

At the start of the 2006 hurricane season in the Atlantic Basin,
Zachary Simecek takes a look at the impact on the energy markets

Weathering the impact of stormy price hikes

★ The catastrophic damage to Gulf of Mexico oil facilities wrought by Hurricane Katrina last year leaves the industry extremely jittery at the start of the 2006 hurricane season approaches. So far, most weather predictions do not bode well.

A team of researchers at the University of Colorado, led by William Grey, has predicted that 2006 will bring 17 significant tropical storms in the north Atlantic, up from 15 in 2005. This research also identifies an 81% chance that at least one major hurricane will reach the US coastline in 2006. Some experts believe that we are in the midst of a hurricane 'up' cycle that could last for many years.

Worryingly, it is also evident that any new storms are likely to have a bigger impact than in 2005, because the region's infrastructure is only just recovering from last year. There is particular vulnerability in the Gulf region's electricity generation. Executives at a recent gas industry conference in San Antonio, Texas considered whether patched-up generating equipment – vital in powering the distribution of gas and oil in the Gulf region – would be in good enough shape to hold up during another active hurricane season.

As concern grows ahead of this year's hurricane season, it is worth analysing the market's reaction to last year's events in order to make some predictions for this year.

As much as 19% of the Gulf of Mexico's oil production was curtailed by hurricanes in 2005. The disruption reduced production by more than 100 million barrels of oil between June and November 2005. It is also estimated that storms shut in 7.84 billion cubic feet of natural gas a day during this period. These factors contributed to a 7% increase in the price of the benchmark Nymex crude oil and a 92% increase in Nymex natural gas prices during the five-month period immediately following Katrina.

When comparing Nymex crude oil and natural gas prices, before and after major hurricane landfall dates in Logical Information Machines' MIM analysis tool (charts 1 and 2), it appears that the price reaction to hurricanes in 2005 was not

immediate. Looking first at the oil market, we found that in 2004, Nymex crude had a positive 10-day average price move leading up to the landfall date on two of the four occurrences, and had a positive 10-day average move after landfall date on three of the four occurrences.

In 2005, three of the five storms had a negative 10-day average moving towards the landfall date and three of the five storms had a negative 10-day average after landfall (chart 3 on next page). In 2004, crude oil prices rose approximately 3% prior to landfall and another 4% after landfall. In 2005, the change to crude oil prices prior to and after landfall was consistent at approximately minus 1% in both the 10-day average prior to and after landfall dates. This suggests that the market was actually more 'ready' for the 2005 storms, but was later caught out by the consequential damage to infrastructure

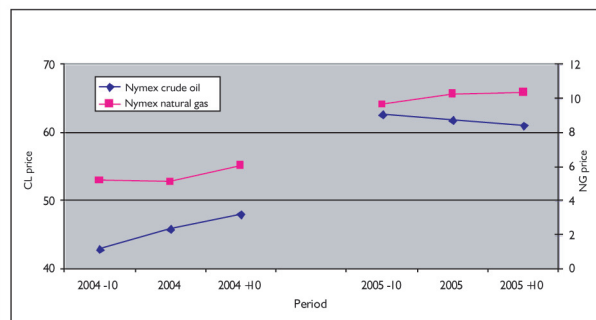
F1. Nymex crude light futures (US\$/bbl)



F2. Nymex Henry Hub natural gas futures (US\$/mmBtu)



F3. Nymex NG and CL pricing before and after hurricane landfall dates



that caused supply fears and price hikes in the run up to winter 2005/2006.

This 'wait and see' trend was also evident in Nymex natural gas trading (chart 3 on next page). In 2004, the 10-day moving average prior to a hurricane landfall date was minus 2% and

the 10-day average after the landfall date was a dramatic 19% jump. In 2005, that trend reversed itself.

The 10-day average prior to landfall was up – close to 6%, while the 10-day average after landfall was 1%. The major price upswings that were seen did not happen straightaway, but rather occurred once the market had absorbed the supply disruption that the one-two punch of Katrina and Rita caused.

Analysts should expect prices to rise again before the start of the 2006 hurricane season, as the prospect of a 2006 storm season that surpasses last year's tempests in intensity will create uncertainty in the market. However, LIM's analysis does show that the lessons learned from the 2004 season mean the market reaction will probably be to wait and see how much damage a hurricane actually does, rather than to panic before a storm makes landfall. Prices for the Nymex crude oil futures have risen dramatically over the past two years. During the 2004 and 2005 hurricane seasons (June 1 through November 30), the futures saw dramatic volatility.

The 2005 hurricane season had a significant impact on Nymex natural gas futures. The supply, storage, and distribution disruptions caused by the storms contributed to substantial price increases between June 1 and November 30.

The trends in the 10-day pre- and post-landfall averages are visible in chart 3. The chart shows the average price of each instrument 10 days prior to a hurricane landfall date, the average price on landfall date, and the average price 10 days after the landfall date. In 2004, prices elevated in the 10-day period approaching landfall and in the 10-day period after landfall. In 2005, the trend reversed itself for crude oil and decreased in severity for natural gas. [ER](#)

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Wilmsen, E. (April, 2006), *Colorado State University forecast team continues to predict another very active hurricane season for 2006*. Retrieved on April, 18, 2006, from http://newsinfo.colostate.edu/index.asp?url=news_item_display&news_item_id=37859201 that the one-two punch of Katrina and Rita caused.