

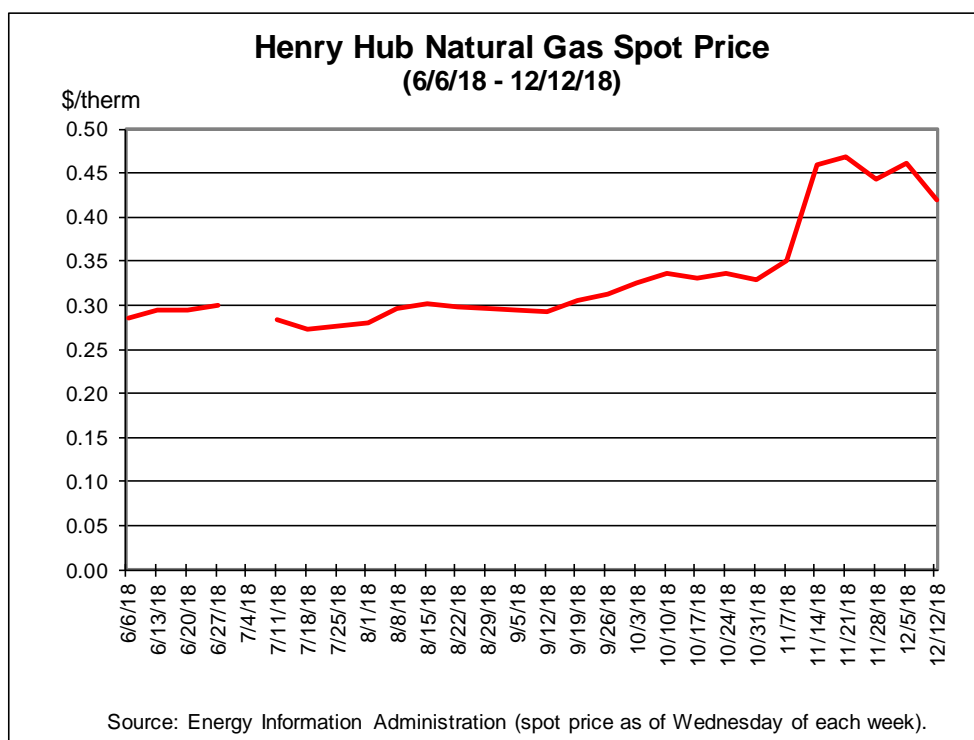
# WHOLESALE NATURAL GAS MARKET ASSESSMENT

## Wholesale Natural Gas Futures Prices as of December 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 December 4, 2018.<sup>1</sup> OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around \$0.35 per therm, or higher, during December 2018 (see Henry Hub Spot Price figure). Recent natural gas spot prices are around 50 percent higher than 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 November 2018 was about \$0.42 per therm, up from roughly \$0.33 per therm in October 2018, as cold weather and low inventory supported higher prices.<sup>2</sup> 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 price is expected to average \$0.32 per therm in 2018 and \$0.31 per therm in 2019.<sup>3</sup> As of December 7, 2018, natural gas in storage stood at 2,914 billion

<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).

<sup>3</sup> EIA, *Short-Term Energy Outlook* (December 2018) at 1.

cubic feet (“Bcf”). The working gas in storage is down about 20 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 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>4</sup> The PGC for December 2018 is 50.91 cents (\$0.51) per therm, compared with 43.34 cents (\$0.43) per therm for the same period a year ago—up nearly 18 percent. The PGC for December 2018 is up over 5 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 December 14, 2018, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook through the first half of January 2019 favors above normal temperatures for the northern and eastern half of the nation, especially the Ohio Valley and Tennessee Valleys, as well as the Mid-Atlantic area.<sup>5</sup> Below normal temperatures are more likely for southeastern New Mexico and much of Texas. The expected weather for January may still provide some upward for natural gas prices, given the relatively low storage levels.

## **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.<sup>6</sup> Most of the twelve regions reported that their economies expanded at a modest or moderate pace from mid-October through late November. In general, consumer spending held steady, although District reports on the growth of nonauto retail sales appeared somewhat weaker, while auto sales tended to improve, particularly for used cars. Tariffs remained a concern for manufacturers, but a majority of regions continued to report moderate growth in the sector. All Districts reported growth in nonfinancial services, ranging from slight to strong. New home construction and existing home sales tended to decline or hold steady, while construction and leasing of nonresidential structures tended to rise or remain flat. Most regions reported that firms remained positive; however, optimism has waned in some as contacts cited increased uncertainty from impacts of tariffs, rising interest rates, and labor market constraints. Thus, the current state of economic activity may still be relatively neutral for natural gas prices.

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<sup>4</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.

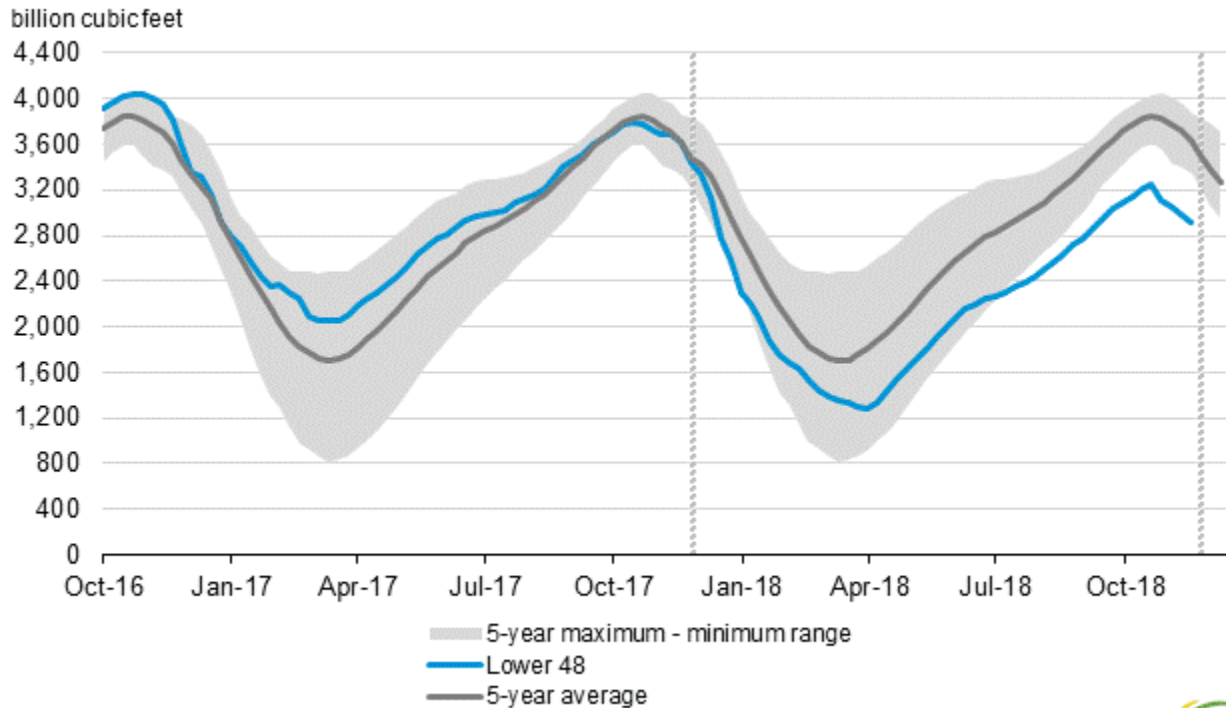
<sup>5</sup> NOAA at <http://www.cpc.ncep.noaa.gov/>.

<sup>6</sup> Beige Book (released December 5, 2018).

## Storage

EIA reports that the working gas in storage was 2,914 Bcf as of December 7, 2018, a net decrease of 77 Bcf from the previous week. Stocks were 722 Bcf lower than the same period a year ago—down 19.9 percent—and down 723 Bcf from the 5-year average of 3,637 Bcf—a decrease of 19.9 percent.<sup>7</sup>

### 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 December 13, 2018)

In its December 2018 Short-Terms Energy Outlook, EIA mentions that the high demand for natural gas for heating and power generation in November contributed to keeping natural gas storage levels relatively low and placing upward pressure on natural gas prices.<sup>8</sup> The current storage picture may continue to support some upward pressure on natural gas prices.

## 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 December 2018 Short-Term Energy Outlook ("STEO"), EIA notes that **"dry natural gas production will average 83.3 billion cubic feet per day (Bcf/d) in 2018, up 8.5 Bcf/d from 2017. Both the level and volume growth of natural gas production in 2018 would establish new records. EIA expects natural gas production will continue to rise in 2019 to an average of 90.0 Bcf/d."**<sup>9</sup> Continued high natural gas production helps reduce the need for

<sup>7</sup> EIA, *Weekly Natural Gas Storage Report* (released December 13, 2018).

<sup>8</sup> EIA, *STEO* (December 2018) at 9.

<sup>9</sup> *Ibid* at 2.

inventory to meet winter demand, which may help offset any upward pressure from the lower storage levels.

## **National Security**

As noted in previous reports, we see little danger to the natural gas supply.<sup>10</sup> 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 \$0.51 per therm for December 2018 is up 5.2 percent from the previous month, and is up 17.5 percent compared to the same period a year ago.<sup>11</sup> The January 2019 PGC (assuming that the commodity market adjustment factor is zero) may remain about the same at around \$0.49 per therm, based, in part, on the expectation that near-term NYMEX futures prices trade between \$0.37 and \$0.46 per therm, among other things—such as summer storage injections around \$0.26 per therm. 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>10</sup> The Department of Homeland Security (“DHS”) last issued an advisory bulletin on September 14, 2018. The bulletin mentioned threats such as foreign terrorist organizations exploiting the internet to inspire, enable, or direct individuals to commit terrorist acts. In addition, terrorist groups are urging recruits to adopt easy-to-use tools to target public places and events. 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.

<sup>11</sup> The commodity market adjustment factor for the December 2018 PGC was \$0.02 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor (“CMAF”)) being equal to \$0.4891 per therm.

# Wholesale Natural Gas Price/Supply Assessment Information

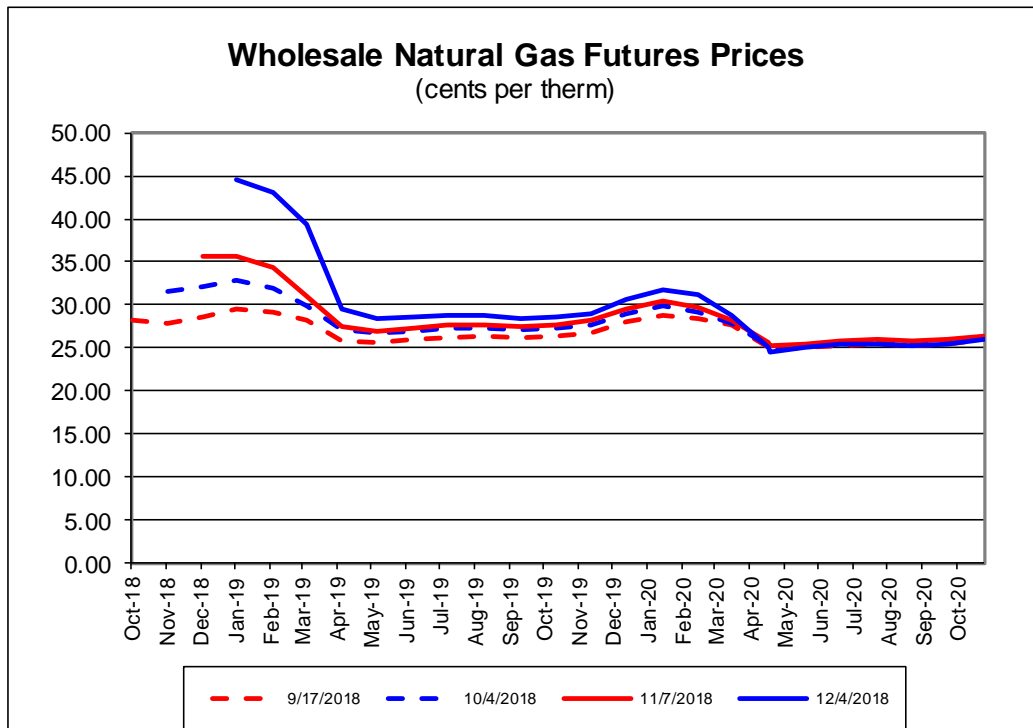
Current for December 4, 2018

## Price Information

Twelve Month NYMEX Strip Components  
12/4/18, cents per therm

Henry Hub Spot Market Price  
12/4/18, cents per therm

	<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Jan 19	44.57	Jan 19 35.69	46.3
Feb 19	43.05	Feb 19 34.28	
Mar 19	39.37	Mar 19 31.08	
Apr 19	29.57	Apr 19 27.45	
May 19	28.39	May 19 27.00	
Jun 19	28.53	Jun 19 27.29	
Jul 19	28.76	Jul 19 27.64	
Aug 19	28.71	Aug 19 27.67	
Sep 19	28.45	Sep 19 27.47	
Oct 19	28.66	Oct 19 27.63	
Nov 19	29.03	Nov 19 28.14	
Dec 19	30.59	Dec 19 29.55	



The current PGC for December 2018 is about \$0.5091 per therm. Assuming, among other things, that near-term futures prices are around \$0.37 to \$0.46 per therm, the PGC rate (excluding the commodity market adjustment factor) for January 2019 may remain about the same at around \$0.49 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for December 2018 is that wholesale prices may remain above \$0.35 per therm, resulting in wholesale prices that are up at least 25 percent 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 December 17, 2018

Factors	Next Month	Winter 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.