

Northeast Seams Report

Update on Northeast Seams Issues

January 10, 2007

NYISO Business Issues Committee Meeting





Status of Seams Projects

Current Deliverables

| Issue | Activity 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.■ The first set of pilot tests were conducted on April 20-21. Any additional tests will be scheduled based upon results evaluation of the April tests.■ 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.■ In 2007, ISO-NE and NYISO will evaluate a participant-initiated proposal for intra-hour transaction scheduling. The proposal would allow transactions to be scheduled on shorter notice and, potentially, for shorter duration. The shorter timeframes would allow participants to more quickly respond to price differences between the two areas. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Status of Seams Projects *Current Deliverables*

| Issue | Activity Description |
|---|--|
| <p>2. Regional Resource Adequacy - RAM</p> | <ul style="list-style-type: none"> ▪ The NYISO has submitted a hybrid proposal to its stakeholders for consideration incorporating a voluntary forward capacity market for procurement of a portion of its future resource requirements. ▪ On March 1, 2004, ISO-NE filed a locational capacity market with the Commission. Following completion of evidentiary hearings, the FERC ALJ decision was issued on June 15. On September 20, 2005, FERC heard oral arguments on ISO-NE's locational capacity market design. On October 21, 2005 the Commission issued an order establishing settlement procedures on alternatives to the LICAP demand curve proposed by ISO-New England, authorizing the ISO to make a compliance filing on its Shortage Hours proposal and requiring the ISO to file updated cost estimates of its LICAP proposal. On March 6, 2006, ISO-NE and other parties filed a comprehensive settlement that would establish an auction-based Forward Procurement Market to acquire capacity three years prior the obligation period. On April 11, 2006, the FERC Settlement Judge issued his report on the settlement, which is currently under consideration by FERC. On June 16, 2006, the Commission issued an order approving the proposed capacity market settlement agreement for the New England region. ISO-NE has implemented a transitional capacity payment mechanism as of December 1, 2006 pursuant to FERC's approval of the capacity market settlement agreement. In addition, ISO-NE is in the process of implementing the post-transition Forward Capacity Market established by the settlement agreement. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Status of Seams Projects *Current Deliverables*

| Issue | Activity Description |
|---|--|
| <p>2. Regional Resource Adequacy - RAM (Continued)</p> | <ul style="list-style-type: none"> <p>▪ PJM introduced a proposal for a Reliability Pricing Model (“RPM”) in June 2004 and has subsequently presented and revised the proposal at numerous stakeholder meetings and has discussed the proposal with various PJM states PUCs. The PJM Board of Managers received comments from Members at the May 5, 2005 PJM Annual Meeting. PJM has discussed the proposal with the NY PSC, with the NYISO and with MISO to ensure that the RPM proposal would not impact seams or create adverse impacts on regional markets. PJM filed its RPM proposal with FERC on August 31, 2005 and FERC held a technical conference on RPM on February 3, 2006. On April 20, the FERC endorsed the major principles of RPM. On May 17, FERC appointed an Administrative Law Judge (ALJ) to oversee settlement proceedings in parallel with the technical conference and paper hearing procedures. FERC called for the technical conference and hearings, which were held on June 7th and June 8th, to help resolve details prior to implementing RPM in place. Parties filed proposed settlement on Sept 29, 2006. On December 22, 2006, FERC approved the settlement agreement with conditions that separate Locational Delivery Areas exist and prices are set in each area through an auction with a demand curve for three years in advance. Also, specific mitigation rules are included.</p> <p>▪ Presentations were made by ISO-NE and PJM describing their FCM and RPM approved market designs at NYISO November 2nd and 17th ICAP Working Group meetings.</p> |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Other Seams Related Activity

Recent Initiatives

| Issue | Activity Description |
|--|--|
| <p>3. Cross-Border Controllable Line Scheduling</p> | <ul style="list-style-type: none"> ▪ Full market deployment of the Cross-Sound Scheduled Line occurred on June 7, 2005 ▪ Implementation Date for 1385 Line: NYISO and ISO-NE have discussed the implementation of scheduling of transactions on the 1385 (Northport to Norwalk Harbor) cable with LIPA and NUSCO and the addition of appropriate pricing nodes. ISO-NE has provided its Participants with a memo describing the operational issues of scheduling across the 1385 line and proposed solutions. The Participants had a meeting on Oct. 31 and held further discussions in November. A meeting was held on December 19, 2005 involving LIPA, ISO-NE, and NYISO to discuss the timeframe and steps required to initiate scheduling over the 1385 line. On December 23, 2005, LIPA proposed a timetable for NY discussion of operational issues and possible tariff changes. The NYISO has established biweekly internal meetings to identify any implementation issues and draft tariff language for stakeholder review as necessary. The NYISO plans to test and deploy the necessary modeling changes to implement a separate proxy bus in a software release planned for October 2006, with the functionality disabled as to Market Participants until ISO-NE is ready. The multiple critical projects that ISO-NE and its stakeholders will be coordinating over the next two years require that the work to support contract scheduling on the 1385 not begin until 2007. ISO-NE has committed to implement scheduling on the 1385 line no later than June 1, 2007. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Other Seams Related Activity

Recent Initiatives

| Issue | Activity Description |
|--|--|
| <p>3. Cross-Border Controllable Line Scheduling (continued)</p> | <ul style="list-style-type: none"> ▪ Cedars-Dennison controllable tie between NYISO and Hydro-Quebec: Meetings have been held with Alcoa and HQ to discuss scheduling protocol modifications required for the conversion of the Cedars import modeling to a controllable tie line proxy bus. The required modeling changes for this new proxy will be deployed with the 1385 modifications in October 2006. Additional meetings will be scheduled during the summer to develop a joint communications plan to inform the MP's of the proposed changes and to schedule a cut over date. NYISO tariff revisions are necessary to initiate this new proxy scheduling point. ▪ NYISO has implemented the software to permit scheduling at the Dennison proxy bus with HQ in October 2006. The interface is scheduled to be activated for bidding in Q1 2007, after stakeholder review in late 2006 and FERC filing in January. ▪ NYISO scheduling software for the Neptune, Cedars and 1385 controllable lines was deployed on 10/11/06 and this software will remain in an "inactive" state until all parties are prepared to start scheduling. Tariff filing for scheduling across Neptune and Cedars will be by early February 2007. ▪ The Neptune 660 MW HVDC tie between New Jersey and Long Island is scheduled to begin testing in April 2007, and begin commercial operation in July 2007. This tie will be scheduled in a similar manner to the Cross Sound Cable and initially will only support import transactions into the NY Control Area. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Other Seams Related Activity

Recent Initiatives (continued)

| Issue | Activity Description |
|---|---|
| 6. ISO-NE Phase II HVDC Evaluation | <ul style="list-style-type: none"> ▪ ISO-NE, NYISO, PJM and HQ – 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 it's current form would not be suitable. ▪ The Report, "Review of the PJM-NY-NE Procedures and Methodology for the TE-NE HVDC Line" was finalized May 2005 . This document is posted on the ISO-NE website at http://www.iso-ne.com/trans/ops/limits/ ▪ NYISO/PJM/ISONE data sharing agreement has been signed by all parties. ▪ All three recommendations in the May 6, 2005 Report are to be implemented, that is: (1) PJM will improve the calculation for the marginal Phase II limit and will implement this calculation method by the mid November - early December time period; (2) ISO-NE will post the NYISO and PJM real time limit for Phase II; and (3) an analysis for significant curtailments with the ISO-NE administering any report. ▪ ISO-NE has begun to develop the scope of work and schedule for implementation. |
| 7.COORDINATION OF INTERREGIONAL PLANNING | <ul style="list-style-type: none"> ▪ To continue to develop ways to improve the coordination of planning for the Northeast region, this project is established to identify future deliverables towards achieving progress in this endeavor. ▪ ISO-NE, NYISO, and PJM will seek input from stakeholders on future deliverables at IPSAC meeting scheduled for first quarter 2007. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Issues Pending Further Discussion

| Issue | Activity Description |
|--|---|
| <p>1. Reserves Participation in Adjacent Regional Markets</p> | <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 Structure WG for stakeholder discussion and prioritization. ISO-NE will consider inter-control area provision of reserves following implementation and assessment of their reserve market, scheduled to be implemented in October 2006. |
| <p>2. NY MS-7040 Transfer Study</p> | <ul style="list-style-type: none"> NY study on the impact of MS-7040 transfers above the current 1500 MW limit is complete and recommended no change in the current limit but did recommend developing a process to assess available margins to support HAM scheduling above current MW limits. A proposed solution was presented at the Feb. 9, 2006 Operating Committee meeting. Implementation of proposed real-time operation expected for Summer 2006 Capability period, subject to completion of Operating Studies and automated monitoring capabilities. A presentation was made to the Market Structure WG on April 13, 2006 detailing a proposed scheme for operating MS7040 transfers above 1500 MWs in real-time. This method for operating the MS7040 transfers above 1500 MWs in real-time (subject to defined operating conditions) was implemented on 11/1/06. The NYISO is reviewing historical transmission constraint pricing outcomes and investigating operational and market impact of revised constraint penalty costs. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Issues Pending Further Discussion *(continued)*

| Issue | Activity Description |
|--|--|
| <p>3. 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. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Issues Pending Further Discussion *(continued)*

| Issue | Activity Description |
|--|---|
| <p>4. Modeling of Netted Transactions at the NYISO-HQ Interface</p> | <ul style="list-style-type: none"> ▪ Currently, real-time imports from HQ are limited to 1200 MW based upon NY first contingency criteria. Day-ahead and real-time scheduling software recognizes a 1500 MW limit at the NY-HQ proxy bus comprised of imports, exports and wheel-throughs. One solution that has been suggested would create a second proxy bus model at the interface, which would be used to schedule only wheel-through transactions; the first proxy bus would be used to schedule imports/exports up to a net level of 1200 MW. A high-level presentation on functional requirements and preliminary resource requirements was presented at the Jan. 20, 2006 S&PWG meeting. NYISO Senior Management will evaluate this project, scheduling and budget impacts in conjunction with all other identified initiatives and determine what further action will be taken. HQUS made a presentation on this topic at the July 31, 2006 S&PWG meeting. ▪ The NYISO has proposed to implement a second proxy bus with HQ to account for wheel-through transactions. Each HQ proxy buses will have a separate ramp limit and will split the available ramp for that interface. The NYISO is currently reviewing software and modeling design requirements. The implementation date for this second proxy bus is prior to the Summer 2007 period, assuming stakeholder review in first quarter of 2007 and a FERC filing in January 2007. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Issues Pending Further Discussion *(continued)*

| Issue | Activity Description |
|---|---|
| 6. 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 will supply transaction data regarding volume and rates for PJM exports into NY. ▪ The NYISO has also initiated discussions with IESO to eliminate export fees. |
| 7. Limitations Due to Loss of Large Source | <ul style="list-style-type: none"> ▪ ISO-NE has historically limited resources above certain MW levels when tripping at higher outputs could result in reliability problems for one of the other northeastern markets. ▪ The three ISOs have filed a joint protocol with FERC on the coordination of loss of source procedures. Operating studies of the loss of source, including the Phase II HVDC line connecting Quebec and New England, have been updated and approved. Planning studies are under discussion by the Joint ISO/RTO Planning Committee (JIPC). |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.



Issues Pending Further Discussion *(continued)*

| Issue | Activity Description |
|--|--|
| 8. NY-PJM PROXY BUS CLEARING PRICE CALCULATIONS | <ul style="list-style-type: none">NY and PJM calculated their respective proxy bus prices using the LMP method but with fundamentally different underlying assumptions. This can result in significant price differences between the NY and PJM proxy prices. These discussions have started between the ISOs. The NYISO made a presentation of its proposal to improve the proxy bus pricing at the November 21st joint MSWG/S&P meeting. |

Note: The complete list of seams issues is updated each quarter for FERC. This is only a summary of recent activities.