

**Presentation by the
New York State Reliability Council
to the
Energy Coordinating
Working Group**

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Presentation Topics

- **Role and Structure of the New York State Reliability Council (NYSRC)**
- **NYSRC Reliability Rules**
- **Installed Reserve Margin Requirements**
- **Possible Reliability Impacts of Environmental Initiatives**
- **Reliability Challenges**

Role and Structure of the New York State Reliability Council

New York State Reliability Council

- **Successor to the New York Power Pool (NYPP) formed in 1966 by NY utilities**
- **NYPP had a long history of stringent reliability standards based upon New York's unique reliability requirements**
- **NYPP standards were based upon experience with 1965 and 1978 major blackouts as well as the demands of planning and operating within the Eastern Interconnected Power System**

New York State Reliability Council

- NYSRC created in 1999; part of restructuring of New York State's competitive wholesale market
- Primary purpose: promote & preserve the reliability of New York Control Area (NYCA) electric power system
- Primary functions: develop reliability rules, monitor compliance with these rules, and establish statewide installed reserve margin (IRM) requirements

NYSRC Structure

- **13 Member Executive Committee**
 - 6 Transm. Owners
 - 1 Wholesale Seller
 - 1 Large Consumer (Ind./Comm.)
 - 1 Municipal & Coop
 - 4 Unaffiliated
- **Other Stakeholders**
 - NPCC, NYISO, NYPSC, Public
- **Subcommittees/WG**
 - Reliability Rules
 - Reliability Compliance Monitoring
 - Installed Capacity
 - Defensive Strategies Working Group
- **9 votes required**

NYSRC Reliability Rules

NYSRC Reliability Rules

- NYISO & all Market Participants must comply
- NYSRC Reliability Rules must comply with NERC & NPCC standards
- NYSRC Rules can be more specific and/or more stringent than NERC & NPCC standards
- The NYSRC shall carry out its mission with no intent to advantage or disadvantage any Market Participant's commercial interests

NYSRC Reliability Rules

- “NYSRC Reliability Rules For Planning and Operating the New York State Power System” - Version 22, May 9, 2008
- NYSRC Web site - <http://www.nysrc.org>
- Effective February 9, 2006, the Public Service Commission of the State of New York adopt the NYSRC Reliability Rules as they are updated

NYSRC Reliability Rule Categories

52 Reliability Rules for :

- Resource Adequacy
- Transmission Planning & Operating Capability
- Resource, Transmission and Load Data Requirements
- Operating Reserves
- Operation During Major Emergencies
- System Restoration
- System Protection
- Local Reliability Rules
- Control Center Communications
- Reliability Assessment

Installed Reserve Margin Requirements

Background

- In accordance with the NYSRC – NYISO Agreement:
 - the NYSRC determines the annual statewide IRM
 - FERC must approve any changes to IRM
- NYS Public Service Commission role
- NYSRC/NPCC Resource Adequacy Criterion:
 - IRM must meet an annual LOLE of 0.1 days/year for the NYCA

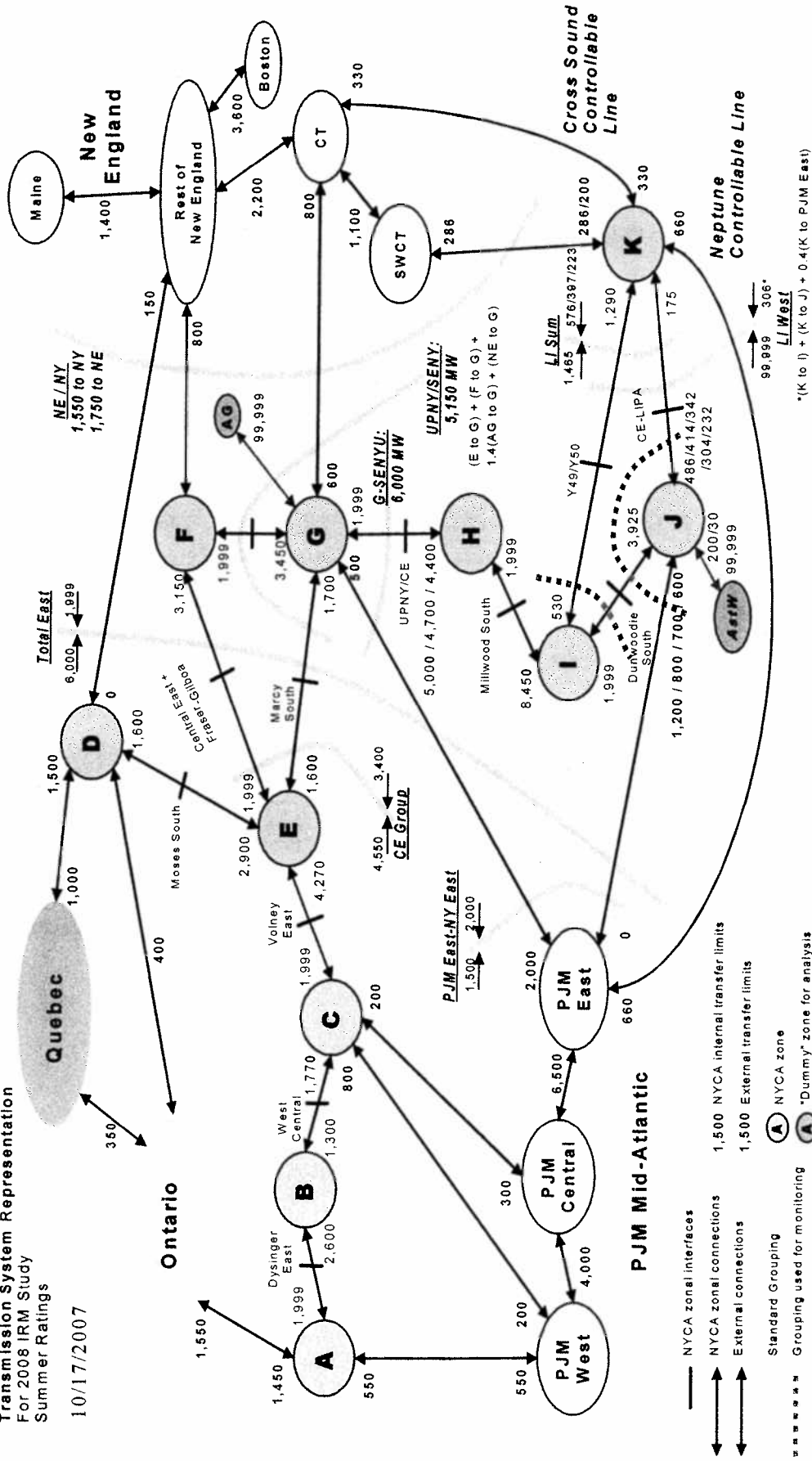
Major Computer Program and Models Used for Calculating NYCA IRM Requirements

- **GE-MARS (Multi-Area Reliability Simulation) Program**
- **Models:**
 - **Load Model**
 - **Capacity Model**
 - **NYS Transmission Model**
 - **Outside Control Areas: New England, Ontario, Quebec, PJM (Load, Capacity, and Transmission representations of each)**
- **Sources of Input Data: NYISO, NY Market Participants**

New York Control Area

Transmission System Representation
For 2008 IRM Study
Summer Ratings

10/17/2007



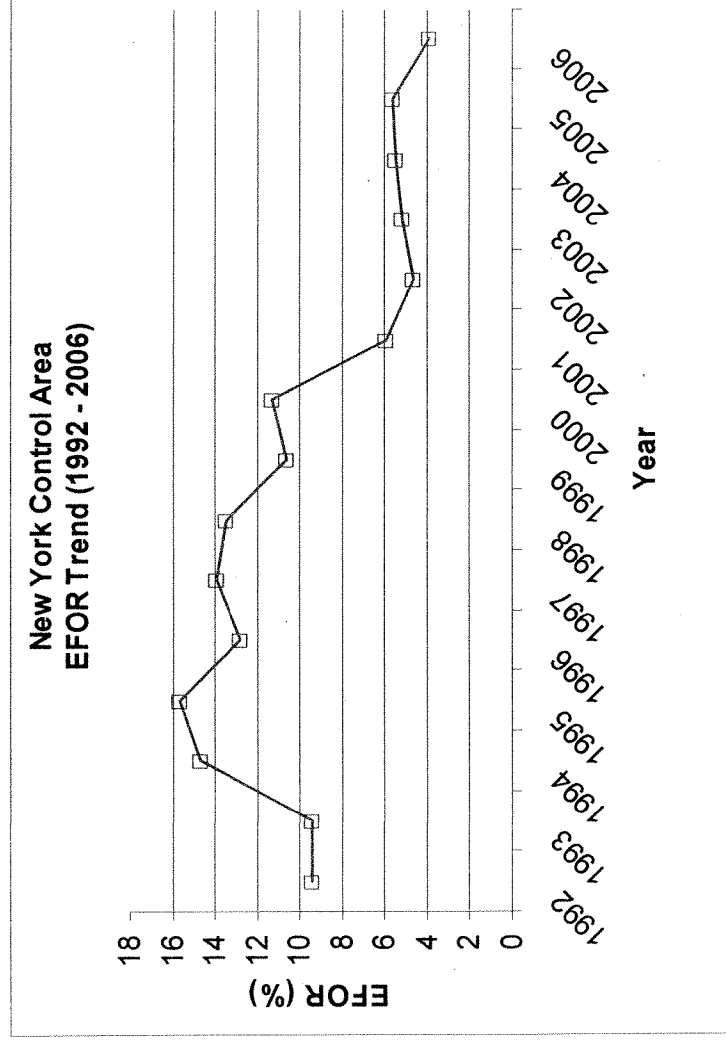
NYCA IRM Study Results for 2008 Capability Year

- IRM = 15% (adopted by NYSRC Executive Committee in December 2007)
- Locational Capacity Requirements (LCR)
 - New York City = 80%
 - Long Island = 94%

Comparison with IRM Used in 2002 State Energy Plan

- 2002 State Energy Plan used an 18% IRM - based on NYSRC studies - for its long range resource adequacy assessments
- Primary reasons for three point IRM reduction to 15%:
 1. Improvement of generating unit availability
 2. Transmission reinforcements in NY and neighboring systems
 3. New generating units

NYCA Generating Unit Forced Outage Trends, 1992 - 2006



Possible Reliability Impacts of Environmental Initiatives

RGGI & HEDD Initiatives

- These initiatives have the potential of reducing the availability of select generators in New York at the critical peak load times and thus increase the Loss of Load Expectation (LOLE) in those areas
- The NYSRC has performed preliminary reliability studies to examine the potential impacts on IRM requirements

Preliminary Study Results

- *HEDD Study Results* – NYCA resource adequacy requirements could range from an IRM of 15% up to as high as 24%
- *RGGI Study Results* – NYCA resource adequacy requirements could range from an IRM of 15% up to as high as 17%

Conclusions

- Potential exists for environmental initiatives to have an adverse impact on the reliability of the NY Power System
- Implementation of RGGI, HEDD or other environmental initiatives should recognize their potential effect on the electric power system and seek to monitor/minimize their adverse reliability impacts over time

Reliability Challenges

- Minimize NYCA reliability impacts of implementing HEDD and RGGI and other environmental initiatives
- Maintain generation fuel diversity to avoid overdependence on one type of fuel and to minimize the impact of loss of fuel supply
- Encourage future development of new generation resources to ensure adequate future resource capacity
- Protect NYCA reliability from the impacts of system disturbances in regions outside NYS