Reported Prices – winter has proved stubborn during March with repeated Nor’easters along the northeast coast, clippers across the upper-Plains into the Ohio Valley, rain on the west coast, and recent colder-than-normal temperatures overall. Winter events would presumably be a signal to the bulls. However, the natural gas market has instead kept prices within a range of about $2.60 to $2.80 per MMBtu; the last time the next-month contract at Henry Hub closed above $3 was January 30. Meanwhile, crude oil prices have maintained support. West Texas Intermediate is currently trading at $65 per barrel on March 28. Brent crude is trading near $70 per barrel.

Weather – the past two weeks of March have been colder than normal across the US. Despite the early-spring cold, cumulative heating degree day totals this winter have been fewer (warmer) than normal. For the week ending March 24, only the West South Central region was warmer than normal—the rest were colder, according to data from the National Oceanic and Atmospheric Administration. Cumulatively heating degree day data since October shows every single division of the continental US to be warmer than normal, and the lower-48 as a whole has been 6.5 percent warmer.

Working Gas in Underground Storage – net withdrawals for underground storage exceeded 85 Bcf per week for the periods ending March 9 and March 16, up slightly from the prior two weeks due to colder temperature conditions. The following week, ending March 23, showed another above average withdrawal of 63 Bcf. At 1,383 Bcf for underground storage inventories, volumes are running 32.7 percent behind this time last year and 20.0 percent behind the five-year average.

Natural Gas Production – US dry gas production hit a new high at 78.4 Bcf on Sunday, March 25, according to preliminary data from S&P Global. Lower-48 dry gas production during March 2018 averaged 77.9 Bcf per day—6.5 Bcf above the average in March 2017. The largest share the production increase has come from the Utica and Marcellus shales, together flowing 4.1 Bcf per day year-over-year in March. Over the same period, the Texas-Midcontinent-Southeast producing area has also grown production by 1.5 Bcf per day, and the West-Rocky Mountains is also up 0.6 Bcf per day. We may continue to see gains in production especially as new infrastructure projects expand takeaway capacity in supply glutted regions such as Appalachia and the Permian.

Shale Gas – prices for steel have risen in recent weeks following an announcement from the Trump Administration to levy tariffs on imports. Prices for hot rolled coil (HRC ex-works Indiana) climbed 10 percent between the end of February and March 12, according to S&P Global. These increases bring US prices in line with European markets if those prices include 25 percent tariff adder. The consequences of the 25-percent tariff include direct effects such as higher upfront costs for steel-intensive projects like well, tubulars, pipelines, crackers, and LNG liquefaction and export. A cost increase of 1 to 10 percent of a total project is non-trivial when billions of dollars are on the line.
Tariffs could also result in retaliatory measures from other countries, creating secondary effects that are less predictable.

**Rig Count** – oil rigs dropped 7 and gas gained 4 in the most recent Rotary Rig Count report from Baker Hughes. A total of 993 rigs are currently in operation across the US; Canada shows another 134. Texas represents more than half the US total with 496 rigs in operation, and nearly all of those rigs (443) are in the Permian basin, which itself continues to experience rapid growth in activity.

**Pipeline Imports and Exports** – imports from Canada are averaging 6.0 Bcf per day during March, which is 0.9 Bcf higher than the average in March 2017. On the export side of the ledger, the US is currently flowing about 4.2 Bcf per day of pipeline gas to Mexico—0.3 Bcf per day higher than one year ago. The combination of LNG feedgas and pipeline exports to Mexico reached nearly 8 Bcf per day on March 26 according to S&P Global. Is this the export market seeking a new level?

**LNG Markets** – Cove Point LNG in Maryland began official commercial operations in March, but feedgas volumes to the facility have been limited for much of the month. In recent days though the facility has kicked back into gear. Implied flows for LNG feedstock into Cove Point have gone from near zero to nearly 1.4 Bcf between March 23 and 28. S&P Global notes that recently-executed contracts between Cove Point Pipeline and various LNG off-takers do not become effective until March 31, though flows have perhaps increased in anticipation of this date. The first cargo shipped from Cove Point, as noted in the previous *Market Indicators*, has landed. Shipping trackers show the port was in the UK after the Gemmata LNG tanker docked at Milford Haven on March 21. So completes the first delivery of LNG from the US mid-Atlantic facility shipped under an agreement with Royal Dutch Shell. And another factoid regarding LNG exports: The Energy Information Administration has reported that 60 percent of LNG exported from Sabine Pass in 2017 was sold on a spot basis. Flexibility in the “long-term” contract terms allow the liquefied natural gas to follow the demand, and in some cases, Cheniere can sell into the spot market through their marketing arm.

**Natural Gas Market Summary** – year-to-date total natural gas demand in the country is up about 9.7 Bcf per day (including gas exports) compared to the first quarter of 2017. Every demand sector (including pipeline exports and feedgas for LNG exports) is up over the same period from 2017. Residential and commercial natural gas consumption for the lower-48 states has averaged about 36 Bcf per day in March, or less than half the peak-demand day this winter set on January 1, 2018, when residential and commercial consumption reached nearly 79 Bcf. How much energy does that amount of natural gas represent? 80 Bcf of natural gas is equivalent to 24 terawatt-hours of energy, or the same energy that 1,000 gigawatts of electric generation capacity—roughly the size of the current US electric grid—would produce over a 24-hour period. In other words, the US natural gas system delivers a lot of energy when it’s needed most.

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