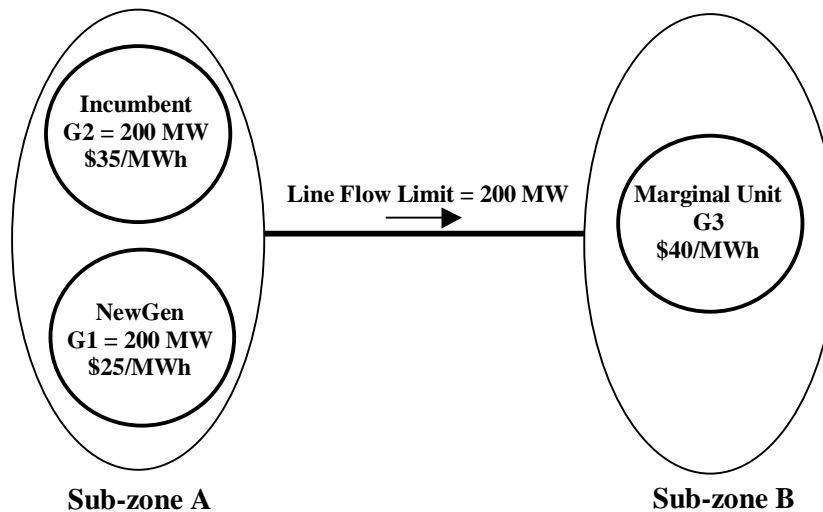


Attachment B

Example Showing Redispatch Cost of Intra-Zonal Congestion Management in the Absence of Workable Competition based on Current ISO Procedures

The following example is based on the example discussed in the September 15, 1999 FERC Order. We made the following assumptions :

- Both the incumbent generator (Incumbent) and the New Generator (NewGen) would like to export 200 MW from sub-zone A to sub-zone B.
- The transmission capacity of the Intra-zonal Interface (A => B) is only 200 MW. Without the NewGen, the Incumbent would have been able to transmit its entire 200MW.
- The marginal generation costs of the generators are :
 - Incumbent: \$35/MWh
 - NewGen: \$25/MWh
 - Marginal generator in sub-zone B: \$40/MWh (assumed unchanged over a 200 MW incremental range)



Under the ISO's zonal pricing policy, the Market Clearing Price (MCP) of energy in the zone containing sub-zones A and B is \$40/MWh (the cost of the marginal unit). In the absence of Intra-Zonal Congestion, both the NewGen and the Incumbent would be paid \$40/MWh. Their net profit would be \$5/MWh for the Incumbent, and \$15/MWh for the NewGen.

Intra-Zonal Congestion Management (AZCM) in a competitive market (Reference Case): Under a perfectly competitive AZCM market, all generation owners would bid their marginal cost for adjustment bids. The Incumbent with higher decremental

adjustment bid of \$35 would be backed down first. The NewGen, with a lower decremental adjustment bid of \$25, would be called to generate and serve sub-zone B. To make up for the reduction in generation in sub-zone A, generation units in sub-zone B would be increased by 200 MWh at \$40/MWh, and the redispatch cost to mitigate Intra-Zonal Congestion would be $200 * (\$40 - \$35) = \$1,000$. Under the NewGen Interconnection Policy this cost would be borne by all load in the zone containing sub-zones A and B when the AZCM market is competitive. This is the competitive market AZCM cost.

AZCM in a non-competitive market: If the AZCM market is non-competitive, a market-based approach to AZCM could result in very high costs to the NewGen. For example, if the Incumbent in the decremental market (sub-zone A), submitted a decremental bid just slightly lower than the NewGen's marginal cost of \$25/MWh, the NewGen would be backed down. The NewGen would face an AZCM cost of up to $200 * (\$40 - 25) = \$3,000$. However, as described in the ISO's Operating Procedure M-401, the ISO will **not** rely on the market bids in this case, since there is no competitive AZCM market. The cost-based approach to AZCM would result in decrementing the Incumbent generator by 200 MW at \$35/MWh and incrementing the marginal generator in sub-zone B by 200 MW, paying it \$40/MWh, both at their cost-based rates in accordance with RMR Contracts (i.e., at their respective marginal generation costs).¹ This would be the same redispatch cost as would be experienced in the competitive market, as described in the Reference Case. The NewGen proposal, however, would charge the \$1,000 cost to the NewGen, rather than to all loads.

NewGen's Options available in a non-competitive AZCM market

Option 1: Under this option the NewGen would pay the \$1,000 AZCM cost, determined by the process described above. The net profit for the NewGen would be its profit from generation minus the AZCM cost: $200 * (\$40 - \$25) - \$1,000 = \$2,000$.

Option 2: Under this option the NewGen has agreed to back down its own generation whenever there is Intra-Zonal Congestion on the A=>B interface. Its foregone profits would be $200 * (\$40 - \$25) = \$3,000$. Because this cost exceeds the costs of Option 1 by \$2,000, the NewGen would not select this option.

Option 3: Under this option, the NewGen would agree to pay the Incumbent to back down its generation. In a competitive bilateral market, the Incumbent should be willing to receive its opportunity cost of $\$200 * (\$40 - \$35) = \$1,000$ to back down. The NewGen would pay \$1,000 to the Incumbent, and keep the remaining \$2,000 of its \$3,000 profit. In a non-competitive market, the Incumbent would try to take advantage of its position to demand more compensation than \$1000. Absent Option 1, the NewGen may have to pay up to \$3,000 or most of its profit to buy off the Incumbent. With Option 1 available to

¹ In case the marginal generator in sub-zone B is not under an RMR Contract, another RMR Unit with somewhat higher variable cost would have to be called upon, increasing the cost of AZCM slightly. If the Incumbent is not under an RMR contracts, the ISO will use an Out-of-Market OOM call and settlement protocols to mitigate non-competitive intra-zonal congestion. Under those protocols, the cost of decrementing the generator is determined by the real-time Hourly Ex-post Price, which is not influenced by local market power of any generator.

the NewGen, it would not agree to pay the Incumbent more than the cost it would bear under Option 1, or \$1,000.

This example demonstrates that the redispatch cost of Intra-Zonal Congestion Management, in the absence of workable competition and based on current ISO procedures, is similar to that of a competitive market. This sets the upper limit of the cost that the NewGen has to pay to mitigate the additional Intra-Zonal Congestion.