Reported Prices – two weeks and one major cold snap later, US natural gas prices have gained as much as 45 cents per MMBtu since mid-October. With prices rising as high as $2.87 per MMBtu, futures for December delivery are now trading around $2.64 per MMBtu as bullish enthusiasm appears to have given way. Looking to petroleum, crude oil in West Texas currently calls for $57 per barrel as prices there have gained about $4 per barrel during the past month. European crude oil prices at Brent show a $5.50 per barrel premium at $62.50 per barrel.

Weather – for October, temperatures based on US heating degree days as a whole finished 2 percent warmer than 2018 and 4.8 warmer than normal. This warm trend changed with the month as heating degree days climbed in early November. For the week ending November 9, temperatures were 23 percent colder than 2018 and 17 percent colder than normal. Cumulatively, the United States has been three percent colder since the beginning of October 2019. Total US demand continues to grow as winter weather takes hold across the middle and northeast potions of the US. Driven by residential and commercial demand, total US lower-48 demand, including exports, pushed above 125 Bcf per day on Tuesday, November 12, the highest since the beginning of March 2019.

Working Gas in Underground Storage – through the first week of November, net daily volumes of natural gas were still being injected into underground storage. For the week ending November 8, EIA reported a net injection of 3 Bcf. Currently, the Energy Information Administration reports that national working gas inventories are 3,729 Bcf. Over the injection season (April 1 through October 31), more than 2,569 Bcf of natural gas was placed into storage, which represents the second-highest net injected volume for the seven months following only the 2014 injection season.

Natural Gas Production – average daily dry gas production year-to-date at 88.5 Bcf is running 6.9 Bcf per day higher than the same period in 2018—a strong gain year over year. Since the last “Market Indicators,” a new production record was set on November 1 at 92.9 Bcf for the day. However, since then, production has fallen slightly and is currently sitting below 90 Bcf per day on November 12. Looking ahead, one question is whether lower-48 production may begin to slow. S&P Global Platts notes in a recent research report on producer guidance that Northeast firms indicate that production volumes may be held flat or potentially decline relative to the last quarter of 2019. However, a few firms are calling for volumetric growth. Many factors can affect future production, including the inventory of drilled-but-uncompleted wells and company financial hedges. As always, we will be looking for those indicators that help explain the market trends as we see them.

Rig Count – for the week ending November 8, 2019, the total US rig count fell one percent to 817 rotary rigs in operation compared to the week prior, according to Baker-Hughes. Gas-directed drilling stayed constant at 130 rigs in operation, while rigs seeking oil fell by five rigs.
**Shale Gas** – on November 13, the International Energy Agency released its *World Energy Outlook 2019*. The report notes the position of the United States as an exporter of both shale gas and oil, overtaking total oil and gas production from Russia before 2025. They report the United States accounts for 30 percent of the increase in natural gas over the period to 2030.

**Pipeline Imports and Exports** – the recently completed Sur de Texas pipeline is on track to beat out its October flows, averaging more than 650 MMcf per day this month so far. The pipeline is expected to gain even more of a boost in the first quarter of 2020 as the Cempoala Compressor Place II project will enter service downstream of the delivery point of Sur de Texas. The project is expected to boost flows up to 700 MMcf per day, opening up more downstream capacity for Sur de Texas. Meanwhile, month-to-date exports to Mexico are averaging 5.2 Bcf per day this November, 0.4 Bcf higher than this same time in 2018, while imports from Canada are up 0.7 Bcf per day from November 2018 to 4.5 Bcf per day.

**LNG Markets** – European and Asian LNG prices collapsed throughout 2019 and are currently weak compared to months prior. The price decline has been driven in part by excess supplies relative to demand as a massive storage overhang in East Asia led to strong builds in European gas storage, according to S&P Global Platts analysis. In terms of prices, the LNG Japan/Korea Marker settled on Friday November 15 at 6.08 per MMBtu, according to the CME group. Gas prices at the National Balancing Point in the UK has dropped to 5.24 per MMBtu as of November 13 after relatively steady declines that have continued since August. Even with these bearish global indicators, US feedgas flows for LNG exports remain strong with month-to-date volumes of 7.2 Bcf per day in November.

**Natural Gas Market Summary** – natural gas looks to remain a major and important global fuel through 2040, according to projections released as part of the 2019 World Energy Outlook from the International Energy Agency on November 13. In 2018, more than 45 percent of the growth in the world’s energy demand was met by natural gas, growing faster than any other fuel. Looking ahead, the IEA envisions that natural gas remains a critical component of the US and global energy mix for decades to come. The US is uniquely positioned to serve growing global energy and natural gas demand in part given its robust resource base, extensive infrastructure, regulatory environment, and competitive gas industry. Finally, and importantly, IEA recognizes that “gas grids provide a crucial mechanism to bring energy to consumers, typically delivering more energy than electricity networks and providing a valuable source of flexibility.”