Technical Differences and Similarities: Energy and Power

by Cynthia Kase, President, Kase and Company, Inc.

Some fourteen years after the inception of the Crude Oil and nearly seven years after the Natural Gas contracts began to trade, the shock of converting from a physical market to a commoditized market is beginning to wear off energy traders. It is now the turn of the power traders to be in shock. Comparing the similarities of both oil trading and gas trading to power trading may help these traders recover more quickly.

While similarities overwhelm differences - let's begin by discussing the two major dissimilarities between either oil trading and gas trading and power. The first major dissimilarity is simply the lack of liquidity in the power futures market. To effectively trade, one must be able to execute relatively easily and also with a minimal bid offer spread. The higher the liquidity, in an equal volatility market, the lower the bid offer spread will be. In late December, for example, the average number of transactions per day in both the natural gas and crude often exceeded 1000. Conversely, in the COB contract, there were few days where the contract traded more than 20 transactions a day, and many days where there were fewer than ten. To actively trade, roughly 150 to 200 transaction per day are necessary. Lack of participation from regulated generators as well as from the consumer side is most likely the cause and can be expected to improve over time.

The other major difference is that the energy markets are less subject to disruptions that have long term implications. For example, a problem with a nuclear reactor could cause a good portion of power supply to be reduced for a protracted period of time. Storms and pipeline disruptions generally have short lived impact on oil or gas.

All physical commodities exhibit strikingly similar characteristics, and products which are BTU oriented are even closer in nature. First, all commodities are traded by human beings. While fundamentals always rule in the very long run, the emotions of human beings, primarily greed and fear, dominate the shorter term price moves.

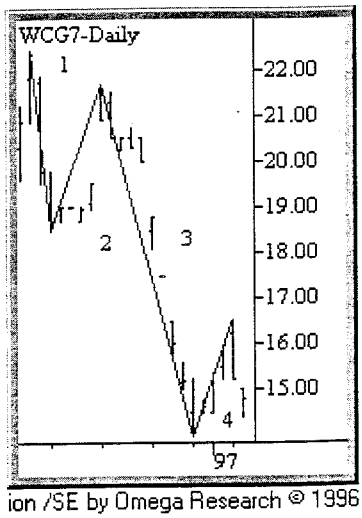
Therefore, to the extent that no single entity controls the market, the "mad crowd" rules. A case in point, for example, is the recent patterns shown on the daily February COB chart versus the daily February natural gas chart.

One example has to do with "wave counts" - the patterns which are repetitive in a general sense in trending markets. Those

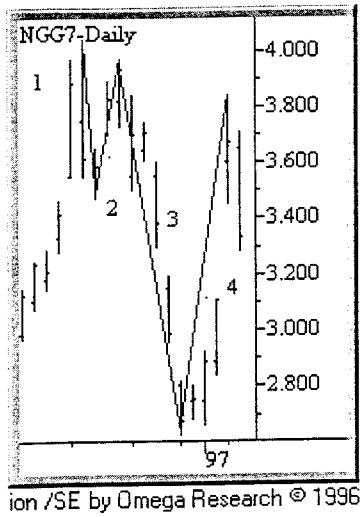
continued on page 56

Traditional Wave Patterns

COB Power, Feb 97



Henry Hub Gas, Feb 97

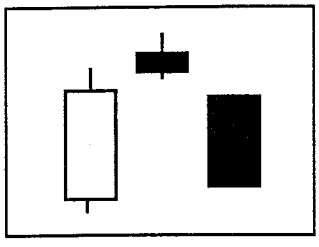


Technical Differences and Similarities

continued from page 54

familiar with waves will see that the one, two, three, four pattern that we currently can identify on the charts above is very similar between the two contracts.

Text Book Evening Star



Another example is shorter term, two and three day patterns, such as those commonly identified on candlestick charts. One such formation is called an "evening star" formation. It is characterized by a strong up day, a stall day

All physical commodities exhibit strikingly similar characteristics....

(called a star) during which the open and settle are close together, and a strong down day. The pattern is re-enforced when the middle star has a wide range between the open/close and the low - called a hanging man. Both charts below, one for gas and the other for power, show this classic formation.

Similar to heating oil and natural gas, power is affected by seasonality and cooling demand. Therefore, to the extent that power is used for such applications and to the extent that gas and oil are used to generate power, seasonal and weather factors have similar influences.

Power, similar to oil, is a "spread trade" commodity. In oil, we have crack spreads and in power, spark spreads, unlike gas which is simply a raw material, directly consumed with little or no processing. Power is an end product similar to heating oil, gasoline, jet fuel, etc. To some degree, power is a mirror image of the refining process. The input to the refining process is one raw material—crude—albeit of differing grades which the refiner optimizes. Conversely power is the single output of the generation process - albeit of differing types, such as firm and non-firm, off-peak and on-peak.

The refinery output consists of a variety of products which is optimized based on economic conditions, such as gasoline maximization in summer, heating oil in winter. The generator similarly optimizes inputs by choosing among a range of inputs (hydro, gas, coal). Thus the price of power is impacted by a wider range of factors more similar to oil than to gas.

The key point is that commodity markets have more in common than otherwise, and power traders can learn much from those who understand the general technical methodologies involved in trading commodities, especially those techniques used to trade closer relatives in the energy complex. ◆

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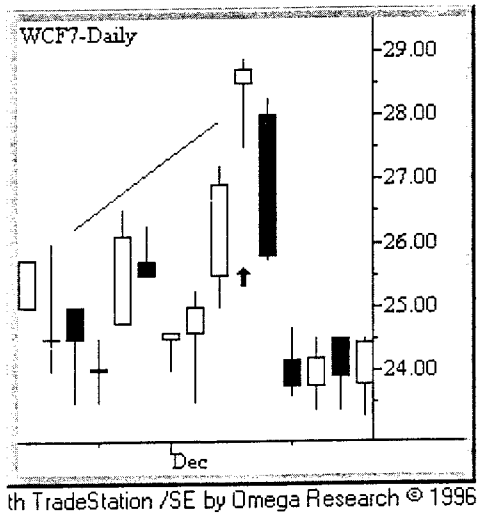
Similar Evening Star Formations

January Power, COB



February Gas, Henry Hub