# Waking Up or an Overreaction?
## U.S. Power and Gas Weekly

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Dan Grunwald
Associate, Power and Gas
+1 312 244-7135
daniel.grunwald@morningstar.com

**Data Sources Used in This Publication**
PJM
EIA
NRC
NOAA
CME

To discover more about the data sources used, click here.

### Gas Price Jump

Natural gas prices jumped Monday as weekend 6-10-day forecast models turned colder. Those models ushered in considerable heating degree day forecast expansion against a backdrop of earlier expectations that winter would be late this year. With injection season ending on time after all though, any further recovery to the current low storage numbers looks unlikely. The prospect of an early winter at current storage levels has already woken the market and pushed prices above the $3.00/mmBtu ceiling last month. This weekend's weather shift has pushed the market up to over $3.50/mmBtu shifting prices back to a more normal range relative to storage levels. This note looks at why the changing year-on-year supply demand picture may still prevent any further sizable move upward.

### Supply Stack Shift Re-Iteration

The power grid's increasing reliance on natural gas is worth reiterating and explains a large part of how the market finds itself in such short supply today. As noted in our mid-October note "PJM, a New Coal/Gas Switching Regime?" increased power burn, especially in the Eastern Interconnect, used up record  additional gas supply this year at the expense of winter storage.

This changing picture results from gas capacity additions and coal retirements but also from new usage patterns. As natural gas capacity has shifted over the past few years demand has increased more rapidly than expected. That's because new capacity has gravitated away from the old peaking plant model toward taking over the intermediate portion of the stack. The result is an increase in both running time and usage. Exhibit 1 shows how both capacity and utilization have grown in the PJM market. This change increases the demand level for added capacity beyond historical norms, exaggerating the impact.

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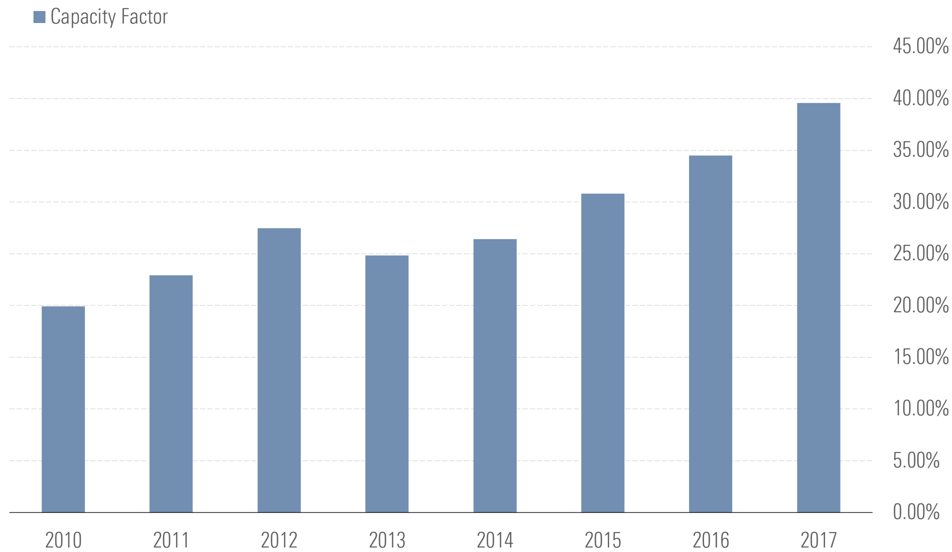
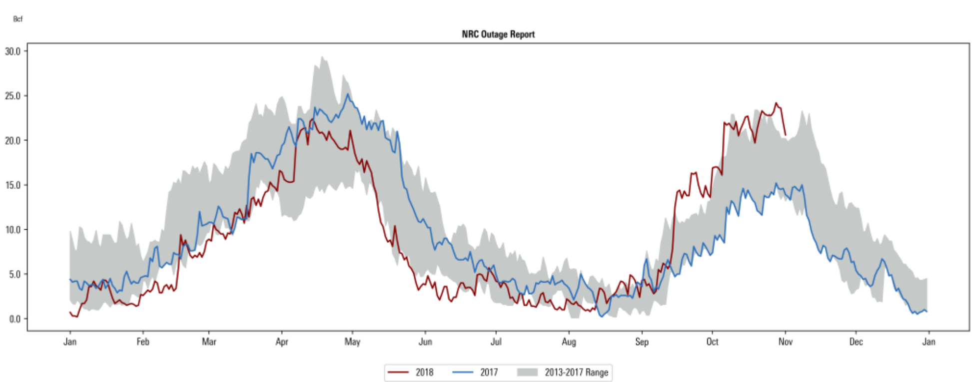
**Exhibit 1** PJM Historical Capacity Utilization Factor




Source: PJM, EIA, Morningstar

This year, outage situations, as well as high demand profiles in both summer and winter, have confirmed greater reliance on natural gas power generation and its increasing takeover of the upper end of the baseload stack. As nuclear units came offline this fall to refuel, natural gas stepped in to take their place (Exhibit 2). These nuclear outages are now coming off, providing some relief for natural gas demand in time for winter weather.

**Exhibit 2** NRC Nuclear Outage Reporting

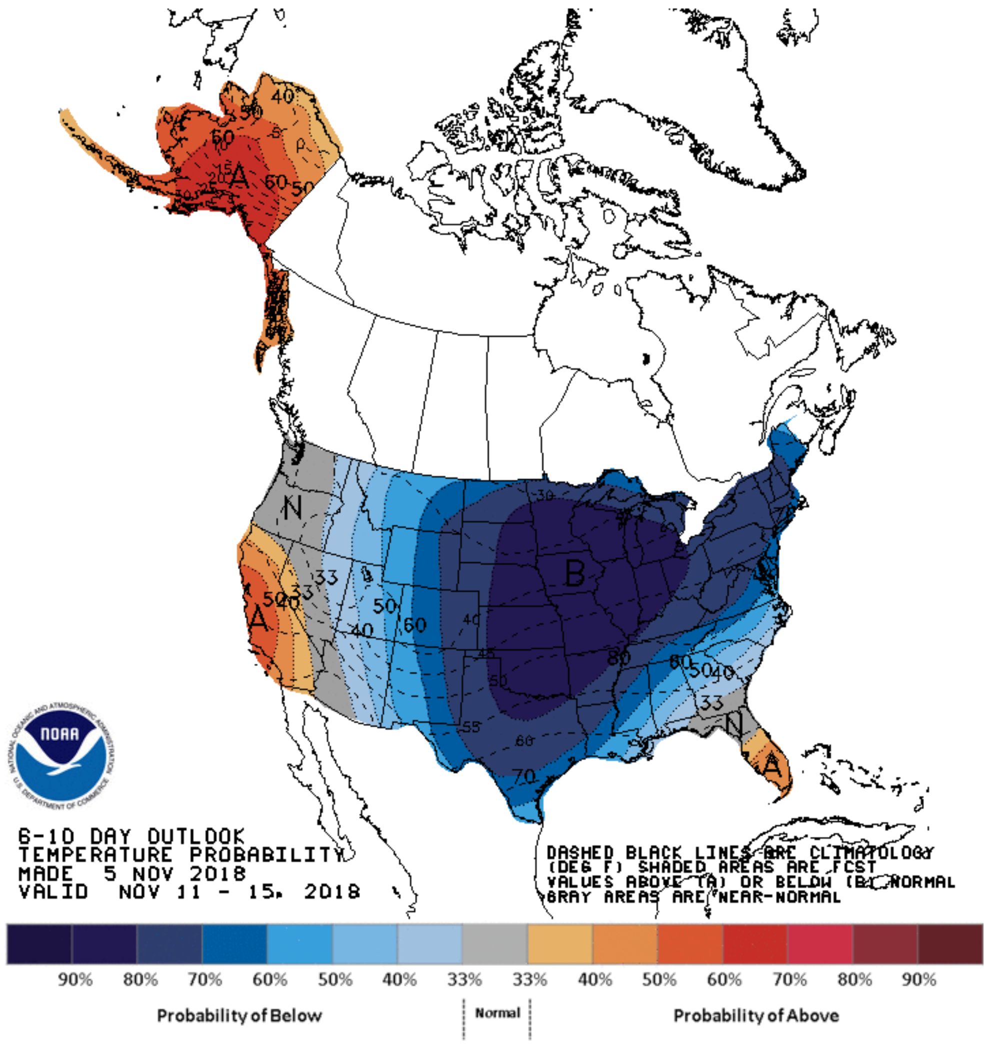



Source: Nuclear Regulatory Commission

## Cold Midwest Blast

Even though returning nukes may see power demand for natural gas trend downward over the next couple of weeks the story this week is still dominated by weather. As noted in our recent storage update "Natural Gas Storage, Will It Be Enough?" the two regions that warrant special attention early this winter are New England and the Midwest. The weekend models forecast polar air moving south to provide a cold blast through the Midwest (Exhibit 3). This is a typical start to winter, dashing hopes that extended fall weather could allow storage reserves to build up further. Midwest storage inventories are still under their normal 1,000 billion cubic feet level for the start of winter (Nov. 1), sitting at 956 Bcf as of Oct. 26. This week will bring further additions, but with withdrawals now expected for the northern regions, the storage number is unlikely to hit 1,000 Bcf by season end.

**Exhibit 3** NOAA 6-10 Probability Forecast




Source: NOAA

## Weather Volatility

As we noted last week "Mild Winter or Polar Vortex for New England?" the western Pacific is currently causing weather models to whip back and forth and they are still not settled, making for a volatile outlook.. The increased frequency of winter extremes (both warm and cold) gives rise to the possibility of either a sizable surplus or a sizable deficit in storage at the end of the coming winter. This risk premium is finding its way into the gas price, which is now moving higher and closer to expected winter levels.

**Hitting the Brakes or Stepping on the Gas**

Weather continues to drive volatility in the natural gas market. With generation demand sensitive to nuclear outages and encroaching ever deeper into the baseload stack, we expect a drop in power burn, starting with this week's storage number, as the nukes return from maintenance. A decent injection this week could see prices retreating again. Such a reversal is even more likely if models revert to showing a bit more warmth in coming weeks.

Longer term, winter weather models continue to frustrate. This year's market has been banking on a moderate winter, but that scenario has become less likely. As models still don't want to provide clear direction it is unlikely that prices will provide a sizable retreat at this point, but they should see a small to moderate correction after this week's overreaction.

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For More Information

+1 800 546-9646 North America
+44 20 3194 1455 Europe
commoditydata-sales@morningstar.com

MORNINGSTAR®

22 West Washington Street
Chicago, IL 60602 USA