



## **Salem Harbor Retirement Requests & ISO-NE Determination of Need**

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### **Reliability Study Assumptions and Determination**

On May 10, 2011, ISO New England notified Dominion Energy Marketing Inc. that the ISO has determined that Salem Harbor units 3 and 4 will be needed in 2014-2015 to ensure the reliability of the power system in northeastern Massachusetts and Greater Boston. The ISO's notification came in response to Dominion's request to retire Salem Harbor units 1, 2, 3, and 4, effective June 1, 2014.

ISO New England is responsible for the reliable operation of the region's power system, but it does not have the authority to prevent a resource from retiring. At this point, Dominion can choose to continue operating units 3 and 4 in 2014 or it can proceed to retire the two units. Dominion must decide and notify the ISO of its decision by mid-November 2011.

Concerning Salem Harbor units 1 and 2, the ISO determined that those two units were not needed to ensure reliability and Dominion's request to retire those units in June 2014 has been accepted.

The ISO is responsible for planning and operating the high-voltage power system in New England so that mandatory reliability standards are met and the region's consumers can count on a reliable supply of electricity. The ISO's determination regarding the Salem Harbor units resulted from an extensive analysis of the reliability needs of the North Shore and Greater Boston.

The analysis evaluated system needs in 2014 to 2015 at times of peak demand, simulating various combinations of power plants and transmission lines tripping offline. These scenarios are rare, but the consequences can be significant, threatening the safe and reliable operation of the power system.

Under a variety of computer-simulated scenarios and system configurations, potential thermal overloads on transmission lines were observed, which could damage equipment, compromise grid reliability, or cause uncontrolled outages.. To address these potential violations, the ISO has determined that between 415 and 560 MW of generation from the Salem Harbor units would be needed to prevent transmission lines in the area from overloading.

### **Next Steps**

In response to "non-price retirement" requests filed by Dominion Energy Marketing, ISO New England officially notified Dominion on May 10, 2011, that Salem Harbor units 3 and 4 will be needed to ensure reliability in the capacity commitment period from June 1, 2014, to May 31, 2015. Because the ISO does not have the authority to prevent a resource from retiring, Dominion must notify the ISO by mid-November 2011 whether it will proceed with the retirement of units 3 and 4 on June 1, 2014.

The ISO approved Dominion's request to retire Salem Harbor units 1 and 2. A "non-price retirement" request is binding, so Dominion must retire units 1 and 2 no later than June 1, 2014, but may retire the resources earlier if the units no longer have an obligation through the region's Forward Capacity Market to be available.

If Dominion elects to keep Salem Harbor units 3 and 4 in service, once the reliability need in northeastern Massachusetts and Greater Boston has been resolved, Dominion must retire the units.

## **Preliminary Transmission Solutions**

On a regular and ongoing basis, ISO New England assesses the needs of the New England transmission system, both systemwide and in specific areas, to provide a reliable supply of electricity to the region's residents and businesses. Working with local transmission owners NSTAR, National Grid and Public Service of New Hampshire, the ISO concluded a comprehensive study of the reliability needs of northeastern Massachusetts and Greater Boston last year and embarked on a study to evaluate a variety of transmission solutions that could address reliability concerns and eliminate the need for Salem Harbor units 3 and 4. Transmission solutions must be painstakingly designed and tested to avoid adverse impacts on overall system reliability. Solution studies assess the transmission projects that will result in the most cost-effective transmission solutions to meet the identified reliability needs.

The working group identified several preliminary transmission solutions for the entire northeastern Massachusetts and Greater Boston area, which were presented to the region's stakeholders at an ISO Planning Advisory Committee meeting in December, 2010. A portion of the preliminary, preferred transmission solution was identified that could eliminate the need for Salem Harbor units 3 and 4. That solution would replace the conductors on six existing 115 kilovolt transmission lines in the North Shore area. Replacing the conductors increases the capability of transmission lines to carry more electricity. The transmission solutions study for the long-term system plan for northeastern Massachusetts and Greater Boston is expected to be finalized later this year. Once the transmission solution has been selected, it must then proceed through state siting proceedings before it can be constructed.

The ISO's authority is confined to the identification and development of transmission solutions. Private developers also may opt to pursue new generation, increased energy efficiency, and aggregating demand-response resources that can curtail consumption when needed. These market-based solutions could help address system reliability issues in the area.

## **Critical Energy Infrastructure Information**

Given the level of transmission system detail contained in ISO-NE's reliability needs assessments and solutions studies, these reports are classified as Critical Energy Infrastructure Information (CEII), a federal designation intended to protect the security of the power system. These reports cannot be released to those without CEII clearance.

## **Background**

On February 10, 2011, the ISO received non-price retirement requests from Dominion Energy Marketing Inc. to retire Salem Harbor units 1, 2, 3, and 4 effective June 1, 2014. Requests to retire resources track the Forward Capacity Market (FCM) timeline. Dominion's retirement requests were submitted in advance of the fifth Forward Capacity Auction (FCA-5), which is scheduled to begin June 6, 2011, to procure the resources needed three years from now, in the 2014-2015 capacity commitment period. The FCM provides resources with the option of delisting, or withdrawing, from the capacity market for one year, permanently, or to retire. This process occurs in advance of the capacity commitment period and helps the region maintain a continuous and reliable supply of capacity resources while allowing the ISO to plan for an orderly addition or attrition of resources.

Bids or requests to remove resources from the region's markets trigger an analysis by ISO New England to determine whether the resources are needed to ensure a reliable supply of electricity. Previous comprehensive studies by the ISO and transmission owners have shown that Salem Harbor units 3 and 4 are needed for reliability.

Dominion did not submit delist bids for the Salem Harbor units in the first or second Forward

Capacity Auctions (both held in 2008 for capacity years 2010-2011 and 2011-2012, respectively). Dominion submitted delist bids to withdraw all four Salem Harbor units from the capacity market for one year in FCA-3 (2012-2013) and again submitted delist bids to withdraw the Salem Harbor units for one year in FCA-4 (2013-2014). Both times, the bids to withdraw Salem Harbor units 3 and 4 from the capacity market for one year were rejected because allowing these resources to delist as capacity resources would jeopardize the reliable operation of the region's power system. However, Dominion's bids to withdraw Salem 1 and 2 for both capacity commitment periods were accepted. For FCA-5 (2014-2015), Dominion initially submitted bids to permanently delist all four Salem Harbor units. The subsequent non-price retirement requests supersede the permanent delist bids.

In accordance with system planning procedures developed for the Forward Capacity Market, ISO New England is also required to complete a re-assessment of the reliability need for units whose delist bids have been rejected. Each re-assessment must be completed by one year before the relevant capacity year. ISO New England presented the results of that reassessment for the Salem Harbor units, for the 2012-2013 capacity commitment period, to the NEPOOL Reliability Committee on May 9, 2011. The ISO's reassessment confirmed the earlier determination, that Salem Harbor units 3 and 4 are still needed to ensure reliability in that timeframe. If the ISO had determined that the units were no longer needed to ensure reliability, the units would be allowed to withdraw from the capacity market for one year, from 2012 to 2013, as requested.

Resources that seek to withdraw from the capacity market for a one-year capacity commitment period but are retained for reliability will be paid their accepted bid amount, as approved by the ISO's internal market monitor and FERC. Resources that seek to retire but are retained for reliability purposes can be paid the auction clearing price, or they can apply to FERC to be paid under the terms of a cost-of-service agreement. If the resource chooses the cost-of-service compensation method, the difference between the cost-of-service compensation amount and the capacity clearing price for the relevant Forward Capacity Auction will be paid by electricity consumers in the affected reliability area.