

## Energy Insights -- January 2014

### Briefing on Energy Issues and Trends

#### **New England Governors Request Support to Expand Region's Energy Infrastructure**

Last month, the six New England governors signed an agreement to work together to advance energy infrastructure that expands and diversifies energy supplies while ensuring that the benefits and costs are shared appropriately among the states.

In a January 21<sup>st</sup> letter, the governors took the first step toward executing this shared objective by requesting that ISO New England, the region's electricity grid operator, provide technical assistance to:

- Diversify the region's electricity through the development of new electricity transmission infrastructure to enable delivery of up to 3,600 megawatts of clean energy into the region from low- and no-carbon resources, enough to serve 1.2 million to 3.6 million homes.
- Expand the region's natural gas pipeline capacity by up to 1 billion cubic feet per day from the construction of new -- or the expansion of existing -- pipelines, which is 600 million cubic feet per day more than two recently announced pipeline expansion projects in New England.

Both types of infrastructure projects would be funded proportionately by all six New England states through increases in ISO-New England's service fees (which would be passed onto ratepayers). The governors have asked ISO New England to devise a way to pay for the projects.

Currently, natural gas pipeline bottlenecks are limiting

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#### **Did You Know:**

The electric utility industry invested a record \$35 billion in transmission and distribution infrastructure in 2012 (latest data available) -- a 24 percent increase over the previous year. This represents the largest year-on-year percentage increase in transmission investment since 2000.

Source: Edison Electric Institute ([www.eei.org](http://www.eei.org))

the supply of natural gas that can be imported into the region which poses a threat to electricity reliability and increases the cost of energy, particularly during winter cold snaps. In addition, transmission constraints are limiting the amount of cleaner, lower-cost electricity that could be imported from neighboring states and regions.

The governors, through the New England States Committee on Electricity (NESCOE), have asked ISO New England to provide: technical system planning support for the development of the projects; and filing of any tariff changes needed to fund the projects which would require the approval of federal regulators.

Sources: Singer, Stephen (January 23, 2014). New England Seeks to Expand Gas Delivery Network. The Associated Press. Letter to Gordon van Welie, President and CEO, ISO New England, Inc. from the New England States Committee on Electricity, January 21, 2014, [www.nescoc.com](http://www.nescoc.com)

## **Home Electricity Use Down Despite Increase in Electronics**

Although homeowners are relying on electronic devices more than ever, residential electricity usage declined in 2013 for the third year in a row - to its lowest point since 2001. The U.S. Department of Energy attributes this decrease to more efficient housing, appliances and gadgets.

- **More Efficient Homes:** Many states have adopted or toughened building codes to force builders to better seal homes which has led to a reduction in electricity consumption for heating and cooling.
- **More Efficient Gadgets:** Due to federal energy standards, large appliances such as refrigerators and air conditioners have become more energy efficient. For example, today's typical room air conditioner uses 20 percent less electricity than models from a decade ago. Central air-conditioners, refrigerators, dishwashers, water heaters, washing machines, dryers and TVs are also more efficient. In addition, the replacement of incandescent light bulbs with LEDs and compact fluorescent bulbs has contributed to decreased electricity use as well as the replacement of desktop computers with less energy-consuming laptops and iPads.

This downward trend in home electricity usage is expected to continue. The U.S. DOE predicts average residential electricity use per customer to fall again in 2014 by 1%.

Source: Fahey, Jonathan (December 30, 2013). Home Electricity Use in US Falling to 2001 Levels. The Associated Press.

## **EPA Proposes Greenhouse Gas Standards for New Power Plants**

The Environmental Protection Agency (EPA) has re-proposed New Source Performance Standards for new fossil-fueled electricity generating plants. Unlike previous standards proposed in 2012, the new proposed rule sets separate standards for natural gas and coal-fired plants.

The average emission rate of U.S. coal-fired electricity generation facilities is currently 2,249 pounds of CO<sub>2</sub>/MWh. New coal-fired plants would be required to use carbon capture and sequestration technologies to reduce emissions by about half to 1,100 pounds/MWh.

The average emission rate from U.S. natural gas-fired electricity generating facilities is 1,135 pounds of CO<sub>2</sub>/MWh. The proposed emission limits for new natural gas-fired plants would be 1,000 pounds of CO<sub>2</sub> per MWh for larger units and 1,100 for smaller units.

EPA has stated that since the utility industry is expected to choose to build natural gas combined-cycle units even in the absence of the standards, the proposed rule "will result in negligible CO<sub>2</sub> emission changes, quantified benefits and costs by 2022". EPA estimates that the carbon capture and storage requirement would cost between \$80/MWh and \$130/MWh.

Critics such as the American Public Power Association (APPA) say the re-proposed rule "effectively precludes coal going forward as a resource for electricity generation" and could likely lead to higher electricity rates in the coming years". In addition, according to APPA, carbon capture and sequestration technologies have not been commercially demonstrated.

Public comments on the proposed standards are due in March. EPA is expected to issue greenhouse gas

standards for existing power plants later this year.

Source: Varella, Robert (January 13, 2014). EPA Publishes Proposed Greenhouse Gas Standard for New Power Plants. *Public Power Weekly*.

## **U.S. Carbon Emissions from Electricity Generation Increased Slightly in 2013**

According to the U.S. Energy Information Administration (EIA), carbon dioxide emissions from fossil fuels used to generate electricity increased by two percent in 2013 from the previous year. The increase is due to a small increase in coal consumption to generate electricity. According to EIA, "coal has regained some market share from natural gas since a low in April 2012; however, the impact on overall emissions trends remains fairly small." The EIA estimates that carbon dioxide emissions will rise 0.7 percent in 2014 with no changes expected in 2015.

Even with this slight increase, overall U.S. carbon emissions remained 10 percent below 2005 levels - more than half the reduction needed to achieve President Obama's goal of reducing carbon emissions by 17 percent from 2005 levels by 2020.

Source: "EIA Reports a Rise in CO2 Emissions". *Public Power Weekly*, January 20, 2014.

## **Massachusetts Announces Climate Change Preparedness Initiatives**

Governor Deval Patrick announced a \$50 million investment for a statewide plan to address the impacts of climate change in Massachusetts. In the energy sector, the plan includes a \$40 million municipal resilience grant program to be administered by the Massachusetts Department of Energy Resources that will enable cities and towns to harden energy services at critical sites using clean energy technology. The grants will be funded through Alternative Compliance Payments (ACP) which are paid by electric retail suppliers if they have insufficient renewable or alternative energy certificates to meet their compliance obligations under the Renewable and Alternative Portfolio Standard Programs.

The Department of Public Utilities (DPU) will work with utilities to determine ways to accelerate storm hardening and deploy micro-grids and resiliency projects for transmission and distribution. The

Executive Office of Energy and Environmental Affairs will establish an inventory of generation facility vulnerability and preparedness plans. The Governor's plan also includes initiatives to reduce vulnerabilities in the public health and transportation sectors.

Source: "Governor Patrick Announces \$50M for Comprehensive Climate Change Preparedness Initiatives". Press Release. January 14, 2014.

### **CT Energy & Environmental Chief Announces Departure**

Daniel Esty, Commissioner of Connecticut's Department of Energy and Environmental Protection (DEEP) is leaving his post effective February 3<sup>rd</sup> to return to Yale University which had granted him a three-year leave of absence from his tenured professorship to serve. DEEP is charged with conserving, improving, and protecting the state's natural resources and environment and with the development and implementation of policies and programs to make cheaper, cleaner and more reliable energy available to residents and businesses.

Governor Malloy has named Esty's chief of staff Robert Klee as his replacement. Klee joined DEEP in 2011 and holds a law degree from Yale as well as a doctorate from the university's School of Forestry and Environmental Studies. He also has an undergraduate degree from Princeton in geology and environmental science.

Source: "Governor Malloy Announces DEEP Commissioner Esty Returning to Position at Yale". Press Release. January 15, 2014.

### **FERC Commissioner Nominee to be Designated Chairman upon Appointment**

Norman C. Bay is the Director of the Office of Enforcement at the Federal Energy Regulatory Commission (FERC), a position he has held since 2009. Prior to this, Mr. Bay was a Professor of Law at the University of New Mexico from 2002 to 2009. From 2000 to 2001, Mr. Bay was the United States Attorney for the District of New Mexico. He was an Assistant U.S. Attorney from 1989 to 2000, an Attorney-Adviser at the United States Department of State from 1988 to 1989, and a Law Clerk for the Honorable Otto R. Skopil, Jr. of the U.S. Court of Appeals for the Ninth Circuit from 1986 to 1987. Mr. Bay received a B.A. from Dartmouth College and a J.D. from Harvard Law School.

Source: Federal Energy Regulatory Commission,  
[www.ferc.gov](http://www.ferc.gov)

### **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](http://www.newenglandenergyalliance.org) for more information on the Alliance.**