Natural Gas Market Indicators

American Gas Association

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Reported Prices – crude prices have struggled to maintain any momentum this month. West Texas Intermediate has dropped below $42 per barrel and Brent is trading at what is historically a low $1.75 premium. Meanwhile natural gas has yet to break above the $3 mark this summer despite strong flows to power generation and some production declines due to maintenance. The prompt-month (August) NYMEX at Henry Hub called for $2.80 per MMBtu on the morning of July 28. The futures strip through March 2017 also showed prices around $3.30 during the first quarter of 2017.

Weather – when summer began, temperatures were generally cooler than 2015. That dynamic has now flipped. Following four July weeks of much warmer than normal temperatures, the cumulative cooling degree day total since May indicates temperatures are now 4.3 percent above (warmer than) last year and a strong 19 percent warmer than normal. Every region of the country has been cumulatively warmer than normal this summer since May and six of the nine census regions have been warmer than last year. Folks, it's been hot everywhere, particularly if you live in New England, the Middle and South Atlantic areas or the Mountain and Pacific regions.

Working Gas in Underground Storage – working gas inventories are now nearly 3.3 Tcf with 100 days still left in the traditional injection season. The question posed at the beginning of the summer, how would storage inventories be balanced, seems to have been answered with a hot summer and marginal adjustments to domestic production. Even so, working gas inventories are 15 percent above last year and 19 percent more than the five-year average.

Natural Gas Production – volumes took a hit on July 19 and 20 as dry gas produced fell 1.5 Bcf due to maintenance on Rockies Express, though flows have since recovered. Month-to-date and year-to-date averages for dry gas production are now both down from 2015; one might say significantly so at 1.5 and 0.3 Bcf per day, respectively, given that the production curve has only really increased since the shale revolution began. So, what does this mean? Perhaps production is not sustainable and the resource base is really not as large as some analysts have said. Seriously?! Actually, no: the answer is that the market works and is functioning, pricing signals matter, companies adjust their businesses to prevailing conditions, and that the US natural gas market continues to search for efficient well-positioned ways in which to demand this abundant domestic resource.

Shale Gas – better efficiencies and higher production in shale gas wells are noted in the recent *Drilling Productivity Report* from the Energy Information Administration. Year-over-year new-well gas production increased in all major basins, with the Marcellus leading the way in aggregate gains. In fact, the amount of gas produced from a new well in the Marcellus shale is 2 to 12 times more productive than new wells in any other basin. In other news, and perhaps as a barometer of things to come for other natural gas producers, Southwestern Energy has resumed drilling operations after laying down all rigs in January of this year. Five rigs – four in Pennsylvania and one in Arkansas – are starting once again with the idea of rebuilding a producing inventory poised to capture some analysts' expectations of well head prices of $3 per MMBtu or more in 2017.

Rig Count – the domestic oil rig count was up 14 for the week ending July 22 to 462 rigs operating, while natural gas directed drilling was down one to 128. Both counts are well below operations from one year ago, but there has been a rebound of sorts since May. With oil prices trending lower in recent days, it remains to be seen if this rebound will be sustained.

Pipeline Imports and Exports – imports of pipeline natural gas from Canada are up in recent weeks as summer power requirements from natural gas have surged. Volumes from Canada are running about 0.9 Bcf per day higher this July than in 2015 and year-to-date volumes have also caught up at 5.6 Bcf per day. On the flip side of the ledger, exports to Mexico during July have been strong with daily volumes reaching as much as 4.0 Bcf per day and averaging 3.7 Bcf for the month, which exceeds the same period last year by 0.5 Bcf per day.

LNG Markets – in terms of current US LNG volumes, feedgas for exports from Sabine Pass has averaged 0.7 Bcf per day in July. At the same time, send out from LNG import terminals has averaged 0.3 Bcf per day this month, generally directed at balancing summer power generation loads in the east. Also a newsworthy moment for US natural gas, the Maran Gas Apollonia, which loaded its cargo at Sabine Pass on July 21, became the first vessel loaded with US LNG to sail through the newly expanded Panama Canal.

Natural Gas Market Summary – nine US nuclear reactors have announced intent to retire through 2019. The nearly 9 GW of nuclear capacity these plants represent has a gas burn equivalent of 1.35 Bcf per day, according to estimates from Bloomberg New Energy Finance. This represents the potential upside for natural gas as it fills the gaps created by the shuttering nukes. Looking at the more immediate, natural gas to power generation reached 41 Bcf per day at times during July. When that occurs net storage injections are usually reduced and daily volumes of added working gas fall into low single digits. Even for a day or two national inventories can indicate as much gas coming out of storage as going in or even a net withdrawal (estimated small net withdrawal by *Bentek Energy* for July 25)