

Natural Gas Market Indicators



December 15, 2016



Reported Prices – with OPEC ministers concluding that lower cartel production levels are desirable and publicly stating that they plan to try to influence non-OPEC members to reduce flows also (11 other countries corralled to date), crude prices have jumped from the high-40s to a range of \$52-55 per barrel for West Texas Intermediate and Brent supplies. Now the question becomes, will the production reductions firmly take hold? It's a fair question. History tells us that some of these OPEC initiatives work not so much. If oil prices are driven to \$60 per barrel or higher, many analysts believe that US shale oil production will ramp up to become a swing supplier at the margin and actually put downward pressure back on the price of oil. We'll see. On the gas side, Henry Hub futures pricing for January has firmed to a \$3.40-3.50 per MMBtu range although daily prices in high producing regions like Northeast Pennsylvania were closer to \$2.70 per MMBtu early in the month of December.

Weather – a colder than normal week for the country as a whole finally materialized, ending December 10, 2016. It was the first colder than normal week in the past two months plus and likely portends an increase in underground storage withdrawals. For the nation as a whole, heating degree days exceeded those of this week last year by 41 percent and nearly six percent when compared to normal. Every region of the country was colder than normal except the Middle Atlantic, which was one percent warmer. That said, in aggregate since October 2016, every region of the country has been warmer than normal as measured by heating degree days. In fact, the individual regions have been between 18 and 31 percent warmer, resulting in a national picture that has been 23 percent warmer in aggregate for the past 11 weeks.

Working Gas in Underground Storage – underground storage working gas levels at 3,953 Bcf were strong to begin December (2016) compared to history. Net withdrawals did not begin until mid-November and there has not been a triple digit withdrawal week (essentially 15 Bcf per day sustained withdrawal rate) to date but that will change soon. Inventories are slightly above where they were at this time last year but seven percent higher than the five-year average.

Natural Gas Production – natural gas production for the first half of December has slipped slightly from 71.5 Bcf per day in November to 71 Bcf per day this month. Average production rates today are about 2.5 percent less than December 2015 notwithstanding the fact that domestic storage inventories are higher and supply strength for the developing winter seems intact. In addition, year-to-date production volumes only trail last year by 0.4 Bcf per day, according to Bentek Energy.

Shale Gas – data from the Energy Information Administration's "Drilling Productivity Report" published on December 12 anticipates a slight increase in shale production for January pushing output to 47.5 Bcf per day. This increase comes after four consecutive months of contraction.

Rig Count – rig counts posted their single biggest gain since April 2014 for the week ending December 9. A gain of 27 rigs is the largest since commodity prices collapsed two years ago and this week's report follows on the heels of a net gain of 108 rigs since early September. This week many of

the major producing regions saw an increase in activity. The Permian added 11 rigs week over week; the Eagle Ford gained three; Bakken was up one; the Denver-Julesburg Niobrara added six; Marcellus jumped two; and there were no changes in the Utica or Haynesville counts. It seems higher commodity prices have stimulated renewed activity for oil and gas. The oil rig count resides at 498 and gas-directed activity is up to 125 rigs.

Pipeline Imports and Exports – pipeline natural gas *imports* from Canada have edged above 5 Bcf per day once again just as *exports* of pipeline gas to Mexico and feedgas for liquefaction are also about 5 Bcf per day. Year-to-date imports from Canada have been on average 5.6 Bcf per day, which is 3.7 percent more than in 2015. LNG exports and pipeline gas to Mexico, on the other hand, have actually been 41 percent higher year-to-date than in 2015 – a significant increase and a trend that many analysts believe will continue.

LNG Markets – “Global LNG supply is on the up and up” write analysts at the Wood Mackenzie blog. They see global LNG production of 262 million tonnes (Mt) in 2016 and a further 100 Mt at 18 projects under construction. New technologies will be contributing. The first cargoes from Floating LNG—where a ship with LNG operations on board can develop offshore fields—are coming next year. The Petronas FLNG Satu is scheduled to start operations in 2017 after having set sail this past May headed toward Kanowit gas field to set up shop and begin commissioning. Back at home, US LNG imports started modestly in early December averaging only 0.1 Bcf per day but have actually been three times that year-to-date on average. Exports on the other hand remain strong. Feedgas for liquefaction at Sabine Pass is averaging 1.4 Bcf per day this month.

Natural Gas Market Summary – natural gas demand in the lower-48 climbed above 100 Bcf on December 8, a first for the 2016–17 winter and the highest consumption level since February. If arctic air moves into North America and temperatures drop and stay low, we’re likely to see a number of 100+ Bcf days during December. Supplies are still well positioned to meet this uptick in demand. Storage inventories are still at about 3.9 Tcf; production remains above 70 Bcf per day; and pipeline and LNG imports are there to help meet additional pulls on the system. However, the market has decided that supplies are going to be needed sooner rather than later. Natural gas moved into normal backwardation in early December. With January 2017 contracts calling for a premium to subsequent months, traders may be sending signals that even more supplies could be needed to meet a January cold snap. All is dependent on where temperatures go from here. The market is poised and ready to meet whatever demand is thrown at it.

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