



July, 2020

# The Chemical Reaction



## Introduction

Welcome to The Chemical Reaction, where our team of experts keeps you up to date with all things Chemicals. Find highlights on current events, key trends and much more in the content below. Interested in learning more on a certain subject? Navigate to a report through the links included or reach out to one of our qualified analysts for more information.

### Our recent Insights and Informs:

- [PTA market faces oversupply, WM launches asset tool to help assess competitiveness](#)
- [PKN all-in: Poland's quest to create a national champion](#)
- [China's PTA producers look to futures to endure pandemic impact](#)
- [Coronavirus and polymers - hanging by a thread](#)
- [Coronavirus and polymers – has the virus demolished construction?](#)
- [Coronavirus and polymers - sustainability through the pandemic](#)

## Q3 2020



## China floods in July increase raffia-grade polypropylene demand by 200 kt

William Liu, 23 July 2020

### Issue

- Heavy rainfall from June through July has led to floods in 24 provinces in China. Water levels in 433 rivers have exceeded warning levels and 33 rivers have reported record-high water levels, calling for more vigorous flood defence, including sand bags barriers.
- This has boosted demand for raffia-grade polypropylene, the key material for producing heavy-duty sacks used in sand bags.

### Implications

- Heavy-duty sacks supply is tight in some regions following sustained flood-control measures. Heavy-duty sack manufacturers are operating at full capacity to meet demand, increasing raffia-grade polypropylene purchases.
- We expect raffia-grade polypropylene demand to increase by 200 kt in July to keep up with heavy-duty sack production.
- Polypropylene manufacturers have shifted focus to raffia-grade production to meet demand surge.



### Outlook

- All polypropylene manufacturers can produce raffia-grade polypropylene since it is a low-end product. As such, raffia-grade supply will not be an issue in the short term.
- However, the widespread shift to raffia-grade production will squeeze the capacity for producing other polypropylene grades, resulting in supply constraints that help pushing price upwards.

## Enterprise & Navigator's new US ethylene terminal operates at full capacity ahead of schedule

**John Maselli and Enrique Galindo, 20 July 2020**

### Issue

- The new ethylene terminal, which is a 50:50 joint venture between Enterprise and Navigator Holdings, is located in Morgan's Point, Texas, right at the Houston Ship Channel. The terminal has an export capacity of 1,000 ktpa and has successfully loaded its first cargo in January 2020.
- Navigator announced the terminal exceeded its interim design capacity by loading over 79 kt of ethylene in June. The terminal loading capacity was previously limited to 60% of design capacity until an on-site refrigerated storage unit is completed later this year.

### Implications

- The facility is the second ethylene terminal in the US after Targa Resource's 240 ktpa terminal. This new terminal is expected to increase US ethylene export capacity to 1,240 ktpa. It is also connected to Enterprise's 272 kt ethylene storage well.
- In March 2020, Navigator announced 95% of the terminal capacity was contracted in long term take-or-pay offtake agreements. Under this agreement, export volumes will flow even if terminal fees are not fully recovered.
- Although the terminal will have a large impact on US ethylene markets and global ethylene trade, it will not significantly alter global ethylene markets. Only about 2.5% of global ethylene production is traded between countries.
- Since the terminal can accommodate larger ships, we expect export volumes from this terminal to serve Asian markets with more favourable arbitrage and margins. Delivery to Europe will be limited due to logistical challenges and less attractive returns.
- Additional US exports with competitive export costs to Asian markets are likely to pressure Asian ethylene exporters. We are expecting Japanese export volumes to trend downwards, while South Korea will similarly face export pressure as its domestic ethylene capacity grows. Oil price recovery will help the competitiveness of US ethylene exports in Asia, but Japan and South Korea have the geographic advantages to the Chinese market and will still be relied on for prompt cargoes.

### Outlook

- In the US, the contracted volumes through the terminal helps to balance oversupplied domestic markets and will provide long-term price support
- The terminal puts pressure on other exporters. It is likely that US lower cost structure will back out higher export costs from other regions, especially Europe.



## PTA market face oversupply, WM launches asset tool to help assess competitiveness

**Hugh Hartzog, 17 July 2020**

PTA markets are in flux as a protracted recovery in polyester demand appears likely. While some Asian economies, including China, have showed modest signs of recovery, economic risks remain for some western countries experiencing a surge in virus cases.

Quite independent of our outlook for PTA demand, oversupply is materializing, as an unprecedented wave of new PTA capacity begins operation in Q3 and Q4 this year. As new assets come online, the competitive position of existing assets will rebalance, potentially displacing current capacity.

In these uncertain times, understanding PTA production economics is a challenge. To help our clients, Wood Mackenzie has created the PTA Asset Benchmarking Tool (PTA ABT) to aid market participants in their strategic and commercial decision making.

In this [Insight](#), we dive into Wood Mackenzie's newest analytic tool, the PTA ABT, and showcase its capabilities and analysis.

The PTA ABT combines our long-term supply and demand data, regional pricing sets, paraxylene (PX) sourcing profiles, and technology yields to represent the current PTA production environment. In forming a holistic view of PTA production economics, Wood Mackenzie allows users of the tool to derive powerful insights about the costs and profitability of PTA production.

## Cost Reduction of MEG futures contracts at Dalian Commodity Exchange

**Patricia Pan, 17 July 2020**

### Issue

- On 15 July 2020, Dalian Commodity Exchange (DCE) announced the following:
  - Trading fee for MEG futures contract during day trading will be halved starting from 20 July 2020.
  - Trading fee for night trading will also be lowered.
  - Trading fee reduction also applies to coke and coking coal, with different specifications.
- Delivery fee at DCE for all commodities, including polyethylene, polypropylene and PVC, will be suspended from August 2020 through 31 March 2021.

### Implications

- These fee reductions will effectively reduce hedging and delivery costs for chemical enterprises, which are suffering from the coronavirus crisis.
- This new policy aims to encourage more investors to participate in the MEG futures market.

### Outlook

- Other China's commodity exchanges intend to boost trading volumes with similar moves. Zhengzhou Commodity Exchange hosts the PTA and cotton futures markets while Shanghai Bourse hosts the country's only crude oil futures transacted in Chinese yuan.





- We expect to see the optimisation of all kinds of rules and regulations at DCE in the future, aiming to improve the overall business environment.

## PKN all-in: Poland's quest to create a national champion

**Isabelle Gilks, 17 July 2020**

More than two years on from announcing its intention to purchase the Polish State Treasury's shareholding in rival company Grupa LOTOS, PKN Orlen has received the green light from the European Commission for the takeover. However, the consent, which follows an in-depth investigation, comes with several conditions.

In this [Insight](#), Wood Mackenzie examines:

- The list of conditions of the deal and how we think these could be met
- Our view as to how the takeover would impact refinery earnings for PKN Orlen
- Who might be interested in buying the assets that have been offered for divestment
- What impact the merger would have on the structure of the Polish downstream sector

Click [here](#) to access the full insight.

## Hengli Petrochemical is commissioning its fifth PTA line in Dalian, Liaoning, China

**Luo Jing, 13 July 2020**

### Issue

- Hengli Petrochemical is commissioning a 2.5 Mtpa PTA line at its refining and petrochemical base at Changxing Island, Dalian city, China.
- Hengli has successfully tested one train from the new line at the end of June. The second train will be tested in mid-July.
- The line uses INVISTA's P8 PTA technology and is expected to come online only six months after the fourth PTA line started.

### Implications

- By commissioning the fifth PTA line, Hengli's total PTA capacity will be soon extended to 12.5 Mtpa, consolidating its position as the second-largest PTA producer in China and globally.
- The new PTA line has already exerted pressure on the local PTA market, which is crippled by weak downstream demand. Some large producers bought spot PTA to keep the PTA-PX spread in comfortable zones.
- The coronavirus pandemic only affects the economics of on-going PTA projects. Large and competitive producers, like Hengli, can withstand the hit and speed up construction process after China relaxed lockdown measures in March.

### Outlook

- The new PTA line reminds us of the cloud on the horizon - supply is lengthening in China from Q3 2020 to Q1 2021



## PTA Project Capacities from Q3 2020 to Q1 2021

Assets	Nameplate Capacity (kt)	Start-up Date
<a href="#">Hengli #5</a>	2,500	Q3 2020
<a href="#">Zhejiang Xinfengming #2</a>	2,500	Q4 2020
<a href="#">Fujian Baihong (Billion) #1</a>	2,500	Q4 2020
<a href="#">Honggang #2 (Shenghong)</a>	2,400	Q4 2020
<a href="#">Yisheng New Material #1</a>	3,000	Q1 2020

Source: Wood Mackenzie Chemicals

- Hengli has back-integrated into refining and petrochemicals sector in 2019, boosting its competitiveness in PTA and downstream polyester fibres. Hengli's crude-to-chemicals complex boasts a 4.5 Mtpa of total PX capacity, but only meets 54% of its PX demand when all assets fully run.
- The company once targeted a second phase of the refining complex on the same site, but no progress has been made since. Hengli will have to rely on the merchant PX to plug feedstock shortfalls before it commissions an additional PX capacity, if any, in the future.

## China's PTA producers look to futures to endure pandemic impact

Luo Jing, 8 July 2020

As in many other petrochemical markets, PTA producers took a hammering from the coronavirus pandemic. Nationwide lockdowns and job losses disrupted supply chains and curbed downstream PTA demand.

China's PTA and polyester sectors have started a gradual recovery in March. April onwards, most PTA producers ended maintenance or ratcheted up run rates. The PTA-PX spread have maintained a comfortable level for large producers, despite the soaring PTA inventory.

China's PTA producers would have faced a lot more pressure since the outbreak if there had not access to the PTA futures market in the country. In the recently published [insight](#), we did a deep dive in this area.

- PTA producers sought help from the PTA futures market and sustained business in when the nation was in lockdowns.
- With hedging product value being the main function for producers, the futures market helps PTA producers in many other ways.
- We see flaws and limitations in this financial tool, and some of them may even impede its internationalisation process.
- China's futures market already changed how people trade PTA in China. Will it direct the evolution of the world's largest polyester market in the future?

Click [here](#) to access the full insight.



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## Wood Mackenzie Chemicals

### **Trusted, in-depth, unique. Full chemical chain analysis.**

The petrochemicals industry landscape is shifting at an alarming pace. Only one thing seems certain: the coming decade will be shaped by the coronavirus crisis. Consumer behaviour, investment decisions, the corporate landscape and even the path of globalisation will be influenced by its effects.

It's never been more important to have a wide view of the path ahead – while keeping a sharp focus on your key markets.

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