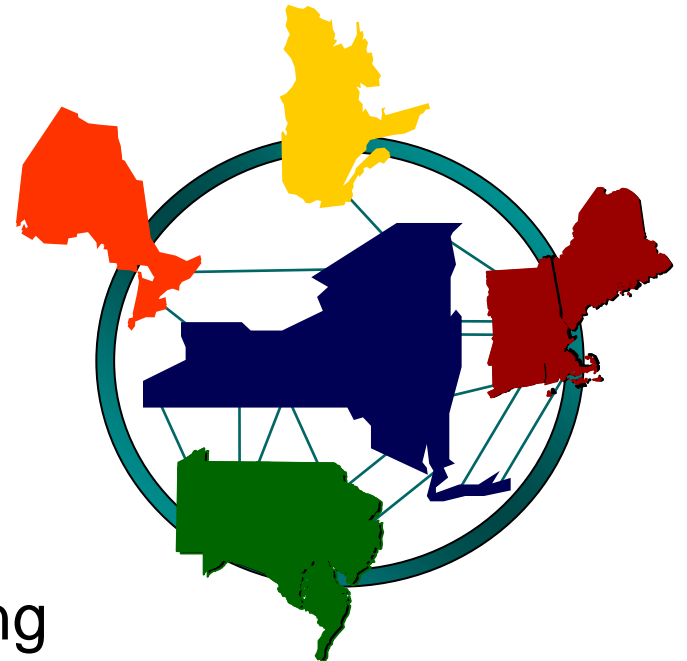


Northeast Seams Report

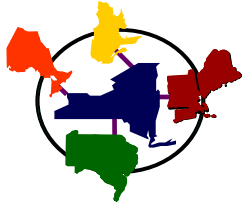
Update on Northeast Seams Issues

February 24, 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.■ At the May 24, 2010 MIWG meeting NYISO provided updates on the six initiatives identified in the January 12, 2010 Broader Regional Markets report:<ul style="list-style-type: none">◆ <i>Interface Pricing Revisions</i>◆ <i>Regional PAR Coordination Operating Guide</i>◆ <i>Parallel Flow Visualization</i>◆ <i>Buy-through of Congestion</i>◆ <i>Market-to-Market Coordination</i>◆ <i>Enhanced Interregional Transaction Coordination</i>

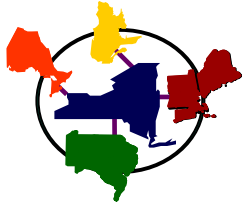
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Broader Regional Markets

Issue	Description
1. Market Solutions to Loop Flow: Buy-Through of Congestion (continued)	<ul style="list-style-type: none">NYISO stakeholders approved the conceptual design of enhancements to the interface pricing methodology for periods in which the Michigan-Ontario PARs are not available to minimize Lake Erie Loop flows at the June 2, 2010 Business Issues Committee (BIC) meeting. NYISO will continue with the design process, stakeholder approval for any necessary tariff changes, and include this effort in its 2011 budget planning and prioritization process.The NYISO’s January 12, 2010 status report addressing Broader Regional Markets initiatives received conditional approval from FERC on July 15, 2010. In its order conditionally approving the solutions proposed by the ISOs and RTOs, FERC directed ITC, Midwest ISO, PJM, and NYISO to provide answers to a number of additional questions by August 15.On August 16, 2010 NYISO filed a report providing a status update regarding Broader Regional Market Initiatives including responses to questioned posed by FERC in its July 15, 2010 order.On September 27, 2010 PJM hosted a Joint IESO-Midwest ISO-NYISO-PJM Stakeholder Technical Conference on Broader Regional Markets - Developing Solutions to Lake Erie Loop Flows in Philadelphia, PA. The conference provided details on key aspects of the buy-through of congestion proposal including: the registration protocol, bidding process, operational management, and settlement treatment.

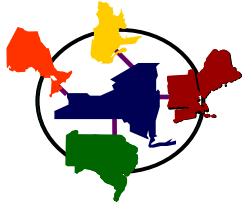
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Broader Regional Markets

Issue	Description
1. Market Solutions to Loop Flow: Buy-Through of Congestion (continued)	<ul style="list-style-type: none">At the November 10, 2010 MIWG NYISO reviewed the Buy-Through of Congestion conceptual design in preparation for seeking stakeholder approval at the December 8 BIC. The presentation provided an overview of the registration, bidding, transmission service impacts, TLR outcomes, hedging opportunities, settlement rules, credit requirements, regulatory filings, and outstanding issues associated with development of the proposal.At the NYISO’s December 8, 2010 Business Issues Committee (BIC) meeting stakeholders approved the conceptual design of the proposed Buy-Through of Congestion mechanism for recovery of congestion management costs incurred in managing loop flow impacts. The mechanism would provide an alternative to market and operational interruptions caused by Transmission Loading Relief (TLR) actions by establishing an economic based alternative to imposed curtailment.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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Broader Regional Markets

Issue	Description
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.The NERC IDC (Interchange Distribution Coordination) Working Group recommended and the NERC ORS (Operating Reliability Subcommittee) approved the implementation of an enhancement to the IDC to provide for a parallel flow visualization tool to calculate generation-to-load dispatch impacts on flowgates. The ISOs and RTOs are working with NERC to develop the processes necessary for the exchange of data needed to perform the required calculations. Implementation of the IDC enhancements is targeted to begin parallel testing by November 1, 2010.A software deployment required for NYISO to provide the NERC IDC with data necessary to include gen to load impacts in the market flow calculations is scheduled for January 2011.NYISO is participating in NAESB BPS working group effort to establish guidelines for the identification of firm versus non-firm generation. The characterization is needed by the Parallel Flow Visualization effort, for subsequent utilization by the Interchange Distribution Calculator (IDC) and Transmission Loading Relief (TLR) protocols.

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Broader Regional Markets

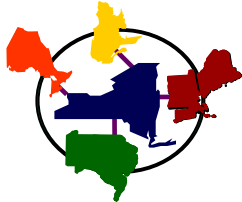
Issue	Description
2. Market Solutions to Loop Flow: Interregional Congestion Management (continued)	<ul style="list-style-type: none">Following the implementation of the Parallel Flow Visualization Tool, targeted for November 2010, the ISOs and RTOs intend to re-engage their efforts to develop Congestion Management protocols, and to engage their stakeholders in the process.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.The September 27, 2010 stakeholder technical conference provided a progress update on the development of the NERC parallel flow visualization tool. Results of the calculations performed by the tool will provide the basis for establishing firm flow entitlements (FFE) and will be used to administer the settlement provisions for the market-to-market protocol between NYISO and PJM. Also included the technical conference presentation was an overview of the market-to-market protocol with examples illustrating the market and settlement process.The regional PAR coordination study team has met several times to begin the assessment of options for improving the coordinated operation and management of controllable power flow devices across the region. Included in these discussions has been the treatment of the Ontario-Michigan PARS in the NERC IDC model used by the TLR process.

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Broader Regional Markets

Issue	Description
2. Market Solutions to Loop Flow: Interregional Congestion Management (continued)	<ul style="list-style-type: none">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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Broader Regional Markets

Issue	Description
3. Market Solutions to Loop Flow: Enhanced Interregional Transaction Coordination	<ul style="list-style-type: none">▪ The NYISO's 2008 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 report recommends the development of processes to improve coordination between the ISOs even if only during limited circumstances, such as reserve shortages.▪ At the May 13, 2010 MIWG meeting NYISO provided an update on the development of Enhanced Interregional Coordination. The presentation covered changes to bidding rules and NERC e-Tagging requirements necessary to implement intra-hour transaction scheduling. A conceptual overview of changes to the real-time scheduling rules necessary to support evaluation of intra-hour transactions was provided. Changes to real-time market settlements were also covered. Specific details related to implementation at HQ and PJM interface were also covered▪ At the May 24, MIWG NYISO provided an update on pricing revisions necessary to support Enhanced Interregional Transaction Coordination. Standard pricing rules for proxy generator buses, special pricing rules for proxy generator buses (CSC, Linden VFT, Neptune), and pricing rules for non-competitive proxy generator buses (HQ Chateaugay, HQ Cedars-Dennison) were addressed in the presentation.▪ Tariff revisions necessary to implement EITC were approved by the MC on October 21, 2010.

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Broader Regional Markets

Issue	Description
3. Market Solutions to Loop Flow: Enhanced Interregional Transaction Coordination (<i>continued</i>)	<ul style="list-style-type: none">▪ At the September 20, 2010 MIWG meeting NYISO provided an overview of opportunities to improve transaction scheduling between ISO-NE and NYISO. Potential improvements being considered by the ISOs include: a ‘one-stop’ scheduling platform, more frequent scheduling, settlement revisions aimed at reducing risk, and improved congestion pricing. The ISOs continue to discuss options for improving scheduling outcomes.▪ A white paper describing proposed methodologies for enhanced transaction coordination at the ISO-NE interface will be released in January 2011. Stakeholder meetings will be scheduled to discuss the proposed enhancements and solicit feedback following the release of the white paper.▪ Phase 1 of the NYISO’s Enhanced Interregional Transaction Coordination (EITC) initiative is scheduled for activation in March of 2011. This phase will provide market participants with the capability to schedule transaction at the NYISO-Hydro Quebec interface on a 15-minute scheduling interval basis. On December 28, 2010, NYISO filed proposed tariff amendments necessary to implement this capability.▪ A technical conference has been scheduled for January 21, 2011 to review proposals for improving transaction coordination at the interface between NYISO and ISO-NE. The technical conference will provide ISO-NE and NYISO stakeholders with an overview of enhancements under consideration (as detailed in the white paper) and an opportunity for discussion and feedback.

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Broader Regional Markets

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.

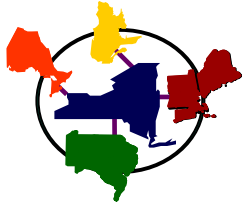
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Broader Regional Markets

Issue	Description
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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Broader Regional Markets

Issue	Description
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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Broader Regional Markets

Issue	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 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.

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Broader Regional Markets

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 January 14, 2010 NYISO submitted tariff revisions to revise the Capability Year adjustment election for holders of rights to UDRs. The filed tariff language would require holders of UDRs to make such an election by 5:00 PM February 1, preceding the Capability Year. Draft NYISO Technical Bulletin #192, "Interim Capability Year Adjustment Procedure" outlining details of this process has been distributed to market participants for review.▪ On February 3, 2010 FERC approved Tariff changes necessary to support the Capability Year adjustment election for holders of UDRs.

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Broader Regional Markets

Issue	Description
7. Asymmetric Capability Year Impact on Inter-Area Capacity Sales <i>(continued)</i>	<ul style="list-style-type: none">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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Broader Regional Planning

Issue	Description
8. Coordination of Interregional Planning	<ul style="list-style-type: none">▪ 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.▪ The draft 2009 Northeast Coordinated System Plan was posted on April 8, 2010 for stakeholder comment. On April 30 IPSAC held the final WebEx meeting for the NCSP effort to discuss the comments received on the NCSP09 and review the report with stakeholders. Many stakeholder comments were incorporated into the draft NCSP and the final NCSP09 was posted on May 24, 2010 to the regional websites. The NCSP is a comprehensive document which discusses a wide variety of planning issues and how they are coordinated throughout the Northeast.▪ As part of the April 30, 2010 IPSAC WebEx, there were discussions regarding progress made on the NYISO-NE production cost model validation and plans for completing the production cost studies.▪ Next steps for the JIPC include: conducting high-level production cost studies focusing on PJM, NYISO, and ISO-NE, developing a detailed production cost model and conducting detailed production cost studies, identifying the need for strengthening ties among the systems, updating studies and coordinating planning studies, and addressing interregional cost allocation as may be required by the FERC.

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Broader Regional Planning

Issue	Description
8. Coordination of Interregional Planning	<ul style="list-style-type: none">■ An IPSAC WebEx meeting was held on October 29, 2010 to present draft IREMM production cost study results, assumptions to be used in PROMOD studies, improvements in coordination of production cost data bases, EIPC, and responses to the FERC NOPR.■ As the result of internal NYISO studies and joint JIPC studies, NYPA is examining the technical feasibility of the separation of the Moses-Willis double circuit.■ IREMM results are nearing completion. An IPSAC meeting will be scheduled for 1st Quarter 2011 to provide updates on the IREMM studies, PROMOD studies, EIPC, and other items. Draft reports of the IREMM and PROMOD reports are scheduled to be posted the second quarter 2011.■ A summary of the NOPR comments filed by parties in the Northeast, with a focus on interregional cost allocation, was discussed with the IPSAC on October 29. The JIPC is now awaiting the FERC Final Rule to provide direction on the interregional planning and cost allocation issues.

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Broader Regional Planning

Issue	Description
9. 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 February 8, 2010, the EIPC submitted a revised proposal to the DOE that was restructured to conform to the amount of the award. The EIPC finalized an agreement with the DOE in late July.▪ Following the Eastern-Interconnection wide stakeholder meeting held on April 22-23, 2010 in St Louis several weeks were provided for additional stakeholder comments and negotiations to finalize the SSC make-up and selection process. The final process was posted on May 14, 2010.▪ On May 25, 2010, EIPC posted the schedule and procedures to be used for the selection of sector caucus representatives and SSC members. The names of the sector caucus representatives were posted on June 23rd and the SSC members were posted on July 6th. The first meeting of the SSC was held in Chicago on July 15-16th. The next SSC meeting is scheduled for October 12-14, 2010.

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Broader Regional Planning

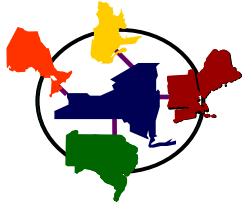
Issue	Description
9. Eastern Interconnection Planning Collaborative (EIPC) <i>(continued)</i>	<ul style="list-style-type: none"> ■ With the formation of the SSC completed, the technical work of the EIPC is expected to begin in July. The delayed start for this project has resulted in an adjustment to the schedule: an interim report is now targeted for October 2011 and a final report in October 2012. ■ Three stakeholder Working Groups were formed in early August: <ul style="list-style-type: none"> ◆ “Roll-up” WG ◆ Modeling WG ◆ Scenario Planning WG ■ Initial conference calls for each of these Work Groups were held in August. In addition, EIPC hosted Webex presentations open to all stakeholders on Scenario Planning on August 17th and on the CRA Macroeconomic models on August 30th and on September 28th. A initial webinar on the "Roll-up Case" was held on October 4th. ■ At its meeting on October 12-14th in Washington, DC, the SSC finalized its Charter, elected a Chair and Vice Chair and approved the Scopes for its three Working Groups. The SSC agreed to hold monthly conference calls starting on Nov 22nd. The next SSC meeting will be held in Charlotte on December 13-14th. ■ EIPC held a Technical Workshop on November 8- 9th to discuss the inputs needed for the CRA macroeconomic analysis, development of the futures cases, and EIPC’s proposal to address transmission during Task 5.

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Broader Regional Planning

Issue	Description
9. Eastern Interconnection Planning Collaborative (EIPC) <i>(continued)</i>	<ul style="list-style-type: none">At a conference call held on November 22nd , the SSC approved the criteria for development of the futures cases; reviewed the proposed high level description of the “Business as Usual” case; discussed the schedule for development of the futures cases and charged the WGs’ with preparing a work plan and schedule for the remainder of Phase I for the December SSC meeting.EIPC posted a revised Roll-Up Report on November 19th which provided additional details on the regional plans in response to stakeholder questions. A webinar was held on November 30th to discuss the revised report.The SSC Work Groups continue to meet weekly focusing on defining the energy futures and the data inputs needed for the macroeconomic analysis scheduled to begin early in 2011.At the SSC meeting held on December 13-14th, the SSC agreed to utilize the EISPC criteria and process for the selection of the Baseline Infrastructure resources in the first instance—subject to SSC review in February. The SSC also agreed that the Business As Usual would be the first future also for approval in February. Finally, the SSC reached agreement on a “high level” definition of the 8 Futures to be submitted for macroeconomic analysis in Task 5. The next SSC conference call is planned for the week of January 17, 2011.Based upon input from the EISPC, on Jan 18th, the SSC approved the Baseline Infrastructure resource assumptions as well as the definition of the regions required for the macroeconomic models. The SSC also provided guidance to the Work Groups regarding several of the BAU sensitivities.

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Broader Regional Planning

Issue	Description
9. Eastern Interconnection Planning Collaborative (EIPC) (continued)	<ul style="list-style-type: none">The next SSC meeting is scheduled for Feb 7-8th in Washington DC. The principal issues for approval include: “Business as Usual” future, including all sensitivities; all model data inputs needed for CRA analysis of the BAU future; transmission sensitivity approach; and the remaining futures & sensitivities.

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