

American Nuclear Society Northeastern Section

November 19, 2015

New England States Committee on Electricity

NESCE

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 at
 - www.nescocoe.com
 - Twitter @NESCOEStates

Overview

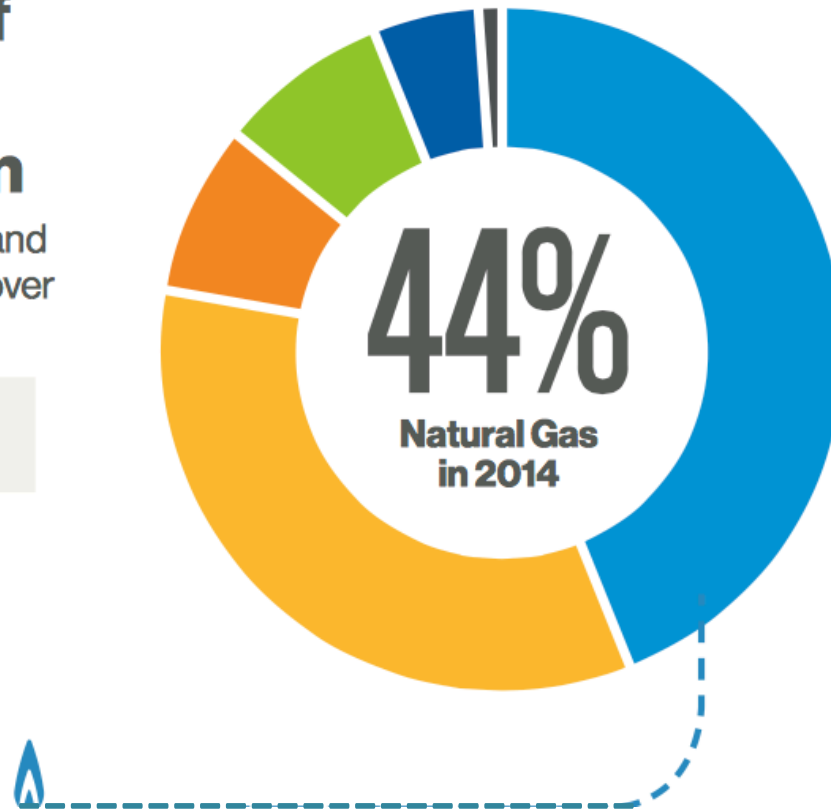
- ✓ **New England today**
- ✓ **New England Governors' April 2015 Statement**
- ✓ **Energy Efficiency and Distributed Generation**
- ✓ **Transmission and Clean Power**
- ✓ **Other State Activities**







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

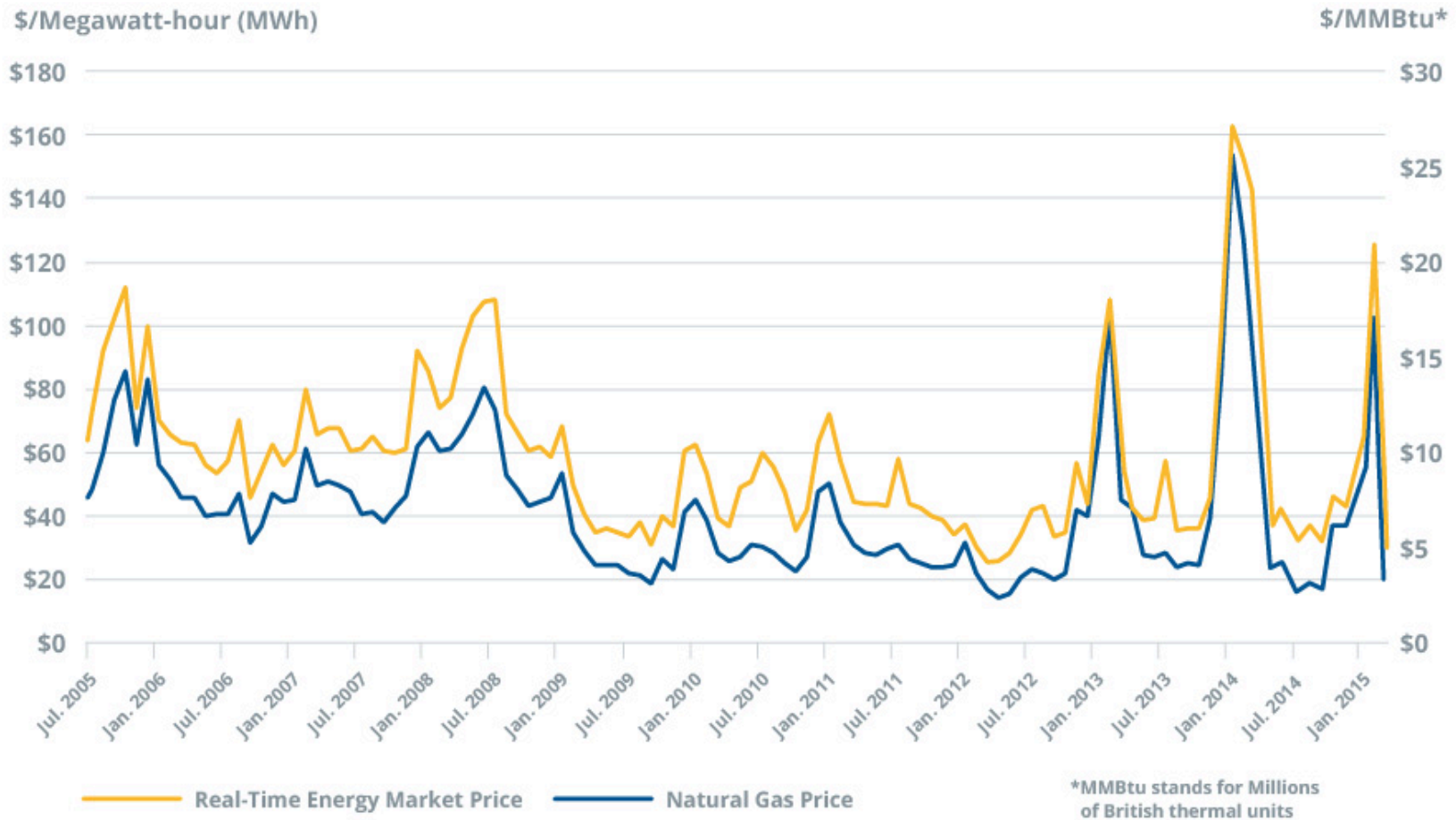


	NET ENERGY	
	2000	2014
 NATURAL GAS	15%	44%
 NUCLEAR	31%	34%
 RENEWABLES	8%	9%
 HYDRO	7%	8%
 COAL	18%	5%
 OIL	22%	1%

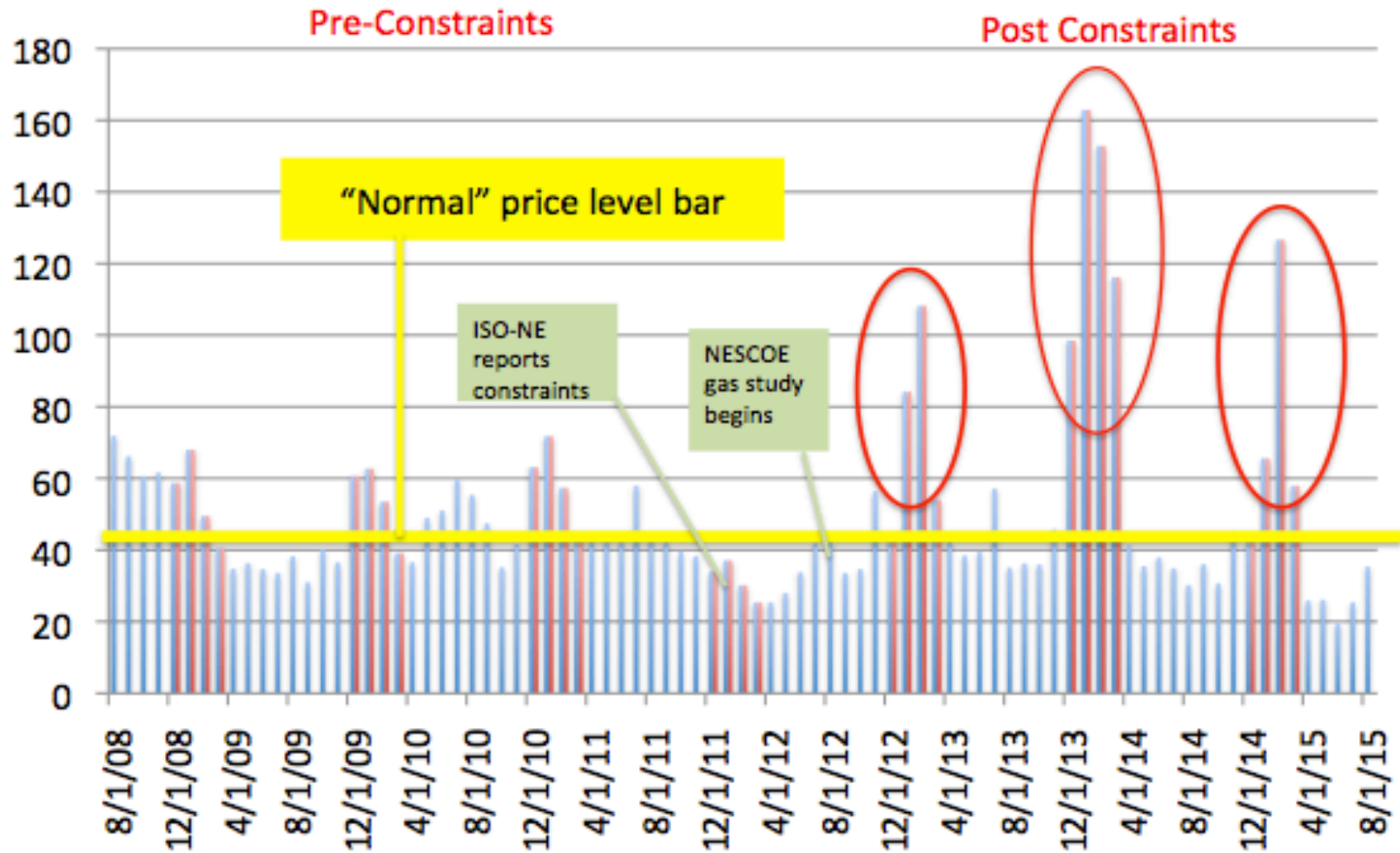
Dramatically reduced coal/oil operations

As New England consumers have learned...

Natural Gas and Wholesale Electricity Prices are Linked

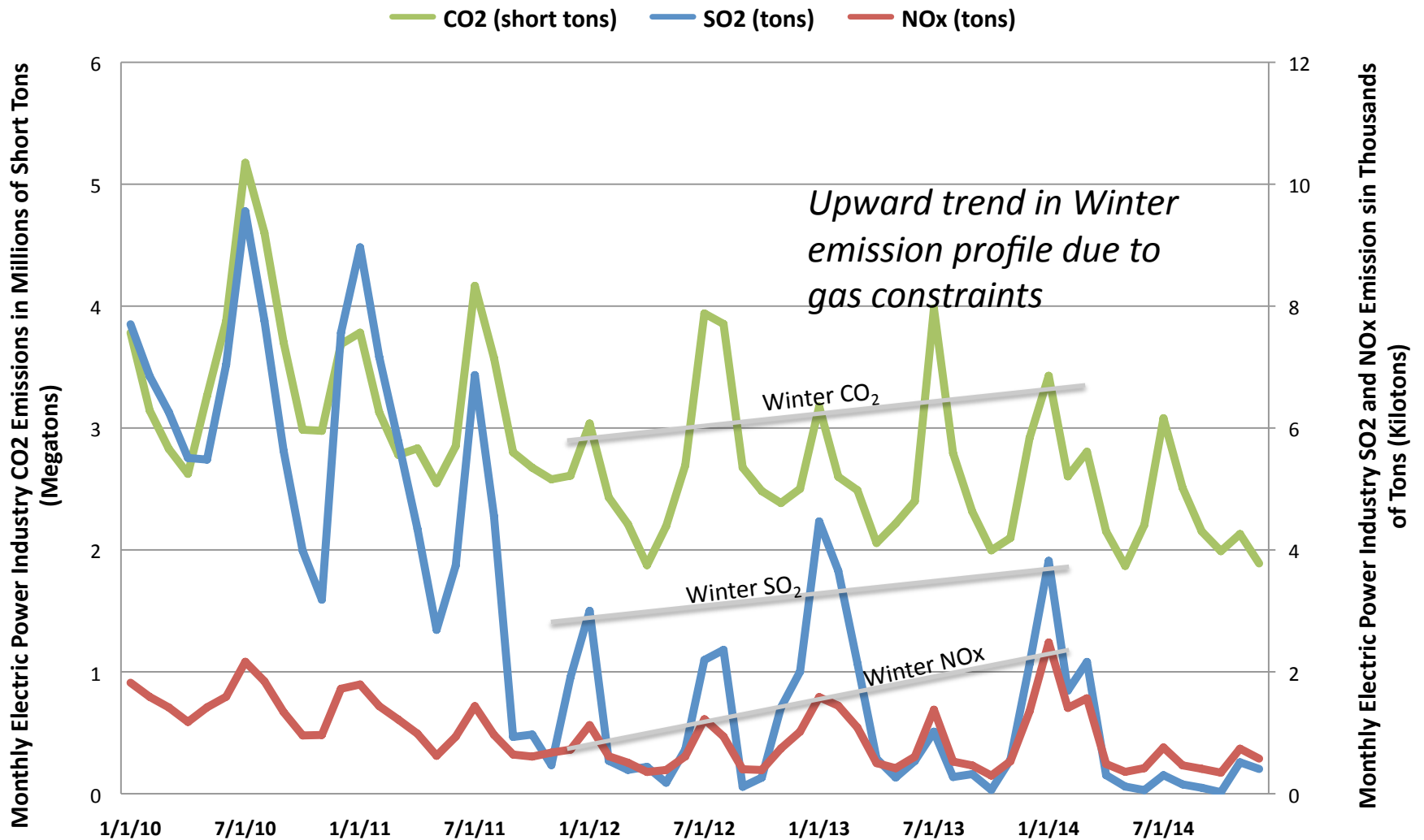


Monthly Average RT LMP's (\$/MWhr)



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

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



Source: U.S. Environmental Protection Agency



New England Governors

April 2015 Energy Forum

“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.”

Energy Efficiency and Distributed Generation

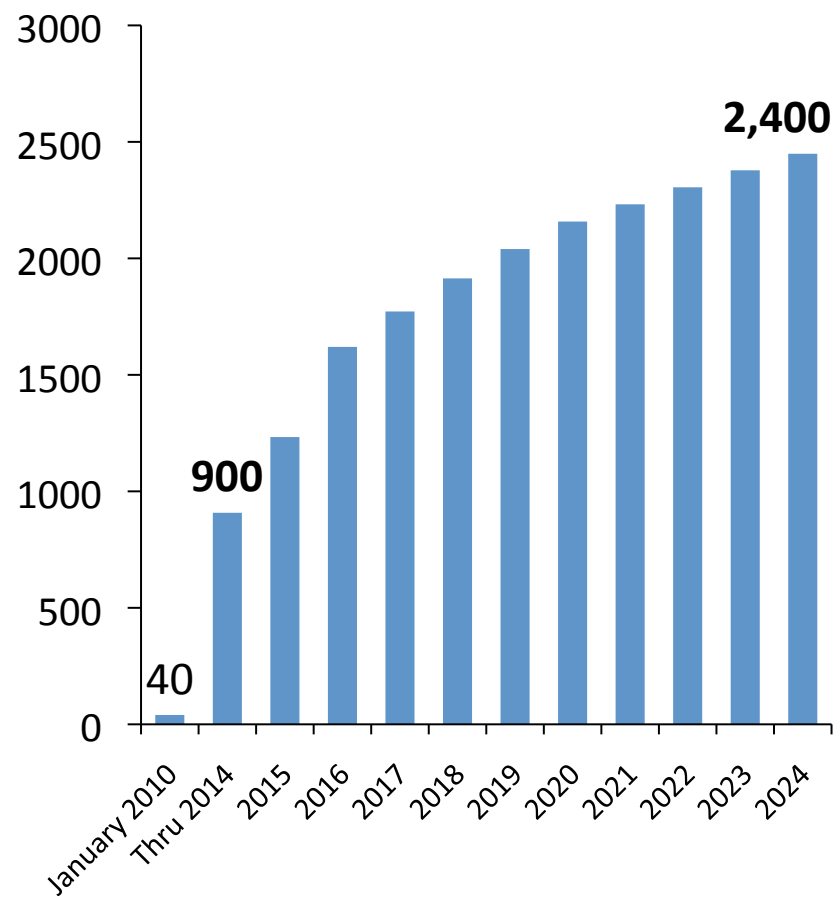
Resources that reduce the need for, and/or affect the timing of, new infrastructure to meet regional needs

Energy Efficiency

- Aggressive investments underway, reflected in regional planning
 - Four N.E. states in top ten nationally; all six in top twenty
- From 2019-2024, ISO-NE estimates that N.E. states will collectively invest over \$6 billion in EE, reducing peak energy use by 1,274 MW over that period
- Load growth “essentially flat” over long-range forecast

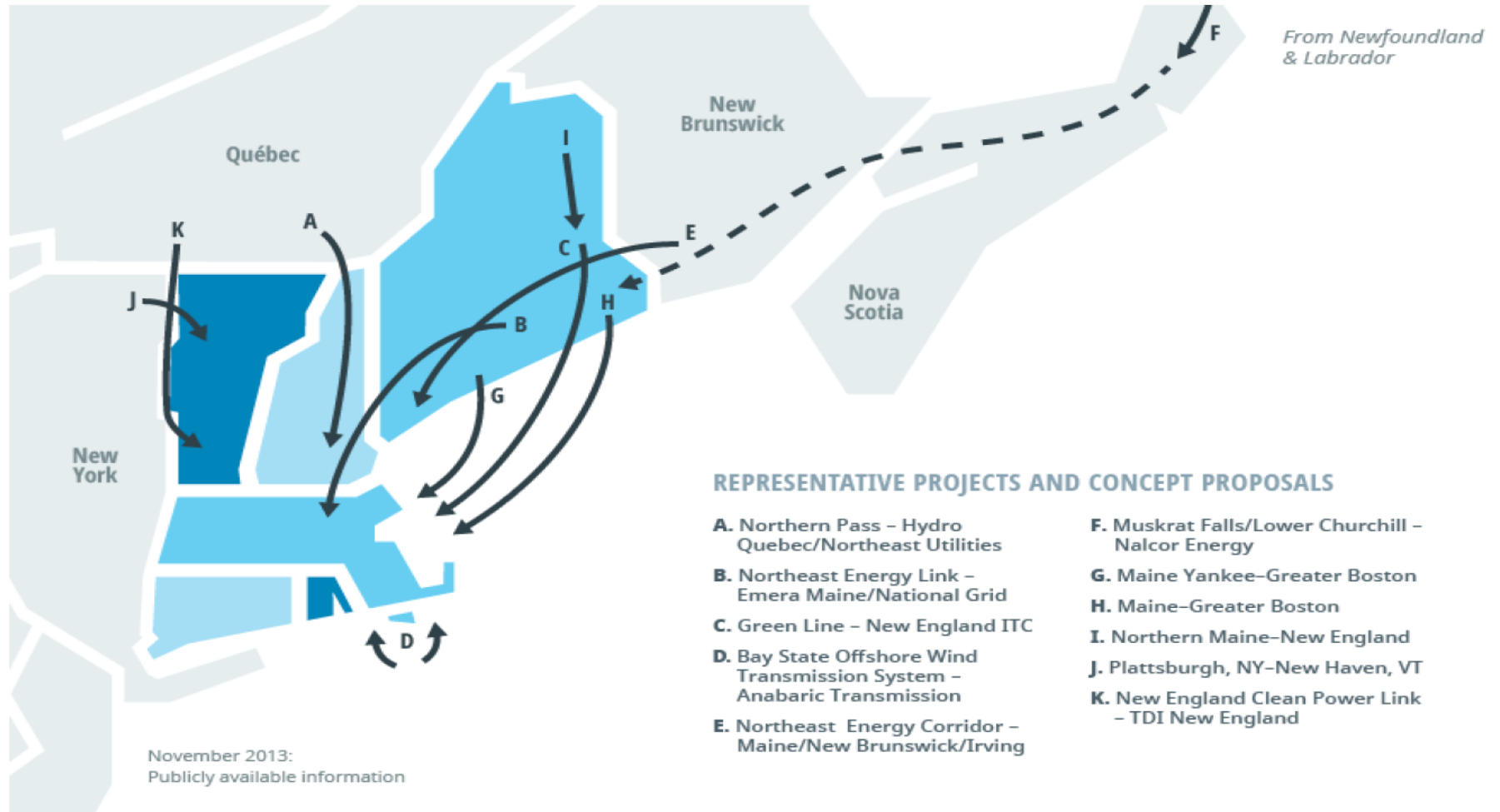
Distributed Generation

- ISO-NE developed, at states' request, solar PV forecast based on state policies with funding sources
- At nameplate capacity, solar to increase to roughly 2,400 MW by 2024
 - 2015 Forecast: PV developing more rapidly than was projected



Source: ISO-NE

“Merchant” Transmission Proposals



Source: ISO-NE

Order 1000: NESCOE Perspective



- NESCOE/states actively participated in FERC rulemaking and in regional stakeholder process on compliance
- ***On competition:*** Supported all qualified project proponents having comparable project development & cost recovery opportunity
- ***On public policy:*** Advocated for a process states would use, with a central role for states. **Ultimately, state officials, not ISO-NE, decide whether and the means by which to satisfy state laws**

Order 1000: Competitive Transmission

This fall, NESCOE and ISO-NE hosted forum to explore emerging practices/experiences elsewhere (NY-ISO, PJM, SPP, Cal-ISO) and hear from merchant developers

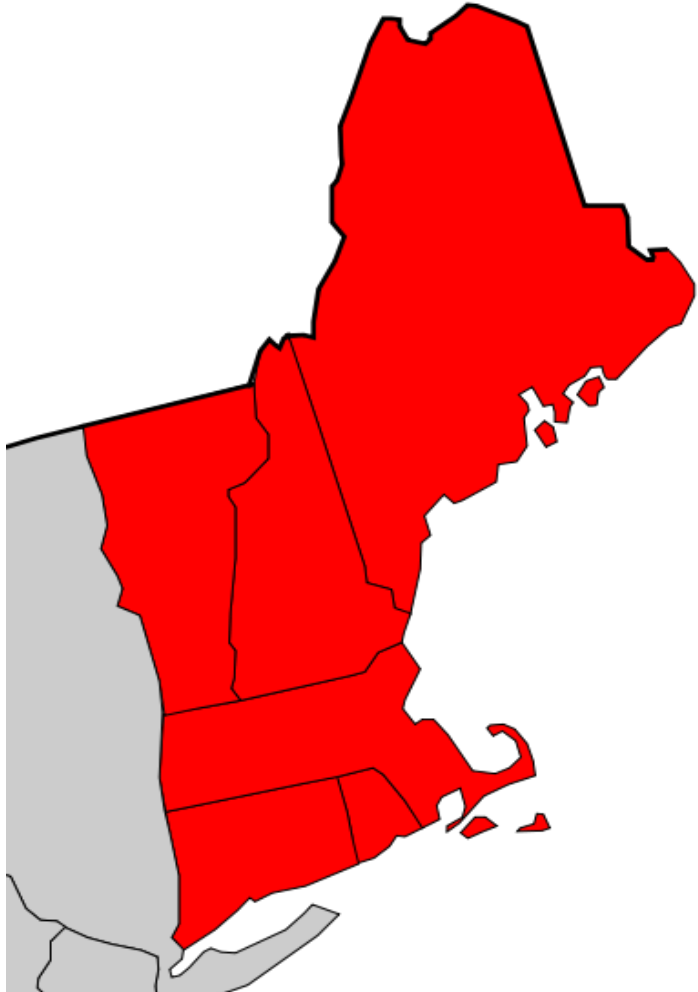
- ISO-NE last region to receive final set orders of compliance and yet to run competitive solicitation

Questions New England needs to work through ~

- What type of solicitation model should be used?
- How should evaluation criteria be structured?
- Is there the right expertise on ISO staff to conduct evaluations?
- How do regions ensure accountability on cost and how should various cost containment features be evaluated?

Consumers need confidence in the process and outcomes

Order 1000: Policy-Driven Projects



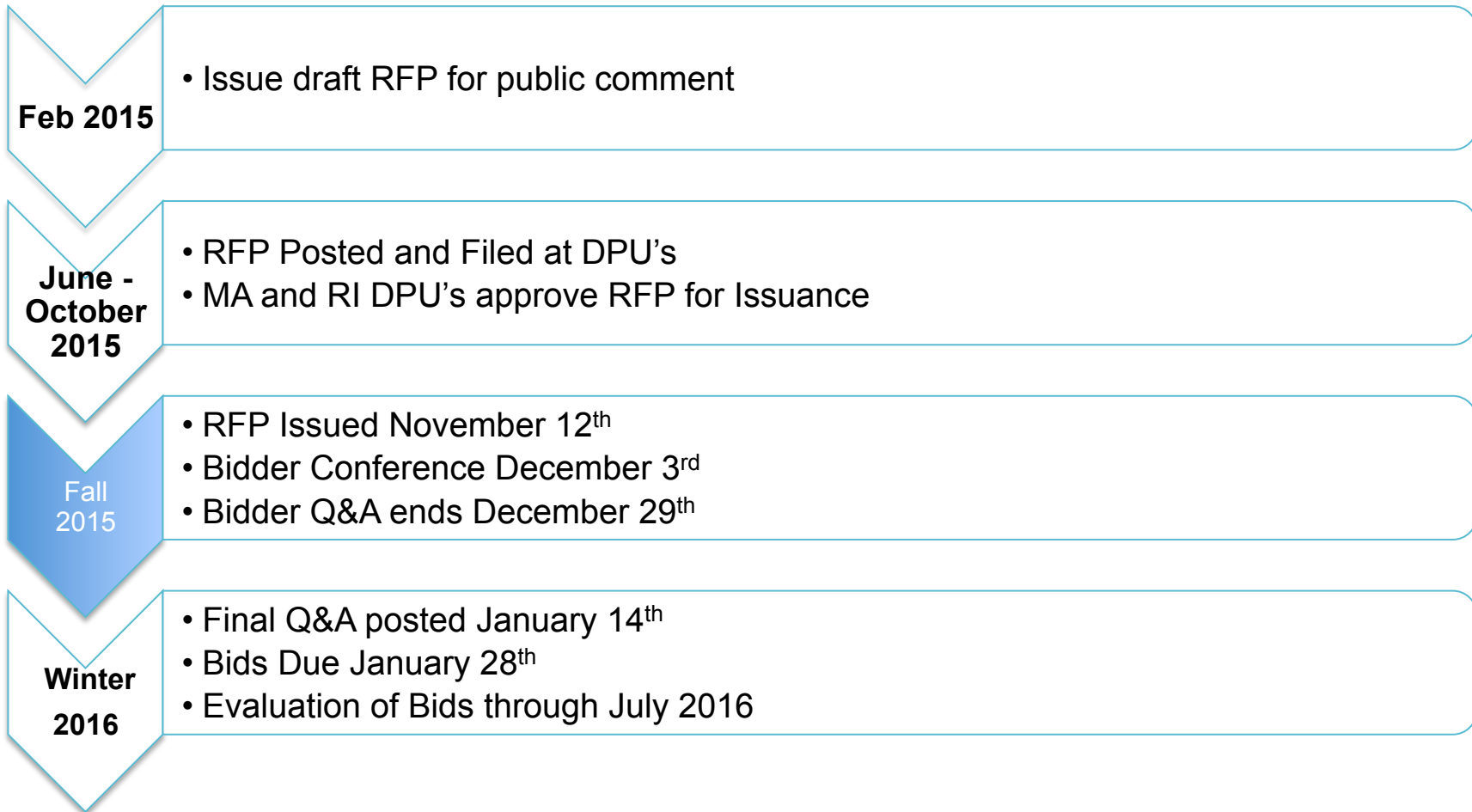
- NESCOE/5 States challenging compliance orders at D.C. Cir.
- FERC unlawfully expanded the rule to require project selection rather than consideration of public policies
 - *Not just academic*: by requiring selection and at the same time denying states a central role in that process, expanded rule substitutes ISO-NE judgment for that of state officials charged with implementing state laws
- Expect clarity on process prior to implementation

Multi-State Clean Energy RFP

Certain state agencies and utilities in CT, MA and RI developed, with NESCOE assistance, a draft joint RFP for clean energy projects based on each state's current authority. www.CleanEnergyRFP.com

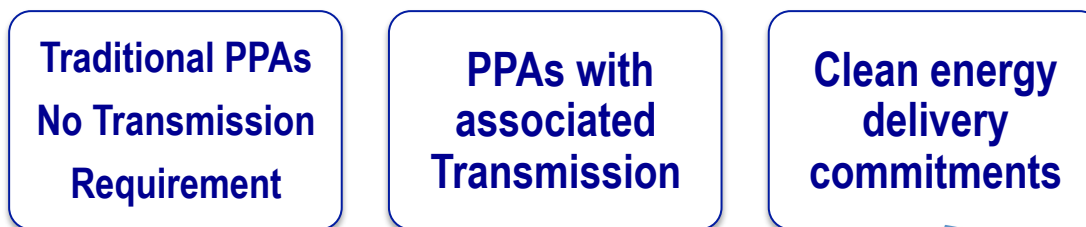
Objective: To explore whether a multi-state procurement might attract larger-scale projects and transmission than single state procurements and achieve individual states' clean energy goals more cost effectively than if each state proceeded on its own.

Multi-State RFP Schedule



Resource Types: Class I renewable power (wind, solar) or large-scale hydro meeting requirements of states' laws. 20 MW minimum threshold. Over 5,000 GWh in total.

Project types



- Clean energy delivery commitment proposals tie transmission-only support payments to the project's performance in fulfilling the commitments for the delivery of clean energy
- Support payments under a FERC filed and accepted transmission tariff/rate schedule paid for by the participating states
 - Tx developer and clean energy supplier ability to negotiate commercial terms.



RFP issuers will jointly and individually evaluate bids

- ✧ No obligation to procure anything at all
- ✧ Each state, EDC use own authority, criteria, judgment to determine whether a proposed project is cost-effective and beneficial for its consumers

Green Tracking

- Verification of clean energy attributes for imported power is critical if Canadian resources wish to be credited with helping states satisfy carbon reduction requirements or environmental objectives
 - No uniform structure currently in place in Eastern Canada to measure, verify, and track emissions characteristics of imports into New England.
- In 2013, N.E. Governors and Eastern Canadian Premiers adopted a resolution (Resolution 37-1) encouraging Canadian provinces to evaluate existing options and opportunities to adopt verification mechanisms of generation sources and environmental attributes that correspond with the existing New England Power Pool (NEPOOL) GIS verification system
 - Recent changes to NEPOOL GIS rules to facilitate tracking **but corresponding changes** likely needed on other side of the New England's borders.

Snapshot: Some Parallel State Actions

- **CT DEEP** implementing new legislative authority in connection with diverse resource solicitations (natural gas, energy efficiency, renewable energy, large-scale hydropower, and energy storage).
 - Comment opportunity on three proceedings to procure resources
- **NH PUC** investigation, with electric utility involvement, into “potential approaches . . . to address cost and price volatility issues currently affecting wholesale markets”
 - Sept. 2015 Staff Report filed with PUC, issued for public comment
- **MA DPU** order October 2015 determining that it has legal authority to review and approve contracts filed by EDCs for pipeline capacity, and established a standard of review for such contract.
 - National Grid, Eversource Gas Capacity/Supply RFPs
 - Separately, broad legislative proposals under discussion
- **VT** in process of siting evaluation of TDI Clean Power Link
- **ME** and **RI** have enabling laws
 - Maine PUC proceeding underway to evaluate gas pipeline
 - National Grid Gas Capacity/Supply RFP



Connecticut

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.”
- ✓ **Participating in Three State Clean Energy RFP**



Rhode Island

2014 Affordable Clean Energy Security Act (ACES)

- ✓ Authorizes Rhode Island state agencies to participate in regional efforts to solicit natural gas pipeline projects as solutions to electric system reliability challenges
- ✓ Includes provisions relative to electric and gas utility procurement of natural gas pipeline capacity
 - Must benefit ratepayers by strengthening energy system reliability and security and potentially mitigate energy price volatility that threatens economic vitality and competitiveness
- ✓ Participating in Three-state Clean Energy RFP
- ✓ Narragansett Electric Company issued Gas RFP



Massachusetts

- ✓ **MA DPU issued order on Oct. 2, 2015 on natural gas pipeline capacity, and established a standard of review for such contracts**
 - EDCs must demonstrate -
 - a fair and reasonable procurement to identify potential for alleviating gas constraints and improving winter electric supply reliability
 - a proposed agreement results in net benefits for customers and compares favorably to the range of alternative options reasonably available
 - Appealed by two entities
 - **MA EDCs issued related RFP**

- ✓ **Issued an order on October 26, 2015 on proposed timetable/method for renewable energy solicitation**
 - **Participating in Three-state Clean Energy RFP**

- ✓ **Broad legislative proposals in connection with clean energy resources**



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. Some excerpts:

“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 consumers**”

“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.”

- ✓ NH PUC Issued Staff Report for Public Comment



Maine

- ✓ **PUC has authority to procure gas capacity under certain conditions**
 - up to 200 million cubic feet per day of natural gas at a cost not to exceed \$75 million annually

- ✓ **In adjudicatory proceeding, PUC considering regional need and what level of capacity purchase would be cost-beneficial for Maine**
 - Testimony on multi-state approach due in February
 - Hearings in early April
 - Decision end of May/early June



Vermont

- ✓ **TDI-NE, a 1,000 Mw transmission line, is seeking siting approval**
 - Series of agreements with four Vermont state agencies, three towns, and an electric utility
 - Hearings held in October
 - PSB order expected by end of 2015

- ✓ **Other petitions are expected**

www.nescoe.com