Reduction of DAM Congestion Shortfalls

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Market Structures Working Group

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CONGESTION SHORTFALL REDUCTION The Issue

Transmission Owners (TOs) bear the cost of full funding of TCCs

DAM congestion rent shortfalls affect wholesale TSC rates

- Autumn 2002 auction
  - Revenues distributed to TOs - $63.9 M
  - Nov/02 through Apr/03 Dam congestion shortfalls - $81.9 M
  - Total NYISO congestion rents Nov/02 through Apr/03 – $321.7 M
- Since NYISO start-up
  - Revenues distributed to TOs - $532.2 M
  - Dam congestion shortfalls - $172.5 M
  - Total NYISO congestion rents Nov/02 through Apr/03 - $1,473.1 M

CONGESTION SHORTFALL REDUCTION The Issue

Based on analyses performed by LECG, the NYISO has concluded that the major cause of DAM congestion rent shortfalls has been the outage of transmission facilities

- Make Whole Approach attributes decreases in congestion rent collections to transmission facilities that are out of service and assigns them to the TOs responsible for the outaged facilities
- The Make Whole Approach will improve the allocation of congestion rent shortfall costs, but does not directly address the related issue of reducing congestion rent shortfall costs

CONGESTION SHORTFALL REDUCTION The Issue

The congestion shortfall reduction discussion can be recast as an issue of how to enable TOs to hedge the risk of congestion rent shortfall costs. This risk occurs under the Make Whole Approach, or any other approach for allocating congestion rent shortfall costs to the TOs.

- TOs receive revenue for their unallocated transmission capacity in one market (e.g., the capability period TCC auction) and may be assessed a congestion shortfall cost in a second market (e.g., the DAM) if transmission capacity is not available.
- The Make Whole Approach will assign congestion shortfall costs in a manner better reflecting cost causality, but the TOs responsible for outages may still need a way to hedge differences in congestion prices between:
  - The capability period TCC auction and monthly auctions.
  - The monthly auctions and the DAM.

CONGESTION SHORTFALL REDUCTION Objectives

The NYISO has approached the task of designing a congestion shortfall reduction approach with the following objectives:

- Continue to fully fund TCCs
- Require compatibility with the Make Whole Approach approved by the BIC and M/C
- Enable TOs to manage the risk of congestion shortfall cost assignment in either the DAM or reconfiguration auction.
- Allow, but not require, the entire transmission network to be utilized for the sale of TCCs
- Avoid approaches that shift costs and revenues among the TOs.

PROPOSAL 1 Minimum Offer Prices

Proposal 1: Allow TOs to place optional minimum offer prices on certain transmission capability sold in the TCC auctions.

- Could be simply implemented by representing some transmission capability sold in the auction as TCCs (i.e., ETCNL – Existing Transmission Capacity for Native Load) with optional minimum offer price bids.
- TCC auctions may be conducted as usual
  - If the Market clearing prices (MCPs) for the TCCs offered by a TO exceed the minimum offer prices submitted by the TO, then the transmission capability represented by these TCCs is sold
  - If the MCPs for the TCCs offered by a TO are less than the minimum offer prices submitted by the TO, then the transmission capability presented by these TCCs is not sold
  - MCPs in the auction could be set by minimum offer price bids

PROPOSAL 1 Minimum Offer Prices

- If the TCCs offered by a TO are sold in an auction, then the TO offering the TCCs is allocated auction revenue based on the MCPs of the TCCs sold
- If the TCCs offered by a TO are not sold, then the TO does not receive auction revenues; the transmission capacity remains "fallow."
  - If the TCCs are not sold in the Capability Period auction, then the TO may place minimum offer prices on the unsold TCCs in each monthly reconfiguration auction during that period
  - If no minimum offer price is submitted, the transmission capacity is automatically released.
  - If the TCCs are not sold in a monthly reconfiguration auction, then the transmission capability represented by these TCCs may produce a surplus in the DAM.

PROPOSAL 1 Minimum Offer Prices

- Under the proposal, excess congestion rents earned in the DAM would be allocated:
  - TOs would be paid congestion rents for the unsold TCCs, or
  - The congestion rents for the unsold TCCs would be socialized among the TOs.
- This allocation will offset congestion shortfalls assigned to the TO.

PROPOSAL 1 TO Impacts

- May allow TOs to hedge congestion shortfall cost assignments in the reconfiguration auction and/or DAM.
  - Each TO may shift the sale of some of its transmission capacity from the capability period auction to the monthly auction or the DAM, so that it will earn revenue in the monthly auction or the DAM, to offset the shortfall costs incurred in that time period.
- TOs effectively reduce their *net* congestion rent shortfalls by reducing the quantity of transmission sold in the auction, but TOs forego auction revenues.
- If implemented, participation in the proposed process would be voluntary. TOs would be permitted to place offer prices on their TCCs in the auctions, but would not be required to do so.
- Should not lead to revenue shifts among the TOs, relative to today's system, as long as the minimum offer price bids can set the MCPs in the auction.

PROPOSAL 1 — Implementation Issue

The most straightforward way to implement the proposed approach would be to allow TOs to place minimum offer prices on ETCNL sold in the TCC auction.

- An issue arises because only National Grid, New York State Electric & Gas and Con Edison have been assigned ETCNL
- The other TOs also must be provided the opportunity to manage their risk of transmission facility
- Proposal is that the NYISO would assign these other TOs ETCNL like reservations based on on their transmission networks

PROPOSAL 1 Market Impact

Proposal 1 may raise concerns about the availability of TCCs in the auctions.

- Some increase in the auction price of TCCs may be appropriate, to track increases in DAM congestion.
- But there is also the potential for uneconomic minimum offer prices.
- The most direct mechanism for providing the correct bidding incentives is to get the rate-making treatment right by modifying the wholesale TSC.
  - TO shareholders should bear the impact of uneconomically high minimum offer price bids for TCCs.
  - Approach broaches the issue of retail rates, but this appears to be unavoidable.

In order to fully understand the bidding incentives created by Proposal 1, it will be necessary to understand the potential impacts on each TO's rates and shareholder returns. Who bears the risks and costs?

- Can companies help to put together this information?
- Possible that in situations in which rates are fixed or in which there is significant regulatory lag, the current situation may be good enough.

PROPOSAL 1 Market Impact

There is a potential for TOs to set TCC minimum offer prices that exceed DAM congestion charges. A possible backstop (in addition to addressing the incentives provided by rates) is for the NYISO to set a ceiling on the number of MWs of TCCs for which an offer price could be specified, and/or possibly a maximum allowable minimum offer price for each such TCC. A methodology to set these limits would need to be determined.

- Values would be set so as to balance the objectives of allowing the TO to appropriately hedge themselves while mitigating the potential for economic withholding.
- DAM congestion shortfall produced by the outage of fully subscribed interfaces, and facilities that are modeled as out of service in an auction, would be excluded from the analysis.

PROPOSAL 2 Buy and Sell TCCs

Proposal 2: Encourage TOs to buy TCCs in the TCC auctions to hedge their risk.

- TOs could buy TCCs in the capability period auction and sell them in the monthly auction, in order to hedge the cost of congestion shortfalls assigned during the monthly auction.
- TOs could also buy TCCs in the monthly auction or capability period auction to hedge the cost of congestion shortfalls assigned in the settlement of the DAM.
- TOs explicitly buy and sell TCCs to arbitrage expected price differences between the capability period auctions, monthly auctions and DAM.
- Some TOs say that they can do this today, whereas some feel that they cannot.

PROPOSAL 3 Transmission Capability Reduction

The NYISO would determine an amount of transmission capability to withhold from the TCC auctions resulting in DAM surpluses which would be used to reduce congestion shortfalls

- Difficult to ensure that capacity reductions on one TO's network does not adversely impact other TOs
- Difficult to implement, except on a trial and error basis
- Complicates implementation of the Make Whole Method
  - As currently described, the Make Whole Method cannot allocate DAM surpluses produced due to un-subscribed capacity from the auctions
- For the above reasons, Proposal 3 was rejected

Proposal 2 achieves the same result as Proposal 1, in terms of allowing TOs to hedge congestion shortfall costs.

The best approach depends on the ultimate incentives the TOs have to bid economically for TCCs. This will depend on the ratemaking treatment, which may be different for the two Proposals.