

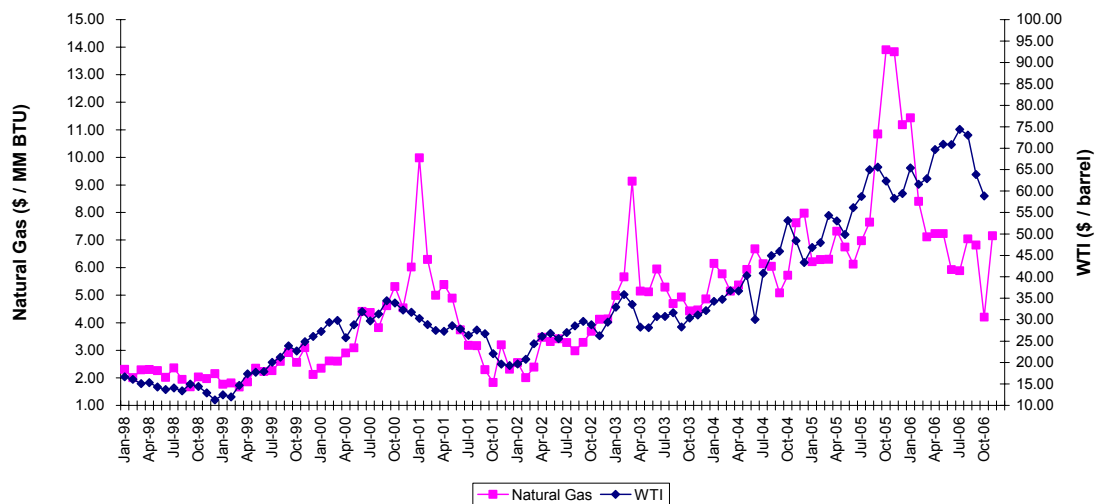
*Welcome to the...*

## NAPM – New York Commodity Corner

### November 2006 Edition

It is our intent to provide you with historic commodity pricing information, define trends, discuss forecasts, and most of all, help develop insights regarding materials pricing. Crude oil and natural gas updates are available monthly, upon request; all other commodities will be updated per calendar quarter, or as the specific need arises. We hope you find this information useful, and as usual, we are open to suggestions and questions to make this more relevant to your needs. Please send your questions and comments to: [info@napm-ny.org](mailto:info@napm-ny.org)

**West Texas Oil vs NYMEX Natural Gas (\$ / MM btu)**



### **Crude Oil & Natural Gas (updated 11/06)**

**Crude Oil – Cost Drivers:** World-wide supply and demand balance, the war on terror, regional/geopolitical instability in nations like Nigeria and Venezuela, global and local weather, OPEC statements and actions.

**Current Price Forecast:** Year to date 2006, WTI crude oil price has averaged \$ 68.17 / barrel. Latest fourth quarter 2006 average price forecast for WTI crude is in the range of \$59.00/barrel, driven lower largely by the pricing levels of the past month. Pricing has eased into the \$58-64 range recently driven in part by a mild hurricane season, higher than average crude inventory levels, and a market psychology less driven by the geopolitical ‘worry of the week’ or by OPEC statements. Current forecast for 2007 is slightly less favorable for buyers – most in the range of \$ 65 for the full year average.

**Natural Gas – Cost Drivers:** Natural Gas is largely a domestic natural resource. Cost drivers are supply / demand, weather, and to some extent, sympathetic movement to oil.

**Current Price Forecast:** Year to date 2006 average pricing is \$ 7.49/MMBtu (MMBtu = Million British Thermal units), as significant price declines beginning in the second quarter have sustained through the summer air conditioning season and through to autumn, with 4Q estimated pricing at \$ 6.35. The drop from the \$9-13 range of late 2005 and early 2006 has been driven again by a quiet hurricane season in the Gulf of Mexico, and by record levels of natural gas in storage in the US as we head into the winter heating season. The current 2007 full year price forecast has natural gas in the \$ 7.80 /MMBtu range for the full year average. Longer term, the pricing pressure on natural gas will continue, as an increasing amount of its usage in the US is for electric generation and residential heating and cooling, where there is less flexibility for alternative sources of energy. In the past, when natural gas usage was driven more by industrial use, these users had some flexibility to switch between gas and alternative fuels as prices rose.

### **Ethylene**

**Where Used:** About 70% of North America's ethylene production is derived from natural gas (30% from crude oil). Ethylene is the building block for a variety of the plastics we use daily, as well as solvents, surfactants, and other significant chemical 'building blocks'.

**Cost Drivers:** Although tied to natural gas and oil costs, ethylene is also very subject to supply / demand swings, and in particular to the operating efficiency of the production facilities. Downstream end products (plastics, solvents, glycols, etc) can compete for the available pounds of ethylene, thus driving ethylene pricing.

**Current Forecast:** Year to date 2006, ethylene has averaged \$0.50 per pound, current 2006 fourth quarter average price forecast is about \$0.45 per pound, 2007 full year forecast running in the area of \$0.42 per pound. The decline is driven in part by some of the factors mentioned above regarding natural gas such as the mild hurricane season, as well as by improving operating rates at production facilities, and the expectation of easing demand as economic activity stabilizes.

### **HDPE**

**Where Used:** High density polyethylene is used in wide variety of applications; most common include plastic milk containers, liquid detergent bottles, etc... and industrial applications such as plastic pipe for natural gas transmission and a myriad of automotive applications.

**Cost Drivers:** As one would assume by the name, HDPE (high density polyethylene) is heavily influenced by ethylene costs, and it also has its own supply / demand cost influences.

**Current Forecast:** Year to date 2006 average price is \$0.71/pound for bottle grade material, the fourth quarter forecast is running at approximately \$0.66/pound. The full year 2007 average price forecast is in the \$0.68/pound range. The drivers for the declines in the fourth quarter and into 2007 are similar to those mentioned above for ethylene.

### **PET**

**Where Used:** This is the plastic used to make soda bottles, water bottles, plastic beer bottles... and is also used in the manufacture of carpeting, clothing, etc...

**Cost Drivers:** PET pricing is tied to ethylene and to xylene markets, supply / demand balances, and it has historically had a “seasonal” influence (increased consumption during the summer due to water and soda bottle demand).

**Current Forecast:** Average year to date 2006 price is \$0.75/pound, with a fourth quarter forecast of \$0.76/lb. For 2007, forecasts are running in the \$0.68/pound range (marginal pricing improvement) based on feedstock cost reductions and reducing demand in China for PET polyester resin, in particular for its fiber uses.

### **Glycerine**

**Where Used:** Glycerine is used in cosmetics, foods, pharmaceuticals, and a variety of personal care and oral care products, as well as in other applications including animal feed, antifreeze and certain energy uses.

**Cost Drivers:** As glycerine is a byproduct of the production of various other products, its cost is principally driven by the demand for glycerine for its various uses – the supply remains driven largely by the production of other products such as soaps, fatty alcohols and fatty acids, so it is the demand for glycerine generally that drives its pricing.

However, over the past few years the increasing use of biodiesel as a fuel in Europe, which has resulted in significant increases in the supply of byproduct glycerine globally, has driven glycerine market pricing lower. This in turn has led to glycerine uses expanding, bringing the market pricing back into balance.

**Current Forecast:** Refined glycerine in the US has averaged \$0.36/lb. in 2006, and is forecast at the \$0.34-0.35 level in 2007 - 2008.

## **Linerboard**

**Where Used:** Linerboard is the main component and cost driver in the manufacture of corrugated shipping containers, which are used in a broad variety of consumer industries as well as the automotive industry.

**Cost Drivers:** Linerboard is heavily influenced by supply / demand balances, inventories, conversion cost (energy), exports (foreign exchange driven) and industry consolidations (fewer, bigger players).

**Current Forecast:** Prices have risen during 2006 from an average of \$410/ton in late 2005 to the 2006 price from 2Q-4Q of \$500/ton. The 2007 full year average price forecast is currently at \$485/ton, reflecting a modest decline based upon stagnating industrial production in the first half of the year.