

## MARKET COMMENTARY

## LINVEST RESEARCH

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By Harry Hooi, P.Eng. MBA



## FEATURED ARTICLE

This edition of the Linvest Market Commentary features insights from:

Harry Hooi MBA and independent consultant with over 25 years of technical engineering and business development experience in the domestic and international oil and gas sector.

Is natural gas and its relation, liquefied natural gas (LNG), the economic panacea that every hydrocarbon producing region believes it is? Unfortunately, the answer is it depends. However, the basic commodity tenet holds; the lowest cost producer wins. What does this mean? Let's first look at the cost of LNG. The fixed costs of LNG are its liquification plant, its shipping cost, and its regasification. These costs are typically \$ 1.50, \$ 1.00, and \$ 0.50 /mcf, respectively, dependent upon locale and constructions costs. This suggests \$ 3.00 /mcf are fixed and the difference between market price and fixed costs will be the cost to develop the natural resource and get the gas to the liquification plant.

The next question is what is the market price for natural gas? One has to remember that world gas demand is adequately supplied and supply has been growing to meet anticipated growth in demand and better markets. In recent history, the highest market prices have been in Asia, specifically, China and Japan, at \$ 16 /mcf. The next highest has been the European region at approximately \$10 /mcf. The big elephant in the room is the large volume of landlocked natural gas in North America selling at \$ 2-3 /mcf. This has set up an LNG race where the buyers (Asia and Europe) are trying to get the lowest price and the sellers (Australia, Middle East (Qatar et al), and North America (Canada and the US)) are trying to get the high price where the winners will the ones who are / will be first on stream with LNG, are the most cost efficient producers, and have supply contracts tied up. This will lead to world gas price compression as more LNG supply comes on stream to meet natural gas demand and gas price has been falling to the lowest common denominator, North America. This evidenced to some degree by the drop in Japan LNG gas prices falling to \$ 9 /mcf and European gas prices falling to \$ 7 /mcf in 2015. As more LNG facilities come on stream especially in the North America, specifically, the US, world, uncontracted, gas price is likely to fall. The time frame for the next significant drop in gas price is 2018-2019 when the remaining four, US LNG facilities under construction (Cameron, Freeport, Cove Point, and Corpus Christi) are slated to come on stream. This will expose \$ 6 /mcf US LNG gas (\$ 3 for LNG fixed costs and \$ 3 for natural gas supply) to the world gas market. This could create a world natural gas trading range of \$ 6-9 /mcf for LNG.

If you turn the natural gas cost equation on its head, you arrive at the cost of natural gas development and transport to a liquefication facility of \$ 3-6 /mcf. This implies that world natural gas producers have to be

profitable at \$ 3-6 /mcf by 2018 (North America, Russia, Australia, Africa, and the Middle East). The factors that will affect which side of the range the world will be at and natural gas price volatility will likely be: cost of pipeline connected gas in Europe, political stability in significant natural gas supply regions, and world economic conditions thereby world natural gas demand. The worst case scenario is world natural gas price approaches the North American price in 2019 implying a \$ 6 /mcf price world where every gas producing connected to tidewater goes head to head in competition. Conversely, the North American hope is that North American pricing will approach world pricing implying a \$ 6 / mcf supply price where cooler heads reign and supply growth is kept in check with demand; likely not the case. It is interesting to note that current NYMEX forward curve gas pricing is forecasting a sub \$ 3 /mcf gas price to 2020, pointing to the worst case scenario.

What does the above mean to the investor? As always, invest in efficient gas producers for the long term. A significant uptick may start to take hold in North American producers, starting in 2018. Conversely, a downdraft may take place in non-North American producers, starting in 2018. The author suspects that all eyes will be on the world natural gas prices when significant US LNG supply starts to enter world market. In the mid-term, there is case that world gas price could start to drift down to transport adjusted North American gas price as US LNG comes on stream. This would be "lumpy" since liquification facility, start up, dates are discrete with volatility added by the political uncertainty in gas producing regions and world economic conditions impacting demand.

What about North America in the short term? The price catalysts are weather and demand related. Gas production continues to grow from shale gas / unconventional sources albeit at a lower rate indirectly slowed by a dramatic drop in hydrocarbon liquid pricing. Demand continues to increase as the US economy improves although at a slower rate than expected. However, the biggest negative is the forecasted warmer winter caused by a strong El Nino. We're already seeing warmer than normal weather in the heating season. The result of increasing production and warmer weather is an all-time high in US gas storage level at 4.0 tcf to kick off the heating season. If the warmer weather persists, we could end up with an all-time high in storage (approximately 2.0 tcf) at the end of the heating, not boding well for 2016 natural gas pricing. This suggests not investing in natural gas / natural gas companies until January 2016 when another read can be taken on the impact of this potentially warmer North American winter.



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https://twitter.com/LinYingjun info@linvestresearch.com www.linvestresearch.com

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