

Infrastructure Needs: Electricity-Natural Gas Interdependencies



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PRESIDENT AND CEO

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Resource Shift is Creating Reliability Challenges

- **ISO New England** is increasingly reliant on resources with uncertain performance and availability
 - **Natural gas resources** lack firm gas transportation or fuel storage and rely on “just-in-time” fuel supply
 - **Coal, oil-steam fleet** is being displaced by more efficient resources
 - **Intermittent resource growth** with inherently uncertain output
 - 1800 MW of solar PV (cumulative) expected over the next 10 years
 - Approximately 750 MW of existing wind and 2,000 MW of new wind proposed in New England
- ISO estimates **up to 8,300 MW of non-gas-fired generation is “at risk” for retirement by 2020** (28 older oil and coal units)
 - If all retire, ISO estimates 6,300 MW of new or repowered capacity will be needed in the region



“At Risk” Generator Retirements have Begun

Major Retirement Requests:

- **Salem Harbor Station (749 MW)**
 - 4 units (coal & oil)
- **Norwalk Harbor Station (342 MW)**
 - 3 units (oil)
- **Brayton Point Station (1,535 MW)**
 - 4 units (coal & oil)
- **Vermont Yankee Station (604 MW)**
 - 1 unit (nuclear)

| Total MW Retiring in New England* | |
|-----------------------------------|-----------------|
| Connecticut | 528 MW |
| Maine | 159 MW |
| Massachusetts | 2,682 MW |
| New Hampshire | 56 MW |
| Rhode Island | 64 MW |
| Vermont | 666 MW |
| Total | 4,155 MW |

*Megawatts based on relevant Forward Capacity Auction (FCA) summer qualified capacity (NOTE: total includes full and partial generator and demand response Non-Price Retirement (NPR) requests for Capacity Commitment Period (CCP) 2013-2014 through CCP 2017-2018)

Source: Status of Non-Price Retirement Requests; December 20, 2013

