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ISO New England's Response to Pilgrim Nuclear Power Plant Retirement Request

Holyoke, MA—October 13, 2015—On Monday October 12, 2015, Entergy Nuclear Power Marketing submitted to ISO New England a formal request to retire its Pilgrim Nuclear Power Station by June 1, 2019. Pilgrim, a 680-megawatt (MW) electric generating plant located in Plymouth, Massachusetts, is among the region's largest power plants and is one of three remaining nuclear stations in New England. Entergy's 620-MW Vermont Yankee Nuclear power plant retired in December 2014. In 2014, nuclear power generated 34% of the electricity produced in New England.

When a generating resource located within New England submits a retirement request, ISO New England conducts a study to see how the retirement will affect the overall reliability of the region's bulk power system. If the ISO New England study determines that power system reliability will be affected, ISO New England can ask the retiring resource to remain online. If the resource owners agree to do so, the generating resource would receive an out-of-market payment. Regardless of the outcome of the study, the ISO does not have the authority to prevent a resource from retiring.

New England's wholesale electricity, the bulk product that is produced by more than 350 power plants throughout the six-state region, is bought and sold at market-based prices. Because the largest share of New England's electricity is produced by generators that use natural gas—which has become more abundant because of increased production in the Marcellus Shale—lower natural gas prices have produced a highly-competitive market environment for New England's power plants. In 2014, natural gas generated 44% of the electricity produced in New England. Increased natural gas supply has resulted in lower natural gas prices, bringing lower wholesale electricity prices and less revenue in general for resources in the energy market. While competitive prices are beneficial for consumers, each resource owner must make the business decision regarding whether to continue to compete and operate based on their specific circumstances.

These economic forces are pushing other older generators toward retirement. Even before Pilgrim's announcement, more than 3,500 MW, or approximately 10%, of New England's generation has recently retired or will retire over the next few years. With Pilgrim's announcement, recent and pending retirements will total nearly 4,200 MW by June 1, 2019. These retiring resources are mostly older generating plants that use oil, coal, and nuclear. Of the 11,000 MW of proposed new generation, two-thirds would use natural gas and most of the rest would use wind to generate power. While not all the proposed projects will get built, the region will only become more reliant on natural gas for power generation as non-natural-gas-fired power plants retire. Most of this new gas-fired generation is seeking to become dual-fuel capable, meaning they will be able to switch to use oil if natural gas is not available, or if the cost of oil is lower than that of natural gas. As the operator of the region's bulk power system and wholesale electricity marketplace, ISO New England does not favor any one fuel or technology.

New England’s Forward Capacity Market is designed to ensure the region has sufficient capacity to meet projected consumer demand. The forward auction is conducted three years before the year of need to provide time for new resources to be developed. In addition to the annual auction, interim auctions are held regularly during the three-year period leading up to the year of need. If the auctions do not procure adequate generating or demand response resources in time, the ISO will establish special operating procedures to ensure the reliability of the system. The region’s next Forward Capacity Auction is scheduled for February 2016 for resources needed in 2019-2020.

New England has limited natural gas pipeline infrastructure serving the region. The availability of natural gas for power generation has an impact on grid reliability, especially during the winter months when gas pipelines have reached maximum capacity to heat homes and businesses, or during other times of the year when gas pipelines are out of service for maintenance.

ISO New England has implemented a winter reliability program for the next three winters to ensure that participating oil and natural-gas power plants have sufficient fuel during the winter months. However, the retirement of any large non-natural-gas-fired generator, such as Pilgrim, will place further stress on the region in terms of fuel security and will add to the operational challenge to maintaining reliability during New England’s coldest months. The ISO has also implemented longer-term market enhancements to provide strong incentives for resources to invest in operational improvements and to secure necessary fuel arrangements to ensure resources can perform when needed.

New England’s nuclear power fleet:

Unit Name	License Expiration Date	Electrical Output (megawatts)
Millstone 2	7/31/ 2035	884
Millstone 3	11/25/2045	1,227
Pilgrim	6/8/2032	680
Seabrook	3/15/2030	1,295

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.

