

# Northeast Coordinated System Plan 2009 (NCSP09)

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# Northeastern ISO/RTO Planning Coordination Protocol

- Data and information exchange
- Coordinate interconnection requests and transmission requests with cross-border impacts
- Develop a Northeast Coordinated System Plan (NCSP)
- Allocate the costs associated with projects having a cross-border impact consistent with each party's tariff and applicable federal or provincial regulatory policy
- Open stakeholder process through the Inter-Area Planning Stakeholder Advisory Committee (IPSAC)

# Northeast Coordinated System Plan 2009

- Executive Summary
- Summaries of RTO's System Plans
- Summaries of Interregional Studies
- Additional Coordinated Planning Activities and Issues
- Key Environmental Issues with Potential Interregional Impacts
- Renewable Portfolio Standards
- Wind and Renewable Resource Studies
- Demand Side Resource Development
- Plans for Additional Joint ISO/RTO Planning Committee (JIPC) Analysis
- Summary and Conclusions
- Appendices

# Executive Summary

- Summarizes Protocol and NCSP09 content
- Transmission upgrades have been placed in service and feasibility studies of upgrades have been completed
- Interconnection queue studies and transmission improvements have been coordinated across ISO/RTO borders
- Cross-border transmission security issues are being addressed, including loss-of-source contingencies in New England
- Improvements in modeling and performance of studies have improved the quality of resource adequacy studies, including both generator deliverability and load deliverability issues
- Market efficiency analysis reflect coordinated models of the three ISO/RTOs and neighboring regions
- Effects of environmental regulations, integration of wind and renewable resources, and demand side resources are being monitored and reflected in interregional operations and planning

# Introduction

- Summarizes ISO/RTO Regional System Plans
  - Major system improvements have been coordinated across interregional borders
- Economic Studies have been performed by each of the ISO/RTOs
  - Information has been provided to stakeholders

# Summaries of Interregional Studies

- Loss of source analyses have been conducted
  - 1,400 MW to 1,500 MW range is expected as the New England limit
  - Ongoing planning studies account for key contingencies in neighboring systems
- Major transmission improvements having interregional impacts have been coordinated across ISO/RTO boundaries
  - PJM 500 kV and 765 kV improvements
- The feasibility of a new Plattsburgh – Vermont tie has been demonstrated to show benefits to both New York and New England
  - Further evaluations of the need for this tie and follow-up studies will be addressed through the NYISO and ISO-NE stakeholder processes

# Summaries of Interregional Studies, *cont.*

- Reliability analysis of the NYISO/PJM area demonstrates generator and load deliverability without adversely affecting the neighboring system
- Market efficiency analysis of the NYISO/PJM area showed consistency with current market conditions and the need for further investigating model improvements of controlled power flows along the ISO/RTO border
- Market efficiency analysis of the NYISO/ISO-NE border area has been initiated and plan developed to compare IREMM simulations with other production cost programs

# Additional Coordinated Planning Activities and Issues

- Studies and databases have been coordinated
- Northeast Power Coordinating Council (NPCC)
  - Statutory activities relating to standards, compliance, and enforcement
  - Non-statutory criteria services establish regional criteria and monitor and enforce compliance with these criteria
  - Coordinates planning assessments for Quebec, the Maritimes, Ontario, NYISO, and ISO-NE within the broad region and with PJM
- Reliability *First* Corporation
  - Conducts assessments that are coordinated with NPCC and other neighboring regions, including MISO, MRO, SERC, and VACAR

# Additional Coordinated Planning Activities and Issues, *cont.*

- ISO/RTO Council (IRC)
  - Develops effective processes, tools, and standard methods for improving electricity markets and planning
  - Coordinates with FERC on issues
- Eastern Interconnection Reliability Assessment Group (ERAG) conducts periodic reviews of generation and transmission expansion programs
- NERC Long Term Reliability Assessment
  - Summarizes regional plans for meeting resource adequacy and transmission reliability issues

# Additional Coordinated Planning Activities and Issues, *cont.*

- Eastern Interconnection Planning Collaborative
  - Fully coordinate interconnection-wide transmission planning through an open stakeholder process
- Fuel Diversity Issues
  - Have been coordinated across ISO/RTO boundaries
  - Improvements in the natural gas infrastructure have improved the delivery capability into New England

# Key Environmental Issues

- Regulations have potential interregional impacts
  - Ozone standards
  - Greenhouse gas emissions, especially carbon dioxide
  - Power plant cooling water
- Regulations
  - Add costs for emission allowances
  - May require use of low emitting fuels
  - Could add capital costs for controls
  - Fossil generating units may elect to limit energy production and reduce capacity rating during peak production periods
- The JIPC will continue to monitor environmental regulations and their impacts on the power system

# Renewable Portfolio Standards

- Most state in the NYISO/PJM/ISO-NE footprint have renewable portfolio standards
- Load may
  - Contract with renewable resources
  - Purchase Renewable Energy Credits (RECs)
  - Make Alternative Compliance Payments (that also serve as a price cap on the RECs)
- The broad region has considerable renewable development in the Interconnection Queues

# Wind and Renewable Resource Studies

- The ISO/RTOs have identified generic wind integration issues and have coordinated on a number of studies
  - North Country Wind Operating Studies
  - Eastern Wind Integration and Transmission Study (EWITS)
  - NERC's Integration of Variable Generation Task Force (IVGTF)
  - Individual ISO/RTO studies conducted by NYISO, ISO-NE, and PJM
- There is potential for renewable resources in Eastern Canada to be exported to the Northeast USA

# Demand Side Resources

- Reliable and cost effective Demand Side Resources are given full and fair consideration (along with other resources) to address grid reliability and economic congestion problems
  - Each ISO/RTO has demand side integration processes
  - The increased presence of demand side resources will present challenges

# Summary: NCSP09

- Summarizes completed and ongoing study activities
  - New ties, such as Plattsburgh to Vermont
  - Production cost analysis
  - Resource adequacy analysis
  - Cross-border transmission security issues, such as loss-of-source contingencies, addressed through normal study processes
- Generator interconnection queues and transmission improvements with cross-border impacts
- Improvements in modeling and interregional planning activities
- Impact of wind and demand resources
- Fuel diversity
- Environmental regulations

# Next Steps

# Joint ISO/RTO Planning Committee

- High level production cost studies of the three ISO/RTOs using IREMM
  - Include environmental emission metrics
- Develop a detailed production cost database of the three ISO/RTOs and study potential project benefits
- Identify benefits for strengthening ties and related neighboring interfaces
- Update studies and continue coordinating planning activities
  - Databases
  - Generation interconnections
  - Transmission improvements

# Next Steps – Discussed Later Today

- IPSAC discussion of studies will be held to address
  - Scope of Work
  - Assumptions
  - Draft Preliminary Results
- The draft NCSP09 will be posted (in MSWord) for stakeholder review
  - Stakeholders will have three weeks (15 business days) to provide written comments to the JIPC – No further comments will then be accepted
  - Comments received and the plan for addressing the comments will be discussed at a future WebEx



# Open Discussion