

New England Making Progress on Fuel Security?

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Data Sources Used in This Publication
FERC
EIA
EOXLive
ISO NE

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ISO New England in Transition

New England has fuel security issues and the ISO has acknowledged as much in their Operational Fuel Security Analysis (OFSA) published earlier this year as we discussed in a January note (see "[ISO New England Gambling With Natural Gas](#)"). Portland Natural Gas Transmission System, or PNGTS, has seen enough potential in the market to apply to the Federal Energy Regulatory Commission in the past month for import and expansion access. Other, more sizable projects are on hold due to opposition from environmental groups. The ISO is also petitioning for tariff waivers to save the Mystic Generation plant and by extension the Everett Marine Terminal otherwise known as Distrigas. We see these plans, together with projects adding transmission to import hydro and add a sizable off-shore wind farm as providing the potential for the ISO to escape from its current constraints and over reliance on natural gas.

Looking to 2022

As can be seen from the current Massachusetts Hub forward curve (Exhibit 1) a lot of risk premium is being built into calendar year 2022. This is the year Mystic has announced it will retire in June without some sort of intercession. In addition, both the Massachusetts Clean Energy Drive offshore wind farm and a transmission line bringing in imported Canadian hydro power are slated to come online during 2022. The tight timeline leaves a tricky switching game for the ISO which is already teetering near the edge of serious issues during extreme winter and even summer weather conditions. Further scenario analysis by the ISO assuming the absence of Mystic shows that system reliability is at stake and required forced load shedding would likely be in order.

Exhibit 1 Mass Hub Forward Curve

Month	2018	2019	2020	2021	2022	2023	2024	2025
Average	\$ 45.65	\$45.63	\$46.35	\$46.46	\$47.25	\$45.12	\$45.21	\$46.36

Source: EOXLive, Morningstar

Saving Mystic

Exelon has had several regulatory wins of late in both Illinois and New Jersey resulting in intervention to save their plants from retirement. Adding Mystic to the winning streak would be impressive. Mystic is located in Maine near the Everett LNG import terminal that is also currently being acquired by Exelon. The four generating units Mystic 7, 8, 9 and Mystic Jett - all slated to retire - have over 2,000 MW of

capacity between them. However, Mystic 8 and 9 with 1,600 MW capacity are the key drivers of ISO New England's waiver request as they are supplied completely from the LNG terminal. Absent the Mystic plant, the terminal is likely to shut as well.

The ISO ran several scenarios and referenced its OFSA in its waiver application to FERC to save the Mystic plant. The loss of the generator itself only appears to cause problems if imported energy is constrained and there is an issue with oil replenishment to dual-fired plants during the winter. The ISO is therefore caught in an awkward situation if it pursues normal reliability means to solve the issue because that would require unnecessarily costly transmission upgrades to address what are likely short-term challenges if the Mystic plant is retired.

The loss of the unit itself could probably be tolerated by the ISO but there is a larger strategic context to consider. That is the consequent closure of the LNG terminal that would represent loss of a non-pipeline import solution to source gas for power generation during times of system stress such as cold winter snaps. As the LNG terminal also serves utility gas this would further displace pipeline natural gas demand towards heating and limit availability for power generation during extreme weather events.

Critics have labeled the ISO's scenarios overly cautious and their argument has some merit. Only the best-case scenario used additional megawatts that the Central Maine Power hydro import project would bring, assuming it comes online in time. But even in this scenario, the retirement of both Mystic and the LNG terminal still required some load shedding. However, within this four-year timeframe, battery storage could be deployed to diminish the variability of renewable generation to close the reliability gap.

In the end the region is already in a tight spot and the ISO's overriding concern is with system reliability, making the waiver request for Mystic a reasonable precaution in our view. This caution is doubly justified by the possibility of other coal, oil, and nuclear units being retired to address emissions standards during the 2022-24 time period. In that context, saving a smaller, cleaner plant serves more than one reliability purpose. With the current risk premium most visible in the 2022 time frame, an intervention to protect the plant until the 2022-23 winter is therefore prudent but it may not be necessary to extend it any further than that.

Further Retirement Risks

As we outlined in an April note (see "[The New England Compromise](#)") there is plenty of risk that older and higher emission oil and coal plants will exit the stack over the next few years. This fact has not changed and adds urgency to the need to alleviate the natural gas demand constraint. Regulation is already limiting use of high emissions plants in the summer and potential for further emission restrictions in the region will increase reliance on pipeline natural gas fueled plants. The ISO needs to be diligent in managing the transition until greater investment in alternative fuel generation is in place.

Portland XPress Project

PNGTS recently applied for FERC approval of the first and second stages of a proposed three-stage project that could help alleviate New England's gas imbalance. The first phase of the project filed on

April 20th asks for authorization to increase capacity from the border at Pittsburg, New Hampshire to Westbrook, Maine by 39.84 MMcf/d as well as from Westbrook to Dracut, Massachusetts by 1.64 MMcf/d. The project is shooting for a Nov. 1 in-service date. This first phase also looks to increase import capacity from Canada from 210 MMcf/d to 274.22 MMcf/d. The first phase according to PNGTS should not require any additional infrastructure and should be able to increase its capacity within the confines of current capabilities. The second phase of the project, slated to be in-service by November 2019, looks to increase capacity by 1.13 MMcf/d from Westbrook to Dracut. This phase should also require no further facility construction. Phase three slotted for an in-service date of Nov. 1, 2020 looks to add further capacity from Westbrook to Dracut by adding a Westbrook Compressor Station and a Dracut Meter Station. The pipeline has not yet filed for this phase of the project. Over the past winter, pipeline utilization to serve New England has not been significant but the increased capacity over the next three years will help meet incremental demand during that timeframe.

New Clean Energy Updates

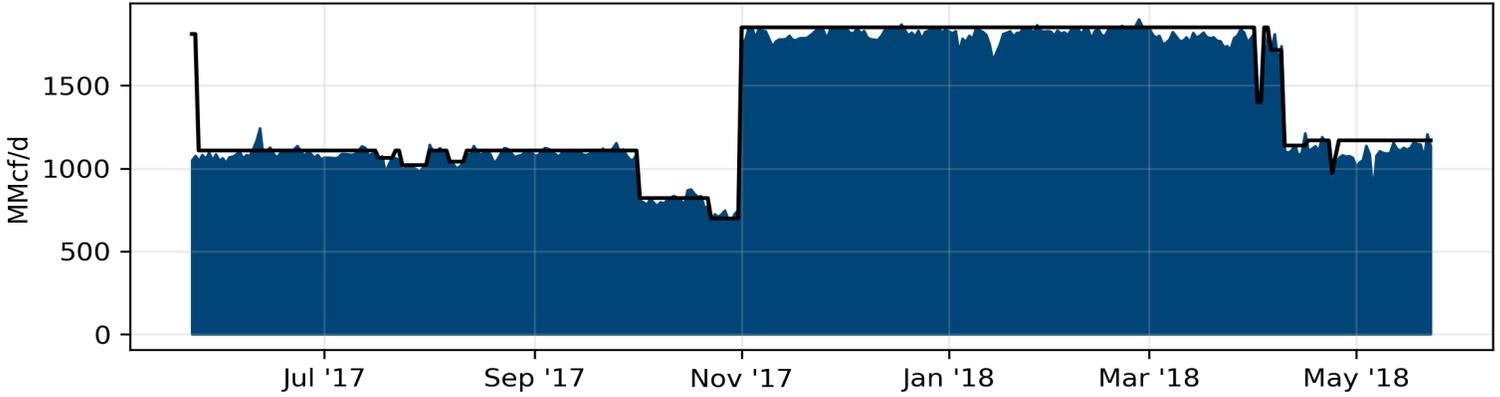
Given ISO NE's system issues, the Clean Energy Connect offshore wind project will help in a substantial way but is not slated to come online until December 2022 - a few months too late for the Mystic retirement and still megawatts short of replacing that plant's capacity. The three main proposals so far submitted for the Massachusetts offshore wind RFP are for up to 800 MW of wind from Vineyard Wind with an earliest start date of 2021, the Bay State Wind proposal that would be operational by 2022 and Deepwater Wind starting in 2022 and only operational by 2023. All three proposals have an option of 400 megawatts to serve part of the RFP or 800 megawatts

Conclusion

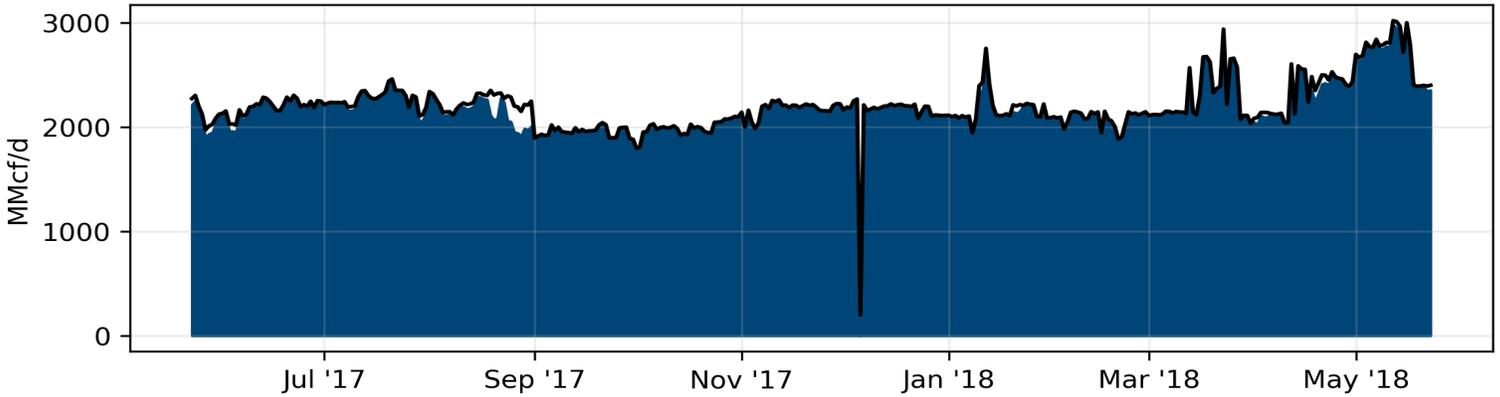
New England's tight capacity balancing act over the next few years has finally seen a little light with Portland stepping in and the ISO filing to save Mystic. The year 2022 looks to be critical transition with a number of new projects coming online and older plant retirements. Uncertainty about the net outcome of these changes is reflected in today's forward curve premium. The timeline of new projects and potential delays together with additional retirements should guarantee volatility in forward prices over the coming three years. ■■■

Natural Gas Important Points

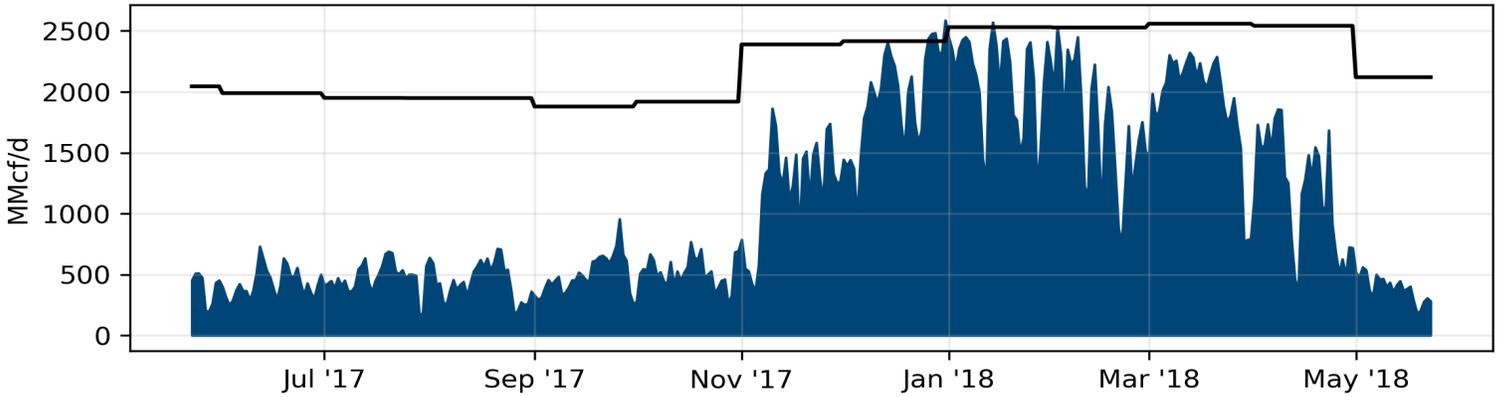
Algonquin: Stony point Compressor



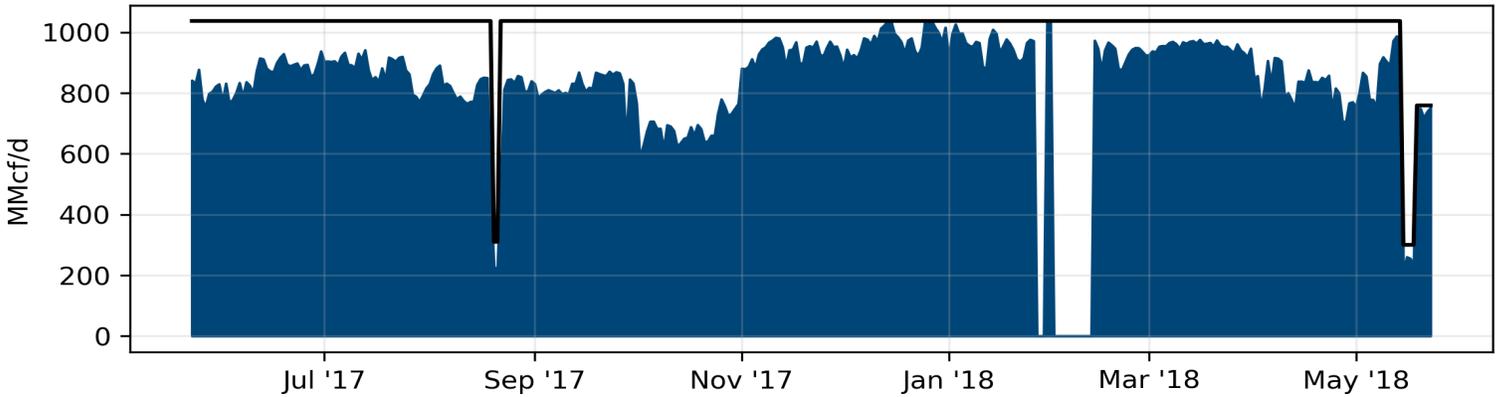
Transcontinental: Leidy Line Station 505



Texas Eastern: Lambertville Compressor

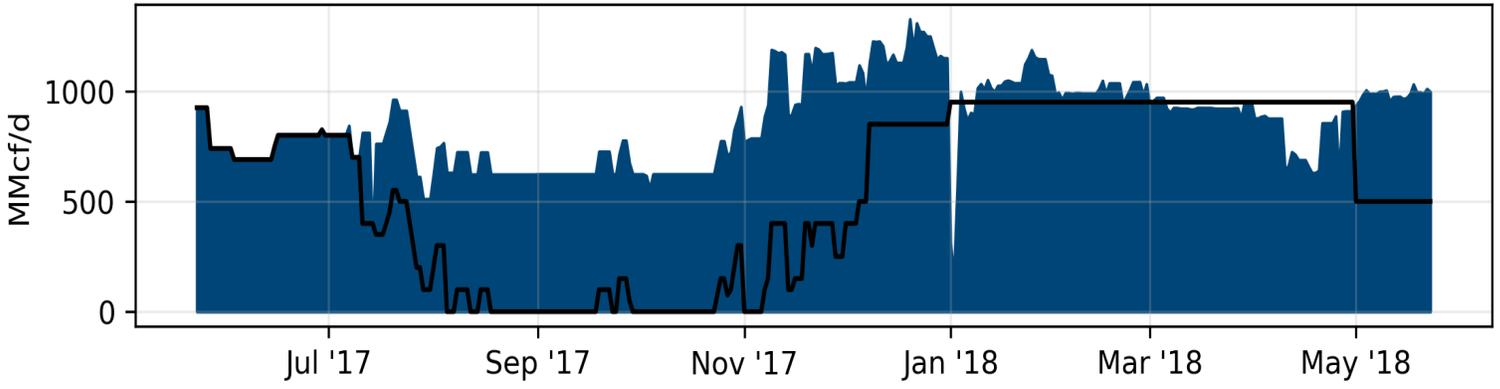


Millennium: Wagner West Compressor

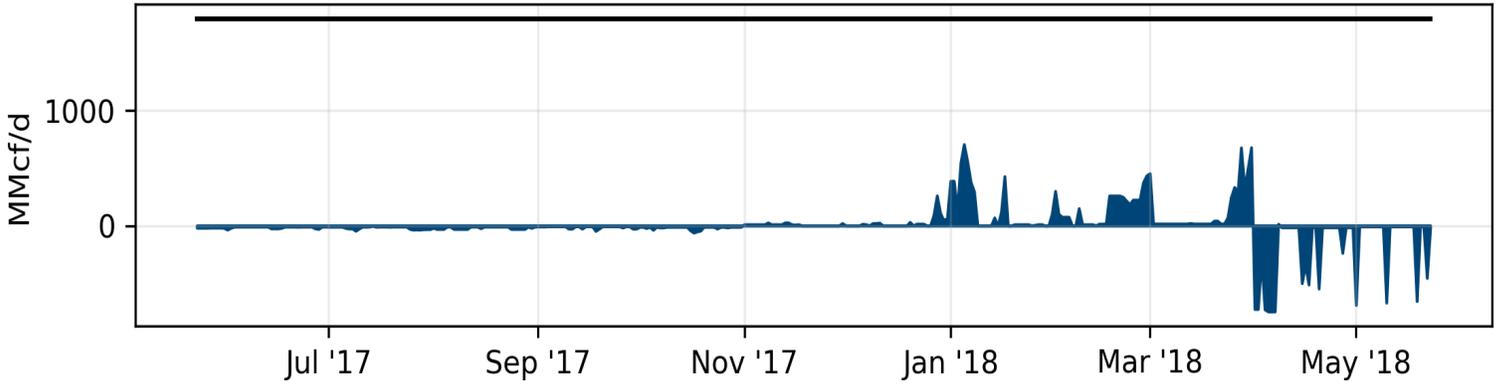


■ Volume — Capacity

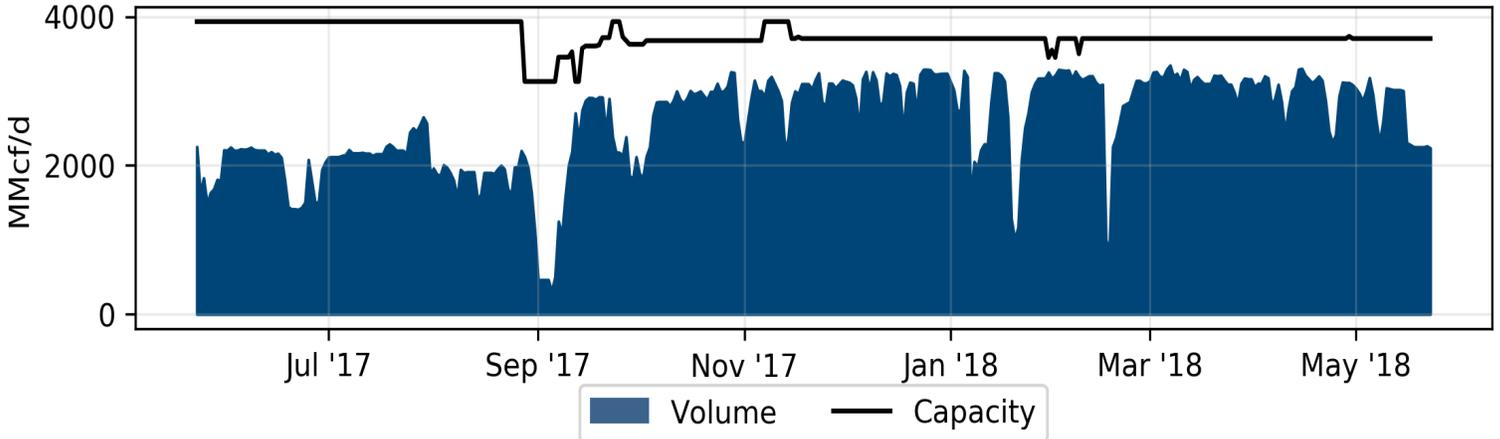
Columbia Gas Trans: Braxton-Stonewall



LNG: Cove Point



LNG: Sabine



■ Volume — Capacity

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