

Natural Gas Market Indicators



December 31, 2014



Reported Prices – as we finish the calendar year 2014, prompt month Henry Hub natural gas prices plunged to below \$3.20 per MMBtu and the January-February-March trading band has narrowed to about \$3.15-3.20 per MMBtu. At the same time, West Texas Intermediate crude is below \$54 per barrel. Specifically for world oil prices, the final quarter of 2014 has broken through the doldrums of recent years that saw high prices but relatively modest changes from day to day to a virtual downward spiral to close the year.

Weather – for the country as a whole warmer than normal temperatures have dominated for the month of December. Cumulatively since October 1, 2014, that warmth has been primarily focused in the Pacific and Mountain regions but, in fact, only the east south central (as of December 27, 2014) had been cumulatively colder than normal and only 2 percent colder. The country has been cumulatively 7.0 percent warmer than normal as measured by fewer heating degree days, since early October 2014.

Working Gas in Underground Storage – there is now a year-to-year surplus of natural gas in storage. In April, storage stocks were at a decadal low following a record pull on gas supplies after last winter's polar vortex. What followed was a relatively mild summer, which curbed gas flows to power generation and along with rising production contributed to a record pace for storage rebuild. Then warmer weather for late November and December slowed gas withdrawals, which at this time last year were as much as 200 Bcf and more pulled from working gas. Instead, for the weeks ending December 12 and 19, more modest withdrawals of 64 and 49 Bcf, respectively, were delivered, leaving natural gas stocks at 3,246 Bcf – 150 Bcf ahead of this time last year.

Natural Gas Production – the new norm for domestic dry natural gas production is 72-73 Bcf per day (and still growing) according to Bentek Energy. This year dry gas production has set an incredible 57 all-time daily records, having hit another on Saturday December 20 at 73.5 Bcf. Driving this growth in large part is production for the Marcellus. The Northeast and Midwest has grown from about 3 Bcf per day in October 2010 to over 20 Bcf per day. That's right, from just over 1 Tcf annually in 2010 to 7 Tcf annually – and growing. Today, total US gross production reaches 83 Bcf per day equivalent and is up more than 8.5 Bcf per day from just one year ago.

Shale Gas – in a recent statement released by Range Resources the company pointed to a 24-hour test of a Utica Shale well located in Washington County, PA that flowed at 59 MMcf per day (million cubic feet) – a record initial flow for a horizontal well in the Appalachian basin. The importance of this test is reflected in the fact that the Utica Shale lies beneath the Marcellus Shale in this portion of Pennsylvania and thus becomes a producing target for leases held by Marcellus production adding to the longevity and ultimate recoverable natural gas from the region. On the flip side of that news, falling oil prices seem to be negatively impacting Utica shale development in Ohio. In addition, the New York State Health Department is recommending that hydraulic fracturing (high pressure underground injection) not be permitted in the state citing evidence that the process cannot be done

safely – obviously a view not shared by industry and other jurisdictions. The judgment will almost certainly be challenged in the courts.

Rig Counts – natural gas-directed rig activity has held its own while oil-directed activity has dropped the last several weeks bringing total rig counts to 1,840 as of December 26, 2014, according to Baker-Hughes. Though falling total rigs are still 83 higher than this time last year.

Pipeline Imports and Exports – net imports of natural gas from Canada have generally firmed to a range of 5.0-5.5 Bcf per day and placing the year-to-date daily average at 5.2 Bcf per day – the same as in 2013. At the same time, net exports to Mexico are 0.3 Bcf per day higher in December 2014 compared to December 2013 and the year-to-date average is also higher, 2.0 Bcf compared to 1.8 Bcf on average. Many reports indicate that additional pipeline capacity growth to Mexico may raise exports to 2.3 Bcf per day or higher in 2015.

LNG Markets – a deal to sell portions of Apache Corp. interests in Australia (13 percent of Wheatstone LNG and other properties) and Apache's 50 percent stake in the Kitimat LNG project in western Canada has been announced and is expected to be finalized during the first quarter of 2015 by Woodside Petroleum (an Australian firm) for US\$ 2.75 billion plus additional expenses incurred between now and June 30, 2015 – a total deal of about US\$ 3.7 billion. At the same time, the Federal Energy Regulatory Commission has approved expansion of the Cheniere Sabine Pass export facility from four to six trains. The decision based on the incremental study of environmental impacts associated with both the export facility and Creole Trail Pipeline rejected a request by the Sierra Club that a full environmental impact statement be required for the capacity addition.

Natural Gas Market Summary – many analysts believe that a sustained lower price environment for oil in North America (and the world more generally) would slow growth in natural gas and liquids production and also infrastructure requirements to move that volumes to markets. Lower oil prices also put pressure on world LNG markets by reducing the pricing advantage in areas of the world expected to be supplied by new North American LNG supplies. Taking it even further, slowdowns in investment could slow plans to develop some industrial projects in the US as world markets adjust to a slower economic pace and shifts in spending; and, as the price relationship between naphtha (petroleum based chemical feedstock) and ethane (natural gas liquids) evolves. Delays in industrial projects scheduled to be completed point to less gas demand (3.0 Bcf per day instead of 4.5 Bcf per day with no project delays) by 2020 already. Of course, in the short run lower natural gas prices means savings to consumers and puts more money in the pockets of energy users, which can stimulate consumer spending. That's not so bad.

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