having its own set of fixed CRRs, Full Network Model (FNM) and related data (i.e., Interface and Nomogram limits, contingency definitions and Aggregated Pricing Node (APnode) definitions).

The fixed CRRs, FNM and related data may be the same for some or all of the periods. An optimization problem is formulated with one objective function and a multitude of associated constraints sets. Each constraint set is associated with a defined period. The submitted LT-CRR elections present the control variables in this optimization problem. The LT CRR elections may need to be prorated due to a violation of one or more constraints. The final cleared LT CRRs will be a result of the most limiting constraint over all of the constraint sets.

6 Proposal for Meeting the Full Funding Requirement

1. All CRRs would be fully funded, regardless of whether they are LT-CRRs, seasonal or monthly CRRs.
2. The CAISO would continue to use its CRR Balancing Account and extend its use for settlement of LT CRRs. One change, however, is that the CRR Balancing Account will be cleared monthly, so there would be no end-of-year clearing apart from the clearing of the last month.
3. Auction revenues from the annual and monthly CRR auctions will go into the CRR Balancing Account for the appropriate month. Auction revenues for each season are allocated uniformly across the three monthly accounts comprising the season.
4. The auction funds plus the IFM congestion revenues collected by the CAISO in hours when there are surplus revenues would be used at the end of each month to compensate CRR holders as far as possible for any hourly shortfalls that may have occurred during the month. Any shortfall or surplus at the end of a month will be allocated to measured demand, which includes both internal load and exports. This is generally consistent with the allocation of other uplift charges or credits.

7 Figure: Proposed Process for Annual and Long Term CRR Allocation



8 Additional LT-CRR Issues

8.1 Exclusion of Trading Hubs as Eligible Sources for LT-CRR

The CRR Dry Run currently in progress has indicated some potentially problematic results (described below) related to the use of “EZGen” Trading Hubs as CRR sources in the tiered allocation of CRRs. While the CAISO and the participants are still assessing whether some modifications to the allocation rules are warranted to mitigate these types of results, the CAISO believes that it would be prudent and appropriate to exclude Trading Hubs as allowable CRR sources in the nomination of LT-CRRs, at least for CRR Year 1.

Under the existing rules and procedures for allocation of one-year CRRs, the fact that the LSEs are nominating as seasonal CRR sources both EZGen Trading Hubs and the individual generator PNodes that comprise those Trading Hubs can lead to two potentially problematic results when transmission constraints associated with specific generator PNodes become binding in the SFT.

- First, CRR nominations from the specific generator PNodes associated with binding constraints will always be prorated prior to CRR nominations from EZGen Hubs. This is because the proration algorithm reduces the most effective nominations in order to reduce the fewest MW of nominations overall, and CRR nominations from the PNode associated with the constraint are typically more effective than CRR nominations from a Trading Hub.
- Second, once such a constraint becomes binding, which may occur at the outset of Tier 2 or even in Tier 1, no additional Trading Hub CRRs can be allocated unless that nominated CRR has a zero shift (or distribution) factor over the binding constraint. In the case at hand, where the binding constraint is associated with a generator PNode that is also contained in the Trading Hub definition, this would mean that no further CRR nominations using the Trading Hub as the source would be feasible. Indeed, the recent CRR Dry Run has shown that for some season/TOU combinations the prorating of Trading Hub CRR nominations has been substantial in Tier 2.

As noted, the CAISO is still assessing both the question of whether these outcomes are indeed problematic and ought to be mitigated, as well as alternative mitigation approaches should they be deemed desirable. In the upcoming stakeholder discussions of CRR Dry Run results these matters will be discussed fully.

In the context of LT-CRRs, these technical issues raise concerns about the possible long-term impact of Trading Hub LT-CRRs within the simultaneous feasibility tests run for future CRR allocations. The possible impacts on the efficiency and equity of future allocations of annual and LT-CRRs remain to be evaluated, and are a reason for the CAISO’s cautious approach to awarding long-term instruments sourced at Trading Hubs at this time.

One specific concern is that if LSEs in aggregate nominate both significant quantities of Trading Hub LT-CRRs as well as CRRs for major portions of the capacity of specific generating units included in the Trading Hubs, this will increase the likelihood of constraints associated with specific generator PNodes binding in Tier 1 which would then, for the same network assumptions, prevent virtually any allocation of Trading Hub CRRs or CRRs sourced at those generator PNodes in subsequent annual CRR allocation processes for the entire 10-year term of the LT-CRRs. Additional analysis is required to evaluate the extent to which this is a concern that could be caused or exacerbated by allowing Trading Hub LT-CRRs.

The CAISO emphasizes the importance of the long-term MW firmness of LT-CRRs released through this proposed process, as required by guideline 2 of the Final Rule. This means that the LT-CRRs, once issued, should not be subsequently modified (except by mutual consent of the CAISO and the holder of the rights) even in light of unintended consequences that may affect other participants. Therefore, since LT-CRRs will be locked in and firm for ten years, and since the question of whether and how to mitigate the outcomes described above is still open, the CAISO proposes to require that Trading Hub CRRs be subject to renewal annually through the PNP rather than locked in for ten years before the MRTU markets even start operation.

As the CAISO and market participants gain experience with the CRR allocation process, this policy restriction on nominating LT-CRRs sources at Trading Hubs may be reconsidered.

For the one-year and monthly CRRs, the CAISO will review this issue carefully and make further recommendations within the context of the stakeholder process and the CAISO's report on the CRR Dry Run, which will be filed at FERC in March. The CAISO will schedule activities in the coming weeks for stakeholders to participate in this evaluation and provide input to the CAISO's recommendations for the CRR Dry Run report.

8.2 Load Migration During the LT-CRR Term

Section 36.8.5.1.1 of the filed MRTU tariff, as revised November 20, 2006, requires an 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. The CAISO proposes to apply the same requirement to allocated LT-CRRs, with certain modifications.

First, the option to transfer the financial equivalent of LT-CRRs rather than the CRRs themselves will be limited in a manner congruent with the limitations on the ability of LSEs to sell LT-CRRs bilaterally via the CAISO's SRS. In other words, for the years of a LT-CRR beyond the year for which bilateral SRS transfers are allowed, the LSE who loses load must transfer the actual CRRs and cannot transfer a financial equivalent.

For example, suppose the year is 2011 and the CAISO has not yet conducted the annual allocation process for 2012. Also, suppose LSE-1 holds LT-CRRs that are valid through the end of 2018. Then if a share of LSE-1's load migrates to LSE-2 at this time, LSE-1 must transfer a share of its LT-CRR for the years 2012 through 2018 to LSE-2. There will be no option for LSE-1 to make a cash payment to LSE-2 as an alternative to the LT-CRR transfer.

If, however, the migration of load occurs after the CAISO has performed the annual allocation process for 2012 and one-year CRRs for 2012 are now released, then the rules allowing the financial equivalent for the year 2012 would apply. Thus LSE-1 would be required to transfer a portion of its LT-CRRs for the years 2013 through 2018, and would have the option of either transferring CRRs or paying a financial equivalent for the year 2012.

The second modification has to do with enforcement of the required transfer. In several comments to the filed CRR proposal, parties argued that relying on the LSEs to perform the required calculations and transfers would likely result in disputes, and that therefore the CAISO should take on the responsibility of performing the transfers according to clearly specified and transparent procedures. At this time the CAISO is evaluating this suggestion thoroughly, and will confirm shortly whether it intends to make this change to its existing CRR provisions. In addition the CAISO will discuss the details and mechanics of such a proposal with stakeholders in the context of developing the FERC 205 filing on CRRs to be submitted in late March.

8.3 Sale of Allocated LT-CRRs by LSEs

LSEs would be free to sell CRRs and, with certain limitations, LT-CRRs they have been allocated. The filed MRTU tariff requires that any transfer of CRRs must be registered through the CAISO's SRS. Moreover, the SRS is the only means by which the settlement of revenues and charges associated with CRR holdings can be transferred from one holder to another.

As discussed in the previous section of this White Paper, only a portion of the 10-year term for LT-CRRs may be transferred via the SRS or sold through CAISO-sponsored annual or monthly auctions. Pursuant to the limited transfers that can be made through the SRS, while parties may make contractual arrangements outside the CAISO that are the financial equivalent of such a sale or transfer, the financial settlement by CAISO for the applicable LT-CRR would remain with the LSE that was originally allocated those LT-CRRs, except for the portions that may be transferred via the SRS or sold in the auction processes as described earlier.

In the context of this LT-CRR proposal, however, two significant limits upon individual LSEs should be recognized:

- a) The overall cap on LT-CRRs (50% of each LSE's Adjusted Load Metric), as described within #3 of Section 4.
- b) The fact that LT-CRR holdings count towards each LSE's SEQ for the associated season/TOU throughout the life of the LT-CRRs, which is noted as #9 within Section 4 of this White Paper. This provision will impact both the amount of one-year CRRs and new LT-CRRs that an LSE might nominate in the annual allocation.

Both of these limits would remain in place whether or not the LSE sells all or portions of its allocated LT-CRRs or CRRs to another party, either through a CAISO-sponsored auction or through the secondary market.

8.4 LT-CRR Allocation to Out-of-Control Area Load

For LSEs that serve load external to the CAISO control area (OCALSEs), the rules for obtaining LT-CRR through the allocation process build upon and are consistent with the procedures for allocating 1-year CRRs to OCALSEs, as specified in the filed MRTU tariff, Section 36.9. In summary, if an OCALSE is allocated 1-year CRRs in the annual allocation process per Section 36.9, that OCALSE can then nominate as LT-CRRs a portion of the awarded 1-year CRRs, and these nominations will be included on a comparable basis with LT-CRR nominations of internal LSEs in conducting the Tier LT SFTs to determine the final awards of LT-CRRs.

It is important to note that the present proposal does not modify MRTU tariff Section 36.9 with respect to how an OCALSE qualifies for CRR allocation in the annual process. In particular, the requirement for a showing of legitimate need (Section 36.9.1) is not affected. To be eligible for allocation of 1-year CRRs the OCALSE must demonstrate legitimate need based on ownership of or bilateral energy contract with generation inside CAISO control area, and such generation will define the eligible sources the OCALSE may nominate for CRR allocation. In particular, intertie Scheduling Points cannot be nominated by OCALSEs as sources for CRR allocation. This limitation preserves the priority for native CAISO control area load in obtaining import CRRs. OCALSEs who rely on sources outside the CAISO control area and other parties who wheel power through the CAISO and desire CRRs must acquire them through the CRR auction processes or the secondary CRR market.

This proposal also does not modify the filed MRTU tariff provisions on calculation of the CRR eligible quantity (Section 36.9.3). For an OCALSE the Seasonal Eligible Quantity described

above would be based on historical hourly export data for each export Scheduling Point the OCALSE desires to nominate as a CRR sink.

Once the OCALSE obtains the 1-year CRR in the allocation process, it can nominate such rights for LT-CRR up to a maximum of 50 percent of its Adjusted Load Metric. In Year 1 the OCALSE would participate in the verified tiers to obtain 1-year CRR. In Year 2 and beyond the OCALSE would be allowed to nominate for renewal in the PNP any previously allocated 1-year CRR, and then could nominate these for LT-CRR. In order to participate in the PNP, the OCALSE would have to demonstrate continued need for the CRR based on continuation of generator ownership or bilateral contract (per Section 36.9.5 of the filed MRTU tariff).

Thus, following in an analogous manner the quantity limitations specified above for internal LSEs, the OCALSE could potentially acquire through this allocation process a quantity of LT-CRRs equal to 50 percent of its Adjusted Load Metric for each export Scheduling Point.

Section 36.9.2 on prepayment of Wheeling Access Charges would apply to OCALSE LT-CRR nominations in a manner consistent with the requirement for 1-year CRRs, with one change. Because the WAC prepayment would cover a 10-year period, the CAISO proposes to offer the OCALSE the option to sign a pro forma contract to make annual WAC payments rather than pay all 10 years of WAC at the time the LT-CRRs are nominated. Each year's payment would have to be made at the time the CAISO conducts the annual CRR allocation process for the next year. If the OCALSE fails to make its contracted annual payment it would forfeit the associated LT-CRRs.

8.5 Impacts of PTO Withdrawal from CAISO

Because a PTO can withdraw from the CAISO and remove its transmission facilities from the CAISO controlled grid with two years notice, LT-CRRs having a 10-year term would clearly be affected if such a withdrawal were to occur. The CAISO believes that withdrawal of a PTO would constitute an extraordinary event against which the CAISO cannot be expected to guarantee either firmness of MW or full funding for LT-CRRs that were released based on the pre-PTO-withdrawal CAISO grid. The present LT-CRR proposal therefore includes provisions for how to treat outstanding LT-CRR in the event of PTO withdrawal.

The proposal involves a two step process: re-configuration of outstanding LT-CRR based on the "new" CAISO grid, and performance of simultaneous feasibility tests for each relevant CRR time period (season and TOU) with possible pro-rationing to minimize any potential uplift cost for fully funding the resulting reconfigured set of LT-CRR.

8.5.1 Re-configuration of LT-CRRs

Suppose PTO-A withdraws from the CAISO grid, so that PTO-A's transmission facilities that were included in the "old grid" are no longer included in the "new grid." The CAISO would first redefine its FNM so that connections between PTO-A's facilities and the new grid become new inter-tie scheduling points. Note also that old-grid inter-tie scheduling points that connected to PTO-A's facilities would no longer exist in the FNM. Therefore any LT-CRR whose source or sink was within PTO-A's system or at an old-grid scheduling point, while its other end (sink or source) was still within the new grid, would have to be reconfigured to utilize a new-grid inter-tie scheduling point in place of its former source or sink in PTO-A's system.

LT-CRRs whose source and sink were both within the new grid or utilized inter-tie scheduling points that connected to the new grid would not need to be reconfigured. LT-CRRs whose source and sink were both within PTO-A's grid would cease to exist.

8.5.2 Simultaneous Feasibility Tests

After re-configuration of the outstanding LT-CRRs the CAISO would run a set of SFTs on the re-configured set of rights and if necessary reduce some of their MW values to yield a feasible set of LT-CRRs. The temporal granularity of these SFTs would be analogous to the “Tier LT” SFTs the CAISO runs each time new LT-CRRs are requested in the annual allocation process. That is, there would need to be separate SFTs for each season/TOU over the time horizon of the outstanding LT-CRRs, and possibly a separate set of SFTs for each year of that time horizon due to the mix of term lengths among the outstanding LT-CRRs. As in the annual Tier LT process, it will be possible to utilize a multi-period constraint across years to ensure that each LT-CRR resulting from this process has a constant MW value over its remaining term, while performing any necessary pro-rationing in the most efficient manner.

As a result of this two-step process, the “new” outstanding LT-CRRs would be defined on the “new grid” and would meet a consistent standard of simultaneous feasibility.

9 Transmission Planning

To meet the requirements of FERC Order 681, the CAISO proposes three new processes related to LT-CRRs to be incorporated within its comprehensive planning for transmission upgrades to the CAISO system. Together, these initiatives should produce a result that:

1. Ensures the total MW amount of LT-CRRs that are released will remain feasible, and will not be degraded throughout their full terms;
2. Calculates the amount of CRRs that should be awarded to the sponsor of “merchant transmission” projects, and
3. Identifies and assigns responsibility for expanding transmission facilities that are necessary to ensure the availability and feasibility of LT-CRRs needed to support long-term power supply contracts.

The following sections explain these processes conceptually and suggest how each should meet the requirements of the CAISO’s LT-CRR compliance filing.

9.1 Ensuring Feasibility for the Full LT-CRR Term

The CAISO believes Paragraphs 453 – 455 of Order 681 make clear that the CAISO transmission planning process must ensure that LT-CRRs are feasible for their entire term.

To accomplish this result, the CAISO recommends active monitoring of binding constraints that represent existing LT-CRRs during planning study assessments.

The following activities monitored through grid planning may impact the feasibility of outstanding LT CRRs: 1) planned or proposed transmission projects; 2) generation or transmission retirements; 3) generator interconnections; or 4) interconnection of new load. In response to such driving factors, the CAISO proposes to conduct, through its transmission planning process, an assessment of whether or not these activities render outstanding LT CRRs infeasible over time. The CAISO would then evaluate whether it is necessary to include upgrades in the CAISO transmission plan to ensure feasibility. But that may not always be the appropriate solution. As explained further above, however, full funding requires that should there be any revenue inadequacy for funding LT-CRRs, such deficits will be funded by metered demand.

As an example of how the process would work, in the event of a proposed transmission project, the data from the LT-CRR annual simultaneous feasibility test (SFT) that includes all the binding constraints would be incorporated within the CAISO's Transmission Economic Assessment Methodology (TEAM) as well as other analyses of possible transmission upgrades. Then, as transmission alternatives are considered, the CAISO and PTOs would analyze the potential changes in flows on these binding constraints.

The CAISO anticipates that most proposed transmission upgrades would reduce congestion; that is, the flows on binding constraints would be reduced or the flow capability through constrained facilities would be increased. For these projects that alleviate or avoid exacerbating these binding constraints, the feasibility of identified LT-CRRs would be ensured.

For those unusual and occasional transmission projects that could result in substantial adverse impacts on the binding constraints and cause infeasibility in certain LT-CRRs, the transmission analysis would identify this outcome within its assessment of the project and would modify the planned project to mitigate the potentially adverse impact.

It should be emphasized that limiting LT-CRRs to 50% or less of the capacity of the system makes it highly unlikely that transmission upgrades could threaten to degrade any LT-CRRs. The CAISO anticipates that if a greater percentage of the transmission system capability for congestion hedging is covered by LT-CRRs, the CAISO's planning process would face greater challenge to assess and maintain the feasibility of these LT-CRR instruments.

Thus, the CAISO emphasizes that incorporation of a review of LT-CRR feasibility within TEAM would be in addition to other transmission planning activities aimed at relieving highly congested areas, such as studies on transmission projects that relieve binding constraints that are causing high LMPs and impacting shadow prices. The combination of these activities within the CAISO's planning efforts also should help ensure that transmission investment is made in a way that does not diminish the value of the MW amounts of LT-CRRs throughout their guaranteed renewal or term of existence.

9.2 Methodology for Determining Amount of CRRs for Merchant Transmission

The MRTU Tariff allows entities to develop transmission projects at their own cost and to receive the incremental CRRs that the project creates. Thus, the quantity of CRRs allocated to "merchant transmission" developers would be commensurate with the transfer capacity that the project adds to the CAISO grid.

FERC's September 21, 2006 Order on the MRTU Tariff required details regarding CRRs for merchant transmission sponsors to be submitted in a compliance filing to FERC. The CAISO's October 23, 2006 "Request for Clarification and Rehearing" asked that FERC permit the filing of tariff language related to these additional "merchant transmission" details on a time frame consistent with the requirements of the LT-FTR Final Rule.

FERC Order 681 requires that the methodology for determining the quantity and geographic sources and sinks for these incremental CRRs be specified before the CAISO begins releasing LT-CRRs. Assuming the CAISO initiates the release of LT-CRRs no sooner than a few months before MRTU start-up, a detailed explanation of this methodology would not be necessary for the January compliance filing on LT-FTRs, but should be filed at FERC by the spring of 2007.

The CAISO has formed an internal team to develop this methodology. Stakeholders can expect that a White Paper will be posted soon and that public input and discussion will be requested within a separate stakeholder process.

9.3 Facilitating Transmission Expansion

Currently any entity – such as transmission developers (PTOs or merchant transmission) or transmission customers (LSEs) -- can identify a possible transmission upgrade and seek its incorporation into the CAISO planning process. Under the CAISO's oversight through the FERC-approved interconnection procedures, the PTOs perform System Impact and Facilities studies to determine whether and how the project can be safely and reliably integrated with the ISO Controlled Grid. Depending on the project, construction could be financed through the TAC or by the developer. If the developer finances the project, the CAISO would quantify the amount of incremental CRRs that the merchant project would create and allocate LT-CRRs as described in the previous section.¹⁴

Order 681 requires the planning process to incorporate requests for LT-CRRs as well as actual transmission projects. Paragraph 456 states that “...when a transmission customer enters into a long-term power supply arrangement and is willing to pay for any transmission expansion or upgrades which may be necessary in order to make long-term firm transmission rights feasible over the entire term of the contract, that expansion or upgrade must be incorporated into the transmission organization's planning process. This will require that the expansion plans that transmission owners submit to the transmission organization incorporate any expansions necessitated by such long-term supply arrangements. We believe that it is important for the regional planning process to take account of any upgrades or expansions of the transmission system that may be required to ensure FTRs needed to support long-term power supply arrangements are available.”

Thus the CAISO proposes new procedures within its planning efforts to address transmission customers (LSEs) requests for CRRs to support long-term power supply contracts when they are willing to pay for the upgrades needed to make those CRRs feasible.

First, the CAISO and PTOs will incorporate into future year congestion studies any long-term power supply information that is voluntarily provided by LSEs. The results of these posted studies could facilitate an LSE's decision to pursue customer funded transmission upgrades to create incremental CRRs for their own use.

Additionally, the CAISO and PTOs, under the oversight of the CAISO, will identify the transmission upgrades that are necessary to ensure the feasibility of the quantity and location of LT-CRRs requested by the transmission customer. The CAISO will require PTOs to incorporate these necessary transmission upgrades into the individual transmission expansion plans submitted to the CAISO, so that the overall CAISO transmission plan will incorporate both the PTO plans and these customer funded upgrades.

9.3.1 Informational Studies on Future Congestion and Transmission Upgrades

In order to provide information to transmission customers about future transmission congestion that may need to be hedged by customer funded transmission projects, the CAISO and PTOs will incorporate information voluntarily submitted by LSEs – such as long-term power supply arrangements -- into future year transmission assessments and congestion studies. These

¹⁴ Transmission projects needed to interconnect new generation projects are identified through the CAISO's Large Generator Interconnection Procedures, and the Interconnection Customer can choose to receive CRRs for these upgrades in lieu of a five-year payback. However, a reliable interconnection and resource adequacy deliverability are the primary design objectives for these upgrades rather than the quantity and location of incremental CRRs.

studies will identify potentially congested paths and transmission upgrades that would mitigate congestion that impacts long term power supply arrangements.

The results of these studies will be publicly available to help any LSE decide to pursue customer funded transmission upgrades for incremental CRRs for their own use. Transmission customers may want to review results of the proposed future year congestion studies to determine whether currently available CRRs will meet their needs for the expected congestion on the planned transmission system.

These comprehensive congestion studies are expected to be performed biennially, with updates if needed during the off-year. The studies will entail generation production simulations on the full WECC network model maintained by the WECC. At the beginning of each study the CAISO and PTOs will update the model to include all transmission projects expected to be in operation during the particular future study years chosen. Long-term power supply information voluntarily provided by LSEs will be used to verify generation development, retirement, and bidding assumptions used in the models and studies.

An economic assessment based on the TEAM methodology would also be performed on the identified upgrades that would mitigate significant congestion for long-term power supply arrangements – so that these upgrades, if determined to be economically justified additions to the CAISO grid, would be proposed in the CAISO Transmission Plan even without a project sponsor or an LSE request.

For LSEs, these studies should provide the best available information about congestion risks on the planned transmission grid and how additional transmission capacity could mitigate those risks of congestion.

9.3.2 Identifying Upgrades Needed for Requested LT-CRRs

When transmission customers make known their needs for transmission upgrades to accommodate LT-CRRs to support long-term contracts at the beginning of the annual transmission expansion planning cycle, CAISO and the PTOs will identify transmission upgrades to satisfy those needs as part of the annual transmission expansion plan.

The new process for transmission upgrade requests to accommodate long-term contracts resembles the generator interconnection process that is currently managed by the CAISO. For example:

- Transmission customers would submit requests for the amount of LT-CRRs needed to support their long-term power supply contract. They could also include one specific transmission upgrade alternative for the ISO and PTOs to consider in its their analysis (e.g. a new transmission line)
- Such requests would be put into a queue for detailed studies to identify the upgrades needed to create the requested quantity of LT-CRRs. Similar to the generator interconnection process, these system impact and feasibility studies assess the impact upon the planned transmission grid and identify the necessary upgrades to create the requested LT-CRRs. The transmission customer submitting the request would pay for the cost of these studies.

In order to coordinate the development of these transmission projects with the CAISO's overall transmission planning process, the CAISO expects that a transmission project queue would be coordinated with the existing generator interconnection queue as well as PTO-sponsored transmission projects.

In accordance to the policies reflected in the generator interconnection procedures, cost responsibility for reliability upgrades -- such as those upgrades needed to correct short-circuit duty problems created by the transmission facilities needed for the requested CRR needs -- would be based on queue position. However, unlike the generator interconnection process, the transmission model used to estimate the quantity of incremental CRRs that would be created would be based on the expected operating dates of the projects rather than their queue positions. Furthermore, the actual quantity of LT-CRRs that would be created would be determined at the time the identified transmission upgrades are permanently energized. (The CAISO does not intend to release incremental CRRs until the incremental capacity of the grid is in service.)

The following explanation outlines how the CAISO's transmission planning process would accommodate transmission customers who are willing to pay for any transmission expansion or upgrades which may be necessary in order to make their requested LT-CRRs feasible over the entire term of their long-term power supply arrangement:

1. Review Existing and Planned Transmission Capability

Initially, the CAISO would encourage any transmission customer to consider whether existing transmission capability makes available enough LT-CRRs or seasonal CRRs (that could be renewable through the Priority Nomination Tier) to meet its needs. The CAISO also would encourage review of the posted results of the future year congestion studies that are outlined in the previous section to determine whether additional facilities are needed to meet the LSE's needs for CRRs.

Assuming the transmission customer has explored the release of currently available LT-CRRs and seasonal CRRs and considered future congestion studies on the planned CAISO grid, the LSE then could submit a facilities request to the CAISO to identify the needed transmission facilities to allow the customer to obtain his desired amount of LT-CRRs at some time in the future.

2. LT-CRR Facilities Request Process

The facilities request process would identify the needed transmission facilities to allow the transmission customer to obtain the desired amount of LT-CRRs, using a transmission model corresponding to the year for which the customer would first like to obtain the CRRs. The transmission customer would also specify the customer's desired year for these CRRs to be available. Upon its request, the customer (LSE) would be given a queue position based on the date of the customer's request. The CAISO, the affected PTO(s) and the customer would participate in a scoping meeting, and then the CAISO and PTO would proceed with a "LT-CRR Facilities Study," with the cost charged to the customer.

3. LT-CRR Facilities Study

The CAISO would perform a In the first phase of the "LT-CRR Facilities Study" by the CAISO would running a number of SFTs on the planned transmission system with the requested LT-CRRs, all previously awarded Incremental CRRs, all currently active LT-CRRs (except any that would become inactive before requested LT-CRRs commence

and other transmission encumbrances. This study would substitute the planned transmission system for the network model used in the SFT. In other words, all CAISO approved transmission projects would be modeled based on their expected operating year. Basically, the similar methodology that will be used to determine incremental CRRs for any merchant project would be utilized in this process for identifying whether the planned facilities would provide sufficient additional capacity to satisfy the LT-CRR request. If the planned system does not provide sufficient capacity, the CAISO will inform the affected PTO(s) of the amount of the deficiency and the identify the limiting system conditions.

In the next phase of the "LT-CRR Facilities Study", the CAISO and PTO(s), in cooperation with the requester and under the CAISO's oversight, will study the limiting system conditions and identify alternative transmission upgrades, including a recommended alternative, to satisfy the LT-CRR request. The CAISO will review the PTO(s) analysis and then repeat the SFT to verify that the recommended alternative would provide sufficient capacity to satisfy the LT-CRR request. The process concludes when the CAISO approves a transmission upgrade plan to provide the requested LT-CRRs and the requester and affected PTO(s) execute a Special Facilities Agreement.

10 Summary of Stakeholder Activities

Stakeholder input has played a critical part in the shaping of this final proposal. The list below identifies the dates on which discussions occurred with CAISO stakeholders regarding Long Term CRR's. The written comments submitted by stakeholders are posted on the CAISO website at: <http://www.caiso.com/1845/1845dca750770.html>

- July 20 - Commission Issued Order
- August 10 - Conference Call conducted on Scoping Process
- August 25 - Comments by Stakeholders submitted
- September 26 – White Paper on Options posted by the ISO
- October 3 - Stakeholder Meeting conducted to consider options
- October 16 - Comments by Stakeholders submitted
- October 18 – Market Issues Forum and Panel Discussion with Board
- November 7 - White Paper posted outlining simplified approach
- November 9 - Stakeholder Meeting conducted (reviewing simplified approach)
- November 20 – Stakeholder Comments submitted on simplified approach
- November 28 - White Paper posted (with additional alternatives)
- November 29 – Stakeholder Meeting conducted (reviewing additional alternatives)
- December 8 – Comments by Stakeholders submitted
- December 15 – Draft White Paper Posted on Recommended Proposal
- December 19 - Stakeholder Conference Call conducted on Draft Recommended Proposal

California ISO

- January 5 – Posting of Revised White Paper on Recommended Proposal
- January 5 – Comments by Stakeholders submitted
- January 8 – Posting of draft Tariff language
- January 9 - Stakeholder Meeting conducted on Recommended Proposal (including review of stakeholder comments)
- January 11 - Deadline for further Stakeholder Comments
- January 16 - Conference Call conducted (reviewing Final Proposal and posted Tariff language)
- January 18 – MSC Conference call conducted (MSC opinion on Final Proposal)