Natural Gas Market Indicators

American Gas Association

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Reported Prices – natural gas prompt-month prices have traded in a moderate range between \$2.82 to \$3.03 per MMBtu so far in October. Henry Hub prices backslide during the first part of October, but regained ground by October 12. Oil prices backslid a bit as well. Crude prices teased \$53 per barrel during the end of September, but have since retreated closer to \$50.

Weather – the first AGA heading degree day summary for this winter season shows a warm start. The first week of October was 43.5 percent higher (warmer) than normal. Granted, there are typically few heating degree days this early in the season so small changes in HDDs can lead to big percentage differences. Still, much of the country has been uneasonably warm, which in turn has lessened heating demand. On the supply front, Hurricane Nate disrupted offshore supplies as the storm increased in intensity in the Gulf of Mexico and eventually made landfall at the mouth of the Mississippi in Lousiana. Shut-ins of natural gas totaled 2.5 Bcf per day at the peak on October 8, after which operations began to restart and gas flows increased in the days that followed.

Working Gas in Underground Storage – inventories of working gas increased 87 Bcf for the week ending October 6. For the past two weeks, the national working gas volume has trailed the five-year average for the first time since January with stocks currently 0.2 percent below average. At 3,595 Bcf, working gas totals trail year-ago levels by 4.4 percent. With NOAA projecting above-average temperature anomolies for much of the continental US for October, additional strong weekly builds this month may be likely.

Natural Gas Production – as mentioned previously, Hurricane Nate prompted shut-ins of Gulf of Mexico natural gas production beginning on October 5 and reduced national volumes by as much as 2.5 Bcf per day during the duration of the impacts. Lower-48 natural gas production, which had been running at more than 74 Bcf per day prior to Nate's emergence, dropped as low as 71.5 Bcf per day on October 7, after which daily production flows began to recover above 72 Bcf. Despite the disruption, a gas production resurgence is underway. October lower-48 dry gas production is averaging four percent above 2016 monthly levels.

Shale Gas – northeast shale production is on the up as new infrastructure projects unleash stranded supplies. Thirty-day northeast production has averaged 25.3 Bcf per day, a gain of 3.5 Bcf per day from last year. Flows through the Rover pipeline, the first phase of which began operating in late August, have reached their largest volume to date at 1 Bcf. As new pipeline capacity comes online later this year from on systems like TCO, TETCO, Transco, and others, new gas volumes from Northeastern shale plays are likely fill that new capacity and boost overall production.

Rig Count – the growth in the oil and gas rig count has stalled. Gas rigs reached a low in August 2016 and have since climbed about 130 percent. However, the number of gas rigs in operation reached their high at 192 in late July and has since fluctuated in number between 180 and 190. Similarly, oil rigs reached a maximum count of 768 in early August, but that number has fallen to 748 in the most recent report. Without additional price support in both crude oil or natural gas, growth in the rig count may prove elusive. In all, 936 rigs are in operation as of October 6.

Pipeline Imports and Exports – imports from Canada are down as the shoulder season brings with it less demand. Averaging 5.3 Bcf per day, pipeline imports from north of the border are 0.6 Bcf per day below October 2016 average flows. Exports to Mexico are averaging 4.0 Bcf per day this month, which is slightly behind last year's monthly average by 0.1 Bcf.

LNG Markets – the US Court of Appeals for the DC Circuit will not hear oral arguments regarding challenges by the Sierra Club to three LNG export sites (Cove Point, MD; Sabine Pass, LA; Corpus Christi, TX). The court has stated that the Sierra Club's assertion that inadequate attention has been paid to environmental studies associated with the Department of Energy's approval process fails to overcome the presumption in favor of exports under the statutory authority of the agency. Next up on the LNG export list is Cove Point, Dominion's facility in Maryland, which received FERC approval for feedgas in late August and is likely to begin taking substantial gas deliveries in October. Meanwhile feedgas delivery for LNG export has averaged 2.5 Bcf per day this October.

Natural Gas Market Summary – only a couple weeks after setting records for daily dry gas production, US supply pulled back after Hurricane Nate disrupted gas production in the Gulf of Mexico. Even so, natural gas prices didn't break out of the narrow pricing band in which they've traded for most of the summer. Demand is up overall, though there are sector differences. Warmer temperatures have lessened residential and commercial heating demand relative to October 2016; however, gas flows to power generation are up 12 percent for the month from last year despite a similar pricing environment. That said, overall volumes of gas to power generation are down about 2.7 Bcf per day on average year-to-date. The major incremental change in demand has come from pipeline and LNG exports, which at 6.6 Bcf per day are up 66 percent this month compared with October 2016. On the underground storage front, inventories are nearing 3.6 Tcf and still growing, which means the gas market is well positioned in terms of supply as we head into the winter. The question, as always, is weather. Just normal temperatures would be quite cold compared to the past two winter heating seasons. The EIA *Short-Term Energy Outlook* is projecting an increase in natural gas customer bills this winter of 12 percent, mostly attributable to their assumptions of colder temperatures (relative to last year) driving a 9 percent increase in consumption. EIA sees only a two percent increase in residential customer prices. Their 10-percent-colder scenario pushes consumer expenditures up to a 20 percent increase relative to last year. EIA's 10-percent-warmer scenario sees only a 1 percent increase in expenditures relative to 2016. At the end of the day, the data shows that natural gas remains an affordable heating option for consumers.