

1. Scheduling Coordinators (“SCs”) can submit forward schedules that cause Intra-Zonal Congestion, either intentionally or unintentionally.
2. Because the ISO must Dispatch market bids to manage this Intra-Zonal Congestion, and because typically only one or at most a few suppliers’ resources can be Dispatched to manage Intra-Zonal Congestion, SCs can submit unreasonably priced bids (i.e., bids that reflect the exercise of local market power) that the ISO must Dispatch to manage the Intra-Zonal Congestion. Current local market power mitigation provisions are woefully inadequate.
3. The ISO cannot Dispatch bids to manage Intra-Zonal Congestion until just before the operating hour or within the operating hour. Managing the Congestion in real time places additional and unreasonable burden on real-time operating staff and creates the undesirable situation in which the ISO can foresee Congestion from forward market Schedules but does not have the tools to deal with such Congestion until real time. Failing to deal with Congestion before it occurs, and then forcing real time operators to deal with such Congestion in addition to performing their other responsibilities, jeopardizes reliable system operations.

To address these problems caused by Intra-Zonal Congestion, the ISO proposed the following provisions in A-50:

1. **Forecast transfer limits.**

The ISO proposed to forecast Intra-Zonal Congestion caused by abnormal system conditions and post transfer limits to the affected SCs two days in advance of the operating day. The ISO proposed to calculate transfer limits only for abnormal system conditions because of concerns that ISO staff would not be able to accurately predict all Intra-Zonal Congestion, including Congestion that arose under normal system conditions (*i.e.*, no Outages). The ISO believed that because it performs power flow analysis to support transmission Outage coordination, it would be able to predict Intra-Zonal Congestion arising as a result of Outages, and would also be able to determine what the transfer limits would be in those situations. While the ISO's proposed Tariff language required it to post limits in instances where the ISO predicted Intra-Zonal Congestion due to abnormal conditions, the language did not preclude the ISO from posting such limits in other circumstances. In the case of the Southwest Generation ("SW Gen") problem (described in greater detail below), the ISO would be able to post limits in advance even though "abnormal conditions" did not exist. The ISO wants to make clear that regardless of whether the Intra-Zonal Congestion is due to abnormal system conditions, and the ISO had posted limits in advance, or whether the Intra-Zonal Congestion is not due to abnormal system conditions, or arose after the forward markets, and the ISO may not have posted limits in

advance, the ISO proposed to mitigate such Intra-Zonal Congestion the same way: by dispatching proxy bids as described in step 3.

The ISO wants to further clarify that the provisions of proposed Amendment No. 50 apply to both incremental and decremental Dispatch.

2. Providing an Opportunity for SCs to Submit Schedules That Do Not Cause Congestion.

After the ISO posted the limits to all affected SCs, the ISO would allow the SCs to self-manage the problem by working among themselves to submit Hour-Ahead Preferred Schedules that complied with the ISO's posted transfer limits. While some suppliers protested that a provision that allows SCs to discuss among themselves how to comply with the ISO's limits leaves the suppliers open to charges of collusion, the ISO does not see how any conversation among SCs designed to comply with the ISO's limits could be considered collusion. As the ISO explains in its Answer to Protests concerning Amendment No. 50, which is being submitted to the Commission today, improper collusion generally occurs only in the context of entities seeking to achieve some unlawful end. Therefore, while a conversation designed to circumvent the ISO's rules could be considered improper collusion, a conversation designed to comply with the ISO's rules should not.

3. Dispatching Cost-Based Proxy Bids.

If the Final Hour-Ahead Schedules do not conform to the ISO's limits, the ISO would create resource-specific proxy bids using known cost information (for thermal units) or the unit's reference price (for non-thermal units). The ISO would then pre-dispatch those proxy bids immediately after Final Hour-Ahead Schedules were issued to move units to operating points that relieved the Congestion. If the ISO increases a unit's output, the ISO would pay that supplier the greater of 110 percent of the bid or the Zonal Market Clearing Price. If the ISO decreases a unit's output, the ISO would charge that supplier the lesser of 90 percent of the bid or the Zonal Market Clearing Price.

The design of A-50 Intra-Zonal Congestion Management procedures was influenced both by input from Market Participants and by practical realities. A-50 was intended to strike a compromise among various interests and still meet the ISO's two primary needs - to manage Intra-Zonal Congestion before real time and to prevent the exercise of local market power. While the ISO may have preferred that all Intra-Zonal congestion be managed in the Day-Ahead time frame, the ISO agreed, in part because of stakeholder feedback, to manage it within the Hour-Ahead time frame. From a practical standpoint, adjusting forward Generating Unit Schedules to prevent those Schedules from causing Congestion would have required the ISO to "force-balance" SCs' portfolios to ensure those portfolios remained in load/generation balance. Force-balancing Schedules can be a very difficult process when Inter-SC trades must be adjusted, because

adjustments to those trades must, by necessity, cascade through multiple SCs' portfolios. Leaving forward Schedules in place and making necessary post-Hour Ahead adjustments by pre-dispatching proxy bids, while forcing the ISO to manage the problem after the Hour-Ahead Market and closer to real-time than the ISO preferred, was a compromise. Specifically, the compromise provided the ISO part of what it needed, *i.e.*, moving the time for managing the problem from within the operating hour to between the Hour-Ahead Market and the operating hour, and gave Market Participants part of what they wanted (*i.e.*, no adjustments in the Day-Ahead).

While the ISO views A-50 as an essential tool for the management of Intra-Zonal Congestion, the ISO recognized that A-50 was not the ideal solution to the Congestion problem created by the addition of new Generating Units in Mexico, Southeast California and in Arizona (which the ISO will refer to as the "Southwest Generation" or "SW Gen" problem²). First, A-50 was crafted to address the Intra-Zonal Congestion problems already confronting the ISO. Such problems typically occur in a few hours on some days but are not the 12-hour a day, day-in, day-out type of problem that the ISO expects the SW Gen problem to be. Second, the vast majority of Intra-Zonal Congestion arises from Generating Units within the ISO Control Area and, for the most part, is not significantly affected by power flowing in to the ISO Control Area from

² The ISO acknowledges that the problem is caused both by new generation and by limited transfer capability through the 500/230 kV transformer bank at Miguel Substation. Some parties will likely refer to this problem as the "Limited Transfer Capability at Miguel Substation" problem, though the new generation creates congestion not only at Miguel but within the Imperial Irrigation District's system. The ISO proposes to call this the SW Gen problem not to assign blame to any particular party but to use the shortest notation to describe the problem.

neighboring Control Areas. However, power imported from Arizona on the Southwest Power Link greatly contributes to the SW Gen problem. These two imminent problems left the ISO with the following choice: (1) file A-50 as soon as possible, acknowledging its limitations, so that if A-50 was approved, the ISO would at least have a tool to apply both to the new generation connecting at Imperial Valley to mitigate Congestion before real time, though not in the Day-Ahead time frame, and prevent the possible exercise of local market power, as well as deal with all other instances of Intra-Zonal Congestion; or (2) try to modify A-50 to deal with the SW Gen problem and assume the risk that delaying the filing of A-50 would force the ISO, starting June 1, to manage what it believes will be a huge daily problem under the current rules.³ The ISO opted for the former scenario. While A-50 is not the ideal solution for the SW Gen problem, the ISO believes A-50 is sorely needed for other Intra-Zonal Congestion problems. As such, delaying the filing of A-50 just because of the SW Gen problem would have undermined the ISO's goal of having a tool to manage Intra-Zonal Congestion during the summer peak season. The ISO requested a technical conference as part of its A-50 filing to try to develop a solution to the SW Gen problem as quickly as possible, and greatly appreciates the Commission's and its Staff's efforts to convene and attend the technical conference. The ISO also greatly appreciates the Commission Staff's willingness to consider additional comments

³ Specifically, under the current rules in which local market power is treated under the Automated Mitigation Procedures, suppliers can bid up to \$49.99/MWh above their reference price without the possibility that they would trigger local market power mitigation. Moreover, the current local market power mitigation measures do not effectively address the "DEC" game. Suppliers with local market power can simply bid negative \$30/MWh to "DEC" their units and force the ISO to pay them such amounts. Finally, the current rules force the ISO operators scramble in real time to manage Intra-Zonal congestion.

and to provide the opportunity to submit comments and reply comments on the technical conference.

II. COMMENTS

a. Extent of the Intra-Zonal Congestion Problem

At the request of Commission staff, the ISO has identified those areas in which the ISO currently has to manage Intra-Zonal Congestion. Those areas are shown in **Attachment A**.

b. Criteria

The ISO believes that the solution to the SW Gen problem must meet the following criteria (listed in roughly descending order of importance):

1. Be implemented as soon as possible.

The new generation in Mexico is slated to begin commercial operation on June 1, 2003. As such, any measure must be implemented as close to the scheduled on-line date as possible.

2. Resolve Congestion in the Day-Ahead Time Frame.

While the ISO was prepared to mitigate Intra-Zonal Congestion immediately after the Hour-Ahead Market as proposed in A-50, the ISO expected that the magnitude and frequency of Intra-Zonal Congestion that would be dealt with through A-50 would not be nearly as severe of the Congestion that is now projected to be caused by the SW Gen problem. It is imperative that Congestion as severe and frequent as that expected from the SW Gen problem

must be shifted to the Day-Ahead time frame to relieve the burden on real time operations personnel.

3. **Prevent the exercise of local market power.**

Regardless of the historic costs of Intra-Zonal Congestion, the flaws in the current market design must be corrected as quickly as possible to prevent these flaws from being exploited by the new Generation coming on-line. In that regard, the new Generators may be able to exercise local market power with respect to “DEC” bids. Under the current rules, the Generators could bid supply into the Day-Ahead market, creating Congestion, and then submit negative \$30/MWh bids because there could be limited, if any, competition in the “DEC” market. As the California crisis of 2000-2001 clearly taught, there is every reason to deal with a potential problem before it becomes an expensive crisis. Should the Generators bid negative \$30/MWh, the ISO estimates that the SW Gen problem could result in more than \$4 million per month in Congestion costs. An ounce of prevention is much more than worth a pound of cure, both in regards to protecting consumers from unjust and unreasonable rates and to restoring lost confidence in wholesale electricity markets.

4. **Minimize the effects on ISO personnel and systems and the implementation costs, including minimizing modifications that will be “sunk” when the ISO moves to its new market design.**

Any changes to the ISO's existing systems – which the ISO intends to abandon when it moves to the new MD02 market design – will have to be made by the same human resources that are currently working to develop the ISO's MD02 market redesign. Changes to the current system will be obsolete soon after they are made.

5. **Transparently and equitably allocate the scarce transmission capacity.**

While the ISO would, in a perfect world, allocate transmission using market mechanisms, the transmission could be allocated administratively or by agreement until long-term market mechanisms can be put in place.

6. **Minimize the effects on existing Firm Transmission Rights (FTRs) and Existing Transmission Contract rights (ETCs).**

The Commission has directed the ISO to honor ETCs, and the ISO has already auctioned FTRs that will be in place through March 31, 2004 on the Southwest Power Link.

c. **Scenarios**

The ISO presented the following scenarios for discussion at the Technical Conference. The ISO has not yet fully developed all of the details for each of the scenarios. As the ISO considered each scenario, it considered the ramifications of implementing each scenario both as a stand-alone solution to the SW Gen problem and as a ISO Control-Area wide solution to other problems that, like the SW Gen problem, may involve Intra-Zonal Congestion created or exacerbated by

resources outside the Zone. Although no scenario completely meets all of the ISO's proposed objectives, for the reasons set forth below, the ISO's preferred scenario is Scenario No. 2 in conjunction with Scenario No. 5.

1. **Use existing methods.**

The ISO lists this as a scenario, but does not believe that it is a viable scenario. Under this scenario, Schedules from the SW Generators and import schedules at Palo Verde that exceeded the transfer capability of the Miguel bank would not be reduced in the Day-Ahead Market. Instead, the ISO would Dispatch unscreened or unmitigated Supplemental Energy or Adjustment Bids in real-time to manage the Congestion. This scenario is not viable because: (1) it does not reduce or eliminate the Congestion before real-time; and (2) it does not eliminate suppliers' ability to exercise local market power, since the bids the ISO must Dispatch are not mitigated and therefore may reflect the exercise of local market power. Until the Commission approves an interim solution to this problem, and until the ISO implements that solution, the ISO will be forced to apply Scenario 1 to the problem. The following table shows, in a "scorecard" format⁴, how well Scenario 1 meets the ISO's criteria.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	0	Currently in place.
Resolve Congestion in the Day-Ahead time frame	0	Intra-Zonal Congestion is not considered in forward markets
Prevent the exercise of local market power	0	ISO must use market bids from suppliers who are in a position to exercise market power
Minimize costs and effects on existing systems	0	Requires no changes to existing systems
Equitably allocate transmission	0	Allows infeasible Schedules
Minimize effects on existing FTRs and ETCs	0	No effect.

Table 1 – How scenario 1 meets the ISO’s criteria

2. **Apply A-50 as filed.**

A-50 is needed for the emerging Intra-Zonal Congestion situations throughout the State, however this scenario would only re-Dispatch the SW Generators to resolve the Intra-Zonal Congestion. Import schedules at Palo Verde, though contributing to the Congestion at Miguel, would not be affected. Under this scenario the ISO could post forecast transfer limitations for the SW Generators the day before the Day-Ahead market for the relevant day⁵. SCs then could submit Preferred Hour-Ahead Schedules that conform to these limits. If they do not, the ISO would calculate cost-based proxy bids for Generating Units that can effectively resolve the problem and pre-Dispatch those bids immediately after Final Hour-Ahead

⁴ The “-1 / 0 / +1” column indicates whether the ISO considers the scenario to be worse than the current system (-1), no change from the current system (0) or an improvement over the current system (+1).

Schedules are issued to move the SW Generators to operating points that relieve the Intra-Zonal Congestion. The ISO believes this scenario could be in place during the summer if the Commission approves it by June. The ISO believes that this solution would mitigate the SW Gen problem, at least until the point that additional generation comes on in this area outside the ISO Control Area. At that point, fully curtailing the generation in the ISO Control Area still might not eliminate the Congestion at Miguel. While this solution deals with Congestion before the operating hour, and mitigates the exercise of local market power, the ISO believes that this is a suboptimal solution to the SW Gen problem, though, because it does not deal with the problem in the Day-Ahead market. Moreover, because A-50 applies only to Generators with Participating Generator Agreements, not to import suppliers, it is not an equitable solution. The ISO requested a technical conference specifically because of the problems associated with applying A-50 to the SW Gen problem with the desire that a better, more equitable scenario that meets the ISO's criteria could be found. In sum, Scenario 2 addresses the SW Gen problem, but not fully to the ISO's satisfaction, because it does not deal with the problem in the Day-Ahead time frame. The following table shows,

⁵ The language proposed in A-50 required the ISO to post transfer limits for Congestion arising from abnormal system conditions but did not preclude the ISO from posting limits even if the Congestion was not due to abnormal system conditions.

in a “scorecard” format, how well Scenario 2 meets the ISO’s criteria.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	-1	While not currently in place, the ISO estimates this scenario could be implemented within Summer 2003 if approved immediately
Resolve Congestion in the Day-Ahead time frame	+1	Better than current systems, since it provides an opportunity for market Participants to resolve the Congestion in the forward markets; if the Congestion is not self-managed, it is dealt with after the Hour-Ahead and before the operating hour, but not in Day-Ahead time frame; the bid mitigation provisions of A-50 should take away incentives for Generators to over-schedule in the forward markets and therefore reduce the amount of real-time adjustments needed
Prevent the exercise of local market power	+1	Dispatches units based on cost-based proxy bids if Congestion is not self-managed
Minimize costs and effects on existing systems	0	ISO already has a system to generate proxy bids
Equitably allocate transmission	0	Continues to allow infeasible forward market Schedules
Minimize effects on existing FTRs and ETCs	0	No effect

Table 2 – How Scenario 2 meets the ISO’s criteria

3. Using Market Bids Where Possible.

The SW Gen problem is unlike most Intra-Zonal Congestion situations because it involves Congestion caused not only by Generating Units, but also by System Resources (imports from another Control Area). Most Intra-Zonal Congestion does not lend itself to a market solution because there are not enough suppliers to provide sufficient competition to establish a market solution to the problem. In this case, which involves multiple SCs scheduling power from the Generation in Mexico, and other SCs scheduling power into California from Palo Verde, there may be sufficient competition to allow a market solution, but only if both groups of suppliers are part of the market solution. If the Commission were to adopt this approach, the ISO strongly recommends that some kind of competitive screen, e.g. looking at the supply of bids from all resources, both inside and outside of the ISO Control Area that can affect the Congestion, be established to check for workable competition before automatically assuming that such competition exists. The consequences of assuming workable competition where none actually exists are dire.

In general, this scenario would work this way. The ISO would gather market bids from those resources in the ISO Control Area and from suppliers scheduling into California at Palo Verde. In the Day-Ahead time frame, the ISO would collect and use these bids to produce feasible Final Day-Ahead schedules. In the Hour-

Ahead time frame, the ISO would collect and use these bids one of two places: (1) immediately after Final Hour-Ahead Schedules are issued, which would require Market Participants to submit Supplemental Energy bids to be considered in this process before the current deadline for submitting such bids (sixty minutes before the operating hour), or (2) after the current deadline for submitting Supplemental Energy bids. The ISO would apply some yet-to-be-determined test to verify that the stack of bids represented workable competition. If the bid supply demonstrated that there was workable competition, the ISO would use these bids in merit order in the Day-Ahead market to establish final Day-Schedules that did not cause Congestion, or Dispatch those bids immediately after the Hour-Ahead market to move units from their Final Hour-Ahead Schedules to operating points that resolved the Congestion. If there was not workable competition, the ISO would establish cost-based proxy bids for Generating Units inside the ISO Control Area and dispatch those cost-based bids, along with the market bids from System Resources at Palo Verde, in merit order to alleviate the Congestion. The ISO does not propose to establish cost-based proxy bids for System Resources, because those resources are not associated with any given physical unit and therefore do not have verifiable costs.

Though the details of this scenario have not been fully developed, the potential advantages of this solution are as follows: (1) it offers a market solution, where market participants can compete for the scarce transmission; and (2) it could be conducted in the Day-Ahead time frame, though, like Option 5 discussed *infra*, may be enforced in the Hour-Ahead Market. One major disadvantage of this solution is that it would require the ISO to create additional computer systems to collect and scrutinize the bids to assess competitiveness, and then to either use those bids to modify Day-Ahead Schedules (if done in the Day-Ahead time frame) or pre-dispatch the bids after the close of the Hour-Ahead market (if done in the Hour-Ahead time frame). Such new systems will likely take months, not weeks, to develop. The following table shows, in a “scorecard” format, how well Scenario 3 meets the ISO’s criteria.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	-1	The ISO cannot estimate how long it would take to implement this scenario because the details have not yet been developed, but believes the development time to be months, not weeks
Resolve Congestion in the Day-Ahead time frame	+1	Better than current systems, since it provides an opportunity for market Participants to resolve the Congestion in the forward markets
Prevent the exercise of local market power	+1	If sufficient competition exists, market power should be mitigated; if not, the ISO would Dispatch units based on cost-based proxy bids; still requires Scenario 2 to fully mitigate market power in real time
Minimize costs and effects on existing systems	-1	Requires the ISO to develop a test to assess competitiveness, and computer systems to adjust Schedules and to calculate and settle proxy bids
Equitably allocate transmission	+1	Allocates transmission based on market bids when sufficient competition exists
Minimize effects on existing FTRs and ETCs	0	No effect

Table 3 – How Scenario 3 meets the ISO's criteria

4. **Creating new Congestion Zones.**

The ISO Tariff indicates that the ISO can create new Congestion Zones if it foresees significant Congestion arising as the result of changes to the bulk power system. The ISO began operation with four Congestion Zones – two active Zones, SP15 and NP15, and

two inactive Zones, San Francisco and Humboldt⁶. Initial studies run by the ISO to investigate this scenario indicate that a new Zone or Zones would create unacceptably large price dispersions⁷ in the current SP15 Zone unless the market separation rule, which prevents the ISO from making trades between SCs, is also relaxed. Relaxing the market separation rule is not a trivial undertaking; the ISO's MD02 design does not contemplate doing so until the integrated forward market in Phase 2 is implemented⁸. Additionally, the ISO has not determined if the Congestion Zones that must be created are workably competitive. If new Zones are not workably competitive, creating them would only create additional opportunities for suppliers to exercise local market power. Critically, this scenario could not be implemented quickly. The ISO estimates it would take at least a year to create new Zones and the bidding and settlement systems to support them. The ISO is very reluctant to create additional Zones simply to perpetuate the existing flawed Congestion Management system that it intends to replace as part of the MD02 program. The following table shows, in a "scorecard" format, how well Scenario 4 meets the ISO's criteria.

⁶ Congestion Zones remain Inactive if they are not workably competitive.

⁷ Since the ISO pays all Generators within a Zone the same Zonal price, large price dispersions within a Zone are unacceptable. Consider the following example: If the price at node A within Zone 1 is \$10/MWh, and the price at node B (also within Zone 1) is \$50/MWh, the Zonal average price would be \$30/MWh. While the Generator at Node A would be happy to be paid \$30/MWh, the Generator at Node B would not be happy to be paid only \$30/MWh. Paying both Generators \$50/MWh would be very expensive.

⁸ Currently estimated for just prior to Summer 2004.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	-1	The ISO estimates this scenario would take a year or more to implement
Resolve Congestion in the Day-Ahead time frame	+1	Deals with Congestion in the Day-Ahead time frame
Prevent the exercise of local market power	+1	Assuming the newly created Zones were workably competitive; still requires Scenario 2 to fully mitigate market power in real time
Minimize costs and effects on existing systems	-1	Requires the ISO to develop new Zones and the supporting systems to use them; perpetuates and complicates a flawed Congestion Management system which the ISO has indicated it intends to replace.
Equitably allocate transmission	+1	Allocates transmission based on market bids
Minimize effects on existing FTRs and ETCs	-1	Would greatly effect the existing FTRs, which give rights from Palo Verde into SP15; new FTRs between the new Zones would have to be created and auctioned.

Table 4 – How Scenario 4 meets the ISO’s criteria

5. Administratively Allocating Transmission Between Palo Verde Imports and SW Generation.

Under this scenario, the ISO would limit how much power could be Scheduled from the SW Generation after evaluating the level of imports Scheduled at Palo Verde. The quickest and simplest way to accomplish this is to first allow Palo Verde imports to Schedule up to the Inter-Zonal limit (not the Intra-Zonal limit) in the Day-

Ahead Market. The ISO would then determine the maximum total amount of power that could be Scheduled from the SW Generation after the Day-Ahead market considering the Intra-Zonal limitation at Miguel. The ISO would allocate this remaining available capacity to each SW Generating Unit by first determining unit-specific Scheduling limits based on the SW Generation's cost-based proxy bid prices. The ISO would then communicate such limits to the applicable SW Generator and enter the unit-specific limits into the ISO's Outage Scheduler. Entering the limits into the Outage Scheduler forces the Generators to submit Preferred Hour-Ahead Schedules that comply with these limits. To minimize the possibility that the Congestion would be re-created in the Hour-Ahead Market, the ISO would not allow imports beyond what were already Scheduled in the Day-Ahead market to be Scheduled in the Hour-Ahead Market. Like Scenario 2 (A-50), this simple approach of allocating any "leftover" transmission to the SW Generators would allocate all necessary curtailments to the SW Generators. If the SW Generators and Palo Verde import suppliers could agree on a different allocation methodology (e.g., sharing both the available transfer capability at Miguel and the curtailments), the ISO could enforce a different allocation by reducing the Available Transfer Capability on the Palo Verde Branch group, allocating transfer capability held back from the Palo Verde importers to the SW

Generators. The ISO should not be asked or required to determine a different allocation of transmission capacity between the SW Generators and the Palo Verde import suppliers. The affected parties themselves must agree on a different allocation, or the Commission must order a different allocation. Scenario 5 would require the least changes to ISO systems. Consequently, the ISO believes this scenario and Scenario 2 are the only scenarios it could implement in Summer 2003. Scenario 5 has the added benefit of allowing the ISO to deal with the Congestion before the Hour-Ahead Market. Like Scenario 2, the disadvantage of this scenario is that it would give preference to the Palo Verde importers unless a different allocation between import suppliers and SW Generators was ordered or could be agreed to. Despite the near-term advantages of this scenario, the ISO considers this Scenario to be a suboptimal long-term alternative because it is not a market-based approach to the problem. The following table shows, in a “scorecard” format, how well Scenario 5 meets the ISO’s criteria.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	-1	The ISO cannot state the exact timing of this scenario, because the details have not been fully worked out, and the allocation of transmission between importers and Generators has not been determined; this scenario would require the fewest changes to existing systems
Resolve Congestion in the Day-Ahead time frame	+1	Deals with Congestion in the Day-Ahead time frame (Generating Unit limits are enforced through Outage Scheduler in the Hour-Ahead Market)
Prevent the exercise of local market power	+1	Still requires Scenario 2 to fully mitigate market power in real time
Minimize costs and effects on existing systems	0	Requires the least amount of changes to existing systems
Equitably allocate transmission	-1	At best, allocates transmission based on agreement between the parties; at worst, gives preference to import suppliers
Minimize effects on existing FTRs and ETCs	0	If full preference is given to Palo Verde imports, there would be no effect on FTRs and ETCs

Table 5 – How Scenario 5 meets the ISO’s criteria

6. Implementing Locational Marginal Pricing (LMP) using a full network model.

The ISO would use a full network model and modify schedules based on LMPs to produce feasible Schedules in the Day-Ahead Market. This scenario by itself is not a panacea. Some additional

means to effectively mitigate local market power must still be implemented, because local market power can still be exercised even in a LMP paradigm. Finally, the ISO estimates that it cannot implement this scenario until late 2004. So, while this scenario is the most promising for the long-term, it is not available in the short-term. The following table shows, in a “scorecard” format, how well Scenario 6 meets the ISO’s criteria.

Criteria	-1/0/+1	Reason
Be implemented as soon as possible	-1	The ISO estimates this scenario cannot be implemented until late 2004
Resolve Congestion in the Day-Ahead time frame	+1	Produces feasible Day-Ahead Schedules
Prevent the exercise of local market power	+1	Still requires Scenario 2 to fully mitigate market power in real time
Minimize costs and effects on existing systems	-1	Requires the ISO to develop brand new systems as part of the MD02 effort
Equitably allocate transmission	+1	Allocates transmission based on market bids
Minimize effects on existing FTRs and ETCs	-1	Requires the ISO to develop new FTRs based on a nodal Congestion Management design

Table 6 – How Scenario 6 meets the ISO’s criteria

d. Need for real-time mitigation

Regardless of which of these scenarios are chosen, any scenario that deals with Congestion of this magnitude in the Day-Ahead time frame – as the ISO greatly prefers – must be complemented with a means to mitigate bids and Dispatch such mitigated bids in real-time if necessary. No forward market solution can completely accurately predict Congestion, nor can it account for

unforeseen Outages that may create Congestion in real-time, *i.e.*, Congestion that was not forecast in the Day-Ahead time frame. Scenario 2 includes such real-time mitigation; Scenarios 3, 4, and 5 do not. Therefore real-time mitigation, *i.e.*, Scenario 2, must be adopted in addition to whatever other solution is ultimately adopted.

e. ISO Preferred Scenario

First, the ISO strongly urges the Commission to approve Scenario 2, *i.e.*, A-50. A-50 provides the ISO with the interim tools necessary to manage Intra-Zonal Congestion other than Congestion caused by the SW Gen problem. Furthermore, the real-time provisions of A-50 are needed regardless of the other scenario adopted to manage Intra-Zonal Congestion that is not managed in the forward markets due to forecast error or unforeseen circumstances.

In addition, the ISO urges implementing Scenario 5 to assist in addressing the SW Gen problem. While Scenario 5 does not allocate transmission based on market mechanisms, it meets the ISO's other criteria: it can be implemented more quickly than other scenarios, it mitigates market power, deals with the Congestion in the Day-Ahead time frame (the limits are determined in the Day-Ahead time frame but are enforced in the Hour-Ahead time frame), and minimizes the effects on existing systems and ISO personnel.

The ISO strongly opposes Scenario 1, which simply perpetuates the current Intra-Zonal Congestion Management problems. Likewise the ISO opposes Scenario 4, which cannot be implemented quickly and would require substantial changes to systems already slated to be replaced. Because the ISO

cannot yet fully estimate how long it would take to implement Scenario 3, but believes that scenario would take months, not weeks, to implement, it recommends against this scenario as well.

f. Phantom Congestion.

Some conference participants asserted that any solution to the SWGen problem must also address the problem of “Phantom Congestion” *i.e.*, transmission the ISO reserves in the forward markets to honor ETCs but which ultimately goes unused in real time⁹. While the ISO acknowledges that Phantom Congestion is a real problem that has troubled the ISO since its inception, and could bear on this particular problem because some ETCs are scheduled on the Southwest Power Link, it is a problem beyond the scope of the SW Gen problem and cannot be resolved in this proceeding.

g. Interconnection Process

The SW Generators were interconnected under San Diego Gas & Electric Company’s interconnection procedures. Under the ISO Tariff (as modified by Amendment No. 39), Generators connecting new Generator Units to the ISO Controlled Grid are required to make transmission reinforcements necessary to meet the transmission system’s “reliability needs”. Transmission reinforcements required for “reliability needs” include items such as replacing circuit breakers whose short-circuit duty was exceeded due to the new Generating Unit. Such items would be required even if the Generating Unit was connected to the grid and generating no power, *i.e.*, zero MW. On the other hand, the ISO Tariff’s

⁹ Need to indicate how many ETCs are sold on PV branch group.

interconnection procedures do not require that the generators make the transmission reinforcements necessary to deliver power to load. As a result, new Generation can create large amounts of Congestion. This, of course, is the case for the Generation connecting along the US/Mexico border in California and in other areas of the Southwest. This problem, where Congestion resulting from new Generation may degrade operating reliability and place a large financial burden on transmission customers, highlights the need for the Commission to address these concerns in the generator interconnection policy rulemaking. The ISO believes that it is critical that the Commission's new generator interconnection policy be structured so that the right economic signals are sent to Generators to encourage Generators to locate their Generation so that the Generating Units can deliver their power without placing inappropriately large transmission expenditures on end-use customers.

h. Summary

For the reasons detailed above, the ISO urges the Commission to approve Scenario 2 (A-50), which will allow the ISO to deal with Intra-Zonal Congestion and, as described above, deals with the SW Gen problem, though not optimally. A-50 is also needed to complement any approach that manages Congestion in the Day-Ahead time frame, because no forward market Congestion Management system can fully mitigate all Congestion. The ISO also urges the Commission to adopt Scenario 5 to deal with the SW Gen problem until a stable long-term approach can be implemented. Scenario 5 is the preferred approach because it can be implemented the soonest, has the least effect on existing systems, FTRs

and ETCs, deals with Congestion in the Day-Ahead and Hour-Ahead time frames, and mitigates local market power. The ISO recommends the Commission reject Scenario 1 for failing to resolve market power or to manage the problem before real time; reject Scenario 3 as complex and unavailable within a reasonable time frame; reject Scenario 4 as unavailable within a reasonable time frame and for perpetuating the existing flawed Congestion Management approach; and reject Scenario 6 as being unavailable within a reasonable time frame, though Scenario 6 is the ISO's preferred long-term solution to all Congestion problems.

The ISO also urges the Commission to consider delivery issues in the rulemaking on generator interconnection policy.

The ISO again thanks Commission Staff for facilitating the Technical Conference and allowing additional input.

Respectfully submitted,

Anthony J. Ivancovich,
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Attorney for the California Independent
System Operator Corporation

Filed: May 6, 2003



May 6, 2003

The Honorable Magalie Roman Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

**Re: California Independent System Operator Corporation
Docket No. ER03-683-000**

Dear Secretary Salas:

Enclosed for electronic filing please find Comments of the California Independent System Operator Corporation on the May 1, 2003 Technical Conference in the above-referenced docket.

Thank you for your assistance in this matter.

Respectfully submitted,

Anthony J. Ivancovich
Counsel for The California Independent
System Operator Corporation

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 the above-captioned docket.

Dated at Folsom, California, on this 6th day of May, 2003.

Anthony J. Ivancovich

ATTACHMENT A – INTRA-ZONAL CONGESTION AREAS AS OF MAY 5, 2003

Generation Project	Developer	Transmission Owner	Construction Status	Congestion/Issues Problems
Avenal Energy Center	Duke	PG&E	On Hold	Potential and/or occasional congestion
Blythe Energy Project	FPL-Blythe Energy	WALC	Complete	Potential and/or occasional congestion
Border	Cal Peak	SDG&E	Complete	Potential and/or occasional congestion
Carbazon Wind Generation	Cabazon Wind Partners	SCE	Complete	Light Spring and Summer congestion can happen on Devers Leg and other 115kV lines
Central La Rosita II, Phase 1	Intergen	SDG&E	Complete	Potential and/or occasional congestion
Central La Rosita II, Phase 2	Intergen	SDG&E	Complete	Daily congestion
Chowchilla #2	Neo Corporation	PG&E	Complete	Occasional congestion during summer off-peak, (< 200 hr/yr) after Wilson-Le Grand 115kV line re-rated @ 4 ft/s. If re-rate is not done, daily congestion amounting to < 1000 hr/yr.
Ciclo Combinado Mexicali	Intergen	SDG&E	Complete	Daily congestion
Contra Costa Unit 8	Mirant	PG&E	On Hold	Congestion possible.
Daggett Generation Facility	Mirant	SCE	Not Started	Yes.
Delta Energy Center	Calpine	PG&E	Complete	Potential and/or occasional congestion
East Altamont Energy Center	Calpine	WAPA	Not Started	Spring conditions
El Cajon	Cal Peak	SDG&E	Complete	Yes
Feather River Energy Center	Calpine	PG&E	Complete	Daily fall/winter/spring peak congestion anticipated, less than 200/yr.
Fresno Cogen Expansion	Fresno Cogen Partners, LP	PG&E	Not Started	Anticipate less than 1% congestion during summer off-peak. Developer proposes to use congestion management.
Gilroy Energy Center units 1&2	Calpine	PG&E	Complete	With third unit, daily congestion anticipated (< 4000 hrs/yr.) for Llagas-Metcalf 115kV lines; Special Protection Scheme proposed.
Henrietta Peaking Project - Unit 1	GWF Energy	PG&E	Complete	Occasional congestion during summer off-peak, < 100 hr/yr.
Henrietta Peaking Project - Unit 2	GWF Energy	PG&E	Complete	Occasional congestion during summer off-peak, < 100 hr/yr.
HEP Peaker Plant	GWF Energy, LLC	PG&E	Complete	Occasional congestion during summer off-peak, < 100 hr/yr.
King City Energy Center	Calpine	PG&E	Complete	May be congestion with extreme low load & high generation.
Midway Sunset Cogeneration Company	Midway Sunset Co-gen. Company	PG&E	On Hold	Yes until upgrades installed
Montezuma Hills Wind Project	EnXco USA, Inc.	PG&E	Not Started	Congestion possible
Morro Bay Modernization Project	Duke	PG&E	Not Started	Potential and/or occasional congestion
Otay Mesa	Calpine	SDG&E	10% Complete	May cause congestion before Miguel-Mission 230 kV #2

ATTACHMENT A – INTRA-ZONAL CONGESTION AREAS AS OF MAY 5, 2003

Generation Project	Developer	Transmission Owner	Construction Status	Congestion/Issues Problems
				line is complete
Panoche	Cal Peak	PG&E	Complete	Summer peak congestion, facilities may have been already upgraded
Riverview Energy Center (GP Antioch)	Calpine	PG&E	Complete	Potential and/or occasional congestion
Russell City Energy Center	Calpine	PG&E	On Hold	Potential and/or occasional congestion
SPI Lincoln Co-Gen	Sierra Pacific Ind.	PG&E	Not Started	Yes
Tehachapi 1 (Wind)	PowerCom	SCE	Complete	Yes
Termoelectrica De Mexicali	Termoelectra De Mexicali	SDG&E	Complete	Daily Congestion
Tesla Power Plant	FPL Energy	PG&E	On Hold	Will create congestion on 230 kV system
Tracy Unit 1 Peaking Project	GWF	PG&E	Complete	Slight summer congestion
Tracy Unit 2 Peaking Project	GWF	PG&E	Complete	Slight summer congestion
Wellhead/Gates	Wellhead	PG&E	Complete	Summer peak congestion
Wellhead/Panoche	Wellhead	PG&E	Complete	Summer peak congestion