

NECPUC Annual Symposium
June 15-18, 2014

Governors' Infrastructure Initiative

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Northeast Utilities
June 16th, 2014



**Northeast
Utilities**



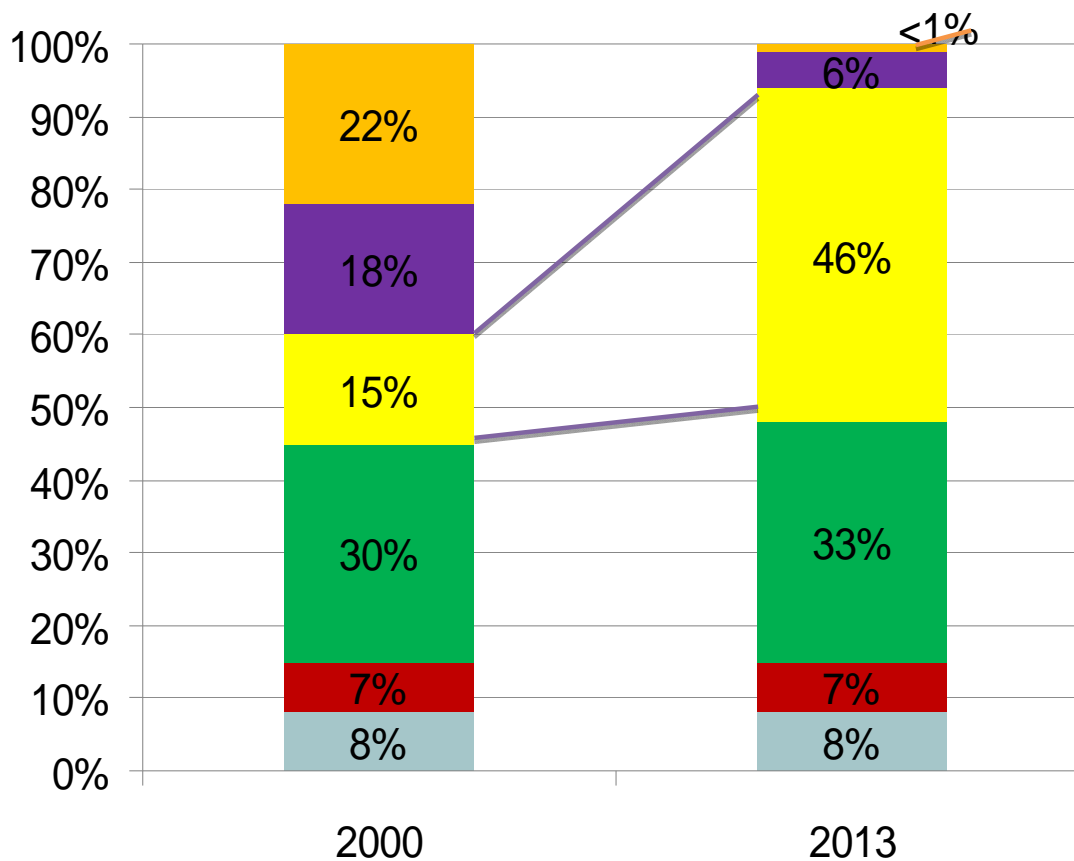
We have multiple challenges facing our region

- Shift to natural gas for heating and power generation without additions to gas infrastructure
- Imminent retirement of generation capacity
- Aggressive carbon reduction goals coupled with increasing intermittent generation

Significant Increase in Natural Gas Generation



Annual Energy Output



Generating Capability

Oil:	5273 MW
Coal:	2300 MW
Nat Gas:	17,850 MW
Nuclear:	4656 MW
Hydro:	3335 MW
Renewable:	1079 MW

Future Outlook Shows Increasing Reliance on Natural Gas



Upcoming Retirements

Announced (4,100 MW)

- Salem Harbor Station (749 MW)
- 4 units (coal & oil)
- Norwalk Harbor Station (342 MW)
- 3 units (oil)
- Brayton Point Station (1,535 MW)
- 4 units (coal & oil)
- Vermont Yankee Station (604 MW)
- 1 unit (nuclear)

Potential

- Up to **8,000 MW** at risk of retirement

New Generation Projection

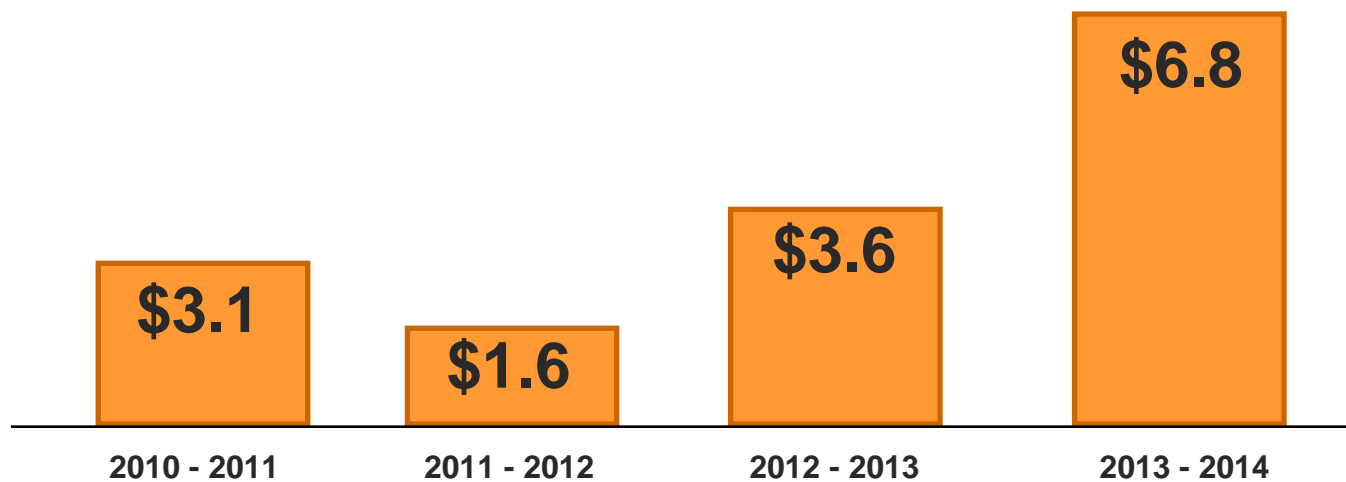
Fuel Type	Capacity (MW)
Biomass/Wood Waste	138
Hydro	62
Landfill Gas	0
Natural Gas	1,847
Natural Gas/Oil	2,497
Oil	245
Solar	16
Wind	2,110
Total	6,915

Energy Prices Are Escalating



- All of these challenges are pressuring customers' energy bills
- Gas pipeline constraints have added over \$3 billion to our electric bills this winter

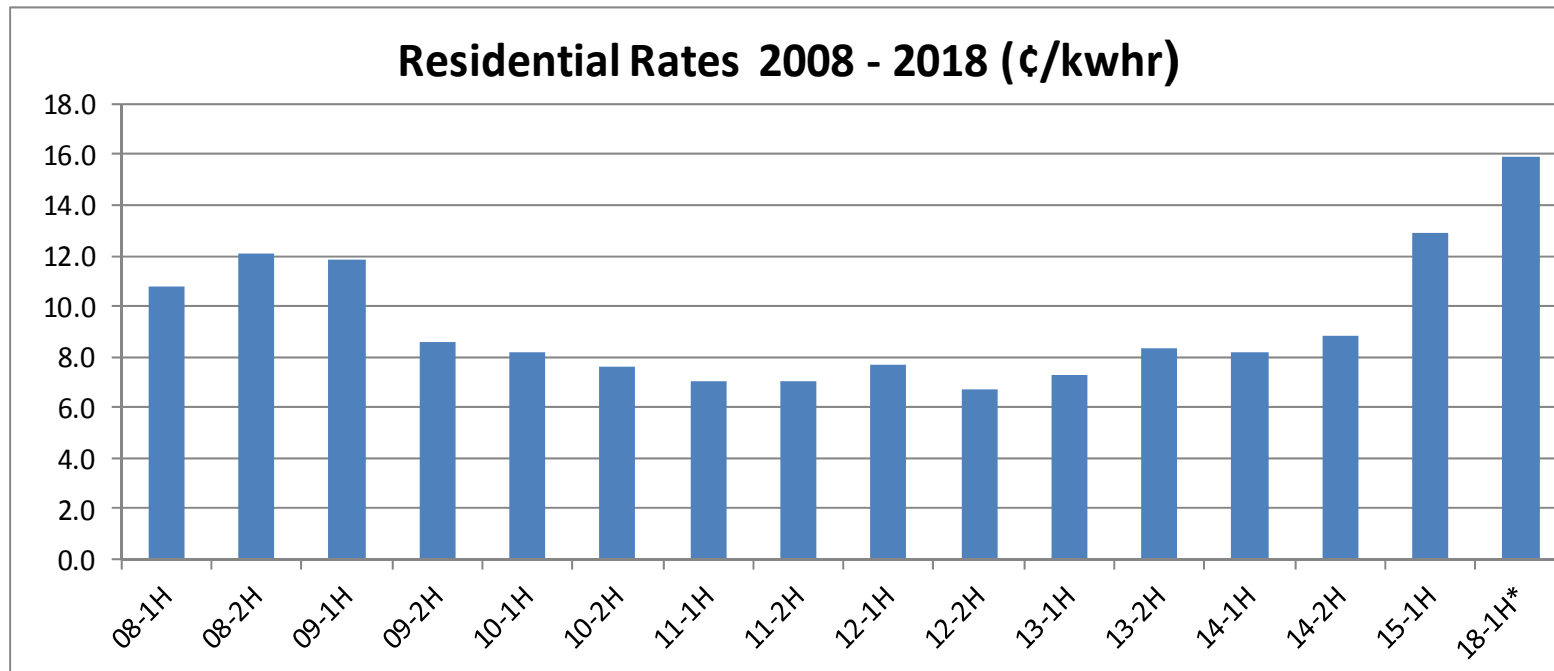
**Winter Season Wholesale Electricity Costs
December – March
(\$Billions, ISO-NE Region)**



Infrastructure Deficiency Driving Retail Rates Higher



- Price increases despite abundant nearby natural gas and hydro
- Liquidity reduced due to suppliers leaving New England market
- Failed auctions for retail supply, moving to Day Ahead markets in MA for C&I
- Energy rates set to double over next few years



* - 2018 prices are an estimate using actual price for generation capacity and current market rates for energy

Solving These Challenges



- We are working with NESCOE to promote the development of:
 - Electric transmission to achieve greenhouse emission goals
 - Natural gas infrastructure to address power market disruptions
- We support the use of an ISO tariff to expedite construction of electric and gas infrastructure
 - Precedent exists to lean on our regulated utilities to address energy policy objectives
 - Electric Distribution Companies proposal to NESCOE for EDC's to contract for gas transportation capacity

Electric Distribution Company (EDC) Model

