

Natural Gas Market Indicators



April 14, 2017



Reported Prices – market observers have followed the bouncing ball of crude prices in the US and abroad which have landed firmly above \$53 per barrel for West Texas Intermediate during the first half of April 2017. Brent crude has even reached to over \$56 per barrel. Natural gas prices at Henry Hub have also firmed coming out of the 2016-17 winter heating season and are now about \$3.15 per MMBtu. This pricing signal (up in 2017 over 2016) is in part responsible for weekly increases in oil- and gas-directed rig activity in the lower-48. What will summer bring for natural gas acquisition prices? The current NYMEX monthly strip points to about what we see now for the balance of the summer. More to come.

Weather – the traditional winter heating season has closed with heating degree days (HDD) 16.2 percent fewer than normal (warmer) for the six-month period October 2016 through March 2017. Each of the last six months individually was warmer than normal and every region of the lower-48 states was cumulatively warmer, also. The largest deviations from the norm occurred in the South Atlantic (21.1 percent warmer), the East South Central (26.4 percent warmer) and the West South Central (35.2 percent warmer). The current 8 to 14-day outlook for temperatures from the National Oceanographic and Atmospheric Administration (NOAA) shows warmer than normal conditions for the lower two-thirds of the country and cooler than normal expectations in the Upper Midwest and New England.

Working Gas in Underground Storage – net injections of natural gas in storage on a national basis began the last week of March, were interrupted by small net withdrawals for two days at the end of the month and have primarily been net injections since. In fact, for the week ending March 31 the first net weekly injection of working gas for the year was recorded (+2 Bcf) according to the Energy Information Administration, followed by a 10 Bcf injection for April 7, bringing inventories to close the winter heating season to 2,051 Bcf and immediately rising. In the roundest numbers possible, we ended the winter heating season with about 2 Tcf still remaining in working gas for the nation as a whole. Based on recent history total net injections may grow working gas by about 2 Bcf over a 200(+) day net injection period. That means that about 10 Bcf per day would be required on average to “fill” storage. Understanding that storage refill is underpinned by winter heating season planning primarily by local gas utilities but also influenced by market arbitrage opportunities and other factors, this average daily injection rate is in the middle to low-end of a range of recent injection metrics.

Natural Gas Production – dry natural gas production reached 26.4 Tcf in 2016, per data from the US Energy Information Administration, a decline of 2.2 percent from the record set in 2015. That said, AGA analysis of reserves and production data from 30 large reserves holders’ annual reports (2016) show that the sample of companies maintained their relative reserves position as a group even with continued falling prices in 2016. That net result is unusual based on past analysis (when commodity prices are falling) and likely reinforces the observation that companies concentrated on cutting costs in 2016, which left more of their marginally economic gas reserves recoverable.

Shale Gas – US energy-related carbon dioxide emissions fell 1.7 percent in 2016, per data from the Energy Information Administration (EIA). The drop is due to declining carbon emissions from electricity generation as the carbon-intensity of the US power sector drops as coal is replaced with natural gas and renewables. EIA noted that the magnitude of the drop in carbon-intensity from electricity generation during 2015 and 2016 were the largest for two consecutive years since 1973. However, even as shale gas has propelled changes in the electric generation sector, the same technologies have brought about lower oil prices as well. The transportation sector, spurred by low prices for petroleum fuels, saw an uptick in transportation sector CO2 emissions, which increased 1.9 percent.

Rig Count – two natural gas rigs are now operational in the Gulf of Mexico. From October until two weeks ago, there were exactly zero gas rigs operating in the Gulf, thus the turnaround is another indicator of renewed industry activity amid higher commodity prices. In addition to the modest but increasing Gulf activity, there are 672 oil and 165 gas rigs currently in operation. Both totals are double that from their respective lows in 2016.

Pipeline Imports and Exports – imports from Canada have averaged 5.2 Bcf per day in April, which is down 0.2 Bcf per day from April last year. Exports to Mexico at 4.0 Bcf per day are 0.7 Bcf per day higher year over year. Last week, the US hit 6.6 Bcf per day for combined LNG and pipeline exports. With new export capacity for both pipelines and LNG planned, this number is primed to grow.

LNG Markets – commissioning for train 3 at Sabine Pass has been completed while the commissioning procedure for train 4 is in process. Train 5 is under construction and train 6 has received initial permits. Remember that 16 months ago no LNG had yet been exported from the facility. What a difference a year makes. The next facility to enter service may be the Dominion Cove Point liquefaction venture in Maryland probably in late 2017. In the meantime, feed gas for exports from Sabine Pass has averaged 1.9 Bcf per day during 2017 and hit a new peak of 2.41 Bcf per day according to data and analysis from SNL Energy. LNG imports and distribution to the pipeline grid have averaged only 0.4 Bcf per day in 2017 – the same year-to-date volume as in 2016.

Natural Gas Market Summary – expectations for average storage injections this summer point to requirements within a low to medium range based on history and demonstrated industry capability. Without production declines that may mean that natural gas to power generators, industrial usage, as well as LNG exports and pipeline volumes to Mexico will need to prop up the demand side of the market balance equation. But hydro-electric reservoir storage is strong in the west this year and \$3+ natural gas prices may bring on more gas-to-coal switching if history is a prognosticator in the power sector, also. More observations to come.

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