

Roth: How Natural Gas is Priced

Natural gas prices are no longer based just on its use for heating. With about 25 percent of the United States' electricity coming from plants burning natural gas, it has become a larger part of our nation's energy use. Although not yet used widely, some predict that it is also destined to be a large part of our transportation energy in the future.

Even with more uses, natural gas prices are historically low. Compared on an energy-equivalent basis, natural gas is cheap relative to other energy sources like heating oil and gasoline.

Today, huge new supplies of gas are coming on-line, thanks to horizontal drilling and hydraulic fracturing, which are tapping huge resources and lowering prices.

Since the beginning of the 2008 financial crisis, the stock values of gas production companies and gas pipeline companies have fallen. The path of future natural gas prices will influence the cost of electricity, especially in the Northeast.

Still the major use of natural gas is for heating, and supply and demand are mismatched for that purpose. Demand is highest in winter, typically exceeding supply during the heating months in the Northeast and Midwest. In the summer months, demand is lower than supply, making it cheaper in the winter and more expensive in the summer.

The unpredictable demand for gas means that gas has to be stored – often waiting until the price is right to sell.

Natural gas must be moved from its source to where it can be used or stored, requiring numerous pipelines. The U.S. has

more than 300,000 miles of pipeline, yet it doesn't go everywhere. Building and maintaining underground gas pipelines is expensive, and the companies that own them charge gas producers for usage.

Extreme weather can also affect gas prices. The very warm 2011-2012 winter in the Northeast led to lower demand for gas to heat homes, leaving record-high storage inventories and lower prices.

With more gas-fired electricity generators, summer weather that is hotter than expected can lead to more gas demand from air conditioners and depleted inventories for the winter and higher prices. A hot summer followed by a cold winter can produce a price spike. More volatile weather means more volatile gas prices.

The number of new wells being drilled and those in active production fluctuate. Some producers face pressure to sell gas even at prices they don't like to make debt service payments on the money they borrowed to drill the wells.

The U.S. also imports gas from Canada and Mexico via international pipelines or shipped in special tankers, called liquefied natural gas, or LNG.

Trading and speculation of natural gas futures, derivatives, and investment funds also can affect the price of gas.

All the variables in supply and demand – including unpredictable weather, resistance to fracturing, and energy consumers adjusting their behavior to benefit from lower natural gas prices – make it complicated and difficult to predict future gas prices. But people are doing it every day, winning and losing, and so it goes.