



Demand Response: The Wholesale Market Operator's Perspective

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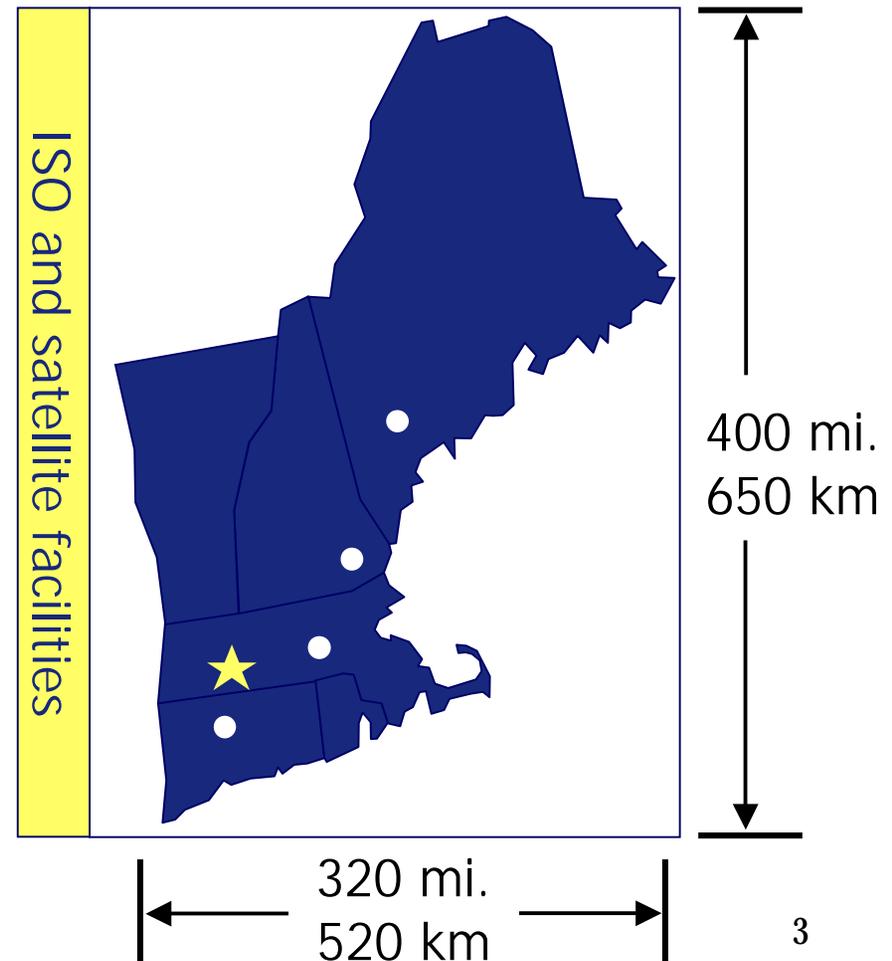
Overview of Remarks

- Background: the New England system
- The Summer 2001 program
- The Roadmap: Summer 2002 and beyond
- Issues to be addressed
 - Views on the role of ISOs/RTOs in load response
 - Wholesale-to-retail issues and the role of regulators



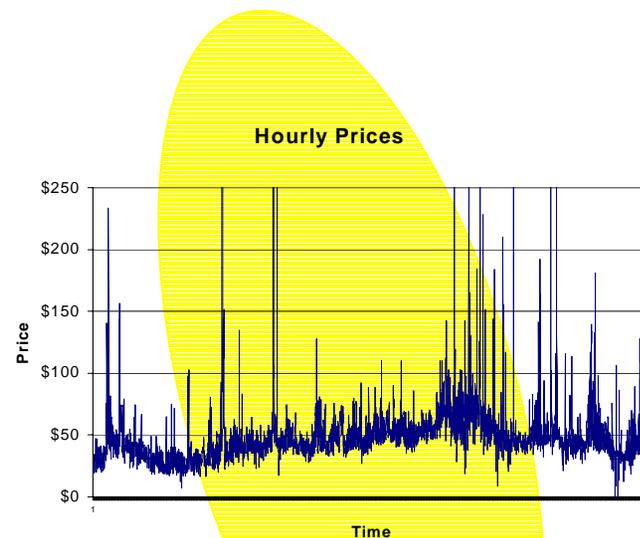
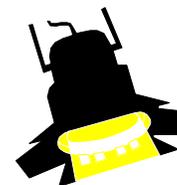
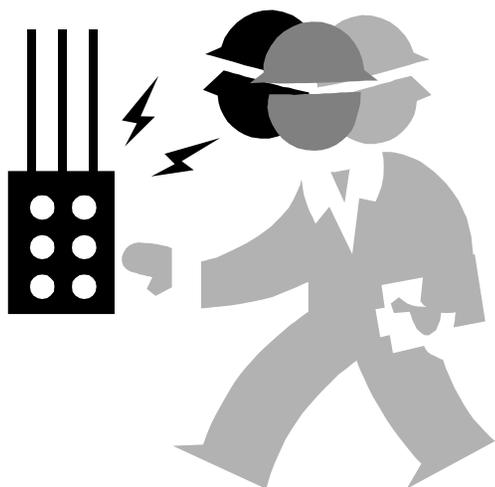
New England's Electric Power Grid

- 14 million people; 6.5 million customer meters
- 340+ bulk generators
- 8,000+ miles of transmission lines
- 4 satellite control centers
- 11 interconnections to neighboring systems
- 28,000 MW of installed generating capacity
- Peak load: 24,967 MW
- No very large, single blocks of industrial load





Demand Response to Wholesale Prices is Key to a Well-Functioning and Balanced Marketplace



Price caps will be required until we have well functioning demand response



The Load Response Program in 2001

- Innovative internet-based system enabling wholesale market price visibility to customers, and load response visibility to operators; targeted 300kW - 5MW size
- Class 1 - Emergency
 - Emergency interruptible load program where end-users guarantee a certain level of interruption and receive energy and reserve market payments; 18 sites, 6.8 MW
- Class 2 - Economic
 - A price-responsive program where end-users are paid the ECP when they voluntarily respond to an ISO notice; 106 sites, 58.8 MW
- 2001 experience indicates technology was not a barrier
- Items needing attention:
 - Aligning economic incentives
 - Transparency/accessibility to the end-use customer (retail rate design/LSE commitment)
 - Movement to market-based settling/payment mechanisms.



The Roadmap: 2002 and beyond

- Changes for 2002:
 - Class 1 'Emergency' Program:
 - End-use customers eligible to receive saleable capacity credit
 - Provide a minimum payment of \$100/MWh
 - Provide a minimum duration of 2 hours
 - Allow earlier end time
 - Class 2 'Economic' Program:
 - Allow 'low-tech' participation without RETX system
 - Pager, e-mail, FAX notifications; manual baselining
 - Incorporate 'congestion multiplier' for constrained areas to demonstrate increased value of load response in those areas
- Changes for 2003 (and beyond):
 - Integrate demand response with Standard Market Design
 - Work with regulatory community to address "barriers" in retail markets



Role of Regulatory Community

- Facilitate moving toward appropriate and meaningful real-time/dynamic pricing
 - Retail rate design needs to be “synchronized” with wholesale market design and rules
- Barriers need to be addressed:
 - Promote easy/low-cost access to required metering technology
 - Consistent treatment of distributed generation resources from environmental standpoint
 - Promote consistency in customer baselining practices
 - Assist/lead in efforts to inform the public
 - Incent load serving entities (LSEs) to engage in a meaningful way



Role of ISOs and RTOs

- ISOs will facilitate both emergency load management actions and economic curtailments until market structures and signals are clear.
 - Many current programs provide subsidies (by necessity)
 - These indicate barriers or muted incentives to participation
- Tools to achieve the goal should include:
 - Forward contracts for reliability interruptions
 - Meaningful reward/penalty features
 - Proper valuation of the capacity represented by interruptions
- ISOs/RTOs must work with FERC and state regulators to ensure:
 - Demand response is a part of the Standard Market Design
 - Standardized customer baselining practices
 - Consistent payment approaches