

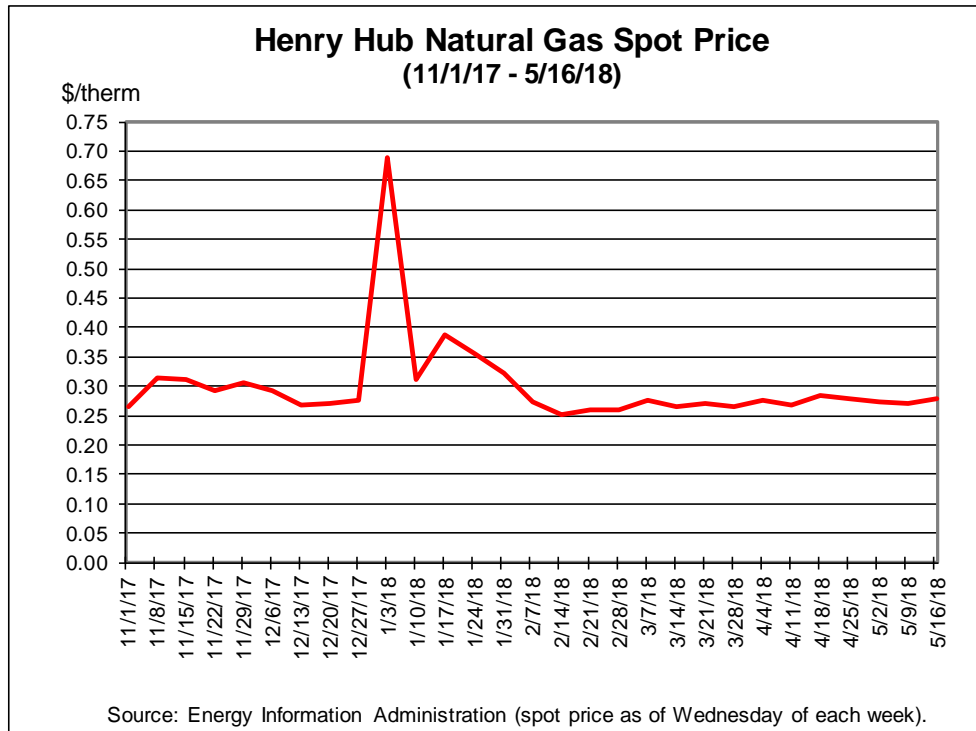
WHOLESALE NATURAL GAS MARKET ASSESSMENT

Wholesale Natural Gas Futures Prices as of May 4, 2018

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Outlook for Wholesale Natural Gas Prices

This report presents the Office of Technical and Regulatory Analysis' ("OTRA") assessment of wholesale natural gas supply and prices for May 4, 2018.¹ OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around, or below, \$0.30 per therm during July 2018 (see Henry Hub Spot Price figure). Recent natural gas spot prices are down at least 10 percent from prices for the same period a year ago.



Data from the Energy Information Administration ("EIA") indicates that the average Henry Hub natural gas spot price for April 2018 was about \$0.28 per therm, up from \$0.27 in March 2018.² EIA expects natural gas prices, on average, to be fairly stable over the forecast period despite new natural gas export capabilities and growing domestic natural gas consumption—with electric power generation being a leading contributor. Henry Hub natural gas prices averaged about \$0.30 per therm in 2017 and the forecasted price is expected to average \$0.30 per therm in 2018 and \$0.31 per therm in 2019.³

¹ This assessment is based on information collected from various sources. Projecting future conditions is a difficult task at best, so these comments are subject to change as new information becomes available.
² EIA, *Natural Gas Weekly Update* (various issues).
³ EIA, *Short-Term Energy Outlook* (May 2018) at 2.

As of May 11, 2018, natural gas in storage stood at 1,538 billion cubic feet (“Bcf”). The working gas in storage is down about 35 percent from the same period a year ago, and is down by over 25 percent compared to the 5-year average.

Commodity prices, together with the costs Washington Gas Light (“WGL”) incurs for storage, peaking, and balancing, have resulted in a higher retail price than what was experienced last year. Specifically, the costs WGL incurs to acquire and deliver natural gas to customers are reflected in WGL’s retail commodity price, called the Purchased Gas Charge (“PGC”).⁴ The PGC for May 2018 is 43.67 cents (\$0.44) per therm, compared with 63.84 cents (\$0.64) per therm for the same period a year ago—down about 32 percent. The PGC for May 2018 was unchanged from the previous month.

The major factors that contribute to this outlook are described below. These factors include the weather, the economy, the storage situation, the supply situation, and national security.

Weather

Weather variations always have an effect on natural gas price formation. As of May 17, 2018, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook for June 2018 favors above normal temperatures for the Southwest and much of the Central and Southern Great Plains.⁵ The expected weather for June may provide some upward pressure on natural gas prices.

Economic Conditions

National economic factors also contribute to the formation of wholesale natural gas prices. The Federal Open Market Committee (“FOMC”) maintained its target range for short-term interest rates at a still relatively low 1-1/2 to 1-3/4 percent.⁶ **“Information received since the Federal Open Market Committee met in March indicates that the labor market has continued to strengthen and that economic activity has been rising at a moderate rate. Job gains have been strong, on average, in recent months, and the unemployment rate has stayed low. Recent data suggest that growth of household spending moderated from its strong fourth-quarter pace, while business fixed investment continued to grow strongly. On a 12-month basis, both overall inflation and inflation for items other than food and energy have moved close to 2 percent. Market-based measures of inflation compensation remain low; survey-based measures of longer-term inflation expectations are little changed, on balance.”**⁷ Thus, at present, the current state of economic activity may still be relatively neutral for natural gas prices.

⁴ The current Purchased Gas Charge reflects current market conditions and current collections. The current cost of gas (including commodity, demand, and other cost adjustments) reflects the seasonal market. Alternative suppliers’ newer fixed price offers should generally reflect the PGC benchmark, with anticipated price changes as well, over the next twelve months.

⁵ NOAA at <http://www.cpc.ncep.noaa.gov/>.

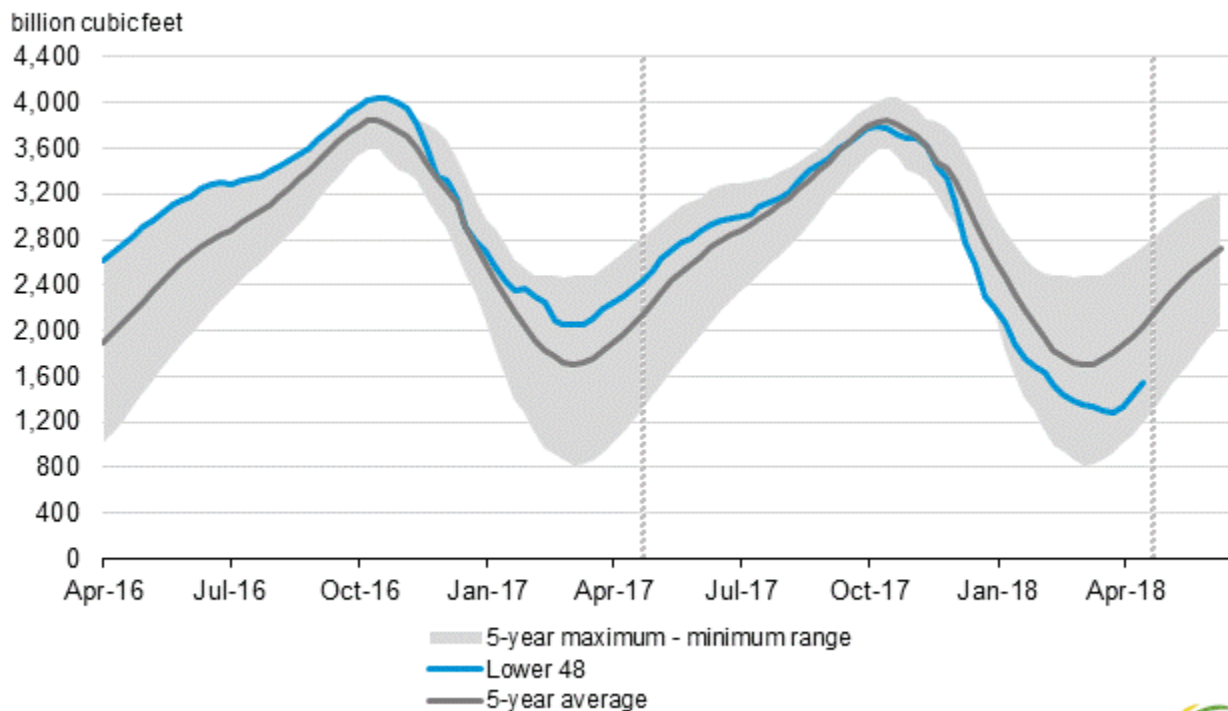
⁶ Statement of the Federal Open Market Committee (released May 2, 2018).

⁷ Ibid.

Storage

EIA reports that the working gas in storage was 1,538 Bcf as of May 11, 2018, a net increase of 106 Bcf from the previous week. Stocks were 821 Bcf lower than the same period a year ago—down 34.8 percent—and down 501 Bcf from the 5-year average of 2,039 Bcf—a decrease of 24.6 percent.⁸ The natural gas storage refill season typically begins on April 1, however, but continued colder-than-normal temperatures throughout most of the Lower 48 states resulted in withdrawals from storage during the first three weeks of April.⁹ Based on a forecast of rising production, EIA anticipates that natural gas inventories will increase by more than the five-year average rate of growth during the injection season (April–October) to exceed 3.5 trillion cubic feet on October 31, which would be about 8 percent lower than the five-year average for the end of October.¹⁰ EIA also expects that higher natural gas production during the injection season will offset current low storage levels and keep price movements moderate.¹¹ Thus, the current storage picture should continue to be neutral for natural gas prices.

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2013 through 2017. The dashed vertical lines indicate current and year-ago weekly periods.

Source: EIA, *Weekly Natural Gas Storage Report* (released May 17, 2018)

⁸ EIA, *Weekly Natural Gas Storage Report* (released May 17, 2018).

⁹ EIA, *Short-Term Energy Outlook* (May 2018) at 9.

¹⁰ *Ibid.* at 2.

¹¹ *Ibid.* at 9.

Supply

Flexibility in the nation's domestic production has helped to soften upward price pressure, especially with the continued development of natural gas in shale formations. In the May 2018 Short-Term Energy Outlook ("STEO"), EIA notes that **"U.S. dry natural gas production averaged 73.6 billion cubic feet per day (Bcf/d) in 2017. EIA forecasts dry natural gas production will average 80.5 Bcf/d in 2018, establishing a new record. EIA expects natural gas production will rise again by 2.9 Bcf/d in 2019 to 83.3 Bcf/d. Growing U.S. natural gas production is expected to support increasing natural gas exports in the forecast."**¹²

National Security

As noted in previous reports, we see little danger to the natural gas supply.¹³ Most of the U.S. supply is secure, in that it is generally domestically produced or imported from Canada.

Future Natural Gas Prices

The PGC rate of roughly \$0.44 per therm for May 2018 is unchanged from the previous month, and is down 31.6 percent compared to the same period a year ago.¹⁴ The June 2018 PGC (assuming that the commodity market adjustment factor is zero) may be around \$0.44 per therm, based, in part, on the expectation that near-term NYMEX futures prices trade between \$0.26 and \$0.29 per therm, among other things. OTRA's assessment of natural gas prices may be significantly different from actual market prices if: (i) there are significant variations in weather-related factors, (ii) crude oil prices change significantly, (iii) other substantial disruptions to the energy market occur, or (iv) certain cost-related assumptions are significantly different.

As always, investments in energy efficiency and conservation measures are important ways toward reducing energy consumption and lowering energy bills. Ratepayers are encouraged to invest in measures such as insulation, weather stripping, or replacing an old inefficient water heater and/or furnace. Finally, for those residential consumers whose budgets are severely challenged, arrangements for assistance should be made as soon as possible in anticipation of need. Contact either the District Department of the Environment's Energy Office or the D.C. Public Service Commission's Office of Consumer Services for advice and/or solutions as well as programs such as the Washington Area Fuel Fund (888-318-9233).

¹² EIA, *STEO* (May 2018) at 2.

¹³ The Department of Homeland Security ("DHS") recently issued an advisory bulletin on May 9, 2018. However, this appears to repeat the expired advisory bulletin from November 9, 2017, which highlighted the continuing threat from homegrown terrorists, many of whom are inspired online to violence by foreign terrorist organizations. The bulletin went on to indicate that an informed, vigilant, and engaged public remains one of the greatest assets to identify potential homegrown terrorists and prevent attacks. The National Terrorism Advisory System, or NTAS, replaces the color-coded Homeland Security Advisory System.

¹⁴ The commodity market adjustment factor for the May 2018 PGC was \$0.02 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor ("CMAF")) being equal to \$0.4167 per therm.

Wholesale Natural Gas Price/Supply Assessment Information

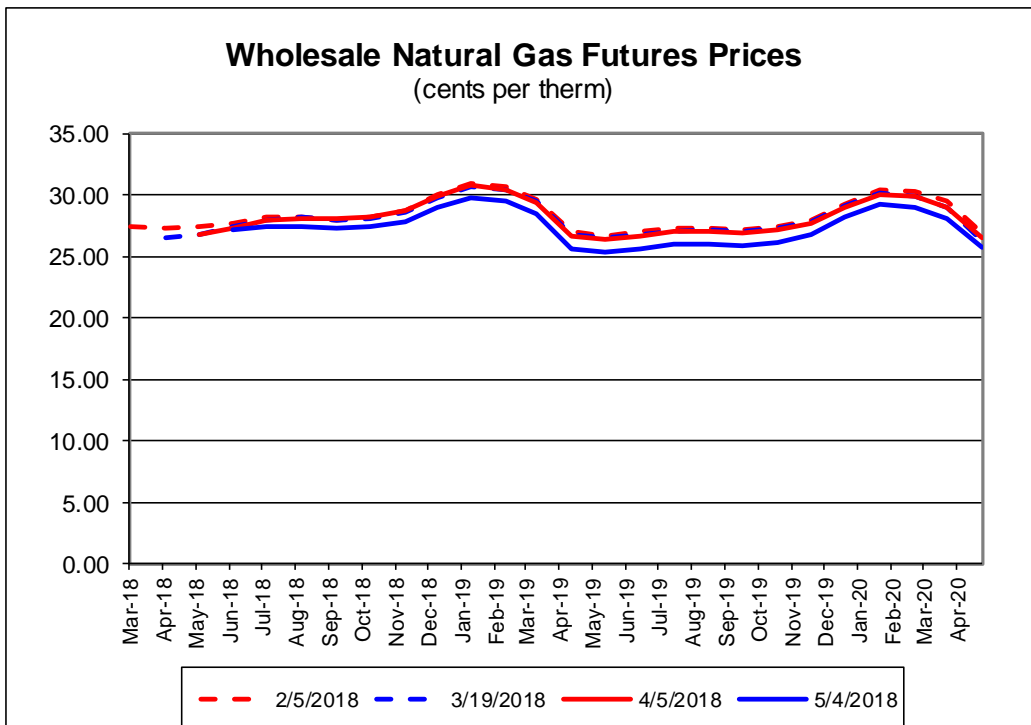
Current for May 4, 2018

Price Information

Twelve Month NYMEX Strip Components
5/4/18, cents per therm

Henry Hub Spot Market Price
5/4/18, cents per therm

<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Jun 18 27.11	Jun 18 27.29	26.9
Jul 18 27.41	Jul 18 27.91	
Aug 18 27.46	Aug 18 28.12	
Sep 18 27.29	Sep 18 28.03	
Oct 18 27.40	Oct 18 28.17	
Nov 18 27.85	Nov 18 28.65	
Dec 18 28.95	Dec 18 29.91	
Jan 19 29.79	Jan 19 30.75	
Feb 19 29.46	Feb 19 30.42	
Mar 19 28.42	Mar 19 29.35	
Apr 19 25.58	Apr 19 26.67	
May 19 25.29	May 19 26.40	



The current PGC for May 2018 is about \$0.44 per therm. Assuming, among other things, that near-term futures prices are around \$0.26 to \$0.29 per therm, the PGC rate (excluding the commodity market adjustment factor) for June 2018 may remain around \$0.44 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for June 2018 is that wholesale prices may remain around \$0.30 per therm, or less, resulting in wholesale prices that are at least 2 percent lower compared to year ago levels (see Market Conditions Summary).

Weather Forecast

1. Current for next few days to one week:

<http://www.cnn.com/Weather/>
<http://home.accuweather.com/>

2. National Oceanic and Atmospheric Administration Forecast for the Winter

<http://www.noaa.gov/>

3. U.S. Weather Service Atlantic Hurricane and Storm Reports

<http://www.nhc.noaa.gov/>

Wholesale Natural Gas Market Conditions Summary
May 22, 2018

Factors	Next Month	Summer Season
Oil Prices	Yellow	Red
Weather - Temperature	Red	Red
Weather - Hurricanes	Yellow	Red
Economic Conditions	Yellow	Yellow
Storage	Yellow	Red
Natural Gas Supply	Yellow	Yellow
National Security	Yellow	Yellow
Overall	Yellow	Red

Code: Red - Upward Pressure

Blue - Downward pressure

Yellow - No Change

No color - Not Applicable
N.A.