Maine Natural Gas Conference
October 8, 2015

New England States Committee on Electricity

NESCOE

NESCOE is New England's Regional State Committee, governed by a Board of Managers appointed by each of the New England Governors to represent the collective views of the six New England states on regional electricity matters

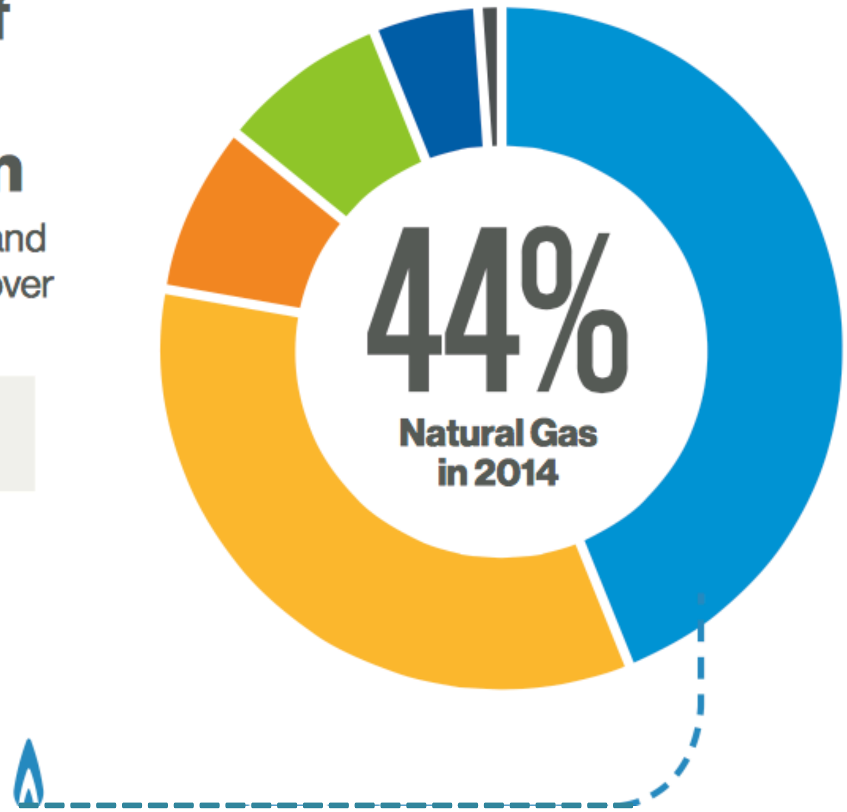
- **Focus**: Resource Adequacy, System Planning & Expansion
- **Resources**: 6 full-time staff with diverse disciplines & experience. Consultants, primarily for transmission engineering & independent studies
- **More information** including filings & comments:
  - www.nescoe.com
  - Twitter @NESCOEStates

New England: Dramatic Changes in the Energy Mix from Oil and Coal to Natural Gas

Sources of Electricity Production

Major shift from oil and coal to natural gas over the past 15 years

View the real-time fuel mix at **iso-ne.com**

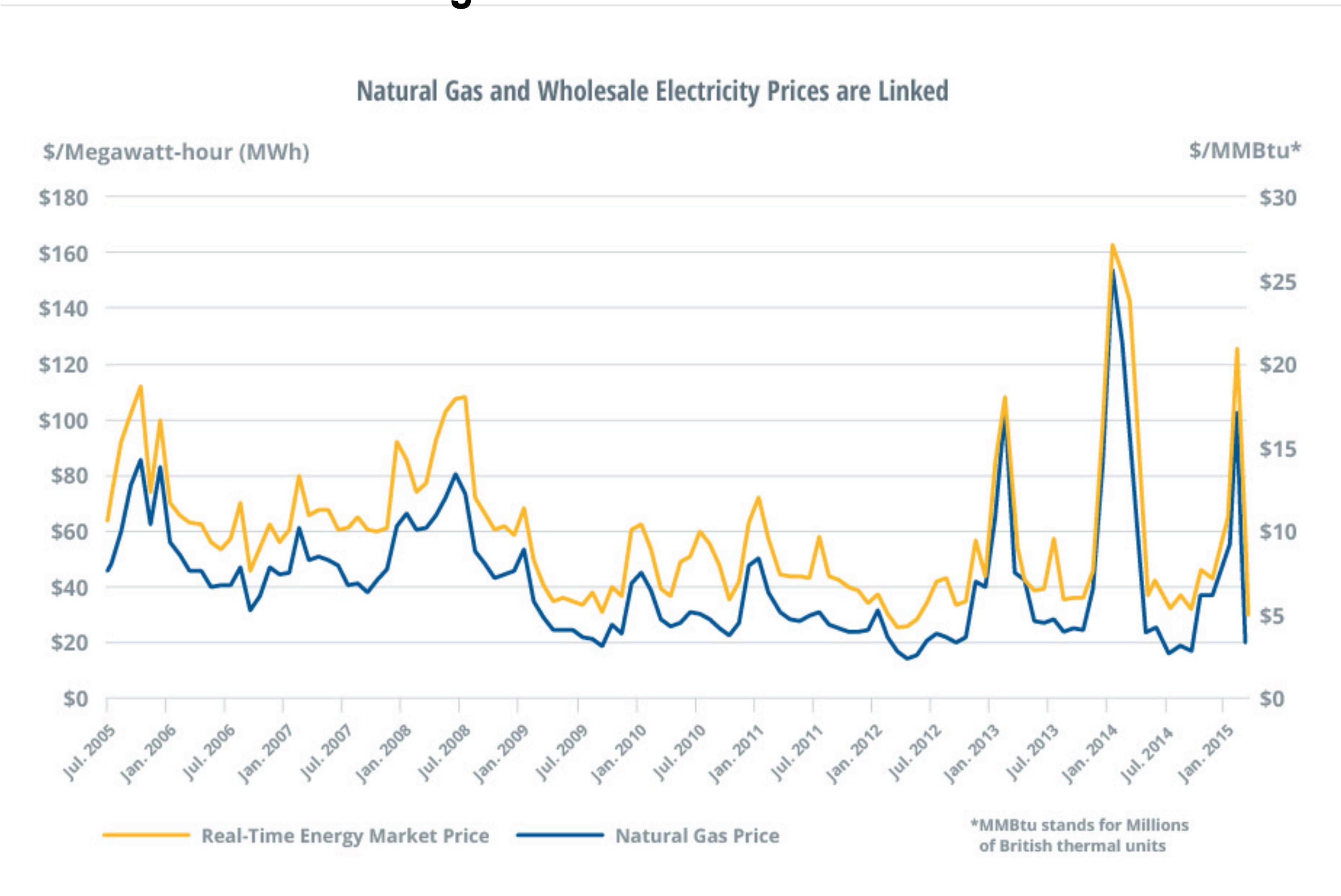


	NET ENERGY 2000	NET ENERGY 2014
NATURAL GAS	15%	44%
NUCLEAR	31%	34%
RENEWABLES	8%	9%
HYDRO	7%	8%
COAL	18%	5%
OIL	22%	1%

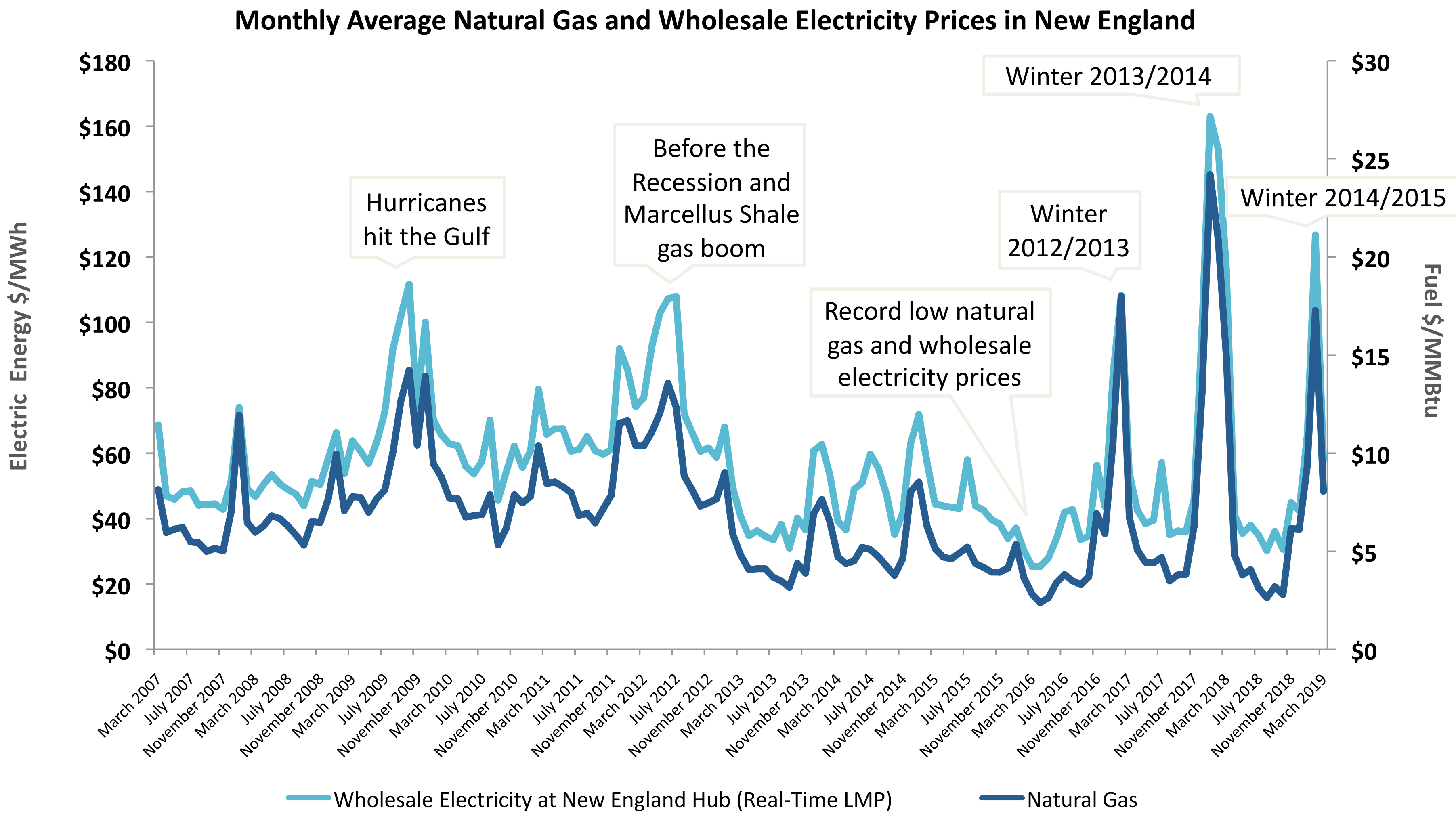
Dramatically reduced coal/oil operations

Source: ISO New England

As New England consumers have learned…

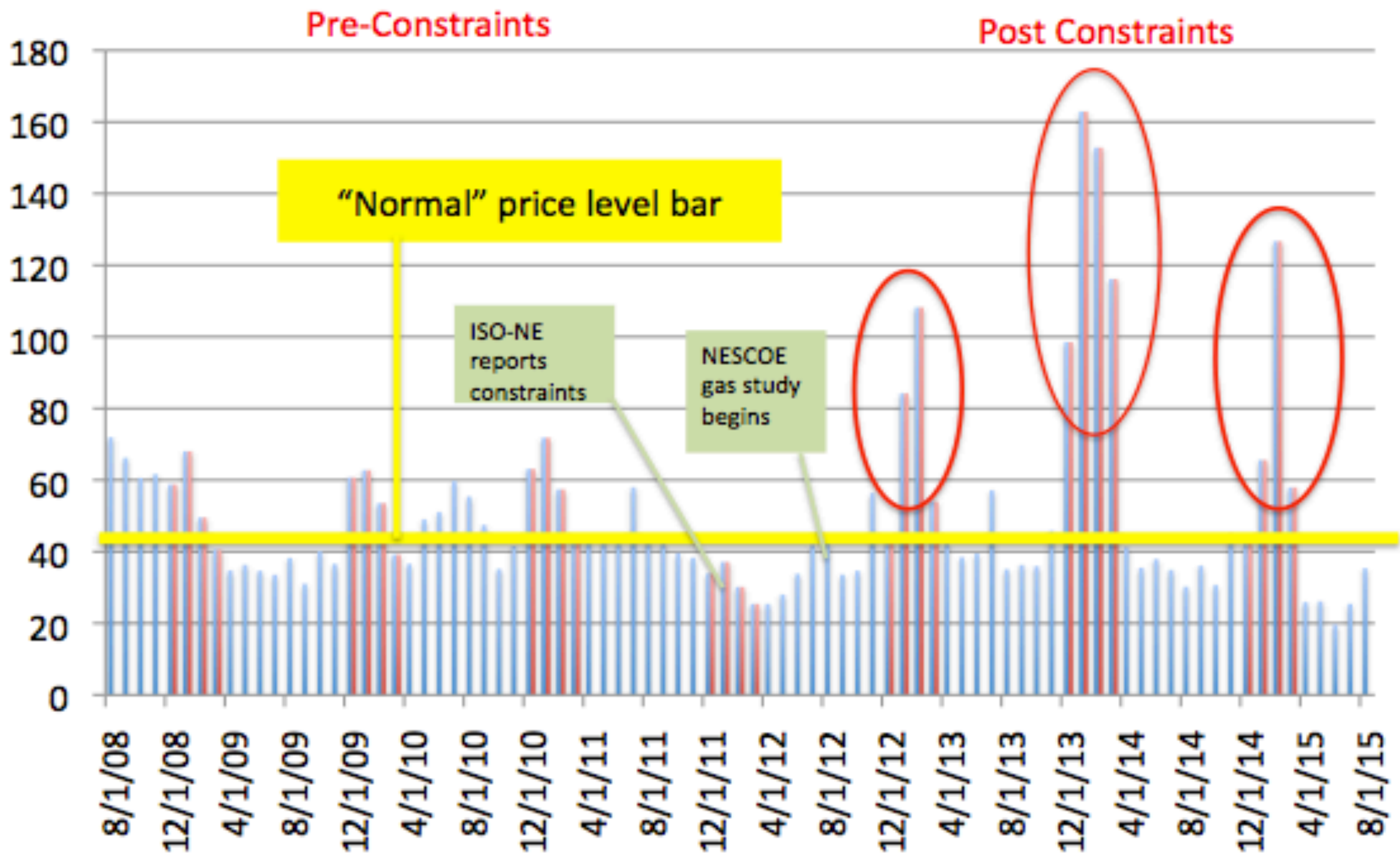


The Region has Experienced Volatile Gas and Electric Prices the Past Few Winters



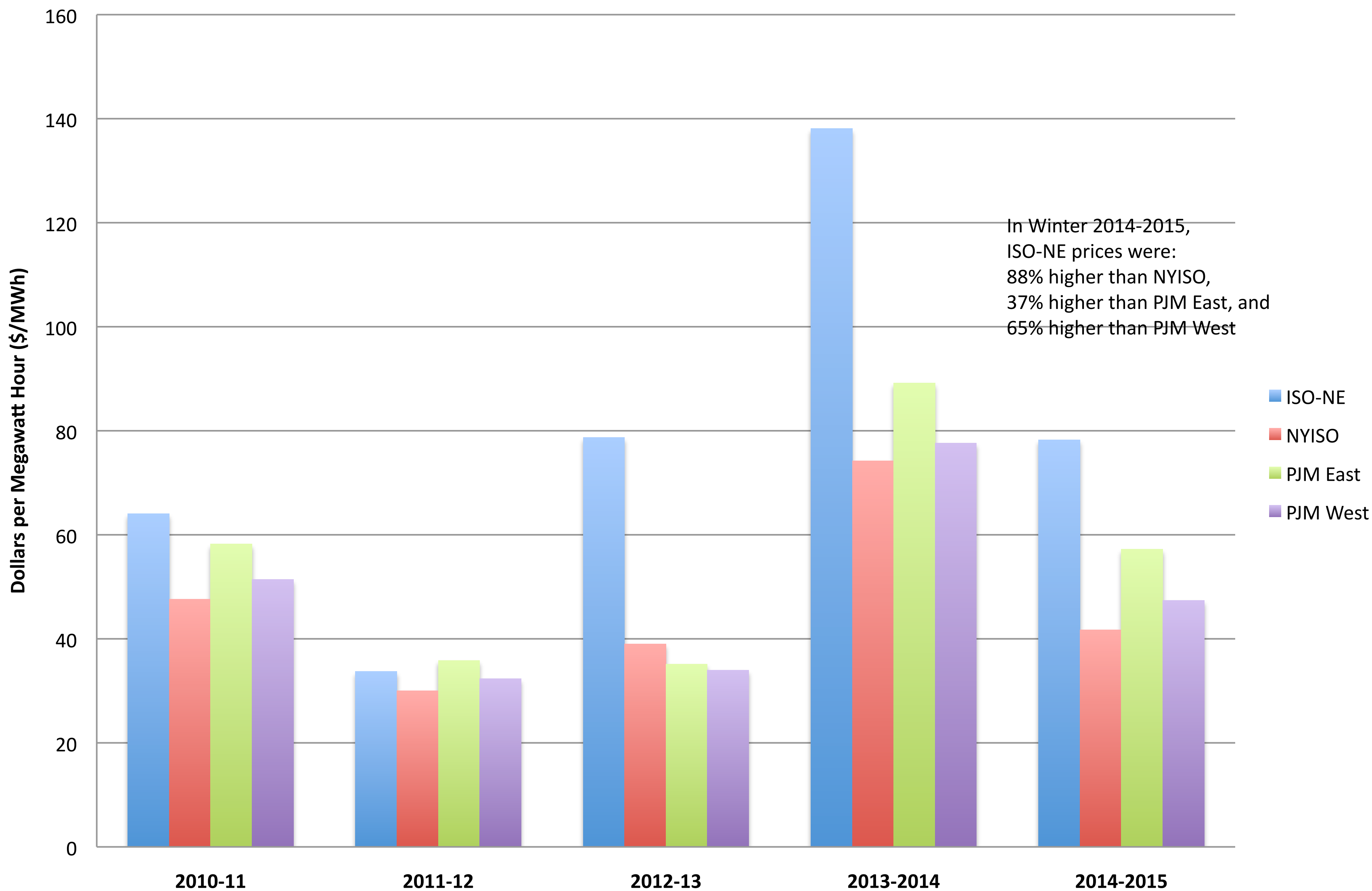
Slide courtesy ISO-NE

Monthly Average RT LMP's ($/MWhr)



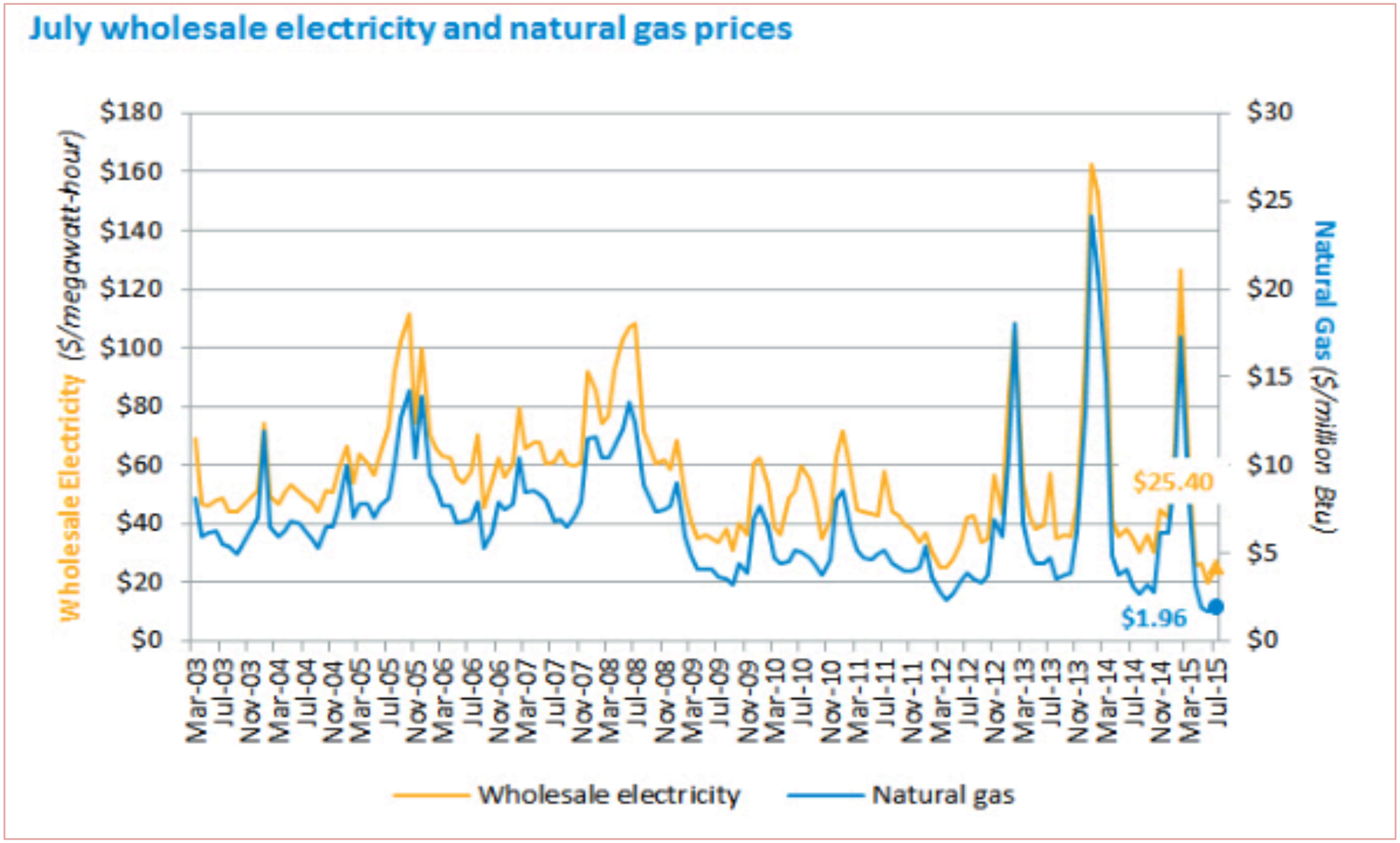
Monthly Average RT on-peak LMP's through August, 2015, data per ISO-NE

Winter Season (Dec-Feb) Average Electricity Prices - Wholesale 2010 – Current (March 2015)



Source: ISO New England, New York ISO, PJM Interconnection

Non-Winter Prices Reach All-Time Lows



Power plants (oil/coal) that do not run regularly and/or only earn low profits when operating do not earn money to offset costs forcing retirement decisions

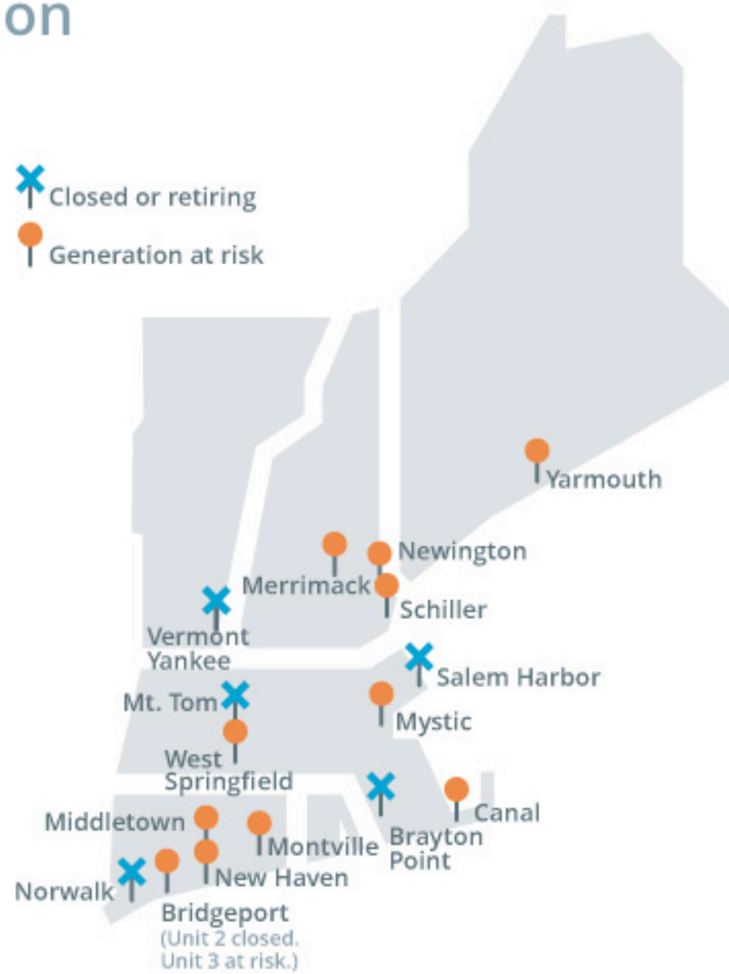
Retirements

Tomorrow's Energy Mix: Resources on the Way OUT

Several of the region's oldest generators—and some of its largest—have already ceased operations or plan to exit the markets by 2018. They take with them over 3,500 MW of regional capacity. Notable exits include:

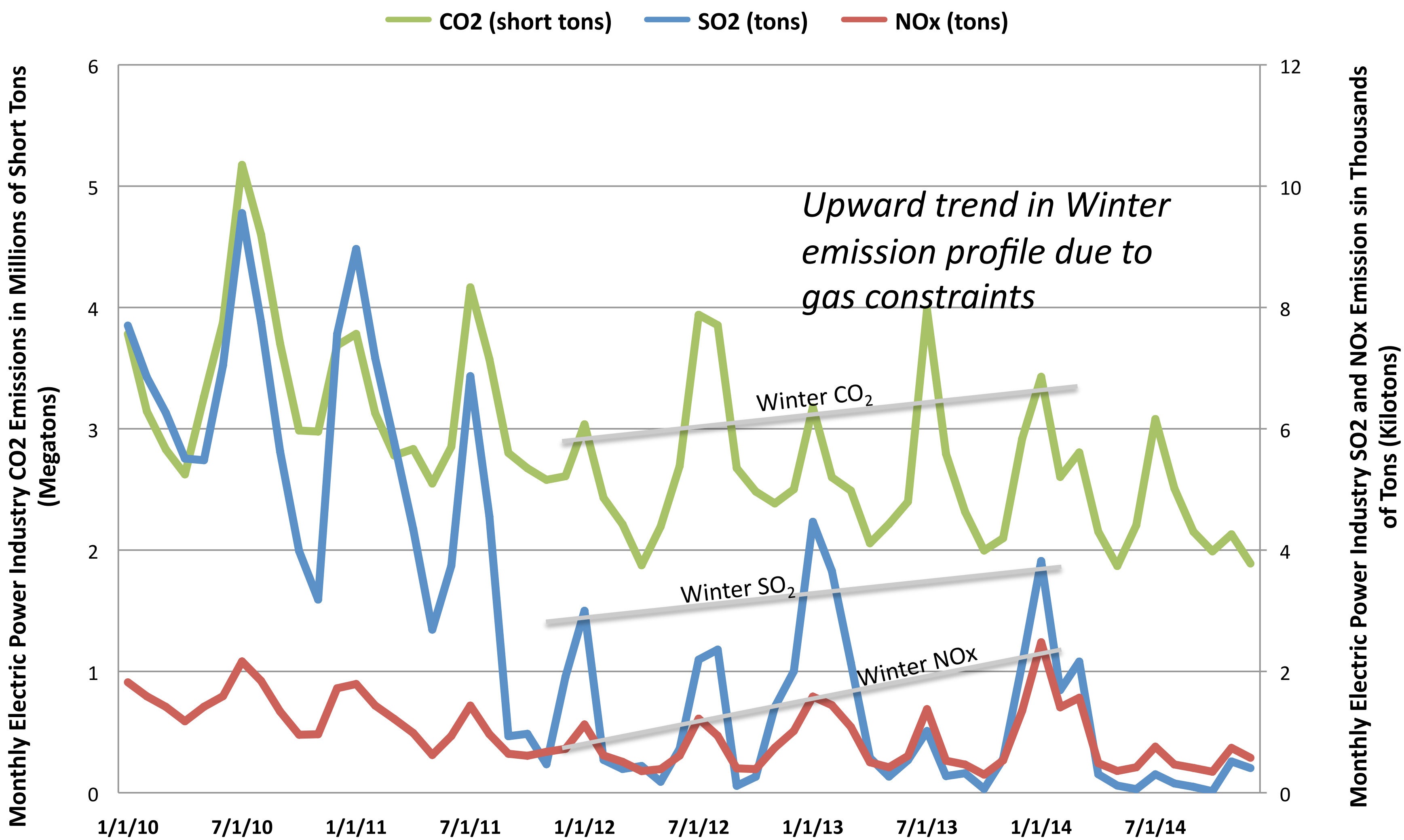
- Brayton Point Station (1,535 MW from oil and coal)
- Salem Harbor Station (749 MW from oil and coal)
- Vermont Yankee (604 MW from nuclear power)
- Norwalk Harbor Station (342 MW from oil)
- Mount Tom Station (143 MW from coal)

About 6,000 MW more of New England's oil and coal capacity will be over 40 years old in 2020—some substantially older—and at risk of retirement, according to a 2012 ISO analysis.



Source: ISO New England

New England Electric Power Industry Monthly Air Emissions: 2010-2014

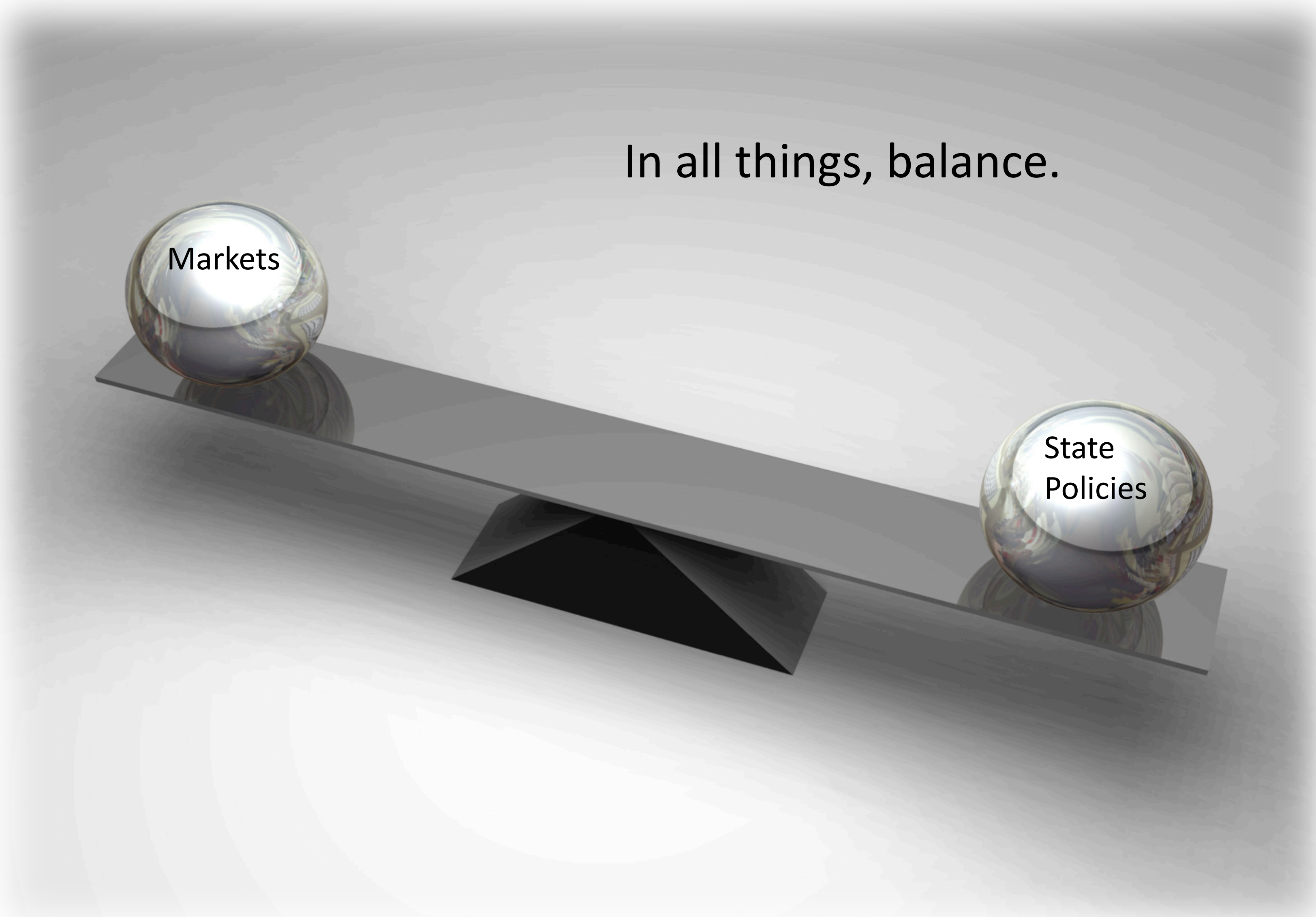


Source: U.S. Environmental Protection Agency

New England Governors

April 2015

"New England continues to face significant energy system challenges with serious economic consequences for the region's consumers. . . . **The economic, system reliability, and environmental consequences of inadequate energy infrastructure require action. Cost-effective investment in new natural gas infrastructure and the continued integration of clean energy resources are important to resolving these challenges.** With these infrastructure investments, and continuing aggressive investment in other clean energy solutions such as energy efficiency and distributed generation, our region can reduce energy costs and thereby attract new businesses and jobs for our hard-working citizens."


In all things, balance.
Markets
State
Policies

Some State Activities, Progressing in Parallel

- **Multi-State Clean Energy RFP** – www.cleanenergyRFP
- **Connecticut DEEP** comment opportunity closed Sept. 30 on three proceedings to procure resources pursuant to Public Act 15-107, *An Act Concerning Affordable and Reliable Energy*.

  The Act authorizes DEEP to procure a range of resources - natural gas, energy efficiency, renewable energy, large-scale hydropower, and energy storage. The Act authorizes selection of the most cost-effective energy resources through an open and competitive process.

  On gas: "DEEP is working on issues related to procurement for natural gas resources, and is evaluating options for coordinating the solicitation of natural gas resources with other states who have legal authority and interest in doing so, consistent with the strategic approach set forth by the New England Governors. DEEP expects to provide an opportunity for public comment on a request for proposal for natural gas resources this fall, with more details and questions to consider."

- **Maine and Rhode Island** have enabling laws, with a Maine regulatory process ongoing.

- **Massachusetts**

  ○ **EDCs and Gas Capacity**: DPU issued an order on October 2nd finding that it has "authority pursuant to G.L. c. 164, § 94A to review and approve contracts for natural gas pipeline capacity filed by electric companies." DPU 15-37

  Standard of Review: "…EDC must demonstrate that the proposed contract (1) results in net benefits for the Massachusetts EDCs' customers at a reasonable cost, and (2) compares favorably to the range of alternative options reasonably available to the EDC at the time of acquisition of the resource or contract negotiation (e.g., pipeline capacity, local storage, electric transmission). An EDC must show that the price of the resource is competitive and that the contract satisfies other non-price factors such as reliability of service and diversity of supply.

  Filing Requirement: ".. an EDC seeking Department review and approval of a gas contract must include with its filing materials that demonstrate a competitive and transparent procurement, that avoid conflicts of interest, and that allow for consideration of procurement by entities other than EDCs."

  ○ **LDCs and Gas Capacity**: DPU approved LDC - Boston Gas, Baystate Gas, Berkshire Gas - Capacity Contracts with Kinder Morgan.

  ○ **Broad legislative proposals under discussion.**

- **New Hampshire**

In mid-September, PUC Staff released report of its investigation into potential approaches involving NH's electric distribution companies to mitigate the high and volatile electricity prices that have affected electricity markets in NH and other New England states in recent winters

"we view Access Northeast and Northeast Energy Direct (NED) as two very cost-effective projects that will moderate future winter electricity prices though the numbers clearly indicate that NED will provide the greatest benefits to regional electricity customers. Nonetheless, **Staff's principal recommendation in this report is that if the Commission chooses to participate in a regional procurement of gas capacity (whether pipeline or LNG) for the benefit of electricity consumers it should condition that participation on the procurement being conducted through an open and transparent process that is demonstrably competitive and results in the lowest possible cost to consumer**s"

"Staff has concluded that the Commission may hold that New Hampshire EDCs have authority to enter into gas capacity contracts for the benefit of gas- fired generators, if such a proposal were to be made by a New Hampshire EDC."