ISO New England: Managing Reliable Power Grid Operations This Winter

*Supplies should be sufficient—barring unexpected resource outages or fuel delivery constraints*

**Holyoke, MA—December 5, 2016**—Electricity supplies should be sufficient to meet New England’s consumer demand for electricity this winter, according to ISO New England, the operator of the region’s power system. Because possible natural gas pipeline constraints could limit electricity production from natural gas power plants, ISO New England has implemented a Winter Reliability Program that will help protect overall grid reliability.

“Reliable power system operations depends on sufficient resources, adequate fuel supplies, and available infrastructure for both fuel and electricity delivery,” said Vamsi Chadalavada, executive vice president and chief operating officer of ISO New England Inc. “The region should have adequate supplies of electricity to meet demand, barring any unforeseen resource outages or fuel delivery constraints.”

**Managing Multiple Risks**
Winter has become a challenging time for New England grid operations, especially during the coldest weeks of the year when the availability of natural gas supplies is uncertain. Approximately 44%—about 14,850 megawatts (MW)—of the total generating capacity in New England uses natural gas as its primary fuel, and natural gas generated 49% of the region’s power in 2015. New England’s natural gas infrastructure was not designed to serve demand for natural gas for both heating and power generation, so on cold winter days, New England’s network of pipelines is near or at capacity for commercial and residential heating. Any pipeline capacity remaining after heating customers are served can be sold for power generation. As a result, approximately 3,450 MW of natural gas-fired generating capacity may be at risk this winter because of pipeline constraints.

This year, the completion of the Algonquin Incremental Market (AIM) Project will increase pipeline capacity into the region by 342,000 dekatherms of gas per day and is expected to ease concerns about pipeline capacity this winter. However, in coming years, Local Distribution Companies (LDCs)—that sell gas to heating customers—will continue to expand their infrastructure and use this increased capacity. Moreover, the region will lose 1,500 MW of coal- and oil-fired generation this spring that will be replaced primarily by new gas-fired generation, and no additional infrastructure to deliver or store natural gas is currently being developed. Also, New England has relied on cargoes of liquefied natural gas (LNG) in recent winters, but these LNG tankers follow global market spot prices and may elect to go elsewhere, depending on price. They can also be held up by severe weather in winter.

**2016/2017 Winter Reliability Program**
To help address these multiple risks, ISO New England will again use a Winter Reliability Program to incentivize gas and oil-fired power plants to procure sufficient fuel before winter begins. The program will run from December 1, 2016 to February 28, 2017, and include an oil inventory component, an LNG component, and a demand response component.

According to Chadalavada, “Despite planning for these anticipated risks, if the region experiences any combination of extreme cold for an extended time, power plant outages, and limitations on natural gas delivery, maintaining reliability..."
could require the use of emergency procedures. Beyond this winter, the situation will grow even more uncertain because non-gas power plants are retiring and being replaced primarily with new, gas-fired generation. We are currently evaluating how the ISO will maintain reliability in the future under these conditions.”

The next non-gas generator to retire will be the 1,500 MW Brayton Point Power Station in Massachusetts that will close at the end of May 2017.

2016/2017 Winter Outlook by the Numbers

- Peak demand forecast:
  - At normal winter temperatures of about 7 degrees Fahrenheit (°F): 21,340 megawatts (MW)
  - If extreme winter weather of 2°F occurs: 22,028 MW
  - Both forecasts take into account the 1,884 MW in energy savings from energy-efficiency measures acquired through the region’s Forward Capacity Market (FCM)
- Resources with an FCM capacity supply obligation to be available: 31,101 MW
  - Total resources, including both FCM obligations and capability without FCM obligations: 33,948 MW
    (A generator’s maximum possible output may be greater than its FCM obligation)
- Natural-gas-fired generating capacity at risk of not being able to get fuel when needed: 3,450 MW
- Winter 2015/2016 peak demand: 19,545 MW on February 14, 2016, for the hour from 6 to 7 p.m.
- All-time winter peak in New England: 22,818 MW on January 15, 2004
- All-time peak demand: 28,130 MW, on August 2, 2006

Operational Procedures to Maintain Reliability

Should unexpected generator or transmission line outages occur, the ISO has procedures in place to maintain reliability, including calling on demand-response resources to reduce their energy use, importing emergency power from neighboring regions, and asking businesses and residents to voluntarily conserve electricity.

ABOUT ISO NEW ENGLAND

Created in 1997, ISO New England is the independent, not-for-profit corporation responsible for the reliable operation of New England’s electric power generation and transmission system, overseeing and ensuring the fair administration of the region’s wholesale electricity markets, and managing comprehensive regional electric power planning.