NYISO Committee Proposal

Seams Issues

High Priority Items

Issue	Proposed Practice
1. Checkout	**Proposal:** Preference for ISOs to develop processes that will minimize transaction failures due to missing or mismatched data by: • Allowing updates to NERC tag information in each ISO's MIS • Checking tag information prior to the hour-ahead evaluation • Reviewing tag information in the OATI NERC tagging system and initiating contact with transaction owners to resolve discrepancies. • Checkout should be coordinated better between Control Areas. Each ISO should check-out interchange transaction schedules with each other, rectify any inconsistencies, where possible, and then post the accepted schedules. • If an ISO identifies data problems or mistaken entries during the check-out process and cannot rectify them, the affected market participant should be contacted by phone and attempts made to rectify the error rather than rejecting the schedule. A centralized checkout process for ISO to ISO transactions should be established allowing for a single contact point for the Northeast market. The Common Interface Tool (CIT) proposed by the MOU may address these issues and should be explored in more detail. In the near term, the ISOs should operate separate day-ahead unit commitment and dispatch processes but within a structured sequence that would enable the separate processes to operate much as if they were a single process. Full implementation of this approach would extend the sequencing to the hour-ahead scheduling processes. **Advantages:** • Will minimize the failure of transactions to flow due to data or coordination errors. • Will minimize the number of system reliability issues that occur as a result of "scheduled" transactions not flowing on the hour. • Allows market participants to better manage their import and export schedules by sequencing the deadlines for bid submission and schedule posting among the neighboring ISOs. • Avoids the complexity of implementing a single Northeast-wide day-ahead unit commitment and scheduling process at this time. • This approach would enable market participants to submit consistent bids and schedules across the ISOs because they would know which schedules had been accepted in adjacent control areas. • Improved consistency of schedules in the day-ahead market. • Reduced withholding of capacity from day-ahead markets to hedge inter-control area arbitrage transactions. • Current SCUC/BME software accounts for ramping limitations simultaneously within the software and eliminates the need for a separate process.

Note: The proposals presented here have not been evaluated for technical feasibility and impact on available ISO resources.

NYISO Committee Proposal

2. Ramping	**Proposal:** • Allow Multiple schedule changes per hour. • Neighboring ISOs should use compatible Ramp Rates for common interfaces. The Ramp Rate selected should be the highest common Ramp Rate practicable to maximize use of interface transfer capability. **Advantages:** • Minimize transaction curtailments due to ramp constraints and improve reliability performance.
3. Transaction Scheduling	**Proposal:** The Supporting Parties do not, at this time, recommend either a financial system or a physical system as the Best Practice. Adjacent control areas must, however, agree on a consistent or coordinated set of transmission rights between the control areas. Ultimately, a single system for managing inter-ISO transactions and allocating interface transfer capability must be developed. In the near term and the end-state, the system must recognize a transmission customer's right to schedule and depend upon firm transmission service in day-ahead and real-time energy markets. • The transaction scheduling system must provide transmission access to those who value it most, prevent "hoarding" of transmission rights or effective hoarding due to the timing of the release of those rights, and should simplify transaction scheduling. • Each ISO should provide the same scheduling flexibility. Following PJM's practice, each ISO should allow four (4) in-hour schedule changes. The scheduling deadline for real-time market transactions for all ISOs should be as close to the beginning of the dispatch hour as practicable. • ~~Each ISO should model common control area interfaces in he same way (e.g., as one zone or multiple zones). The modeling method chosen should accurately represent regional prices and actual interregional energy flow patterns.~~ Note: This issue has been removed from the proposal in recognition of the fact that it is being addressed on the larger list of issues identified by the MOU process, however it is noted here to reinforce that it continues to be an issue of concern for some NYISO Market Participants. • Each ISO must accept transaction block bids scheduled on an all-or-nothing basis similar to the manner in which the NYISO allows generators to designate blocks of energy through submission of a minimum run-time. • A common electronic system for tracking transactions should be established so information can be passed freely between control areas, duplicative data entry into multiple systems can be eliminated, and ISOs can be certain that they are reviewing the same information.

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NYISO Committee Proposal

4. Transaction Curtailment	**Proposal:** • Recommend that a SRE-like approach be investigated to determine if procedures could be developed to allow the NYISO to pick-up counterflow transactions in-hour to solve a constraint, when agreed upon with a neighboring control area. • ISOs must contact the transaction owner by phone when curtailments occur and provide a reason for the curtailment. • ISOs should reinstate transactions as soon as possible. • ISO should provide the ability for a BME like process to minimize transient real-time problems that would result in curtailments. • Firm day-ahead transactions should be curtailed after non-firm and firm hourly transactions. **Advantages:** • Reduction of curtailments and better accommodation of ramp constraints. • Currently the Hour-Ahead and Day-Ahead evaluation tools will schedule counterflow transactions to solve a DNI or ramp constraint, when such counterflow transactions are available and it is economic to do so. However, when an in-hour constraint is reached and SCD cannot redispatch the system to solve the constraint, the NYISO Operator must make a DNI change by curtailing transactions to affect relief on an internal interface. Rather than cutting a transaction in between BME runs to change the DNI, the in-hour process we propose could be a more market friendly approach that maximizes the use of the transmission system.

Note: The proposals presented here have not been evaluated for technical feasibility and impact on available ISO resources.

NYISO Committee Proposal

5. ATC/TTC	**Proposal:** • Each ISO should post the Transmission Reliability Margin (TRM) used in the ATC calculation and post updates as it changes. • Each ISO must clearly and consistently define and post TTC on OASIS. Each ISO must verify calculations of TTC at common border interfaces with the bordering ISO before posting the values. The values at interfaces of bordering ISOs must be equivalent in a given direction and must be represented on each OASIS in the same manner. For example, where two ISOs calculate a different TTC for the same border interface, the TTC for both ISOs (unless both ISOs conferred, recalculated, and agreed upon the higher value or some value in between), would equal the lower TTC value. The ISOs must strive to achieve the highest TTC consistent with good utility practice. Each time bordering ISOs calculate different TTC values for the same interface, they must promptly post the original and final calculated values, and an explanation for the difference, on the OASIS. • TTC should not be changed for economic considerations such as reducing internal congestion, which should be addressed through generation redispatch. The conditions under which TTC will be changed must be proceduralized and common to all ISOs. When an ISO changes a TTC value, the reason, the value, and duration for such change must be posted on the ISO's OASIS at the time the change occurs. • Each ISO must post and update, at a specific site on the OASIS, (a) bid amounts and (b) scheduled and actual flow information for each boundary interface in real time in each direction. The aggregate total MWs of counter-flow bids at each proxy bus and a bid associated with those counter-flow bids. Posting only the net values is insufficient. For each interface, each ISO must post the following: a. All energy bid to be imported; b. All energy bid to be exported; c. All energy scheduled as imports; d. All energy scheduled as exports; e. Scheduled Desired Net Interchange values and updates; f. Actual energy flows in real time. Each ISO must list the above values separately as either firm or non-firm. Wheel-through transactions must be listed separately • Each ISO should post Transmission Outage Schedules as far in advance as possible and update the schedules as soon as schedule changes are identified. Each outage posting should include (a) any limiting circumstances that could cause changes in the outage schedule (e.g., cancellation due to inclement weather, dependence upon performance of other outages) and (b) where a change to a scheduled outage is requested and granted, the identity of the requesting party and the duration of the change.

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NYISO Committee Proposal

6. Capacity Market	**Proposal:** There is a desire to develop consistent products, rules and requirements so that providers of capacity are held to the same level of responsibility across ISO Markets. Longer term alternatives should be considered as energy markets evolve. **Advantages:** • Insures adequate resources are available to meet load and insure reliability. • Allows for supply of capacity from both internal and external sources. • Provides economic signals that allows suppliers maximum flexibility in deciding whether to participate in the ICAP market, abstain entirely, or sell the capacity to other control areas.
7. ICAP Recall	**Proposal:** Establish a process that enables parties to import/export capacity, ensures that recalled energy is appropriately compensated, and that anticipated capacity shortages are communicated to neighboring control areas. • All Parties should be paid using the NY method of payment (or the NE cover cost method) when curtailments occur for a capacity shortage. • ICAP Recall should be initiated at "equivalent levels" across ISOs. • Drop out-service charges and reservation requirement for ICAP transactions. • Fix BME so that it cannot recall non-ICAP based transactions for reserve shortages. **Advantages:** • Facilitates trading of capacity across control area boundaries. • Minimizes economic exposure of capacity resources sold outside their control area. • Enhances interregional reliability.
8. Trading Hubs	**Proposal:** Establish trading hubs to provide locations that would facilitate and enhance trading activity in the New York Market. • Retain implementation of current zonal definitions. • The NYISO will effectively have 11 Zones that can truly act as hubs with the implementation of Virtual Bidding • Consideration of adding additional hubs should be revisited when State Estimation capabilities are available in the NYISO. **Advantages:** • The NYISO recognizes that several zones are already being used as virtual trading hubs. Designating appropriate locations as trading hubs would allow Market Participants to conduct business at trading points that are integrated into the NYISO MIS.

Note: The proposals presented here have not been evaluated for technical feasibility and impact on available ISO resources.

NYISO – MARKET PARTICIPANT JOINT PROPOSAL

SEAMS ISSUES

High Priority Items

- Background

At the January 4, 2001 Memorandum of Understanding ("MOU") Business Practices Working Group ("Working Group"), the MOU Working Group selected, from a list of more than thirty (30) issues the eight (8) highest priority, short-term interregional transaction problems (or "Seams Issues"). The MOU Working Group asked each market participant and the participating independent system operators - PJM, ISO-NE, IMO and NYISO (the "ISOs") to develop market rules, practices and standards that would, when implemented, eliminate or resolve the high priority Seams Issues (the "Best Practices").

On February 15, 2001, the Business Issues Committee ("BIC") and NYISO representatives reviewed and adopted the Best Practices contained in a proposal endorsed by a broad cross section of market participants (the "Market Participant Proposal"). The BIC and NYISO Staff decided to include in the Market Participant Proposal action items from the NYISO's Strawman that were not already addressed. The resultant Best Practices described below represent the joint effort of many market participants and NYISO Staff (the "Supporting Parties") to address the high priority, short-term Seams Issues identified by the MOU Working Group (hereinafter, the "Joint Best Practices Proposal" or "Joint Proposal").

This is the last Management Committee Meeting prior to the March 13, 2001 Toronto MOU Working Group meeting, at which all participating ISOs and market participants are expected to identify best practices to address the Seams Issues.

The Supporting Parties believe that the Joint Proposal described below is comprehensive and provides concrete direction to resolve Seams Issues. The Supporting Parties urge the Management Committee ("MC") members to endorse the Joint Proposal as the NYISO's Best Practices Position Paper at the March 13, 2001 MOU Working Group meeting.

- Priorities

This Joint Proposal illustrates the Seams Issues using transactions between the New York and PJM control areas as examples. The Supporting Parties believe, however, that the Best Practices described herein must be adopted by ALL ISOs to effectively address Seams Issues throughout the Northeast.

The Supporting Parties recognize that the ISOs already consider some of these Seams Issues as priorities to be addressed before Summer 2001. The Supporting Parties recommend that the ISO Project Prioritization Team assign implementation of the Best Practices contained herein the highest priority second only to (a) those issues needed for Summer 2001 and (b) emergency issues.

The Supporting Parties recommend that the NYISO implement the Joint Proposal Best Practices that do not require the concurrence of other ISOs as soon as practicable.

The Supporting Parties recommend below an order in which the Joint Proposal Best Practices may be implemented to achieve optimum results. For example, standardizing the way TTC is determined and adjusted (an ATC/TTC Best Practice) will help to resolve scheduling and ramping issues. Each subtask should have the same priority as other subtasks irrespective of the order as listed below.

- Problem Description

Problems Associated With Checkout, Ramping, Scheduling and Curtailment:

Disparity in the way the ISOs schedule and effect inter-control area exchange is an obstacle to the development of liquid markets. First, the ISOs do not have the same scheduling flexibility. In PJM, a market participant can submit a schedule that allows for four (4) adjustments in each hour. For example, the schedule for Hour 1 could provide for 500 MW at the beginning of the hour, an increase to 525 MW at 15 minutes after the hour, an increase to 600 MW at half past the hour, and a decrease to 550 MW at 45 minutes after the hour, so long as the entire schedule was submitted no later than 20 minutes before the start of the dispatch hour. In contrast, the NYISO requires all schedules to be submitted no later than 90 minutes before the start of the dispatch hour and provides for no adjustments during the hour.

Second, PJM and NYISO have placed different limitations on the rate at which each control area can vary interchange. PJM schedules changes in generator output ("Ramp Rate") of 2000 MW in an hour (at a rate of 500 MW each 15-minute interval). The NYISO has limited itself to a Ramp Rate of 700 MW in an hour. Overly restrictive Ramp Rates contribute to energy supply shortages during peak load periods by reducing energy import capability. Common scheduling and ramping procedures (e.g., use of standardized ramp rates and scheduling frequencies) between the ISOs will minimize the scheduling and ramping confusion, improve inter-control

area transaction management, maximize use of interface transfer capability, and facilitate development of liquid markets.

Third, market participants have difficulty transacting across control area boundaries that use dissimilar market models. Market participants would benefit from software modifications that would assure the scheduling and physical flow of a transaction for a desired block of time. Curtailment of delivery, notwithstanding financial settlement through the NYISO, has resulted in the inability to restart the generator's transactions (e.g., because of lost ramp space) and lost opportunity costs. For example, assume a market participant ("MP") schedules a twenty-four - (24-) hour transaction from PJM to NY with a decremental bid in the New York Day-Ahead Market ("DAM"). Both control area operators accept the schedule, and PJM assigns the market participant adequate ramp space to start the transaction at 0000 hours. Assume further that the transaction begins to flow on schedule, until 0500 hours at which time New York's Balancing Market Evaluation ("BME") software concludes that the transaction is uneconomic based on the MP's decremental bid, but only for the 0500 hour. At the end of hour 0500, when the New York Real-Time price is above the MP's decremental bid, the MP's transaction should resume flowing. But if the PJM ramp space that the MP was relying upon to export to New York, which was relinquished when the MP's transaction was cut by New York's BME, is no longer available, then the MP will be unable to continue supplying the transaction (from its generation resource) for the remaining hours of its transaction and will be forced to repurchase that energy in the NYISO Real-Time market or from another source. Under this scenario, the MP (a) will be obliged to buy replacement energy in the Real-Time market or in a bilateral market at a price above its DAM commitment price (and incur a loss) and (b) may also face a NYISO penalty under Emergency Corrective Action "A" (ECA "A") for failing the checkout process.

Fourth, the scheduling process, which requires data entry in several software systems for a single interchange transaction, is unwieldy. If transaction information is entered incorrectly in one system, the transaction schedule, at least in New York, fails check-out and is rejected.

Note: This issue has been removed from the proposal in recognition of the fact that it is being addressed on the larger list of issues identified by the MOU process, however it is noted here to reinforce that it continues to be an issue of concern for some NYISO Market Participants.

Problems Associated With ATC/TTC:

ATC, as defined in Order No. 888, is a measure of the amount of transmission capacity available to be reserved for transmission service. TTC is a fixed value for each transmission path that varies only when the physical characteristics of the transmission equipment vary (e.g., temperature limitations, physical degradation). ATC is not a useful data point when calculated for a system that does not require transmission capacity reservation but is continuously redispatched based upon financial parameters. Instead of ATC, market participants require access to information on bids, scheduled flow and real-time flow in an understandable and consistent format among and across all ISOs. By establishing a standard definition and method for determining TTC across the ISOs and by providing information on bids, scheduled flow and

real-time flow, market participants will be better able (a) to decide whether inter-control area transactions are economically and physically feasible; (b) to adjust real-time transactions to accommodate changes; and (c) to evaluate, after the fact, whether interfaces are being efficiently utilized.

The Supporting Parties believe that implementation of the Best Practices applicable to the ATC/TTC Seams Issues does not require a major change to software systems in any of the control areas and could be completed by May 1, 2001