Natural Gas Markets And The Wintertime Blues

Do Not Get In Touch With Your Temperature-Related Outer Feelings

Yesterday's discussion of the March-April "Widowmaker" trade in natural mentioned out of necessity the effects of the wintertime inventory drawdown cycle in natural gas. This raises the question as to the effects of unusually warm or cold winters on natural gas inventories and the relative performance of the S&P 1500 Gas Utilities group to the S&P 1500 Supercomposite as a whole. That index includes firms such as Laclede Group (LG), National Fuel Gas (NFG), ONEOK (OKE) and Southwest Gas (SWX).

Degree-Days

First, the measure of energy demand for either heating or cooling is the degree-day, which is the maximum of $(0, (65^{\circ} - \text{current temperature}))$ for a heating degree-day (HDD) or the maximum of $(0, (\text{current temperature} - 65^{\circ}))$ for a cooling degree-day.

Let's compare the Department of Energy's Eastern Consuming Region inventories for natural gas against heating degree-days in the East North Central region expressed as a percentage of normal over the November-March heating season. I shaded the HDD columns to be turquoise during cold periods and purple during warm periods such as our present winter here in the East North Central region.



Natural Gas Inventories And Cold Weather

To keep what could be a dissertation-length story short, most winters have a combination of warm and cold stretches and the use of natural gas as a utility and industrial boiler fuel and as a chemical and fertilizer feedstock distort a direct relationship between cold winters and large inventory drawdowns. You have to go back to the winter of 1995-1996 to find a marked relationship between a cold snap and declining natural gas inventories.

Stock Performance

If we map the same HDD data against the relative performance of the Gas Utilities group, a similar lack of a demonstrable relationship appears. Anecdotally, you do have some winters such as 2000-2001 where cold weather coincided with a peak in the group's performance, but that also was the winter when Enron and the Wannabe crowd went down; I certainly have my opinion as to which development was more important. A similar confluence during

the winter of 2008-2009 involves the large-scale collapse of industrial and feedstock demand for natural gas; this had to have affected relative performance more than cold weather.



Relative Performance And Cold Weather

Markets are discounting mechanisms, and they are usually efficient in recognizing short-term weather-derived effects are transient. Unless we hit a new Ice Age, something widely predicted by the usual crowd of alarmists back in the 1970s, we can act as if all weather events are going to be short-lived affairs. We also have to remember not all natural gas usage is for space heating purposes in the winter.

Just as the impulse to buy soybeans on a hot Monday in July should be resisted at all costs, so too should the impulse to buy or sell natural gas or natural gas utilities during periods of unusual winter weather.