

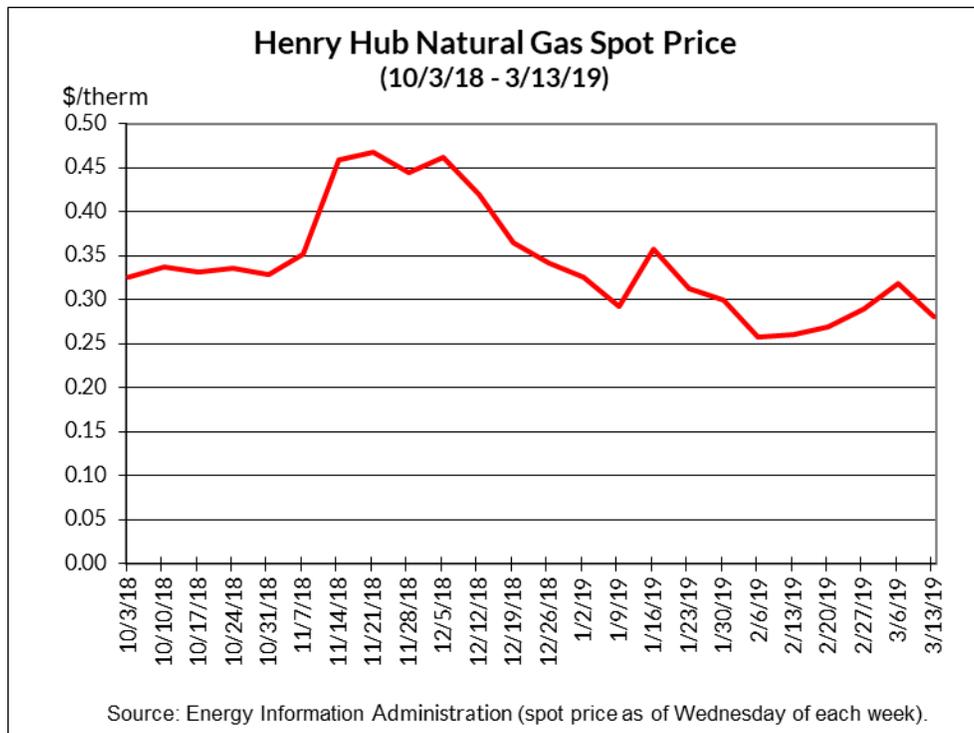
WHOLESALE NATURAL GAS MARKET ASSESSMENT

Wholesale Natural Gas Futures Prices as of March 14, 2019

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 March 14, 2019.¹ OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around \$0.30 per therm during April 2019 (see Henry Hub Spot Price figure). Recent natural gas spot prices are around 1 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 February 2019 was about \$0.27 per therm, down from roughly \$0.31 per therm in January 2019.² EIA expects natural gas prices, on average, to experience some downward pressure on prices over the forecast period, due to strong growth in natural gas production, 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 \$0.32 per therm in 2018 and the price is expected to average \$0.29 per therm in 2019 and \$0.28 per therm in

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).

2020.³ As of March 8, 2019, natural gas in storage stood at 1,186 billion cubic feet (“Bcf”). The working gas in storage is down about 23 percent from the same period a year ago, and is down by roughly 32 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 March 2019 is 51.48 cents (\$0.51) per therm, compared with 43.67 cents (\$0.44) per therm for the same period a year ago—up nearly 18 percent. The PGC for March 2019 is down over 3 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 March 15, 2019, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook through the first half of April 2019 favors above normal temperatures for much of the nation, with the exception of parts of the southwestern U.S. and the High Plains.⁵ Below normal temperatures are more likely for Southern California, the southern half of Nevada and Utah, Arizona, and the western portion of New Mexico. The expected weather for April may still be neutral for natural gas prices, despite 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.⁶ According to the report, economic activity continued to expand in late January and February, with ten Districts reporting slight-to-moderate growth. About half of the regions noted that the government shutdown had led to slower economic activity in some sectors including retail, auto sales, tourism, real estate, restaurants, manufacturing, and staffing services. Consumer spending activity was somewhat mixed across the nation, with several Districts attributing lower retail and auto sales to harsh winter weather and to higher costs of credit. Manufacturing activity strengthened, in general, but there were concerns about weakening global demand, higher costs due to tariffs, and ongoing trade

³ EIA, *Short-Term Energy Outlook* (March 2019) 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/>.

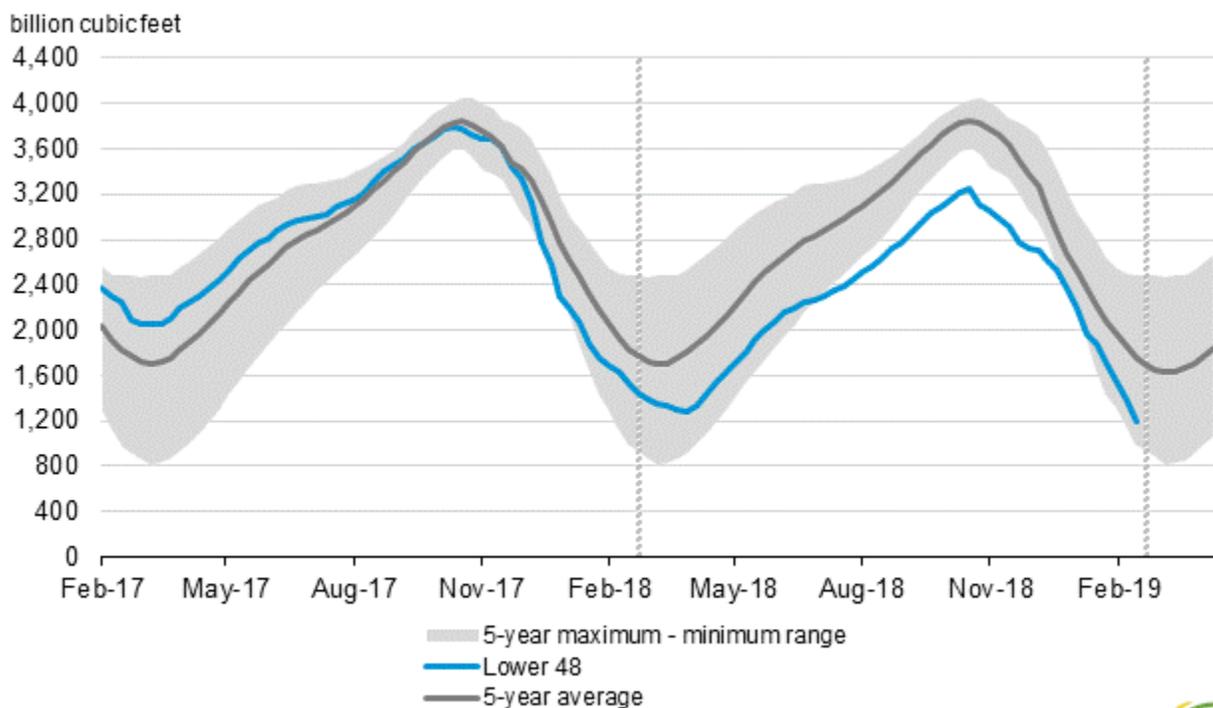
⁶ Beige Book (released March 6, 2019).

policy uncertainty. Activity in the nonfinancial services sector increased at a modest-to-moderate pace in most regions, driven in part by growth in the professional, scientific, and technical services sub-sector. Residential construction activity was steady or slightly higher across most of the country, but residential home sales were generally lower. Labor markets remained tight for all skill levels, including notable worker shortages for positions relating to information technology, manufacturing, trucking, restaurants, and construction. Reported labor shortages were restricting employment growth in some areas. Thus, 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 1,186 Bcf as of March 8, 2019, a net decrease of 204 Bcf from the previous week. Stocks were 359 Bcf lower than the same period a year ago—down 23.2 percent—and down 569 Bcf from the 5-year average of 1,755 Bcf—a decrease of 32.4 percent.⁷

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 2014 through 2018. The dashed vertical lines indicate current and year-ago weekly periods.
Source: EIA, *Weekly Natural Gas Storage Report* (released March 14, 2019)

In its March 2019 Short-Terms Energy Outlook, EIA forecasts that natural gas storage injections will outpace the previous five-year average during the April-through-October injection season and that inventories will reach 3.6 trillion cubic feet at the end of October, which would be 12% higher than October 2018 levels and 2% below the five-

⁷ EIA, *Weekly Natural Gas Storage Report* (released March 14, 2019).

year average.⁸ However, the current storage picture may 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 March 2019 Short-Term Energy Outlook ("STEO"), EIA expects that the **"total supply of natural gas will outpace demand through the end of 2020. EIA estimates that, in January 2019, the 12-month average of natural gas supply (production combined with imports) exceeded the 12-month average of demand (consumption combined with exports) for the first time since December 2017. EIA forecasts that natural gas production will continue to increase, setting record highs in 2019 and in 2020. In addition, based on company reports, EIA expects new liquefied natural gas (LNG) capacity to come online this year and contribute to rising LNG exports. EIA expects the bulk of this capacity to start in the second quarter of 2019. As a result of the ongoing production growth, however, the 12-month moving average of supply is forecast to exceed demand through the forecast period. EIA forecasts that the higher supply growth will bring inventory levels back near five-year averages and help to keep price levels moderate."**⁹ Continued high natural gas production helps reduce the need for inventory to meet demand, which may offset any upward pressure from the currently lower storage levels.

National Security

As noted in previous reports, we see little danger to the natural gas supply.¹⁰ 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 March 2019 is down 3.6 percent from the previous month, and is up 17.9 percent compared to the same period a year ago.¹¹ The April 2019 PGC (assuming that the commodity market adjustment factor is zero) may remain around \$0.46 per therm, based, in part, on the expectation that near-term NYMEX futures prices trade between \$0.26 and \$0.30 per therm, among other things. OTRA's assessment of natural gas prices may be significantly different from actual

⁸ EIA, *STEO* (March 2019) at 2.

⁹ *Ibid* at 8.

¹⁰ The Department of Homeland Security ("DHS") last issued an advisory bulletin on January 18, 2019. The bulletin mentioned, among other things, 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.

¹¹ The commodity market adjustment factor for the March 2019 PGC was \$0.07 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor ("CMAF")) being equal to \$0.4448 per therm.

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).

Wholesale Natural Gas Price/Supply Assessment Information

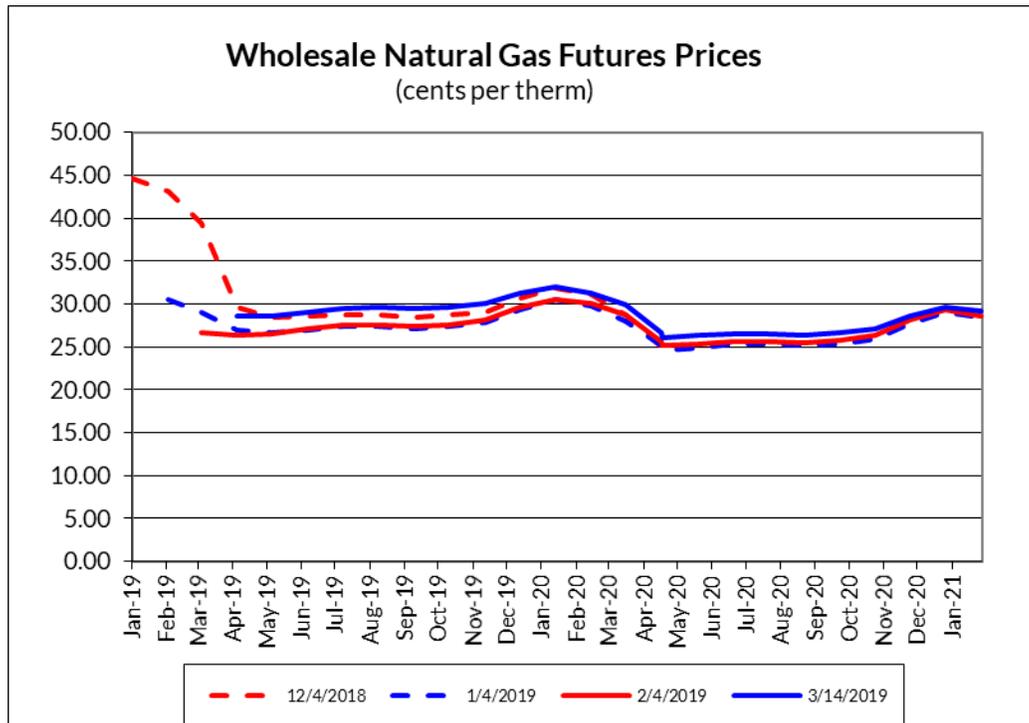
Current for March 14, 2019

Price Information

Twelve Month NYMEX Strip Components
3/14/19, cents per therm

Henry Hub Spot Market Price
3/13/19, cents per therm

	<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Apr 19	28.55	Apr 19 26.42	28.1
May 19	28.60	May 19 26.56	
Jun 19	29.05	Jun 19 27.05	
Jul 19	29.52	Jul 19 27.53	
Aug 19	29.64	Aug 19 27.57	
Sep 19	29.49	Sep 19 27.35	
Oct 19	29.61	Oct 19 27.61	
Nov 19	30.02	Nov 19 28.12	
Dec 19	31.26	Dec 19 29.57	
Jan 20	31.99	Jan 20 30.56	
Feb 20	31.32	Feb 20 30.02	
Mar 20	29.84	Mar 20 28.67	



The current PGC for March 2019 is about \$0.5148 per therm. Assuming, among other things, that near-term futures prices are around \$0.26 to \$0.30 per therm, the PGC rate (excluding the commodity market adjustment factor) for April 2019 may remain around \$0.46 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for March 2019 is that wholesale prices may remain around \$0.30 per therm, or less, resulting in wholesale prices that are roughly 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 March 18, 2019

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.