

A Lackluster PJM Summer

U.S. Power and Gas Weekly

Morningstar Commodities Research
May 22, 2019

Matthew Hong
Director of Research, Power and Gas
+1 312 244-7649
matthew.hong@morningstar.com

Data Sources Used in This Publication
NOAA

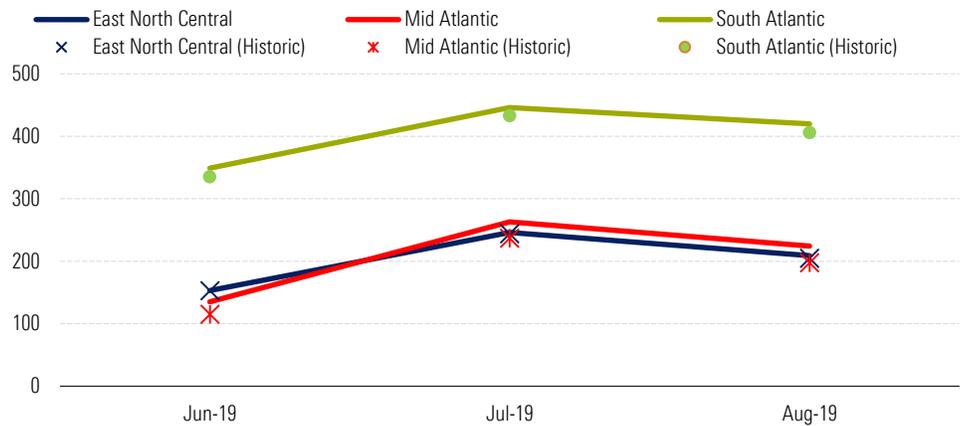
Shoulder Season in PJM

In the eastern half of the country, May is typically when temperatures transition from spring to summer, but for some parts of the country, summer could not come soon enough. Although it did not feel like it at times, heating-degree days in the East North Central, mid-Atlantic, and South Atlantic, which encompasses the PJM region, ended up warmer than normal. Deviations from normal heating-degree days actually ended up lower by 1%, 4%, and 10%, respectively. Actual heating-degree days for April in those regions also ended up warmer than the monthly heating-degree forecast provided by the National Oceanic and Atmospheric Administration. This note looks at what will drive PJM prices as the country enters the summer months.

Summer Cooling-Degree Days

Cooling-degree days in the East North Central, mid-Atlantic, and South Atlantic regions for the summer are forecast to trend close to historical levels, with some slight deviations (Exhibit 1). While cooling-degree days should stay in line with historical norms in the East North Central, cooling-degree days in the mid-Atlantic and South Atlantic are forecast to be above normal, with the largest deviation from historical levels coming in July. Cooling-degree days in July are forecast to be 263 and 446 in the mid-Atlantic and South Atlantic, respectively. Normal levels in July for those two regions are 237 and 433, which shows NOAA's expectation for a normal to warmer summer this year.

Exhibit 1 East North Central, Mid-Atlantic, and South Atlantic Cooling-Degree Days



Source: NOAA

Western Hub Day-Ahead Futures

Day-ahead peak power prices at PJM's Western Hub for the summer (June, July, August) have been range-bound since the beginning of spring, settling at \$35.52 per megawatt as of May 17 (Exhibit 2). Current trading levels are also in line with the past few years. The June, July, and August contract over the last three years had an average price of \$36/MW, putting current levels slightly below the three-year average. At the moment, it's hard to see power prices moving up on changes to electricity demand alone, especially since prices seem reflective of a normal summer. If prices do move up this summer, changes in natural gas fundamentals will be the likely driver, especially as Western Hub prices track closer to Henry Hub natural gas. Heat rates since March 1 have stayed in a very tight 12.75 million British thermal units per megawatt to 14.0 mmBtu/MW range, averaging 13.25 mmBtu/MW over that period. At a 13.25 heat rate, much of the generation stack in PJM is in the money, and with the three-year summer average at a 12.97 mmBtu/MW heat rate, it's hard to see prices moving significantly in either direction from where we are now.

Exhibit 2 Summer Western Hub Day-Ahead Futures and Henry Hub Natural Gas (June, July, August)



Source: ICE

Expansions in natural gas generation over the years have further woven together the price relationship between power and natural gas, especially in PJM, where natural gas generation has grown significantly over the years. On May 19, an operational outage at a MarkWest plant in West Virginia took over 2 billion cubic feet per day out of the Columbia Gas Transmission system, which ended up causing Northeast production to fall by 2.6 Bcf/d. This likely drove spot month natural gas prices higher by \$0.03. Power prices at PJM's Western Hub settled down \$0.05 from May 17's close of \$32.10/MW. The fact that this disruption was short-lived probably saved spot month power futures from moving higher. While this event was resolved relatively quickly, Western Hub power prices are susceptible to long-term disruptions, and while increased demand from the electricity sector is unlikely to drive prices higher, sustained operational challenges on the pipeline system could push power prices up in the summer.

Conclusion

As the eastern half enters the high-demand summer months, PJM looks to be fairly priced. With NOAA forecasting a somewhat normal summer, prices appear to be trending toward historically normal levels.

While demand is unlikely to drive changes in power prices, changes in natural gas prices may. As the relationship between Western Hub and Henry Hub strengthens, changes in natural gas are more likely to affect the price of power this summer. In short, the market looks to be pointing toward a lackluster summer, barring any unforeseen event. ■■■

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For More Information

+1 800 546-9646 North America

+44 20 3194 1455 Europe

commoditydata-sales@morningstar.com



22 West Washington Street
Chicago, IL 60602 USA

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