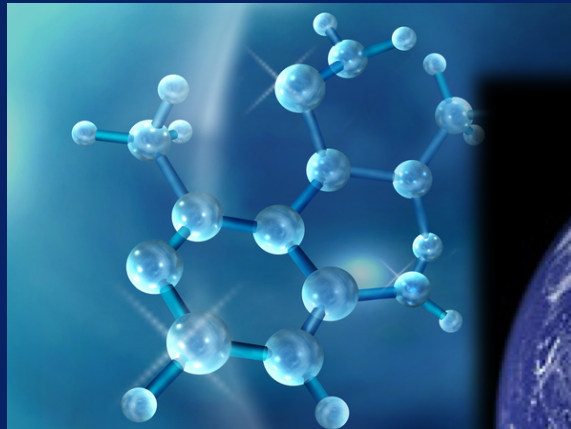


Brainfood for the Plastics Industry

Issue 21.25 – Dec 2021



Market Update

Crude Oil

WTI crude oil prices are down over 8% the past two weeks to a spot price today around \$72/barrel. Prices crashed the day after Thanksgiving sparked by concerns about the omicron Covid-19 variant, a trading session known for incredibly poor liquidity. Two weeks ago WTI pricing was around \$78.50/barrel and dropped to a closing low of \$65.57/barrel on Dec 1, a decrease of 16.5%. Since December 1, WTI and other products like equities have rebounded significantly with crude pricing up 10% and the S&P 500 up 4%.

As we mentioned in our last report, President Biden did approve a release of 50 million barrels of oil from the strategic reserve to increase supply in the hopes of driving down prices of gasoline and heating oil. This led to some initial price declines, but the biggest market mover was the omicron variant sell off on Black Friday. It appears the crude market was oversold in the recent price drop. According to Goldman Sachs' pricing model, prices reached such a low point that for the low price points to sustain, there would need to be demand decreases to the magnitude of not a single plane flying around the world in 3 months. Obviously, they are making a point that crude remains tight from a supply perspective and potential small changes in consumer behavior as a result of omicron probably should not result in prices this low for crude oil.

Many analysts, including us at BlueClover, remain bullish crude oil and expect WTI crude oil pricing to rally towards \$100/barrel this winter. The World Petroleum Conference is being held this week in Houston and there have been some interesting quotes. Jeff Miller, CEO of Halliburton, mentioned that since 2014 the international spending on investment in oil and gas has been about 50% below historical norms. And while many at the conference agree that a push to greener fuels makes sense, they worry that demand for petroleum remains strong and the underinvestment will lead to much higher pricing. The same Jeff Miller had a good quote, "For the first time in a long time, you're seeing a buyer looking for a barrel of oil, as opposed to a barrel of oil looking for a buyer" ([article source](#))

Natural Gas

Natural gas prices are down 26% over the past two weeks and more than 40% from their October peak. Spot Natural Gas is trading around \$3.68/mmbtu.

The biggest reason for this has been much warmer than expected weather allowing more natural gas to stockpile into storage. This increases the cushion of supply heading into the winter heating season. Important to note that while pricing has fallen significantly over the past two months, the price of natural gas is still about 50% more expensive than what it was a year ago. This market remains prone to price spikes from a string of cold weather or potential winter pipeline constraints because we also expect LNG ("Liquified Natural Gas") exports to continue at high rates.

Market Update

Plastics Feedstocks (Naphtha, Ethane, and Propane)

- Naphtha pricing (CIF Japan) is down 9% over the past two weeks.
- Ethane and Propane prices in Mont Belvieu, TX are both down 15% over the past two weeks to 32.625 cents per gallon for ethane and 101.25cpg for propane.

Ethylene

- Ethylene prices are down 6% to a spot price of 30cpp in Mont Belvieu's Enterprise Hub.

Propylene

- Physical PGP prices are down 15% to a spot price of 50cpp. Physical pricing for December reached a low price of 48.5cpp on Dec 2 but have rallied from this price point.
- BlueClover accurately called for PGP pricing to break 60cpp in November and did expect pricing to reach the mid 50s. We are not surprised at the price action over the past two weeks but there does seem to be support for PGP in the upper 40s from a demand perspective for consumers to turn the PGP into PGP derivatives. Even from a supply cost standpoint, physical PGP at 50cpp only represents a 21cpp gross margin for PDH units given today's propane price.
- Refinery Grade Propylene has remained in the low to mid 20cpp range for many months. Pricing for RGP in pipe is currently 23cpp.
- Contract PGP for November settled down 9cpp to a contract price of 66cpp. BlueClover's most recent estimate for October contract PGP prior to market settlement was down 10cpp.
- BlueClover is estimating that December contract PGP will be down 12cpp.

Polypropylene

- Polypropylene products continue to slid lower in price but not by the same delta as PGP over the past few weeks. Widespec PP has fallen more but prime remains a healthy margin over contract PGP.
- The lag in contract PGP to catch up with physical PGP in a sharp downward moving market is causing some PP buyers to hold off on purchasing spot volumes as they expect pricing for PP to slide further as we enter the last few weeks of December and December contract PGP settles lower.
- Many producers continue to remind customers and distributors that they remain tight on spare prime PP heading into the 2022 calendar year.



Feedstock “Spot” Prices:

<u>Product</u>	<u>Location</u>	<u>Price as of Dec 7</u>	<u>Price as of Nov 23</u>	<u>Unit</u>
Brent Crude	North Sea, Europe	75.40	82.04	USD/barrel
WTI Crude	Cushing, OK	72.01	78.45	USD/barrel
Natural Gas	Henry Hub, LA	3.68	4.94	USD/MMBtu
Naphtha	C&F Japan	675	742	USD/mt
Ethane	Mont Belvieu, TX	32.625	38.5	Cents/Gal
Propane	Mont Belvieu, TX	101.25	118.75	Cents/Gal
Ethylene (Enterprise system)	Mont Belvieu, TX	30	32.125	Cents/Lb
PG Propylene (Enterprise)	Mont Belvieu, TX	50	59.125	Cents/Lb

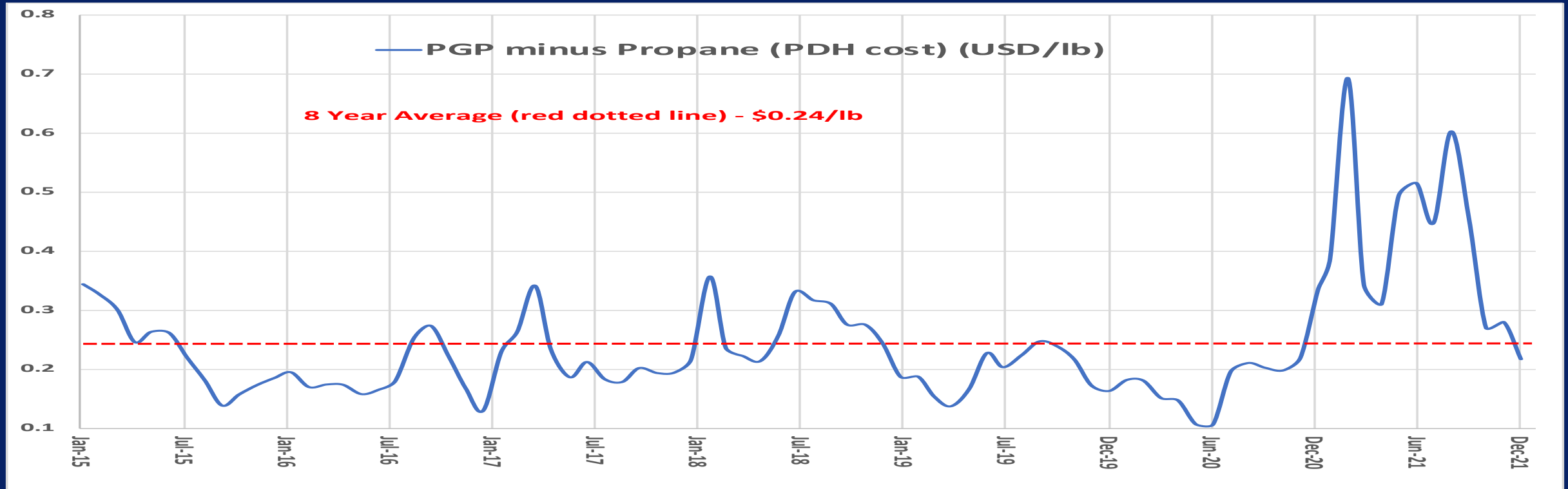
* Sources – CME, Bloomberg

Inventory

HERO PRIME™		
Grade	Description	Location
	Sold Out	

HERO FLEX™		
Grade	Description	Location
	Sold Out	

Trader Toolbox – PDH Gross Margins Just Crossed the 8 year Average



The above graph is an 8-year historical monthly gross spread (“margin”) between propane converted to a PDH cost and monthly physical PGP pricing as reported by the PetroChem Wire.

We mentioned in the Propylene section on page 3 how the gross margin between propane as a feedstock to a PDH plant and spot physical PGP has just dropped to 21cpp from a rolling 6 month historical high of 47cpp (this was from April 2021 through Sept 2021).

The 8-year average for this gross margin is 24cpp. The average was pulled lower by the 2019 and 2020 years only to be taken much higher by the 2021 years. We at BlueClover estimate gross margins to operate north of 20cpp for much of 2022. Therefore, if propane prices rally from current levels this winter, we think physical PGP pricing will be north of 50cpp



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 along with potential outsourcing to industry experts on commodity markets.

Please visit our website below for more information.



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