

Natural Gas Market Indicators



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Reported Prices – natural gas prompt-month prices that temporarily bumped above \$3.10 per MMBtu in September for the October contract left the board at \$2.97 and would seem to reflect shoulder month's reductions in demand. Crude prices, on the other hand, have firmed to above \$52 per barrel for West Texas Intermediate (WTI) and over \$58 for Brent. WTI crude prices are the highest they have been since April 2017 while Brent has moved up to a price not seen since July 2015.

Weather – the five-month period May through September 2017 has come in about 14 percent cooler than last year but 9 percent warmer than normal. For the 21-weeks represented through September 23, 10 were actually cooler than normal in the US, however, 11 weeks were solidly warmer than normal, also. For the nation as a whole, all regions of the country have been warmer than normal this summer in aggregate (since early May) except the East North Central and West North Central regions (Upper Midwest), which has been 3.9 and 1.4 percent cooler, respectively. The antithesis of that temperature pattern has occurred in the Pacific, Mountain and New England regions where conditions were 49 percent, 19 percent and 25 percent warmer, respectively, compared to normal. The current two week US Weather Service outlook for temperatures in the lower-48 states shows prospects for below normal temperatures in the Pacific Northwest, northern Rocky Mountain area and extreme West Texas with normal to above normal temperatures nationwide otherwise.

Working Gas in Underground Storage – inventories of working gas in storage remain just above the five-year average with less volumes of gas injected on average this summer compared with prior years. That said, the two storage reports in September showed net injections above 90 Bcf for the week – only exceeded this summer by a 107 Bcf injection in early June. The Energy Information Administration notes 3,466 Bcf of gas in storage for the week ending September 15, 2017, which trails last year at this time by 3.5 percent but is 1.2 percent higher than the five-year average.

Natural Gas Production – the productive monster of US shale gas continues to push aggregate production into record territory. September average dry production for the lower-48 at 73.7 Bcf is 2.2 Bcf per day above this month last year, bolstered in part by new takeaway capacity in the Northeast. Several times this month, dry gas production has set new record highs, according to Bentek's preliminary model data. The highest to date was September 20, which posted 74.6 Bcf. Given the elevated rig count during 2017 and new midstream pipeline capacity coming online in the coming weeks and months, this daily record may not hold for long.

Shale Gas – five natural gas producers accounted for 14.3 Bcf per day of natural gas production in Pennsylvania during July 2017. Most analysts expect a solid year-over-year increase in Marcellus shale extractions where most volumes originate from five counties in the state – Greene and Washington counties in the southwest and Susquehanna, Lycoming and Bradford counties in the

northeast. Also, in July 2017 Chesapeake Energy produced 2.1 Bcf per day in Pennsylvania, while Cabot, Range Resources, Southwestern and EQT all produced from 1.9 to 1.2 Bcf per day in July.

Rig Count – there has been a softening in the oil rig count during the past few weeks, but natural gas has continued to add to its total. At 190, the number of gas rigs in operation is up 107 percent year-over-year after adding 4 rigs during the week ending September 22. Oil rigs on the other hand have shed 24 rigs or 3 percent of its total since early August; the count of oil rigs in operation now total 744.

Pipeline Imports and Exports – imports from Canada are down as the shoulder season brings with it less demand. Averaging 5.0 Bcf per day, pipeline imports from north of the border are 0.4 Bcf per day below September 2016 average flows. Exports to Mexico averaged 3.9 Bcf per day this month, which is slightly behind last year's monthly average by 0.2 Bcf.

LNG Markets – South Korea, in an announcement on September 26, said it will replace some of its coal-fired power plant capacity under construction with LNG as a way to tackle pollution. In addition, the government will seek to scrap 2.2 million diesel vehicles by early next decade and switch to LNG and LPG fuels. This is one more example of the growing role LNG is playing as east Asian countries work to address pollution concerns. LNG feedgas volumes into Sabine Pass have been strong during the past two weeks, bringing the month-to-date average to 2.0 Bcf per day, up 58 percent from September 2016. In addition, Cheniere Energy has filed a request for immediate authorization to operate a fourth train at Sabine Pass. FERC had granted permission for introduction of feedgas back in June. A fifth train is expected to be completed by August 2019. Total exports (including pipeline flows to Mexico) are now pushing the 6-7 Bcf per day mark. With new LNG capacity expected at Cove Point later this year, also, we may see exported flows reaching new record territory and continuing to grow.

Natural Gas Market Summary – with the commissioning of the first phase of Rover pipeline, which is designed to move gas from the Appalachian basin to markets in Midwest, production flows have begun to climb to record territory. September production is running among the highest monthly volumes ever for the lower-48. With the balance of Canadian and LNG imports, total US supply is up 1.8 Bcf per day this September over last year. Demand is up as well, but to a more modest degree. Higher exports have been offset by lower power burn. What's next for the market? Both supply and demand are poised to move into record territory as new infrastructure projects bring new supplies to new markets. Pipeline projects in Appalachia will continue to unlock constrained gas flows. And Cove Point is likely to begin taking gas later this year. Amid this renewed strength in the market, supplies are robust and pricing remains low and relatively stable—a good sign for consumers as we head into the winter months.

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