

Natural Gas Market Indicators



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Reported Prices – your authors often take home some “light reading” on energy markets. From that experience, there seems to be a consensus building for oil prices continuing to rise in 2019. The most cited reason is continued sanctions on Iran, which are much more likely to reduce the supply margin for oil in international markets than reductions in oil demand resulting from a trade-tariff induced economic slowdown. If so, how will North American natural gas prices respond? If recent history is any guide, they will shrug off those international influences and settle based on the supply-demand picture closer to home. We’ll see. West Texas Intermediate is now over \$73 per barrel and Brent is nearly \$83. Prompt month prices for November 2018 natural gas at Henry Hub is \$3.28 per MMBtu; January contracts have now surpassed \$3.40 per MMBtu.

Weather – every single week was warmer than normal across the US this summer. That’s twenty-three straight weeks from May to September. Every single region was warmer than normal cumulatively across that period too. From May through September, cooling degree days had cumulatively reached 28 percent more than normal and 15 percent more than last year for the lower-48. Individually, every region of the country had been warmer than normal also. As we now turn to fall, continued warmer temperatures have kept power burn relatively high. Two hurricanes have made landfall during the past month, producing significant flooding and wind, consumer impacts, and lower gas demand generation in impacted areas. Indeed, this has been an eventful summer with significant effects on the people and infrastructure of North Carolina and Florida.

Working Gas in Underground Storage – storage volumes are almost certainly going to finish the injection season well below recent history. The question is by how much? The storage report for the week ending October 5 showed a 90 Bcf injection. With about three weeks remaining in the typical underground storage injection season, national inventories at 2,956 Bcf were 17.5 percent behind last year and 17.0 percent less than the five-year average (2013-17). Will the injection season continue into November? Or will cooler weather prompt a turnaround to net withdrawals early or on time?

Natural Gas Production – another *Natural Gas Market Indicators*, another production record. Lower-48 dry gas production reached a new daily high of 84.1 Bcf on Monday, October 8, 2018, according to preliminary data from S&P Global. Northeastern production flows have reached 30.5 Bcf per day, a new high, as the Atlantic Sunrise pipeline was placed into service. However, in the days following, off-shore production took a hit as the Hurricane Michael in the Gulf of Mexico shut-in about 800 MMcf per day of natural gas flows. All told US dry gas production has averaged 83.4 Bcf per day in October, up 14 percent year over year.

Shale Gas – in this section of the *Market Indicators* we often refer to the EIA *Drilling Productivity Report* to track the gas production trends in major shale basins. In this edition, let’s start with oil. EIA

shows that oil production is growing in all the major shale regions: the Permian, Eagle Ford, Anadarko, Niobrara, and Bakken. Oil production in the Permian is quickly approaching 3.5 million barrels per day, according to EIA. Other areas, like the Bakken and Eagle Ford, are gaining on their prior peaks hit before oil prices collapsed in 2014. Of course, we see similar trends in natural gas production from these regions as well. Every one of these areas, which are heavy in liquids production, have seen rises in natural gas production also. Among the regions, the Permian leads the pack with 11.8 Bcf per day of natural gas production estimated for October 2018.

Rig Count – although oil prices have risen, the oil-directed rig count hasn't moved much. Prices at West Texas Intermediate fell below \$65 per barrel in June but have since risen to around \$75. During those price movements, there have been effectively no substantial change in the number of oil-directed rigs in operation, with the rig count floating between 860 and 870 over that period. Similarly, the natural gas-directed rig count has remained stable. Weekly reports of shown the gas-directed count in a range of 182 to 189 rigs since mid-June.

Pipeline Imports and Exports – daily natural gas pipeline imports from Canada registered 4.3 Bcf in September 2018, which is 0.7 Bcf per day or 14 percent below the volume imported in September 2017. In contrast, pipeline exports to Mexico were up 0.8 Bcf per day to 5.1 Bcf per day in September 2018 compared to one year ago. Total exports of natural gas and LNG now routinely reach 8 Bcf per day or nearly 10 percent of daily dry gas production.

LNG Markets – a positive investment decision has been made on the LNG Canada project in Kitimat, British Columbia. Shell, Petronas, Mitsubishi, Korea Gas, and PetroChina support the Canadian west coast project, which is to include two trains capable of creating 1.7 Bcf per day of LNG, with potential expansion to four trains. Project timing remains unclear. Many analysts are looking past the LNG Canada project to other potential US facilities wondering whether the “second wave” of North American LNG investment decisions will continue. Meanwhile, the Port Arthur liquefaction and export facility in Texas led by Sempra Energy has cleared an environmental review by the Federal Energy Regulatory Commission for the facility itself and related pipeline proposals. Back to the data, US LNG feedgas flows for export are averaging 2.8 Bcf per day in October.

Natural Gas Market Summary – natural gas storage is poised to end October with the lowest inventories since 2005, according to the recent EIA *Short-Term Energy Outlook*. Moreover, gross exports of natural gas are nearly 15 percent higher year over year. Still, the market is only pricing natural gas at most between \$3.30 and \$3.40 per MMBtu this winter. Why? Record production. Dry gas flows are up 14 percent in October from last year. Given additional supplies from Canada, LNG imports, and of course storage, the collective supply status in this country is robust.

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