

Northeast Seams Report

Update on Northeast Seams Issues

October 26, 2011

NYISO Management Committee Meeting



Draft –for Discussion Purposes Only



Broader Regional Markets

Issue	Description
1. Market Solutions to Loop Flow: Buy-Through of Congestion	<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.▪ Per the December 30, 2010 FERC order, the NYISO has suspended work on Buy-Through of Congestion in order to focus resources on the Commission’s priorities of Interface Pricing and Market to Market.



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2. Market Solutions to Loop Flow: Interregional Congestion Management	<ul style="list-style-type: none">▪ NYISO and PJM are evaluating a coordinated bilateral Congestion Management Process concept. 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.▪ A kick off meeting was held in August 2010 for a regional PAR coordination study. In addition to identifying devices with the ability to manage loop flows the study will identify regional paths and flowgates significantly impacted by Lake Erie loop flows. The NYISO's August 16, 2010 Broader Regional Markets initiatives report filed with FERC provides further detail on the preliminary scope of this study.▪ On October 20, 2010 Midwest ISO and ITC filed proposed tariff amendments at FERC seeking to allocate 30.9 % of the cost of ITC's phase angle regulating transformers at Bunce Creek on the Michigan-Ontario border to New York, and 19.5% to PJM. The Commission has set a November 10, 2010 comment date in Docket No. ER11-1844. The NYISO intends to vigorously oppose this proposal.▪ On November 17, 2010 the NYISO, the New York TOs, ISO-New England and many other entities filed protests in opposition to joint Midwest ISO-ITC cost allocation proposal. NYISO contends that the cost allocation proposal is not consistent with Commission precedent or the Commission's recent transmission planning and cost allocation NOPR.▪ On December 30, 2010 FERC issued an order elevating the priority of the Market-to-Market Coordination/Congestion Management and Interface Pricing Revision elements of the NYISO's Broader Regional Markets plan.



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2. Market Solutions to Loop Flow: Interregional Congestion Management (continued)	<ul style="list-style-type: none">At the May 26, 2011 Market Issues Working Group meeting NYISO provided an update on the development of updates to its interface pricing methodology. NYISO is targeting the fourth quarter of 2011 for the required software deployment.At the May 26, 2011 Market Issues Working Group meeting NYISO provided an update on the development of Market-to-Market Coordination with PJM. Topics covered in this presentation included examples of coordination in real time operations, the process for establishing flowgates, defining market flows, settlements, tariff impacts, and next steps.On July 21, 2011 PJM and NYISO held a joint stakeholder meeting to review the ongoing development of a Market-to-Market Coordination protocol. The presentation included an overview of the joint operating agreement and project timeline as well as a review of key concepts, coordination in real-time, market flows, entitlements, settlements, post process validation, and next steps.In response to ITC's filing of a proposed Ontario/Michigan PAR interconnection agreement, operating agreement and related documents, on August 17, 2011 the NYISO filed a petition to intervene and initial comments in DOE Docket No. PP-230-4. The NYISO's comments stated that the proposed PAR operating rules present a potential reliability risk to New York. The NYISO is working with ITC, MISO and IESO to resolve its reliability concerns. Comments on ITC's filing are due at DOE by September 23, 2011.



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<p>2. Market Solutions to Loop Flow: Interregional Congestion Management <i>(continued)</i></p>	<ul style="list-style-type: none"> ▪ On August 26, 2011 NYISO submitted to FERC the Regional Power Control Device Coordination Study, Final Report, prepared by Midwest ISO, PJM, IESO and NYISO. The report concluded that under some circumstances a correlation may exist between PAR operation and Lake Erie circulation and a significant correlation between scheduled interchange among the Lake Erie ISO/RTOs and Lake Erie circulation. The report cautions that an observed correlation among these variables does not however imply a causal relationship between them. ▪ The NYISO is working with MISO and IESO to address the NYISO's concerns with the proposed OH/MI PAR operating instructions that ITC submitted to the DOE with its application. On October 13 MISO and IESO Jointly filed comments at DOE that address most of the NYISO's concerns relating to the modeling of the OH/MI PARs in the NERC Interchange Distribution Calculator. The comment date at DOE (Docket No. PP-230-4) has been extended to November 4, 2011. ▪ At the September 16, 2011 MIWG, NYISO presented changes to NYISO tariffs and the NYISO-PJM Joint Operating Agreement (JOA) necessary for implementation of Market-to-Market Coordination with PJM. At the September 26 MIWG NYISO presented stakeholders with details on the incorporation of Ramapo PAR operation into the Market-to-Market Coordination process. ▪ NYISO will host a joint stakeholder conference for PJM and NYISO stakeholders on November 3, 2011 to review Market-to-Market congestion management protocols.



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3. Market Solutions to Loop Flow: Enhanced Interregional Transaction Coordination	<ul style="list-style-type: none">▪ During the first half of 2011, NYISO and ISO-NE held a series of joint stakeholder discussions to review design proposals for improving the efficient utilization of the NY-NE interface. Two distinct options: Tie Optimization (TO) and Coordinated Transaction Scheduling (CTS) were considered.▪ At the June 1, 2011 NEPOOL Markets Committee and NYISO Business Issues Committee joint stakeholder meeting NYISO stakeholders selected the Coordinated Transaction Scheduling proposal with an 85.47% affirmative advisory vote. NE stakeholders voted to approve a separate competing proposal, Tie Optimization, by 61.64%. As a result of this outcome, the ISOs' management will review the merits of each of the proposals and return to stakeholders with a recommendation for moving forward.▪ At the June 6, 2011 Market Issues Working Group NYISO provided an update on Enhanced Interregional Transaction Coordination (EITC) Phase 3 which will provide for 15-minute transaction scheduling between NY and PJM. Software and tariff changes developed for EITC Phase 1 will support much of the EITC Phase 3 deployment. Additional operational tools and procedures will be developed to support 15-minute checkouts with PJM. NYISO expects to begin implementation in March of 2012.▪ A MIWG meeting has been scheduled for August 9, 2011 to discuss Inter-Regional Interchange Scheduling (IRIS.) Methods of evaluating the performance of Coordinated Transaction Scheduling (CTS) and conditions under which to consider transitioning to Tie Optimization (TO) will be discussed.



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3. Market Solutions to Loop Flow: Enhanced Interregional Transaction Coordination (continued)	<ul style="list-style-type: none">On July 27, 2011 NYISO and HQ activated 15-minute scheduling at the HQ-Chateaugay Proxy.At an August 31, 2011 meeting of the NYISO BIC, stakeholders approved the concept of including a two year post implementation review of interface scheduling performance under CTS in the CTS tariff filing. The motion was passed with 88% in favor.NYISO presented tariff revisions necessary for the implementation of CTS at the September 16 and 26, 2011 MIWG meetings. Additional tariff amendments will be brought to MIWG in October. NYISO expects to seek stakeholder approval for the CTS related tariff changes at the November BIC and MC meetings.



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Estimated Benefits of Broader Regional Markets Initiatives

- An analysis of the Broader Regional Markets initiatives conducted by the NYISO's Independent Market Monitor indicates, under a \$6 per MMBTU natural gas price scenario, annual regional savings of at least \$362 million with \$193 million annual savings on New York interfaces and constraints.
- Coordination of flows around Lake Erie would result in an estimated \$53 million in annual savings regionally with \$18 million for New York interfaces and constraints
 - ✓ Gross value of over-priced and under-priced loop flow is \$430 on an annual basis
 - ✓ Reasonable to expect to capture 10-20% of this value
- Improved interface utilization would result in \$309 million in annual savings regionally with \$175 million for New York interfaces and constraints
 - ✓ Measured as reduction in production costs
 - ✓ Results in price convergence between regions
- At the September 27, 2010 joint stakeholder technical conference David Patton presented an update to the analysis of the benefits of the Broader Regional Market Initiatives originally presented at the April 21 MC meeting.



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4. 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.▪ The NYISO intends to evaluate the capabilities for cross border reserve trading as part of the Interregional Transaction Coordination effort in 2010.▪ On November 10, 2010 NYISO presented a proposed approach for allowing market participants to purchase or sell Operating Reserves and Regulation Service at an external interface. Reserve product qualification, performance management, scheduling, and settlement aspects of the proposed approach were discussed.



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5. Congestion Rent Shortfalls Resulting From External Transmission Outages	<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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Issue	Description
7. Asymmetric Capability 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.▪ On February 3, 2010 FERC approved Tariff changes necessary to support the Capability Year adjustment election for holders of UDRs.▪ At the June 17, 2010 Installed Capacity Working Group (ICAP WG) NYISO presented an overview of market design considerations related to the realignment of NYISO's ICAP Capability Year with neighboring markets. PJM and ISO-NE both employ a planning year beginning on June 1 each year and the NYISO employs two distinct six-month capability periods within a capability year beginning on May 1 each year. The NYISO requested feedback from market participants related to anticipated market benefits, additional perceived obstacles, potential impacts on exports from New York, and prioritization with respect to other ICAP market enhancements.



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Issue	Description
8. Capacity Market Enhancements	<ul style="list-style-type: none">▪ Explore Impediments to Reciprocal Capacity Wheeling with New England<ul style="list-style-type: none">♦ <i>Identify the scope of issues pertaining to auction structure, timing, planning, operations, IRM/LCR, cost allocation and other impact areas in NY and NE markets</i>▪ Identify/enumerate capacity market seams<ul style="list-style-type: none">▪ <i>Investigate whether delisted capacity is treated similarly in ISO-NE and NYISO (ICAP vs. UCAP, interaction with export limit, losses, etc.)</i>



Broader Regional Planning

Issue	Description
9. Coordination of Interregional Planning	<ul style="list-style-type: none"><li data-bbox="575 358 1787 658">▪ The first meeting of the (NYISO) Interregional Planning Task Force was held as a Webex on January 29, 2010, followed by an in person meeting on February 10th . NYISO staff provided updates on IPSAC work plans for 2010 and the EIPC initiative and initiated discussions regarding the development of a process and schedule for addressing cross border planning and cost allocation issues. Numerous IPTF meetings have been held since then, primarily to update stakeholders on IPSAC and EIPC activities as well as to discuss the FERC Planning & Cost Allocation NOPR.<li data-bbox="575 679 1787 901">▪ An IPSAC meeting was held on March 30, 2011 to discuss: Draft IREMM Results of the Interregional Production Cost Study, Draft PROMOD Results of the Interregional Production Cost Study, Integrating Energy Efficiency in Long-Term ISO/RTO Planning, Update on the FERC Planning NOPR and Interregional Issues, EIPC Update, Next Steps on Production Cost Studies, Plans for NCSP11, Environmental issues, and other items.<li data-bbox="575 922 1787 1108">▪ An IPSAC Webex meeting was held on June 27th to discuss: Environmental Issues and Variable Resource Technologies, Natural Gas Issues and ISO/RTO Reliability Update, IREMM Results of the Interregional Production Cost Study, Update on the PROMOD Interregional Production Cost Study, Update on Interregional Activities, and Next Steps and Plans for NCSP11.<li data-bbox="575 1129 1787 1200">▪ Reports have been posted on Environmental Issues and Variable Resource Technologies, and IREMM Results on the Interregional Production Cost Study.



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Issue	Description
9. Coordination of Interregional Planning	<ul style="list-style-type: none"><li data-bbox="575 358 1779 468">▪ An IPSAC Webex meeting is scheduled for Nov 29th to discuss: updates on the Production Cost analyses, Environmental Issues, Order 1000 and the development of the next Northeast Coordinated Regional Plan.



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<p>9. Coordination of Interregional Planning <i>(continued)</i></p>	<ul style="list-style-type: none"> ▪ FERC issued Order 1000, the Final Rule on Transmission Planning & Cost Allocation on July 21, 2011. It contains new requirements in the following areas: <ul style="list-style-type: none"> ▪ Regional Planning ▪ Public Policy Considerations ▪ Inter-regional Planning ▪ Cost Allocation: Both regional and inter-regional ▪ Eliminates “Right-of-First-Refusal” tariff provisions ▪ It is anticipated that the Northeast ISO/RTO Planning Coordination Protocol will be utilized as the vehicle for compliance filings related to inter-regional planning and cost allocation. ▪ Stakeholder discussions regarding Order 1000 will take place at ESPWG, IPTF as well as IPSAC. ▪ The Effective Date of the Final Rule is October 11, 2011. ▪ Compliance filings on most topics due on October 11, 2012. [in approximately 14 months] ▪ Compliance filings on inter-regional topics due on April 1, 2013. [in approximately 20 months] ▪ On August 22nd NYISO filed for rehearing of the Commission’s assertion that it has jurisdiction to assign the costs of transmission facilities to “all beneficiaries” regardless of their contractual relationship with the owner of those facilities.



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Issue	Description
10. Eastern Interconnection Planning Collaborative (EIPC)	<ul style="list-style-type: none">▪ On December 18, 2009, the DOE announced award selections totaling \$60 million dollars in funding to develop open and transparent stakeholder processes and to conduct transmission planning analyses on an interconnection-wide basis. The awardees for the Eastern Interconnection were the EIPC proposal for developing the stakeholder process and performing the technical analysis and the EISPC proposal to establish a consensus-building process among the Eastern states to identify resource and policy options as input to the technical analysis. Discussions are underway to finalize an agreement with the DOE.▪ On May 28th, the SSC reached a consensus on the final set of eight “resource expansion futures”, and the data inputs for all sensitivity cases to be studied. These futures are:<ul style="list-style-type: none">♦ <i>Business as Usual</i>♦ <i>Federal Carbon Constraint: National Implementation</i>♦ <i>Federal Carbon Constraint: State and Regional Implementation</i>♦ <i>Aggressive Energy Efficiency, Demand Response, Distributed Generation and Smart Grid</i>♦ <i>National Renewable Portfolio Standard (RPS): Top Down Implementation</i>♦ <i>National RPS: State and Regional Implementation</i>♦ <i>Nuclear Resurgence</i>♦ <i>Combined Federal Climate and Energy Policy</i>



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<p>10. Eastern Interconnection Planning Collaborative (EIPC) (continued)</p>	<ul style="list-style-type: none"> ▪ An SSC meeting was held on July 28-29th in Cleveland which focused on the following topics: <ul style="list-style-type: none"> ▪ Review of CRA results for Futures 5 sensitivities and Futures 6,7 & 8 base case and transmission sensitivities. ▪ The Scenario Development TF was directed to provide its recommendations on the final three scenarios for detailed analysis in Phase II by early September. ▪ Review of high level transmission cost estimates for Future 2 ▪ Draft outline and schedule for Phase I Report to the DOE ▪ Draft scope and schedule for Phase II analysis ▪ As of August 18th results have been posted for 76 out of 80 sensitivities. [Analysis is underway on the remaining sensitivities for Futures 6 , 7 & 8.] The remaining 4 sensitivities are being held in reserve for use in defining the final three Scenarios. The modeling results are available on the EIPC website at www.eipconline.com/Modeling_Results.html. ▪ At the SSC meeting held on Sept 26-27th in Philadelphia, the following topics were addressed <ul style="list-style-type: none"> ▪ Nationally Implemented Federal Carbon Policy w/increased EE/DR ▪ Regionally Implemented National RPS Scenario ▪ “Business As Usual”

