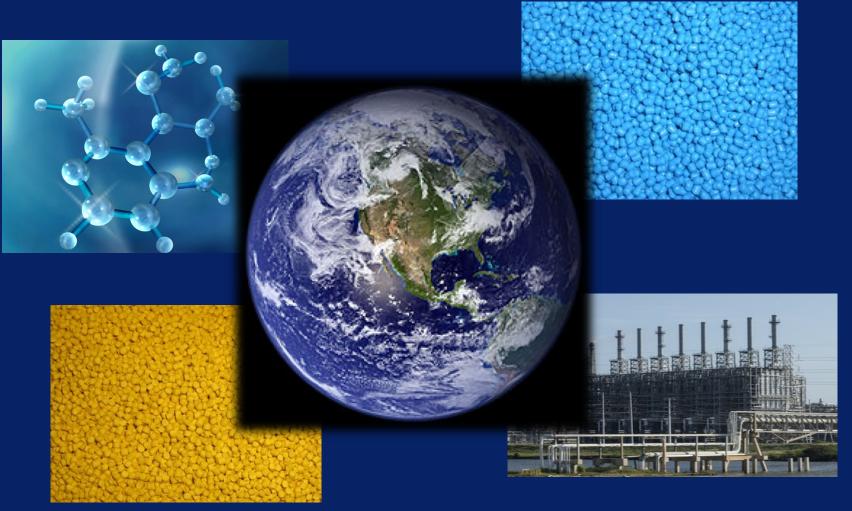
Brainfood for the Plastics Industry

Issue 22.18 – Sep 2022





Market Update

Plastics Feedstocks (Naphtha, Ethane, and Propane)

- Naphtha prices (CIF Japan), which have followed crude oil pricing, are down by about 5% over the past four weeks to a spot price of \$656/mt.
- Propane prices are lower by about 3% to 104cpg (cents per gallon) in Mont Belvieu, TX.
- Ethane prices are 18% lower from 61cpg four weeks ago to 50cpg, following a drop in natural gas. Also, with ethylene prices unable to rally north of 25 cents per pound (cpp) this is putting pressure on ethylene cracker margins which we believe may be hurting ethane demand.

Ethylene

• Ethylene prices in the Enterprise system in Mont Belvieu, TX are pretty much unchanged from four weeks ago around 25cpp.

Propylene

- Physical PGP prices in Enterprise's system settled at 41.75cpp on Friday Sept 9. This is down from 46.5cpp four weeks ago and down from 49.25cpp six weeks ago.
- The current estimated monthly average for physical PGP in Mont Belvieu, TX is 42.2cpp.
- In our last full report from Wednesday Aug 17th, BlueClover accurately called for August contract PGP to settle up 2cpp. This happened as Aug contract PGP settled at 49cpp. BlueClover is currently estimating September contract PGP to decrease by 3cpp.
- In mid August BlueClover admitted our guess of PGP pricing breaking north of 50cpp was incorrect. We wrote in that same report when physical PGP pricing was 46.5cpp "The pressures from an oversupplied polypropylene market remain in place as convertors and brands' inventories levels remain elevated as compared to previous quarters. At this point the selling pressure on PGP appears to be in command and looks set to retest its year-to-date lows in the low 40s."
- Undoubtedly the supply pressures of the polypropylene market are having an impact on PGP demand.
- If PGP prices slide lower and propane remains north of \$1 per gallon, PDH units may reduce operating rates further as margins reduce.
- While it is certainly a realistic possibility, BlueClover is going to make a guess that PGP pricing does not break below 40cpp this year.

Polypropylene

- BlueClover was expecting PP prices to stabilize by this point, but this has not materialized.
- The constant supply of PP along with subdued demand continues to impact pricing. As a result, PP buyers continue to drawn down their inventories as their steadfast expectation of available product remains. Also, many convertors and brands are forecasting reduced orders from big box retailers resulting in hesitancy to significantly rebuild inventories, even at these lower prices.

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Despite a forecast by experts for an above-average hurricane season, August was the first time in 25 years that did not have a named storm in the Atlantic ocean. However, we are not out of the woods yet as historically September is more active than August and October is almost as active as August.

Crude Oil

WTI crude oil prices are lower by 3% the past four weeks to a spot WTI price of \$87.53/barrel. WTI prices dropped to \$81.94/barrel on Wednesday September 7, its lowest pricing since West Texas Intermediate broke north of \$80/barrel in early January 2022 as it marched to \$120/barrel.

The case for a continued slide in crude oil pricing includes the impacts of China's zero covid policies, central banks raising borrowing costs to fight inflation, and recessionary risks across developed economies.

Some momentum traders are piling into the bear camp. From a recent Wall Street Journal article, "Big hedge funds have been layering on shorts, and they're now playing for lower prices. This is a definitive sign that the bull market is over. You can stick a fork in it." said Dave Whitcomb, who runs Peak Trading Research.

Reasons for a price rally include reduced global supply and stronger than expected consumer demand. From a supply standpoint, it appears that Iranian barrels will remain out of the market as a deal between Iran and other nations is not close. Also, OPEC nations may reduce supply to counter the 30% drop in crude pricing. As gasoline prices return to pre-Ukraine war levels, drivers may not think twice when filling up their cars. This at the same time as many airports announce record passenger volumes over these past summer months.

BlueClover continues its neutral view on crude oil with a view of greater upside pricing risk than downside.

Natural Gas

Natural gas prices experienced an 11% pull back these past four weeks with the current price for natural gas in Henry Hub, LA at \$8.05/mmbtu.

The energy crisis in Europe is resulting in a major shift to their economy. For decades, offsetting its higher labor costs, Europe relied on cheap natural gas from Russia to fuel its manufacturing (metals, chemicals, automobile production). Now that the natural gas spigot has been turned off/reduced by Russia, Europeans know they need alternative long term energy infrastructure. This is resulting in a likely recession but also the potential collapse of significant amounts of manufacturing in the region.

The United States is positioned more favorably as America has invested in our own natural resources and has also reshaped into a service-based economy. However, more manufacturing is returning to the USA to reduce our dependency on China and disruptive supply chains.

It will be interesting to see if America's natural gas exports to Europe faces any backlash as prices in the USA continue to climb heading into the winter heating season.

Feedstock "Spot" Prices:

| <u>Product</u> | <u>Location</u> | Price as of Sep 12 | Price as of Aug 16 | <u>Unit</u> |
|------------------------------|-------------------|--------------------|--------------------|-------------|
| Brent Crude | North Sea, Europe | 93.78 | 95.55 | USD/barrel |
| WTI Crude | Cushing, OK | 87.53 | 90.16 | USD/barrel |
| Natural Gas | Henry Hub, LA | 8.05 | 9.06 | USD/MMBtu |
| Naphtha | C&F Japan | 656 | 690 | USD/mt |
| Ethane | Mont Belvieu, TX | 50.25 | 61 | Cents/Gal |
| Propane | Mont Belvieu, TX | 104 | 107 | Cents/Gal |
| Ethylene (Enterprise system) | Mont Belvieu, TX | 24.75 | 26.25 | Cents/Lb |
| PG Propylene (Enterprise) | Mont Belvieu, TX | 41.75 | 46.5 | Cents/Lb |



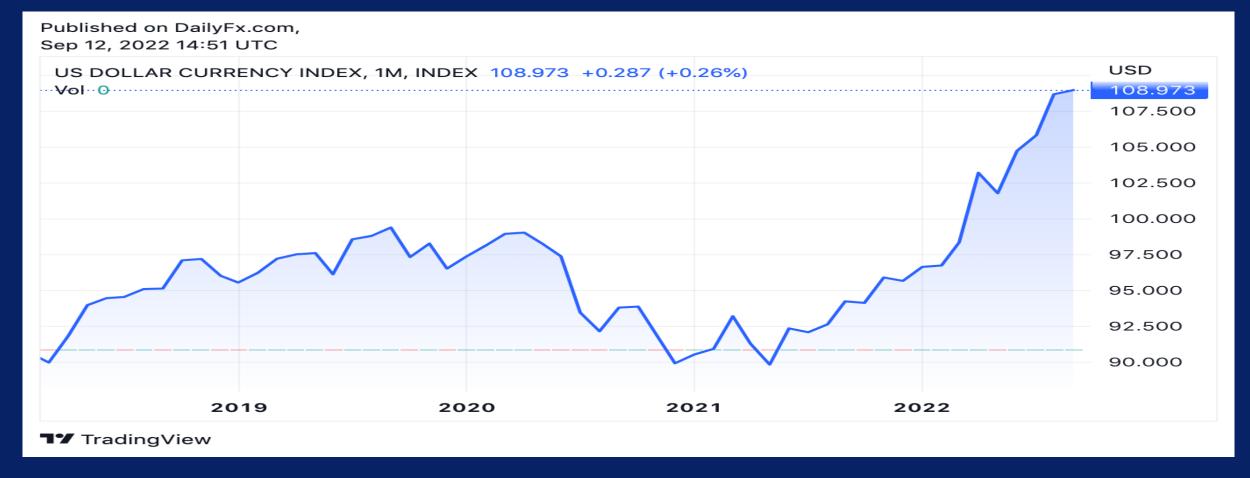
Inventory

| HERO PRIME™ | | | | |
|-------------|-------------|----------|--|--|
| Grade | Description | Location | | |
| | SOLD OUT | | | |

| Post Consumer PP Repro | | | | |
|------------------------|---------------------|----------|--|--|
| Melt | Description | Location | | |
| 3 | Black 3 melt HomoPP | Midwest | | |
| 16 | Grey 16 melt HomoPP | Midwest | | |
| 22 | Grey 22 melt HomoPP | Midwest | | |



Trader Toolbox - The US Dollar Reigns Supreme



The above graphic is a monthly chart for the US Dollar Index going back to 2018. The US Dollar Index measures the strength of the US Dollar against a basket of six major currencies. A raising US Dollar Index indicates a strengthening US Dollar and weaker foreign currencies.

As you can see the dollar has been increasing significantly since the middle of 2021. Reasons for this strength include the USA's diverse economy, energy independence, and geography advantages against foreign threats (as compared to regions such as Europe or Asia).

The stronger dollar has helped to pull commodity pricing (in US Dollar terms) lower. Also, with the US economy doing well compared to many global peers, it allows the Federal Reserve to increase borrowing costs more aggressively which contributes to a stronger dollar.

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