

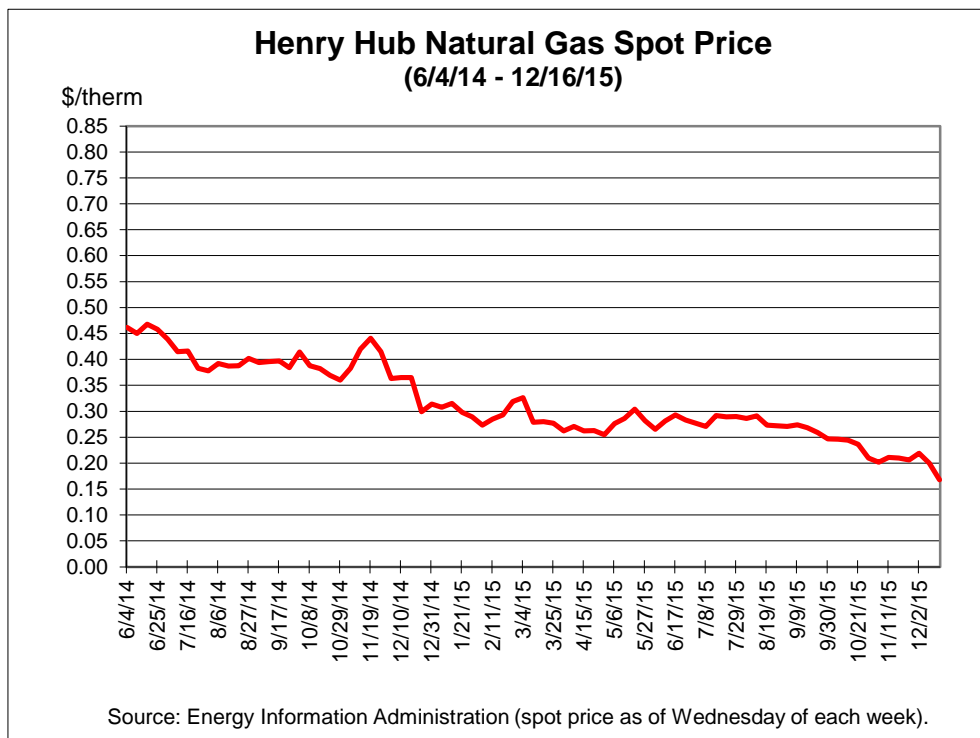
# WHOLESALE NATURAL GAS MARKET ASSESSMENT

## Wholesale Natural Gas Futures Prices as of December 4, 2015

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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 December 2015.<sup>1</sup> OTRA's current assessment of the natural gas market suggests that wholesale natural gas prices may remain around \$0.25 per therm, or less, during December 2015 (see Henry Hub Spot Price figure). Recent natural gas spot prices are at least 40 percent lower than prices from the same period a year ago.



The Energy Information Administration ("EIA") indicates that the average Henry Hub natural gas spot price for November 2015 was about \$0.21 per therm, down from about \$0.23 per therm for the previous month.<sup>2</sup> In its Short-Term Energy Outlook ("STEO") for December 2015, EIA indicates that **“[w]armer-than-normal temperatures in November, record inventory levels, production growth, and forecasts for a warm winter contributed to spot prices remaining at low levels. Monthly average Henry Hub spot prices are forecast to remain less than [\$0.30 per therm] through August 2016. The projected Henry Hub natural gas**

<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, *Short-Term Energy Outlook* (December 2015) at 9.

**price averages [\$0.267 per therm] in 2015 and [\$0.288 per therm] in 2016.”<sup>3</sup>** Natural gas prices averaged \$0.437 per therm in 2014.

As of December 11, 2015, natural gas in storage stood at 3,846 billion cubic feet (“Bcf”). The working gas in storage is up 16 percent from the same period a year ago, and is up by about 9 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”).<sup>4</sup> The PGC for December 2015 is 37.36 cents (\$0.37) per therm—the lowest PGC since May 2000 when it stood at 36.99 cents—compared with 58.66 cents (\$0.59) per therm for the same period a year ago—down 36.0 percent. The PGC for December 2015 is down 13 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 17, 2015, the National Oceanic and Atmospheric Administration (“NOAA”) indicated that its outlook for the remainder of December generally calls for below normal temperatures across the western portion of the nation.<sup>5</sup> Above normal temperatures are favored for the remaining two-thirds of the nation, from the Great Plains eastward to the Atlantic Coast. The outlook for January calls for below normal temperatures limited to the southern portion of the nation, extending from the southern portion of Texas through Alabama and a portion of the Florida Panhandle. The northern half of the nation and the West Coast may experience above normal temperatures. The expected weather for the remainder of December and into January may provide some downward pressure for natural gas prices.

## **Economic Conditions**

National economic factors also contribute to the formation of wholesale natural gas prices. In its most recent statement, the Federal Open Market Committee (“FOMC”) indicated that information received since the FOMC last met in October suggests that economic activity has been expanding at a moderate pace. Household spending and business fixed investment have been increasing at solid rates in recent months, and the real estate sector has improved further; although, net exports have been soft. A range of recent labor market indicators, including ongoing job gains and declining unemployment—5.0 percent in November compared to 5.7

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<sup>3</sup> Ibid.

<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.

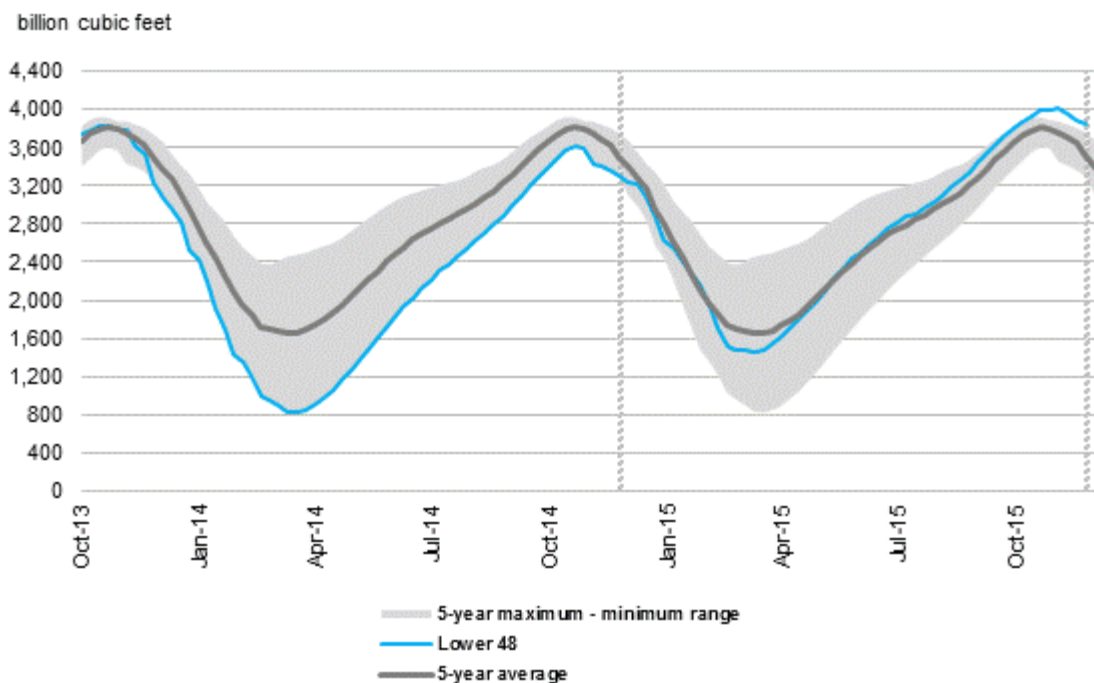
<sup>5</sup> NOAA at <http://www.cpc.ncep.noaa.gov/>.

percent in January—shows further improvement and confirms that underutilization of labor resources has diminished appreciably since early this year. Inflation has continued to run below the FOMC’s 2 percent longer-run objective, partly reflecting declines in energy prices and in prices of non-energy imports. Given its current economic outlook, the FOMC decided to increase, albeit modestly, its short-term interest rate target and noted that the policy stance after this change still remains accommodative—thereby supporting further improvement in the labor market and a return to 2 percent inflation.<sup>6</sup> 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 3,846 Bcf as of December 11, 2015, a net decrease of 34 Bcf from the previous week. Stocks were 541 Bcf higher than the same period a year ago—up 16.4 percent—and up 322 Bcf from the 5-year average of 3,524 Bcf—an increase of 9.1 percent.<sup>7</sup> EIA indicates that “[w]armer-than-normal temperatures since the beginning of November, the start of the heating season, have contributed to lower inventory withdrawals. From October 30 through December 11, storage inventories fell by 85 Bcf. This drop compares to the five-year average decline over this period of 258 Bcf, and to a decline of 253 Bcf last year over this period.”<sup>8</sup> The current storage picture suggests some downward pressure for 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 2010 through 2014. The dashed vertical lines indicate current and year-ago weekly periods.

Source: EIA, *Weekly Natural Gas Storage Report* (released December 11, 2015)

<sup>6</sup> Statement of the Federal Open Market Committee (released December 16, 2015).

<sup>7</sup> EIA, *Weekly Natural Gas Storage Report* (released December 11, 2015).

<sup>8</sup> EIA, *Natural Gas Weekly Update* (released December 11, 2015).

## 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 2015 STEO, EIA expects natural gas marketed production to grow by an annual rate of 6.3 percent in 2015 and 1.9 percent in 2016. EIA indicates that **“[i]ncreases in drilling efficiency will continue to support growing natural gas production in the forecast despite low natural gas prices and declining rig activity. Most of the growth is expected to come from the Marcellus Shale, as the backlog of uncompleted wells is reduced and as new pipelines come online to deliver Marcellus natural gas to markets in the Northeast. Several major projects have recently come online in the Marcellus, and a few others are set to begin service before the end of the year. In Pennsylvania, where most Marcellus drilling is located, production growth was flat earlier this year, but production reached a record level in September, according to EIA's most recent production data. Continuing increases in domestic natural gas production are expected to reduce demand for natural gas imports from Canada and to support growth in exports to Mexico. EIA expects natural gas exports to Mexico, particularly from the Eagle Ford Shale in South Texas, to increase because of growing demand from Mexico's electric power sector coupled with flat natural gas production in Mexico. EIA projects [liquefied natural gas (LNG)] gross exports will increase to an average of 0.7 Bcf/d in 2016, with the startup of Cheniere's Sabine Pass LNG liquefaction plant planned for early 2016.”**<sup>9</sup>

## 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 \$0.37 per therm for December 2015 is down 12.9 percent from the previous month, and is down 36.3 percent compared to the same period a year ago.<sup>11</sup> The January 2016 PGC (assuming that the commodity market adjustment factor is zero) may remain around \$0.40 per therm, based, in part, on the expectation that near-term NYMEX futures prices continue to trade between \$0.18 and \$0.22 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)

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<sup>9</sup> EIA, *STEO* (December 2015) at 9.

<sup>10</sup> As of December 16, 2015, the Department of Homeland Security (“DHS”) issued a bulleting indicating that, while there were no specific or credible impending threats against the United States, DHS was providing additional guidance to state and local authorities on increased security measures in light of recent attacks in San Bernardino, California and Paris. 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 2015 PGC was -\$0.03 per therm, resulting in the adjusted PGC (excluding the commodity market adjustment factor) being equal to \$0.4036 per therm. Last month, OTRA estimated a PGC of \$0.48 per therm for December 2015, the result of overestimating storage costs.

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

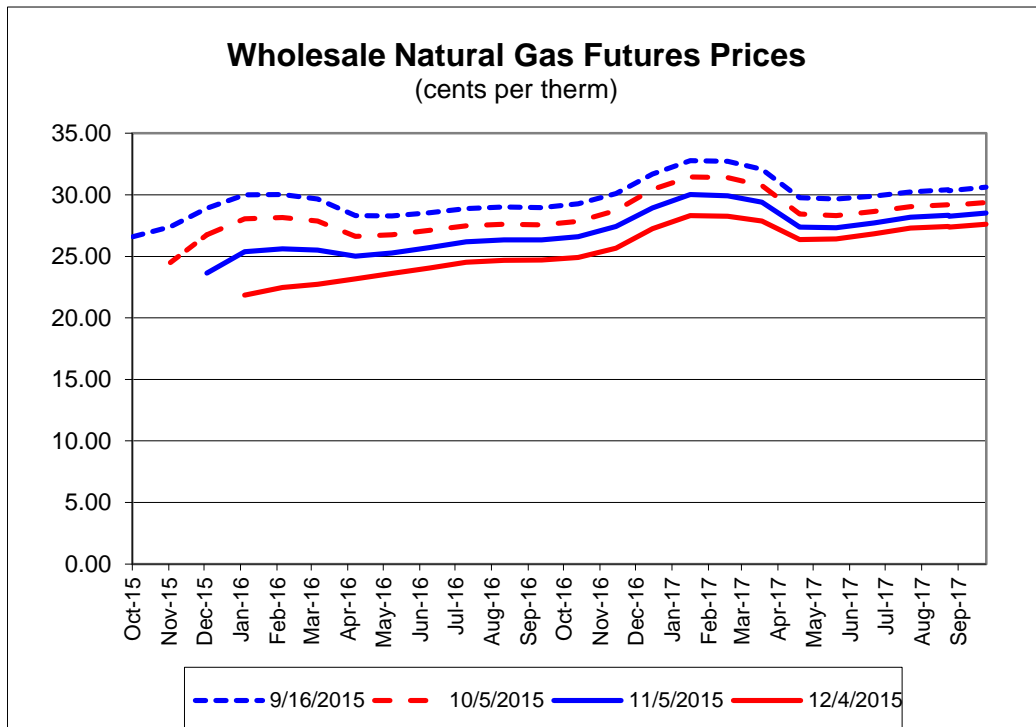
Current for December 4, 2015

## Price Information

Twelve Month NYMEX Strip Components  
12/4/15, cents per therm

Henry Hub Spot Market Price  
12/4/15, cents per therm

	<u>Current Month</u>	<u>Previous Month</u>	<u>Current Only Available</u>
Jan 16	21.86	Jan 16 25.39	20.8
Feb 16	22.47	Feb 16 25.62	
Mar 16	22.73	Mar 16 25.51	
Apr 16	23.61	Apr 16 25.01	
May 16	23.60	May 16 25.29	
Jun 16	24.05	Jun 16 25.72	
Jul 16	24.51	Jul 16 26.18	
Aug 16	24.68	Aug 16 26.34	
Sep 16	24.69	Sep 16 26.35	
Oct 16	24.90	Oct 16 26.59	
Nov 16	25.66	Nov 16 27.42	
Dec 16	27.24	Dec 16 28.94	



The current PGC for December 2015 is about \$0.37 per therm. Assuming, among other things, that near-term futures prices remain around \$0.18 to \$0.22 per therm, the PGC rate (excluding the commodity market adjustment factor) for January 2016 may remain around \$0.40 per therm. However, given the uncertainty about the weather, as well as other factors, this assessment could easily change. The assessment for December 2015 is that wholesale prices may remain around \$0.25 per therm, or less, resulting in wholesale prices that are lower by at least 40 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 18, 2015

Factors	This 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.