

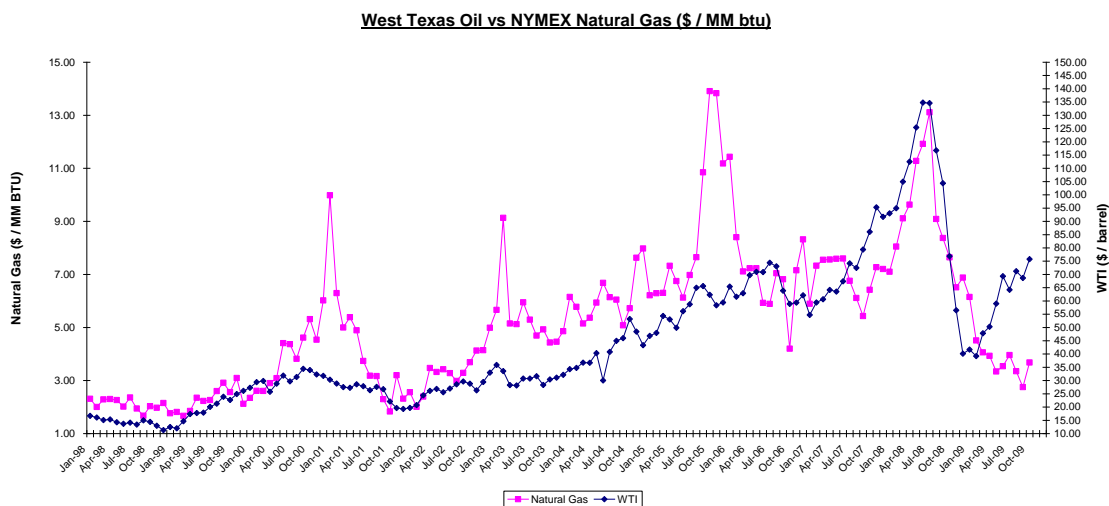
*Welcome to the...*

## ISM – New York Commodity Corner

### October 2009 Edition

It is our intent to provide you with historic commodity pricing information, define trends, discuss forecasts, and most of all, to help develop insights regarding materials pricing. Commodities will be updated each calendar quarter, or as the specific need arises. We hope you find this information useful and 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)

### Crude Oil & Natural Gas



**Crude Oil – Cost Drivers:** World-wide supply and demand balance, gasoline refining conditions in the US, regional/geopolitical instability and issues, commodity investment/speculation, global and local weather, OPEC statements and actions.

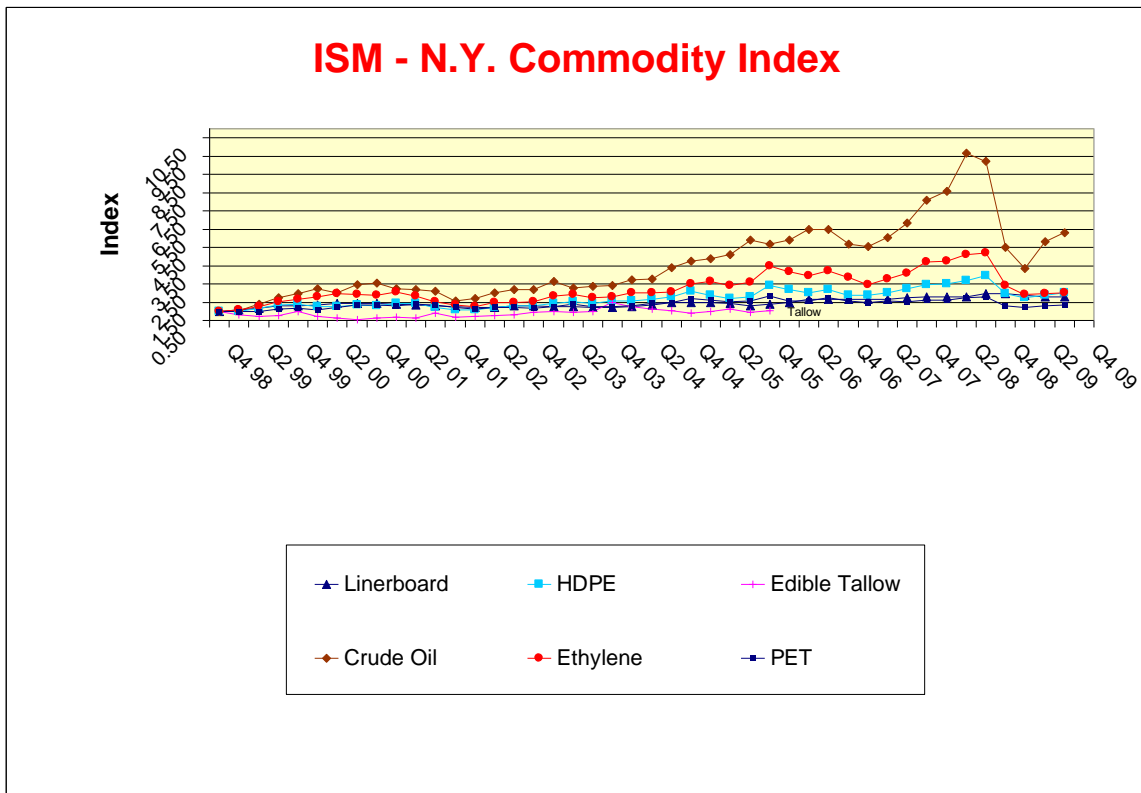
**Current Price Forecast:** For full year 2008, WTI crude oil price averaged \$99.56/ barrel, driven to record highs largely by concerns around global demand exceeding supply on an ongoing basis, increasing demand in the developing world and by financial market investor participation in the commodity futures markets.

The sharp declines since mid-2008 have been driven by the global recession curtailing demand, as well as the overall movement out of commodities by investors globally. In addition, non-OPEC supply of crude has been increasing since mid-year 2008. Current forecasts for 2009 are varied, currently in the \$ 62 / bbl range. Current FY 2010 forecasts estimate crude at \$75/bbl (a 21% year on year increase).

**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, in particular given its recent volatility.

**Current Price Forecast:** Full year 2008 average pricing was \$ 9.06/MMBtu (Million British Thermal units), as high demand from steel, fertilizer and other industries kept pricing high in the first half, as well as longer term supply concerns and sympathy with higher crude oil prices. Pricing declined in the back half of 2008 along with the gathering recession. On the supply side, there were increases in 2008 driven by both increased production from ‘unconventional’ sources (e.g. oil sands) and increased drilling rig counts.

The current 2009 full year price forecast has natural gas at \$ 4.12/MMBtu for the full year average, following a steep drop in pricing from a 3Q 2008 average of \$10.19 to a 1Q 2009 average of \$ 4.97. Over the course of the recession, reduced industrial and utility consumption will keep pricing pressure downward. Later in 2009, there is an expectation of a 4Q increase based on normal seasonal demand for heating, combined with reduced production as rig counts decline based on lower pricing levels. 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. Current FY 2010 forecast is estimated at \$6.00/MMBtu (a 45.6% increase year on year).



## 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 feedstocks.

**Cost Drivers:** Although tied to natural gas and oil costs, ethylene is also 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:** Full year 2008, ethylene averaged \$0.585/ pound, and the current FY 2009 forecast average is \$ 0.3331/lb. The significant drop occurred between 3Q2008 (\$0.68/lb.) and 4Q 2008 (\$0.39/lb.), as ethylene followed its feedstocks' pricing down and demand for a breadth of downstream uses dried up. Moving forward, the expectation is for decreased demand as the recession continues and from a cost perspective ethylene feedstock pricing will face downward pressure. On the supply side, ethylene cracker shutdowns and idlings will help to balance the ample supply which exists globally. Current FY 2010 forecast estimated at \$.3538/lb (only a 6% year on year increase, despite the projected change in Natural Gas pricing).

## HDPE

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

**Cost Drivers:** High density polyethylene is heavily influenced by the factors driving ethylene costs, and it also has its own supply / demand cost influences.

**Current Forecast:** Full year 2008 average price was \$0.844/lb. for bottle grade material, and the forecast for FY 2009 average is \$0.643 /lb. The demand reduction referred to throughout this report was pronounced in HDPE markets, with a 2008 decline in demand of 8.4%. Again, feedstock pricing will result in downward price pressure, and to a lesser extent than with ethylene, there is expected to be some managing of capacity. On a global basis, given the investments made over the past several years, HDPE production capacity will increase over the next two years. The current FY 2010 forecast is at \$.67/lb., a 4% year on year increase vs. the 6% estimated on ethylene and 45% estimated on Natural Gas.

## PET

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

**Cost Drivers:** PET pricing is tied to ethylene glycol 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:** Full year 2008 average price was \$0.825/lb. for the mid-size buyer of bottle grade PET, and forecast for FY 2009 is currently \$0.656/lb., driven by a steep decline during 4Q2008 as demand for carbonated soft drinks declined 6% and for water bottles declined 14 %. Pricing is expected to be relatively stable during the year, as demand declines and low operating rates keep a lid on prices. Current FY 2010 forecast is estimated at \$.679/lb.

## 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 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 biodiesel fuels, soaps, fatty alcohols, and fatty acids.

Over the past few years the increasing use of biodiesel as a fuel in Europe, and increasing volumes in North America, has resulted in significant increases in the supply of byproduct glycerine globally, which has driven glycerine market pricing lower.

**Current Forecast:** Refined glycerine prices in the US have declined from roughly \$0.70-0.80/lb. in late 2007 to \$0.50-0.60/lb. in 2008 for tallow quality refined glycerine. Availability of material in the US (going to feed applications) and from Europe had increased significantly, loosening market pricing conditions.

More recently, given the weakening demand for oleochemicals, supply of glycerine has begun a decline. Similarly, reduced demand in Europe for diesel fuel along with high inventories have led to reduced production of biodiesel-based glycerine.

The impact of these supply declines results in a forecast for 2009 showing prices moving from the \$0.35-0.40 cts./lb range in the first quarter up to \$0.50-0.60 by yearend, and stabilizing into 2010.

## **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 such as food and beverage, as well as the automotive industry.

**Cost Drivers:** Linerboard is heavily influenced by supply / demand balances, inventories, conversion cost (energy), exports and industry consolidation.

**Current Forecast:** Prices in 2008 averaged \$ 569/ton (transaction pricing) for the full year, with pricing flat in the first half and one \$60/ton increase in July 2008 to \$600/ton. Since November 2008, there have been small monthly price declines, and 2009 forecast is for continued declines throughout the year, resulting in an average of \$545/ton (transaction pricing). The demand declines discussed throughout this report also impact corrugated demand, and specifically even demand for foods declined in 4Q2008 by 14.8%, and this is a major driver of this market. Although producers will take downtime as they are able, given the forecast for further demand reduction in 2009, the pricing pressure will continue downward. Current FY 2010 forecast is estimated at \$498/ton transaction pricing, an estimated 8.6% reduction year to year.