Tuesday, April 12, 2016 8:11 AM ET Exclusive

Change in supply-demand dynamics seen supporting natural gas price recovery

By Jodi Shafto

Natural gas storage could prevent an immediate price response to the developing La Niña weather pattern that has historically supported sharp price gains, but there is potential for prices to begin to increase, with producers playing an important role in the recovery process, CME Group executive director and economist Erik Norland said.

The similarities between the 2015-16 natural gas market fundamental picture and that of the 1997-98 period, when similar weather patterns were in place, suggest the natural gas price could see a sharp spike as the El Niño weather pattern that depressed the natural gas price to its lowest level in 17 years turns to a La Niña event, Norland said in a presentation during the LDC Gas Forum Southeast in Atlanta on April 11.

As the La Niña took hold in 2000-01, prices that were depressed by El Niño eventually saw enormous gains from $2/MMBtu to $10/MMBtu, about a 400% increase, and evidence on the demand and supply sides of the market suggest prices may be set for a similar recovery.

The natural gas price should recover to $2.90/MMBtu between now and the end of 2017, Norland said. There is a 50% chance of prices rising above that and a 50% chance of prices holding below that, with the price potential to the upside much greater than the potential to the downside, Norland said. "It is difficult for prices to go below $2/MMBtu; it is possible but it does become difficult for prices to go much further down."

The price recovery, however, could be held back by natural gas stocks that have built to a level 68% above last year, with 1 trillion cubic feet of additional natural gas in supply, Norland said. "That might keep the natural gas price depressed for a while, even as the weather changes and we see a cooler-than-normal winter this winter, but there is potential, as that storage comes down, for prices to begin to increase."

The price recovery that took hold in the early 2000s built to a soaring natural gas price in 2007 as demand rose but supply did not. The question with this current price recovery rests most importantly on the amount of supply and whether natural gas supply increases again, stagnates, plateaus or decreases, Norland said. "A decline in supply could create a tremendous uphill climb in prices going forward."

"The future of natural gas and natural gas prices depends on whether or not we can continue to decrease shale gas production or, at the minimum, stabilize natural gas production from other sources," Norland said.

Shale gas production remains strong in a few areas of the country, particularly in the Marcellus and Utica basins in Pennsylvania, Ohio and West Virginia. Areas like Texas and Oklahoma saw production stall a long time ago and other areas have seen natural gas production outright decline or stagnate, Norland said.

He said it is concerning that, in this period of depressed pricing, the amount of investment into new exploration has declined very sharply. "The rig counts have come down to levels we haven't seen in a very, very long time." This can be deceiving as rigs have become more efficient over time and can produce at better rates; still, the fact that investment is declining is a source of concern for prices going forward, Norland said.

The picture is similar for crude oil with a storage level at highs that present the possibility, or even probability, that price will return to lows of around $25.00/bbl or $26.00/bbl, Norland said. That has consequences for investment in the amount of oil rigs operating, which in turn has a consequence for natural gas, due to residual gas production.

Hand in hand with the positive supply-side story, Norland said there is a tremendous demand-side story with the globalization of natural gas. "What this has the potential to do is take the once local natural gas market and turn it into a global market," Norland said.

Natural gas had always been difficult to trade across continents and as a result the commodity became a local market in North America, Asia and Europe. "That is beginning to change with LNG exports particularly from [Cheniere Energy Inc.'s] Sabine Pass as well as many other facilities that could come on line," Norland said. "This has the potential to take the local Henry Hub and make it a much more global benchmark for natural gas prices."

But in order for that to happen you have to be able to arbitrage the tremendous differences between prices around the world profitably and that is not too easily done, Norland said. While there is the potential for a lot of LNG export, world economies also play an important role and similar to the U.S. are largely awash in debt, which places headwinds on natural gas exports.

China, with an overvalued currency, provides a good market for U.S. LNG exports as the strong Chinese currency gives them a lot of buying power, but China as a potential market for natural gas might be somewhat impaired by a drop in their currency or if they have a severe economic slowdown, both of which are possibilities, Norland said, as China looks to be following the example of the U.S. economic crisis.

LNG exporting provides opportunities for demand growth and a possible floor for the market, but impressive demand-side support will come from the U.S. power-generating sector.

Electrical power represents a complex demand picture as well, Norland said. "The most interesting thing about the new generating capacity that has come on line is that none of it is coal, but a great deal has been solar and wind," he said.

The natural gas capacity factor has increased greatly over the last few years, largely because of coal. Natural gas is operating at about 55% of capacity on average, which is quite different from solar at 28% and wind at 33%.

Solar capacity additions have been helped by tax subsidies, which made it competitive with natural gas. Should those subsidies expire, the amount of solar energy brought on line will likely plunge, which will boost the natural gas market in the short term, Norland said. But in the long term, solar energy will come down on its own and make it competitive with natural gas, he said.

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