

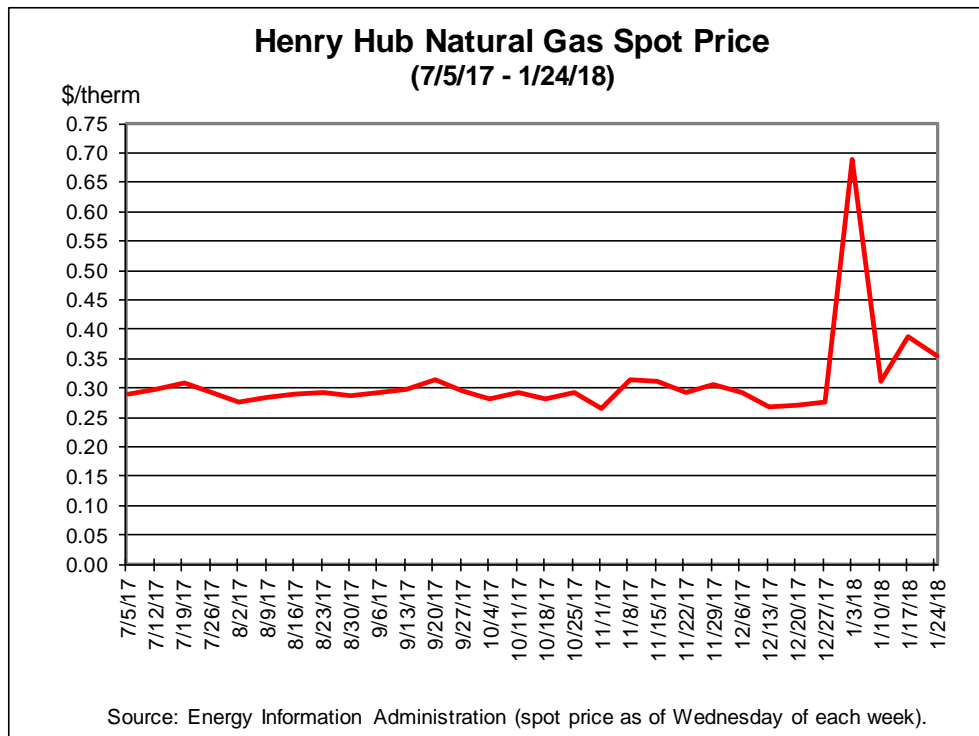
WHOLESALE NATURAL GAS MARKET ASSESSMENT

Wholesale Natural Gas Futures Prices as of January 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 January 4, 2018.¹ OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain between \$0.30 to \$0.40 per therm during February 2018 (see Henry Hub Spot Price figure). Recent natural gas spot prices are up at least 6 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 December 2017 was about \$0.30 per therm, unchanged from the month of November 2017.² 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. Henry Hub natural gas prices averaged about \$0.30 per therm in 2017

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).

and the forecasted price is expected to average \$0.29 per therm in 2018 and \$0.29 per therm in 2019.³

As of January 19, 2018, natural gas in storage stood at 2,296 billion cubic feet (“Bcf”). The working gas in storage is down about 18 percent from the same period a year ago, and is down by roughly 18 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 January 2018 is 43.34 cents (\$0.43) per therm, compared with 43.90 cents (\$0.44) per therm for the same period a year ago—down about 1 percent. The PGC for January 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 January 26, 2018, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its updated outlook for February 2018 favors above normal temperatures for the Southwest and parts of the Southeast.⁵ Below normal temperatures are likely for the central and eastern portions of the nation. The expected weather for February 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 Reserve’s Beige Book provides anecdotal information on current economic conditions from various regions—twelve Federal Reserve Districts—in the nation.⁶ Reports from all 12 Federal Reserve Districts indicated that economic activity continued to expand from late November through the end of last year. The outlook for 2018 remains optimistic. Most regions reported that non-auto retail sales expanded since the last report and that auto sales were mixed. Residential real estate activity remained constrained across the country and most Districts reported little growth in home sales due to limited housing inventory. Nonresidential activity continued to experience slight growth. Most manufacturers reported modest growth in overall business conditions and some manufacturers increased capital expenditures over the reporting period. On balance, employment continued to grow at a modest pace since the

³ EIA, *Short-Term Energy Outlook* (January 2018) at 1.

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/>.

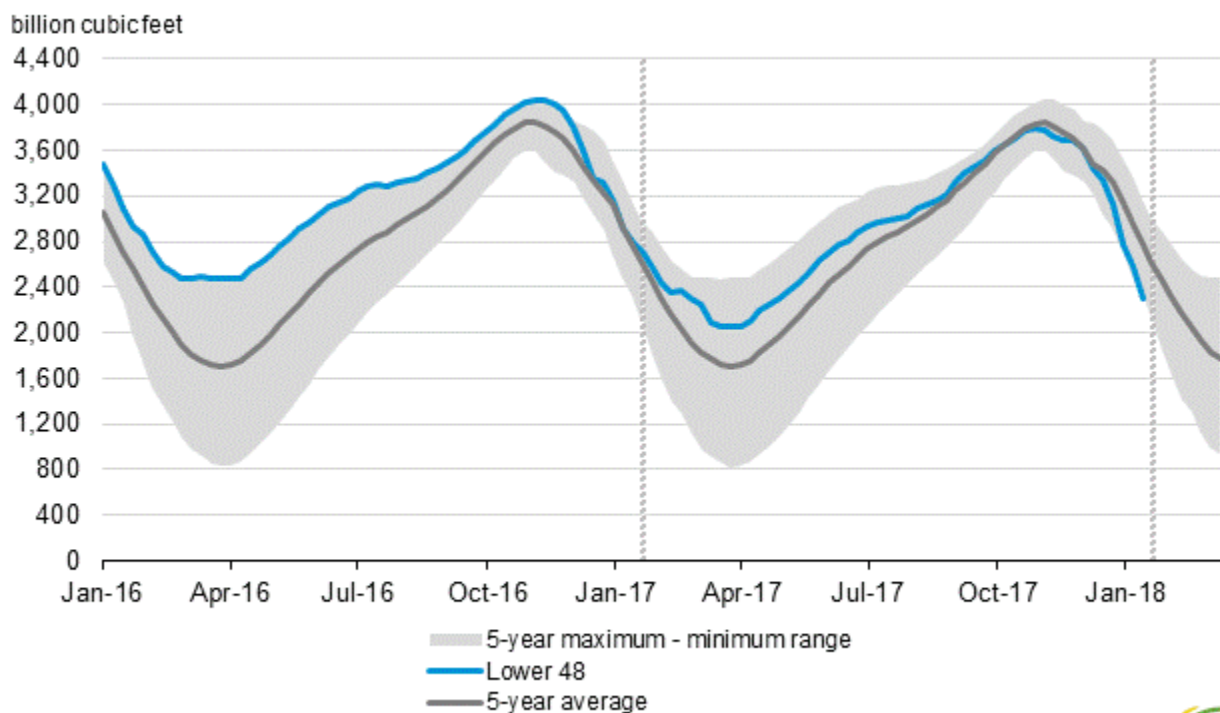
⁶ Beige Book (released January 17, 2018).

previous report. Most regions cited on-going labor market tightness and challenges finding qualified workers across skills and sectors, which, in some instances, was described as constraining growth. Several Districts noted elevated demand for manufacturing and construction labor. 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 2,296 Bcf as of January 19, 2018, a net decrease of 288 Bcf from the previous week. Stocks were 519 Bcf lower than the same period a year ago—down 18.4 percent—and down 486 Bcf from the 5-year average of 2,782 Bcf—a decrease of 17.5 percent.⁷ The colder weather expected in the central and eastern portions of the nation may contribute to larger storage withdrawals. Thus, the current storage picture tends to put some upward pressure on natural gas prices at this time.

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 January 25, 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 January 2018 STEO, EIA notes that “[d]ry natural gas production averaged 73.6 Bcf/d in 2017, up 1.0% from the 2016 level and reversing the 2016 production decline. The

⁷ EIA, *Weekly Natural Gas Storage Report* (released January 25, 2018).

strongest growth in dry natural gas production occurred late in the year, as improved economics related to expanded pipeline capacity contributed to a 3.8% increase in production between the third and fourth quarters of 2017. The rate of production growth is expected to moderate in 2018.... Much of the expected increase in natural gas production is the result of increasing pipeline takeaway capacity out of the Appalachia producing region to end-use markets. The greater pipeline connectivity contributes to higher wellhead natural gas prices for producers and is expected to encourage production growth.... In 2018, U.S. liquefaction capacity will continue to expand. EIA expects the Cove Point terminal in Maryland to ramp up to full capacity.... In both 2018 and 2019 the new liquefaction facilities will require a ramp up period, and they are forecast to operate below nameplate capacity for a period of time, lowering the overall LNG export capacity utilization rate.... In 2017, the United States was a net exporter of natural gas for the first time on an annual basis since 1957, with net exports averaging 0.4 Bcf/d. Overall, net natural gas exports are forecast to average 2.3 Bcf/d in 2018 and 4.6 Bcf/d in 2019.”⁸

National Security

As noted in previous reports, we see little danger to the natural gas supply.⁹ 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 \$0.43 per therm for January 2018 is unchanged from the previous month, and is down 1.3 percent compared to the same period a year ago.¹⁰ The February 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 \$0.29 and \$0.36 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

⁸ EIA, *STEO* (January 2018) at 10-11.

⁹ The Department of Homeland Security (“DHS”) issued its last advisory bulletin on 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.

¹⁰ The commodity market adjustment factor for the January 2018 PGC was \$0.0 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor (“CMAF”)) being equal to \$0.4334 per therm.

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).

Wholesale Natural Gas Price/Supply Assessment Information

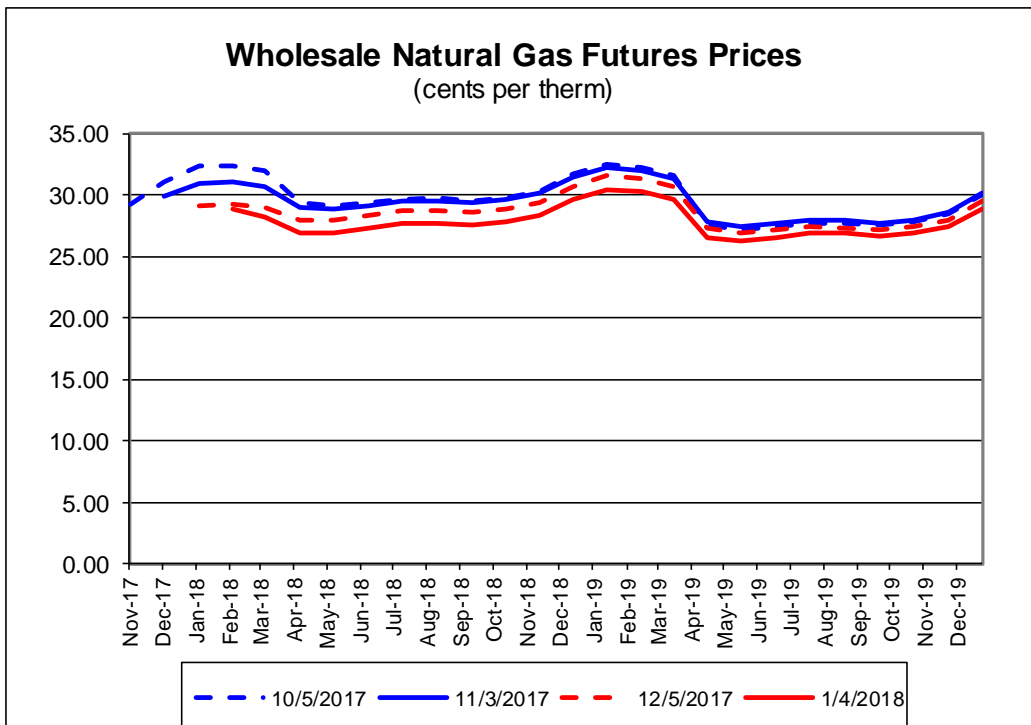
Current for January 4, 2018

Price Information

Twelve Month NYMEX Strip Components
1/4/18, cents per therm

Henry Hub Spot Market Price
1/4/18, cents per therm

	<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Feb 18	28.80	Feb 18 29.20	44.20
Mar 18	28.13	Mar 18 28.94	
Apr 18	26.96	Apr 18 27.97	
May 18	26.92	May 18 27.98	
Jun 18	27.30	Jun 18 28.31	
Jul 18	27.65	July 18 28.65	
Aug 18	27.69	Aug 18 28.70	
Sep 18	27.52	Sep 18 28.53	
Oct 18	27.76	Oct 18 28.78	
Nov 18	28.31	Nov 18 29.36	
Dec 18	29.59	Dec 18 30.69	
Jan 19	30.43	Jan19 31.58	



The current PGC for January 2018 is about \$0.43 per therm. Assuming, among other things, that near-term futures prices are around \$0.29 to \$0.36 per therm, the PGC rate (excluding the commodity market adjustment factor) for February 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 February 2018 is that wholesale prices may remain around \$0.30 to \$0.40 per therm, resulting in wholesale prices that are at least 5 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
January 26, 2018

Factors	Next Month	Winter Season
Oil Prices	Yellow	Yellow
Weather - Temperature	Red	Red
Weather - Hurricanes	No color	No color
Economic Conditions	Yellow	Yellow
Storage	Red	Red
Natural Gas Supply	Yellow	Yellow
National Security	Yellow	Yellow
Overall	Red	Red

Code: Red - Upward Pressure
Blue - Downward pressure
Yellow - No Change
No color - Not Applicable
N.A.