

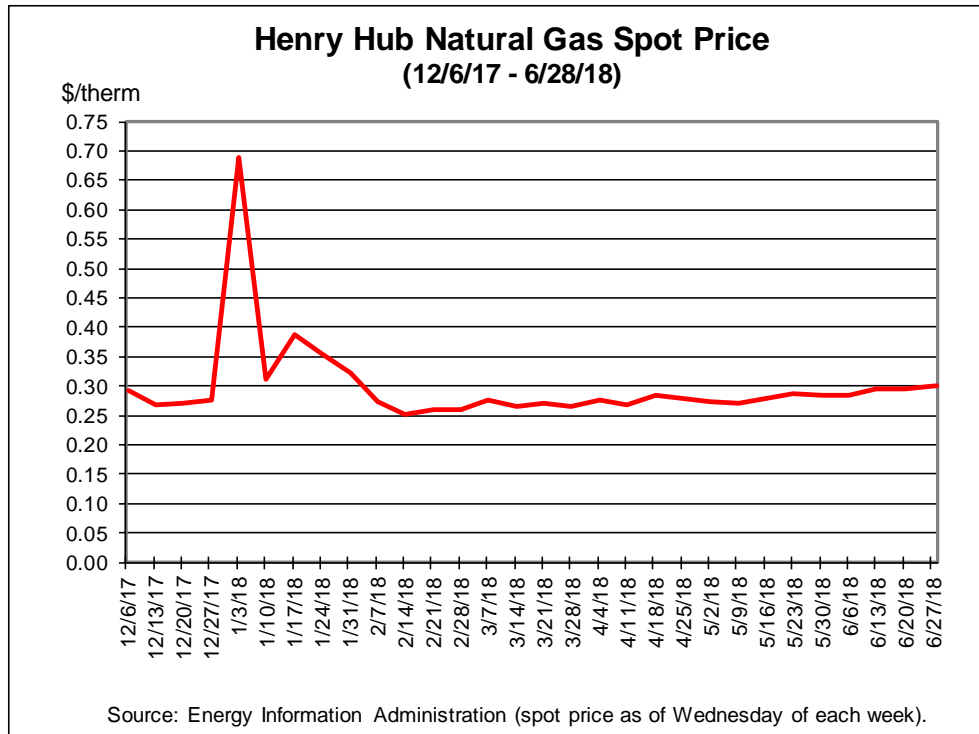
WHOLESALE NATURAL GAS MARKET ASSESSMENT

Wholesale Natural Gas Futures Prices as of June 8, 2018

by Roger Fujihara
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 8, 2018.¹ OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around, or slightly higher than, \$0.30 per therm during July 2018 (see Henry Hub Spot Price figure). Recent natural gas spot prices are up around 1 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 May 2018 was about \$0.28 per therm, unchanged from April 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

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).

average \$0.30 per therm in 2018 and \$0.31 per therm in 2019.³ As of June 22, 2018, natural gas in storage stood at 2,074 billion cubic feet (“Bcf”). The working gas in storage is down about 26 percent from the same period a year ago, and is down by roughly 20 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 lower 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 June 2018 is 42.05 cents (\$0.42) per therm, compared with 65.37 cents (\$0.65) per therm for the same period a year ago—down about 36 percent. The PGC for June 2018 was down roughly 4 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 21, 2018, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook for July 2018 favors above normal temperatures for the western portion of the nation, the Central Plains, as well as the middle and lower Mississippi Valleys, and the Northeast.⁵ The expected weather for July may provide some upward pressure on natural gas prices.

On May 24, 2018, NOAA’s Climate Prediction Center released its forecast for the 2018 Atlantic Hurricane Season. NOAA indicates that there is a 75 percent chance of a near-normal to above-normal season. In particular, NOAA predicts a 70-percent likelihood of 10 to 16 named storms, of which 5 to 9 could develop into hurricanes. About 1 to 4 of the potential hurricanes could become major hurricanes (Category 3 or higher), with winds of 111 miles per hour or more. An average hurricane season typically yields 12 named storms, of which 6 become hurricanes, including 3 major hurricanes.⁶ As of June 28, 2018, there has been 1 named storm (Alberto) that moved into the Gulf of Mexico, but did not have any significant impact on the natural gas production facilities. 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—can contribute to 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”) raised its target range for short-term

³ EIA, *Short-Term Energy Outlook* (June 2018) at 2.

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/>.

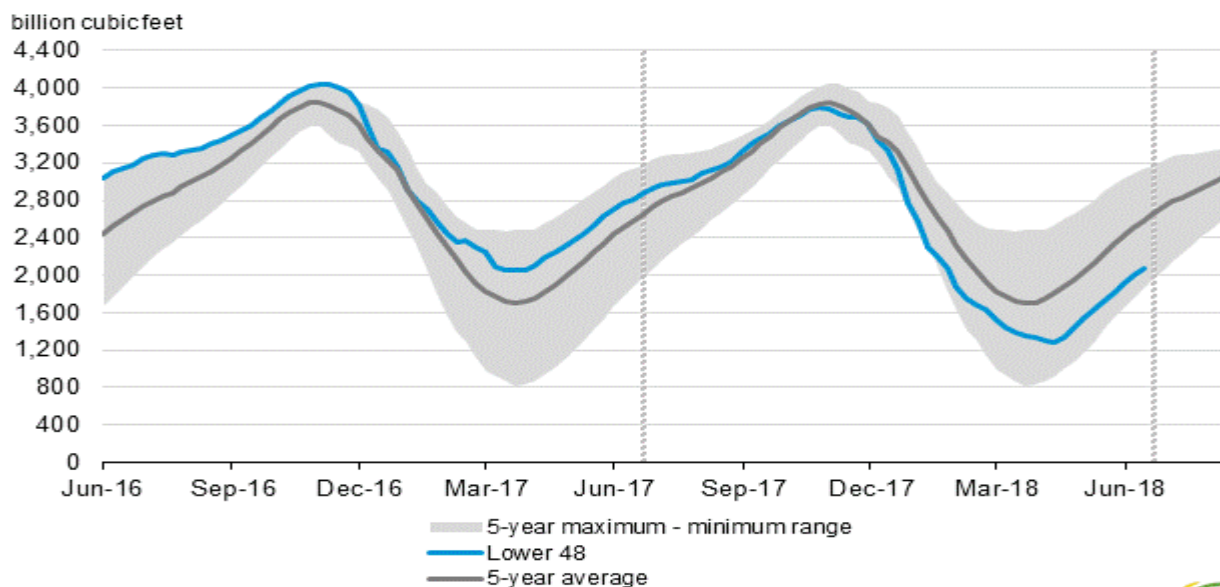
⁶ Ibid.

interest rates up to, a still relatively low, 1-3/4 to 2 percent.⁷ “Information received since the [FOMC] met in May indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate. Job gains have been strong, on average, in recent months, and the unemployment rate has declined[—down to 3.8 percent in May 2018, compared to 4.1 in January 2018]. Recent data suggest that growth of household spending has picked up, while business fixed investment has 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. Indicators of longer-term inflation expectations are little changed, on balance.”⁸ 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 2,074 Bcf as of June 22, 2018, a net increase of 66 Bcf from the previous week. Stocks were 735 Bcf lower than the same period a year ago—down 26.2 percent—and down 501 Bcf from the 5-year average of 2,575 Bcf—a decrease of 19.5 percent.⁹ The natural gas storage refill season typically begins on April 1, 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.¹⁰ Net injections have averaged 9.6 Bcf/d and will have to average 13.3 Bcf/d for the remainder of the refill season to match the five-year average level (3,815 Bcf) by October 31.¹¹ The current storage picture may support upward pressure on 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 June 28, 2018)

⁷ Statement of the Federal Open Market Committee (released June 13, 2018).

⁸ Ibid.

⁹ EIA, *Weekly Natural Gas Storage Report* (released June 28, 2018).

¹⁰ EIA, *Short-Term Energy Outlook* (June 2018) at 8.

¹¹ EIA, *Natural Gas Weekly Update* (release June 28, 2018).

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 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 81.2 Bcf/d in 2018, establishing a new record. EIA expects natural gas production will rise again in 2019 to 83.8 Bcf/d. Growing forecast U.S. natural gas production supports increasing forecast liquefied natural gas (LNG) exports. LNG exports averaged 1.9 Bcf/d in 2017. EIA forecasts LNG exports to average 3.0 Bcf/d in 2018 and 5.1 Bcf/d in 2019."**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 \$0.42 per therm for June 2018 is down 3.7 percent from the previous month, and is down 35.7 percent compared to the same period a year ago.¹⁴ The July 2018 PGC (assuming that the commodity market adjustment factor is zero) may be around \$0.45 per therm, based, in part, on the expectation that near-term NYMEX futures prices trade between \$0.27 and \$0.31 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* (June 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 June 2018 PGC was -\$0.03 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor ("CMAF")) being equal to \$0.4505 per therm.

Wholesale Natural Gas Price/Supply Assessment Information

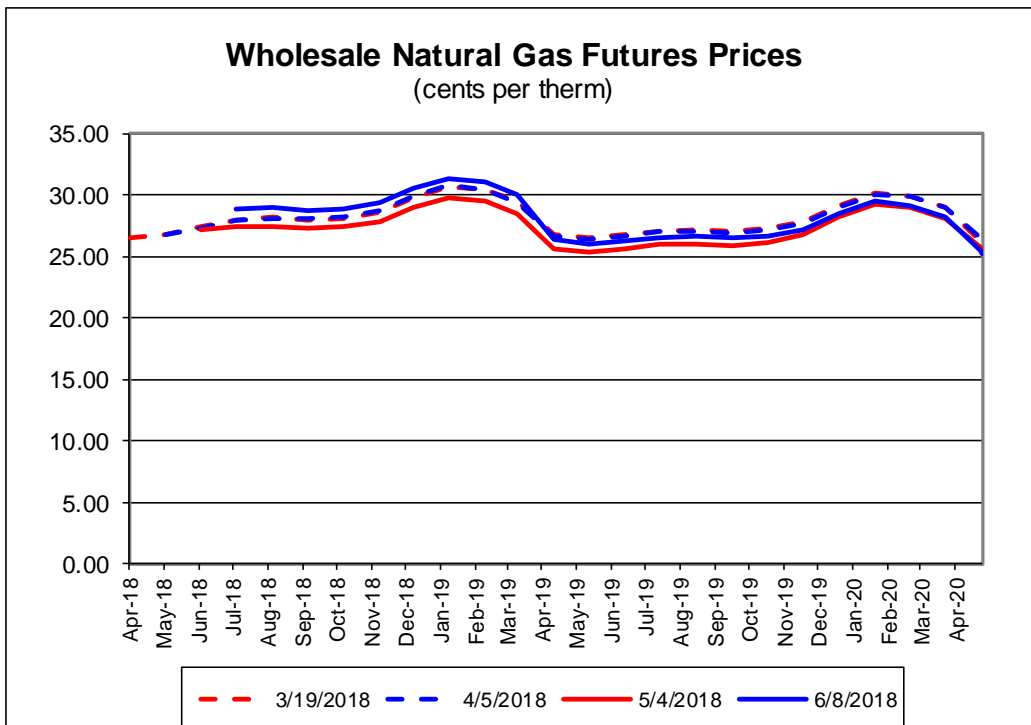
Current for June 8, 2018

Price Information

Twelve Month NYMEX Strip Components
6/8/18, cents per therm

Henry Hub Spot Market Price
6/8/18, cents per therm

<u>Current Month</u>		<u>Previous Month</u>		<u>Current Only Available</u>
Jul 18	28.90	July 18	27.41	28.6
Aug 18	28.94	Aug 18	27.46	
Sep 18	28.76	Sep 18	27.29	
Oct 18	28.90	Oct 18	27.40	
Nov 18	29.37	Nov 18	27.85	
Dec 18	30.47	Dec 18	28.95	
Jan 19	31.33	Jan 19	29.79	
Feb 19	31.02	Feb 19	29.46	
Mar 19	30.04	Mar 19	28.42	
Apr 19	26.37	Apr 19	25.58	
May 19	25.95	May 19	25.29	
Jun 19	26.22	Jun 19	25.61	



The current PGC for June 2018 is about \$0.4205 per therm. Assuming, among other things, that near-term futures prices are around \$0.27 to \$0.31 per therm, the PGC rate (excluding the commodity market adjustment factor) for July 2018 may remain around \$0.45 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for July 2018 is that wholesale prices may remain around \$0.30 per therm, or slightly higher, resulting in wholesale prices that are at least 1 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 27, 2018

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.