

**Northeast ISOs
Seams Resolution Report
History of Seam Issues Resolution**

2004 - Open Projects

P8b Q3-2005 (orig. Projected 2003) – FACILITATED CHECKOUT

- NYISO, ISO-NE, PJM, IMO, HQ & MISO – - NYISO and ISO-NE have implemented the facilitated checkout service, allowing other control areas to programmatically obtain transaction data to assist with the checkout process.
- ISO-NE has implemented an operator checkout display to retrieve data via the checkout service from neighboring control areas. Currently in production use with NYISO checkout service.
- NYISO has developed an operator checkout display to retrieve data via the checkout service from neighboring control areas. Implementation pending - will be subject to the constraints of the SMD2 project.
- IMO is targeting a fall 2004 and HQ a summer 2005 implementation of the checkout service and operator checkout displays.
- Facilitated Transaction Checkout Working Group (an NPCC Subcommittee) meetings continue to monitor status and collaborate on implementation details. NPCC is planning a series of presentations on Facilitated Checkout in the Northeast in September/October 2004.

P8c Q2-2005 (orig. Projected 2004) – NY E-TAGGING

- NYISO has implemented automated tools to improve communication and updates of NYISO transaction bids and schedules with the E-Tag system.
- Automation provides direct benefits to other control areas, such as PJM, that are linking their systems to the E-Tag system for automated transaction scheduling inputs
- Allows automated response on incoming E-Tag requests and automated updates for bid / schedule changes to the E-tag system resulting from the hour-ahead evaluation, checkout and curtailments.
- Phase II will provide enhanced tools for Market Participants to compare NYISO bids and E-Tag profiles, and also more automated integration of this data. Delivery is anticipated in Q2-2005.
- Phase I development (operations automation) is complete and was deployed on April 25, 2004.
- NYISO and PJM are working on additional enhancements and business rules for market participants.

P10 Q1- 2005 (orig. Projected 2003) – NPCC EXPANSION OF REGIONAL RESERVE SHARING – NPCC will coordinate the implementation of a 100 MW reserve sharing pilot among NPCC members and PJM to improve regional reserve market efficiency. NPCC committees have approved revised policies to permit the reserve sharing pilot project. The NPCC Reserve Assistance Procedure is anticipated to be approved by the NPCC Reliability Coordinating Committee in November 2004. The revised project schedule looks to implement reserve sharing in Q1-2005.

P12 December 1, 2004 (Orig. Date 2003) – NY REAL-TIME SCHEDULING (RTS) IMPLEMENTATION AND NY SMD 2.0 – Real-Time Scheduling (RTS) is a major portion of the overall *NY SMD 2.0* and involves developing new real-time commitment (RTC) and dispatch (RTD) software in place of the current hour-ahead commitment and real-time dispatch modules. *NY SMD 2.0* incorporates a number of “Best Practice” improvements from New York; includes all key features of FERC SMD. The RTS time frame extends from 5 minutes in the future to 2½ hours in the future. Commitment and decommitment decisions are made every 15 minutes by the real-time commitment (RTC) process. Decisions to adjust the output of internal energy suppliers (dispatch) are made every 5 minutes by the real-time dispatch (RTD) process, as is the calculation of energy and ancillary services prices. In-day Pre-scheduling will address real-time ICAP recall requirements for capacity emergencies by providing comparable treatment to ICAP suppliers with firm tie line reservations. Factory Acceptance Testing is complete, and a total of five Market Trials have been completed and analyzed. The scheduled “go-live” date is December 1, 2004, subject to completion of a readiness plan which includes NYISO departmental signoff and consultation with NY Market Participants.

- P14 Projected 2005 – NY-HQ-ISONNE HVDC Interconnections** - Evaluate methods to improve regional coordination to enhance and maximize utilization of NY-HQ-ISONNE HVDC interconnections. This is a joint project lead by ISO-NE and HQ TransÉnergie to update the methodology and procedures for scheduling of the Phase II HVDC interconnection between New England and Quebec. Initial efforts were focused on use of the IDC as a possible tool to forecast availability of Phase II above the 1200 MW limit, however the parties have concluded that the IDC in its current form would not be suitable. ISO-NE is continuing to evaluate current data available from NY and PJM for forecasting availability of Phase II. PJM and NYISO staff has been participating with ISO-NE and TransÉnergie in monthly conference call meetings and continue to support this effort.
- P15 Q2-2005 (Orig. Date 2003 but changed as a result of SMD NOPR) - REGIONAL RESOURCE ADEQUACY MODEL (RAM) GROUP** - The Regional Resource Adequacy Model (RAM) Working Group (formerly the JCAG Working Group) was set up to develop similar long-range UCAP markets in NY, PJM and ISO-NE. The RAM Working Group developed initial recommendations in mid-2002. The work plan was reassessed in light of the SMD NOPR and the ISOs/RTOs filed joint comments addressing resource adequacy on January 10, 2003. NERA was selected to analyze the proposed central resource adequacy market design, and presented their final report at the February 26, 2004 regional RAM meeting. A NYISO status report was filed with FERC on February 27, 2004. The broad range of concerns raised by stakeholder groups in each ISO/RTO made it unlikely that all of the ISO/RTOs would adopt the RAM proposal as formulated. It is anticipated that this effort may lead, instead, to enhancements or new capacity markets in each region. In enhancing their existing markets, the ISO/RTOs have committed to maintain the same product (UCAP) to enable trade between regions to occur and to identify and remove any remaining barriers to the trading of capacity between regions. Each region has Resource Adequacy/ICAP working groups looking at this issue. FERC accepted this Status Report on October 7, 2004 and directed NYISO to file a report on the status of a multi-regional resource adequacy market by April 1, 2005.
- The NYISO has submitted a hybrid proposal to its stakeholders for consideration which incorporates a voluntary forward capacity market for procurement of a portion of its future resource requirements. The NYISO plans to further develop this hybrid proposal with its stakeholders during the fourth quarter of 2004 and will coordinate with the PJM and ISO-NE efforts in their respective regions. The NYISO will bring any resulting proposal back to the RAM Group for discussion in early 2005.
 - On March 1, 2004, ISO-NE filed a locational capacity market with the Commission. The design of this market was based strongly on the extant design developed by NYISO. On June 2, 2004, the Commission issued an order directing that the proposed locational capacity market be implemented on January 1, 2006 subject to the resolution of specific issues at hearing. The hearing judge is required to issue an initial decision by June 1, 2005. The Partial Unit ICAP Sales project (P19 below) will also improve the ability to trade capacity between regions.
 - PJM staff introduced a proposal for the Reserve Adequacy Construct at the Market Implementation Committee meeting on June 30, 2004. PJM has subsequently presented its proposal at its Members Committee, at FERC and at various state public utility commissions. PJM is delivering tutorials on its proposal to members and interested parties.
- P18 Q4-2005 (orig. Projected 2004) – NYISO AND ISO-NE – Intra-Hour Transaction Scheduling (includes Participant driven as well as VIRTUAL REGIONAL DISPATCH solutions)** - While the NYISO and ISO-NE have documented a technical definition of a virtual regional dispatch (VRD) process previously, more recent discussions reveal a need to consider, on a priority basis, market participant based solutions as an alternative or adjunct. . VRD will remain a potential solution and may, in fact, become part of a hybrid solution. We are proceeding with further stakeholder meetings to finalize the technical details and to work towards joint stakeholder acceptance of a proposal.
- Develop and implement a VRD Pilot Test Program (pilot program) as soon as practicable with a target date of the fourth quarter of 2004. The VRD Pilot will evaluate processes that are common to any method of utilizing short notice transactions to improve efficiency of control area interfaces, including alternatives that rely on intra-hour MP transactions. On Sept. 1, 2004, the NYISO

Management Committee approved tariff changes required to settle pilot program transactions. In the 4th Quarter of 2005, ISO-NE and NYISO stakeholders will jointly develop the details of the market participant-based solution.

- Following a review of the pilot program results, and assessment of Market Participant based proposals for improving the efficiency of the NYISO/ISO-NE interface, further phases of this work will be developed. These efforts may focus on further testing of intra-hour transaction scheduling processes during shortage conditions prior to implementation of any selected approach(es) to improve the efficiency of the interface.

P19 Q1-2005 (orig. Projected 2004) – ISO-NE PARTIAL UNIT ICAP SALES – ISO-NE's SMD 1.0 does not support the sale of UCAP to external control areas from portions of units. The Commission has directed that this functionality be added. ISO-NE is considering several options for resolving this issue including potential solutions that could be implemented by January 2005. This schedule may need to be modified to accommodate any concerns that may be raised as part of the stakeholder process or due to the high demands placed on ISO-NE's resources by the locational ICAP litigation proceeding.

- ISO-NE will prepare a proposal for discussion with the Markets Committee ("MC") no later than the October 2004 MC meeting.
- A final proposal will be presented to the MC for vote at the November 2004 meeting, and to the Participants Committee ("PC") for a vote at the December 2004 PC meeting.
- This will support a filing at the Commission in October for a 1st Quarter 2005 implementation date.

P20 Q4-2004 – ELIMINATION OF RATE PANCAKING – The elimination of export fees between ISO/RTO regions is an important objective of the FERC. The NYISO and ISO-NE have been working with their TOs and state regulators to accomplish this goal. During mid-2003, the NYISO and the New York transmission owners developed principles for the elimination of export charges from the New York Control Area, subject to reciprocity. The New England transmission owners included similar provisions in the RTO-NE filing with FERC on October 31, 2003. On March 24, 2004, FERC's Order on RTO-NE was conditioned on the elimination of export fees between New York and New England by the end of 2004. In April 2004, an agreement in principle was achieved among ISO-NE, the NYISO, New York and NE state regulators calling for the elimination of export fees between the regions on or before December 2004.

- ISO-NE has made a compliance filing with the FERC on June 22, 2004 wherein ISO-NE commits to complying with the directive to eliminate Through and Out charges between New England and New York by December 22, 2004. On September 30, 2004 NEPOOL filed tariff changes with FERC to eliminate the export charges to New York with an effective date of December 1, 2004. Both ISO-NE and NECPUC support the elimination of export fees between NY and NE.
- With respect to ISO-NE Energy Tariff Schedule 3 Reliability Administration Service charges, the NEPOOL budget and Finance Committee is currently taking up the issue. Alternatives to the \$/kw-month charge are under consideration, including a change to a \$/Mwh charge.
- NYISO has filed tariff modifications with FERC on June 21, 2004 for the elimination of export fees on transactions to New England, subject to reciprocity, on the same date that FERC approves equivalent tariff provisions for New England eliminating export fees to New York.
- PJM and MISO are participating in the PJM-MISO regional through and out rate elimination Proceeding EL-02-111. The meetings have failed to reach settlement on a single rate design proposal. Stakeholder meetings on the proposals have been held on July 12, August 12, and September 13, 2004; subsequent FERC filings on regional pricing were made on October 1, 2004. The commission ordered the parties to eliminate the regional through and out rate effective December 1, 2004.

- P21 Q1-2005 (orig. Projected 2004) – NY GENERATOR ATTRIBUTES TRACKING (GAT) SYSTEM** – Green power suppliers need consistent rules and trading platforms to permit consistent tracking and trading of green power attributes across the ISOs.
- NY is working with market participants to determine the suitability of adapting the New England Generator Information System (GIS) to New York markets. The NYISO has been actively participating in the NY Dept. of Public Service hearings on a Renewable Portfolio Standard, where attributes trading is identified as a necessary and desirable condition. On September 24, 2004 the New York State Public Service Commission issued its Order on the Renewable Portfolio Standard that outlines a centralized procurement process for renewables. The need for a GAT system, and the details of how that system would interact with the NYISO if so needed, will be determined as part of the implementation plan targeted for March 31, 2005.
 - The IMO is currently looking at a tracking system, although direction from government (via legislation) will be required prior to any implementation.
 - PJM is exploring the implementation options for a GAT system while finalizing the requirements definition for the project; a decision on moving forward with GATS is anticipated later in 2004.
- P23 Q3-2005 –COORDINATION OF INTERREGIONAL PLANNING** — In January 2003, a Liaison Task Force was formed including representatives from all NPCC Areas as well as PJM to develop ways to improve the coordination of planning for the Northeast region. In December 2003 the ISOs achieved agreement on a draft protocol for the coordination of planning in the Northeast region. During the first quarter of 2004, ISO-NE, NYISO and PJM solicited stakeholder input which was generally supportive of moving ahead with the protocol. During the 1st Quarter of 2005 the ISOs will solicit stakeholder input on next steps that will ultimately lead to the issuance of the Northeast Coordinated Plan.
- The ISOs have incorporated stakeholder comments into the draft protocol and the final document is being reviewed for execution by ISO-NE, NYISO and PJM in October 2004. This document provides the basis for standardizing data and information exchanges, developing a coordinated plan, and initiating a joint stakeholder process.
 - The ISOs and other NPCC control areas have already begun to implement certain elements of the protocol, including better coordination of information sharing by harmonizing the timing, development and exchange of data bases and modeling assumptions used in planning analysis, addressing cost allocation issues, the establishment of standardized confidentiality agreements and the identification of interconnection requests that are likely to have inter-area impacts. A website is being developed to identify proposed facilities that may have the potential for inter-Area impacts.
 - The intermediate term goal is to develop and issue an initial coordinated system plan by the 1st Quarter of 2005 which will summarize current ISO and control area plans and coordination efforts, and identify issues for inclusion in a broader region-wide plan. This initial plan will cover the New York, PJM and New England regions and reflect inputs from the NPCC Canadian control areas.
 - A longer-term goal, planned for implementation in mid-2005, is the implementation of a region-wide planning process which would include a Northeastern coordinated plan. This region-wide planning process would be supplemental to each ISO or RTO's individual and more detailed transmission planning process.
- P24 Q2-2005 - CROSS-BORDER CONTROLLABLE LINE SCHEDULING** – NYISO software will be designed or modified to model Controllable Lines across control areas through an external proxy bus, providing market participants with the ability to bid to or from the new proxy bus in the Day-Ahead Market and schedule transactions in real-time. NYISO and ISO-NE operators will have the ability to monitor a Controllable Line and curtail transactions on the line. Deployment of this project will be dependent upon the successful deployment of the NYISO Standard Market Design (SMD2) project. This item will include

changes necessary for NY-NE coordination for the Cross Sound Cable (CSC) project. The ISOs are discussing the implementation schedule for the application of this software to the 1385 (Northport to Norwalk Harbor) cable with LIPA and NUSCO.

- Complete stakeholder review in fourth quarter of 2004.
- Implementation scheduled for June 2005.

Issues Under Discussion

Issues that have been brought to the attention of the ISOs but have either not yet resulted in a specific initiative or the initiative has not been approved as a project by the stakeholder process (Date the issue was added to the list is shown at end of each item). Issues may be consolidated, deleted, or moved to the project list as they are more fully considered among the ISOs and stakeholders.

- I1 INTERNAL CONTROLLABLE LINE SCHEDULING (NY internal controllable lines)** – The concept of operations for general methodology to schedule HVDC controllable lines within NY borders has been drafted and approved by NY Stakeholders at the May 19, 2004 Business Issues Committee meeting. (Oct. 2002). Software implementation will be scheduled when a candidate project emerges. This issue is essentially a NYISO internal issue that will be tracked within the NYISO, and considered complete from a regional seams perspective.
- I2 MULTIPLE PROXY BUSES FOR FREE-FLOWING INTERFACES** – There is a desire to provide east and west scheduling points for transactions on the NY-PJM interface. A draft white paper has been distributed for market participant review, and was discussed at the joint NY/NE meeting on 5/29/2003. This issue is being referred to the individual ISO Market Committees to discuss and refine the business issue definition.
- I4 REDUCED LEAD TIME FOR IN-DAY TRANSACTION SCHEDULING** – NYISO market participants have expressed a desire to reduce the lead time for submission of real time transactions below the 75-minute limit currently in effect. (July 2003).
- I5 NY REAL-TIME SCHEDULING (RTS) FUTURE ENHANCEMENTS** – The functionality that will be deployed with the initial release of RTS/SMD 2.0 is described under project P12. A number of additional seams related features and enhancements are listed below and are being discussed by the NYISO and its Market Participants. Enhancements that are given the go-ahead will be added to the open projects list in future seams reports.
- 15-minute economic dispatch of internal resources
 - Enhanced combined cycle unit modeling
 - 15-minute external schedule changes
 - Close of real-time market closer to real-time
 - Elimination of administrative SCR/EDRP pricing rules
 - Increased demand side participation
- I6 RESERVES PARTICIPATION IN ADJACENT REGIONAL MARKETS** – This item encompasses two issues:
- 1) Establish requirements for external 30-min. reserves participation in NY - 1st draft white paper complete Feb. 2002. Currently being addressed by the NPCC TFCO CO-1 WG. Considered a low priority project.
 - 2) There is Market Participant interest in selling operating reserves in one region from generation sources located in another region.
- I7 THE IMPACT OF EXTERNAL TRANSMISSION OUTAGES ON CONGESTION RENT SHORTFALLS AND ICAP MARKETS** – In the TCC auctions that it conducts, the NYISO permits bidders for TCCs to specify external proxy generator buses as the injection or withdrawal locations. Transmission outages or deratings

occurring outside of the NYCA that are not anticipated at the time of a TCC auction can force the NYISO to reduce the assumed transfer capability between the NYCA and the adjacent control area. If the resulting set of TCCs are rendered infeasible, the NYISO will incur congestion rent shortfalls in the day-ahead market. There is currently no way to assign the cost impact (due to the congestion rent shortfall) of that outage to the responsible external transmission owner. In addition, transmission outages or deratings that cause reductions in transfer capability between regions may have an impact on ICAP sales between regions.

Pending Projects

- P7 Pending (Orig. Date Dec 2002) – COORDINATION OF CONTROLLABLE TIE LINES (PHASE-ANGLE REGULATORS) BETWEEN NY AND PJM** – The FERC Settlement Hearings on the PSEG-ConEd wheeling contracts (FERC Docket EL02-23) have failed to reach an agreement. FERC issued an Order on the Phase I issues 12/9/2002. Appeals of Phase I Order were denied in FERC's 12/23/03 order. The ALJ issued an Initial Decision in the Phase II litigation on June 11th, 2003. Briefs have been finalized. FERC issued its final order on August 6, 2004 which requires NYISO, PJM, Con Edison and PSEG to develop an operating protocol to coordinate the scheduling of the PARS and other measures to implement the transmission service under the subject contracts to be filed with FERC by November 6, 2004. Con Edison and PSEG have both filed for rehearing of certain aspects of the FERC Order. PJM and NYISO have met several times to draft the operating protocols. On October 1, 2004 the ISOs filed a status report with the ALJ indicating that the four parties are holding regularly scheduled meetings and that, while substantial progress has been made, further work is needed.
- P9 Pending (Orig. Projected June 2003) – LAKE ERIE SYSTEM REDISPATCH PROJECT IMPLEMENTATION** - This NPCC procedure allows the redispatch of suppliers across regions to alleviate the potential curtailments of transactions due to TLR requests whenever a control area is in an energy short situation. The project requires implementation of operating procedures and billing and settlement process to account for the regional redispatch. The working group has been reinitiated to address the outstanding issues.
- P16 Pending (Orig. Projected 2003) – NY TCC OPTIONS FOR EXTERNAL INTERFACES** – TCC options on external interfaces will allow parties to hedge congestion on long-term transactions. TCC options differ from TCC obligations in that the TCC holder would not pay the NY congestion charge if the value of a TCC option were negative in any hour.