Power Trends 2005



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The Drake Hotel – New York City

Power Trends 2005

- **What is the NYISO?**
- **From Power Alert to Power Trends**
- **The 2005 Report**
  - ✓ *Electric Supply Outlook- Summer 05*
  - ✓ *Emerging Issues-The Next 5 Years*
    - Generating Capacity
    - Fuels for Generation
    - Transmission
    - Reliability
    - Demand Response and Environmental Initiatives
- **Conclusions and Recommendations**



What is the New York Independent System Operator?

The NYISO's Primary Purpose(s)

- Responsible for the reliable operation of the New York electric system.
- Administering and running the competitive wholesale markets for electricity.

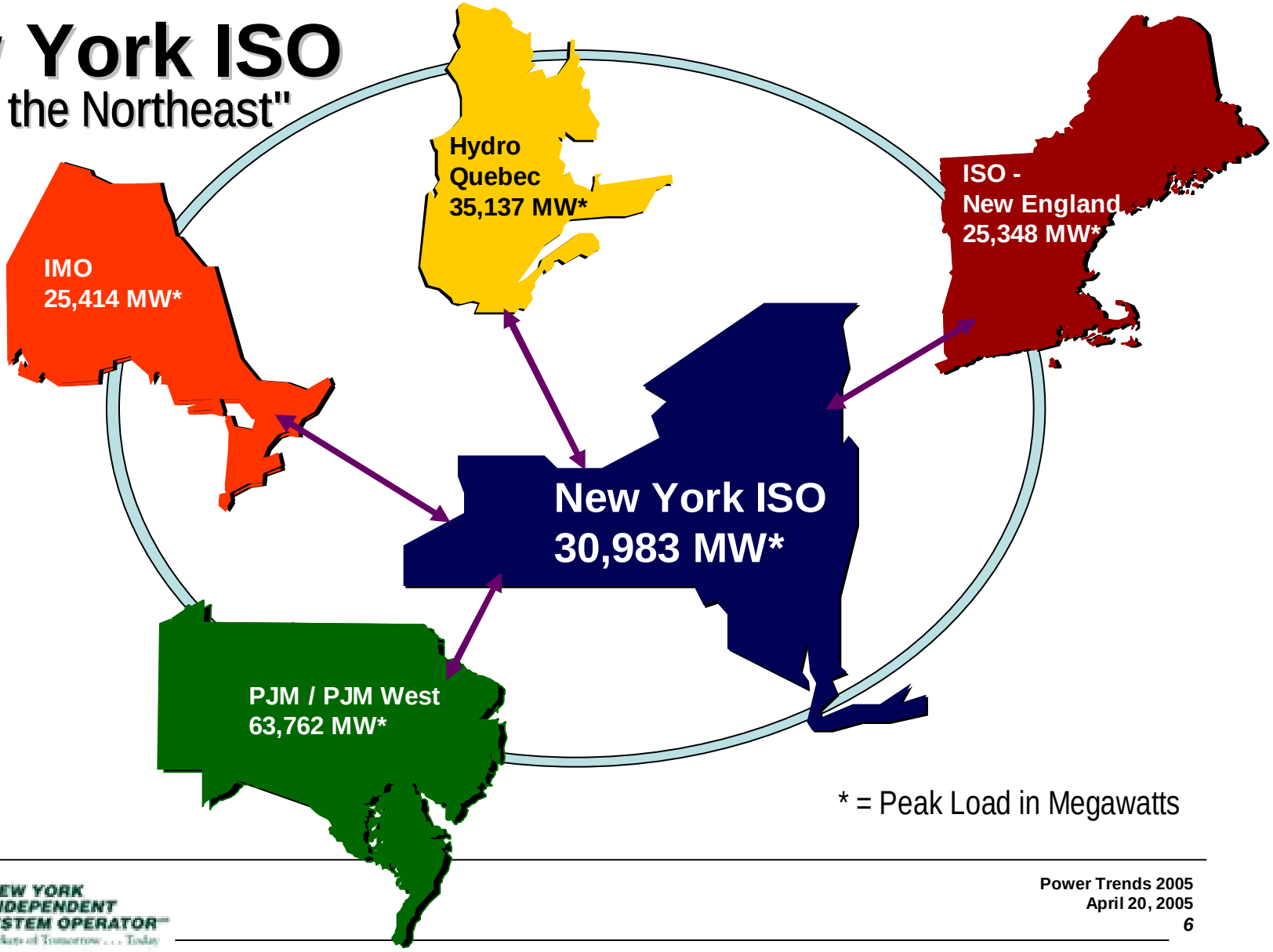
The NYISO

- *Background*

- NYISO formed December 1, 1999.
- Highly divested and complex marketplace featuring co-optimized market clearing systems.
- 91 percent utility generation divestiture rate makes it most divested market in nation.
- NYISO market volume was $7.3 billion last year and $30.4 billion since inception. Highest market volume in the East.
- Unique challenge: New York City is world's biggest and most complex load pocket. World capitals of finance and communications located within.
- Unique geography makes it the "Hub of the Northeast."

New York ISO

"Hub of the Northeast"

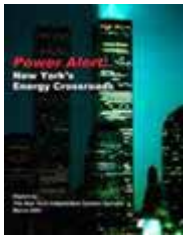


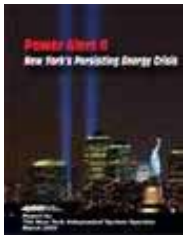
* = Peak Load in Megawatts

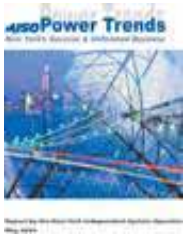



What is Power Trends ?

Power Alert to Power Trends







- Power Alert I: New York's Energy Crossroads, outlined a looming energy problem and concluded more generation was needed in New York State, particularly in New York City and Long Island.
- Power Alert II: Following the 9/11 tragedy, NYISO revisited Power Alert I, with consideration given to infrastructure damage and further potential down-turn in New York's economy created by the terrorist attacks.
- Power Alert III: Took a more comprehensive view breaking down the future of New York's bulk power system and offered recommendations for the future on supply, transmission and demand response
- Power Trends: New York's Success and Unfinished Business, reviewed the progress made since Power Alert I, in building new generation, creating demand response resources and siting new transmission, while noting unfinished business in the areas of planning, national reliability standards, siting and markets.




This Year's Report

Generation

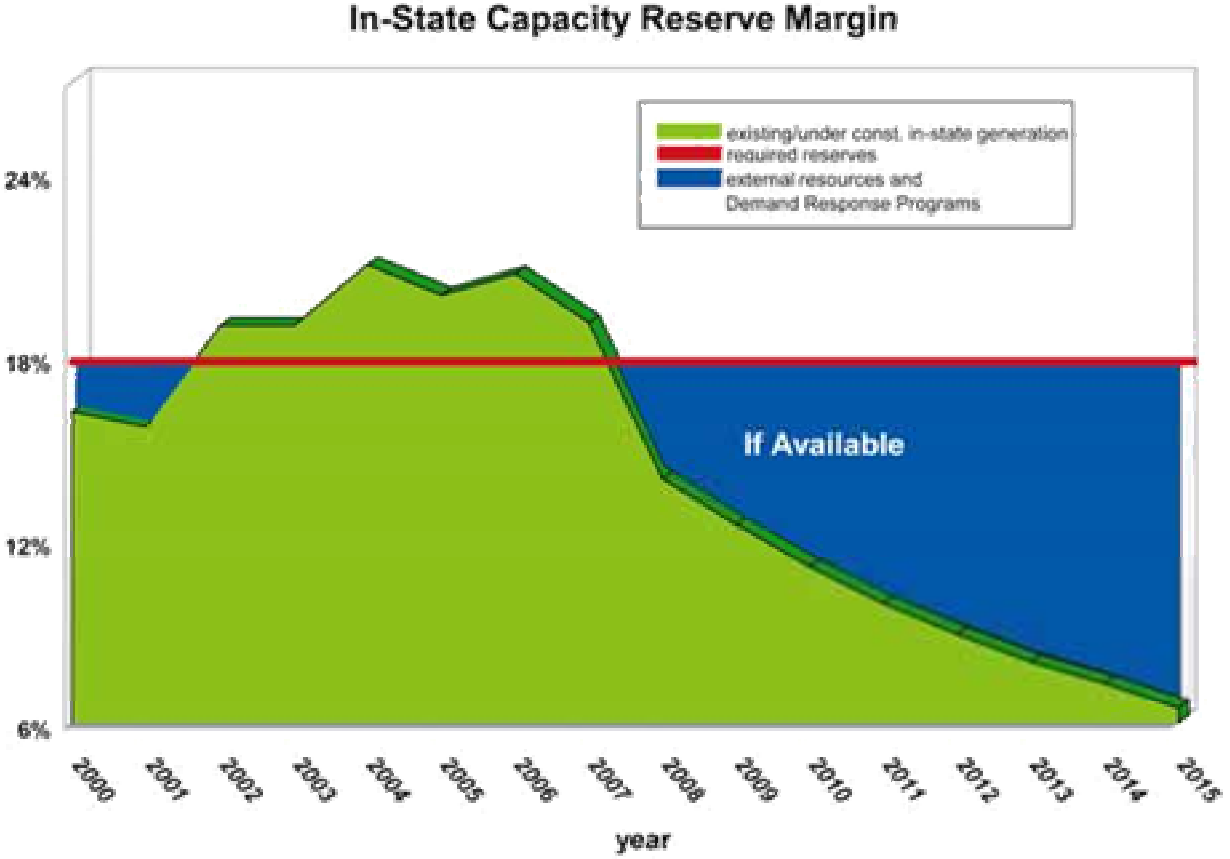
- **This Summer in New York –**

New York Load & Reserve Requirements vs. Available Supply – Summer 2005				
Region	Requirement (Load + reserve or locational requirement)	Generation Available	SCRs* Summer 2005	Projected Surplus above Requirement Summer 2005
NY State	37,715	38,340	897	+1,522
NY City	9,052	9,224	158	+330
Long Island	5,179	5,329	90	+240
**SCR's are a Demand Response Program that can reduce customer demand on peak load days.*				

Emerging Issues –
The Next Five Years

- **Generation**
  - ✓ ***Upstate New York has sufficient supply in the near future***
  - ✓ ***NYC and Long Island require additional generation on an ongoing basis***
    - NYC and Long Island demand continues to grow at a rate of 1.7 percent a year

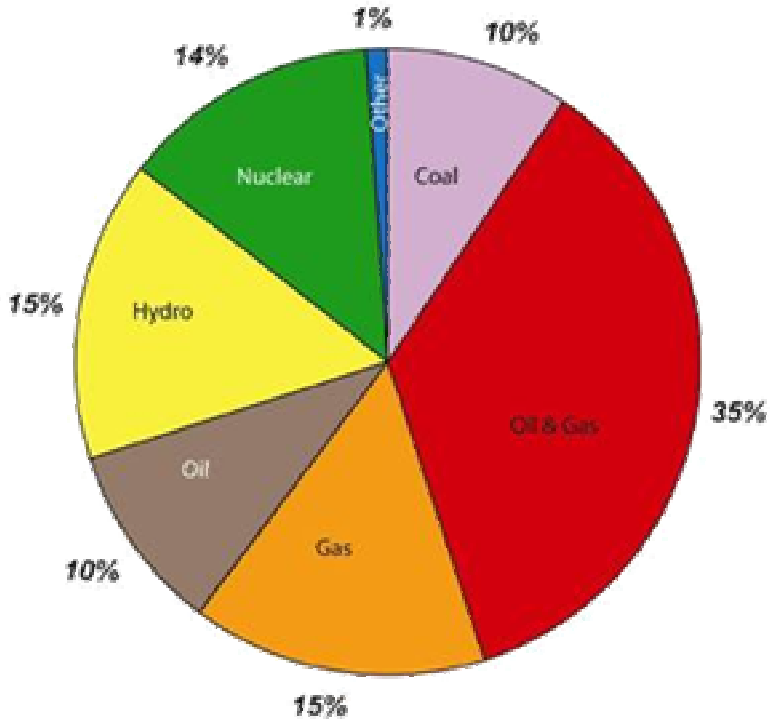
Beyond 2005



The 18 percent reserve margin is the current requirement to meet criteria for adequate resources. The requirement changes as the mix, performance and location of resources change. In general, the more dependent a Control Area is on the transmission system or external resources, the higher the reserve margin.

Fuel Diversity and Growing Dependence on Gas

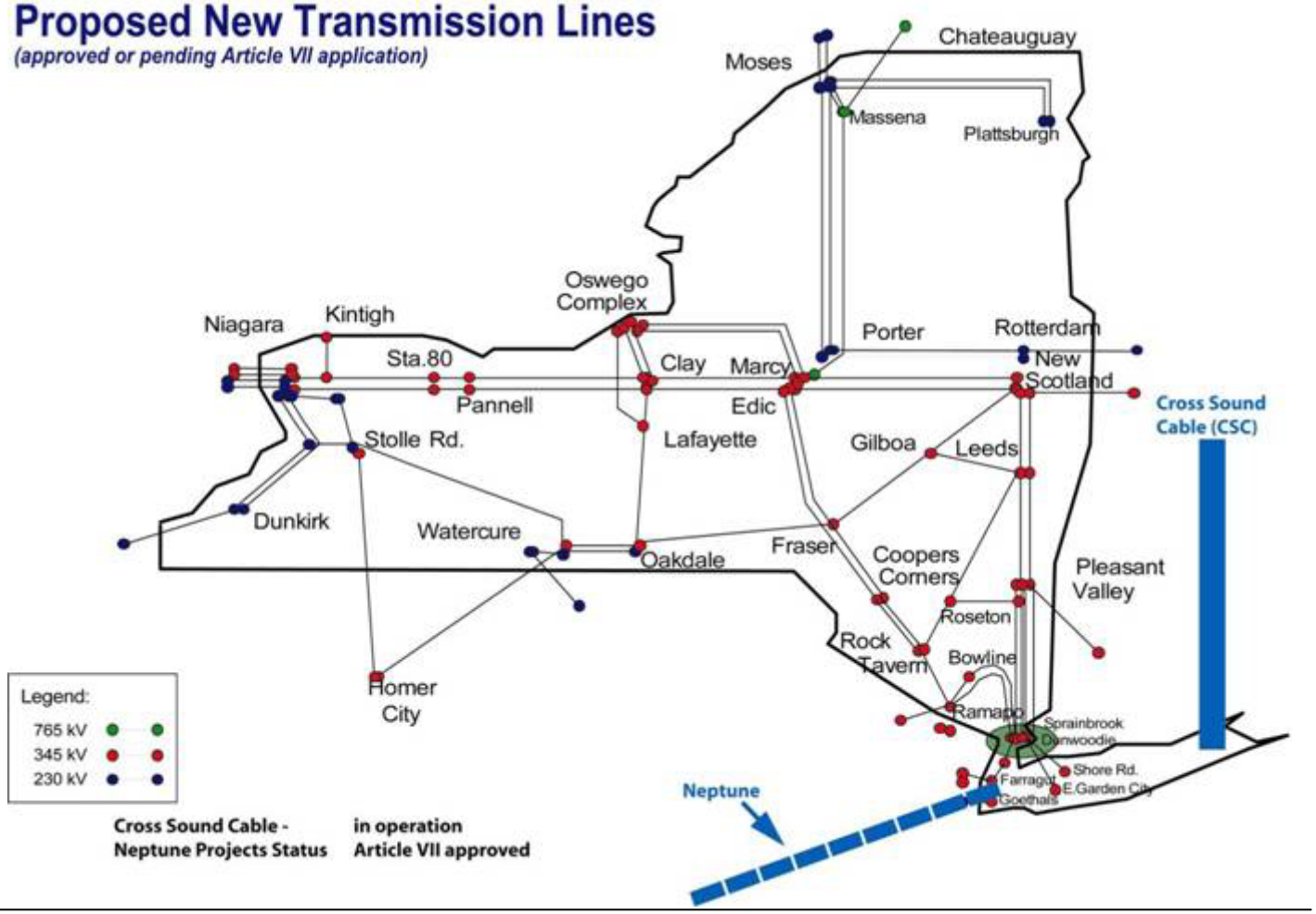
New York's Generating Capacity Mix 2005



Generation

- The New York law governing power plant siting, Article X, lapsed at the end of 2002 and the State Legislature should reenact it as soon as possible.
- National and international conditions in energy markets have made energy investments unattractive to investors, and market innovation will be required to help rectify the problem.

Transmission – *limited success*



Reliability –
Since the 2003 Blackout

- **The NYISO has made improvements through efforts with the Northeast Power Coordinating Council and the North American Electric Reliability Council to:**
  - ✓ *Provide the control room with greater visibility and communications with systems outside of New York*
  - ✓ *Established defensive procedures if problems develop on neighboring systems*
  - ✓ *Initiated where possible, improvements in restoration procedures based on experience gained from the 2003 event*
  - ✓ *Instituted additional training improvements based on the blackout experience, NYISO's operator training exceeds the current industry standards*
- **Congress has failed to enact needed, national mandatory reliability standards**

Demand Response and Environmental Initiatives

- **Success**
  - ✓ *Demand Response programs – acknowledged leaders in the country*
  - ✓ *Partnership with NYSERDA programs has resulted in 1,500 MW available on peak days*
- **Environmental Initiatives**
  - ✓ *Renewable Portfolio Standard*

Conclusions and Recommendations

1. The NYISO staff and its stakeholders should use the new Comprehensive Reliability Planning Process and other market mechanisms to ensure development of needed generation, transmission and demand-side resources.
2. New York State needs to site significant generation additions beginning now, to meet its energy needs between 2008 –2011.
3. The State Legislature should re-enact the Article X siting law promptly. Without a streamlined permitting process it will be very difficult to build new generation to meet New York's needs.
4. The Northeast and the nation, must fashion a fuel diversity strategy to deal with the increasing use of natural gas and dwindling domestic reserves. Renewable energy, energy efficiency, and other domestic fuels are part of the strategy.
5. Congress should act promptly to pass electric reliability legislation including mandatory reliability standards.