

Opinion on Recent Changes to the ISO Congestion Revenue Rights Proposal

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Executive Summary

We comment on the changes made to the ISO's proposal for the allocation of Congestion Revenue Rights (CRRs). At the time this opinion was written, a full proposal from the ISO was not available, so we describe features of a proposal we would prefer to see, rather than on the specific ISO proposal. We make three points, each coinciding with an aspect of the evolving ISO proposal. First, we do not believe that an allocation based on grid usage during the historic year 2006 that also accommodates contracts signed during 2006 for delivery in *future* years raises concerns about the CRR allocation process degrading market efficiency or system reliability.

Second, we repeat our desire for smaller load serving entities (LSEs) to have access to long-term CRRs. A feature of the original ISO proposal, the exclusion of trading-hubs as sources of long-term CRRs, although motivated by reasonable concerns, had the unfortunate consequence of limiting the ability of small LSEs to be allocated long-term CRRs. We prefer a solution that disaggregates trading-hub CRRs into bundles of their component parts. This allows firms with trading-hub sources to compete with those holding sources at specific locations to compete on an equal footing.

Last, there are several aspects of the CRR allocation process that create significant uncertainty about its outcome. By linking the allocation of long-term CRRs to the first CRR allocation, the ISO's proposal raises the stakes considerably. Given this uncertainty, we believe that the amount of rights that can be converted into long-term CRRs in the first year should be further reduced beyond the levels contained in recent ISO proposals. This would leave a reserve of long-term rights that could, if necessary, be used to address any perceived inequities in the initial CRR allocation.

1. Introduction

We have been asked to comment on the latest set of revisions to the ISO's proposals for distributing congestion revenue rights (CRRs).¹ Our January opinion concluded that the ISO proposal for Long Term CRRs is a "reasonable allocation process that poses minimal risks to energy and ancillary services market efficiency."² During the intervening months, several changes have been considered and discussed with stakeholders regarding both the initial proposal for Long Term CRRs as well as the ISO's earlier filing on short-term (one-year seasonal and monthly) CRRs. In some areas, such as the allocation of CRRs for merchant transmission facilities and the codification of credit requirements, these changes flesh out details that were missing from the earlier proposals. Other areas represent more of a change in direction from the January proposal.

At the time of this writing, the proposal from the ISO has not been finalized. We are therefore unable to comment on specific elements of the proposal in full detail. In this opinion we outline our views on the potential changes that have been suggested for dealing with these outstanding issues.

The most significant and contentious changes concern the process of qualification for the allocation of rights during the initial phases of the allocation process. Several stakeholders argued that the original source verification reference period contained distortions that made it a poor proxy for either past or future use of the transmission network. In response the ISO changed the reference period to the most recent full calendar year, 2006. Despite this change, some stakeholders still argue that the current methodology produces an unfair CRR allocation. In this opinion we discuss the various definitions of fairness proposed by stakeholders and the circumstances that may lead to CRR allocations that degrade market efficiency or system reliability.

A second change in the ISO proposal concerns the quantity of CRRs that a market participant can source from a trading hub and the fraction of these CRRs that can be converted to long-term congestion revenue rights (LT-CRRs). Our January opinion supported the ISO's decision to exclude CRRs that source at trading hubs from being designated as LT-CRRs because their presence can limit the overall availability of rights. We continue to believe that limiting the amount of LT-CRRs that can be sourced at trading hubs is prudent, particularly during the first few years of the LT-CRR allocation process. We also recognized in our January opinion that a complete prohibition on LT-CRRs that source from trading hubs may significantly disadvantage competitive energy service providers (ESPs) in the LT-CRR allocation process. To ensure that these market

¹ The ISO's complete approach to the definition and release of CRRs is comprised of two major parts. The first part is contained in the ISO's February 2006 Tariff filing for the MRTU market redesign. This part addressed the release of Seasonal (one-year) CRRs and Monthly CRRs, and was conditionally approved by FERC in September 2006, pending certain follow-up actions by the ISO. The second part is the ISO's January 2007 filing on Long Term CRRs which is still pending before FERC. The recent changes discussed in the present opinion affect both parts of the ISO's complete approach to CRRs.

² "Final Opinion on Long Term Congestion Revenue Rights," January 22, 2007, available at <http://www.caiso.com/1b6e/1b6e745340c70.pdf>

participants receive LT-CRRs during the first few years of MRTU, we support the disaggregation of trading hub rights into equivalent bundles of point-to-point CRRs.

2. Perceived Fairness of the CRR Allocation Process

It is important to recognize that the CRR allocation process involves the ISO distributing valuable financial rights among stakeholders and that this allocation process is effectively a zero-sum game. Rights allocated to one market participant cannot be allocated to another.³ For these reasons, the process is bound to be contentious, and complete agreement over what constitutes a fair allocation is almost impossible to achieve. There are many possible definitions of what constitutes a fair allocation of CRRs. Each definition of “fairness” will result in a different allocation of CRRs among market participants. Generally, each stakeholder advocated for the definition of “fairness” that resulted in it receiving the largest share of valuable CRRs from the allocation process.

As noted in the January opinion, our primary concern with the allocation process is whether it harms the efficiency of the ISO’s energy and ancillary services markets. We propose two principles which, if followed, will limit the extent to which an allocation mechanism might harm market efficiency. One principle for ensuring this is to avoid a direct linkage between future market transactions and the assignment of future rights. Such a linkage could distort the investment decisions of a firm because the cost of locating a plant in a congested area would be at least partially offset by the allocation of CRRs from that location to the firm’s load. A second principle is that the allocation of transmission rights, rather than an auction of all rights, helps to guard against the ownership of CRRs enhancing the incentive of market participants to exercise local market power. For this reason, we have consistently supported allocating CRRs to LSEs and have recommended against auctioning the majority of the total CRRs available.

At least four potentially conflicting guiding principles for determining the fairness of the CRR allocation process have been proposed. One principle is based on the goal of avoiding significant wealth transfers between market participants in the transition from the current zonal-pricing market design to locational marginal pricing (LMP) under the Market Redesign and Technology Upgrade (MRTU). This principle is reflected in proposal that links allocations to demonstrated historical commercial use of various transmission network interfaces. At least within the ISO control area, load-serving entities (LSEs) that have been purchasing power from one location and consuming at another do not face the incremental cost of congestion within a zone for such a transaction under the current market design. Under MRTU they will face those costs. Allocating CRRs on this basis provides these LSEs with revenues that offset, at least partially, the increased congestion costs they might experience under MRTU if they continue to utilize the same grid components as before.

³ It is also important to recognize that CRRs are purely financial instruments – the property rights in question are rights to a share of the congestion revenues collected by the ISO. This means that fairness will be judged by the financial value each party receives from its allocated CRRs, not just the MW quantity.

Although the desire to avoid wealth transfers in the transition to MRTU supports allocating CRRs based on historical usage of the grid inside the ISO control area, this logic breaks down for allocating CRRs for imports into California. Under the current market design, LSEs face congestion from purchasing energy at the interties and this congestion can be hedged by purchasing a financial transmission right (FTR) along this transmission path. Consequently, allocating CRRs that source at an intertie based on historical use may provide a benefit to the LSE that it did not have under the current market design. Therefore, the principle of limiting wealth transfers due to the transition to MRTU is consistent with the ISO setting aside some CRR capacity that sources at the interties for an auction mechanism.

A second fairness principle is to link the allocation of rights as closely as possible to *future* usage of the grid. This principle can conflict with our overriding goal of not linking the allocation of rights to supply contracts signed in the future. However, a reference period as close to the present as possible, as the ISO has chosen, addresses this fairness principle without harming efficiency of the energy and ancillary services markets. We do not object to modifications of the source verification process that would allow for the substitution of *future* contracts for *current* contracts, as long as those future contracts were signed during 2006 and specify a future delivery date, source and delivery location, and contract term. The megawatt (MW) nomination from the source of the future contract should be limited by the minimum MW amount of the expiring contract or the new contract. This change is also consistent with a principle of matching allocation to future usage of the network.

A third fairness principle is the match between the share of total congestion refunds received from CRRs and the payments made by the market participant for the usage of the transmission network, *transmission access charge* (TAC) payments. The TAC is collected through volumetric charges, so a distribution of rights that are proportional to the amount of TAC paid by a LSE would effectively be equivalent to assigning each LSE a load-weighted share of each available CRR without regard to verified sources of energy supply contracts. A number of parties, particularly the smaller LSEs, have supported this sort of the allocation process. Several MSC members have previously proposed a version of this CRR allocation process, the “mutual fund of CRRs” approach, as a simplified mechanism for allocation. Such an approach is in line with the TAC-weighted share principle for allocating CRRs.

The final fairness principle is the share of historic contributions to the existing transmission network that a market participant has made. Under this principle, entities that historically paid the most for the existing transmission network would receive the largest share of CRRs. The current source verification portion of the CRR allocation process can be viewed as being consistent with this fairness principle to the extent that historical use of interfaces is proportional to historical payments for the network.

Because each fairness principle emphasizes different features of the CRR allocation process, we expect that each LSE would receive a different set of CRRs under each one. For example, a LSE that has only been in existence for a short period of time

would receive few CRRs under a fairness principle based on historic contributions to the transmission network. On the other hand, if its customer base was growing rapidly it could expect to receive a much larger amount of CRRs under the future usage of the grid fairness principle.

Although the MSC has long-favored simplicity in the CRR allocation process as way to limit the cost to the ISO and market participants of participating in this zero-sum game, we also recognize that market participants will advocate for allocation mechanisms that yield them a larger share of the valuable CRRs and this drift towards complexity will be difficult to prevent. If the CRR allocation mechanism avoids high administrative costs and does not run counter to the two market efficiency principles described above, we do not object to a more complex CRR allocation process that attempts to bridge these competing definitions of “fairness.”

3. Trading Hubs as Sources

The trading hub issue comes down to balancing the needs of smaller ESPs to gain access to the allocation of long-term rights against concerns that the allocation of trading-hub rights, as currently defined, can result in a CRR allocation that does not make the most efficient use of the available transmission network. The latter concern led the ISO to propose, in its Long Term CRR filing, completely excluding trading-hub rights from the long-term CRR allocation process. However, for many ESPs their *only* verified sources held in 2006 were trading hubs. This means that an exclusion of trading-hubs from the allocation of long-term rights could become a de-facto exclusion of these smaller ESPs from the allocation of long-term rights.

To understand the logic of the solutions that were considered, it is important to understand that the ISO’s proposed allocation process for Long Term CRRs, which was just finalized and filed in January 2007, is integrated into the allocation process for one-year seasonal CRRs that was filed almost a year earlier. Specifically, an LSE’s nominations for Long Term CRRs must be selected from among the one-year seasonal CRRs the LSE was awarded in the first two tiers of the seasonal allocation process.

One proposed solution is to limit, in early tiers of the seasonal CRR allocation process, the amounts that LSEs can nominate from *any* source, be it trading-hub or a single location. This helps to preserve “room” for trading hubs to be allocated in later rounds. The ISO would also limit the amount of trading-hub rights that would be eligible for conversion into long-term rights. Because the CRR allocation algorithm in effect gives trading hubs priority over point-to-point requests when both are competing for a constrained path, this may also result in an overall allocation that is weighted towards trading-hubs.⁴ It is very difficult to anticipate exactly how severe this weighting may be.

⁴ The ISO’s defined trading hubs are comprised of up to 400 individual pricing nodes, and therefore typically have small shift factors on any individual transmission constraint. This implies that if there is limited transmission capacity available on a specific constraint, CRR nominations from trading hubs would have the advantage to clear because the objective function for the CRR allocation process seeks to clear as

As an alternative to the solution based upon nomination limits, we strongly prefer an option that involves disaggregating the trading hub rights into bundles of their component point-to-point rights. Such an approach would allow firms with trading hub rights to compete on an equal footing with firms requesting point-to-point rights. It would also allow for alternative “re-bundling” of the rights into new trading hubs that would hopefully not suffer from the same limitations as the currently defined hubs. We are concerned that the allocation of too many long-term CRRs defined from the current trading hubs will “lock in” a substantial portion of the CRR configuration for at least 10 years, and perhaps beyond.

Unfortunately, our understanding is that software and time constraints make our preferred solution difficult if not impossible to implement for an allocation of 2008 rights. If implementation proves to be impossible for the 2008 allocation, we would support the approach based on nomination limits as a starting point and recommend that all trading hub rights awarded in the 2008 process be converted into the component point-to-point rights before the allocation is run for the 2009 year. Those rights that are expiring at the end of year 1 would enter into the nomination process for year 2 as a bundle of point-to-point rights. These would then compete with other point-to-point requests on an equal footing in year 2.

In order to redress any imbalances that result in allocations being too heavily weighted toward trading hubs in year 1 as a result of relying on the nominations limit approach, the process should consider expanding the sources of rights that would be eligible for priority allocation in year 2 beyond just rights that were allocated in year 1. Instead, it may be advisable to also allow specific sources that were verified as sources in 2006 and were nominated by the LSE, but were not awarded rights in the first year. In this way, sources that “lost-out” to the preferences given to trading hubs in year 1 could try again, on a more equal footing in year 2, for an allocation.

We feel that the potential problems posed by trading hubs, and the fact that several options for redressing these problems cannot be implemented in time for the 2008 allocation, provide more reason to limit the allocation of long-term rights in the first year. Such a conservative approach would preserve more flexibility for the ISO to address any perceived iniquities that result from the first year’s allocation. This point is discussed further below.

4. Need for Caution

In spite of the large number of simulation studies performed by the ISO about the impact of LMP, there is still a considerable amount of uncertainty about patterns and magnitude of congestion under LMP. The only thing that is certain about the transition to MRTU is that market participant bidding behavior will change. How much it will change depends on a number of factors such as hydrological conditions in the western US, the

many MWs of CRRs as possible and therefore favors clearing nominations with lower shift factors on overloaded constraints.

level of fixed-price forward contract obligations of the major generation unit owners, the specific LMPs that these forward contracts clear against, the characteristics of the transmission network, and the ownership of CRRs by major generation unit owners. These many sources of uncertainty imply that it is entirely possible that the initial CRR allocation will give some market participants financial windfalls that others will view as excessive.

Because of this risk of large perceived inequities in the initial CRR allocation process, we believe that the process should preserve the maximum amount of flexibility to revise annual CRR allocations. Because LT-CRRs can lock-in a windfall or harmful obligation for 10 years, we strongly support limiting the amount of CRRs that can be converted to LT-CRRs during the first few years of MRTU. Once market participants have a better idea about the patterns and magnitude of congestion under MRTU, the ISO can release more network capacity for LT-CRRs.