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MEMORANDUM

DATE: February 5, 2003
TO: Market Structures Working Group
FROM: Mike Cadwalader
RE: A Consistent Approach to Allocating Congestion Revenue Shortfalls and Surpluses

At the last Congestion Reduction Task Force meeting, we discussed two different mechanisms (one presented by Jerry Ancona, and one presented by Susan Pope) for distributing among the TOs the costs of congestion revenue shortfalls that may result from the de-rating of transmission facilities between the monthly TCC reconfiguration auctions and the day-ahead market. Each mechanism was intended to ensure that the TO(s) whose de-rates caused the set of TCCs outstanding to be infeasible, leading to the shortfall, would bear the costs of that shortfall, instead of spreading the costs among the other TOs. It also may be possible to use these mechanisms to allocate congestion revenue surpluses that might result from increasing the rating of transmission facilities in the day-ahead market to the TO(s) responsible for those facilities. (For the purposes of this memo, I will assume that it will be possible to apply each method to such cases.)

It seems that it should be possible to extend either approach to cover congestion-related revenue surpluses and shortfalls realized in other contexts, in order to permit a more consistent approach to allocating these revenues or costs. One such extension applies to the monthly TCC reconfiguration auction. If a transmission facility is available at a higher rating in the reconfiguration auction than in the preceding TCC auctions, the ISO may be able to sell additional TCCs, while if a transmission facility is available at a lower rating in the reconfiguration auction than in the preceding auctions, the ISO may have to pay market participants to accept counterflow TCCs. In the first case, application of an extension of one of these procedures should ensure that TO(s) whose up-rates permitted the sale of additional TCCs are appropriately compensated, while in the second case, it should ensure that the TO(s) whose de-rates made the sale of counterflow TCCs necessary are appropriately penalized.

We could accomplish this as follows, using the materials that Jerry Ancona has provided for tomorrow's meeting to illustrate application to the shortfall/surplus allocation method that he has proposed: In his Table 1, suppose that column B refers to the number of TCCs allocated across each interface before the monthly reconfiguration auction, while column D refers to the capability for each interface in the

monthly reconfiguration auction. Then column E would refer to the capability for each interface in that auction in excess of the number of TCCs allocated across that interface before that auction. It would be positive for the W-X interface, indicating that additional TCCs can be sold across that interface, and negative for the Y-Z interface, indicating that counterflow TCCs must be sold across that interface. Column F would be replaced by the price of TCCs across each interface in the monthly reconfiguration auction. Finally, column G, which is the product of columns E and F, would indicate the net amount to be paid to the owners of the W-X interface, and the net amount to be paid by the owners of the Y-Z interface, before "truing up".[1] Similar changes would be made to columns C, D and E of Table 2, so that they would refer to each facility's contribution to interface capability in the auctions preceding the monthly reconfiguration auction, the portion of each facility in service in the monthly reconfiguration auction, and the resulting impact of any up-rates or de-rates on the capability for each interface in the reconfiguration auction.

This sort of extension is not only possible but necessary. If procedures to ensure that TOs are appropriately penalized for outages of transmission facilities in the day-ahead market are implemented, it will likely be necessary to implement parallel procedures to the reconfiguration auction to ensure that TOs cannot evade the costs of these outages simply by having them recognized in the monthly TCC reconfiguration auction. More generally, using a consistent approach to assigning costs associated with transmission outages at all of the various times at which such an outage may cause congestion revenue shortfalls will make it difficult for TO(s) to evade these costs by ensuring that their outage is recognized at a time when they can spread the costs of that outage to others. It will also ensure that a TO whose upgrade permits additional congestion rents to be collected does not inadvertently have to share those revenues with other TOs who had nothing to do with permitting those additional revenues to be realized.

Toward that end, these proposals could also be extended to allocate among the TOs the congestion rent surpluses and shortfalls realized in the real-time market. For the Ancona proposal, we could accomplish this by placing the day-ahead schedule across each interface in column B, the real-time capability for each interface in column D, and the real-time congestion cost across each interface in column F in Table 1, and making similar changes to Table 2. Doing so would permit the cost of real-time congestion shortfalls and surpluses to be routed to the TO(s) whose outages led to the shortfalls or whose upgrades permitted the surpluses. These proposals could also be extended to allocate among the TOs the cost of infeasibilities in the set of TCCs outstanding before the capability period TCC auction is held, and for the Ancona proposal, we would do this by placing the number of TCCs outstanding across each interface before the capability

[1] Once again, there would be a need to true up, since the total monthly reconfiguration auction revenue shortfall or surplus is unlikely to match the sum of the amounts that would be paid or charged to the owners of the various interfaces using this methodology. Many different procedures could be used to perform the true-up.

period TCC auction is conducted in column B, the capability for each interface in the capability period TCC auction in column D, and the price of TCCs across each interface in the capability period TCC auction in column F in Table 1, and making parallel changes to Table 2. Again, true-ups would be necessary in each of these instances, and these true-ups could be performed in many different ways.