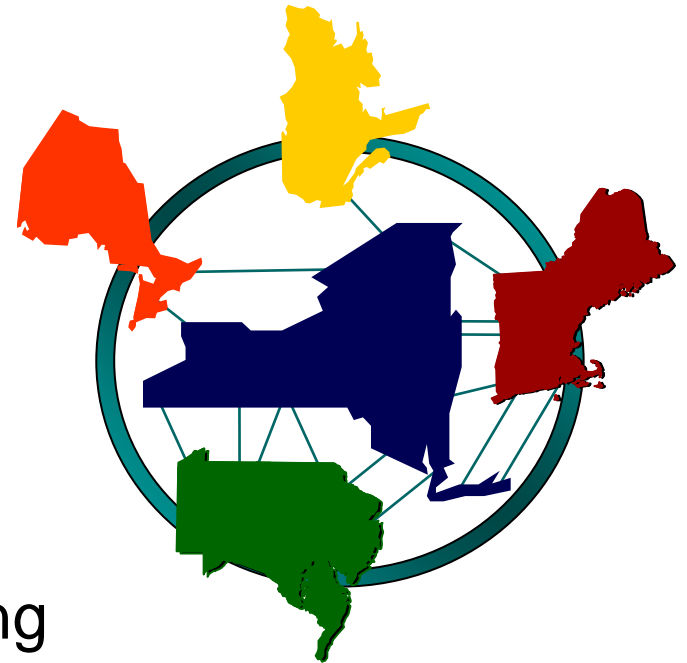


Northeast Seams Report

Update on Northeast Seams Issues

July 29, 2009

NYISO Management Committee Meeting



Draft –for Discussion Purposes Only



Status of Seams Projects

Current Deliverables

Project	Description
1. Intra-Hour Transaction Scheduling	<ul style="list-style-type: none">▪ NYISO and ISO-NE have documented a technical definition of a virtual regional dispatch process and have received potentially viable alternative methodologies from their stakeholders. The ISOs will proceed with further stakeholder meetings to finalize the technical definition and to work towards a joint stakeholder acceptance of the proposal.▪ NYISO and ISO-NE issued a report on the first pilot test on October 24, 2005. A joint meeting of NY and NE stakeholders to review the pilot test report and further develop market participant based proposals for improving the efficiency of the NYISO/ISO-NE interface was held on Nov. 14. Based on discussions at that meeting, ITS will be considered along with other market issues as part of the rules assessment initiative currently underway.▪ NYISO conducted a limited analysis of inter-market real-time transaction scheduling in 2007, in support of an assessment of real-time scheduling and compensation market rules. However, in 2008, that assessment of real-time market rules will focus on issues associated with generation scheduling, dispatch, and compensation. NYISO expects to re-evaluate the projected benefits of an ITS program in 2008, updating an earlier analysis to reflect current market conditions. If that analysis suggests the potential for substantial benefits for NYISO participants, NYISO will work with ISO-NE to determine the feasibility of moving forward with solution design and implementation.

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Status of Seams Projects

Current Deliverables

Project	Description
<p>1. Intra-Hour Transaction Scheduling <i>(continued)</i></p>	<ul style="list-style-type: none"> ▪ In 2008, NYISO and ISO-NE expect to jointly perform an analysis of the impact of uneconomic interchange between the NYISO and ISO-NE control areas. This analysis will attempt to identify the potential economic benefits of more efficient use of available interface transfer capacity. NYISO and ISO-NE will work together to identify market mechanisms that can lead to more efficient scheduling and dispatch across the interface between control areas. ▪ The NYISO's 2007 State of the Market Report provides an analysis of scheduling and pricing patterns at the NYISO's interfaces with neighboring control areas. This analysis indicates that there is an opportunity to increase the efficient use of transfer capacity during unconstrained periods resulting in both production cost and net consumer benefits in both control areas. The analysis indicates that reducing the transaction scheduling lead time would enable market participants to more efficiently schedule transactions. The report recommends the development of processes to improve coordination between the ISOs even if only during limited circumstances, such as reserve shortages. ▪ At the 2009 spring sector meetings, the NYISO provided an overview of 2009 project activities supporting the development of broader regional markets. These activities include an enhanced operating protocol with ISO-NE and the development of a market flow analysis tool with PJM. In addition, the NYISO is working with several control areas to determine the feasibility of dynamic scheduling of energy resources between NYCA and other control areas.

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Status of Seams Projects

Current Deliverables

Project	Description
1. Intra-Hour Transaction Scheduling <i>(continued)</i>	<ul style="list-style-type: none">At the June 26, 2009 MIWG meeting, NYISO provided an overview of a market based scheduling mechanism that would allow for dynamic scheduling between control areas. The initial focus is on the development of this capability at the Quebec interface for energy. Expanding the functionality to reserve and regulation products and to additional control areas could be considered in future phases.

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Status of Seams Projects *Current Deliverables*

Project	Description
2. Regional Resource Adequacy - RAM	<ul style="list-style-type: none">▪ The NYISO has engaged NERA to develop a conceptual forward market design. NYISO forward capacity market initial design alternatives were presented to stakeholders in Dec. 2007 - Feb. 2008. At the joint NYISO Board of Directors Management Committee meeting on June 10, 2008 market participants expressed a range of views on alternative forward capacity market designs. The conceptual design for FCM was presented to MPs on August 28th, with additional design details presented at subsequent ICAPWG meetings from October to the present.▪ Work on remaining design elements will continue in Q1-2009, with expected review through the NYISO governance process in Q2-2009.▪ At the March 19, 2009 ICAP Working Group meeting, the NYISO presented details on qualifications and milestones for new entry to participate in a forward procurement auction, In-City mitigation, credit requirements, settlement rules and seasonal variations issues associated with the forward capacity market design proposal, and revisions to the demand curve setting process.▪ In Q1 2009, the NYISO engaged The Brattle Group to conduct a comparison of the costs and benefits of the contemplated forward capacity market design to the NYISO existing capacity market. The Brattle Group's analysis will include information received during stakeholder sector focus group meetings it will conduct in April 2009. The Brattle Group's draft report will be presented at the NYISO's ICAP Working Group meeting on May 8, 2009, and the penultimate report was presented at the June 5, 2009 ICAP Working Group meeting. Final comments from Market Participants were received and the report was finalized.

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Status of Seams Projects *Current Deliverables*

Project	Description
2. Regional Resource Adequacy - RAM <i>(continued)</i>	<ul style="list-style-type: none"><li data-bbox="517 325 1773 472">▪ The NYISO plans to present a forward capacity market proposal to the June 10, 2009 Business Issues Committee for vote. The outcome of that vote will determine the degree to which resources are committed to fully develop FCM market rules and tariff language.<li data-bbox="517 515 1773 739">▪ At the June 10, 2009 NYISO Business Issues Committee Meeting (BIC) meeting the NYISO conducted an advisory vote to ascertain Market Participant interest in further development of functional requirements for an FCM. A majority of NYISO Market Participants supported ending the current FCM development work. The NYISO will continue to monitor the progress of neighboring forward capacity market designs.

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Other Seams Related Activity

Recent Initiatives

Project	Description
3. Cross-Border Controllable Line Scheduling	<ul style="list-style-type: none">▪ Linden VFT, a 300MW injection from PJM to NYISO is targeted to begin operations during the third quarter 2009 with full operation targeted for the fourth quarter of 2009.▪ Details on the operation, transmission reservations, and Tariff changes for the Linden VFT were presented at MIWG teleconferences on January 26 & 30, 2009.▪ Tariff changes necessary to support implementation of the Linden VFT in the energy market were passed at the February 25, 2009 Management Committee meeting, were approved by the NYISO Board on March 17th and will be filed with FERC. NYISO will work with PJM and Con Ed to ensure emergency operating protocols are in place prior to operation of the Linden VFT Scheduled Line. The NYISO Tariff changes were approved by FERC on May 27, 2009.▪ A technical bulletin (184) detailing the protocol for scheduling energy transaction on the Linden scheduled line was published in July of 2009.▪ At the July 7, 2009 ICAPWG meeting, NYISO presented mitigation measures applicable to capacity imports into New York City over a controllable line from an external control area, and requested comments.

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Other Seams Related Activity

Recent Initiatives (continued)

Activity	Description
<p>1. COORDINATION OF INTERREGIONAL PLANNING</p>	<ul style="list-style-type: none"> ▪ The draft NCSP was posted on January 9, 2009 and an IPSAC conference call was held on January 30, 2009 to discuss comments on the draft Plan and to receive further input from stakeholders regarding continuing studies of interregional system assessments and system improvements. Following these two IPSAC meetings a final comment period was concluded on February 4 and the final NCSP was posted on March 3, 2009. The final NCSP is a comprehensive document that discusses: summaries of the RTO's system plans, interregional studies conducted by the JCSP that include the coordination of projects in the Queues having potential interregional impacts, additional coordinated planning activities and issues, wind and renewable resource studies, key environmental issues with potential interregional impacts, renewable resource development, demand side resource development, and plans for additional JIPC analysis. ▪ Next steps planned are summarized in the NCSP. In particular, NYISO and PJM will be conducting both reliability and production cost analysis which will focus on the New Jersey – Southeast New York area during 2009. In addition new tie lines are being explored, including further analysis between ISO-NE and NYISO, as well as their respective transmission owners, that builds upon the prefeasibility study of a tie between Plattsburgh and Vermont. Upon completion of these studies, plans call for conducting a feasibility analysis of the need for a new tie between southern New England and Southeast New York. ▪ The ISOs provided an update on the status of these studies to IPSAC on a Conference Call held on May 7th. Further updates, including initial study results, will be discussed at the next IPSAC meeting planned for June 30, 2009 to be held in Newark.

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Other Seams Related Activity

Recent Initiatives (continued)

Activity	Description
1. COORDINATION OF INTERREGIONAL PLANNING <i>(continued)</i>	<ul style="list-style-type: none"><li data-bbox="589 339 1284 378">▪ An IPSAC meeting was held June 30, 2009.

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Other Seams Related Activity

Recent Initiatives

Activity	Description
<p>2. INTERREGIONAL CONGESTION MANAGEMENT</p>	<ul style="list-style-type: none"> ▪ NYISO and PJM are evaluating a coordinated bilateral Congestion Management Process concept. PJM and NYISO met on April 12-13, 2007 and discussed possible opportunities for coordination. This intent of this activity is to develop a concept that enables optimal dispatch between control areas such that one control area may alleviate congestion in the other. ▪ NYISO presented a Congestion Management process overview to market participants at the December 14, 2007 Market Issues Working Group. ▪ PJM and NYISO had a productive meeting on January 29th, 2008 to continue discussions on a potential congestion management process. More specifically, the parties reviewed RTO to RTO redispatch examples, interaction between any new process and existing PJM NYISO agreements and potential data exchanges. ▪ PJM and NYISO have held several meetings in the first half of 2008 to develop a conceptual design for implementing a coordinated congestion management process. These discussions have focused on the overall design, potential operational procedures and data coordination protocols necessary to integrate a congestion management process.

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Other Seams Related Activity

Recent Initiatives

Activity	Description
2. INTERREGIONAL CONGESTION MANAGEMENT <i>(continued)</i>	<ul style="list-style-type: none">▪ NYISO and PJM staff met on December 12, 2008 to continue discussions on a congestion management process.▪ On February 12, 2009 NYISO hosted a technical conference for market participants, with representatives from PJM, MISO, IESO and ISO-NE participating, to discuss design considerations and take stakeholder feedback on the development of an Interregional congestion management process. NYISO and PJM staffs have met to discuss the details of performing the market flow calculation and have begun the internal evaluation of identifying the necessary data to be shared to support that process.▪ NYISO and PJM are working on the development of a market flow analysis tool. This tool will help the ISOs in understanding the extent of market flows on each other's systems and in determining the need to define entitlements in a congestion management process.▪ At the June 26, 2009 MIWG meeting NYISO presented an overview of the current effort to develop a congestion management protocol.

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Issues Pending Further Discussion

Issue	Description
3. Reserves Participation in Adjacent Regional Markets	<ul style="list-style-type: none">▪ There is Market Participant interest in selling operating reserves from generation sources in one region to provide reserves in another region. This issue will be considered along with other longer-term market issues as part of the NYISO Market Evolution Plan, which was presented to NY stakeholders in June 2005. Since late 2005, the NYISO's Market Evolution Plan is part of its strategic planning process. The NYISO suggested this item to its Market Issues WG for stakeholder discussion and prioritization. Following implementation (October 2006) and assessment of their reserve market, ISO-NE will consider inter-control area provision of reserves.

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Issues Pending Further Discussion *(continued)*

Issue	Description
<p>4. Congestion Rent Shortfalls Resulting From External Transmission Outages</p>	<ul style="list-style-type: none"> ▪ 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. NYISO Senior Management will evaluate project, scheduling and budget impacts in conjunction with all other identified initiatives and determine what further action will be taken. ▪ NYISO will evaluate this issue as part of NYISO’s market rules assessment initiative.

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Issues Pending Further Discussion *(continued)*

Issue	Description
5. Elimination of Rate Pancaking	<ul style="list-style-type: none">▪ The NYISO, with the support of the New York TOs, will initiate discussions among the affected parties in the Northeast to explore the potential for rate pancaking relief between New York and PJM. A meeting between the NY and PJM TOs was held on August 18, 2005 to initiate discussions on this issue. With the Transmissions Owners as the primary drivers of this issue, NYISO and PJM are awaiting indications of intent from PJM's TOs as to the level of priority this issue has with the TOs. PJM has supply transaction data regarding volume and rates for PJM exports into NY.▪ The NYISO has also initiated discussions with IESO to eliminate export fees. The revenue application review process for the transmitter that owns the inter-tie transmission lines in Ontario, and is responsible to the provincial regulator for this fee, is currently ongoing. The possibility of eliminating the transmission export fee, along with other options, is being discussed at this rate hearing. The decision on the transmitter's revenue application is expected to be given in May of 2007.▪ The Ontario Energy Board recently upheld the \$1/MWh export charge from IESO. However, the IESO will be (1) conducting a study on appropriate export transmission service rates for Hydro One Networks' 2010 rate process; and (2) will start negotiations with the NYISO to pursue a reciprocal arrangement to eliminate export charges. The IESO will begin discussions with its neighbors early in 2008 and will complete its market impact studies in 2009. The Ontario Energy Board must approve any changes to Hydro One's export transmission charges.

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Issues Pending Further Discussion

(continued)

Issue	Description
6. Limitations Due to Loss of Large Source	<ul style="list-style-type: none">▪ A status of detailed loss of source studies was presented at the December 11, 2008 IPSAC meeting. With the addition of the planned 500kV improvements by 2012, the loss of source limit will likely be constrained by limitations in the PJM system to the 1,500 MW level. The New York constraint will become less binding than the PJM constraint at that time. Loss of source analysis is continuing as a part of other interregional studies, such as the NY-VT tie, and the NJ- Southeast NY studies. The loss of source issues and studies are summarized in the NCSP.

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Issues Pending Further Discussion

(continued)

Issue	Description
<p>7. Long-Term Solution for Unscheduled Lake Erie Loop Flows</p>	<ul style="list-style-type: none"> ▪ Unscheduled power flows, particularly around Lake Erie, can negatively impact both electric system reliability and market operations. The NYISO is conducting a comprehensive investigation of transaction scheduling and pricing protocols and incentives in order to assist its efforts to work with PJM, MISO and IESO to develop an alternative long-term solution to address mitigate the market and reliability impacts of unscheduled Lake Erie power flows. The results of this ongoing analysis have been, and will continue to be, shared with stakeholders to facilitate an informed discussion of a viable long term solution for managing loop flow. ▪ Representatives from NYISO, PJM, IESO and MISO met on March 23, 2009 to address the development of solutions to mitigate loop flows. Discussion of the underlying causes of loop flow and the process for sharing data to further the analysis were discussed. ▪ At the 2009 Spring sector meetings NYISO provided an overview of the 2009 project activities supporting improved inter-regional transaction scheduling. Included in those activities are the investigation of a solution that will allow for the applying of charges to unscheduled flows for their congestion impacts.

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Issues Pending Further Discussion

(continued)

Issue	Description
7. Long-Term Solution for Unscheduled Lake Erie Loop Flows <i>(continued)</i>	<ul style="list-style-type: none">▪ At the July 8, 2009 MIWG meeting, NYISO presented an approach to managing loop flow that would allow for the “Buy-Through of Congestion.” This approach would allow for a market based mechanism for managing loop flows and provide for the recovery of costs associated with loop flows.

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Issues Pending Further Discussion *(continued)*

Issue	Description
8. Asymmetric Planning Year Impact on Inter-Area Capacity Sales	<ul style="list-style-type: none">▪ The NYISO capability year begins May 1st, while the capability years for both PJM and ISO-NE begin on June 1st. The election to use Unforced Deliverability Rights (UDRs) for controllable tie-line capacity at an interface with an external control area is factored into the NYISO's annual planning process determining locational capacity requirements. The capacity of a controllable tie-line not used for UDRs may be modeled as emergency assistance in the planning process, subsequently reducing the locational capacity requirement. The one month difference between capability years across the ISOs may be an issue in instances where full capability year obligations or contracted capacity from one control area is transitioned to meet requirements in the neighboring control area.▪ NYISO and LIPA are discussing potential ways to address the impact for the May 2010 period.

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