



January 16, 2004

Federal Energy Regulatory Commission
Office of the Secretary
888 First Street, N.E.
Washington DC, 20426

**Re: California Independent System Operator Corporation
Docket No. ER02-1656-017**

Dear Secretary Salas:

The ISO hereby submits six copies of its response to the letter issued by Jamie Simler, Director, Division of Tariffs and Market Development – West, on December 16, 2003.

A copy of this response will be posted on the ISO's web site. Copies are being provided to all parties in Docket No. ER02-1656.

Respectfully Submitted,

A large, handwritten signature in black ink, appearing to read 'AJI', is written over the typed name and title of the sender.

Anthony J. Ivancovich
Counsel for the California Independent
System Operator

cc: All parties in Docket No. ER02-1656



January 16, 2004

Federal Energy Regulatory Commission
Attention: J.B. Shipley
Office of Markets, Tariffs and Rates,
Division of Tariffs and Market Development – West
Room 71-61
888 First Street, N.E.
Washington DC, 20426

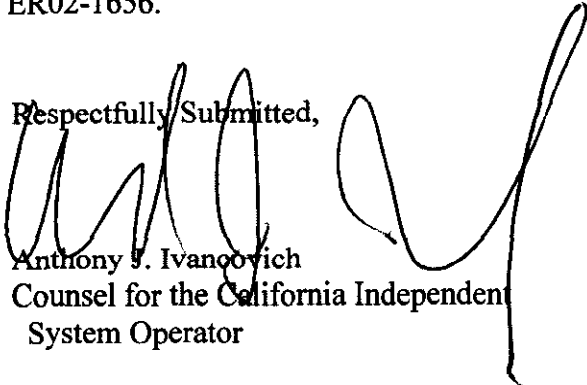
**Re: California Independent System Operator Corporation
Docket No. ER02-1656-017**

Dear Ms. Shipley:

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Respectfully Submitted,


Anthony J. Ivancovich
Counsel for the California Independent
System Operator

Response

The Commission is seeking clarification on two specific aspects of the CAISO's proposed local market power mitigation.

1. A more specific description of the methodology the CAISO will use to determine "competitive" and "non-competitive" paths for application of local market power mitigation.
2. A more specific description of how the CAISO will determine "local transmission constraints in pre-designated local generation pockets"¹

The Commission also asked for a "minimum of three specific examples employing the above methodology".

The CAISO's July 22, 2003 MD02 filing and the supplemental comments provided here offer some comments and examples of the types of analysis and considerations that a competitive assessment should include, some of which are fairly specific (e.g., Residual Supply Index (RSI) analysis). However, the CAISO cannot offer at this time a precise methodology or algorithm for determining whether certain paths are workably competitive, nor does the CAISO believe it is reasonable or appropriate to commit to a precise approach prior to gaining actual experience under the new Locational Marginal Pricing (LMP) design. Actual experience under LMP will likely reveal additional analysis/criteria that have not been considered to date. Moreover, developing methodologies to adequately assess the competitiveness of LMP markets is one of the challenging tasks currently facing the Commission, as well as other ISOs that already have implemented or are planning to implement LMP. The CAISO notes that other ISOs that have designated certain areas or transmission constraints as being subject to local market power mitigation (e.g. PJM, NYISO, NE-ISO) do not have explicit criteria for how they will reassess those designations over time. The CAISO also notes that the competitive/non-competitive path issue applies whether the CAISO implements PJM-type local market power mitigation measures or Automatic Mitigation Procedure (AMP) measures. Thus, it would seem that there is a universal need for the development such criteria. To that end, the CAISO looks forward to working with the Commission and other ISOs to further develop acceptable approaches to performing such assessments.

The CAISO hopes the Commission finds the following comments and clarification helpful and looks forward to discussing these issues further at the technical conference.

1. The methodology the CAISO will use to determine "competitive" and "non-competitive" paths for application of local market power mitigation.

As the CAISO stated in its July 22, 2003 MD02 filing at page 57, footnote 65:

"The initial list of non-competitive paths will be all of the transmission constraints modeled in the SCUC except Path 15, Path 26, the inter-ties, and local transmission constraints in pre-designated local generation pockets (e.g. Miguel substation). As the

¹ The data request incorrectly referred to this issue as "local transmission constraints in pre-designated **load** generation pockets", emphasis added. The word "load" should be replaced by the word "local".

CAISO gains experience with LMP and the full network model, the CAISO will periodically review the competitiveness of transmission constraints and adjust the list of competitive paths accordingly. These assessments will examine whether frequently congested paths that are deemed “competitive” are in fact competitive, and whether congested paths that are deemed “non-competitive” are in fact competitive. The methodology to be used for assessing the competitiveness of managing congestion on particular paths is set forth in Section 2.7 of the Comprehensive Market Design Proposal.”

Section 2.7 of the CAISO Comprehensive Market Design Proposal, which is found in Appendix A of the July 22, 2003 MD02 Filing, states:

“133. The periodic competitive assessment will apply a Residual Supply Index (RSI) test³⁰ for all effective resources that can relieve the congestion on a particular transmission path. If there are three or more suppliers that own effective resources and the RSI is greater than 1.2 for more than 95% of the time within a specified period (e.g., summer on-peak, winter off-peak), the transmission path will be declared competitive for the period. This analysis will be used to evaluate whether paths previously designated non-competitive are in fact workably competitive, and to assess whether paths previously designated competitive are in fact competitive. Following these periodic assessments the [CA]ISO will re-designate competitive and non-competitive paths appropriately.

134. This forward assessment will be updated periodically to reflect changing market conditions, and will be reevaluated after actual market operation in each season. If the actual market outcome is not consistent with a competitive outcome, a transmission path’s competitive status will be revoked and re-designated as non-competitive.”

Footnote 30 of item 133 states:

“The RSI is equal to total supply minus the supply of the single largest supplier divided by total demand [(Total Supply – Largest Supplier)/Total Demand]. An RSI value less than 1.0 indicates demand cannot be met absent the largest supplier (i.e. the largest supplier is pivotal and therefore has market power). Historical studies performed by the [CA]ISO’s Department of Market Analysis have indicated a strong correlation between price-cost markups and RSI values and that there are significant price-cost markups when RSI values are below 1.2.”

The CAISO offers the following additional comments, which may help to further clarify the methodology the CAISO will use to determine “competitive” and “non-competitive” paths for application of local market power mitigation.

- While the RSI approach proposed in the MD02 Filing is one potential approach for assessing the competitiveness of managing congestion across particular transmission paths, its use under a nodal pricing paradigm in a looped network model is untested. There are a number of complexities associated with applying an RSI approach in this context such as quantifying the amount of “effective

supply” available for providing congestion relief, which would necessitate taking into consideration the power transfer distribution factors of individual resources and congestion constraints in other areas of the network that might limit the ability of particular resources to relieve congestion on the path in question. While such complexities may be surmountable, in the end, an RSI analysis could prove to be insufficient to serve as a stand-alone test for market competitiveness.

- The following additional analysis may be necessary to adequately assess the competitiveness of particular transmission paths:
 - A separate assessment of market competitiveness in both the forward and real-time markets. A path may be less competitive in real-time if certain long-start units are not committed in the forward market and, therefore, unable to compete in real-time
 - While much of the market competitiveness assessment will be based on historical analysis, it should also include a forward assessment that examines any expected changes to the transmission network and/or generation. For instance, expected retirements of certain generation units or a change in Reliability Must-Run (RMR) Unit designations may have a significant detrimental impact on the competitiveness of a particular transmission path. Conversely, the addition of new generation in certain locations may actually improve a path’s competitiveness.
- More generally, the CAISO believes that it is premature at this point to commit to a specific formulaic approach for assessing whether congestion on certain congestion paths is workably competitive. There are too many unknowns about how the new market design will actually perform once implemented to pre-commit to specific methodology. The CAISO believes the prudent course is to (1) first gain experience under actual LMP for a full year of operation and (2) limit the competitive paths to the current zonal interfaces and interfaces to other pre-designated generation pockets. During this first year of operation, the CAISO will closely monitor the congestion patterns and work towards developing, through a public process, analytic methods for assessing workable competition based on actual market observations. A full year of operation with the aforementioned competitive designations is a prudent course because of tremendous risk to consumers of the alternative, which is to trust--at the onset of LMP and with very little actual market experience--that congestion across other transmission paths can be managed competitively. If such assumptions are proven false, consumers could be exposed to significant market power abuse. In contrast, the risk of a prudent “show me first” approach is much less, namely the risk that the CAISO may be mitigating for local market power in situations where the congestion can be resolved competitively. In such cases, the harm to the market is that suppliers earn no more than the price set by the variable cost of the marginal supplier. However, this is precisely what one would expect under a truly competitive market in the absence of physical scarcity.²

² Some parties have argued that the prudent approach doesn’t address whether generators that are

- Furthermore, as the Commission is well aware, local market power mitigation is one of the more vexing market design issues facing all ISOs. No ISO has a definitively acceptable and effective approach for assessing the competitiveness of particular transmission paths or particular congested regions. Much more work is needed in this area. The CAISO looks forward to continuing its work with Commission staff and the market monitors of other ISOs to develop more universally acceptable methods to address this important issue.

2. A more specific description of how the CAISO will determine “local transmission constraints in pre-designated local generation pockets”

Section 2.2.6 of the CAISO Comprehensive Market Design Proposal states:

“40. There will actually be two Pre-IFM-RMPM runs, one in which only competitive network constraints⁶ are enforced and a second run in which all network constraints modeled in the FNM are enforced. Comparing the unit dispatch levels between the first and second runs will determine RMR pre-dispatch levels and will identify the units to be subject to local market power mitigation. System market power mitigation (System AMP) will be performed in the first Pre-IFM-RMPM with only the competitive network constraints enforced. The detailed procedures for each Pre-IFM-RMPM run are described below.”

Footnote 6 of item 40 states:

“Initially these will be Path 15, Path 26 and the Inter-ties, plus local transmission constraints in local generation pockets pre-designated as competitive (e.g., Miguel substation). Transmission constraints out of major generation pockets are considered competitive because in a nodal market structure, generators within these pockets will compete for the right to get out of the pocket. The current zonal design creates non-competitive situations in generation pockets in the real-time market because it allows infeasible schedules in the forward market. This will not be the case under a nodal market design. Furthermore, modeling transmission constraints out of major generation pockets in the first Pre-IFM run ensures that any positive incremental dispatches in the second Pre-IFM run, where all transmission constraints are enforced, are due to relieving congestion on non-competitive paths rather than the result of re-

frequently mitigated for local market power are able to recover their fixed costs nor does it address whether there are sufficient price incentives for new investment. In response, the CAISO and other parties have repeatedly offered three points. First, fixed cost recovery is best addressed through long-term contracting. If a resource is providing a critical reliability service that would make it subject to frequent local market power mitigation, load serving entities have a vested interest in making sure the supplier is earning sufficient revenues to remain in operation through either an RMR contract or some other long-term contract. Second, load serving entities have a regulatory obligation to serve load and, therefore, an obligation to make sure adequate infrastructure (generation, transmission, and demand response) is available to reliably serve load. Finally, if there is true physical scarcity, the CAISO’s market design has scarcity pricing rules that will allow prices to rise to the price cap. In any event, as the CAISO pointed out in the July 22, 2003 MD02 Filing and in its September 17, 2003 MD02 filing, the CAISO’s proposal provides ample revenues to suppliers. MD02 Filing at 58-62; CAISO Answer to Protests at 30-37, 78-79.

dispatching infeasible generation schedules from resources located in generation pockets. This initial set of competitive constraints may be expanded after the start of the LMP market. The evaluation process and criteria for designating constraints that are competitive are discussed in the section on Local Market Power Mitigation. A revised set of competitive constraints in the future may include some large load pockets that have sufficient competition among generation owners.”

The CAISO offers the following additional comments about how it expects to determine “local transmission constraints in pre-designated local generation pockets”:

- “Local transmission constraints in pre-designated local generation pockets” are those transmission paths that are congested in generation rich areas (“pockets” of the network where generation within such areas is competing to get out). A classic example of such a constraint is the Miguel substation in the southern portion of the San Diego Gas & Electric Company’s service territory. In theory, because generation within generation pockets is competing to get out, there should be a competitive congestion market. To the CAISO’s knowledge, none of the Eastern ISOs have local market power mitigation measures in the decremental direction (*i.e.*, in generation pockets). Similarly, the CAISO did not propose local market power mitigation in the decremental direction in its MD02 filing. However, it is possible that such mitigation may be needed due to the following reasons:
 - There are significant network loops with the CAISO Control Area and other control areas that are not modeled in the forward energy markets. This may result in high levels of loop flows in particular areas of the CAISO network that may have to be mitigated in real-time through decrementing supply resources. It is possible that certain suppliers may have location market power in providing decremental energy bids to mitigate the real-time congestion caused by these non-scheduled energy flows.³
 - The delivery terms of certain state contracts may reduce incentives for the sellers under these contracts to provide decremental bids for their supply resources, which may make other suppliers pivotal in providing decremental bids. An example is potential decremental bid insufficiency if generation in the pocket has sold forward at a lucrative fixed price in the bilateral market and has specified the generation pocket as the delivery point to the buyer.

In light of these issues, if actual experience indicates a lack of competition in the provision of decremental energy bids, the CAISO may ask for appropriate mitigation to address it.

- An initial determination of “competitive” transmission constraints in local generation pockets will be based on an assessment of intra-zonal congestion

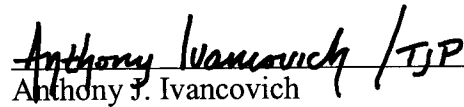
³ This concern is mitigated to some extent by re-bidding activity rules that prevent suppliers from reducing accepted energy bid prices in subsequent markets. However, self-scheduled resources have no accepted energy bids and are able to submit decremental bids at any level above -\$30/MWh in subsequent markets.

patterns under the current market design. Specifically, in the 12 months leading up to implementation of LMP, the CAISO will identify intra-zonal transmission paths that are frequently congested due to an excess of generation trying to serve load by reviewing real-time Out-Of-Sequence (OOS) decremental energy dispatches. Currently, the Miguel substation is the only major transmission constraint in a local generation pocket, but this may change over time. As the CAISO gains experience under LMP, the list of competitive transmission constraints in local generation pockets will be reevaluated based on observed congestion patterns.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010 (2003).

Dated at the City of Folsom in the State of California this 16th day of January, 2004.


Anthony J. Ivancovich
(916) 351-2207