

New England Winter Snapshot

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Data Sources Used in This Publication
NOAA
EIA
ISO New England

To discover more about the data sources used, [click here](#).

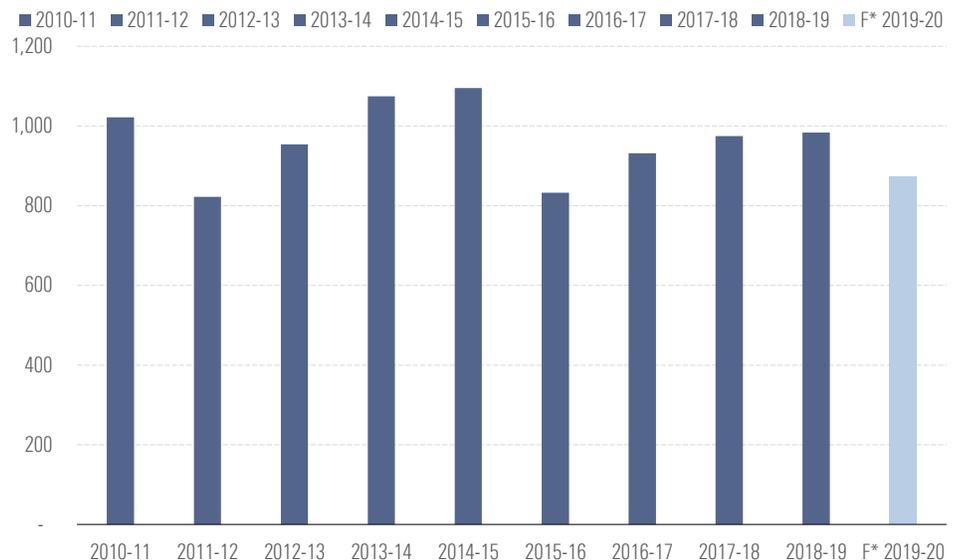
New England Winter

An assessment of ISO New England's upcoming winter season looks to give it a pass considering the region's heavy reliance on natural gas with a possible weak winter. Reduced nuclear base load generation over the summer with the ISO's increased reliance on natural gas will be on display this winter. So far, early winter forecasts appear to be pointing to a soft open after last year's cold start, and natural gas storage levels have rebounded to soften natural gas prices. Another soft winter this time around will let the region's gamble on increased use of natural gas in an area with transportation constraints to get away with lower prices this year. This note will look at what is in store for New England this winter.

Weather Outlook

The winter outlook for New England is looking forgiving with the average monthly heating degree days for November through March in early forecasts coming in at 872 average degree days per month as seen in Exhibit 1, with the five-year average being 963 degree days. The early months of November and December look to at least be on the warmer side. However, weather forecasts are seeing an increased level of unpredictability with a lot of variability in the northern half of the U.S. weather forecasts in the back half of winter show both warmer- and colder-than-average scenarios. In general, we expect to see a warmer winter more likely with increased risks of short-lived cold spikes coming in in the back half of the season.

Exhibit 1 Monthly Average Winter Heating Degree Days

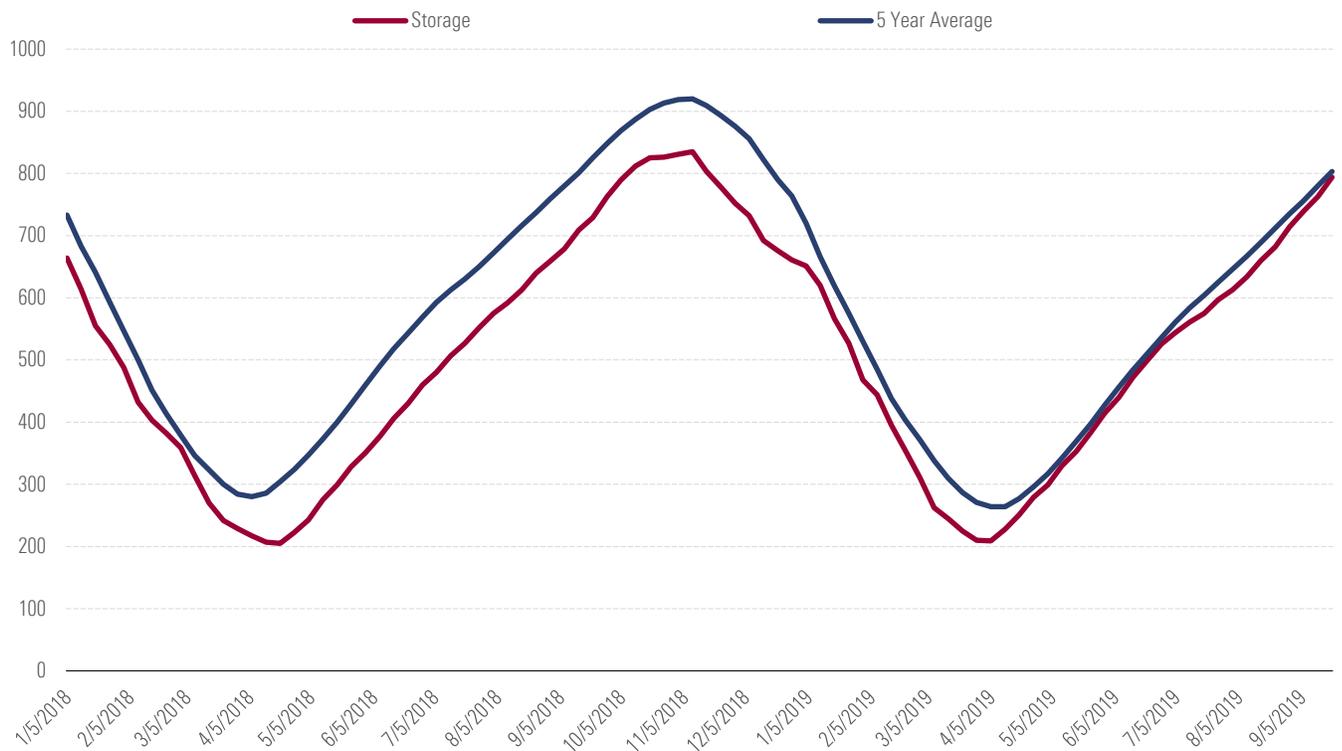


Source: NOAA, Morningstar.

Natural Gas Levels

Natural gas storage levels have rebounded over the injection season off stronger production and a mild summer. With storage levels above the five-year average again as seen in Exhibit 2. Toward the end of the injection season, the supply concerns and early cold that drove prices up last winter will likely not happen this year. While national and eastern storage levels have rebounded, the same pipeline constraints that drive a local premium are still in place. On top of the potential for supply challenges, New England as of September from 2018 to 2019 saw over 1,600 MW of additional natural gas generation capacity. This winter will test if the added natural gas capacity will matter, and if the ISO's continuing argument that it needs to take into account fuel constraints to ensure electricity reliability still holds. If the ISO has issues with a potential mild winter, then further steps will be needed sooner to deal with its heavy reliance on natural gas.

Exhibit 2 East Natural Gas Storage Levels

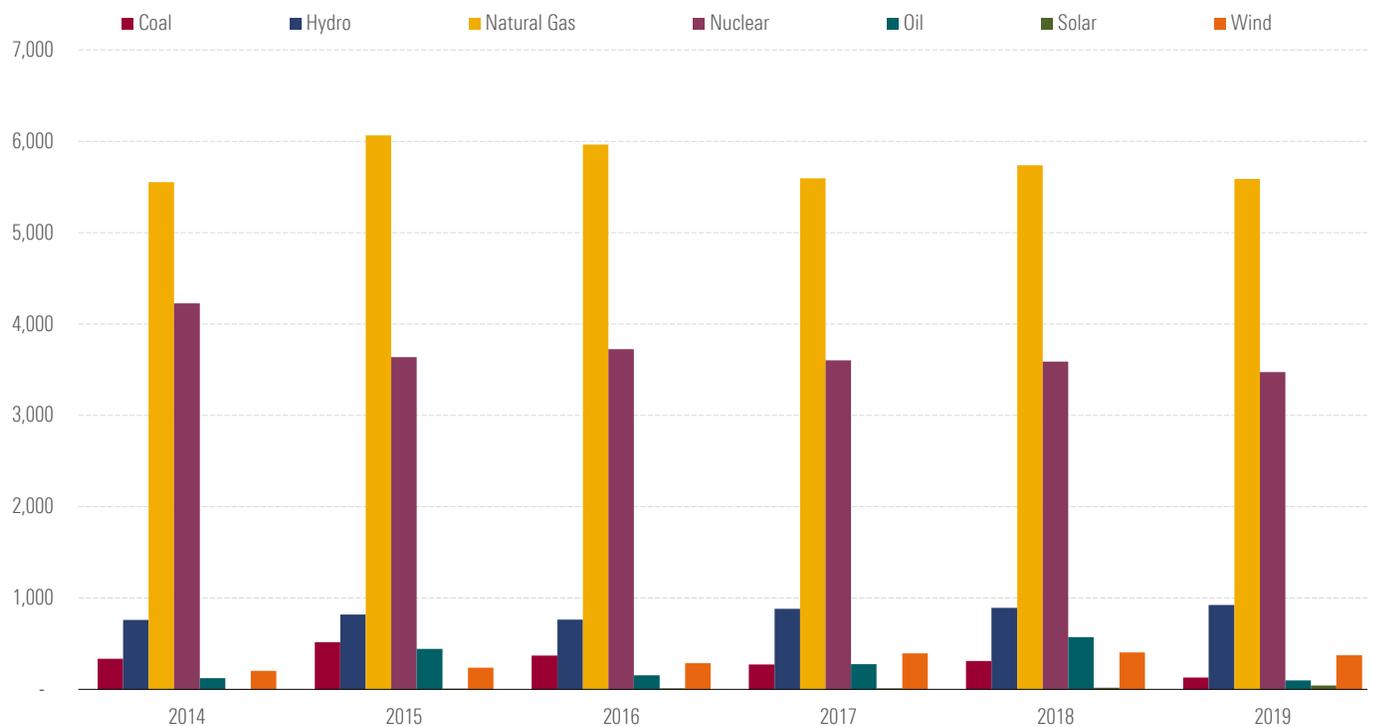


Source: EIA, Morningstar.

Nuclear Retirement

With the summer retirement of the Pilgrim Nuclear Plant, the ISO is more exposed to natural gas constraints during extreme winter scenarios. While natural gas prices and a potentially warmer winter may give the ISO enough breathing room not to have an issue this winter, it is still closer structurally to needing access to more expensive oil and fuel oil to ensure reliability during cold winter events. On the whole, the ISO has seen a fairly stagnant fuel mix in recent years with coal and nuclear generation falling slightly as seen in Exhibit 3. Over the same time, wind, solar, or other resources have seen almost no growth in front of the meter yet, creating the potential for shortages.

Exhibit 3 Annual Average ISO New England Generation Mix



Source: ISO New England, Morningstar

Upcoming Solar and Wind

While solar summer capacity is at 580 MW, its winter capacity is only at 5 MW. Wind capacity is at 168 MW for the summer and 392 MW in the winter. The interconnection queue sees another 400 MW by the end of 2020, giving it nearly double its current capacity if all planned projects are completed. However, wind generation as a whole is still not a major component of the overall stack, although there is relative growth, which leaves the region more reliant on natural gas while coal and nuclear retirements continue. Wind connection agreements see greater growth with about 125 MW in the queue for the end of 2020, but a sizable bump should come when two 800 MW connections for offshore

wind enter the market in 2021 and 2023. These projects, however, will not be available for the coming 2019-20 winter, which means the renewable stack will be nearly identical to last year in terms of renewables not behind-the-meter.

New England Winter

Winter in New England looks like it could be a bearish dud at the start. With soft heating degree forecast and flush natural gas supply, the prices in the region should stay low. Yet, nuclear retirements and inconclusive winter forecasts still leave some potential upside as the winter wears on, but such upside will be limited unless winter forecasts take a major turn colder. Generally, the warmer winter will still only see at most a couple of quick bouts of cold. With solar and wind capacity still lagging in the region, the upcoming winter will still find itself stuck with the same natural gas pipeline constraints, and any help from non-natural gas generation is still another winter off at least. ■■■

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