

# Petrochemical trends H1 2021

## Demand recovery possible despite ongoing uncertainty

Petrochemicals special report

January 2021

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## EXECUTIVE SUMMARY

The global petrochemical industry finished 2020 on a strong note, a welcome change from most of the year. Petrochemical prices saw pressure from multiple fronts, across the globe, as the COVID pandemic, coupled with lower energy prices, negatively impacted demand.

Stay-at-home orders tied to the pandemic had a significant impact on demand for gasoline and associated blendstocks such as MTBE, toluene and xylenes. Products such as MEG and PET also saw demand battered by the pandemic. The pressure on petrochemical prices was exacerbated by the Saudi Arabia-Russia crude oil price war in late March as crude pricing plummeted and with US WTI futures turning negative in April as a result. The impact of these events culminated with at least two refinery closures announced in 2020.

Despite these obstacles, petrochemical prices rebounded in Q4 and a number of participants expressed optimism headed into 2021. This positive sentiment was supported further by the approval of pandemic vaccines. While many believe that 2021 will be a better year for chemicals, products such as MEG, PE and PX are expected to face continued pressure due to capacity growth and associated length.

US producers will likely continue to wrestle with massive capacity growth in Asia via crude to chemicals, a move that will pressure pricing and shift trade flows. A number of products, US propylene for instance, will be dependent on healthy demand in the derivative markets. Derivative demand is expected to improve; however, economic growth could be negatively impacted by high unemployment rates and softer personal income and consumer spending rates.

While the near future remains uncertain, there are legitimate reasons to expect overall improvement in the global petrochemical markets. S&P Global Platts hopes that the following global aromatics outlook provides some insight into what to expect during the first half of 2021 and beyond.

— [Kevin Allen](#)

## Global benzene supply set to remain unusually tight into new year

- **Supply tightens from Asia, US on reduced output**
- **Demand hinges on startup of downstream plants**

The global supply tightness that unusually characterized the benzene market in the second half of 2020 is likely to persist into 2021, although demand for the byproduct chemical of aromatics units, crackers and reformers will hinge on the impact of new downstream plant startups in China.

Aromatics units in Asia are expected to run at reduced rates in H1 2021, estimated at 70%-80% in North Asia, as aromatics margins continue to hover below breakeven levels. Although benzene-naphtha spreads were firm in the fourth quarter of 2020, no increases in run rates were reported, with margin losses on paraxylene too steep to be compensated for by benzene.

“Aromatics producers are relying on benzene margins,” one trader said, echoing widely-held sentiment that benzene margins are healthier than those of associated products.

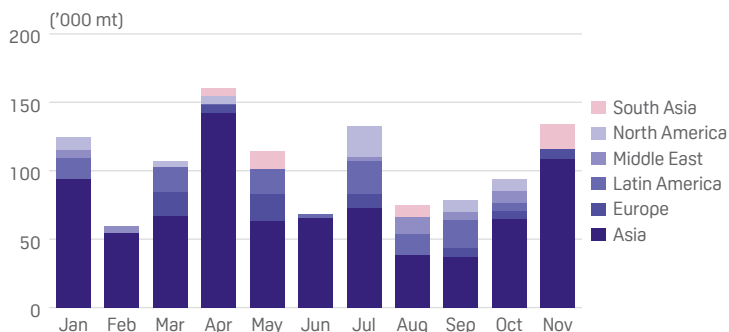
Benzene supply from other avenues is expected to be stable in the new year, with cracker rates seen remaining high to meet Asia’s demand for olefins.

Demand presents a more complex picture, with new Chinese styrene supply in 2021 projected at 5.88 million mt/year, almost three times the country’s annual import volume of around 2 million mt. This could spell trouble for regular exporters of styrene to Asia, especially those that do longer-haul shipments. Should Asian demand for US styrene dip, the US may require less benzene from Asia.

Benzene exports to the US accounted for around 51,000 mt/month of South Korea’s benzene supply over January-November, or 28% of its total benzene exports.

These cargoes will likely move instead on an opportunistic basis in 2021, rather than on the monthly contractual

### ASIAN BENZENE VOLUMES CONTRIBUTE TO MAJORITY OF US IMPORTS IN 2020



Source: S&P Global Platts, Panjiva

volume basis seen over the past two years, enabling traders to react faster to changes in price spreads, market sources said.

### US supply deficit

A supply deficit was expected to define the US spot benzene market in H1 2021, supporting prices as they continue to recover to pre-pandemic levels.

Market sources said continuing tight benzene supply appears somewhat inevitable due to a range of factors, including low imports from South Korea, typically the US' biggest source of benzene imports, low US production via toluene conversion, and depressed refinery operating rates due to lower gasoline and jet demand.

Even if the South Korea-US arbitrage re-opens, market participants said higher benzene import demand from China was expected to draw barrels from South Korea that might otherwise have gone to the US.

"It's hard to see this market operating at anything but a supply deficit [until imports increase]," one US trader said.

Refinery operating rates are expected to remain reduced while the pandemic continues to depress oil demand in the US and globally, which could very well last through 2021. US refinery utilization rates recovered from an April low of 67.6% to a pandemic-era high of 82% in August, before falling back into the 70s% range in subsequent months, according US Energy Information Administration data.

Limited US benzene production via toluene conversion is also expected to continue into 2021 due to weak margins, sources said.

### Robust demand for styrene

The robust demand from downstream styrene monomer producers that characterized the end of 2020 is expected to continue into 2021, market sources said.

While no US producers are expected to shut down or immediately cut rates in response to the additions to global

supply coming online in China, potentially weak or unstable production margins would determine operating rates, they said.

China, the world's biggest benzene importer, is expected to see domestic supply tighten further in 2021 as downstream expansions outpace the availability of benzene. Large-scale downstream styrene and phenol units are integrated in China, with supply from these plants net balanced. Therefore, the increase in demand for benzene would come from standalone downstream units, which are scattered along the eastern and northern coasts of China. However, the mainstream ports for breaking bulk continue to be Jiangyin and Changzhou.

Based on current start-up dates, an estimated 3.8 million mt of new demand is expected. However, delays are foreseen given the ongoing pandemic.

Preliminary CFR China term contract discussions for 2021 point to a premium not far from that agreed for 2020 at \$5-\$9/mt to the weekly Mean of Platts Korea benzene benchmark.

### Opportunity for Europe

In Europe, rumblings of tightening US benzene stocks in the new year could spell opportunity and lead to increased arbitrage flow out of the continent.

Typically, the arbitrage path out of Europe to the US opens two or three times a year and is highly opportunistic – often with trades concluded before the pricing spread is visible in the market. With reduced benzene flows out of South Korea and a lack of Brazilian exports to the US in late 2020, a deficit may be created for European exporters to fill.

Globally, the watchword for 2021 is "uncertainty" among players in the benzene market, with unpredictable factors blurring a clear view. News of advances in COVID-19 vaccine development has sent positive waves through financial markets and stoked hopes of recovery, but for some downstream benzene commodities, the threat of further lockdowns holds strong influence, while China's continued expansion downstream forces exporters to consider alternatives.

— [Tess Tseng](#), [Emily Burlison](#), [Simon Price](#)

### BENZENE PRICES SURGE IN Q4 ON TIGHT SUPPLY



Source: S&P Global Platts

### China's styrene oversupply promises to weigh on 2021 prices

- Heavy Asian turnaround seen in H1 2021
- Packaging, appliance demand remains key

The global styrene supply glut may escalate in 2021 as Asian capacity increases and uncertainty over demand recovery looms amid the ongoing pandemic.

Although Asian styrene prices surged in October on tight supply, it loses steam in early December as the restart of some regional producers added length to the market.

Improving margins and the re-opening of deep sea arbitrage late 2020 brought increased supply to the Asian market and inventories may build again before the Lunar New Year in February after falling to a relatively healthy level in the fourth quarter.

### Asian styrene capacity growth surges

The expansion of China's styrene capacity in 2021 is expected to lengthen the market by approximately 6.88 million mt/year and exacerbate Asia's supply glut, while demand growth lags behind. It may potentially lead to output cuts. Among the new capacities coming on stream are Zhejiang Petrochemical's additional 1.2 million mt/year capacity, CNOOC Shell's 650,000 mt/year facility and Wanhua Petrochemical's 650,000 mt/year plant, industry sources said.

"In the face of over-competition, suppliers with good cost structure will have the advantage," a market source said.

Meanwhile, production losses due to heavy plant maintenance in first-half 2021 are expected to partially offset the supply length and may lend support to CFR China prices. This will also narrow the gap between CFR and domestic China styrene prices, dampening Chinese buyers' import interest.

China's healthy demand for home appliances and automobiles is expected to continue into H1 2021. As lucrative downstream margins and high operating rates persist, styrene buyers may consider other factors, not just prices, during procurement, a market source said. Among others, styrene buyers may even be willing to purchase prompt cargoes at higher prices.

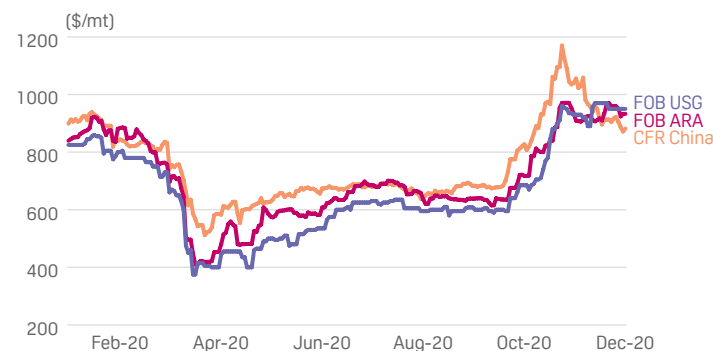
India, Asia's second largest styrene importer, is likely to emerge from a supply shortage in mid-January, according to market sources. Deepsea US cargoes bound for Asia will seek homes in India once South Korea's supply returns to normal. South Korea's styrene supply has been disrupted since March following the unscheduled shutdown of the first of two upstream steam crackers.

However, the Indian government's order for styrene imports to undergo mandatory certification come May 2021, may give rise to regulatory issues. Nevertheless, the deadline for styrene exporters to meet the necessary quality specifications set by the Bureau of Indian Standards is expected to be extended.

### North American market hinges on exports, pandemic

In the US, amid uncertain demand, market participants said feedstock benzene will determine the fate of spot US styrene monomer in the first half of 2021 after prices reached an 18-month high in November.

### GLOBAL STYRENE PRICES RISE AMID STRONG US EXPORT DEMAND



Source: S&P Global Platts

The pandemic is expected to impact polystyrene producers' operating rates, which received a boon from food service packaging amid changes in consumer behavior. US spot styrene prices will be heavily influenced by continued spot export shipments, market sources said.

While some traders worry the planned styrene production growth in China may threaten the global supply balance by spring 2021, plant turnarounds in South Korea, Taiwan, Japan and the Middle East could sustain Asian demand for US material well into the new year.

Longer term, US traders believe non-integrated Chinese producers would be the most vulnerable, globally, to rate cuts or shutdowns in the face of high benzene prices and/or unsustainable margins.

### European contract buyers seek greater discounts in 2021

Uncertainty is also in the writing for Europe's styrene monomer market in 2021 amid concerns over the COVID-19 impact and growing capacities in Asia.

Among others, discounts for contractual styrene, an annually negotiated percentage attached each month to the industry-settled styrene contract price in Europe, is still being discussed, with two different scenarios emerging. On the one side, these discounts are expected to remain steady, or even decline, due to styrene producers' slim profits in 2020.

Buyers, however, have pushed for greater discounts with opening bids discounted by as high as 25%, a trader said. This was spurred by increased volatility and a desire to move away from the contract price standard. While 25% is unrealistic, some settled contracts have discounts which had deepened by 1%-4% as buyers look for greater exposure to spot prices, another trader said.

Meanwhile, consolidation may be on the cards for Europe's styrene market, as additional capacity is poised to come online in China in 2021, market participants said. COVID-19 has disrupted the automotive sector significantly, as demand for new automobiles in Europe drop in line with lockdowns.

Polystyrene, however, has remained robust end-2020 due to demand from the packaging industry, while EPS producers remain bullish for the future as construction use grows.

— [Kevin Allen](#), [Samar Niazi](#), [Sophia Yao](#),  
[Emily Burlison](#), [Simon Price](#), [Ashna Mishra](#)

## COVID-19 developments to drive global polystyrene market in H1 2021

- Year to start with supply tightness
- Environmental concerns to impact virgin PS demand

The beginning of 2021 is expected to bring supply tightness in the polystyrene (PS) market, driven by healthy demand and lower production during the fourth quarter of 2020. However, uncertainty over the impact of the coronavirus pandemic, new capacity additions in Asia and environmental concerns are likely going to add pressure to the market going forward.

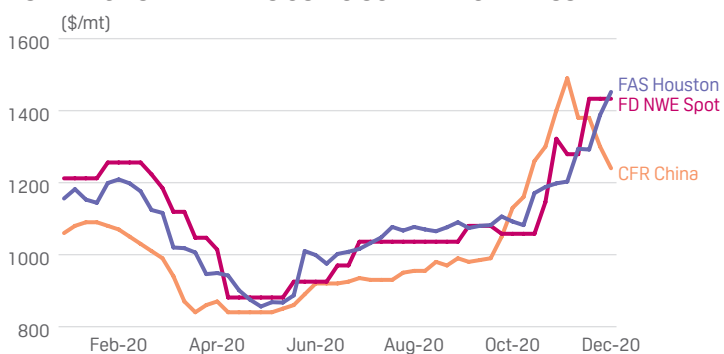
### Consumer goods hold key to Asian PS growth

The Asian PS market recovered in the second half of 2020, carried primarily on the back of China's end-user demand. Supply and demand dynamics in China will be in a strong position to define the market direction in 2021 with increasing capacities and healthy demand for consumer goods.

PS end-users in China, where the COVID-19 situation has been largely under control, received increasing orders from other regions, led by the strength in the refrigerator sector, which is expected to continue.

In addition, surging acrylonitrile-butadiene-styrene (ABS) prices could also lead to an increase in PS demand. In November, the CFR China ABS spot price premium over HIPS was around \$600/mt, significantly above the \$250-300/mt premium range in the first half of 2020, S&P Global Platts data showed. With a wider price gap, sources expect to see more buyers switching to PS for cost savings, which will shorten the supply.

### ASIA PRICE SPIKE LEADS US/EU SUPPLY TIGHTNESS



Source: S&P Global Platts

Further demand growth will however rely on global economic recovery for both domestic and export markets, given great uncertainties amid the ongoing pandemic.

Producers will continue to run at high operating rates on improved margins, whereas tightness in supply is unlikely to ease in the first half of 2021 due to overbooked orders and the ceasing of production at Denka Singapore's 200,000 mt/year line in February.

While a total of 1 million mt/year capacity are expected to come online in 2021, including SP Chemicals' 300,000 mt/year plant and Zhejiang Yisu's 400,000 mt/year plant, the possible delay of construction may limit supply growth and bolster the Asian market in the short term.

### US economic growth controlled by COVID-19 developments

Reduced supply and an increase in upstream pricing promise a strong start for the US PS market in the first half of 2021. 2020 ended with strong seasonal demand and tighter availability due to closing of a production line in Q4. Despite the support, several obstacles are expected to hinder growth in 2021 amid uncertainty on the recovery from COVID-19. The virus has had considerable impact on economic growth in the US, a factor correlated closely to PS due to its proximity to the consumer markets.

On a positive note, US producers could see costs fall in Q1 if expectations of more balanced styrene and benzene markets come to fruition. Sources anticipated that in addition to some lengthening in these markets, new styrene capacities in Asia would pressure pricing lower and support more favorable production costs.

PS demand levels are in question, following early expectations of a 1.5-2% market growth, according to sources, prior to the beginning of the pandemic. The supply contractions associated with a US producer shutting one of its lines were anticipated to have nominal impact.

"It will likely just impact spot [of] which there is already little activity," a source said. More than likely, PS pricing will continue to trace movement in the upstream markets with waves of healthy seasonal demand, the source said.

Looking further forward, recycling and the circular economy will continue to play a role in PS fundamentals. A strong push by producers in the US and Europe will continue as they shift toward increasing the production of recycled materials.

### European producers look to increase PS circular solutions

In the European PS market, the first half of 2021 is expected to begin in similar conditions to the end of 2020.

Demand for white goods and online deliveries climbed considerably during 2020, rolling back a significant part of

the demand erosion for virgin PS felt in the last couple of years, driven by a growing interest for recycled plastics.

Circular solutions will continue to be a significant investment draw for the market, as growing public awareness over environmental issues and an upcoming ban on single-use plastics in the Europe Union will remain a demand driver for virgin PS.

Tight availability at the end of 2020 has supported prices, as well as runaway demand in Asia during Q4 that saw prices lift considerably. Buyers in the market have argued the tightness cannot continue long-term, as they attribute the end of 2020 conditions to multiple maintenance turnarounds, followed by cut run rates.

Exports are becoming a greater target for European sellers, likely tighten the market further, a producer indicated, with orders already received for several thousand tons a month of HIPS to Asia in 2021.

— [Simon Price](#), [Kevin Allen](#), [Sophia Yao](#), [Lara Berton](#)

## Mixed outlook for toluene amid added supply, higher STDP margins

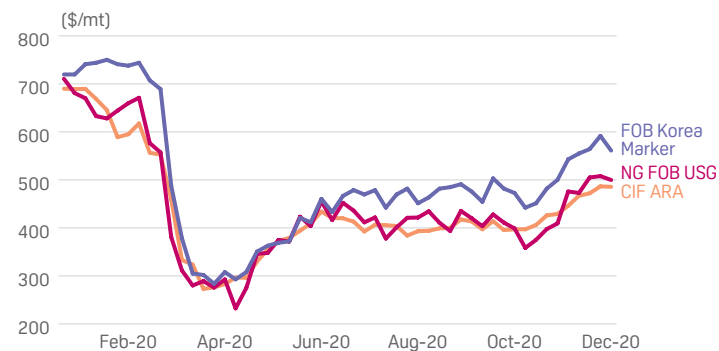
- **China toluene production set to increase**
- **Higher demand from toluene disproportionation**

The prospect of recovery in the global toluene market remains far from certain for the first half of 2021, as the market continues to feel the repercussions of the coronavirus pandemic and as new production capacity in China is set to come online.

In the US, refinery utilization rates will affect toluene supply into the new year much in the same way that they tightened availability in 2020, while in Asia production capabilities among toluene producers are poised to be stronger collectively.

Europe, meanwhile, has yet to fully shrug off the impacts of COVID-19 that hindered demand recovery in 2020 with

### US TOLUENE PRICES SEE SUPPORT FROM ENERGY IN Q4



Source: S&P Global Platts

lockdown measures, mobility restrictions and economic activity the major factors crimping demand from the automotive industry to gasoline blending.

Each region will also be monitoring selective toluene disproportionation (STDP) activity — a process where toluene is used to make paraxylene — in the US, as the prospect for improved STDP margins could support toluene prices in Europe and Asia.

Finally, quality specifications will be in focus next year as India and the US introduce changes to gasoline and toluene.

### New supply in Asia

With more toluene units expected to come online within China in 2021, concern over whether Asia will retain its status as a net importer has started to emerge in the market.

In Q4, production was lower as most producers spanning across the Far East underwent scheduled maintenance or reduced utilization rates, but as units return to operation this may impact the volume of product imported into the region.

China's toluene imports from January to September totaled 366,059 mt, exceeding 331,385 mt in the same period last year, mostly thanks to a quick recovery in the country's economy.

For nations in South Asia, which are mostly net importers, the year ahead appears more promising than 2020.

India's bullish overtures could be driven by improved demand and the government's upcoming quality specifications regulation that risk restraining supply.

Already, some producers secured high alphas for 2021 annual toluene supply in the \$20s/mt to Platts FOB Korea toluene, surpassing their previous records.

Demand in India had mostly recovered and had scope to improve further in the first half of 2021, according to market sources.

### Changes to gasoline, quality specifications

In Europe, gasoline-blending demand was the major support beam for toluene in 2020, but weak blending margins at the turn of Q4 have created headwinds for toluene demand as a blending component.

The thick fog of uncertainty toward overall demand recovery is apparent, with most market participants bearing neutral expectations for the start of 2021. Sustainable recovery will take time and "there will be caps on the upside," said a participant.

Some market sources expected recovery to come later in 2021, but this will be contingent on how the coronavirus situation unfolds.

Meanwhile in the US, changes to reformulated gasoline specifications that took effect Jan. 1 may shift the level of toluene extraction from reformate or the demand for toluene as an octane booster in gasoline. Market participants were uncertain in 2020 how the new rules would play out in aromatics markets beyond expectations of increased demand, and potentially prices, for reformate.

The Bureau of Indian Standards is also likely to introduce stricter quality specifications for toluene, and issue relevant certificates to suppliers adhering to such norms. The proposed quality check has been postponed due to procedural delays induced by COVID-19, but will pressure the market eventually in 2021.

### Toluene disproportionation

In the US, the potential for improved toluene disproportionation unit margins may improve demand, which had been confined to gasoline blending for much of 2020.

TDP and STDP margins will hinge more so on benzene rather than on mixed xylenes or paraxylene, with the appetite for the latter two depressed in the US, sources said. Tight US benzene supply is expected in the early months of the year due to low import volumes, slimmer inventory levels and reduced refinery operating rates.

European market players will also be monitoring STDP activity in the US, as they think that improving STDP margins could support toluene prices in Europe.

— [Philip Reeder](#), [Sue Koh](#), [Emily Burlison](#),  
[Alexander Borulev](#), [Shivangi Acharya](#)

## Asian PTA faces supply glut in China in 2021

- **New Chinese startups to weigh on Asian PTA**
- **India PTA imports to increase on limited supply**
- **Uncertainties remain on freight cost and COVID-19**

The purified terephthalic acid market in Asia is expected to be flooded with supply as new capacities come on stream in China in the first half of 2021, hitting PTA margins and pushing Northeast Asian producers to seek other outlets.

Market sources expect Northeast Asian barrels to start finding their way to other markets such as India, the Middle East and Europe.

### PTA mega-expansion in China

A total of 7.9 million mt/year of new PTA capacity is expected to be brought online in China in H1 2021, including Fujian Baihong Group's 2.5 million mt/year plant at Quanzhou, Shenghong Petrochemical's 2.4 million mt/year plant at

Lianyuangang, and Yisheng Petrochemical's 3 million mt/year plant at Ningbo, according to sources. This represents an almost 14% jump in Chinese PTA capacity from the end of 2020.

However, trade participants expect the overall Chinese PTA operation rate to be lower after the new startups come online in 2021, as the downstream polyester growth falls behind new PTA expansion.

Total Chinese PTA inventories have been hovering around a record high of 3.6 million-4 million mt since H2 2020, which is way above the typical stock level of 1 million-1.5 million mt before COVID-19 due to new capacity and weak demand especially in early 2020 when the pandemic was at its worst in China, according to sources.

The PTA/feedstock paraxylene spread averaged to \$77/mt for dollar-denominated cargoes and Yuan 523/mt for Chinese domestic prompt PTA in September to early-December 2020, down 13%-16% from the first half of 2020, S&P Global Platts data showed. This has already driven the profit margins for some Asian PTA producers to negative territory, yet the spread is likely to be squeezed further in 2021, especially within China, sources said.

While market players have discussed China's PTA export potential after the mega expansions, there is no expectation of a significant increase on China's PTA exports in 2021 due to logistics challenges, higher freight costs compared with other Northeast Asian exporters, and a dearth of new import markets.

On the demand side, the Chinese market expects demand from the downstream polyester chain to continue growing on the back of economic recovery in Asia. The World Bank predicts China's GDP growth at 7.9% in 2021, based on the East Asia and Pacific Economic Update issued in October 2020.

With intensive PTA expansion in China, South Korean PTA exporters will continue to target European and Turkish markets, tapping advantages derived from Free Trade Agreements. South Korea has exported a total of 1.62 million mt PTA in January to October 2020, with barely 92,272 mt to China. This is slightly lower than the full-year exports of 2.08 million mt in 2019, including 255,906 mt to China, according to customs data.

Taiwanese producers, who used to export large quantities of PTA to China are actively exploring other markets like Vietnam and India. Vietnam has surpassed China to be the largest PTA export market for Taiwan in 2020. Taiwan's PTA exports totaled to 554,017 mt between January to October 2020, including 314,866 mt to Vietnam and 208,970 mt to China, based on customs data. In 2019, PTA exports to China was at 516,677 mt.

“No single [overseas] seller is interested in selling to China [due to squeezed prices],” a Northeast Asian PTA producer said, adding the physical spot PTA trades to China will become less liquid after the mega-expansion.

### India sees tight domestic supply, more imports

India’s PTA market is likely to be tight throughout H1 2021 domestically, leading to increased imports, said market sources.

India is second largest PTA market in Asia, typically importing 50,000–60,000 mt per month before the pandemic, according to Indian customs data

The Indian PTA market has been facing domestic supply shortage since mid-September 2020 amid planned and unplanned shutdowns.

Meanwhile, some PTA producers integrated their downstream August onwards and increased PTA supply to the newly acquired polyester units, cutting some supply to the market. The current supply tightness in Indian domestic PTA market may continue in 2021, when there is no new PTA capacity expected to be commissioned locally.

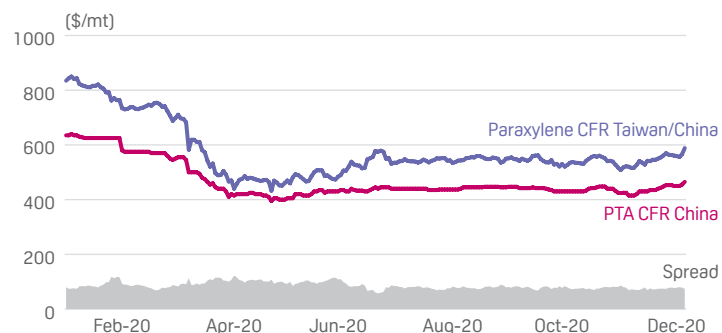
Hence, trade participants expect greater PTA import demand from India in H1 2021, though uncertainties persist from potentially stricter import control, container availability and COVID-19 pandemic.

The Bureau of Indian Standards is expected to introduce stricter quality controls in 2021 – delayed from the initial timeline of December 2020 amid COVID-19 — on PTA imports, which may create temporary supply issues.

Freight cost, which is already spiraling to almost 3-4 times higher than the typical level, is expected to remain high until February or even longer before returning to normal level eventually, sources said.

The soaring freight cost has pushed the PTA CFR India/CFR China spread to \$117/mt on Dec. 8, the highest since Platts started assessing PTA CFR India marker in November 2008.

### ASIAN PTA PROFIT MARGINS UNDER PRESSURE WITH NARROWING PTA/PX SPREAD



### PTA CFR INDIA/CFR CHINA SPREAD SOARS AMID RISING FREIGHT COST



This spread was typically below \$30/mt, Platts’ data from 2018 to early-2020 showed.

In downstream, the textiles sector is gradually recovering from the COVID-19 pandemic impact but yet to bounce back to the pre-pandemic level. With news of possible vaccine launch and onset of wedding season in India from December to March, the textiles sector may potentially pick up further in the first half of 2021.

— [Miranda Zhang](#), [Shilpa Samant](#), [Samar Niazi](#)

### Poor paraxylene margins set to curtail mixed xylene 2021 demand

- Gasoline a key factor for MX
- TDP runs may rise on firm benzene

The outlook for isomer-grade mixed xylene in the first half of 2021 is beset with uncertainty as production margins for MX and downstream paraxylene as well as other aromatics have been unusually poor in 2020, and producers are carefully considering their overall refinery production going into the next year.

In Asia, more downstream PX capacity is set to start up, including phase two of the massive Zhejiang Petrochemical and Saudi Aramco’s Jazan, adding a total 5.85 million mt of PX output to the existing pool in 2021.

However, MX demand is not expected to receive a boost from these new PX plants as they are mostly self-sufficient in upstream feedstock supply.

Instead, many market participants are concerned that Asian and Middle East PX plant capacity additions will further erode PX margins and lead to lower operating rates at PX plants outside China, thereby leading to an imbalance in MX demand and supply dynamics.

In 2021, new reformer units from Petrochina at Jinxi and Jinzhou, as well as Lianqiao Petrochemical are expected to add close to 1 million mt/year of new MX capacity in China,



market sources said. No new capacity was heard starting up outside China.

However, margins for toluene disproportionation units, which use toluene to produce benzene and isomer-MX, remain unclear, although those have been improving on the back of rising benzene prices at the end of 2020. If TDP margins remain poor in 2021, MX output may remain reduced.

Judging by the results of Taiwanese CPC's 2021 term MX tender, which was reportedly awarded at a premium of \$3-\$5/mt over Platts FOB Korea MX assessments, higher than the \$2/mt premium awarded for 2020 term cargoes, the Asian MX market looks stable to firmer. However, market sources have

discounted the results of this tender as most of CPC's term cargoes were awarded to traders. Term contracts between producers and PX makers may not settle at similar levels considering the poor outlook for PX and its margins.

### Supply concerns weigh heavily in Europe

In Europe, a key concern for the market is availability of MX. Given the poor production margins, run rates were kept low throughout the second half of 2020, and may even continue into 2021, sources said.

The premium for Platts MX FOB ARA over Platts Reformate FOB ARA Barge averaged around \$43/mt over June-November, which is considered uneconomical for MX producers, sources said.

With the prevailing length in the global PX market, downstream production margins are likely to remain under pressure, dampening downstream MX demand. As a result of slim margins, MX prices will remain more closely correlated to gasoline than in previous years.

Europe's gasoline demand outlook will be another key determinant in the MX road to recovery in H1 2021. Driving season is over and the market has moved into a

seasonally weak demand period with less traffic on roads and butane in blends due to a more lenient winter gasoline RVP requirement.

Should countries emerge from lockdown in H1 2021, and traffic return to roads, the MX and associated gasoline components markets may get a boost from an increase in demand for gasoline blending to make up for the persistently weak MX-PX production margin.

The recovery of the xylenes chain will be highly dependent on the scale of the economic recovery and how long the COVID-19 pandemic continues.

### US pricing trends to bleed into 2021

Factors that controlled the US' MX prices in 2020 are expected to contribute to poor economics in the new year, dampening spot prices.

The market expects tight MX supply and low PX prices to keep the prompt spot MX-PX spread sufficiently low — an average of \$56/mt in the third quarter — to discourage any paraxylene producers from ramping up crystallization units or purchasing spot MX in Q2 2021.

The low volume of spot paraxylene produced in 2020 is not expected to increase in the coming months, market sources said, with the import economics more encouraging than domestic production.

US paraxylene imports increased nearly 45% between 2019 and 2020, S&P Global Platts data showed.

MX supply in the US will continue to be limited by reduced refinery operating rates in 2021, which in turn will be heavily affected by how the COVID-19 pandemic unfolds.

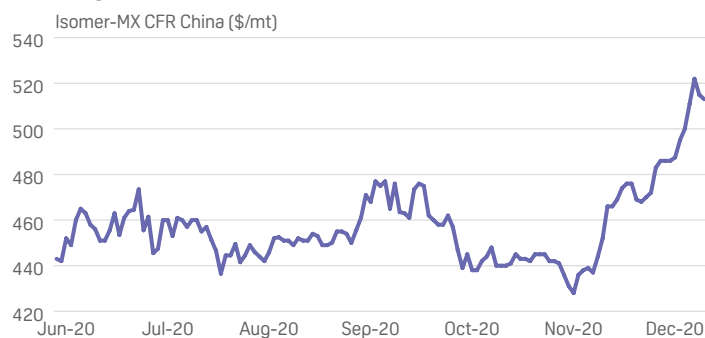
US oil demand in 2021 may be roughly 2.7 million b/d under 2019, according to an S&P Global Platts Analytics forecast in November. However, this may potentially create some upside to the poor refinery margins seen in 2020.

"Improvement is likely to begin in March or April due to several factors: recovering demand, lower product stocks, and improved gasoline cracks as refiners shift to summer specs," Platts Analytics wrote in a November forecast. "But it will be a slow, lackluster recovery."

Market participants said potential strength in spot benzene prices would lead to greater length in MX supply. The expected tightness in 2021 benzene supply may lead to improved toluene conversion margins, thereby increasing MX production.

— [Gustav Inge Holmvik](#), [Alexander Borulev](#),  
[Philip Reeder](#), [Emily Burlison](#)

### NEW CFR CHINA MX ASSESSMENT JUMPS ON FIRM CRUDE IN Q4-20



Source: S&P Global Platts

## Global PX length to persist into 2021 despite rate cuts, stronger PTA demand

- **New PTA demand in China to absorb some excess supply**
- **But only outlet for European paraxylene could be the US**

The global paraxylene market looking to Asia, especially China, to provide direction is a trend of the past few years that looks set to continue into 2021.

The Asian market is expected to remain oversupplied into the first half of 2021, extending a particularly tough 2020 for producers. Nevertheless, market participants expect that fundamentals in 2021, particularly in the first quarter, may improve on tighter supply and demand from new PTA capacity, although the market is expected to remain long.

Supply and demand is rebalancing as paraxylene operating rates in the region have fallen due to production margins dropping below breakeven levels for an extended period. However, sources said there was a limit to run rate cuts, despite the weak economic environment, due to gasoline blending demand and refiner needs to secure internal supply of hydrogen to desulfurize upstream products.

Reduced market supply may be insufficient to lessen current length significantly, a South Asian market source said. Only a large turn in the gasoline market, or weaker polyolefins margins, that push refineries into overall run rate reductions would cause a bigger drop in paraxylene production, a trader said.

The conflicting mix of factors make it tough for plants to decide on forward operating rates and term contract volume commitments for the coming year, an Asian producer source said.

Nonetheless, term contract volumes are expected to be larger than in 2020, easing pressure on spot supplies, sources said. Paraxylene term contract negotiators are discussing discounts of \$7-\$10/mt to the average monthly of Asian Contract Price and the monthly average

of spot prices, in contrast to low single-digit discounts for 2020 contracts, with one contract already heard to have settled.

### New capacity downstream

New purified terephthalic acid demand in China will also help to absorb excess paraxylene supply in Q1 2021, including 2.5 million mt/year from Fujian Baihong, 2.4 million mt/year from Shenghong and 3 million mt/year from Yisheng Ningbo's No. 5 unit. These new capacities represent approximately 5.25 million mt/year of paraxylene demand, according to S&P Global Platts calculations.

However, all eyes are on the startup of Zhejiang Petrochemical Phase 2, which will add a whopping 5 million mt/year of paraxylene supply in late Q1-early Q2, weighing on a market struggling to rebalance, and keeping the supply-demand slate relatively unchanged from 2020. Aramco Jazan's 850,000 mt/year paraxylene plant startup in Q2-Q3 will also add supply.

The positive start to the year due to additional demand may be short-lived and pressure could resurface once Zhejiang Petrochemical Phase 2 starts up, an Asian paraxylene producer said.

### Longer-term concerns

Market sources said a longer-term recovery in production margins may be difficult, as there was enough capacity available to ramp up operating rates or restart if production margins rebound.

Market participants are also concerned about the operating rates of downstream PTA plants in China that have kept run rates steady at around 80%-90% of capacity in 2020 due to decent margins. While new PTA capacities would boost paraxylene demand, further Chinese PTA inventory buildup in an already oversupplied market may potentially reduce run rates on squeezed production margins, the sources said.

Factors such as the COVID-19 vaccine rollout and the pace of post-pandemic recovery by end-users add to the demand uncertainty in Asia's paraxylene market.

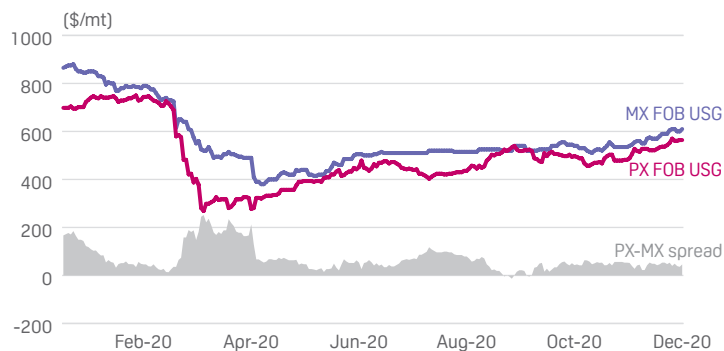
Meanwhile, European market players are occupied with their own surplus inventories and expect minimal impact from China's new PTA capacities on their market.

### Europe uncertainty

Paraxylene market expectations for 2021 are not optimistic since economic recovery from the pandemic is the major factor impacting spot prices and market fundamentals.

Market participants typically stock up for the summer season over winter and spring, but COVID-19 could make things different in 2021, a European trader said.

### ECONOMICS REMAIN POOR AMID PX SUPPLY GLUT



Source: S&P Global Platts

A number of market participants expected the only outlet for European paraxylene will be the US. The early 2021 picture may remain unchanged, as Europe expects an oversupply of paraxylene due to sluggish domestic demand.

Some market players believe that the focus for producers outside China should be on rationalizing production in order to rebalance the market.

### US under pressure

Asian capacity growth over 2019–2021 has impacted paraxylene pricing globally, including within North America.

US producers struggled throughout Q3 as economics were negatively impacted by stronger US mixed xylene prices tied to planned and unplanned outages along the US Gulf Coast. The prompt spot PX-MX spread averaged just over \$56/mt in Q3, far below levels considered profitable for crystallization and Parex unit operators. US producers saw better margins on contracts, with the average 2020 paraxylene premiums (not inclusive of discounts) \$203/mt higher than the 2020 MX monthly spot average.

In addition, output from toluene conversion units has been minimal in 2020, with selective toluene disproportionation or STDP margins frequently in negative territory and economics unlikely to improve in 2021, market sources said.

US producers may continue to compete with low-cost imports into the US Atlantic Coast; US paraxylene imports surged 45% between 2019 and mid-Q4 2020. During Q2 2020, it was cheaper to import into the East Coast than produce in the US Gulf and move material to the East Coast via a Jones Act vessel, sources said.

US paraxylene prices could see some relief in 2021 amid rate cuts and shutdowns in other regions, but the outlook remains poor, making market participants wonder about the fate of BP's US paraxylene production once the company is full absorbed by Ineos.

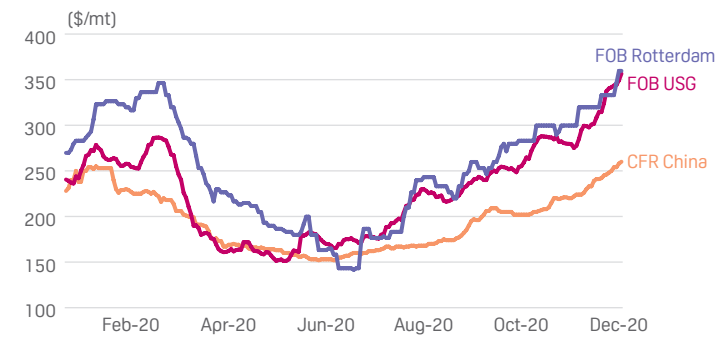
— [Regina Sher, Alexander Borulev, Kevin Allen](#)

## Methanol supply tightness to dissipate in H1 2021 amid higher run rates

- MTO margins could be under pressure
- India awaits Biden decision on sanctions

Global methanol markets head into 2021 with supply concerns due to a prolonged period of lower run rates during 2020 and stronger than anticipated demand, despite

## GLOBAL METHANOL PRICES STRENGTHEN DESPITE COVID-19 ON TIGHT SUPPLY



Source: S&P Global Platts

the coronavirus pandemic, but market sources expect idled capacity returning to the market, new plant startups and a potential change in trade flows following Joe Biden's victory in the US presidential election could bring back supply length.

### China's demand growth threatened

The Chinese market is expected to head into the first half of 2021 with renewed vigor from healthy downstream demand, underpinned by a surge in Chinese retail sales of consumer goods and upbeat GDP growth.

Prices of imported methanol in November were already 10% higher year-on-year, averaging \$238/mt CFR China. This upward momentum will likely continue into Q1 with expectations of tight Iranian supply in January and February.

While Iranian methanol, through new capacities over the past two years, accounted for around 60% of China's spot methanol imports in 2020, questions surrounding its supply to China during winter remain as Iran typically diverts natural gas supply from petrochemical production to household heating.

At the same time, polypropylene margins, which have been profitable for methanol-to-olefin plants in 2020, could face headwinds from new PP units in China and higher feedstock methanol costs. A total of 1.55 million mt/year new PP capacity in China, added in September 2020, is expected to weigh on local PP prices unless domestic and export demand for personal protection equipment continues.

MTO-PP margins over January to November have been 39% higher compared to the same period in 2019, averaging \$170/mt, S&P Global Platts data showed. Their stellar performance, however, will be tested in 2021.

### Biden's victory could change India supply mix

Meanwhile in India, supply constraints are likely in the first half of 2021 amid uncertainty over the resumption of Iranian supplies and a steady demand outlook.

In the immediate aftermath of the COVID-19 outbreak, India could attract sufficient methanol supplies given lack of strong demand in some adjacent markets and its own limited requirements.

However, post -August 2020, with the presence of a handful of Middle Eastern producers, supply grew limited as broader Asian demand recovered, and strict banking controls impeded the purchase of Iranian volumes.

The scenario may well extend into 2021, unless US President-elect Joe Biden seeks a return to the Iran nuclear deal.

Iranian methanol constituted about 75% of Indian imports before February 2020, as buyers made the most of relatively lax banking provisions and customs norms, despite the withdrawal of the US' waiver to trade with Iran in May 2019.

Over March-August 2020, Iran supplied only 6-7% of all monthly shipments, India customs data showed.

Adding to such supply concerns, the Bureau of Indian Standards is expected to introduce stricter mandatory quality controls on all methanol imported to India in 2021.

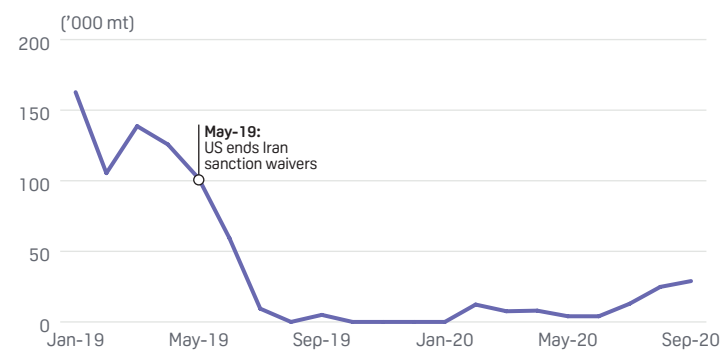
While India's usual suppliers will be able to produce as per new specifications, some traders expressed concerns over whether BIS inspectors would be able to hand out necessary certifications amid procedural delays due to COVID-19.

### US, Europe supply to lengthen

The European and US markets will likely see supply lengthen moving into H1 2021, despite ending 2020 with low storage levels. A slew of unplanned outages in Q3 and Q4 helped temper supply in the face of lackluster demand resulting from the pandemic.

The market saw the return of some supply in H2 2020 from the restart of idled units, which will bring relief over the coming months.

### INDIA METHANOL IMPORTS FROM IRAN DROP SIGNIFICANTLY AFTER US ENDS IRAN SANCTION WAIVERS



Source: India Customs Data

On top of this, additional production is expected to come online in early 2021, with the startup of the 1.8 million mt/year YCI Methanol One plant in St. James, Louisiana, and the ramp-up to full rates of Caribbean Gas Chemical Ltd's 1 million mt/year production facility in Trinidad, according to market sources.

Neither company has commented officially. The speed with which these two facilities come online is likely to impact how soon the market can expect to see spot prices decrease as a result of increased production, market sources said.

Following the startups, Europe will likely see more imports coming from the other side of the pond. However, a key question mark remains over Russia.

There is still uncertainty on Tomet's 900,000 mt/year complex, which stopped production in late October and resumed operations at reduced capacity in early December. It remains unclear when the units will run at full rates. The company was not available to comment.

The plant outage will continue to impact spot availability in the European market, sources said. Unless the complex resumes full operations, part of the lost volume could be replaced by new imports as well as Shchekinoazot's new 500,000 mt/year unit in the Tula region, starting up in mid-2021, the company said.

— [Luke Milner](#), [Lara Berton](#), [Esther Ng](#), [Mary Hogan](#), [Shivangi Acharya](#)

## MTBE oversupply to ease in H1 2021 as gasoline blending demand recovers

- Energy market volatility adds uncertainty
- Thin margins could lead to lower production

Global MTBE markets move into 2021 with tempered optimism of revived gasoline blending demand driven by easing coronavirus measures likely to result in increased demand for transportation fuel. However, lingering MTBE oversupply concerns set against a volatile energy market have added uncertainty to bullish sentiment.

### European outlook bullish

European MTBE demand is expected to rebound from record lows seen in 2020, with industry participants maintaining a bullish outlook for the first half of 2021.

The likelihood of COVID-19 vaccinations in early 2021 has translated into a renewed bullish outlook for oil markets. Gasoline demand is also set to recover as European lockdowns begin to ease, reviving demand for road transportation fuels. The gasoline to naphtha spread is expected to continue to widen, bringing

improved margins for MTBE producers as drivers return to Europe’s roads.

Market sources say they expect supply of MTBE to be unaltered as the current market remains oversupplied, with many producers having to store product.

Other octane products will look to compete with MTBE as prices for octanes such as reformate remain favorable; however, as summer blends come into play, MTBE demand is expected to pick up, providing strong recovery expectations for the summer.

“It’s difficult to say how fast things can recover; the market visibility is very low,” said an industry source, adding that if vaccine expectations remain unchanged, the crude oil outlook will be the main driver for market demand.

ETBE markets are expected to grow as European renewable mandates come into effect; however, demand implications on MTBE are expected to be minimal as producers are carrying their excess carbon allowances into 2021, allowing them to produce MTBE at a lower cost.

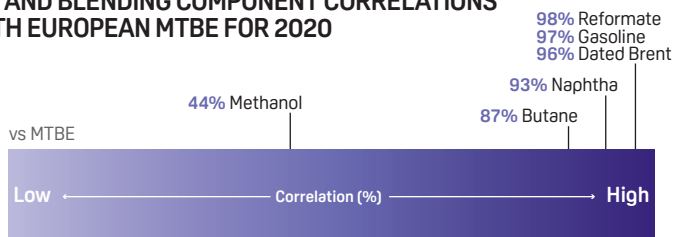
**Demand in Asia firms**

Demand in the Asian MTBE market is expected to be stable to firm in the first half of 2021, amid expectations of a recovery from the effects of the coronavirus pandemic. However, persistent oversupply concerns in the gasoline blending market and uncertainty surrounding oil markets have clouded the upbeat sentiment.

“We think [the MTBE price will be] flat or supportive from [now],” a trader based in Singapore said.

Lucrative MTBE gasoline blending margins and steady MTBE blending demand in Southeast Asia are likely to continue through 2021. “The biggest [gasoline] importer, Indonesia, is still importing,” a second trader said. A recovery of the Chinese economy and rebounding activity in the automotive sector could help further boost demand for MTBE.

**OIL AND BLENDING COMPONENT CORRELATIONS WITH EUROPEAN MTBE FOR 2020**



Source: S&P Global Platts

**US MTBE RECOVERS FROM HISTORIC LOWS IN EARLY 2020 AS GASOLINE FUTURES REBOUND FROM COVID-19**



Source: S&P Global Platts

However, thin MTBE production margins from feedstock methanol and naphtha are expected to continue to add cost pressure and could lead to cuts in MTBE production.

Market participants forecast that the oversupply in the gasoline and gasoline blendstock markets will ease, albeit at a slow pace, on the back of returning gasoline demand on easing pandemic-related issues and with an anticipated release of vaccines. “[The MTBE market in 2021] will be oversupplied, [as] China [is facing] excess capacity and with Middle Eastern cargoes [continuing] to land in Asia,” a trader based in Malaysia said.

In China, around 380,000 mt/year of new MTBE capacity will likely be added, from the Sino-Kuwait joint venture’s 200,000 mt/year Guangzhou facility, Sinochem’s 100,000 mt/year plant in Quanzhou, and Liaoning Bora Chemical’s 120,000 mt/year plants in Panjin, according to market sources.

**US demand depends on export recovery**

Despite expectations that US MTBE could see pricing firm moving into the first half of 2021 as the market recovers from the effects of the coronavirus pandemic, uncertainty around export demand growth to Mexico and Latin America could limit that increase, according to market sources.

As a result, US MTBE production rates could remain at reduced levels moving into early 2021 until margins and demand improve.

Latin American gasoline demand growth is expected to slowly resume in 2021 as the easing of lockdown measures continues, according to data from S&P Global Platts Analytics. The region could see a slight uptick in gasoline imports in early 2021, including imports of MTBE as a blending component.

Mexican gasoline demand recovery is expected to take longer than anticipated, with the coronavirus still hurting demand for transportation fuels.

Gasoline demand growth is anticipated to slowly resume in the second quarter of 2021, but will likely remain flat until then.

At the same time, if Mexican gasoline production decreases during this period, the US MTBE market could see minimal demand growth for export cargoes of gasoline blended with MTBE, according to market sources.

Much of the MTBE export activity in the US Gulf Coast is likely to still take place in the Houston/Texas City hub, where a majority of gasoline blending with MTBE occurs. Any uptick in Mexico's domestic gasoline production, however, could push increased exports of neat MTBE cargoes out of the Beaumont/Port Arthur hub.

— [\*Philip Reeder, Mary Hogan, Abdulrhman Ehtaiba, Michelle Kim, Stergios Zacharakis\*](#)

#### Authors

Kevin Allen, Shivangi Acharya, Lara Berton, Alexander Borulev, Emily Burleson, Abdulrhman Ehtaiba, Mary Hogan, Gustav Holmvik, Michelle Kim, Sue Koh, Ashna Mishra, Samar Niazi, Esther Ng, Simon Price, Shilpa Samant, Regina Sher, Tess Tseng, Sophia Yao, Eshwar Yennigalla, Stergios Zacharakis, Miranda Zhang

#### Editorial leads

Kevin Allen, Lara Berton, Mary Hogan, Gustav Holmvik, Luke Milner, Samar Niazi, Simon Price, Philip Reeder, Tess Tseng

#### Editors

Alisdair Bowles, Jonathan Fox, Norazlina Jumaat, Jonathan Loades-Carter, Debiprasad Nayak, Wendy Wells

#### Design and Production

Jack Karonika

## S&P Global Platts

#### Contact Platts support:

E-mail: [support@platts.com](mailto:support@platts.com); Americas: +1-800-752-8878; Europe & Middle East: +44-20-7176-6111; Asia Pacific: +65-6530-6430

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