

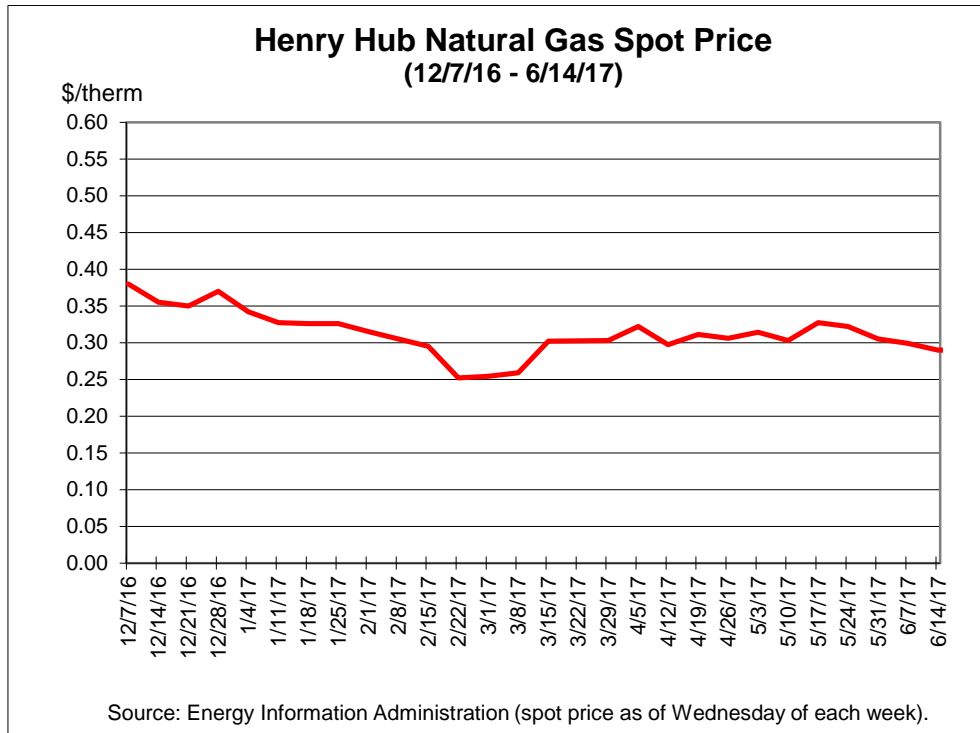
# WHOLESALE NATURAL GAS MARKET ASSESSMENT

## Wholesale Natural Gas Futures Prices as of June 5, 2017

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Office of Technical and Regulatory Analysis

### 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 June 2017.<sup>1</sup> OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around \$0.30 per therm during July 2017 (see Henry Hub Spot Price figure). Recent natural gas spot prices are up about 2 percent compared to 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 May 2017 was about \$0.32 per therm, up slightly from the \$0.31 average for the previous month of April.<sup>2</sup> In its Short-Term Energy Outlook ("STEO") for June 2017, EIA indicates that **"[i]nventory levels that are above the five-year average and forecasts of moderate temperatures are contributing to lower prices. For the week ending May 26, natural gas inventories increased to 2,525 billion cubic feet (Bcf), 10% above the five-year average for that time of year, but 13% below last year's record highs at the end of May.... Capital expenditures for 22 U.S. natural gas producers increased year-over-year**

<sup>1</sup> 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.

<sup>2</sup> EIA, *Natural Gas Weekly Update* (various issues).

**in the first quarter of 2017 after almost two years of annual declines. After averaging [\$0.20 per therm] in the first quarter of 2016, natural gas futures prices rose to [\$0.31 per therm] in the first quarter of 2017, a 55% year-on-year increase. Higher prices increased cash flow, which helped to stabilize and eventually increase capital expenditures. With natural gas prices projected to rise by the fourth quarter of 2017, producers are continuing to add drilling rigs. For the week ending June 2, natural gas-directed drilling rig count was 100 rigs higher than this time last year. Increases in rig counts and drilling efficiencies are contributing to EIA’s forecast of dry natural gas production rising to an average of 76.6 [Bcf per day (Bcf/d)] in 2018, up from an expected 73.3 Bcf/d in 2017.”<sup>3</sup> EIA expects natural gas prices to rise over the forecast period due to new natural gas export capabilities and growing domestic natural gas consumption. Henry Hub natural gas prices averaged about \$0.250 per therm in 2016 and the forecasted price rises to \$0.316 per therm in 2017 and \$0.341 per therm in 2018.<sup>4</sup>**

As of June 9, 2017, natural gas in storage stood at 2,709 billion cubic feet (“Bcf”). The working gas in storage is down 11 percent from the same period a year ago, and is up by about 9 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”).<sup>5</sup> The PGC for June 2017 is 65.37 cents (\$0.65) per therm, compared with 47.57 cents (\$0.48) per therm for the same period a year ago—up 37 percent. The PGC for June 2017 is also up 2 percent 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 June 15, 2017, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook for July 2017 generally calls for above normal temperatures across much of the nation, with the highest probabilities for the Southwest, southern portion of Texas, as well as parts of Florida and Maine.<sup>6</sup> Near normal temperatures are more likely for parts of the Northwest. The expected weather for July may be somewhat neutral for natural gas prices.

On May 25, 2017, NOAA released its 2017 Atlantic Hurricane Outlook. In particular, NOAA indicates that a near-normal or above-normal hurricane season is most likely. In

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<sup>3</sup> EIA, *Short-Term Energy Outlook* (June 2017) at 9 and 10.

<sup>4</sup> Ibid at 1 and 2.

<sup>5</sup> 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.

<sup>6</sup> NOAA at <http://www.cpc.ncep.noaa.gov/>.

particular, the outlook calls for a 45% chance of an above-normal season, a 35% chance of a near-normal season, and a 20% chance of a below-normal season. NOAA calls for a 70% probability for each of the following ranges of activity during the 2017 hurricane season: 11-17 named storms, which includes Tropical Storm Arlene in April; 5-9 hurricanes; and 2-4 major hurricanes (rated at Category 3 or above, with a maximum sustained wind speed of at least 111 miles per hour). As of June 15, there has been only one named storm, which did not develop into a hurricane. The Atlantic hurricane season generally runs from June 1 through November 30. Any significant storm-related disruption to the energy infrastructure—in the Gulf of Mexico, for example—will tend to contribute to upward pressure on natural gas prices. Thus far, there have been no significant impact on the energy infrastructure.

## **Economic Conditions**

National economic factors also contribute to the formation of wholesale natural gas prices. The Federal Open Market Committee (“FOMC”) raised the target range for short-term interest rates, although it remains relatively low.<sup>7</sup> The FOMC indicated that information received since the Committee met in May indicates that the labor market has continued to strengthen and that economic activity has been rising moderately so far this year. Although job gains have moderated, they have been generally solid since the beginning of the year, and the unemployment rate has declined—down to 4.3 percent in May compared to 4.8 percent in January. Household spending has picked up in recent months, and business fixed investment has continued to expand. On a 12-month basis, inflation has declined recently and, like the measure excluding food and energy prices, is running somewhat below 2 percent—one of the FOMC’s long-run objectives. Thus, at present, the current state of economic activity may still be relatively neutral for natural gas prices.

## **Storage**

EIA reports that the working gas in storage was 2,709 Bcf as of June 9, 2017, a net increase of 78 Bcf from the previous week. Stocks were 322 Bcf lower than the same period a year ago—down 10.6 percent—and up 228 Bcf from the 5-year average of 2,481 Bcf—an increase of 9.2 percent.<sup>8</sup> EIA indicates that most of the recent net injections into storage have been lower than the five-year average.<sup>9</sup> Thus, the current storage picture appears relatively neutral for natural gas prices at this time.

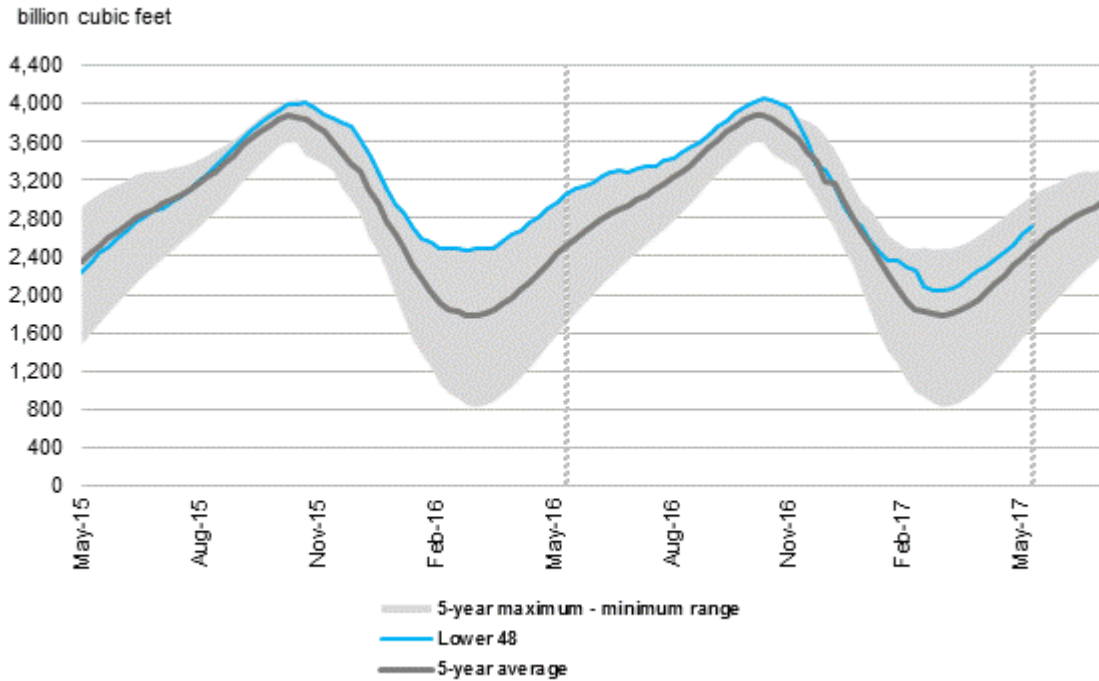
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<sup>7</sup> *Statement of the Federal Open Market Committee* (released June 14, 2017).

<sup>8</sup> EIA, *Weekly Natural Gas Storage Report* (released June 15, 2017).

<sup>9</sup> EIA, *Natural Gas Weekly Update* (released June 15, 2017).

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 2012 through 2016. The dashed vertical lines indicate current and year-ago weekly periods.  
 Source: EIA, *Weekly Natural Gas Storage Report* (released June 15, 2017)

## 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 June 2017 STEO, EIA indicates that “[n]atural gas production is forecast to average **73.3 billion cubic feet per day (Bcf/d) in 2017, a 1.0 Bcf/d increase from the 2016 level. This forecast increase would reverse a 2016 production decline, which was the first annual decline since 2005. Natural gas production in 2018 is forecast to be 3.3 Bcf/d above the 2017 level.**”<sup>10</sup>

## National Security

As noted in previous reports, we see little danger to the natural gas supply.<sup>11</sup> Most of the U.S. supply is secure, in that it is generally domestically produced or imported from Canada.

<sup>10</sup> EIA, *STEO* (June 2017) at 1.

<sup>11</sup> The Department of Homeland Security (“DHS”) issued its last advisory bulletin on May 15, 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.

## Future Natural Gas Prices

The PGC rate of roughly \$0.65 per therm for June 2017 is up 2.4 percent from the previous month, and is up 37.4 percent compared to the same period a year ago.<sup>12</sup> The July 2017 PGC (assuming that the commodity market adjustment factor is zero) should be around \$0.48 per therm, based, in part, on the expectation that near-term NYMEX futures prices continue to trade between \$0.28 and \$0.32 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).

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<sup>12</sup> The commodity market adjustment factor for the June 2017 PGC was \$0.13 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor ("CMAF")) being equal to \$0.5237 per therm.

# Wholesale Natural Gas Price/Supply Assessment Information

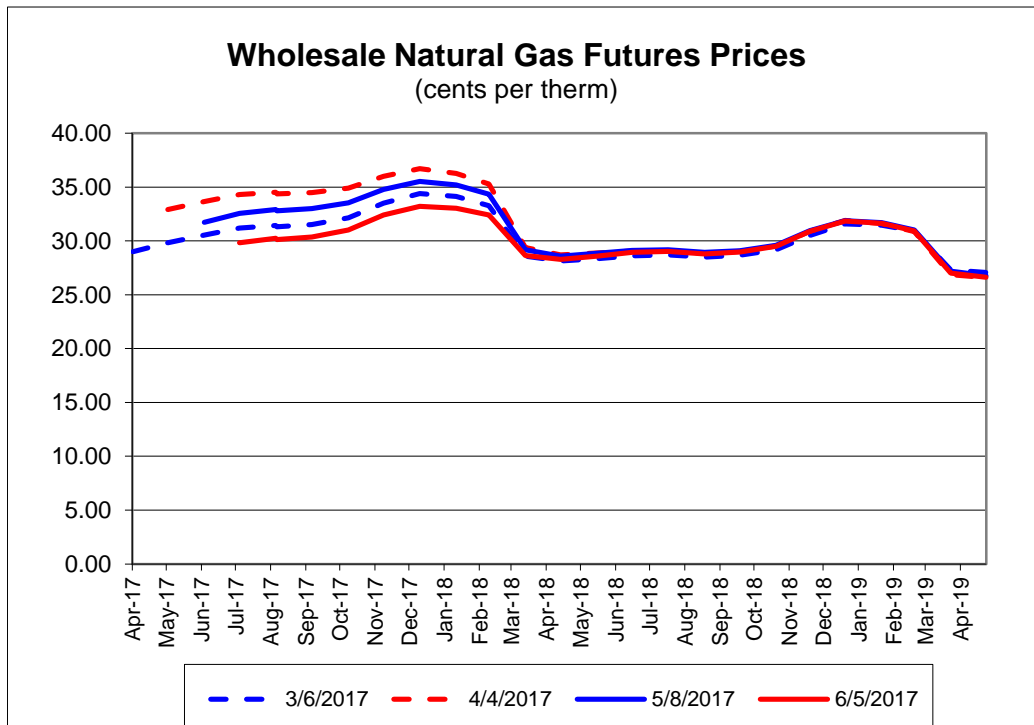
Current for June 5, 2017

## Price Information

Twelve Month NYMEX Strip Components  
6/5/17, cents per therm

Henry Hub Spot Market Price  
6/5/17, cents per therm

<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Jul 17 29.82	Jul 17 32.57	29.1
Aug 17 30.24	Aug 17 32.91	
Sep 17 30.14	Sep 17 32.79	
Oct 17 30.36	Oct 17 33.02	
Nov 17 31.03	Nov 17 33.55	
Dec 17 32.41	Dec 17 34.78	
Jan 18 33.21	Jan 18 35.52	
Feb 18 33.05	Feb 18 35.19	
Mar 18 32.41	Mar 18 34.35	
Apr 18 28.64	Apr 18 29.17	
May 18 28.28	May 18 28.59	
Jun 18 28.60	Jun 18 28.86	



The current PGC for June 2017 is about \$0.65 per therm. Assuming, among other things, that near-term futures prices remain around \$0.28 to \$0.32 per therm, the PGC rate (excluding the commodity market adjustment factor) for July 2017 may be around \$0.48 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for June 2017 is that wholesale prices may remain around \$0.30 per therm, resulting in wholesale prices that are at least 15 percent higher 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 June 16, 2017

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

Code: Red - Upward Pressure

Blue - Downward pressure

Yellow - No Change

No color - Not Applicable  
N.A.