Broader Regional Markets

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Long-Term Solutions to Loop Flow

- Physical Solutions
  - *MISO has informed NYISO that it anticipates all four Michigan/Ontario PARs will be in service by November 1, 2009*
  - *Operation of the Michigan/Ontario PARs to better conform actual power flows to scheduled power flows will reduce loop flow*
- Market Solutions
  - *Broader Regional Markets*
    - Enhance the efficiency of external transaction scheduling outcomes to deliver improved regional price convergence and interface utilization.

Broader Regional Markets (Tentative Plan)

- NY/NE Reserve Shortage Operating Protocol — *Complete*
- Buy-through of Congestion — *2010**
- Congestion Management
  - *Market Flow Calculator* — *2010**
  - *PJM NYISO Full Implementation* — *2011**
  - *Extend to Additional Regions* — *2013**
- Interregional Transaction Coordination
  - *Energy Scheduling with NY/HQ* — *2010**
  - *Buying Reserves and Regulation* — *2011**
  - *ITC with NY/NE* — *2011**
  - *ITC with other regions* — *2013**

**Prospective timeline pending review with Market Participants, neighboring Control Areas and the Commission.*

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Buy-Through of Congestion

Buy-Through of Congestion

- Benefits
  - *Buy-Through of Congestion provides for the recovery of congestion management costs incurred in managing loop flow impacts.*
    - Provides an alternative to market and operational interruptions caused by Transmission Loading Relief (TLR) actions.
    - More efficient utilization of the transmission network.
    - More accurate transaction scheduling decisions.

Buy-Through of Congestion

- Concept
  - *Parties scheduling transactions with any of the other ISO/RTOs surrounding Lake Erie, but not with the NYISO, would be billed for the real-time congestion costs incurred by NY to support the loop flow created by the transaction.*
  - *Congestion costs captured by NYISO's OH and PJM prices.*
    - Exposure to NY congestion costs can be managed with existing Day-Ahead transmission scheduling processes.
    - Charges in proportion to the contract's NY impacts.
    - NY continuing review of external bus pricing logic.

Buy-Through of Congestion

- A collective ISO/RTO solution:
  - *Will facilitate sharing of transaction schedule and scheduling entity billing data.*
  - *Improve identification of sources of loop flow.*
- A mandatory program is necessary to address firm transmission capacity and free-riders.

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Congestion Management

Congestion Management

- Benefits
  - *Congestion Management achieves a more cost effective utilization of the region's collective assets to address constraints across multiple systems, resulting in lower congestion costs to consumers.*
  - *Provide a more consistent pricing profile across markets.*

Congestion Management

- Concept
  - *Allow for the dispatch of generator assets within a neighboring control area to address transmission constraints within own control area when more cost effective than operation of in-area generation.*
  - *Pre-determination of collective transmission constraints to jointly solve and real-time coordination of constraint solution costs.*
  - *Provides financial settlement to neighboring control area for off-cost operation.*

Congestion Management

- Status of NY-PJM Discussions
  - *Reconciliation of market flow calculation process*
    - Historical recalculation of data not feasible.
    - NY building on-line market flow calculation tools.
  - *Definition of historical data needs to resolve entitlements debate*
    - PJM settlement process based upon actual flows at time of event relative to historical usage. NY desires dynamic baseline process.
    - Reviewing option of a bandwidth solution which addresses concerns of both areas.

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Interregional Transaction Coordination

Interregional Transaction Coordination

- Benefits
  - *Dynamic scheduling lower total system operating costs through improved consistency of transaction schedules with market-to-market price patterns.*
  - *Expand pool of flexible assets to balance intermittent power resources output.*
  - *Improve price consistency and transmission utilization across markets.*
  - *Address uncertainty in forward looking scheduling horizons.*

Interregional Transaction Coordination

- Concept
  - *Allow Market Participants to provide flexible energy, reserve and regulation transaction bids, where the real-time dispatch tools will evaluate these flexible transactions on an intra-hour basis.*
  - *Phase 1 – Adjust HQ energy interchange on a 5-minute frequency based upon NY economic evaluation of flexible bids.*
    - Pre-coordination of flexible bids and automated coordination of energy schedules necessary to support frequency of interchange adjustments.

Interregional Transaction Coordination

- Future Steps
  - *Phase 2 – Establish market and coordination processes to support purchase and sale of reserve and regulation between markets.*

Interregional Transaction Coordination

- Future Steps
  - *Phase 3 – Define process to apply dynamic scheduling between two market systems.*
    - Creation of new “spread” bid product.
      - Market Participant supplies single bid to be used by both neighboring ISOs, indicating desired profitability for transaction.
      - ISO uses current/forecasted prices to schedule transactions. Select spread bids with lower bid than predicted difference between market prices.
      - ISOs incorporate updated transaction schedules into dispatch tools.
      - Process is repeated at defined intervals.
    - Market participant assumes risk of final prices being different than those used in scheduling decisions.

The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

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