Revised Congestion Reduction Proposal

NYISO
Business Issue Committee
January 23, 2002

Agenda #6

Proposal History

- Congestion Reduction Proposal approved (82.22%) by BIC on 11/15/2001
- Discussion ensued
- Intent remains the same
- Approach of original proposal mainly unchanged; revised slightly
- Scope expanded - separated
  - Phase 1: mostly original proposal
  - Phase 2: new refinements requiring more definition

Original and Current Intent

Reallocate Congestion Rent Shortfall cost sharing among TOs

- Benefit the overall market by providing stronger incentives for TOs to reduce congestion caused by transmission outages
- Focus outage congestion cost responsibility more closely on the TO capable of affecting the outage
- Improve fairness and efficiency of TCC full funding cost allocations

Existing Cost Allocations for Full Funding of TCCs are Inequitable

- TCCs are “Full Funded” because TOs share in Congestion Rent Shortfalls caused by outages
- TOs share these outage congestion costs regardless of which TO takes the outage or how much congestion is caused
- Cost Sharing based ONLY on a TO’s TCC Auction Residual Revenue (Grandfathered TCC sales excluded)
  - not necessarily proportional to TO’s transmission capability
  - not necessarily proportional to TO’s expected contribution to outage congestion costs

Who pays for congestion rent shortfall caused by any transmission outage?

(Based upon Summer 2001 TCC Auction and existing Market Rules)

	% of Total
LSEs/End-Users via NYPA NTAC	48.7%
Niagara Mohawk TSC	33.8%
NYSEG TSC	9.0%
Con Ed TSC	5.6%
Central Hudson TSC	2.1%
LIPA TSC	0.4%
RG&E TSC	0.4%

Note: Net excess Congestion Rent (which is reduced by Congestion Rent Surpluses) was $27.6 million for the NYCA for the 12 months through Aug 2001. Therefore total NYCA Congestion Rent Shortfall for that period exceeded $27.6 million.

Existing market rules misdirect penalties and weaken incentives for TOs to reduce congestion caused by outages

- *On one hand* – TO that takes a transmission outage may bear little or no responsibility for congestion caused by that outage – insulated from doing a poor job with congestion – allows gaming by some TOs
- *On the other hand* – TO not involved in an outage may be allocated a large proportion of congestion costs caused by that outage
- Congestion Rent Shortfall cost allocations to TOs need to be reformulated to provide a more efficient and effective incentive to reduce congestion

Phase 1

- More fully develop details -Target implementation: Fall 2002 TCC Auction
- Objective 1* - Counter-Flow TCCs for "Significant Outages" to focus congestion cost on the TO taking a major outage that
- Objective 2** - Outage TCC withheld from TCC Auction and reserved for TO that forecasts a significant outage prior to the auction to help offset risk
- Objective 3*** - Create optional Congestion Rent Reserve Fund for a TO to smooth out its TSC/NTAC

* Objective 1 already resides within the original proposal

** Objective 2 represents a smaller refinement in existing market rules than the original BIC approved Congestion Reduction Proposal

*** Objective 3 is an expansion in scope, but relatively well defined

Phase 2

- More fully define and develop details -Target implementation: Fall 2002 TCC Auction or as soon thereafter
- Objectives 4 -7 are new compared to original proposal
- Objective 4 - Provide more accurate Congestion Rent Surplus/Shortfall cost allocations from miscellaneous causes (rather than 49%, 34%, 9%, 6%, 2%, 0.4%, and 0.4% respectively for NYPA/NTAC, Nimo, NYSEG, Con Ed, CHG&E, LIPA and RG&E)
- Objective 5 - (Objective 4 is a pre-requisite) Provide a mechanism for TOs to hedge against the risk of their TCC full funding obligation
- Objective 6 - Allow TCC Availability Adjustments based upon historical averages to provide a more realistic set of TCCs to be auctioned
- Objective 7 - Allow TO to temporarily change transmission limits to take advantage of more favorable ambient conditions

Phase 1 Provides a Stronger Incentive to Reduce Congestion

- A TO will have a strong incentive to minimize Counter-Flow TCC charges caused by significant outages - thereby reducing congestion in the process
- Because value of Counter-Flow TCC is volatile (i.e., it depends on when TO takes outage) the TO can manage its exposure by:
  - Minimizing total outage time for scheduled outages
  - Scheduling outages when congestion is expected to be zero or very low
- Outage TCC for significant outage offsets some of the risk associated with the proposed tighter responsibility on a TO for outage congestion costs

Benefits of Phase 1

- Provides stronger incentives for TOs to reduce congestion caused by signification transmission outages
- Corrects existing market rules that misdirect penalties and weaken incentives for TOs to reduce congestion
- Focuses outage congestion cost responsibility more closely on the TO capable of affecting the outage
- Helps offset the risk associated with the proposed tighter responsibility on a TO for outage congestion costs
- Encourages a TO to plan and forecast significant outages on a longer term basis
- No Changes to …
  - Rate Schedule 1
  - Full funding of TCCs
  - Grandfathered and Auctioned TCC rights

Congestion reduction is a good thing

Allows increased flow over a constrained interface

- Increases market efficiency/decreases overall production costs
- Expands trading opportunities with a wider more competitive market
- Reduces opportunity for market power
- Improves overall reliability

Appendix

Objective 1: Focus Responsibility

- **Objective**: Focus outage congestion cost responsibility for significant outages more closely on the TO capable of affecting the outage particularly significant outages – thereby providing stronger incentives for a TO to reduce congestion
- **Proposed Approach:** Assign Counter-Flow TCCs to a TO that takes a "Significant Transmission Facility Outage" (i.e., an outage that has an impact on Congestion Rent Shortfall during a six month TCC Auction Period of $250,000 or greater).

Counter-Flow TCC

- Counter-Flow TCC = TCC opposite in prevailing direction of TCCs sold in TCC Auction
- Counter-Flow TCC is assigned to Day-Ahead scheduled significant outages that are modeled in SCUC
  - Significant Outage congestion costs are assigned *DIRECTLY* to the TO that takes the outage
  - TO pays Congestion Rent associated with its Counter-Flow TCC
  - Provides incentive ("a stick") to the TO responsible to avoid or reduce congestion caused by the outage
- Counter-Flow TCC assigned to significant outages whether or not Outage TCC was assigned

Objective 2: Reflect Significant Outages in TCC Auction

- **Objective:** Continue to fully fund TCCs with the stipulation that a realistic set of TCCs will be auctioned by taking forecast significant outages into account (already done now in a less refined way).
- **Proposed Approach:**
  - TO submits significant outage forecast to NYISO prior to the TCC Auction.
  - NYISO makes TCC availability adjustment: creates "Outage TCC" equal to levelized reduction in transmission capability caused the outage during the TCC Auction Period.
  - Outage TCC reserved for the TO: not sold in the TCC Auction
  - For TO taking the outage…
    - TCC revenue reduced
    - Exposure to Congestion Rent Shortfall reduced
    - Accrues Congestion Rent Surplus attributable to that Outage TCC.

Objective 3: Smooth Out TSC/NTAC

- **Objective:** Provide a mechanism for TOs to optionally smooth out their individual TSC and/or NTAC rates.
- **Proposed Approach**: *Optional* Congestion Rent Reserve Fund set up for a TO
  - Accumulate all Congestion Rent Surpluses and Shortfalls allocated to that individual TO
  - Any contributions to or withdrawals from the fund by a TO would be passed through as part of the applicable TSC or NTAC (as is currently done)
  - Fund would clear each month that a negative balance occurred
  - Fund would carry a net surplus up to a pre-defined limit

Objective 4: Correct Inequities in Misc Surpluses/Shortfalls

- **Objective:** Better approximation to correct inequities in misc. Congestion Rent Surplus and Shortfall cost allocations that can not be ascribed to a specific TO
- **Discussion:** Current allocation based on TO's share of total TCC Auction Residual Revenue
  - Result: 49%, 34%, 9%, 6%, 2%, 0.4%, and 0.4% respectively for NYPA/NTAC, Nimo, NYSEG, Con Ed, CHG&E, LIPA and RG&E)
  - Simple, but not accurate portrayal of cost responsibility.
- **Proposed Approach:** Develop a new relatively simple cost allocation method that more accurately assigns cost responsibility for misc. surpluses and shortfalls based upon causation
  - Probably static over a six month TCC Auction period
  - Not necessarily same method for surpluses and shortfalls

Objective 5: Provide Hedge to TOs for TCC Full Funding

- **Objective:** Provide a mechanism for TOs to hedge against the risk of their TCC full funding obligation (Implementation of Objective 4 is a prerequisite for this objective).

- **Potential Approaches:**
  - Risk sharing program entered into by TOs
  - Implementation of a Virtual TCC market in which Market Participants with adequate credit-worthiness offer financially based TCCs (i.e., not physically supported) into the TCC Auction

Objective 6: Reflect Historical Outages in TCC Auction

- **Objective 6:** Continue to fully fund TCCs with the stipulation that a realistic set of TCCs will be auctioned such that they correspond to the total expected energy that can physically flow considering both:
  - Outages that can not be forecast specifically, but that can be anticipated to occur based upon historical averages
  - Specific significant outages that can be forecast prior to a TCC auction (as previously addressed in Objective 2 above
- **Proposed Approach:**
  - Develop TCC Availability Adjustment methodology for historical outages that are “non-forcastable” but are anticipated
  - Provide reasonable safeguards against gaming by a TO needed
  - NYISO needs to monitor results and make adjustments to prevent continuing large Congestion Rent Surpluses by any TO

Objective 7: Dynamic Transmission Limits

- **Objective 7:** Provide a mechanism for TO to temporarily change transmission facility limits to take advantage of ambient conditions that are more favorable than those assumed in the TCC Auction.
- **Proposed Approach:**
  - Develop and implement a Two-Day-Ahead Dynamic Rating Program in which a TO can temporarily upgrade and downgrade transmission facility limits (downgrading is already allowed) – on an hourly basis if practical
  - Need to incorporate reasonable safeguards against gaming by a TO
  - NYISO would need to monitor results, and may need to re-evaluate rules and procedures