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Part Two: Increased Investment in U.S. E&P will Impact Generators

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In part two of this series, we address trends that will impact fuel prices in both the short- and long-term as a result of increased E&P activity in the U.S. *

Today, there are more than 900 active rigs, with new oil rigs outnumbering new gas rigs by more than four to one. In addition, with shale oil production less than $35 Bbl and declining, investment is flowing into U.S. E&P activities. This increase is expected to continue for several years, with analysts expecting the U.S. to double its current crude oil production to approximately 9.5 million BOPD through 2025.

As expected with this level of activity, natural gas prices have fallen from around $3.500 mmbtu at the end of 2016 to approximately $2.75 mmbtu at the end of 2017. However, for the long-term, prices will not continue to fall due to the four major trends discussed in part one, which include the following:

1. U.S. Demographics
2. Increasing U.S. Economic Growth Rates
3. Exporting of Crude Oil
4. LNG Terminal Investments

Impact on Generators

Combined, these four factors mean that the increases in oil and gas production in the U.S. over the next five years will not drive gas prices down as similar increases have in the past. Though the U.S. may be producing 50% more gas in 2023, prices will likely be higher and closer to international levels.

To keep up with these rapid changes, generators must take advantage of new technology and market strategies to evolve. With rising prices and production challenges, generators must meet the needs of the industry in order to survive and thrive in the coming years.

Need for Improved Forecasting

Forecasting of natural gas prices should consider more than just natural gas production rates and weather. Export markets must also now be considered, especially LNG. As more energy is exported from the U.S., integration with the world's gas markets will also increase, which means worldwide benchmarks for natural gas are more likely to impact U.S. prices. LNG may only end up consuming 15% of the U.S. gas supply, but because commodity prices swing widely with marginal impacts upon supply and demand, the impact on prices of LNG exports and the other factors described above can be significant.

Need for Effective Fuel Purchase and Hedging Strategies

Strategies to purchase and hedge fuel supplies need to be reconsidered. Aside from the volatility of prices that could occur due to LNG exports, the U.S. will be more integrated with world markets, which means bad weather in China could impact U.S. domestic natural gas prices in the future.

U.S. generators will be competing with export markets, as well as domestic chemical plants and U.S. consumers, for natural gas supplies. This might lead to not only a general rise in prices over time, but also to even more price volatility as uncontrollable factors such as weather events impact residential and business consumers of natural gas. A strategy that simply looks at natural gas production growth and adjusts for weather is unlikely to reliably predict prices or help determine hedging strategies.

Active Management of Fuel Supplies

Fuel supplies will need to be managed more actively. For example, a pipeline outage to an LNG plant, far from a generator, could lead to a diversion of supplies that a generator was counting on. Supply interruptions and price volatility will also make storage even more important for generators than it currently is, as it can be utilized for more than just mitigating demand changes due to weather.

The generators who actively manage supplies will be more efficient than their competitors and see higher returns on investments. In situations such as a pipeline outage, active management with pre-planned mitigation activities can save a generator millions of dollars in a very short period of time.

How to Ensure Success

Meeting the needs associated with the increased investment in E&P requires IT systems to support the team making decisions for generators. Forecasting and analyzing prices, determining the impact of those prices, planning and executing effective hedging strategies, and active management of fuel supply logistics and imbalances, are all critical when supply and demand are mismatched.

With the integration of domestic gas into the world market and the impact of commodities such as crude oil, NGLs, and LNG on natural gas prices, generators need to make sure they have a comprehensive system that can handle analysis for multiple commodities, a variety of modes of transportation, and international trading and logistics.

Finally, as the changes that have occurred just since 2016 have shown, the energy business can evolve significantly in a very short time. Generation companies that are able to meet these needs stand to be more profitable than others over the next few years, as natural gas becomes more expensive and challenging to procure.