



Presentation of ISO New England at FERC Technical Conference on Review of Wholesale Electricity Markets

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Overview of Presentation

- Progress in New England
 - ISO New England Objectives
 - Infrastructure and Process Improvements
 - Forward Capacity Market Outcomes
- Challenges and Opportunities for the Future
- Internal Market Monitor's Report
 - State of the Markets 2007

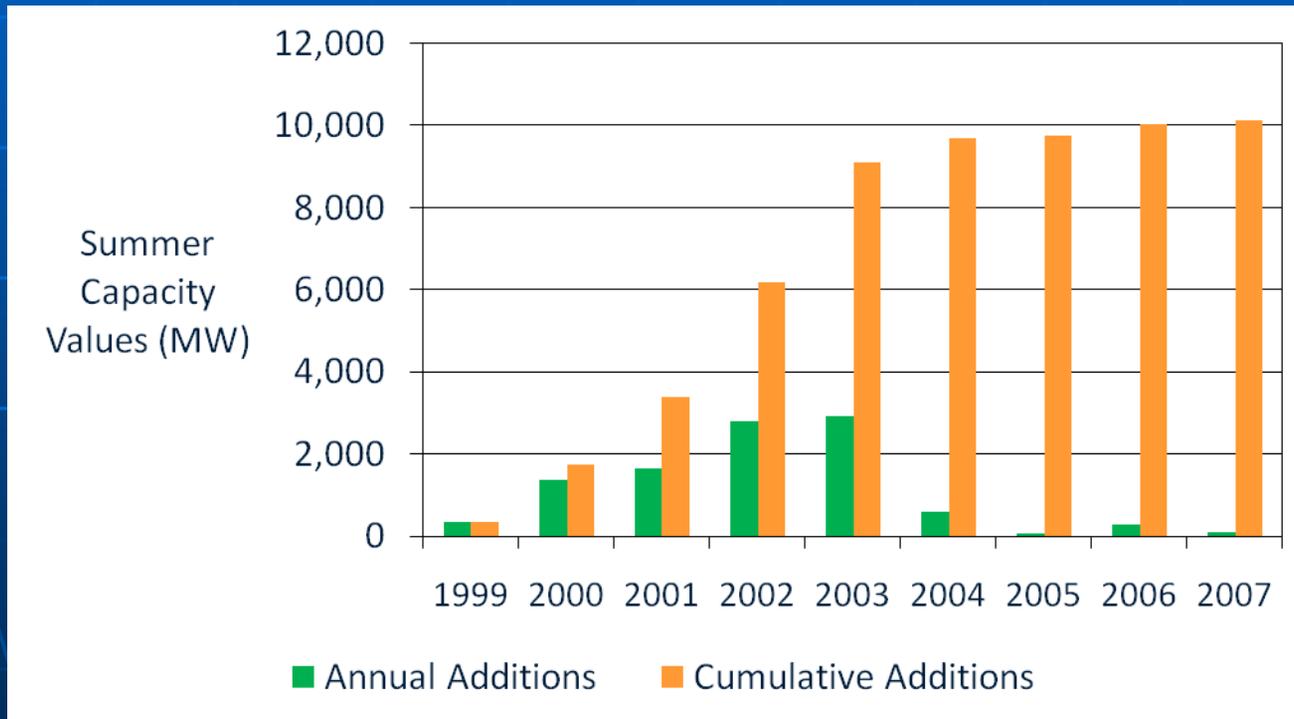
Progress in New England

ISO Objectives Facilitate Infrastructure and Process Improvements

- Reliable system operations 24/7
 - Coordinated dispatch – and maintenance scheduling – for diverse resources within the six-state area
- Long-term regional planning
- Open, non-discriminatory grid access
- Efficient and fair markets
- Transparent information
- Robust stakeholder process

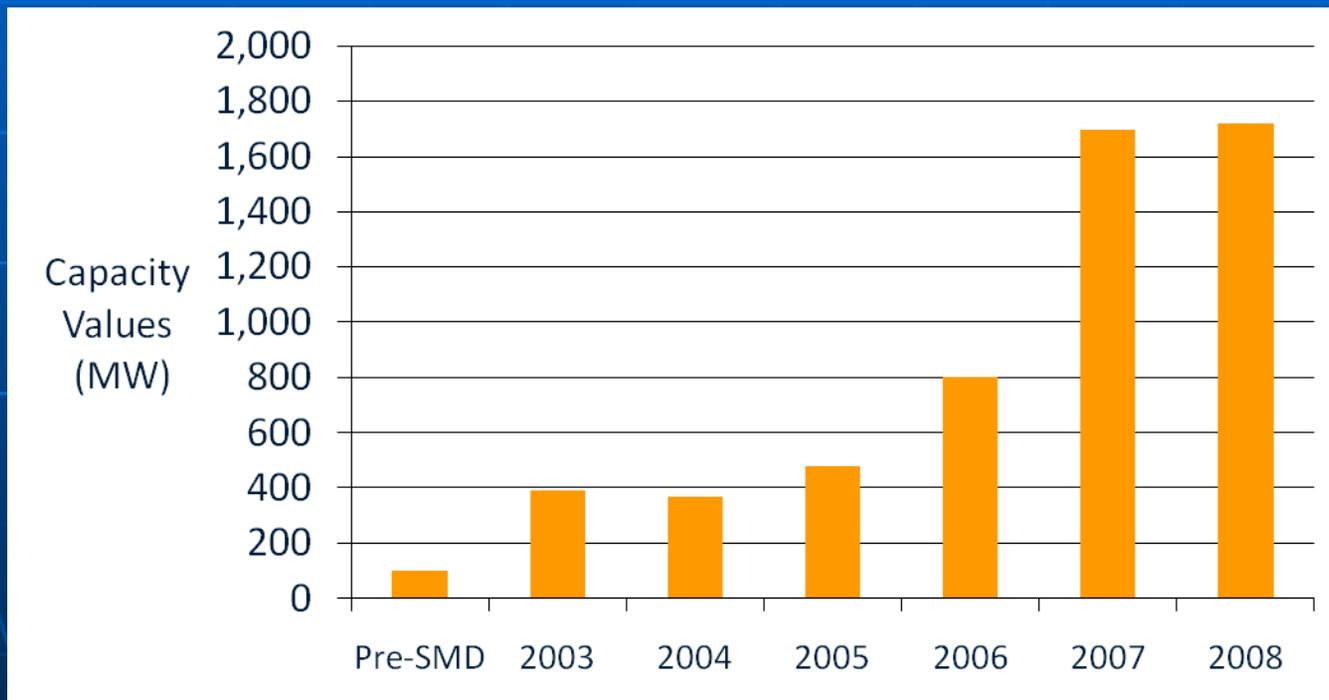
Grid Access and Fair Markets Attract Merchant Investment in Generation, Reduce Consumer Risk

30% of Existing Supply, Approx. 10,000 MW, Added Since 1999



Efficient Markets Facilitate Growth in Demand Response Programs

Enrollments Increase 450% Since 2003

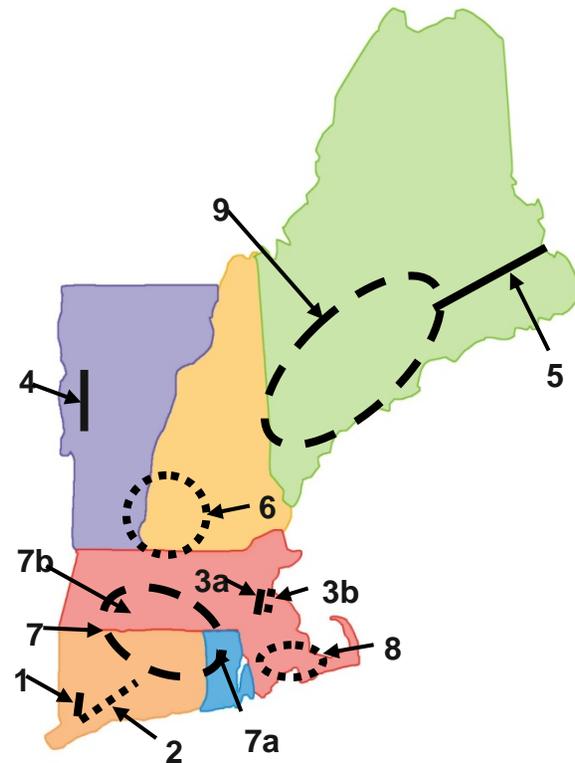


Transparent Regional Planning – with the States and Transmission Owners – Promotes Major Transmission *Over 200 Projects Added in all States Since 2002*

Infrastructure necessary for reliability, competitive markets

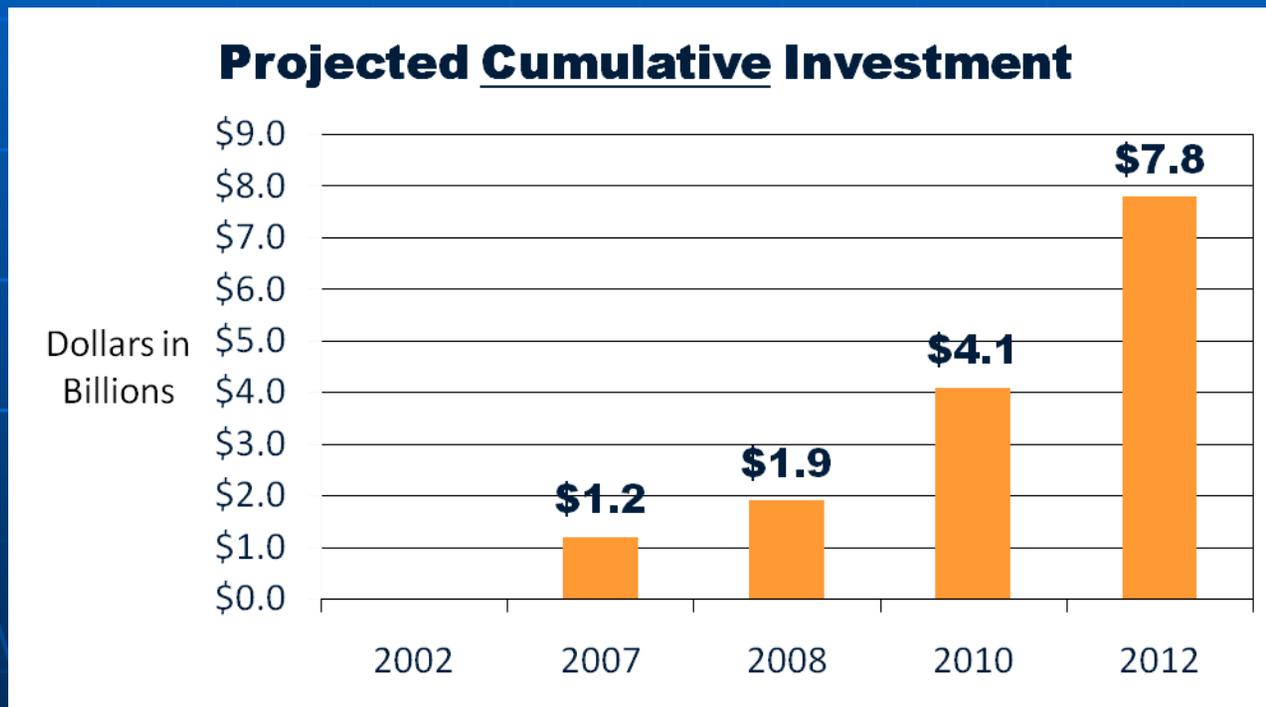
1. Southwest CT Phase I
2. SWCT Phase II
3. NSTAR 345 kV Project
 - a. Phase I
 - b. Phase II
4. Northwest Vermont
5. Northeast Reliability Interconnect
6. Monadnock Area
7. New England East-West Solution
 - a. Greater Rhode Island
 - b. Springfield 115-kV Reinforcements
8. Southeast Massachusetts
9. Maine Power Reliability Program

- In service
- Under construction
- - Under study



\$1.2 Billion in Transmission Investment Since 2002

Over \$6 Billion on the Horizon



Informed Participation Ensures Robust Stakeholder Process, Accountable Governance

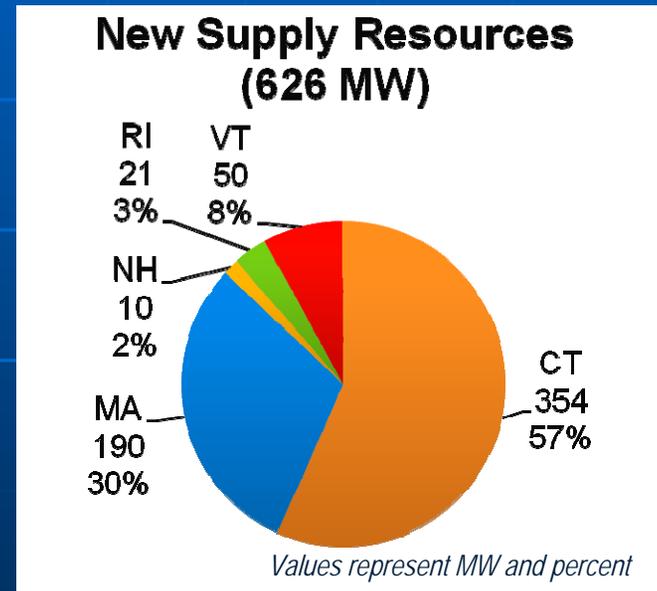
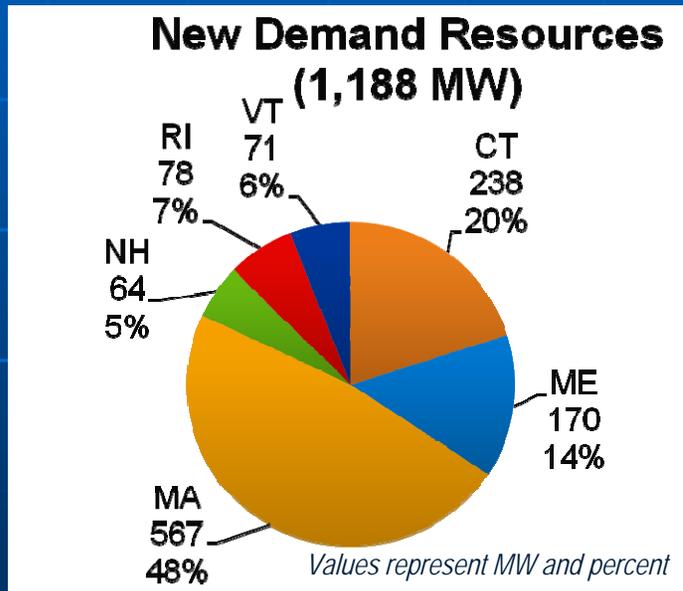
- Market and System Operations, Performance, Needs, Developments and Changes reviewed and modified through an inclusive stakeholder process
 - Stakeholders advance change proposals and issues
- States and market participants involved in the selection of the independent Board of Directors

Informed Participation Ensures Robust Stakeholder Process, Accountable Governance, cont.

- ISO's five year business plan annually reviewed with stakeholders
- ISO's budget reviewed with stakeholders and filed under Section 205 annually for Commission approval

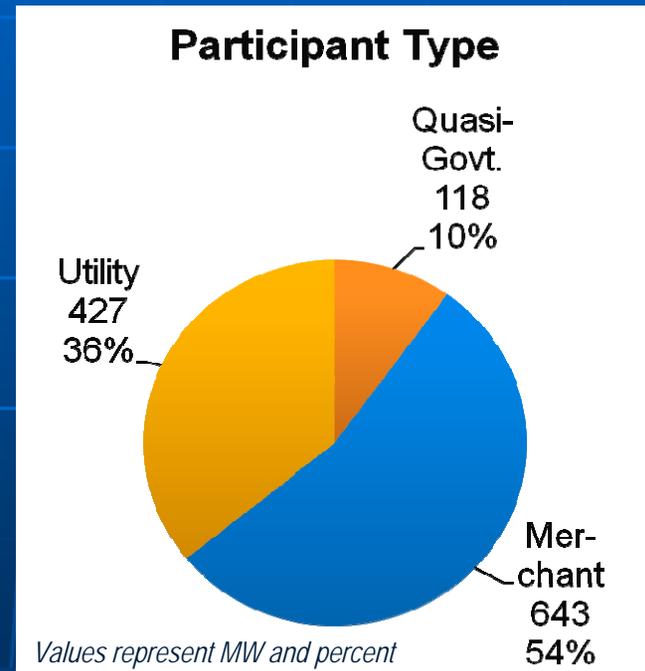
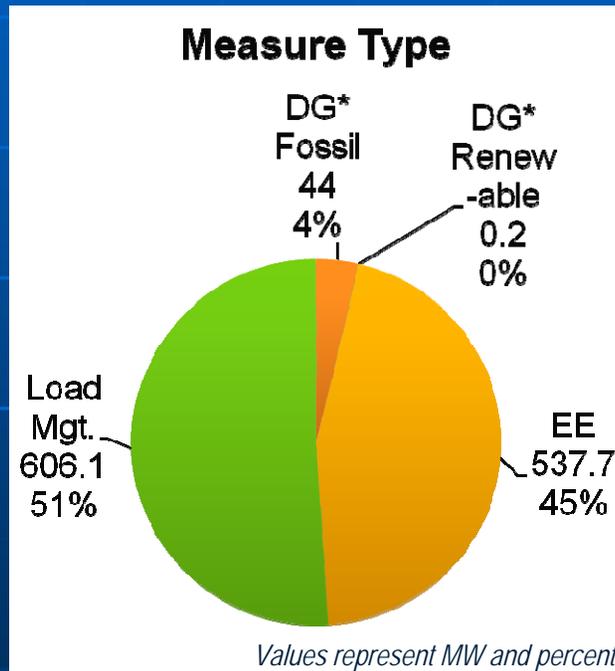
Further Progress with Effective Capacity Market:

First Auction Attracts New Demand and Supply Resources Locate in Areas of Greatest Need



Merchant Investment in Demand Resources and Energy Efficiency

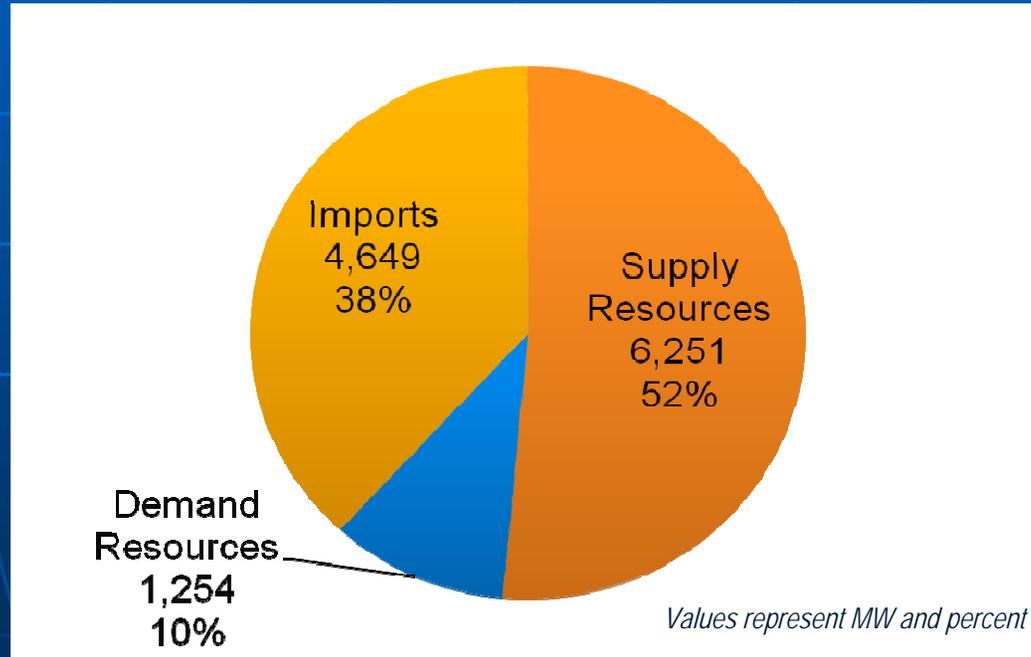
Total: 1,188 MW



*DG: Distributed Generation (behind the meter)

Over 12,000 MW Seek to Participate in Second Capacity Auction

Total: 12,154 MW



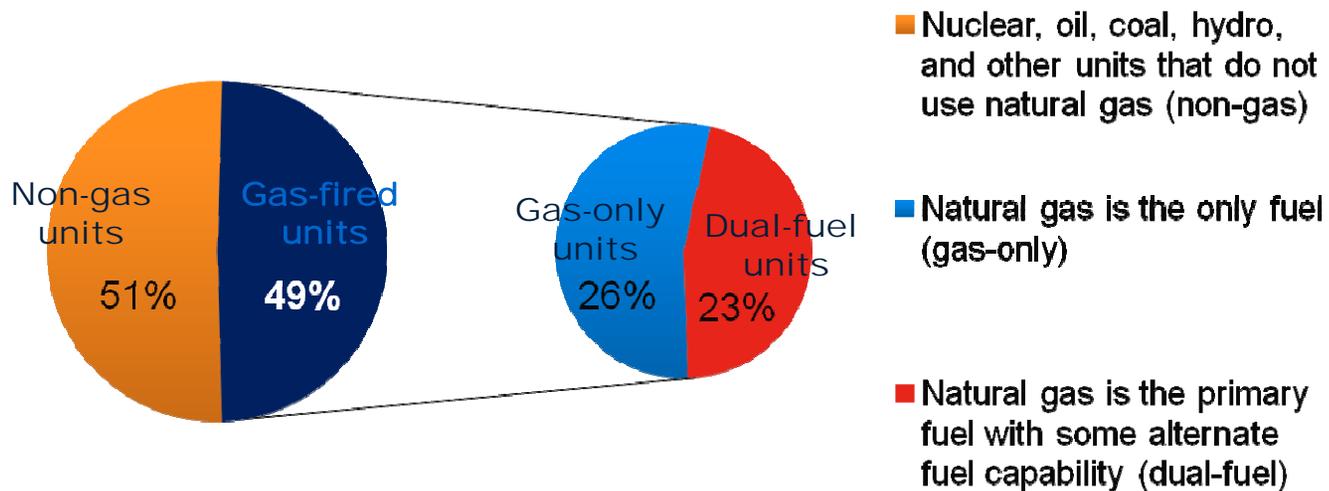
Improvements Deliver Benefits

- Infrastructure investment in the right locations
- Improved efficiency
- Reliable operations

Challenges and Opportunities for the Future

Natural Gas is the Primary Fuel for Approx. 50% of Existing Capacity *Of This, More Than Half is Solely Dependent on Natural Gas*

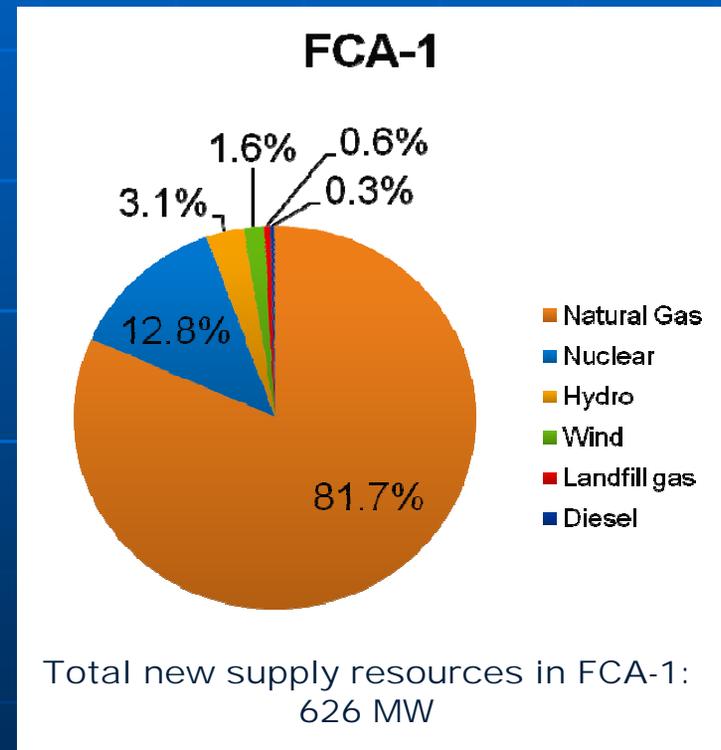
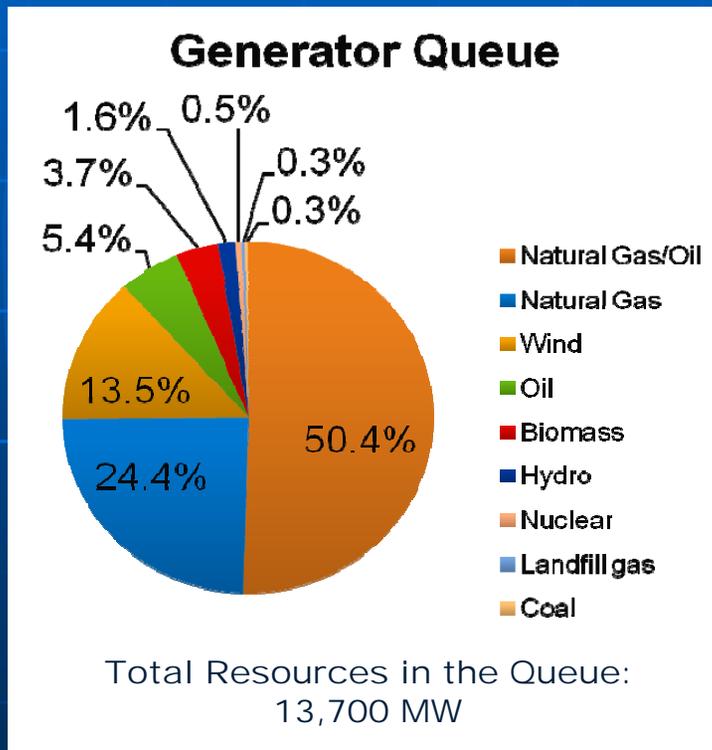
Generation by Fuel Type as a % of Total Capacity



Percentages are based on winter capacity ratings

Natural Gas Dominates New Supply Proposals...

Continues to be Economic Resource



Competing State Energy Policy Goals Warrant Greater Fuel and Supply Diversity

- States seek to:

- Increase use of renewables
- Lower carbon emissions
- Reduce prices/volatility
- Stimulate local economic development



Scenario Analysis Initiative Studies Options, Provides Guidance

- Region will continue to depend on natural gas for its electricity supply
- Price of natural gas and oil will likely drive the price of electricity for the next decade and longer
- It will be challenging for the region to satisfy the state Renewable Portfolio Standard (RPS) and Regional Greenhouse Gas Initiative (RGGI) requirements

Scenario Analysis Initiative Studies Options, Provides Guidance, cont.

- Region should:
 - Become more energy efficient
 - Reduce reliance on high cost fossil fuels
 - Build and/or access non-carbon emitting resources
 - Examine the cost of transmission to enable access to renewables

Strategic Direction for the Region: Consideration of Three-tier Transmission Expansion Framework

- Tier 1: Reliability improvements
 - To meet reliability standards and also reduce uplift, congestion and line losses
- Tier 2: Improvements to integrate renewables within New England
 - To connect proposed geographically remote renewable projects

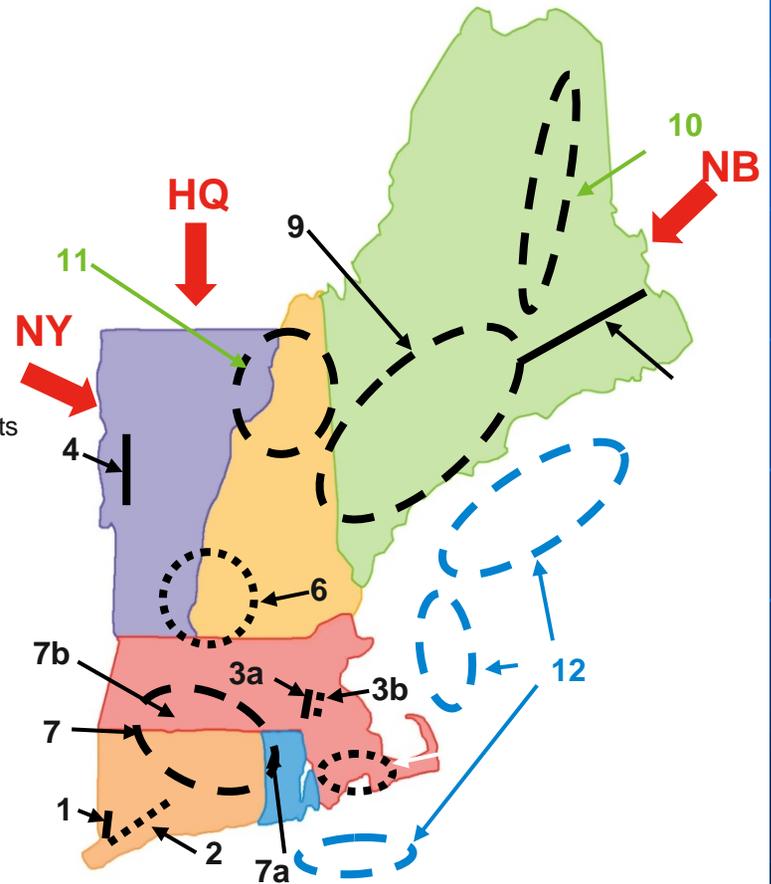
Strategic Direction for the Region: Consideration of Three-tier Transmission Expansion Framework, cont.

- Tier 3: Stronger ties to renewable-rich neighbors
 - Potentially justifiable only with some or all of the following: Discounted imports, changes in RPS standards to include Canadian hydro resources, or bilateral agreements to access non-carbon or renewable resources

Transmission Expansion Framework

1. Southwest CT Phase I
2. SWCT Phase II
3. NSTAR 345 kV Project
 - a. Phase I
 - b. Phase II
4. Northwest Vermont
5. Northeast Reliability Interconnect
6. Monadnock Area
7. New England East-West Solution
 - a. Greater Rhode Island
 - b. Springfield 115 kv Reinforcements
8. Southeast Massachusetts
9. Maine Power Reliability Program
10. Maine Power Connection
11. Northern New Hampshire
12. Off-shore wind

-  In service
-  Under construction
-  Under study



States and Market Participants Are Taking Action - Raises Issue of Economic Transmission

- Demand resources and renewables are required by the states
- Investors are aggressively pursuing renewable and non-CO2 resources
- What is the potential – and appropriateness – of additional transmission investment to achieve environmental and economic goals?

Investment Progress Delivers Benefits, Creates New Challenges and Opportunities

- Integration and operation of increased levels of demand resources
- Additional dual-fuel capability
- Significant non CO₂ generation resources on the horizon if the transmission investments are economically viable
- Achieving consensus on economic transmission investments

Internal Market Monitor's Report: State of the Markets 2007

Overview

- Wholesale electricity markets worked competitively in 2007
- Markets continue to improve
 - Forward capacity market implemented successfully
 - Transmission additions eased system congestion

Overview, cont.

- Wholesale markets have been producing tangible benefits
- Challenges and opportunities for further improvements continue

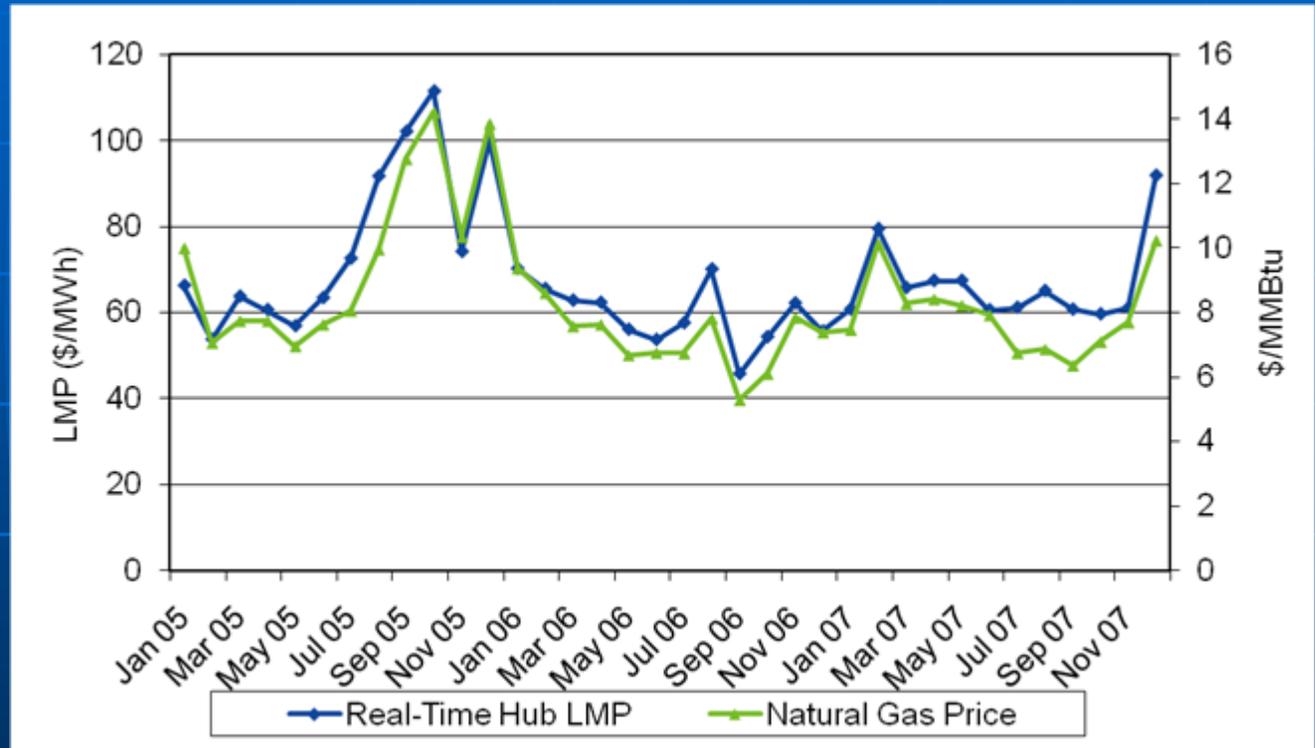
Oversight and Assessment

- Market prices are consistent with marginal costs
- Competitive market assessment
 - Competitive benchmark indices are consistent with market competitiveness

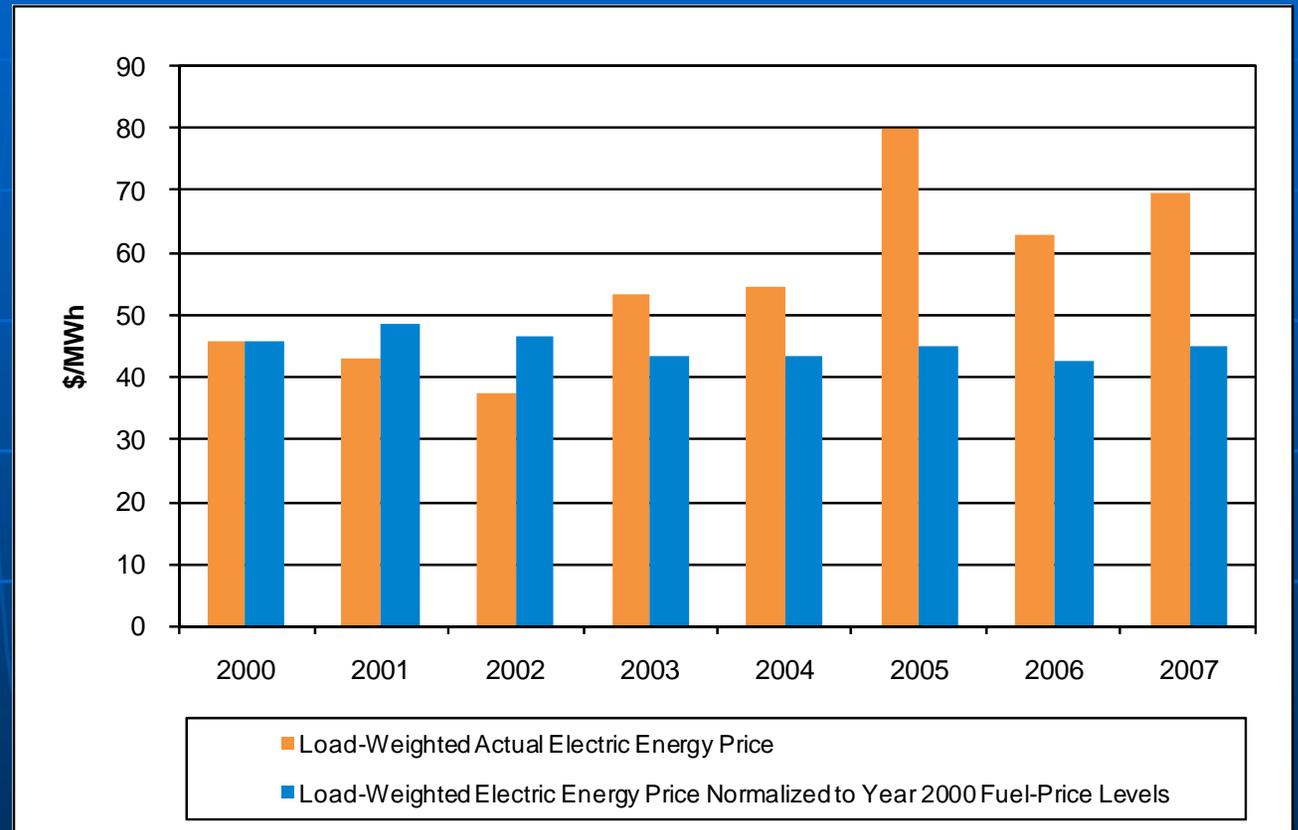
Oversight and Assessment

- Monitoring and mitigation
 - Mitigation was relatively infrequent in 2007 (triggered 16 times in the energy market)
- Existing mitigation rule for “uplift” or out-of-market Net Commitment-Period Compensation (NCPC) needs reform

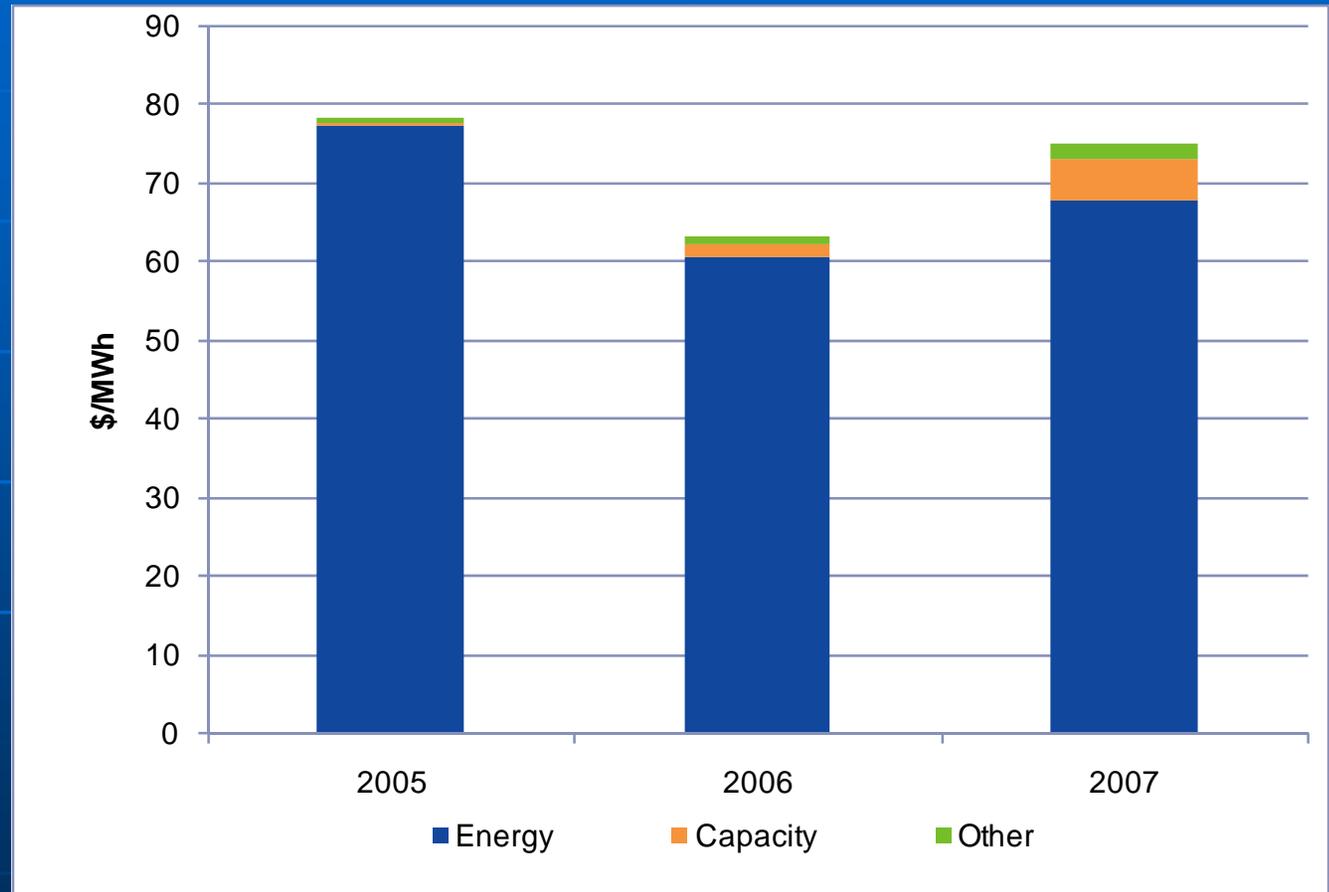
Wholesale Electric Energy Prices Tracked Natural Gas Prices (2005-2007)



Fuel-adjusted Average Real-time Electric Energy Prices Have Been Stable

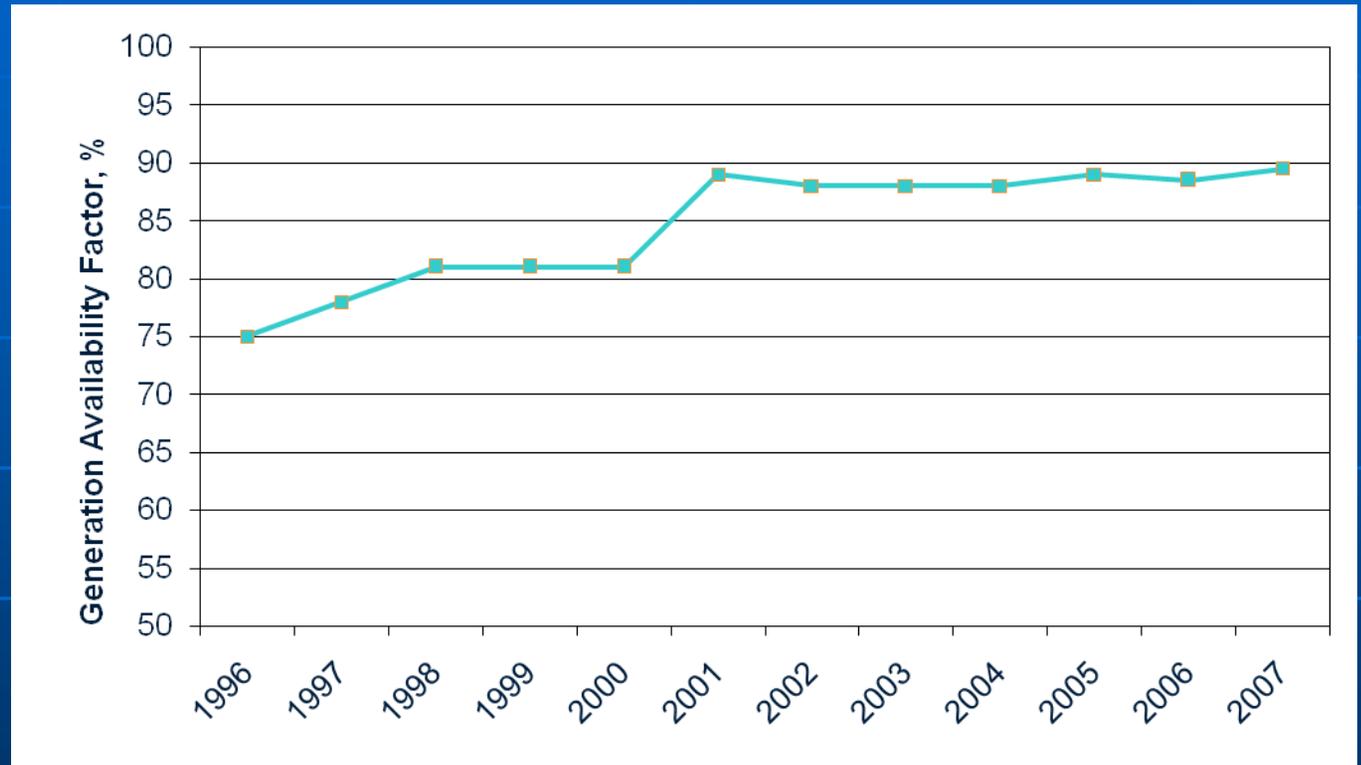


2007 All-In Market Cost Rose Largely Due to Fuel and Capacity Cost Increases

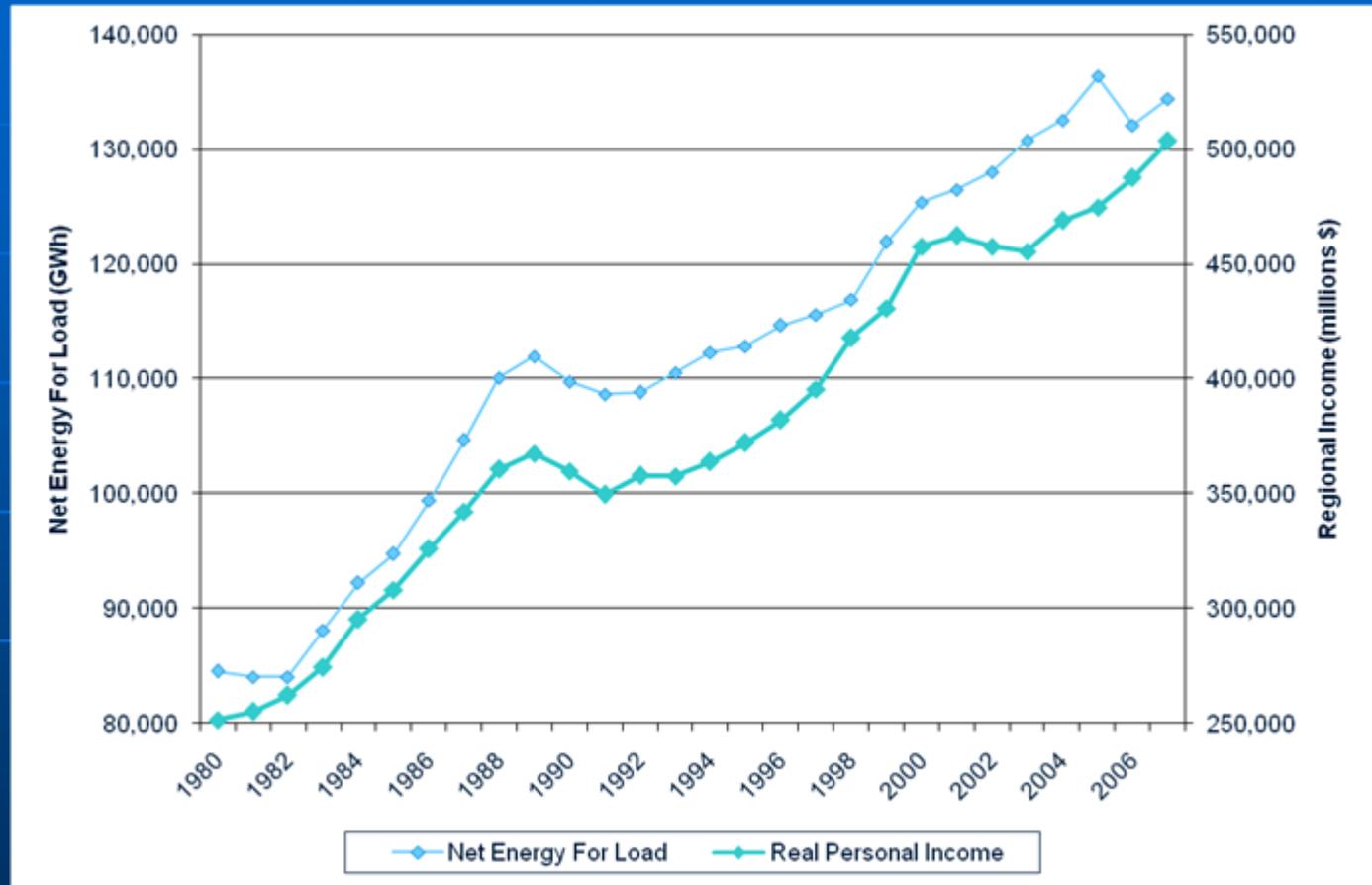


All-in wholesale electric energy cost metric for 2005 to 2007

Generation Availability Has Improved Due To Competition

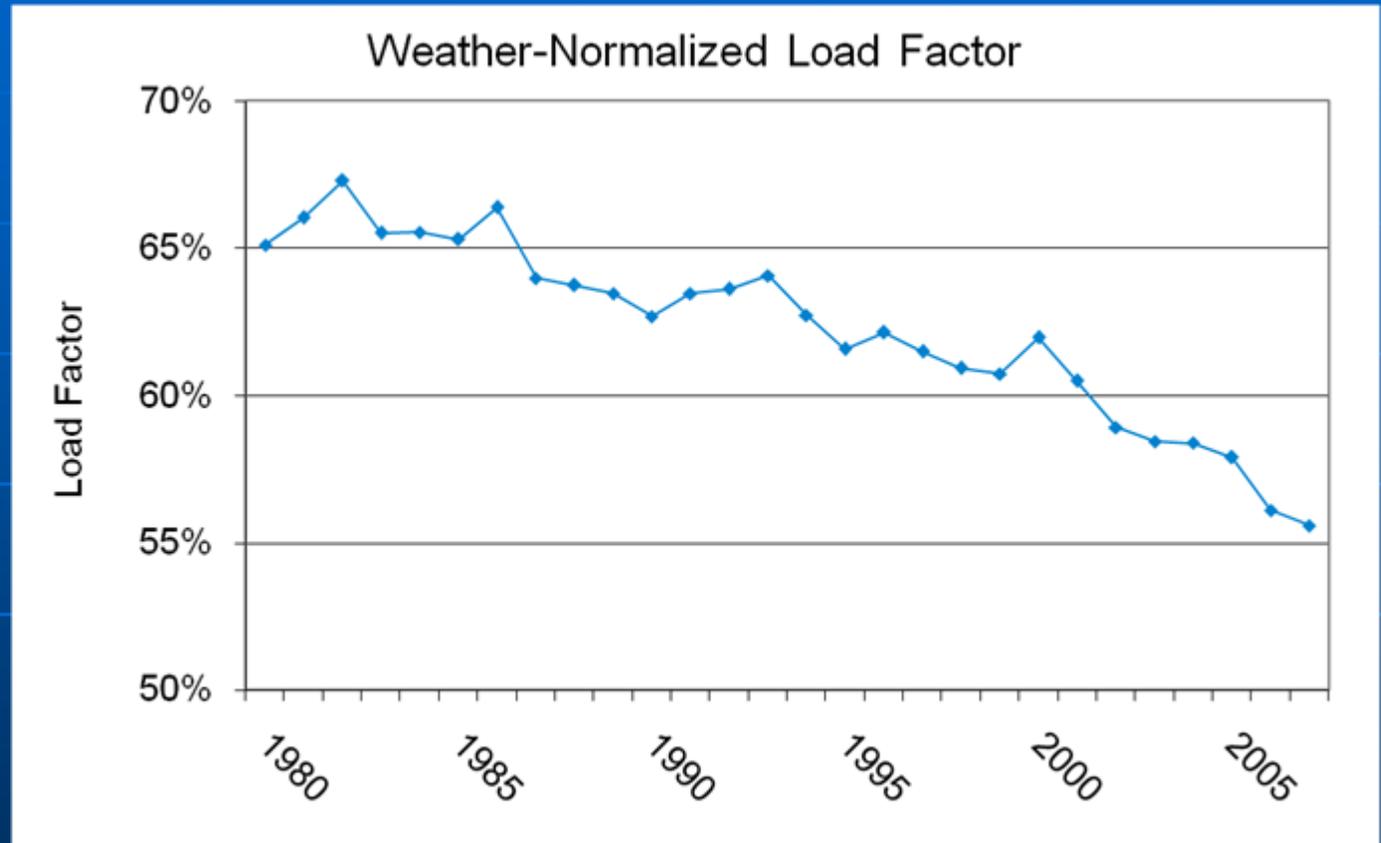


Increase in Energy Consumption Largely Reflects Income Growth



Actual net energy for load and New England Regional Income, 1980 to 2007

Load Growth and Declining Load Factor Require Additional Infrastructure



Recommended Improvements

- Reform mitigation rules for “uplift” (NCPC)
- Evaluate design parameters in forward and real-time reserve markets based on first year of experience
- Continue to improve demand response programs and operation of FTR market

Industry Challenges

- Strengthen linkage between retail and wholesale markets for consumer's advantage
 - Providing transparent price signals for consumers and resources
 - Guiding efficient bilaterals, procurements, and investments

Industry Challenges, cont.

- Improve price formation during shortages, building on success of real-time reserve pricing
 - Full participation and integration of demand
 - Improve transmission constraint pricing