

**California Technical Conference on Wholesale Power Market Design
Panel 1: Congestion Management, Locational Marginal Pricing,
Congestion Revenue Rights**

**Opening Comments of the California ISO
Lorenzo Kristov, Principal Market Design Architect**

1. As most everyone is aware, the ISO's Market Design 2002 (MD02) proposal is centered around the use of the Locational Marginal Pricing (LMP) paradigm in conjunction with source-to-sink Congestion Revenue Rights (CRRs) for congestion management in the ISO's forward and real-time markets. It is important to realize that the primary driver of MD02 has been the need to fix the ISO's original zonal congestion management design and to replace it with a design that respects congestion constraints in a realistic manner, so that forward transmission allocation and pricing will be consistent with the physical flow of electricity in real time and the schedules established in the forward markets will be feasible. The proposed Full Network Model (FNM) provides the needed realism and consistency across market time frames. Given the decision to do bid-based congestion management using the FNM, the proven paradigm for performing this function is LMP.

2. In order to realize the benefits of LMP, the crucial elements are to use the FNM for forward congestion management and to settle supply resources at their nodal prices. It is not nearly so important to settle loads at nodal prices to achieve these benefits. At the same time, there are legitimate concerns on the part of consumers and load-serving entities about the potential for LMP to result in high prices in congested locations. The ISO recognizes also that the reason for such high locational prices goes back to the nature of decisions made by the integrated utilities under the former regulatory framework about how to allocate their investments between new generation and transmission upgrades. The former framework did not contemplate locational pricing for consumers, the unbundling of the generation and transmission components of the electricity industry, or the formation of competitive generation markets. For all these reasons the MD02 proposal includes certain provisions to insulate consumers from high locational prices.

3. The first such provision is load aggregation. All control area loads will be scheduled and settled using three large load aggregation zones defined by the transmission regions of the three major investor-owned utilities. There will be no opting out of this aggregation scheme. Thus all loads within each IOU's geographic footprint, including municipals and direct access customers, will face the same wholesale prices. Participating loads that offer dispatchable demand response will, however, be paid nodal prices for real-time reduction in response to ISO dispatch instructions.

4. The second provision to insulate consumers from high locational prices is CRR allocation. The ISO proposes to allocate CRRs to load-serving entities in appropriate quantities to keep their control area consumers neutral over the year with respect to the congestion charges resulting from LMP. This means that their total annual costs from congestion charges will be offset by their total annual revenues from the CRRs they hold. With this objective in mind, the ISO is now embarking on CRR studies to demonstrate the feasibility of meeting this objective and determine the optimal set of CRRs to allocate to each LSE. The ISO will work closely with the Public Utilities Commission and with other stakeholders in the process of designing and assessing these studies and developing the detailed rules for CRR allocation.

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5. A fundamental principle of CRR allocation is that allocated CRRs actually belong to the consumers themselves. Thus the LSE is really acting as a custodian of the CRRs as the agent who schedules and settles with the ISO. In the event a consumer switches to a different LSE the CRRs will move as well. This principle is one of the main reasons why the ISO proposes to release a substantial share of CRRs through a monthly process, so that entry and exit of loads from the system and switching of consumers among LSEs can be accommodated in changes to CRR allocations without any significant delay. Monthly CRR allocations also enable LSEs to obtain portfolios of CRRs that are consistent with seasonal variations in their use of the grid, while distinct peak and off-peak CRRs allow for short-term cyclical variation in load and supply resource utilization.
6. The ISO also proposes to allocate CRRs to Existing Transmission Rights (ETC) holders who wish to convert, to new Participating Transmission Owners (PTOs) who join the ISO system, potentially to non-converting ETCs (to be discussed in a separate stakeholder process), and to sponsors of transmission upgrades who do not recover their investment costs through a regulated rate-of-return mechanism. Following each allocation process, the ISO will conduct a CRR auction in which all interested and eligible parties may participate.
7. Based on the above discussion, the ISO believes that its proposal to implement LMP and CRRs will solve its long-standing problems with the zonal congestion management design while insulating consumers from the risks of high locational prices and preserving the rights of existing users to utilize the ISO grid.