Natural Gas Market Indicators

American Gas Association

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Reported Prices – leaves are past peak throughout the country, so where is winter? It will come, however, right now with warmer than normal conditions for much of the past six weeks from coast to coast the winter heating season demand surge has not yet materialized. Natural gas prices at Henry Hub remain below $2.35 per MMBtu for December contracts and cash deals at Henry Hub actually traded below $2.00 per MMBtu at times in early November. Brent and West Texas Intermediate oil prices were up a little then slid during the past two weeks to about $44.72 and $42.05 per barrel, respectively, demonstrating a less than three dollar spread. The simple truth is that natural gas and petroleum based energy prices in the United States, today, although a challenge for upstream producers are a great value for energy consumers.

Weather – for the six-week period beginning October 1, only one area of the country has been cumulatively *less than* 20 percent warmer than normal as we roll toward winter and that is New England at 16 percent fewer heating degree days (16 percent warmer than normal). The country has been 28.2 percent warmer than normal as a whole, since early October, with the warmest conditions in the West South Central, Mountain and Pacific regions. The cold will come, of course, as winter approaches but to date it has been a tepid start to the traditional winter heating season.

Working Gas in Underground Storage – recent storage injections have landed the national working gas inventory at a record volume. A decade ago it would have been hard to imagine an operationally based 4 Tcf inventory of working gas in place but we are nearly there. Underground storage actually reached the prior record of 3,929 set in early November 2012 on October 30, 2015. Net injections for the week ending November 6, 2015 pushed working gas to 3,978 – the highest reported working gas volume ever. Inventories are 10.3 percent ahead of last year and 4.5 percent higher than the five-year average.

Natural Gas Production – current daily natural gas production continues to flop between 70-72 Bcf and has been flat for months. In fact, dry gas production on the lower end of the recently observed range has not been seen since February 2015. The Energy Information Administration in their November 9 *Drilling Productivity Report* anticipates a nearly one percent drop in shale gas production from 45 Bcf per day in November to 44 Bcf per day in December. That said, year-to-date total dry natural gas production at 72.0 Bcf per day on average exceeds last year's comparable volume by 3.5 Bcf, according to Bentek Energy, even with the drilling slowdown in 2015.

Shale Gas – with relatively low gas acquisition prices, infrastructure development focused on shale resources in North America is still progressing. Somewhat removed from the US mainstream, Pembina Pipeline Corp., for example, is developing a new processing facility to support production from the Duvernay shale in northwestern Alberta and eastern British Columbia. It would be the first large scale plant supporting Duvernay shale development and would be expected to operate for decades. Many analysts believe that western Canada may be the next area of North America to see surges in unconventional gas production and associated liquids.

Rig Counts – rig counts for the week ending November 6, 2015 fell by four to 771 operating in the United States, according to Baker Hughes – a full 1,154 fewer than just one year earlier. For the week, the decline could be attributed to a fall in oil directed counts of six but a gain of two for gas-directed operations. Total rig activity is now down about 60 percent year over year.

Pipeline Imports and Exports – natural gas pipeline volumes imported from Canada have averaged about 5.5 Bcf per day for the past seven days, however, have been about 0.5 Bcf per day lower when compared to the first two weeks of November 2014. According to Bentek Energy, that makes pipeline imports from Canada a little more than six percent of current US gas supply on a daily basis. That said, year to date imports from Canada are running 5.4 Bcf per day – actually up 0.3 Bcf compared to year to date volumes in 2014. Exports to Mexico remain solid at 2.6 Bcf per day for the month of November and are 0.8 Bcf per day higher than in November 2014. Generally, analysts believe that US gas exports to Mexico will increase once again in 2016.

LNG Markets – it appears that the LNG *export* train (pardon the pun) is building momentum toward that first outbound cargo. Sabine Pass remains on target to be the first project to be making LNG and actually exporting the product – now to happen within the next few months. Dominion's Cove Point export facility is nearly 50 % along the path to completion and on the west coast Veresen (Jordan Cove LNG) is negotiating with potential customers (although the company still faces local and state regulatory hurdles). Sempra is also seeking customers for train 4 in a planned expansion of Cameron LNG. Cheniere places its Corpus Christi LNG facility about 22 percent along its completion continuum and there are more. So, there remain many moving parts to this story, which is expected to converge around an unpredictable export market during the next 2-4 years. Current US *imports* of LNG and subsequent injection into the US pipeline grid are running at about 0.2 Bcf per day.

Natural Gas Market Summary – the supply demand balance within that huge spaceship we call the natural gas market in North America will certainly tighten as winter sets in. But as Richard Meyer, co-author of these indicators has often asked, "Which critical flight buttons are going to be pushed, while we move through the winter heating season?" Storage is stronger than ever, as a supply asset for the 2015-16 winter, and even though domestic production has flattened it is well positioned. Don't forget that Canada is capable of providing 5 Bcf per day and more to U.S. markets, also, so what remains is the consumption side of the market equation playing out its seasonal dance. That is the unknown and so we wait. We wait while mixing additional metaphors and thinking about the longer term. One thing is certain, natural gas energy today is a wonderful consumer value.