

## **THE NEW ENGLAND ENERGY INDUSTRY: A POINT OF INFLECTION**

The New England energy market stands at an important inflection point. Several local generating plants have announced retirements, new investments are being proposed, and regional development of renewable and low-carbon energy continues. Abundant supplies of domestic natural gas now exist with numerous pending proposals to bring increased fuel supplies into New England. While these fundamental infrastructure changes are occurring, important enhancements to the regional electricity market are also being implemented. The competitive market is playing a significant role with companies proposing to build new generating plants, merchant electric transmission and natural gas pipelines into the region. Due in part to tightened energy supplies during this period of new infrastructure development, several utilities have announced increases in standard offer rates for their customers for the coming winter period.

The cost increases, the increased role of natural gas resources and other changes in electricity and fuel markets have policymakers rightly focused on ensuring sufficient reliability and regional economic stability. Continued market-based infrastructure development and competitive pricing offers the path to meet the current challenges for New England consumers. Maintaining a robust, competitive regional electricity marketplace is vital to the success of these critical efforts. This paper provides context for the important industry changes and resulting costs while highlighting a path forward to preserving reliability and competitive price outcomes for consumers.

### **Winter Energy Costs and Reliability**

The transition in the New England energy market, the impacts of a historic 2014 winter across the country and basic supply/demand dynamics, have resulted in recent announcements of short-term winter price increases. On the supply side, power plant retirements in the region (particularly non-gas plants) have tightened generating capacity. At the same time, there are limits on the natural gas pipeline capacity into New England to deliver nearby natural gas. Short-term markets responded to the 2014 winter

experience, the anticipation of another cold winter and increased natural gas use by power plants as well as for home heating through short-run higher standard offer rates for consumers. These increases are largely seasonal with prices in most of the year continuing to be at historic low norms without the price volatility of the winter months.

During the challenging 2014 winter, the New England grid, its generation fleet and fuel infrastructure demonstrated diversity and resiliency. Even on January 7, a day that stands out in the challenging operating environment, this resiliency prevailed. On this day there was a high demand for both power and natural gas, and the Texas Eastern pipeline – a major artery into the region – had an emergency outage. At times on January 7 a number of plants were not dispatched by the market operator, ISO New England, and imported power was significantly lower than anticipated. Within these challenging conditions, New England had surplus electricity supplies over the amount needed for its own reliability, with the region supplying 500 MW of emergency power to the Mid-Atlantic, managed by PJM Interconnection – the largest electricity market in the world.

This winter reliability came at a cost for the region. ISO New England calculates the 2014 winter's energy cost was \$3 Billion, up from the previous winter's \$1 Billion. Other regions such as PJM also paid more. Even with shale gas supply located within its region, PJM prices more than doubled during the first six months of 2014 as compared to the previous year, up from \$15.6 Billion to \$31.1 Billion, with peak-day electricity prices more than three times the highest price New England paid at any point. While comparisons between regions may not paint the whole picture, it is important to note that New England was not alone in experiencing higher costs during a difficult winter; other regions face the same energy usage transition as New England.

Like 2014's winter energy costs, recently announced winter energy prices are not a year-round issue. And they are not expected to be an issue every winter. A milder winter or introduction of greater than anticipated gas supply from Liquefied Natural Gas (LNG) terminals on the eastern part of the New England system could lead to lower spot electricity prices this year, informing electric supply prices next year. Further, major reforms are being implemented to drive new investment in power plants, strengthen operational performance of existing plants and firm up fuel supplies for all power plants.

For several years New England has benefitted from historically low wholesale electricity prices. Tightening power generation and fuel supplies have led to higher energy prices during the winter, which in turn is prompting a market response. When supply and demand create high prices, these prices send market signals. Already numerous new power plants, merchant transmission and natural gas pipelines are being proposed. The proposals moving forward cannot be completed for this winter as building this type of infrastructure takes years. Once these proposals become finished projects, the supply side of the economic equation will increase and prices will likely return to the levels enjoyed in the region in previous winters and throughout the rest of the year.

### **The Market Response**

In response to economic and reliability signals, the competitive market is responding with proposals representing tens of billions of dollars of investment in New England. Proposals to build new power generation, develop merchant transmission lines and expand natural gas infrastructure are advancing throughout the region.

### ***Electric Project Announcements***

Since moving to restructured electric markets in the late 1990s, over 13,000 MW of new generation has been built in the region. The market is continuing to respond to supply needs with more than 50 generation projects totaling 8,300 MW currently with applications pending to connect to the New England grid. This amount is equal to a quarter of the total capacity needed in the region to keep the lights on and represents a diversity of fuel sources including biomass, hydro, natural gas, gas/oil, solar and wind. The next forward capacity auction to line up resources to meet New England's capacity supply needs for 2018 will be held in February 2015. Over 10,000 MW of new capacity has expressed an interest in participating in the auction. Similar to projects in the interconnection queue, not all projects will be built but this expression of interest is **three** times higher than for any of the prior forward capacity auctions over the last decade representing a competitive market poised for a strong response to the current supply and demand conditions.

Developers of merchant transmission lines (or "elective" transmission lines) are also reacting to market signals to bring additional supply resources into New England. There

are currently four major transmission proposals pending in New England including the 340-mile proposed Green Line, the 187-mile proposed Northern Pass, the 230-mile proposed Northeast Energy Link and the 150-mile proposed New England Clean Power Link. These merchant lines propose to bring 1,000 to 1,200 MW of power each, with target in-service dates ranging from late 2016 to 2019.

### ***Proposed Natural Gas Infrastructure***

Several natural gas pipelines have been proposed in response to market signals:

- Spectra Energy Corp's proposed 342,000 dekatherm<sup>1</sup> per day ***Algonquin Incremental Market*** gas pipeline project targeted for service in November 2016 and the ***Atlantic Bridge Project*** which would expand its Algonquin Gas Transmission and Maritimes and Northeast Pipeline systems by 100,000 to 600,000 dekatherms targeted for service in November 2017. In September 2014, Spectra and Northeast Utilities announced a joint venture to potentially expand these lines by an additional 1 billion cubic feet/day, which can produce approximately 135,000 MWh/day.
- Tennessee Gas Pipeline Company has announced its ***Northeast Energy Direct*** proposal which combines its previously announced Northeast Expansion Project with another pipeline from the Marcellus Shale for up to 2.2 billion cubic feet targeted for service in November 2018 (500,000 dekatherms per day contracted in New England).
- Portland Natural Gas Transmission System has announced its ***Continent to Coast Expansion*** Project with an anticipated range of 300,000 dekatherms per day targeted for service in November 2016.

These pipeline expansions have publicly stated they are not dependent upon state intervention such as the New England State Committee on Electricity (NESCOE) proposal to fund new gas pipeline through an electric tariff on all New England consumers. For example, Spectra and Northeast Utilities stated in their announcement of a joint venture that they are not waiting for NESCOE funding, with the Spectra projects moving independently of any NESCOE proposal. While these projects are being developed with a focus on meeting home heating demand, the resultant increase in natural gas supplies from these projects will have a beneficial impact on the vast majority of days on the overall regional gas supply and basis differential with gas-rich regions.

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<sup>1</sup> One dekatherm equals 1,000 cubic feet of gas, which contains 1 MMBtu of energy. Modern natural gas-fired combined cycle generators need approximately 7 dekatherms per MWh.

Similar to pending generation projects, not all proposed transmission lines or natural gas pipelines are likely to be built, but market signals are driving interest in investing in New England. It is important to note, however, that all energy infrastructure, whether generation, natural gas pipeline or merchant electric transmission, should be developed on a level playing-field, free of special state contracts or other subsidies to compete in the marketplace on their own merits.

### **Electricity Market Changes**

The New England electricity markets continue to evolve in response to changes in the generation mix, different operational needs and price signals sending a need for new investment. In May 2014, the Federal Energy Regulatory Commission approved a new regional capacity market design developed by ISO New England and stakeholders to address fuel supplies for electric power generators. These changes seek to increase payments and penalties for power generators to “firm up” fuel supplies, thus driving continued reliable electric service. This fundamental change to the Forward Capacity Market, sometimes referred to as “Pay for Performance” links generator payment to performance during the most tight and stressed periods for electricity supplies. Other major market design changes, including improvements to the treatment of operating reserves and the implementation of a downward sloping demand curve in the capacity market, go into effect in time for the forward capacity auction in February 2015.

### **State Intervention is Not Answer**

The New England energy market is at an important inflection point. At every level, market participants are responding. Developers are making significant proposals to build new infrastructure. Electricity market changes are being implemented to improve performance and receive appropriate compensation for doing so. Existing power generators are meeting the regional system demands and assisting other regions as necessary. To interrupt these significant responses to the market’s economic and reliability signals with state intervention and costly subsidies is neither necessary, nor wise.

Government must resist the temptation to step in to pick winners and losers, repeating the policy mistakes of the 1970s and 1980s that led to massive stranded costs paid by consumers. Market participants are already responding, even before major market

redesigns and improvements have been implemented. The region must now focus on ensuring market-based infrastructure projects can be sited and appropriately developed where they are needed. To that end, state and federal policymakers can play a critical role to help ensure necessary infrastructure projects receive the appropriate reviews and approvals in a timely manner. Infrastructure development must of course be done in close consultation and understanding with host communities, but the process must be allowed to move forward appropriately. Such investments are critical to preserving continued reliability and long-term competitive price outcomes for consumers.

### **Consumer Options for this Winter**

The market price response to the current electricity supply/demand conditions in the region is difficult for many consumers. During this transition period and the upcoming winter, options exist for controlling energy costs. Consumer advocates and Governor's offices across New England can help to educate consumers of options such as the competitive retail energy supply market. Through this competitive market consumers have access to multiple retail suppliers in addition to utility standard offer service. Consumers should make informed decisions, carefully considering all options and appropriate terms and conditions. Customers remaining on standard offer supply may also inquire if their utility offers bill smoothing programs to help address winter volatility and prices as well as federal assistance for low income consumers through the federally-funded LIHEAP program. Importantly, all New England states have policies in place to protect consumers from utility disconnection during the winter months with several states having disconnection moratoriums.

New England does face a challenging situation as the region transitions and the market develops new energy infrastructure. The costs associated with such developments can be challenging for consumers. However, these are necessary economic investments to support regional reliability. The infrastructure developments being proposed now will provide the basis to drive New England's economy for decades to come.