August 29, 2014

**Reported Prices** – domestic crude is just under $94 per barrel and Brent prices are in at under $103 – part of a pricing trend that has been moving downward during mid-summer in the United States. Daily natural gas prices currently in the $3.90-4.00 range have been up and down but have not shown dramatic changes during the same time period. Forward prices for natural gas for November through February futures have settled in the $4.00-4.25 per MMBtu range, which may project a market sense of relative stability for the coming winter. None of these observations are a real surprise given supply strength in the market and only moderate seasonal demand from power generation to date this summer.

**Weather** – five straight weeks of cooler than normal temperatures, then one warmer, have reduced the warmer trend this summer to only 2.5 percent more cooling degree days than normal for the nation as a whole, since early May. July was actually cooler than normal across the nation after April, May and June had been warmer. Another way to place in perspective the impact of seasonal weather during the summer is to look at natural gas volumes directed to power generation on a daily basis. Strong summer gas demand for cooling loads over the past five years have resulted in 35 Bcf per day or more going to power generation on hot days. This summer, since May 1, 2014, gas sent to power generators has only exceeded even 30 Bcf per day six times – all other days recording volumes below 30 Bcf. Cumulatively, the northeastern quadrant of the lower-48 states has been cooler than normal along with the Middle Atlantic region. South Atlantic, Mountain and Pacific regions have been warmer.

**Working Gas in Underground Storage** – continued daily storage injections that tend to exceed 10 Bcf per day have pushed domestic inventories to above 2.6 Tcf for the week ending August 22, according to the Energy Information Administration.

**Natural Gas Production** – daily dry gas production in the United States is up 3.9 percent year-to-date in 2014 over the same period in 2013. For August, production is up even more at 5.9 percent or 3.8 Bcf per day – August 2014 over August 2013. Most of the increase can be attributed (on average) to the northeastern United States where Bentek Energy indicates that daily average production has increased primarily due to growth in Marcellus and now Utica shale production.

**Shale Gas** – analysts are often trying to understand the size and dimensions of the natural gas resource potential in the United States. Recent public reports have acknowledged that Wood Mackenzie has quantified their vision of value remaining in the Marcellus shale play by estimating that $90 billion remains even after more than $100 billion in investment to recover the gas and natural gas liquids likely to be produced. The top 20 operators are expected to drill more than 1,000 wells per year and annual production rates are anticipated to continue growing in the outlook. In fact, the Marcellus shale play has already exceeded previous outlooks for production made by Wood Mackenzie and with continued additions could reach 20 Bcf per day equivalent by 2020, which would represent a quarter of all gas production in the United States.
**Rig Counts** – even with a drop of 17 rigs operating from the prior week, rotary rigs were 120 units higher for the week ending August 22 compared to one year ago. All of the recent drop can be attributed to oil operations inasmuch as gas-directed drilling actually increased by nine rigs week over week. At 1,896 rigs operating, total counts are up 6.8 percent from this time last year with oil-based operations now accounting for 82 percent of activity and gas operations essentially accounting for the balance.

**Pipeline Imports and Exports** – average pipeline imports from Canada in August (5.1 Bcf per day) are the same as one year ago during the same month. The year-to-date total is also identical at 5.1 Bcf per day compared to that in 2013. Exports to Mexico are up slightly in August 2014 compared to August 2013 (2.2 Bcf per day compared to 2.0) and up year-to-date – 2.0 Bcf per day compared to 1.8 Bcf per day in 2013.

**LNG Markets** – the Federal Maritime Commission has recognized that LNG as a fuel for shipping may be a partial solution to broader international goals of limiting emissions from facilities and ships related to the use of diesel fuels in port and at sea. A report from the University of Delaware and the Rochester Institute of Technology indicates that from well-to-hull natural gas meets the proposed standards for marine operations. That said, the contribution to greenhouse gas emissions around the issue of natural gas emissions from refueling and other operations is less defined. LNG sent out from import terminals has been only about 0.1 Bcf per day in August – the same as year to date.

**Natural Gas Market Summary** – as the country enters September analysts will look for signs of supply disruption during what is normally the most impactful period for the Atlantic hurricane season. In addition, chatter may develop around the status of underground storage inventories. Current views are that said inventories may be 300 Bcf lower (about 3.5 Tcf in early November) compared to the recent past, when a volume of 3.8 Tcf seemed to provide a level of comfort for analysts. Thus a storage deficit. But is that really the right question to be asking. Recent data shows and many analysts believe that domestic natural gas production will continue to grow with infrastructure constraints being overcome in critical areas of the Marcellus play. In fact, many believe that domestic production will grow to 70 Tcf per day by the start of the 2014-15 winter heating season. If that is so, then flowing gas will exceed that of the 2013-14 winter season by about 4 Bcf per day. Over a 150 day winter heating season that means another 600 Bcf of gas supply may be available to the national market that was not available one year ago. Without another record setting winter for much of the nation maybe the question should be, how is the market going to accommodate the supply surplus over the balance of the coming winter? The fact is it is never that arithmetic or simple. Demand side questions such as what new natural gas demand is now institutionalized are completely legitimate. That is what makes this analysis so fun. Time always gives us the answers to our questions, if we are listening.

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