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Natural Gas Supply and Demand Outlook

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Natural gas prices started their expected increase with a bang this Fall as Hurricane Ivan swept through the Gulf of Mexico leaving damaged pipelines and platforms in its wake. Spot prices and NYMEX futures spiraled upward immediately, and although these increases were not unexpected, the severity of the increase was somewhat shocking given full storage levels. And indeed, in mid-November prices suddenly fell back to summer pricing levels. Longer-term issues such as high crude oil prices, decreased wellhead production and increased consumer demand may persist and conspire to keep prices high throughout the winter heating season. However, if winter temperatures do not dip far below forecasts, prices may fall as storage is withdrawn and natural gas supplies in the Gulf come back on-line.

Short-term Issues

Hurricane Ivan did significant damage to segments of five large diameter pipelines in the Gulf as it buried parts of them under twenty to thirty feet of mud. These segments will need to be found before repairs can commence, and it may be months before all production is back on-line. In the last week of October 2004, 10.7% of production remained shut-in. And after less than four weeks off-line, 74 Bcf/d had already been lost. This lost production cannot be replaced before the winter heating season of 2004-2005 begins. However, due to the high prices of the past few years, producers have drilled many new wells in hopes of taking advantage of the bullish market. Thus total supply for the coming winter is expected to be 0.6% higher than last year. This increase would have been even greater had it not been for Hurricane Ivan.

Weather, of course, plays a significant factor in natural gas consumption during the winter and summer seasons. Incremental winter gas demand is driven by heating of residential and commercial space, whereas incremental summer demand is related to gas-fired electric generation. The 2003-2004 winter heating season and the 2004 summer cooling season were both fairly mild, thus a return to cooler winter temperatures and warmer summer temperatures in 2005 would surely result in higher gas usage.

Longer-term Issues

Historically, high crude oil prices have also contributed to the upward spiral of natural gas and heating oil prices. Crude oil has already topped the $55 per barrel mark and may not have hit its peak. Approximately 475,000 barrels of oil a day are off-line in the Gulf due to Ivan. Continued political instability in Iraq has also driven up oil prices.

The tight balance between natural gas supply and demand has put upward pressure on gas prices since the gas bubble of the 1990s expired. During this period of relatively inexpensive and plentiful supply the industry earnestly pursued ways to increase demand, and the fruits of that labor can now be seen – particularly in the electric generation and residential markets. In many areas of the U.S., gas-fired electric generation plants have been the technology of choice when siting new power plant construction. And residential consumer demand is expected to rise 1.5 % this winter as consumers push residential developers to add more gas furnaces and other gas appliances to new homes.

In the interim, something unexpected happened on the supply side of the natural gas equation – production began to decline. Wellhead output from domestic on-shore as well as off-shore production has declined steadily since 2001. In addition, production per well in Canada is also on the decline. Thus, even though producers are drilling new on-shore wells and much deeper off-shore wells, they are largely replacing gas that is no longer being produced by existing wells, and are therefore not adding significantly to the overall supply picture.

Three Long-Term Solutions to Meeting Demand

There are three possible solutions to meeting the challenge of decreasing supply and increasing demand: the increased use of liquefied natural gas (LNG), the development of additional gas storage and the construction of pipeline infrastructure to untapped gas resources such as Alaska and the Mackenzie Delta.

There are currently four LNG receiving terminals in the United States, though many new facilities have

been proposed. LNG imports could well be the answer to filling the gap caused by lower production in the U.S. and Canada. LNG is plentiful and may bring down the price of spot market prices. But it remains to be seen whether or not regulatory and siting issues can be overcome.

While natural gas storage will be full by the beginning of the winter heating season, industry groups are strongly advocating for more gas storage in the U.S. to help stabilize prices, manage short-term price spikes and maintain reliable supplies for consumers. The National Petroleum Council projects that North America will need a total of 700 Bcf of new gas storage by 2025.

The FERC recently held hearings to determine what it should do to increase development of gas storage facilities. Although the FERC has approved 11 projects since 2002, almost one-third of the capacity of those projects has not been built. Among the issues the FERC is considering are market-based rates for new storage facilities and financial incentives or benefits to the developers of new facilities.

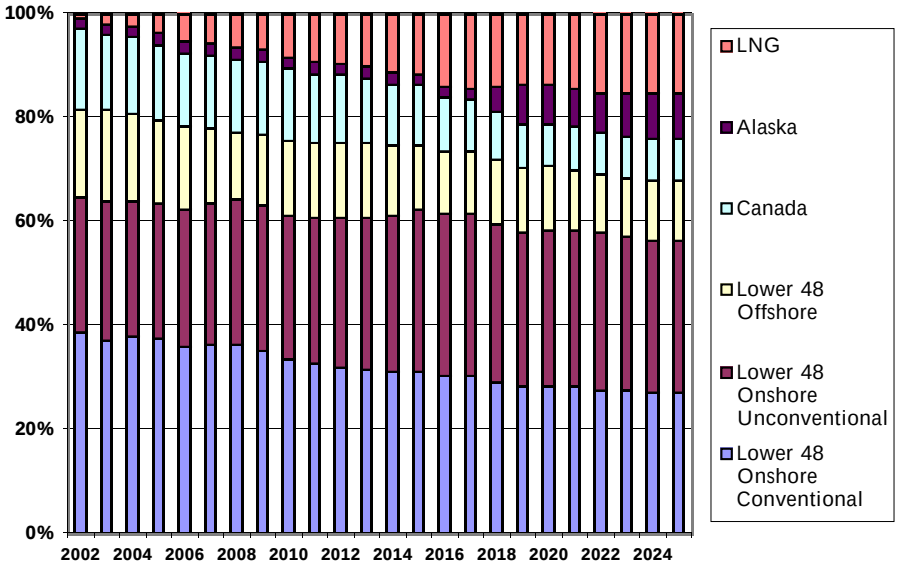
Development of natural gas fields in Alaska and construction of an Alaskan natural gas pipeline similar to the one that brings crude oil to the lower 48 states is again being discussed in governmental and industry circles. The U.S. House of Representatives and Senate recently passed incentives to spur building of the project that could bring as much as 4.5Bcf/d to the U.S. market. However, with a long lead time for permitting and construction, it may be ten years before consumers actually have access to this gas.

Lastly, Canada's MacKenzie Delta also holds a promising cache of natural gas that lacks the infrastructure to get to market. Construction of a pipeline to take the gas to consuming regions is likely to take over five years. Initially, 0.8Bcf/d is forecasted to be available. As with the Alaskan project, the gas in the MacKenzie Delta has the potential to expand gas supplies, though the impact of the project will be felt in the longer term.

Things to Watch This Winter

With supply and demand in tight balance, but with storage very full, we are likely to continue to experience high price volatility this winter. If demand rises due to cold weather and increased economic activity, prices are likely to shoot back up to the high levels seen in October. On the other hand, if demand stays muted, repairs to the pipelines damaged by Ivan are completed, and successful new wells bring additional supply into the market, prices may fall during the winter months. For the longer term, the progress of LNG terminal development, the construction of the Alaskan and/or MacKenzie Delta pipelines, as well as the success or failure of domestic producers in drilling new wells will all have a significant impact on future prices. Also important will be demand response to price. Demand growth may be muted if high prices push industrial and power plant consumers to commit to alternatives to natural gas and if high prices encourage new efficiency investments among all consumers. One thing is sure, no one can predict with certainty what the future will bring.

Projected U.S. Natural Gas Supply



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