

Northeast Seams Report

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Business Issues Committee Meeting

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Issue	Description
1. Michigan- Ontario PAR Cost Allocation	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 May 22, 2012, FERC issued a declaratory order instructing the NYISO "the Commission has accepted MISO's proposed allocation and charges in Docket No. ER11-1844, and permitted them to become effective, subject to refund. Therefore, any charges properly billed pursuant to these Commission-accepted MISO Tariff provisions must be paid by NYISO in accordance with the provisions of MISO's Tariff."
	 A hearing before the FERC Administrative Law Judge (ALJ) regarding cost recovery for the MI/ON PARs was concluded on September 13, 2012. Initial and Reply Briefs were filed by all parties to the proceeding in October.
	 On December 18, 2012 the FERC ALJ issued his Initial Decision rejecting the MISO/ITC proposal to allocate a portion of the cost of the MI/ON PARs to PJM and New York. MISO and ITC filed exceptions arguing that the AJL's Initial Decision should be overturned by the Commission. Responses to the MISO/ITC Exceptions were submitted by NYISO, the NYTOs, PJM, the PJM TOs and the MISO TOs on February 6, 2013.



Issue	Description
2. Market-to-Market Coordination-	 NYISO and PJM activated M2M coordination on January 15, 2013. The ISOs have successfully coordinated generation redispatch for several flowgates and have begun to coordinated Ramapo tap changes based on the M2M protocols.
PJM	 On July 12, 2013 PJM suspended M2M Ramapo PAR coordination of the thunderstorm alert (TSA) M2M flowgates. NYISO and PJM are engaged in ongoing Dispute Resolution regarding PJM's suspension of coordination on these flowgates.
	 At the March 4, 2014 MIWG NYISO presented a proposal which would allow NYISO and PJM to resume M2M Ramapo PAR coordination of the thunderstorm alert (TSA) flowgates. NYISO intends to request stakeholder approval for updates to the PJM-NYISO JOA and file with FERC for implementation by summer 2014.
	 On April 11, 2014 the NYISO MC approved revisions to the PJM-NYISO JOA which will allow TSA flowgates to be re-introduced into M2M Ramapo PAR coordination.
	 On June 11, 2014 updates to the NYISO-PJM Joint Operating Agreement became effective in support of M2M coordination at times when a Storm Watch is in effect in New York. NYISO and PJM have begun operating under the revised protocols.



Issue	Description
3. Interface Pricing	 On October 26, 2011 NYISO deployed pricing and scheduling software enhancements that are designed to allow the NYISO to better reflect the distribution of flows around Lake Erie. These enhancements are referred to as "Interface Pricing."
	 On March 20, 2013 FERC issued an order accepting the NYISO's January 18 proposed interface pricing Tariff revisions. Accordingly the NYISO begun posting to its OASIS Lake Erie unscheduled power flow assumptions used for the Day Ahead market and PJM interface interchange distribution assumptions used for both the Day Ahead and Real Time markets. The Commission also directed the NYISO to file additional tariff revisions requiring that the NYISO, in consultation with its MMU, to seek authorization from the Commission to add additional prohibited scheduled paths at such time that it becomes apparent that a path is being scheduled in a manner inconsistent with expected actual flows. In accordance with FERC's March 20, 2013 Order, on May 20, 2013, the NYISO submitted tariff revisions that are designed to permit the NYISO, acting in consultation with its MMU, to submit a compliance filing to FERC proposing to prohibit the use of particular scheduling path(s). On June 25, 2013 FERC accepted the NYISO filing.



Issue	Description
4. Enhanced Interregional Transaction Coordination	 EITC Phase III (15-minute scheduling at PJM) At the June 6, 2011 Market Issues Working Group NYISO provided an update on 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. At the April 26, 2012 MIWG NYISO provided stakeholders with an update on the rollout of 15-minute transaction scheduling with PJM. The roll-out order for the proxy buses will be: Keystone, Neptune, Linden VFT. Market Participants will be given two weeks notice before the implementation at each proxy. On June 27, NYISO activated 15-minute scheduling at the Keystone proxy bus. On October 30, 2012 15-minute scheduling was activated for the Neptune proxy bus. On November 28, 2012 NYISO activated15-minute scheduling for the Linden VFT proxy bus. On June 3, 2013 the HTP entered commercial operation. The implementation includes 15-minute scheduling capability.



Issue	Description
4. Enhanced Interregional Transaction Coordination (continued)	 EITC Phase V (CTS with PJM) On October 22, 2014 NYISO deployed software to support CTS with PJM and related enhancements including the scheduling 15-minute externals transactions from the 1st timestep of RTC and the ability to submit variable 15-minute transactions bid curves. NYISO reviewed details associated with the (planned) October 22 software deployment and (planned) November 4 CTS activation at the September 29 MIWG.
	On November 4, 2014 NYISO activated CTS with PJM.
	 In December 2014 NYISO plans to begin providing CTS performance metrics to the OC and MC in the Operations Performance Metrics Monthly report.
	NYISO presented its initial set of BRM Metrics at the December MIWG. NYISO will be returning to future MIWGs with those, and additional metrics. NYISO presented its initial set of BRM Metrics at the December MIWG. NYISO will be returning to future MIWGs with those, and additional metrics.



Issue	Description
4. Enhanced Interregional Transaction Coordination (continued)	EITC Phase IV (CTS with ISO-NE) On April 19, 2012 FERC issued an order accepting NYISO's proposed tariff revisions effective with the implementation of CTS. Both ISOs are working toward an end of 2015 implementation. NYISO staff will continue to review software changes and enhancements to the JESS application for CTS with ISO-NE at the January MIWGs. NYISO staff continues to work with ISO-NE on drafting a joint Coordination Agreement and expects to review that with stakeholders beginning in Q2 2015.



Issue	Description
4. Enhanced Interregional Transaction Coordination (continued)	 Five-minute Transaction Scheduling (at HQ Chateauguay) Five-minute transaction scheduling would look to continue to improve real-time interchange scheduling processes by allowing economic scheduling of interchange across controllable interties via the 5 minute Real-Time Dispatch ('RTD'). This initiative is being considered for design and implementation in the 2016-2017 time frame.
	 Evaluation of Energy Market Offer Cap At the March 25, 2014 MIWG NYISO reviewed details related to the temporary bid cap waiver which was in effect from January 22 to February 28. At this MIWG, Potomac Economics provided their assessment of the impact the existing offer cap had on market outcomes.
	On December 15, 2014, PJM filed with FERC proposing to increase its offer cap to \$1,800/MWh for time period January 9, 2015 through March 31, 2015. NYISO submitted comments on PJM's filing supporting the Commission's efforts on offer caps and the regional coordination of comparable offer caps in order to limit potential seams issues between neighboring regions, satisfy reliability, and avoid inefficient market outcomes.
	 15-Minute Transaction Scheduling at Ontario The IESO has expressed interest in pursuing quarter hour scheduling with NYISO beginning in 2016.



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.



Issue	Description
5. Reserves Participation in Adjacent Regional Markets	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.



Issue	Description
6. Congestion Rent Shortfalls Resulting From External Transmission Outages	 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.



Issue	Description
7. Elimination of Rate Pancaking	• 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.
	While rate pancaking between NYISO and ISO-NE has already been eliminated, it is anticipated that the recently initiated interregional cost allocation discussions taking place under the Northeastern ISO/RTO Coordination of Planning Protocol will address the elimination of through-and-out charges between NYISO and PJM.



	approved Tariff changes necessary to support the
Impact on Inter- Area Capacity Sales At the June 17, 2010 Installed presented an overview of may of NYISO's ICAP Capability in two distinct six-month capabing 1 each year. The NYISO requanticipated market benefits, and exports from New York, and presented for stakeholder. NYISO is evaluating an annual be presented design option product at the August 28, 2010. The Analysis Group reviewed.	d Capacity Working Group (ICAP WG) NYISO rket design considerations related to the realignment rear with neighboring markets. PJM and ISO-NE both aning on June 1 each year and the NYISO employs lity periods within a capability year beginning on May uested feedback from market participants related to additional perceived obstacles, potential impacts on prioritization with respect to other ICAP market all capacity/forward capacity market design which will consideration in Q4-2014. If one for implementation of an annual capacity market all ICAP Working Group meeting. If the framework for their capacity market assessment Working Group meeting. They will return to the ICAP



Issue	Description
9. Capacity Market	Explore Impediments to Reciprocal Capacity Wheeling with New England
Enhancements	 Identity the scope of issues pertaining to auction structure, timing, planning, operations, IRM/LCR, cost allocation and other impact areas in NY and NE markets
	Identify/enumerate capacity market seams
	 Investigate whether delisted capacity is treated similarly in ISO-NE and NYISO (ICAP vs. UCAP, interaction with export limit, losses, etc.)
	 At the September 11, 2012 ICAPWG meeting FTI presented draft capacity market study results and solicited stakeholder feedback and comments. A draft version of the report will be distributed for stakeholder comment in mid-October with a final version issued in early November. The NYISO posted the final capacity market study report on March 14, 2013.
	 FERC held a technical conference on February 26, 2014 to explore the possibility of modeling Zone K as an export constrained zone. NYISO filed post technical conference comments with FERC on March 26, 2014.
	 NYISO and PJM are both pursuing capacity market design changes to strengthen incentives for real time operational performance.
	 On November 20, 2014 FERC issued an order directing the ISO/RTO market operators to file reports outlining their efforts to address fuel assurance issues. NYISO will be working to prepare a report in response in advance of the February 18, 2015 filing deadline.
	 IESO has expressed interest in allowing resources located in their area to participate in the NYISO capacity markets



Issue	Description
10. Market Solutions to Loop Flow: Buy-Through of Congestion	 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.
	 On March 19, 2014 NYISO, PJM, MISO and IESO jointly submitted an informational report to FERC addressing the effects of various market improvements on loop flow, and assessing the need to implement a Buy-Through of Congestion solution to loop flow.
	 NYISO is obligated to continue to submit periodic informational reports to FERC addressing the effects of various market improvements on loop flow, and assessing the need to implement a Buy-Through of Congestion solution to loop flow. See New York Independent System Operator, Inc., 133 FERC ¶ 61,276 (2010).
	 On June 2, 2014 FERC issued an order granting NYISO's request to change the semiannual reporting requirement on BRM initiatives to an annual reporting requirement.



Issue	Description
11. Coordination of Interregional	 FERC issued Order 1000, the Final Rule on Transmission Planning & Cost Allocation on July 21, 2011. It contains new requirements in the following areas: Regional Planning
Planning	Public Policy Considerations
	Inter-regional Planning
	Cost Allocation: Both regional and inter-regional
	Eliminates "Right-of-First-Refusal" tariff provisions
	Order 1000 Regional Requirements
	 On October 11, 2012 NYISO made a joint compliance filing with the TO's to address the regional planning and cost allocation requirements of Order 1000.
	 On April 18, 2013 FERC issued an Order on Compliance which conditionally accepted the NYISO/NYTOs' regional compliance filing
	There were numerous conditions—and some are significant
	 Additional compliance filing is required by August 16th



Issue	Description
11. Coordination of Interregional Planning (continued)	 Order 1000 Regional Requirements (cont'd) On October 15th, NYISO made a compliance filing to address the regional planning and cost allocation requirements of the April 18th order. NYISO and the NYTOs filed a joint response to the protests on December 16th. During the first half of 2014, NYISO began work on various implementation procedures and other tasks in anticipation of a final FERC Order, including: Updates to the Reliability Planning Manual Updates to the CARIS Planning Manual Preparation of a new Public Policy Planning Manual Preparation of draft Study Agreements for Reliability and PPR Since June, there have been multiple stakeholder meetings to receive input on these documents.



Issue	Description
11. Coordination of Interregional Planning (continued)	 Order 1000 Regional Requirements (cont'd) On July 2, 2014 NYISO filed a request with FERC to change the effective date of the Regional Compliance filing to the start of the next planning cycle in Jan 2016 On July 17, 2014 FERC issued an Order which largely accepted the October 2013 compliance filing, but required a further compliance filing by September 15 to clarify specific issues.
	 FERC rejected NYISO's request to defer the implementation date and approved the January 1, 2014 effective date originally requested. NYISO has provided a summary of the FERC Order and a detailed matrix itemizing the required tariff revisions to stakeholders NYISO has provided draft tariff language to ESPWG for discussion in August & Sept On Sept 2nd, NYISO filed its response to protests of the July 17th Order On Sept 15th NYISO and the NYTOs made a joint compliance filing in response to the July 17th Order



Issue	Description
11. Coordination of Interregional	 Order 1000 Regional Requirements –Implementation On August 1, 2014, NYISO issued a notice soliciting proposals for Public Policy Transmission Needs.
Planning (<i>continued</i>)	 NYISO received proposals from 8 separate entities on September 30th which was forwarded to the PSC for review in accordance with the NYISO Tariff.
	 On December 11, 2014 the NYPSC issued an Order Establishing Modified Procedures for Comparative Evaluation in the Matter of AC transmission Upgrades
	 Adopts a comparative evaluation process and schedule for the AC Transmission Proceeding (Case 12-T-0502)
	 This process will inform the decision in the Public Policy Requirements process (Case 14-E-0454)
	 Extends the schedule for a PSC decision in both proceedings to August or September 2015



Issue	Description
11. Coordination of Interregional Planning (continued)	 Order 1000 Interregional Requirements NYISO, PJM and ISO-NE held IPSAC webex meetings on January 28th and February 26th to discuss stakeholder comments on the Northeast Protocol. Written comments were requested by March 4th Separate compliance filings were made by each region on July 10th On September 24th, NYISO filed an answer to third party protests regarding certain aspects of the July 10th compliance filing
	 On an IPSAC Webinar held on March 28th, ISO-NE, NYISO and PJM reviewed the Order 1000 interregional requirements and implementation procedures anticipated under the July 10th compliance filings Awaiting FERC response



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Issue	Description
12. Eastern Interconnection Planning Collaborative (EIPC)	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.
	 Eight energy futures were developed and approved by SSC Macroeconomic analysis was completed on a total of 80 futures and sensitivities The SSC selected the final three Scenarios for analysis in Phase II: Business As Usual National RPS—Regional Implementation Combined Federal Climate and Energy Policy Phase I Report was filed with DOE on December 16th Phase I Report posted on EIPC Website at: http://eipconline.com/uploads/Phase 1 Report Final 12-23-2011.pdf



Issue	Description
12. Eastern Interconnection Planning Collaborative (EIPC) (continued)	 Power flow models were developed for the final three SSC Scenarios EIPC PAs identified transmission facilities to support each resource expansion Cost estimates were developed for the transmission and resource additions for each scenario Production cost analysis and sensitivity analysis was conducted for each scenario PAs prepared a draft Report to present the results of the Phase II analyses for stakeholder review and comment EIPC submitted the final version of the Phase 2 Report to DOE for review and comment on December 26th This report is posted on the EIPC website at http://eipconline.com/Phase II Resources.html



Issue	Description
12. Eastern	2013 - 2014: EIPC Non-Grant Study
Interconnection Planning	 Joint IPTF/EGCWG meetings were held on January 6th, 23rd & Feb 20th to discuss comments on the Roll-up cases and draft Report and to receive input on potential scenarios
Collaborative	■ Final Roll-up Report posted February 14 th
(EIPC) (continued)	■ EIPC webinar to discuss input on scenarios was held on March 25 th
(continued)	 Stakeholder written comments on scenarios were due March 28th
	■ Final two scenarios and 2014 work plan was posted on April 14 th
	Update Scenario for 2023
	■ Drought Scenario for 2023
	A webinar was held on September 9 th to provide a status update to stakeholders, which included:
	 Results from the updated Roll-up Case
	 Discuss assumptions for the Drought Scenario
	Provide a Schedule Update
	 A webinar was held on November 21st to present the results for the Drought Scenario
	■ The draft 2014 Report was posted for comment on December 30, 2014
	■ Comments are due on January 16, 2015



Issue	Description
12. Eastern	2013 - 2014: EIPC Gas-Electric Interface Study
Interconnection Planning	 DOE has granted EIPC an extension of time in order to perform an analysis of the gas/electric interface.
Collaborative	Participants in this study are: NYISO, PJM, ISO-NE, IESO, MISO and TVA
(EIPC)	Levitan selected as consultant in September 2013
(continued)	■ Four Study Targets have been defined:
	■ Target 1: Baseline Assessment
	■ Target 2: Infrastructure Adequacy
	■ Target 3: Contingency Analysis
	■ Target 4: Dual-Fuel vs Firm Transportation
	 SSC Meeting was held on October 29-30th in Washington DC to kick-off the study, review the Work Plan, models, input assumptions and output formats
	 SSC Meeting was held on December 20th to discuss electric and gas sector assumptions for Targets 1-4; describe three Scenarios and discuss possible sensitivities for Target 2.



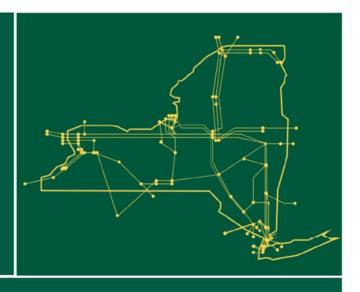
Issue	Description
Issue 12. Eastern Interconnection Planning Collaborative (EIPC) (continued)	 2013 - 2014: EIPC Gas-Electric Interface Study (cont'd) SSC Webinars were held in January, February and March to report on the status of Target 1; receive input on sensitivities for Target 2 and kick-off Targets 3 & 4. Multiple IPTF/EGCWG Meetings were held during the first half of 2014 to: review the Target 1 draft Report receive input on sensitivities for Target 2 Provide status updates Target 1 Final Draft Report and Target 2 First Set of sensitivities were posted on April 14th Target 2 initial Draft Report was posted with initial results from the Three Scenarios and the first set of sensitivities on June 20th SSC Meeting was held in Atlanta on June 25-26th to: Discuss the Target 2 initial Draft Report Finalize second set of sensitivities Provide a status update on Targets 3 & 4 Final list of sensitivities—including the second set—was posted on July 3rd
	 An SSC Webinar was held on August 1 to provide status updates to stakeholders for Targets 2, 3 & 4



Issue	Description
12. Eastern	2013 - 2014: EIPC Gas-Electric Interface Study (cont'd)
Interconnection	Target 2 analysis has been completed
Planning	Target 2 draft Report is on hold awaiting release from the DOE
Collaborative	■ Target 3
(EIPC)	 Data collection and model building are nearing completion
(continued)	 Target 3 analysis began in December and is expected to continue through January 2015
	■ Target 4
	 Draft Report was posted for comment on Nov 6th for stakeholder review
	 A SSC webinar was held of Nov 14th to present the results of the Target 4 analysis and to answer stakeholder questions
	The Final Target 4 Draft Report was posted and sent to the DOE on December 4, 2014
	Schedule
	 The Gas-Electric Study and technical analysis is expected to continue through 1 QTR 2015
	Final Draft Report will be presented to the DOE in June 2015
	 The project schedule is currently under review and will be updated as soon as possible



The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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