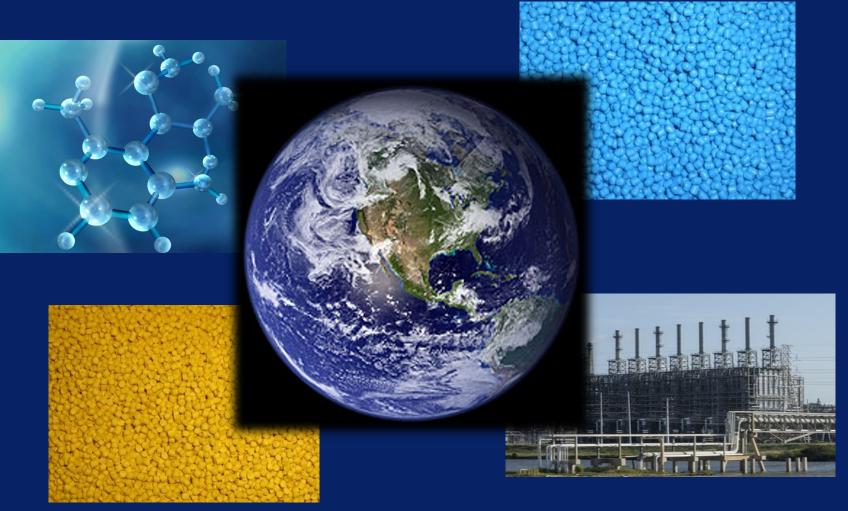
Brainfood for the Plastics Industry

Issue 22.09 – April 2022





Market Update

Crude Oil

From Brainfood 22.07 four weeks ago: "Our estimate is that crude oil will remain over \$100/barrel for the next couple of months." This estimate resulted from sanctions on Russian oil starting to physically hit the market in late March/early April along with continued strong demand for refined products. At the time of that report WTI crude oil prices were around \$102/barrel.

Since that report WTI Crude prices had reached a 4-week low of about \$95/barrel and a 4-week high of about \$107/barrel with current pricing right back at \$102/barrel.

Crude oil prices have been rangebound around \$100/barrel since mid March. Crude oil bulls point to the reduced Russian supply and still strong domestic demand for refined products (ex. In the week ending April 15th, EIA reported gasoline demand increasing from 8.5 million barrels per day to 8.73 million barrels per day.). The crude oil bears point to the lockdowns of major Chinese cities resulting in reduced global demand. According to a report by Bloomberg, China has already seen crude oil demand drop by 1.2 million barrels/day in April as a result of the government lock-down.

In a perverse way, the American consumer can thank the Chinese government for lower gas prices as a result of China's inhumane lockdown. Had the Chinese people been allowed to move freely this past month, surely oil and gasoline prices would be higher. We believe China is on the wrong side of history as complete societal lockdowns do nothing to prevent the spread of Covid but are extremely harmful to mental health and economic growth.

Despite the headwinds Chinese lock-downs have on oil demand growth, BlueClover remains bullish crude oil prices for the remainder of the 2nd quarter 2022.

Natural Gas

Above we highlighted how crude prices are unchanged since mid-March 2022. Natural gas prices are another story. Since mid-March 2022 natural gas prices are up 46% from about \$4.75/mmbtu to \$6.95/mmbtu. What's incredibile is that the April time frame is typically one of less natural gas demand as the need for winter heating subsides.

The heavily traded natural gas futures contract broke the \$8/mmbtu threshold last week for the first time since 2013. US storage inventories are 23% lower than this time last year and 17% lower than the 5-year average. Demand in Europe for USA origin natural gas cargoes remains extremely strong.

Market Update

Plastics Feedstocks (Naphtha, Ethane, and Propane)

- Polypropylene global feedstocks are lower than two weeks ago while ethane is flat.
- Naphtha prices (CIF Japan) are down about 6% to \$870/mt
- Propane prices are down about 6% over the past two weeks to a spot physical price of 124cpg in Mont Belvieu, TX.
- Ethane prices are unchanged at 49.75cpg

Ethylene

• Ethylene prices in the Enterprise system in Mont Belvieu, TX are lower by 2 cents per pound (cpp) to 27cpp.

<u>Propylene</u>

- Physical PGP prices in Enterprise's system in Mont Belvieu, TX are lower by about 2cpp from 65.75cpp two weeks ago to 63.5cpp as of Monday April 25.
- Like crude oil, physical PGP prices have been rangebound, trading mainly between 63cpp and 68cpp for most of April.
- On March 29, BlueClover estimated 70cpp for the April physical PGP monthly average and an increase of 1 or 2cpp for the April contract PGP price.
- Our estimate was a little high as the month to date calendar average for physical PGP in March is 66.3cpp according to the PetroChem Wire and contract PGP for April settled at 71cpp, down 1pp from the March settlement of 72cpp.
- BlueClover estimates physical PGP to average 66cpp for May and for contract PGP in May to be flat. We believe the risk profile is more heavily weighted to an upside price risk scenario. Strong demand for PGP as PP operating rates ramp up and/or any hiccup in PDH units will result in higher PGP pricing.

Polypropylene

- Polypropylene product remains extremely tight. Ineos and Lyondell Basell announced force majeures early in April.
- Select producers have announced PP margin enhancements effective May 2022 as polypropylene prices have increased at a greater pace than PGP over the past two months.
- There is concern among household product producers that demand is softening as consumers wallets are hit by inflation in food and energy and what money is left is spent on travel and leisure as opposed to household items (which saw a surge in demand during the first couple of years of Covid). For example, Whirlpool Corp said sales fell 9% in the 1st quarter of 2022 versus the 1st quarter of 2021. Also the higher prices of resin are causing consumer goods companies to raise material costs. Whirlpool projected up to \$1.75 billion of additional material inflation this year (an increase of \$600 million from its previous estimate) as a result of higher steel and resin costs.

Feedstock "Spot" Prices:

<u>Product</u>	<u>Location</u>	Price as of April 26	Price as of April 12	<u>Unit</u>
Brent Crude	North Sea, Europe	105.68	105.3	USD/barrel
WTI Crude	Cushing, OK	102.29	101.36	USD/barrel
Natural Gas	Henry Hub, LA	6.97	6.70	USD/MMBtu
Naphtha	C&F Japan	870	925	USD/mt
Ethane	Mont Belvieu, TX	49.75	49.75	Cents/Gal
Propane	Mont Belvieu, TX	124	132.5	Cents/Gal
Ethylene (Enterprise system)	Mont Belvieu, TX	27	29	Cents/Lb
PG Propylene (Enterprise)	Mont Belvieu, TX	63.375	65.75	Cents/Lb



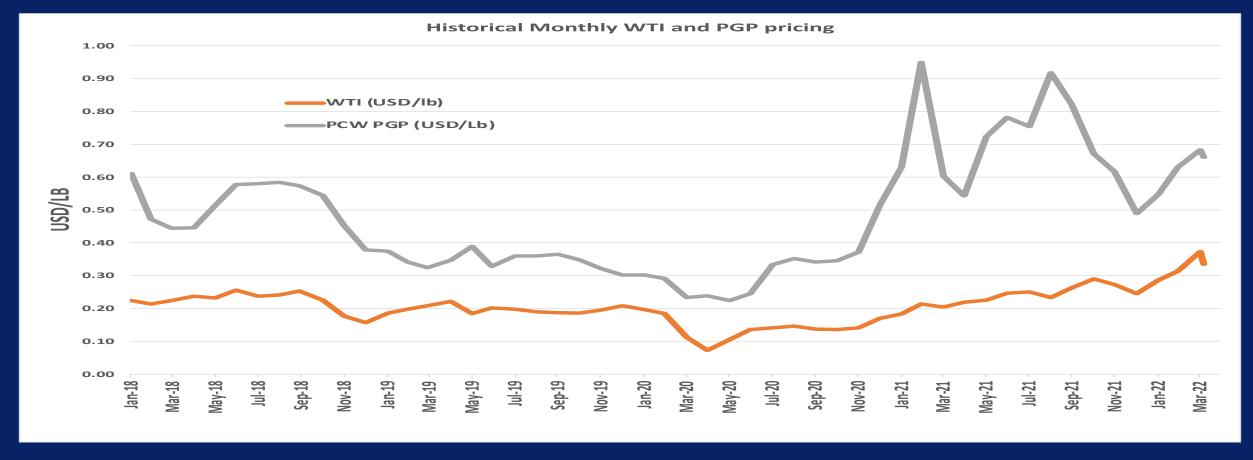
Inventory

HERO PRIME™				
Grade	Description	Location		
	SOLD OUT			

HERO FLEX™				
Grade	Description	Location		
HG3040	30-40 melt Grey PCR CopolymerPP	Midwest		



Trader Toolbox – PGP Outperforms Crude



The above graph begins in Jan 2018 and ends in April 2022 and shows monthly WTI crude pricing and physical PGP pricing all in USD/LB.

As you can see crude has rallied from its March/April 2020 lows. PGP prices have also rallied.

What's interesting is that PGP has outperformed crude over this time period. This is due to significant margin enhancement in two areas of PGP production: 1) from RGP to PGP (splitter margin) and 2) from propane to PGP (PDH Margin). Stronger margins in upstream production of PGP combined with strong demand for polypropylene and other PGP derivatives have led to higher PGP pricing relative to crude over the past two years.

Why BlueClover?

BlueClover is the informed sourcing solution—bridging the gap between upstream knowledge, resin procurement and price risk management.

- Trusting relationship with a professional distribution company that trades polypropylene across a wide range of qualities at a multitude of price points for both spot and contract business.
- ❖ Full access to our Price Risk Management Team.
 - ❖ Work closely with our price risk management team with decades of commodity trading experience to determine when fixed pricing programs make sense for your business.
 - * Access to BlueClover's internal research and analysis on pricing and industry economics.

Please visit our website <u>here</u> for more information.



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