

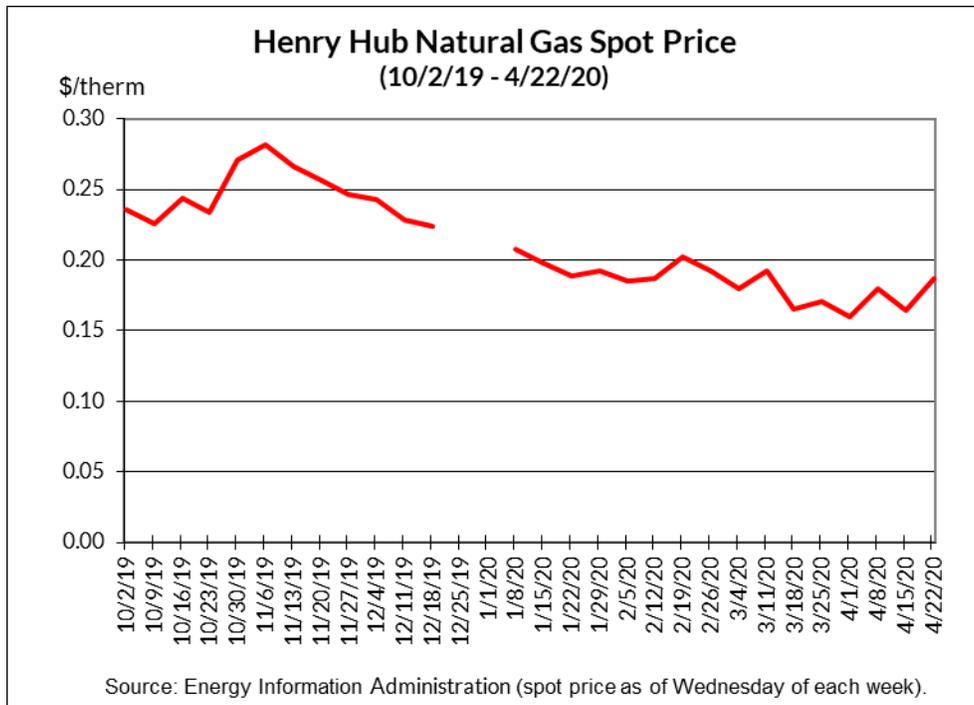
WHOLESALE NATURAL GAS MARKET ASSESSMENT

Wholesale Natural Gas Futures Prices as of April 6, 2020

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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 April 6, 2020.¹ OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around, or below, \$0.20 per therm during May 2020 (see Henry Hub Spot Price figure). Recent natural gas spot prices are at least 20 percent lower 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 March 2020 was about \$0.17 per therm, down from \$0.19 per therm in February 2020.² EIA notes that warmer-than-normal temperatures in March reduced demand for space heating and put downward pressure on prices. But EIA expects that prices will begin to rise at the end of the second quarter of 2020 as U.S. natural gas production declines and natural gas use for power generation increases the demand for natural gas. Henry Hub natural gas prices averaged about \$0.26 per therm in 2019 and the price is expected to average \$0.21 per therm in 2020 and then

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).

increasing to about \$0.30 per therm in 2021 because of lower natural gas production.³ As of April 17, 2020, natural gas in storage stood at 2,140 billion cubic feet (“Bcf”). The working gas in storage is up about 63 percent from the same period a year ago and is up 21 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 April 2020 is 46.46 cents (\$0.46) per therm, compared with 57.23 cents (\$0.57) per therm for the same period a year ago—down roughly 19 percent. The PGC for April 2020 is up 25 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 April 16, 2020, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook through May 2020 favors above normal temperatures across the western region of the nation, Gulf Coast, and most of the East Coast. The largest probabilities (60 percent or higher) of above normal temperatures are forecast across central and south Florida.⁵ The remaining portion of the nation has equal chances of above, near, or below normal temperatures. The expected weather for May may be relatively neutral for 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 The report indicated that economic activity contracted sharply and abruptly across all regions in the United States as a result of the COVID-19 pandemic. The hardest-hit industries—because of social distancing measures and mandated closures—were leisure and hospitality, and retail (aside from essential goods). Most Districts reported declines in manufacturing, but cited significant variation across industries. Producers of food and medical products reported strong demand but faced both production delays, due to infection-prevention measures, and supply chain disruptions.

³ EIA, *Short-Term Energy Outlook* (April 2020) at 3.

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/>.

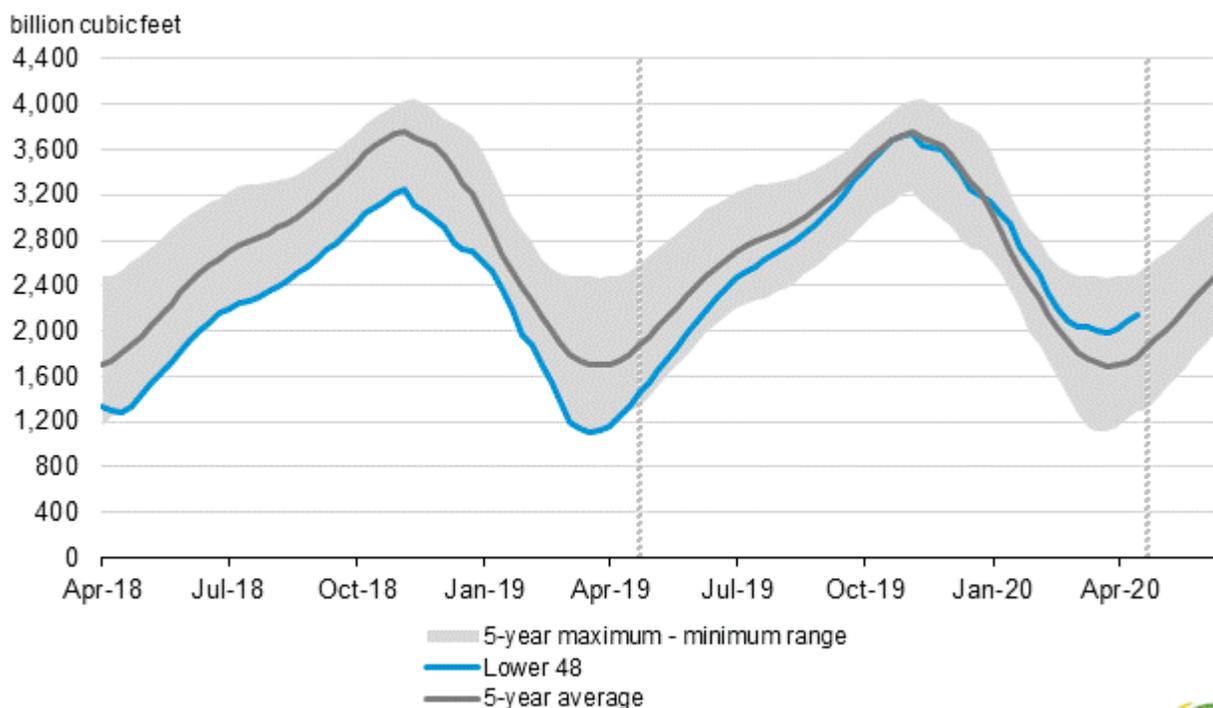
⁶ Beige Book (released April 15, 2020).

Some other manufacturing industries, such as autos, mostly shut down. Regions reporting on loan demand said it was high, both from companies accessing credit lines and from households refinancing mortgages. All Districts reported highly uncertain outlooks among business contacts, with most expecting conditions to worsen in the next several months. Many regions also said severe job cuts were widespread, including the manufacturing and energy sectors. Contacts in several Districts noted they were cutting employment via temporary layoffs and furloughs that they hoped to reverse once business activity resumes. The near-term outlook was for more job cuts in coming months. Thus, the current state of economic activity appears to provide some downward pressure for natural gas prices.

Storage

EIA reports that the working gas in storage was 2,140 Bcf as of April 17, 2020, a net increase of 43 Bcf from the previous week. Stocks were 827 Bcf higher than the same period a year ago—up 63.0 percent—and up 364 Bcf from the 5-year average of 1,776 Bcf—an increase of 20.5 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 2015 through 2019. The dashed vertical lines indicate current and year-ago weekly periods.

Source: EIA, *Weekly Natural Gas Storage Report* (released April 23, 2020)

EIA expects natural gas in storage to build at a rate that is slightly below average because of strong natural gas consumption for power generation in 2020, combined with declining production in the second half of 2020. Less production in the first half of 2021

⁷ EIA, *Weekly Natural Gas Storage Report* (released April 23, 2020).

compared with recent years also puts downward pressure on storage in 2021.⁸ The current storage picture may still provide some downward pressure for 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 April 2020 Short-Term Energy Outlook ("STEO"), EIA indicates that **"U.S. dry natural gas production set a record in 2019, averaging 92.2 [billion cubic feet per day ("Bcf/d")]. EIA forecasts dry natural gas production will average 91.7 Bcf/d in 2020, with monthly production falling from an estimated 94.4 Bcf/d in March to 87.5 Bcf/d in December. Natural gas production declines the most in the Appalachian and Permian regions. In the Appalachian region, low natural gas prices are discouraging producers from engaging in natural gas-directed drilling, and in the Permian region, low oil prices reduce associated gas output from oil-directed wells. In 2021, forecast dry natural gas production averages 87.5 Bcf/d, rising in the second half of 2021 in response to higher prices."**⁹ Continued relatively high natural gas production will help keep natural gas prices relatively neutral.

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 \$0.46 per therm for April 2020 is up 25.0 percent from the previous month, and is down 18.8 percent compared to the same period a year ago.¹¹ The May 2020 PGC (assuming that the commodity market adjustment factor is zero) may be around \$0.37 per therm, based, in part, on the expectation that near-term NYMEX futures prices trade between \$0.16 and \$0.19 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.

⁸ EIA, *Short-Term Energy Outlook* (April 2020) at 10.

⁹ EIA, *Short-Term Energy Outlook* (April 2020) at 3.

¹⁰ The Department of Homeland Security ("DHS") last issued an advisory bulletin on January 18, 2020, which has expired without an updated advisory bulletin. 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. 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 April 2020 PGC was \$0.09 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor ("CMAF")) being equal to \$0.3746 per therm.

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

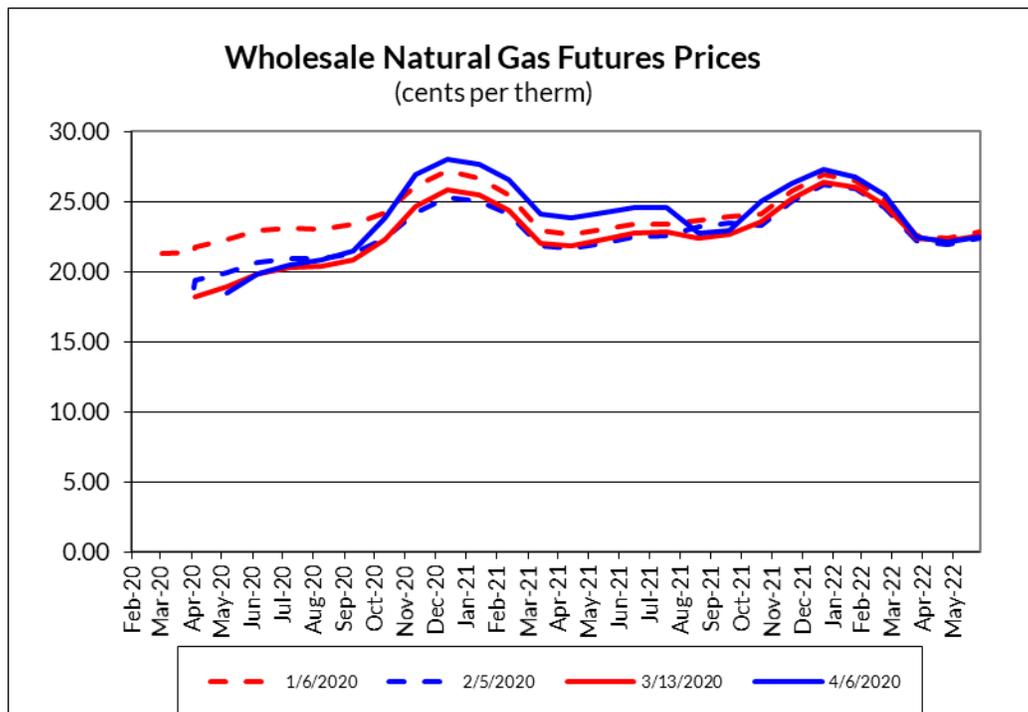
Current for April 6, 2020

Price Information

Twelve Month NYMEX Strip Components
4/6/20, cents per therm

Henry Hub Spot Market Price
4/6/20, cents per therm

	<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Jun 20	18.44	Jun 20 18.95	16.1
Jul 20	19.89	Jul 20 19.87	
Aug 20	20.51	Aug 20 20.28	
Sep 20	20.85	Sep 20 20.41	
Oct 20	21.49	Oct 20 20.88	
Nov 20	23.83	Nov 20 22.34	
Dec 20	26.90	Dec 20 24.67	
Jan 21	28.04	Jan 21 25.81	
Feb 21	27.66	Feb 21 25.45	
Mar 21	26.61	Mar 21 24.40	
Apr 21	24.15	Apr 21 22.06	
May 21	23.88	May 21 21.86	



The current PGC for April 2020 is \$0.4646 per therm. Assuming, among other things, that near-term futures prices are around \$0.16 to \$0.19 per therm, the PGC rate (excluding the commodity market adjustment factor) for May 2020 may be around \$0.37 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for May 2020 is that wholesale prices may remain around \$0.20 per therm resulting in wholesale prices that are at least 20 percent lower 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 April 27, 2020

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 - N.A.
Not Applicable