

# U.S. DEPARTMENT OF ENERGY, QUADRENNIAL ENERGY REVIEW

## **STATEMENT OF DAN DOLAN, PRESIDENT NEW ENGLAND POWER GENERATORS ASSOCIATION**

**APRIL 15, 2016**

Thank you for the opportunity to participate in this important discussion on behalf of the New England Power Generators Association (NEPGA).<sup>1</sup> NEPGA is the trade association representing more than 26,000 MW in New England, or roughly 85% of the region's installed generation capacity from a fuel diverse fleet. NEPGA's mission is to support the competitive wholesale electricity markets in New England. We believe that open markets guided by stable public policies are the best means to provide reliable and competitively-priced electricity for consumers. A sensible, market-based approach furthers economic development, jobs and environmental policy for the region.

More than 15 years ago restructuring of the electricity industry took hold across most of the Northeast. Since the move from rate-base generation to competitive ownership, we've seen the markets drive competitive prices down, substantially reduced air emissions and attract billions of dollars in new, local investments. 2015 saw some of the lowest wholesale electricity prices since these markets began and 2016 has begun much the same way. It is within this context of looking back to the turn of this century, that I offer these comments for today's important discussion.

As highlighted by the Department of Energy's (DOE) work in the first iteration of the Quadrennial Energy Review (QER 1.1), and further underscored in QER 1.2, the electricity industry is in a period of substantial change.<sup>2</sup> This is particularly true in the Northeast competitive wholesale electricity markets with older power plants retiring, the integration of renewables not centrally located to load centers and a more material role for local distributed resources in electricity supply. Innovative and potentially game-changing technologies will be poised to deliver substantial benefits, but this will not happen overnight nor in a predictable fashion. Underpinning this changing industry, performance obligations on power generators are increasing in the competitive marketplace resulting in investments being made in new efficient, flexible resources to meet these obligations as well as to maintain necessary and cost competitive electricity supplies. All of this is also expected to comply with reduced emissions mandates

---

<sup>1</sup> The positions set forth in this filing represent the position of NEPGA as an organization, but not necessarily the views of any particular member with respect to any issue.

<sup>2</sup> As DOE examines the future of the grid, NEPGA joins with calls from the Electric Power Supply Association and our counterparts in New York and PJM to ensure that energy prices appropriately represent the value of all operator actions taken to serve the grid. DOE can encourage FERC to finalize its energy price formation initiative this year. Making sure that generation resources that are supporting reliability at competitive prices continue to have the opportunity to see appropriate prices is critical to well-functioning markets.

through the Environmental Protection Agency's (EPA) Clean Power Plan, the Regional Greenhouse Gas Initiative (RGGI) and state-specific emissions mandates that often go beyond EPA requirements. Simply put, the electricity grid is changing and none of us know quite how it will look in the future, but reliability, competitive pricing and reduced environmental emissions must all be maintained.

I am optimistic about this unknown future in part because of the markets in place today as well as this industry's history of investment, innovation and adaptation to change. In New England alone, more than 4,200 MW of announced power plant retirements have been absorbed into the marketplace with replacement capacity under construction and development – financed through the competitive marketplace. Just this year nearly 1,500 MW of new plants cleared in the ISO New England (ISO-NE) forward capacity market with nearly 7,000 MW of new plants competing to provide new capacity to the region. Even with the potential for 6,000 MW of additional “at risk” plants for retirements (as identified by ISO-NE) there is a tremendous amount of potential investment ready to be deployed in New England when needed, at competitive prices. The new plants that cleared in the most recent forward capacity auction (FCA 10) came in at prices 26% lower than those in FCA 9 and 53% lower than the prices paid to the first new plant that cleared in FCA 7. Even with the tightening capacity situation, wholesale electricity prices have remained competitive with eight of the 10 lowest wholesale electricity price months since 2003 having occurred in 2015 and the beginning of 2016. March 2016, appears to have been the single lowest wholesale electricity price month since the ISO-NE markets took their current form in 2003.

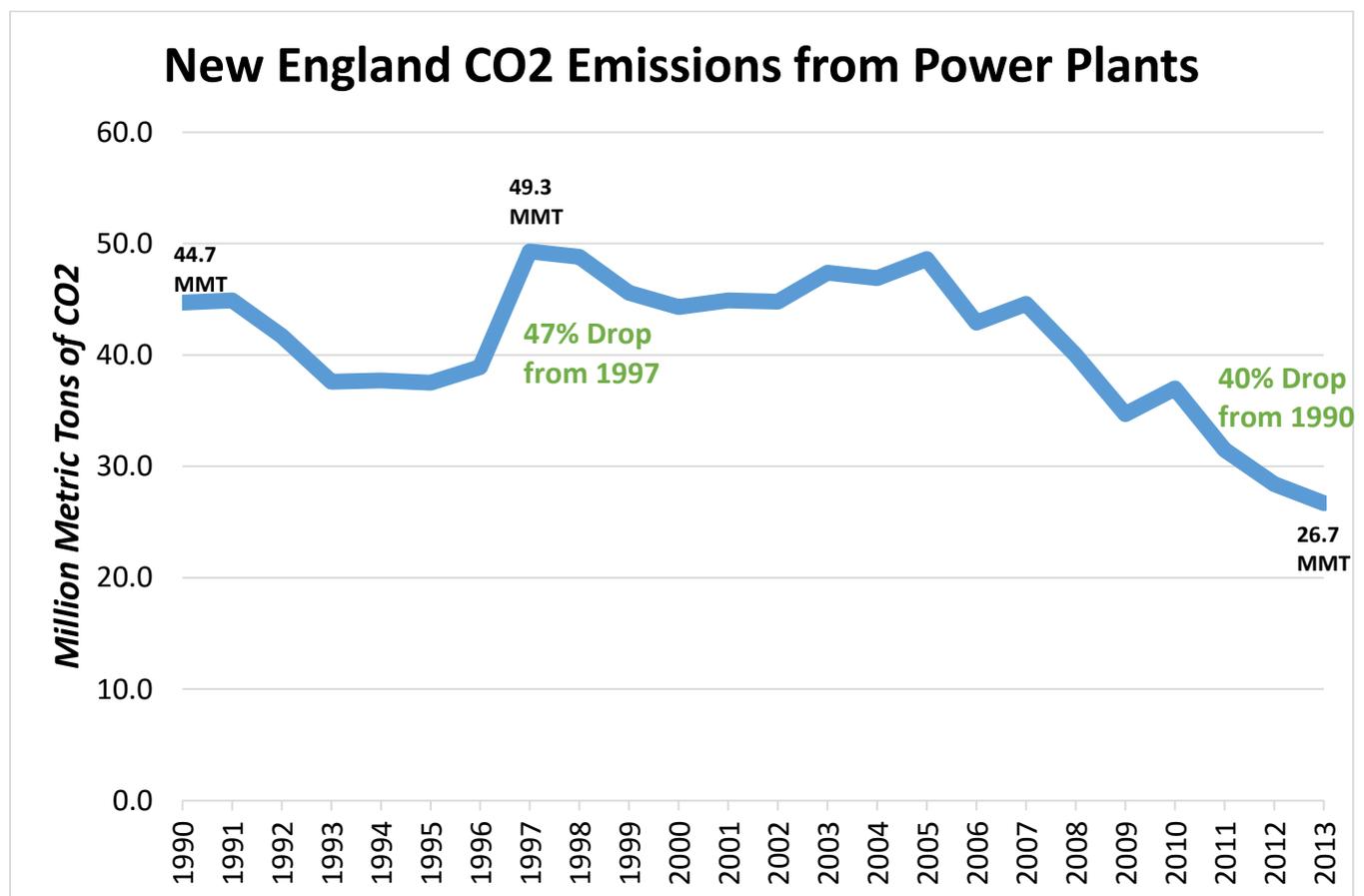
This is not unique to New England as retirements and new investments are occurring in PJM with their capacity market attracting more than 15,000 MW of new generation that has cleared between 2011 and 2014 and in New York with over 11,000 MW of new generation development since 2000. The investments being made now will help position the Northeast to sustain reliability and competitive pricing for decades to come.

These new developments are predicated on competitive markets providing the opportunity – but by no means the guarantee – for market participants to not only recover their costs but also earn a return. Yet these investments face the very real threat of out-of-market intervention, picking winners and losers in the marketplace. These potential actions in a number of states would undermine the competitive prices being seen today and billions of dollars in new local investments. There are examples across the region, whether it is proposals to bail-out Ohio utility-affiliate generation, New England states pushing to contract with provincially-owned Canadian hydro, or New York State public policies that would unjustly favor particular resources over others.

More than 15 years ago the vast majority of Northeastern states restructured the electricity industry and developed the competitive markets overseen by the Federal Energy Regulatory Commission (FERC). These markets have provided substantial

benefits for consumers and are key to meeting individual state policy priorities. It is also important to recognize that this move to markets invited competitive generators to put their capital at work and at risk investing more than \$100 billion across New England, New York and the Mid-Atlantic. States cannot toggle between markets and cost-based regulation, nor shield some supplies from market risks, undermining the economics for all other market participants. Doing so means that future needs cannot be made on a market basis, but instead will return investment, return and operational risks to consumers. At the very moment the hoped for benefits of a restructured competitive market are being realized, the market should not be undercut.

State policy objectives can and should be met through the competitive market, whether for renewables development or emissions reductions. RGGI is an example where a multi-state, broad-based trading platform provides a price on carbon emissions that are then worked into generation resource offers into the electricity markets. The two markets are able to fit collaboratively. In part due to RGGI, as well as changes in fuel use and efficiency improvements at plants, dramatic emissions reductions have been seen. Again using New England as an example, carbon dioxide emissions have been reduced 40% since the 1990 baseline:



Source: U.S. Energy Information Administration, [www.eia.gov/environment/emissions/state](http://www.eia.gov/environment/emissions/state), October 26, 2015

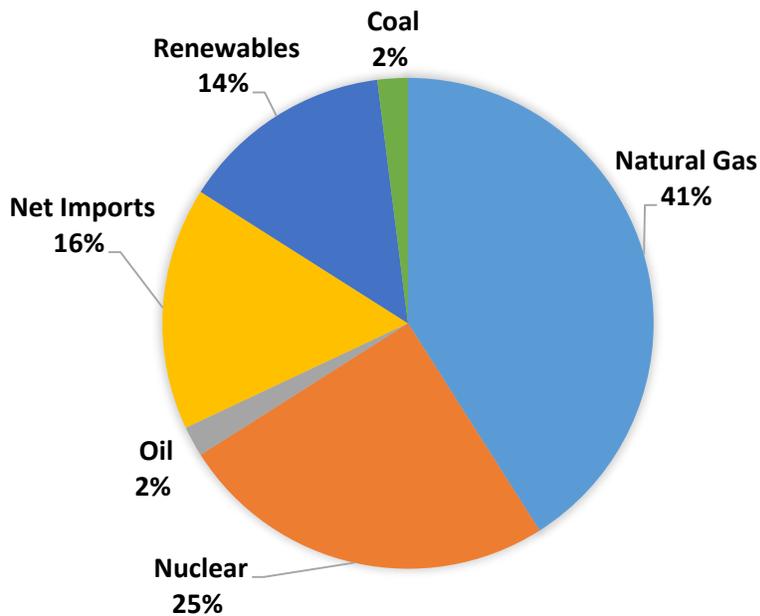
New York generators have powered a very similar story with a 51% drop in emissions since 1990. PJM has also seen dramatic reductions in emissions.

We know more may be called for. The competitive power generation industry is committed to continuing to drive improvements and lead all other sectors of the economy in emissions reductions. It is important to recognize, however, that as states seek to meet economy-wide emissions mandates focusing on those sectors that have not kept pace is critical. For example, the transportation sector has represented the largest source of carbon emissions since at least 1990 in the region. Yet because of the reductions in the electricity sector and because its emissions have actually increased since 1990, transportation now has twice the emissions of any other sector of the economy. If further sizable emissions reductions are necessary, policymakers should focus on those sectors that are not only the largest contributors but also where reductions have not already been realized.

One of the major factors driving these emissions reductions in the electricity industry is the proliferation of natural gas generation. Let's not forget that it was competitive generators who have been at the forefront of pioneering combined-cycle natural gas plants. But as more natural gas is used to generate electricity, it has also raised questions from some about a potential "overdependence" on the fuel. Some have said that New England is the canary in the coal mine on this issue.

It is worth unpacking and exploring the fuel mix of what is actually supplying the electricity supplies for consumers. In 2015, electricity demand in New England was met from a diverse fuel mix of resources:

## 2015 NEW ENGLAND ELECTRICITY SOURCES

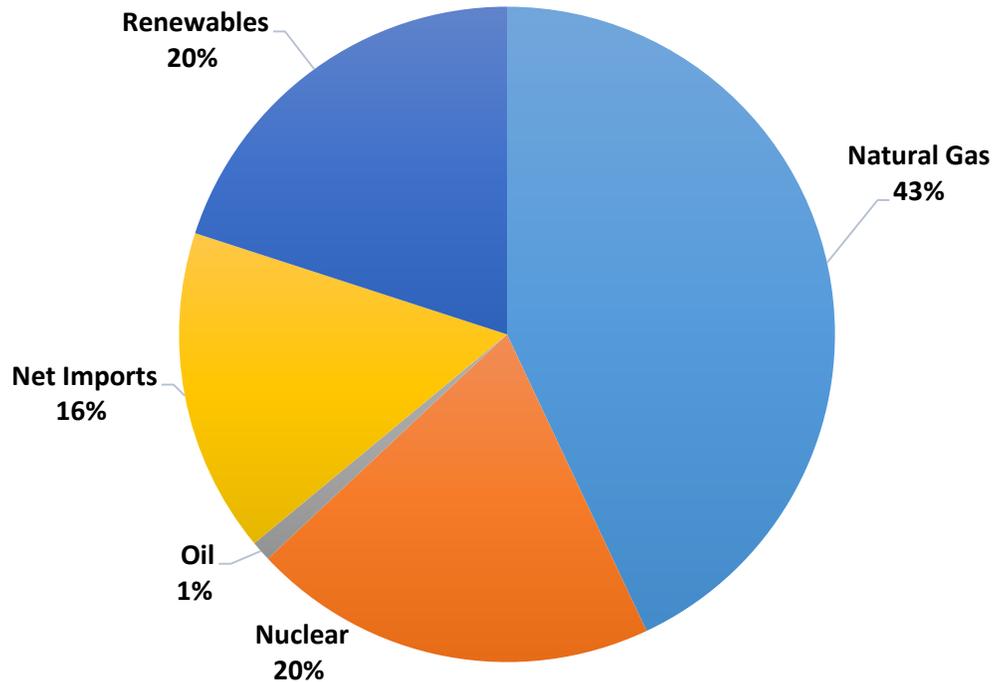


Source: ISO New England Resource Mix - <http://www.iso-ne.com/about/what-we-do/key-stats/resource-mix>

Beyond 2020, the fuel mix in New England will look quite different. Coal will likely be gone in New England, and nuclear will be diminished, but still play a sizable role, with the retirement of the Pilgrim Nuclear Station and Vermont Yankee. Renewables such as wind and solar will continue to grow and natural gas will increase. Looking out a few years, growing state Renewable Portfolio Standard (RPS) requirements, the continued presence of nuclear and imports roughly equal to today, I expect the region will maintain substantial fuel diversity to meet consumer demand. Even with natural gas generation capacity replacing some retiring resource, actual electricity production is still expected to come from a number of different resources – it is hard to see natural gas comprising more than 50% of electricity generation in the region.

Below is a conservative projection of what this future fuel mix could be:

## ***POTENTIAL SUPPLY SOURCES BEYOND 2020***



Across the Northeast there have been many proposals to amplify fuel delivery infrastructure, with a particular emphasis on natural gas. In response, there are many projects moving forward. In New England, enough new pipelines have received firm contracting to increase capacity by 25% into the region. For these projects, like for others in New York or the Mid-Atlantic, siting is a growing challenge, but the marketplace is providing financing to drive infrastructure forward. LNG imports also continue to play an important role in New England to meet peak demand with global supplies growing exponentially. This has particularly been the case the last couple of winters with inputs from LNG terminals providing important east-to-west flows as the west-to-east pipelines reach their endpoints in the region.

As I take a step back and look at electricity costs, investment/reliability and environmental performance I see a strong competitive marketplace that provides tremendous value and benefits for consumers. I believe this becomes even more true with the uncertainty of the future market. There clearly appears to be substantial growth in renewables and distributed technologies in years to come; as well as things we don't foresee, just as many of us didn't foresee the shale revolution or the drop off in solar panel costs. What positions the Northeast so well is the "open architecture" of a competitive market structure as the best mechanism to allow for new innovation and investment to flourish.

The inherent flexibility of markets to adapt and place risks on investors rather than consumers is what makes it so attractive in this changing environment. We've adapted to substantial environmental, fuel and market changes since the dawn of restructuring and we will continue to adjust. It is also with that in mind that the competitive generation industry has so strenuously advocated against picking winners and losers and thereby foreclosing the opportunities for unexpected innovations to occur. We embrace the increased competition that new technologies and this changing electricity grid brings and simply ask for an opportunity to compete on a level playing field.

Improvements must undoubtedly continue to be made to best position the electricity markets to sustain necessary existing plants and integrate new resources, but the competitive structures in the Northeast are sound and should be preserved.