

Energy Insights -- December 2013

Briefing on Energy Issues and Trends

New England Governors Commit to Joint Energy Infrastructure Agenda

In an agreement signed on December 5, 2013, the New England governors made a commitment to work together to bring affordable, cleaner, and more reliable energy to homes and businesses in New England. Its mission is to accelerate regional cooperation to advance energy infrastructure that diversifies the region's energy supply while ensuring that the benefits and costs of infrastructure investments are shared appropriately among the states.

The agreement states that securing the future of the New England economy and environment requires strategic investments in the region's energy resources and infrastructure. The statement calls attention to the fact that the region's electric and natural gas systems have become "increasing interdependent", creating a need for cooperative investments in energy efficiency, new and existing renewable generation, natural gas pipelines and electric transmission in order to maximize ratepayer savings and system integrity.

The governors directed leaders of state energy and environmental agencies to work together in coordination with ISO-New England and through the New England States Committee on Electricity (NESCOE) to advance regional energy infrastructure.

The New England governors believe through joint planning efforts "we can expand economic development, promote job growth, improve the competitiveness of our industries, enhance system reliability, and protect and increase the quality of life of our citizens".

Source: "New England Governors' Sign Energy Statement Committing Region to Cooperation on Infrastructure", Governor Dannel P. Malloy, Governor of Connecticut

ISO New England Forecasts Adequate Capacity to Meet Winter Electricity Demand

ISO New England, the operator of the region's bulk electric power system, predicts the region will have adequate resources to meet consumer demand for electricity during the 2013/2014 winter season. However, New England's reliance on natural gas electricity generating plants to produce more

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Did You Know:

An iPhone demands as much electricity over a year as a refrigerator

Source: Energybiz (an Energy Central publication)

Seventy percent of the U.S. electricity grid's transmission lines and transformers are over 25 years old, and the average age of generating plants is over 30 years old.

Source: U.S. Department

than half of the region's electricity, combined with the "just-in-time" fuel delivery system that these facilities use, can challenge the reliable operation of the grid. This risk to reliability is especially acute during cold weather when demand for natural gas for heating and electricity generation is concurrently high.

The ISO recently implemented a Winter Reliability Program from December through February. Through a competitive bidding process, the program successfully procured nearly 2 million megawatt-hours of incremental electricity from oil-fired generators and dual-fuel generators (power plants that can run on either oil or natural gas) and demand-response resources that can reduce consumer and business consumption.

At normal winter temperatures, ISO projects the winter peak demand to be about 21,300 megawatts (MW). If extreme winter weather occurs, demand could reach 21,935 MW. The all-time winter peak of 22,818 was set on January 15, 2004, during a cold snap.

Source: "ISO New England Forecasts Adequate Capacity to Meet Consumer Demand for Electricity this Winter", ISO New England, December 4, 2013, www.iso-ne.com

Natural Gas Pipeline Constraints Increase Electricity Prices

Electric generation rates throughout New England are increasing in 2014 due to constraints on natural gas pipelines. In the past decade, natural gas has become the fuel of choice for electricity generation due to its low cost and relatively cleaner emissions. In 2000, natural gas was used to generate 15% of the region's electricity, while today, it accounts for more than 50%.

As the region's reliance on natural gas increased, investment in pipelines that feed New England has not kept pace. According to ISO New England, while low-cost natural gas from the Marcellus shale has been a boon to the region, resulting in billions of dollars of lower cost electricity, the transportation of this fuel through pipelines from the west is frequently constrained.

Most of the capacity for natural gas delivered into the region on extremely cold days is used by local distribution companies which provide it to heat homes and businesses. These companies purchase long-term contracts for delivery, and on cold days, those contracts take up most of the available space on the five pipelines into the region.

On the other hand, operators of power plants pay a very high price on the spot market, or simply pull their plants off the grid until the prices stabilize. The result has been an erratic market for electricity prices in New England. The higher prices will affect just the generation portion of consumer bills. In Connecticut, the increase for an average residential customer is expected to be \$9 to \$12 per month next year. In other

states, the increase could be higher.

The region's major gas pipelines are adding capacity, but some think not quickly enough. The New England Governors announced an energy planning agreement (described above) to help induce the pipeline companies to build out their capacity by widening pipes, increasing their pressure or adding completely new infrastructure.

Sources: Dowling, Brian (December 17, 2013). Electricity Prices to Jump throughout Region Due to Natural Gas Concerns. *Hartford Courant*. Tight Pipelines Hinder Natural Gas Chance (December 11, 2013). *The New Hampshire Union Leader*.

New England States Ranked Among the Most Energy Efficient

For the third year in a row, Massachusetts retained the top spot in the *State Energy Efficiency Scorecard* annual rankings compiled by the American Council for an Energy-Efficient Economy (ACEEE). Massachusetts' continued commitment to energy efficiency under the Green Communities Act of 2008 has spurred greater investments in energy efficiency programs by requiring utilities to save a large and growing percentage of energy every year through efficiency measures.

Joining Massachusetts in the top ten most energy efficient states are Connecticut, Rhode Island and Vermont. According to ACEEE, these states continue to comprise the group of states that have made broad, long-term commitments to developing energy efficiency as a state resource.

Maine was one of five "most improved" states that made large strides in a variety of areas. Maine's rise in the ranks to 16th place is due to legislation passed in June 2013 that returned full funding to Efficiency Maine for implementation of energy efficiency programs after several years in which programs had been under-funded.

Nationally, annual budgets for utility-sector natural gas efficiency programs totaled \$1.3 billion in 2012, an 18% increase over the previous year. Electric program budgets rose slightly to almost \$6 billion in 2012. Savings from electric efficiency programs in 2011 totaled approximately 23 million MWh, a 20% increase over the previous year. Gas savings were reported for the first time at 232 million therms.

The *2013 State Energy Efficiency Scorecard* assesses policies and programs that improve energy efficiency in homes, businesses, industries and transportation systems. The state scorecard examines the six policy areas in which states typically pursue energy efficiency: utility and "public benefits" programs and policies; transportation policies; building energy codes and compliance; combined heat and power policies; appliance and equipment standards; and state government-led initiatives around energy efficiency.

Source: *2013 State Energy Efficiency Scorecard*", American Council for an Energy-Efficient Economy, www.aceee.org/state-policy/scorecard

Massachusetts Ranks Fourth in Solar Installations

Solar Energy Industries Association has ranked Massachusetts fourth in the nation in its latest quarterly ranking of installed solar capacity. The 44 megawatts worth of solar panels installed in Massachusetts during the third quarter of 2013 enabled the state to outrank sunnier states like Hawaii and Nevada. Only California, Arizona and North Carolina were ranked higher.

Massachusetts now has 361 megawatts of installed solar capacity - enough solar energy to power nearly 60,000 homes. The trade group estimates that more than 8,000 are employed in the solar business in Massachusetts in jobs ranging from installers to component manufacturers to engineers.

Several factors are contributing to the growth of solar power in Massachusetts. First and foremost, state law requires that electric utilities buy an increasing amount of renewable energy as part of their electricity supplies. And second, the Patrick administration has offered rebates to homeowners and business that install solar projects.

Sources: Chesto, Jon (December 10, 2013). Bay State Rises to Fourth Place in Latest Ranking of Solar Installations. *Boston Business Journal*.

Commissioner LaFleur Named Acting Chair of FERC

Commissioner LaFleur has been named acting chairwoman of the U.S. Federal Energy Regulatory Commission (FERC). The previous chairman, John Wellinghoff, left FERC in late November.

LaFleur joined the commission in 2010 after a long career in the electric and natural gas industry, including acting chief executive officer at National Grid.

FERC regulates elements of the U.S. natural gas, electricity, oil and hydropower industries.

About the New England Energy Alliance, Inc.

The New England Energy Alliance is a coalition of energy companies advocating to ensure the availability, reliability and affordability of future energy supplies which are vital to the region's economic growth and prosperity. Formed in 2005, the Alliance works to balance public debate about solutions to New England's energy infrastructure by providing information on the region's energy needs and the resources, technologies and policies needed to meet those needs.

Please visit www.newenglandenergyalliance.org for more information on the Alliance.