A Look at the NYISO

- Serving 19 million NY residents
- 10,892 circuit-miles of high-voltage transmission lines
- ~ 400 market participants
- Over $75 billion in market transactions (1999-2009)
- 38,190 MW of installed generation
- Record peak load -- 33,939 MW
Reliability

Investments Driven by Competition

- **Investment in Right Places**
  - 80% of new generation
  - 100% new transmission

- **Improved availability**
  - 87.5% (1992–1999)
  - 94.27% (2001–2007)

- **Demand Response**
  - > 4,000 enrolled
  - > 2,380 MW capability

- **Reliability Needs Met through 2020**

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**NYISO Reserve Capacity Net Margin**

- Maintains Operating Reserve Requirement

**NYISO Planned and Actual Reserve Margins 2005–2009**

- Graph showing planned and actual reserve margins from 2005 to 2009.

**NYISO Reserve Capacity Net Margin**

- Graph showing reserve capacity net margin from 2000 to 2009.
Energy Prices
Driven by Competition

Fundamental changes

- Increased efficiency
  - Heat rate improved 25% from 1999 to 2009

- Improved availability
  - Adds 2,400 MW without new capital costs

- Investment in Right Places
  - $500 M saving associated with new generation & DR near demand

Positive outcomes

- $2.2 Billion in annual energy and capacity savings
- Levelized annual average fuel-adjusted wholesale energy prices
- Double-digit power plant emission reductions
Congestion Reduction

Lake Erie Loop Flow

"Uplift" Reduction

$44 Million annual savings

Broader Regional Markets Initiative
- Enhanced Interregional Transaction Coordination
- Interface Pricing
- Market-to-Market Coordination
- Buy-Through of Congestion

$362 million in estimated annual savings throughout region
Renewable Energy & New Technologies

- **Growing Wind Capacity**
  - Nearly 1,300 MW installed
  - > 6,000 MW in queue
  - Increasing need for better load forecasting, regulation service, transmission and balancing technologies

- **NYISO market design, grid operations & technology**
  - Centralized wind forecasting system
  - Integrated wind into economic dispatch system
  - Created regulation-only energy storage product

- **Ramping & Storage**
  - Hydro Quebec 15-min. scheduling
  - 20 MW AES Battery project
  - 20 MW Beacon Power Flywheel project
Transmission

NEW CAPACITY
1290 MW

Reliability
- Low load growth
- Reliability needs met through 2020
- New capacity serving NYC/LI region
- Some retirements anticipated

STARS
- Order 890 economic planning/CARIS
- FERC-approved beneficiary pays methodology
- STARS process
- EIPC

EIPC
Summary

- FERC metrics initiative is assisting us to:
  - Sustain and enhance transparency
  - Identify strengths and gaps in order to address challenges
  - Maintain and bolster collaborative efforts with stakeholders, regulators and policy makers