

# Americas petrochemical outlook H1 2019

## Petrochemicals special report

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## FOREWORD

Petrochemical market participants in the Americas have entered 2019 facing ongoing US-China trade tensions and energy complex uncertainty. But a recent delay in planned tariff hikes has spurred optimism for some participants that trade relations may return to normal by the end of 2019.

Trade tensions with China and other global regions have disturbed traditional petrochemical trade flows from the Americas, while a weaker energy complex in late 2018 also left some traders scratching their heads moving into 2019. After seeing their highest levels since November 2014 in the first half of 2018, global oil prices ended the second half of the 2018 on the downtrend, which pulled some key petrochemical feedstocks lower as well.

China's implementation of antidumping duties on styrene monomer and the associated reduction in demand remain issues heading into the early months of 2019. However, space constraints, planned and unplanned maintenance and capacity additions overseas are expected to further weigh on the benzene market.

In the olefins market, energy weakness has led to pressure on propylene prices. Operations at US propane dehydrogenation units returned to normal in the fourth quarter of 2018, which led domestic inventories to build heading into 2019. Meanwhile, the US ethylene market is expected to remain long for much of the year as three new crackers that were slated to come online by the end of 2018 are now expected to come online in early 2019.

On the polymer side, US polypropylene was not competitive with the rest of the world in 2018 due to high prices. Lower feedstock pricing heading into the new year, however, has sparked some optimism that US PP exports may see renewed interest. For US polyethylene, all three grades of PE reached record lows in December on weak demand caused by the US-China trade conflict. More questions remain for 2019 as additional capacity is expected to come online while trade tensions still remain unresolved.

— [Brian Balboa](#)

## TRADE

### Trade war lingering for US petrochemicals

A 90-day pause on the Trump administration's plan to hike tariffs on \$200 billion in Chinese goods in January may delay higher consumer costs for everything from tires to galoshes, but the US petrochemical industry remains among the top targets of tariffs already in place and there is no obvious end in sight.

"We know that things are not going to change for 90 days — that's all we know," a US market source said in December.

Petrochemical-heavy 25% tariffs the US imposed on Chinese goods in August are not part of the temporary trade detente reached by US President Donald Trump and Chinese President Xi Jinping in early December at the G-20 Summit in Argentina.

The two leaders agreed the US would hold off on raising 10% tariffs to 25% on Chinese goods — many of which involve finished plastics products — to allow the two largest global economies to negotiate a trade deal.

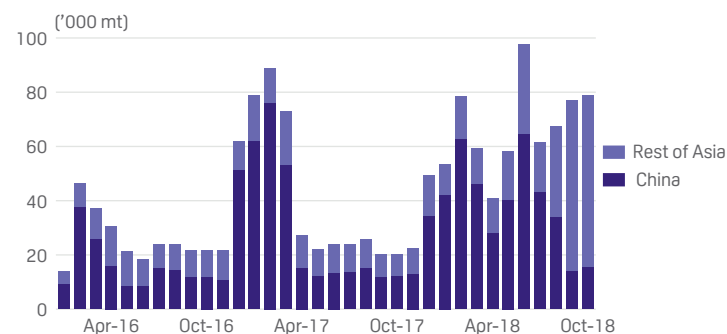
Trump told reporters it was an "incredible deal," and that China would buy a "tremendous amount of agriculture and other products" from the US.

State Councillor Wang Yi, China's top diplomat, told reporters the agreement prevented "the expansion of economic frictions" between the US and China. The Dow Jones Industrial Average jumped 288 points on news of the agreement.

Then, on December 4, Trump tweeted "I am a Tariff Man," saying tariffs would "always be the best way to max out our economic power." The Dow fell nearly 800 points.

Two days later, Canadian law enforcement officials, at the request of the US, arrested Meng Wanzhou, the chief financial officer of Chinese telecommunications

### US HDPE AND LLDPE EXPORTS TO ASIA SOAR IN 2018, BUT FLOW TO CHINA THINS DOWN



Source: US International Trade Commission

behemoth Huawei Technologies, on charges that could stem from violating US sanctions on Iran, sparking outrage in Beijing.

By December 7, the Dow had fallen 1,150 points, or 4.5%. For all of 2018, the Dow fell 5.6% in the worst year for stocks since 2008, the year of the global financial crisis.

Stock prices are likely to rise and fall again as more tweets and negotiation nuggets emerge, but uncertainty will remain for the US petrochemical industry, stuck in the center of the \$250 billion in tariffs the US has imposed on Chinese goods and the \$110 billion in levies China slapped on US goods in response.

“My crystal ball has gotten a big old crack,” another petrochemical market source said, noting the only constant in the tumult for market players and chemical companies is uncertainty about how long the trade tensions will last.

On January 2, Apple CEO Tim Cook told investors the company had cut its revenue guidance for the fourth quarter of 2018 amid China’s slowing economy, which he said had been impacted by ongoing trade tensions.

The market source said China was “kind of a catalyst” for global growth.

“When the Chinese show optimism, and come out and buy at a decent price, then Southeast Asia and India jump in. If they’re actively buying, the rest of the world will follow,” the source said.

But without those big Asian economies, “there’s not much juice left,” the source added. “And China is not going to buy when they feel that their economy will be impacted by the US, which is one of the biggest consumers of their goods.”

The first round of tariffs the countries imposed on each other in July involved largely agricultural products and vehicles. Round Two in August involved hundreds of petrochemicals, from feedstocks China sources from the US to make plastics and rubber to machinery, pipes, tubes and other products China routinely exports to US buyers.

China’s August tariffs target two grades of polyethylene that make up more than 90% of largely export-bound new production that is online, under construction or planned along the US Gulf Coast, in Pennsylvania and potentially Ohio. That new infrastructure makes up the bulk of more than \$200 billion in projects fueled by cheap ethane amid the US natural gas boom, and has prompted the American Chemistry Council to argue vehemently for petrochemicals to be left out of the trade war.

“The success of the US chemicals industry hinges on our ability to engage with global markets,” Ed Brzytwa, director of international trade for the American Chemistry Council,

said in December testimony before the US Office of the Trade Representative (USTR) regarding a potential trade deal with Japan.

US International Trade Commission data show US October exports of polyethylene rose for a third consecutive month to reach an all-time record high of 441,232.1 mt, up 13.2% month on month and 70.9% year on year, reflecting a 19.7% rise in US PE capacity since early 2017.

However, US PE exports to China fell for a fourth straight month in October to 22,564.3 mt, while Latin America saw its share of imports from the US rise in tandem with the overall increases, reaching 192,073.4 mt for all grades combined — the highest total since July 2016, when the US sent 199,289.8 mt.

Trade flows are showing shifts in light of the August tariffs as China buys less, “and producers don’t want to lower prices so they can pay the tariff price,” the first market source noted.

Global producers can circumvent the trade war by supplying China from other operations. DowDupont, for example, can ship products to Asia from its operations in Saudi Arabia, Canada, Argentina and Europe, CFO Howard Ungerleider told a conference in late November. The company’s new US PE operations, however, can supply other markets, such as Latin America.

“We’re going to have to be agile,” he said.

— [Kristen Hays and Phillipe Craig](#)

## OLEFINS & POLYMERS

### US ethylene market to see delayed capacity online

For 2019, the US ethylene market is expected to see a continuation of additional capacity coming online. The market will remain oversupplied and the added capacity would continue to lengthen the market, potentially putting additional downward pricing pressure on the market.

However, market participants added that with the downstream polyethylene units expected to come online, it could also lead to a short-lived increase in ethylene spot prices.

The ample supply had led some producers to reduce rates in 2018. But with new derivative units coming online, market participants said producers were increasing their operating rates in early 2019 as they run their ethane feed.



For 2018, the US ethylene market was supposed to see just over 5 million mt/year of ethylene capacity come online. However, only Chevron Phillips' Cedar Bayou complex in Baytown, Texas, and ExxonMobil's Baytown cracker, with a combined capacity of 3 million mt/year, started producing ethylene on a commercial scale, according to trade participants.

### Additional capacity delayed to 2019

Indorama Ventures' 440,000 mt/year brownfield project in Lake Charles, Louisiana, Sasol's 1.54 million mt/year steam cracker in Lake Charles and Shintech's 500,000 mt/year cracker in Plaquemine, Louisiana, were expected to come online in H2 2018.

Indorama said back in November 2018 that it was running feedstock and undergoing trial operations at its Lake Charles cracker. Market participants, however, have said they expect full production to come online later in 2019.

Sasol said back in December that mechanical completion of its 1.5 million mt/year cracker was imminent and it expected to begin sustained on-spec production sometime in early January.

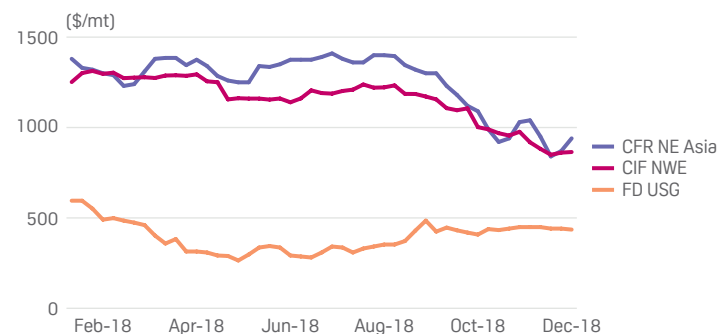
Shintech's cracker was expected to come online in Q3 2018, but contractor issues that led to a construction slowdown and delayed its startup, a source familiar with company operations had said back in August. The company said in December that it expected to complete construction of the cracker by the end of 2018.

### Market to remain oversupplied

Although the market has remained oversupplied heading into 2019, pricing in H2 2018 did not come back down to the record lows seen on May 10-11 at 12 cent/lb. Spot prices peaked in H2 2018 at 23 cents/lb FD USG on September 17-18, coming amid reduced rates for some producers.

The higher prices were shortlived, however, as prompt spot levels gradually came back down for Q4 2018, alongside weaker ethane costs. US ethylene prices had not seen much price direction in Q4 2018, as sellers had mostly kept spot levels from falling below

### ETHYLENE PRICES GLOBALLY UNDER PRESSURE



Source: S&P Global Platts

### AROUND FIVE MILLION MT OF ETHYLENE CAPACITY EXPECTED TO COME ONLINE IN 2019

| Company                      | Location  | Capacity ('000 mt) | Launch |
|------------------------------|-----------|--------------------|--------|
| ChevronPhillips              | Texas     | 1,500              | Q2-18  |
| ExxonMobil                   | Texas     | 1,500              | Q1-18  |
| Formosa Plastics             | Texas     | 1,200              | Q1-19  |
| Sasol                        | Louisiana | 1,540              | Q1-19  |
| Shintech                     | Louisiana | 500                | Q1-19  |
| Westlake LACC (Lotte Axiall) | Louisiana | 1,200              | H1-19  |
| Indorama                     | Louisiana | 440                | Q1-19  |

Source: S&P Global Platts

19-20 cent/lb FD USG, sources noted. The lack of direction in Q4 2018 led the December contract settlement to settle at a rollover of 29.25 cents/lb in the first week of January.

Ethylene spot averaged 18.28 cents/lb FD USG for 2018, down from just under 28 cents/lb for 2017. In the first few days of 2019 though, spot levels have already moved below the 18 cent/lb FD USG mark, as some producers were said to be ramping up production rates.

### US ethane expected to firm in early 2019

US ethane cracker margins in 2018 saw their lowest levels ever since S&P Global Platts began assessing those in 2011. As a result of a continued surge in ethane pricing and a weak spot ethylene market, the US ethane cracker margin fell to a record low of minus 0.35 cent/lb on September 19, 2018.

The low US ethane cracker margin came a day after non-LST ethane established a six-year high of 61 cents/gal. Since then, ethane prices have gradually come down for the remainder of the year, ending 2018 at 29 cent/gal.

Ethane cracker margins also rebounded for the remainder of the year, ending 2018 at 10.67 cent/gal.

Trade sources have said ethane prices should move higher in the first half of 2019, based on expected demand from the ethylene market ahead of PE startups. However, market participants do not expect cracker margins to change much.

"Margins are alright now," one US olefins trader said. "But it all depends on PE. As the China/Asia situation worsens, that could be a cause of concern, but for now you are making margins on that you sell for PE, so plants in the US keep running."

### Market still held to one export terminal

Another factor which will likely keep the US ethylene market long for H1 2019 is the continued lack of additional export terminals. Meanwhile, the market continued to wait on Enterprise Product Partners and London-based Navigator Gas to start up their 1 million mt/year export terminal in Q4 2019 at their Morgan's Point facility along the Houston Ship Channel.

Until then, the US ethylene market will be limited to a 300,000 mt/year facility contracted to Mitsubishi Chemical and operated by Targa Resources.

Olefins trading sources said they expect ample supply to last until at least 2019 until the necessary infrastructure to consume that excess supply comes online.

— [Brian Balboa](#)

## PE markets in US monitor China trade war amid bearish sentiment

More than a year after a record-setting natural disaster led to a lack of clarity for the US petrochemical industry, it again finds itself entering 2019 with more questions than answers.

No longer feeling the effects of Hurricane Harvey, polyethylene markets in the US are now instead fixated on Asia and a simmering trade war with China, all the while wondering when key export markets will reopen and bearish sentiment will subside.

All three grades of commodity-grade PE assessed by S&P Global Platts reached 2018 highs late in the first three months of the year, as high-density PE film peaked at \$1,477/mt FAS Houston on March 14, a day after low-density PE reached a peak of \$1,400/mt FAS. Butene-grade linear-low-density PE, meanwhile, was assessed at its highest point of the year on February 5 with a close of \$1,345/mt FAS Houston, according to Platts data.

US PE markets spent much of the first quarter of 2018 recovering from Harvey's impact on production and logistics, with domestic and export PE prices rising as a result. By March, they saw an opening salvo in the US' ongoing trade war with China, with President Donald Trump announcing import tariffs of 25% on steel and 10% on aluminum.

China responded swiftly and severely via retaliatory tariffs, with the two global powers subsequently ratcheting up the blows to \$50 billion apiece and including petrochemicals. And while China's tariffs on US-origin PE did not take effect until August, the impact on demand and pricing was felt almost immediately after China in April announced plans to target PE.

Not too long after that, export and domestic pricing in the US began to feel pressure from several angles — including weaker buying sentiment tied to uncertainty surrounding the trade war. Depressed global PE pricing made US-origin resins somewhat uncompetitive in the early part of the second quarter of the year, and a decrease in exports to Asia began to take hold in June and July when China increased the pressure.

### HDPE AND LLDPE PRICES UNDER PRESSURE



Source: S&P Global Platts

By December, all three grades of PE had reached record lows and some traders began to plan for the long haul with no resolution in sight.

LDPE export pricing entered January at \$926/mt FAS Houston, down 21.5% compared with the first assessment of 2018, while butene-grade LLDPE was down 22.8% at \$893/mt FAS Houston, according to Platts data.

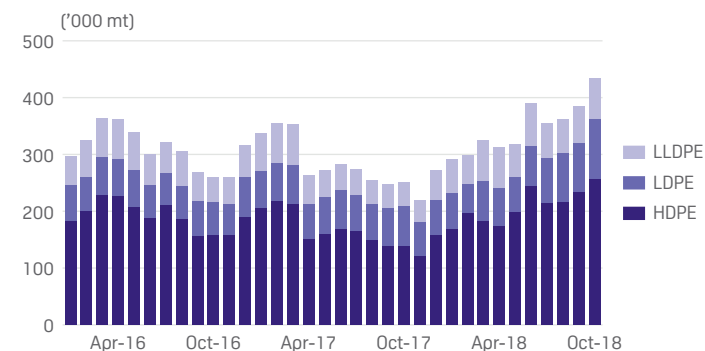
HDPE grades also opened the year at record lows, skidding between 14.3%-19.8% compared with the first assessments of 2018, with film opening at \$1,058/mt FAS Houston; blowmolding at \$937/mt FAS Houston; and injection at \$904/mt FAS Houston, according to Platts data.

China's initial shot at the US petrochemical industry in April targeted only LDPE, which is by far the nation's smallest PE sector, relatively speaking. After a resolution with the US could not be reached and President Trump doubled down with more tariffs, China responded by replacing LDPE with LLDPE and HDPE, both of which are more widely used globally and account for a considerably higher share of total existing and planned US capacity.

The 25% Chinese tariffs on LLDPE and HDPE took effect in late August, but trade flow shifts began in the months that proceeded as US-based traders and buyers in Asia began to grow weary of the potential for additional costs.

US exports of PE to China peaked at 74,295.1 mt for all grades combined in July, but dropped steadily to 22,564.3 mt in October, according to the most recent US International Trade Commission data. The shift came as the US was seeing record PE exports, the result of a surge in production and weak domestic demand.

US exports of all grades of PE totaled 441,232.1 mt in October, up 13.2% month on month and 70.9% year on year as well as being an all-time high, USITC data show. Total US PE capacity, meanwhile, rose 19.7% from the beginning of 2017 through the end of the third quarter of 2018, from around 20.3 million mt/year to around 24.4 million mt/year, according to the most recent American Chemistry Council data.

**US EXPORTS ON A RISING TREND THROUGHOUT 2018**

USITC data for November and December is not expected to be released in the immediate future due to the partial US government shutdown, but the figures available from the ACC paint a bearish picture for US producers.

US inventory for all grades of PE rose by 5.4% between the conclusion of October and end of November, while domestic production fell by 0.8% in the same period. PE sales, meanwhile, fell 5.1% in the domestic market and 6.9% in the export market, ACC data show.

US producers were heard settling domestic US contracts at consecutive 3-cent/lb (\$66/mt) decreases for November and December, the result of soft demand and struggles in the export market, sources said.

Those same producers, however, have started the new year with proposed domestic contract price increases of 5-6 cents/lb (\$110-\$132/mt) on the table, although the overwhelming feedback from the market is no support for a hike.

Instead, buyers entered January with ideas of another multi-cent decrease or at worst a rollover from December.

The US-China trade spat remaining unresolved at a time that even more additional PE capacity is slated to come online is a factor, sources say.

“Unless we get this thing with China sorted out and soon, there will just continue being a race to the bottom of the pricing barrel,” a US-based trader said. “Projects are too far along now to adjust or abandon, and markets like Latin America and Vietnam can only take so much of what China is leaving on the US table.”

To that end, there have been some shifts in global PE trade flows, with China sourcing material from non-US origins that in turn replenish their supplies with imports, sometimes from the US.

These “musical chairs,” as some PE traders have termed it, just lead to more logistics and additional freight costs, further pressuring pricing.

As for how long the US and China keep up their tariff dance while the global PE industry’s game of musical chairs drags on, sentiment is shifting away from expectations of a short-term resolution.

Many market players who initially viewed the tariffs as a negotiating or leverage play are now resigned to a more prolonged struggle, leading to more bearish sentiment and indecision.

— *Phillipe Craig*

**US propylene supply poised to remain healthy into 2019**

The US propylene industry is poised to see continued healthy production rates from domestic propane dehydrogenation production heading into 2019, adding more length to domestic inventories and downward pressure on prices.

The US propylene market was tight for much of 2018, as a combination of production issues and export demand sent spot prices surging during the first half of the year.

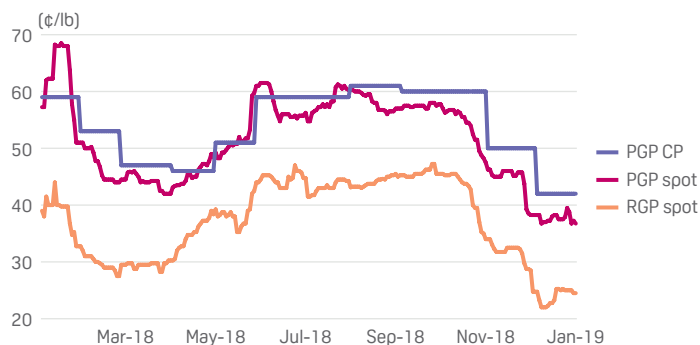
Total US propylene export figures for 2018 were not official, but US International Trade Commission data showed 2018 exports through October totaled 514,395 mt. This was up by 6.5% from 482,798 mt in the same period in 2017. Data for total US propylene exports for 2018 is expected to be completed in the first quarter of 2019.

Heading into 2018, Enterprise Products Partners’ 750,000-mt/year PDH unit in Mont Belvieu, Texas, was expected to start up in January to February. But a delay in the PDH startup pushed propylene spot prices to a yearly high of 68.50 cents/lb (\$1,510/mt) in January. Spot levels briefly came down in the second quarter following the startup of Enterprise’s PDH unit, but operational issues at other PDH units during the summer months took spot levels up to the low 60s cents/gal again.

By the fourth quarter of 2018, however, production issues at all three US PDH units were resolved, which boosted domestic stockpiles of non-fuel use propylene to a 24-month high in the second half of 2018. In December, Energy Information Administration data showed stockpiles of propylene for non-fuel use were at 4.662 million barrels. It was the highest domestic propylene inventory since December 2016.

The increase in supply led both PGP and refinery-grade propylene spot prices to drop to yearly lows. PGP fell to a low of 36.75 cents/lb in December, while RGP fell to a low of 22 cents/lb.

## US PROPYLENE PRICES UNDER PRESSURE IN H2 2018



Source: S&P Global Platts

With the exception of lost production from turnarounds at fluid catalytic crackers during the first half of 2019, some trade participants have said they expect to see a continued build in inventory from healthy PDH production. Despite the healthy output and growing inventory, trade participants said they are still cautious of US PDH production, saying that as soon as one unit has an issue or goes down for an extended period of time, it could quickly reverse the market.

### Could merchant crackers help US propylene production?

No new PDH units are expected to come online until 2020, but the US propylene market could still see some additional capacity in 2019 should producers shift their feed from ethane to propane, according to market participants.

One such example of this is Eastman. The chemical company has said it was making a \$20 million investment to improve cracker flexibility to include RGP in its feedstock slate, enabling it to ramp up PGP production.

Market sources noted that other producers with merchant crackers, such as Flint Hills and Nova, could look into a switch in feed slates as well in 2019. But to date, no other producers have officially announced any plans. Trade participants also said that depending on production economics, a switch in feed slates is something integrated producers would be able to do more easily.

### Weaker propylene could make polypropylene more competitive

Trade participants have said that a continued decline in propylene spot prices heading into 2019 could rejuvenate the US polypropylene market, which had the highest prices globally in 2018. The high US PP price had been attributed mostly to a tight global market and strong feedstock propylene prices in the US, especially in the first half of 2018 when polymer-grade propylene prices peaked. Many PP market participants in the US have stayed away from the export market, instead opting to concentrate on either domestic railcar business or focus on the polyethylene market, which has been more active.

— [Brian Balboa](#)

## US polypropylene to depend on propylene direction

Should the feedstock propylene market continue to come down in early 2019, it may make US polypropylene more competitive with the rest of the world again, according to trade participants.

For most of 2018, US polypropylene prices were the highest globally. With more competitive PP alternatives in other regions such as Europe and Asia, US producers had a difficult time moving PP exports outside of typical regions such as Latin America. The high US PP price had been attributed mostly to a tight global market and strong feedstock propylene prices in the US, especially in the first half of 2018 when polymer-grade propylene prices peaked.

### Propylene expected to come down more in Q1

As US PGP spot prices firmed to a yearly high of 68.50 cents/lb (\$1,510/mt) in January, so too did US PP homopolymer injection export spot levels, moving to a H1 2018 high of \$1,709/mt (77.52 cents/lb) FAS Houston, according to S&P Global Platts data. It was not until early August, that US PP spot prices would peak for 2018 at \$1,720/mt FAS Houston, as PGP spot levels reached the low 60s cents/lb range amid propane dehydrogenation production issues.

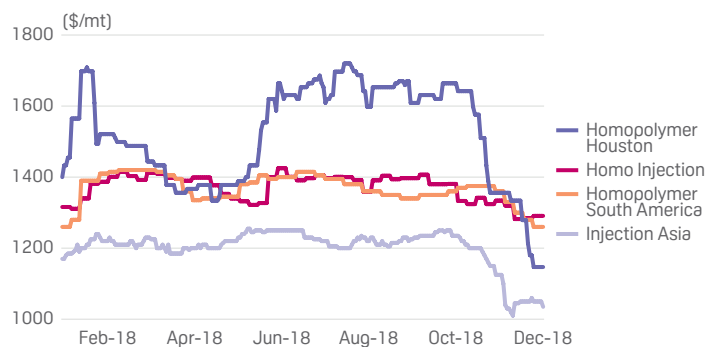
PGP spot and contract prices began to come down in Q4 2018 as PDH units begin operating normally and building domestic inventory levels back up, which in turn led PP pricing down.

Interest for US PP exports did not emerge until December 2018, however, as PGP fell to a yearly low of 36.75 cents/lb. Trade participants said the renewed interest in US PP in December was due to weaker feedstock costs, but also due to some producers looking to sell off material ahead of the US ad valorem tax deadline on December 31. The lower PGP prices led PP market discussions to a yearly low of \$1,147/mt FAS Houston late December.

### US PP prices still highest globally heading into 2019

With no major PDH production issues expected in early 2019, PP market sources have said there is an opportunity for PP prices to come down. US PP spot prices averaged \$1,520/

## US PP MARKET TO STAY ABOVE ASIA IN 2019



Source: S&P Global Platts



mt FAS Houston for 2018, up from \$1,221/mt FAS Houston in 2017. In contrast, PP injection spot prices in Asia averaged \$1,201/mt CFR FE Asia for 2018, while PP homopolymer spot prices in Europe averaged \$1,370/mt FOB NWE.

Meanwhile, domestic PP contracts kept premiums against the PGP contract at an 18-cent premium for homopolymer injection on a delivered railcar basis and at a 20-cent premium for homopolymer fiber grade. Overall, with premiums against PGP contract intact, prices still declined as the PGP contract fell from 61 cents/lb in August to 42 cents/lb the end the year in December.

Regardless of what the propylene market does in early 2019, some US PP market participants have suggested that the market may have bottomed out in December and domestic spot levels may move back up again in January and February.

Despite the decline in PP prices in December, US export spot business was limited. Market participants had said during H2 2018 that US PP exports would likely not emerge again until mid-2019. As a result, activity in the US PP market may be limited to the domestic distribution market for much of H1 2019.

#### High US PP prices may lead to continued imports in 2019

With US PP prices the highest in the world, the discrepancy in global prices also has opened the door to more imports during 2H, which trade participants have said could continue into 2019. Through October 2018, total year-to-date PP imports in the US were at 465,741 mt. This was up 18.9% from the same time frame a year earlier, in line with market expectations from 1H 2018, according to US International Trade Commission data. Much of the imports have come from South Korea, which sent a yearly high of 15,973 mt in October 2018.

The imports came, as domestic production continued to come down through the remainder of 2018. Through November 2018, American Chemistry Council data showed domestic North American production was 2.7% lower than in the same period in 2017. Although production was slightly down, domestic inventory was building back up. ACC data showed domestic stockpiles from June through November 2018 was above levels from the same time frame in 2017. The latest data from the ACC showed November 2018 PP inventory was at 1,634 billion lb, up by 7.1% from 1,526 billion lb in November 2017.

— [Brian Balboa](#)

## LatAm PE markets face record-low prices, uncertainty in 2019

The last two years have each been a tale of the fourth quarter for the Latin American polyethylene market, with the driving factors — beneficial or otherwise — originating

from its North American counterpart and leaving more questions than answers.

After Hurricane Harvey in the summer of 2017 greatly reduced PE trade between the regions and propped up pricing, 2018 began with a muddy outlook for Latin American PE importers waiting on a flood of cheap PE pellets to hit their shores as part of the first wave of North American capacity expansions.

This year, however, has already begun on the opposite end of the spectrum, and it is again because of a Q4 shift in fundamentals. A simmering trade war has seen China take aim at the US plastics industries, and the fallout has shifted PE trade flows and depressed global pricing as the US looks for relief valves for its recent surge in resin production.

As a result, buyers from Mexico to South America spent the final few months of 2018 enjoying record-low PE pricing, and they entered January with ideas of more of the same.

#### Proceeding with caution

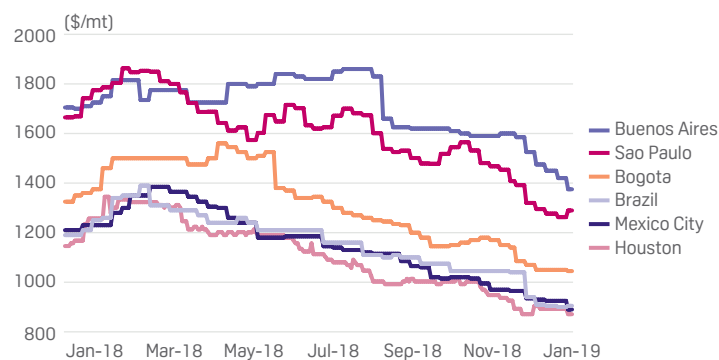
That positive outlook is somewhat balanced by uncertainty tied to new governments in key markets — a dynamic not unique to Latin America but seemingly omnipresent in recent years — leading to what can be best described as cautious optimism.

#### LATIN AMERICAN IMPORT LLDPE PRICING PRESSURED BY FALLING PRICES IN THE US



Source: S&P Global Platts

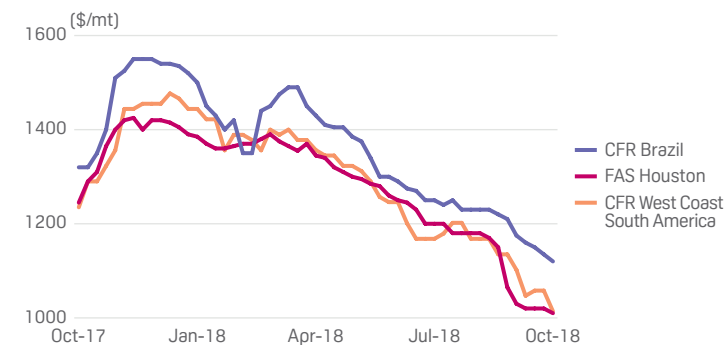
#### LATIN AMERICAN PRODUCERS SEE IMPORT PE PRICES PRESSURE DOMESTIC MARKETS



Source: S&P Global Platts

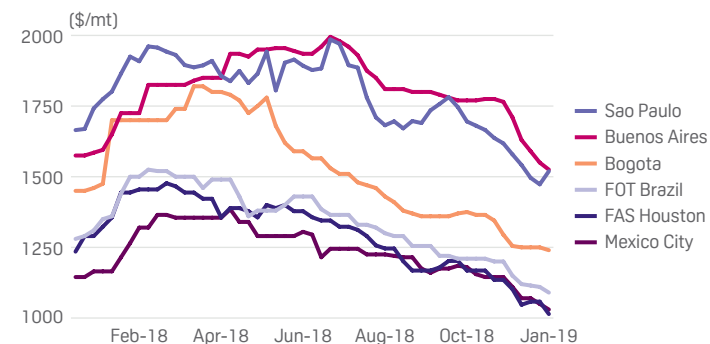


## LATIN AMERICAN HDPE FILM PRICES TRACK US



Source: S&amp;P Global Platts

## DOMESTIC LATIN AMERICAN HDPE FILM PRICES ADJUST LOWER TOO



Source: S&amp;P Global Platts

"The markets feel good for now but they're still nervous, and with good reason," a South American trader said. "They've seen the promises that politicians will revive industries and fix economies, but they've also seen the corruption take hold and leave them worse off than before."

"So, the cheap resins are nice and a positive for the fabricator and the consumer and so on, but it won't matter if the governments don't learn from mistakes. We need investment. We need competitive and reliable feedstocks, and to not be dependent on the government to supply the petrochemical industries."

To that end, both Braskem Idesa in Mexico and Braskem in Brazil are in the exploratory stages of seeking avenues for diversifying their feedstock options, company sources have said, adding that the US' shale revolution has led to a rethinking of investment and feed flexibility going forward. There has even been renewed market talk of similar shale play in Argentina's Vaca Muerta, with optimism that any petrochemical expansions that result would lead to a greater sense of self sufficiency for the region, sources have said.

For the time being, the overwhelming sentiment from Latin America is one of no resolution in sight for the US-China trade war, with decision-makers starting to plan for the long haul. Regional producers such as Braskem in Brazil and Pemex in Mexico have had to fall in line with the falling PE import prices tied to US-origin resins, which are subject to a 25% tariff in China — the intended export target for the recent first wave of US capacity expansions.

## US-China resolution could be disruption

Buyers in these same key Latin American markets have become well aware of the current situation and are keen on waiting out a price floor, taking a hand-to-mouth approach to inventories in the interim. That has applied yet another pressure point to PE prices in the region, with the resulting weak demand from converters leading to elevated stocks for producers and distributors alike, in turn hurting import demand further.

That cycle, it seems, can only be broken with a return to normal global tradeflows, sources have said.

"The key is China," a US-based trader said. "If they open back up to the US today, we could see global PE pricing spike by up to 5 cents/lb (\$100/mt) by tomorrow or within just a few days."

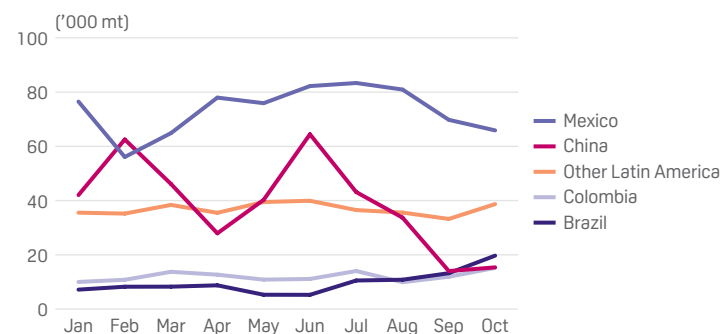
Latin American PE producers have also begun wondering "what if" regarding trade involving the US, although most readily admit any trade tensions between the regions would ultimately hurt the US more. A reworked trade agreement between the US and Mexico went a long way toward at least temporarily assuaging those fears for at least one regional producer.

"We are happy for the free trade agreement between Mexico and the US," a Mexican PE producer source said. "Trade wars are not good for anyone, country or consumers. We think its a bad move for US and China."

"If tariffs between Mexico and US were imposed on PE, our view is that the US producers are the ones most negatively affected, and the consumers as well. For us, it could be neutral or even positive, considering that Mexico imports large volumes of PE from US. The two Mexican producers could benefit from that, although we are a supporter of the current NAFTA free trade agreement and we think that no tariffs should be imposed, an outlook shared by our chemical and plastics associations."

— *Phillipe Craig*

## US HDPE AND LLDPE EXPORTS TO LATIN AMERICA REMAIN STEADY WHILE EXPORTS TO CHINA DROP



Source: US International Trade Commission

## US PVC chain faces economic uncertainties

Polyvinyl chloride, a resin heavily used in construction, has so far escaped direct impact from simmering trade tensions between the US and China, but PVC demand and pricing could see headwinds in the first half of 2019 if the tariff war siphons strength from the world's two largest economies.

"Global demand will still be iffy, very much depending on the outcome of this trade war," a market source said of PVC, which is used to make vinyl siding, flooring, window frames and pipes.

PVC is not among the US products facing \$110 billion in tariffs from China in response to the US imposing \$250 billion in tariffs on Chinese goods in 2018. China is the second-largest export market for US PVC, and while China levies anti-dumping duties on US material, products made with it are re-exported, canceling out those extra costs.

The latest trade data from the US International Trade Commission showed the US exported 283,139 mt of PVC to China from January through October in 2018, up 9% compared with the same span in 2017.

However, PVC demand is more heavily tied to economic health than more consumer-oriented resins like polyethylene. PVC is also cyclical, with stronger demand during warmer months given its heavy use in construction. Global demand for PVC has been soft, with the US FAS price having twice rolled over at October levels in a range of \$755-\$765/mt FAS Houston, its lowest level since November 29, 2017, according to S&P Global Platts data. US dollar strength also has made US material more costly than that from other regions.

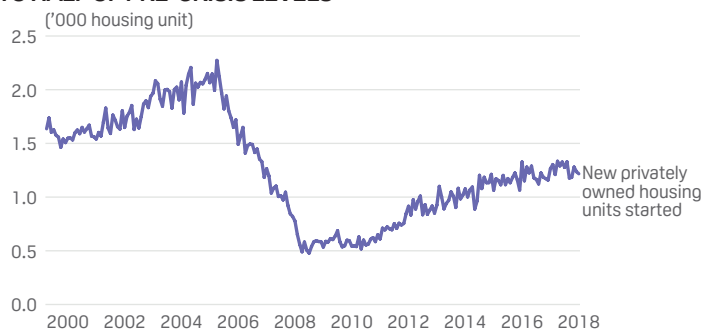
In addition, the US last summer largely lost access to Turkey, the fifth-largest export market for US-origin PVC. In response to US tariffs on steel imports, Turkey imposed anti-dumping duties on US PVC and disallowed re-exports of products made with it. Turkey later allowed re-exports, but required buyers to post more than half of a cargo's value in cash. As a result, US PVC exports to Turkey fell 59% through October 2018 compared with the first 10 months of 2017, USITC data showed.

### Still recovering

Albert Chao, CEO of Westlake Chemical, a major US PVC producer, said in November that in 2006 and 2007, the US was building 2.3 million units of residential homes per year. That was 53% above the 50-year average for US residential construction of 1.5 million units per year, and reflected the housing boom in the 2000s fueled by subprime loans.

When the global financial crisis hit in 2008, new housing demand plunged 82% to 400,000 units,

## US HOUSING MARKET HAS RECOVERED TO HALF OF PRE-CRISIS LEVELS



Source: U.S. Bureau of the Census, U.S. Department of Housing and Urban Development

Chao noted. US PVC exports grew from 10% of total production to 40% from 2008 to 2013, then retreated to the current level of 30%.

In 2018, the US expects 1.2 million to 1.3 million new housing units, Chao said, illustrating a gradual rebound a decade after the crash, with global PVC demand expected to grow by more than 3% annually through 2023. At the same time, US PVC producers are planning no major capacity additions beyond debottlenecking projects at Westlake's Geismar, Louisiana, operations in 2019, Formosa Plastics' Baton Rouge complex in 2020 and Shintech's additional 1 million mt/year at its Louisiana operations by 2021. Market sources say those projects will not keep up with demand unless the trade war leads to a recession.

"Demand, we think, will go up, and with lack of additional capacity, the margin should improve over the next several years unless there's a global recession which, hopefully, we'll not see in the next few years," Chao said.

### Caustic headwinds

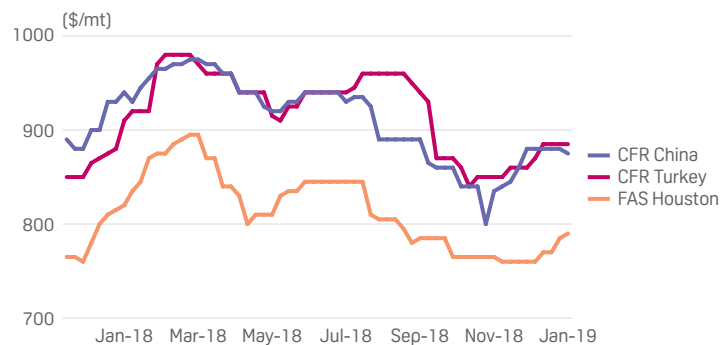
Another piece of the PVC chain facing uncertainty is caustic soda, a by-product of chlorine production and a key feedstock for the alumina and pulp and paper industries.

Norsk Hydro's Alunorte alumina refinery in Brazil, the world's largest such facility, has been operating at 50% capacity since March after heavy February rain raised concerns about contaminated bauxite residue leaks. Brazilian regulators and courts ordered the rate cut, which reduced the plant's monthly demand for US caustic by half to 25,000 mt/month.

As a result, US export caustic prices fell to 27-month lows in a range of \$335-\$345/mt FOB USG from October 30 to December 11, according to Platts data, which market sources attributed to the lighter demand pull from Alunorte. Prices have since risen \$40/mt to a range of

\$375-\$385/mt FOB, but could hover at or near that level until stocks are reduced or Norsk Hydro receives approval to ramp the Alunorte plant back up.

## GLOBAL PVC PRICES REBOUND AT THE END OF 2018



Source: U.S. Bureau of the Census, U.S. Department of Housing and Urban Development

“It’s really all about Alunorte,” a market source said of US caustic price weakness.

Brazil’s environmental office in the state of Para in mid-January lifted its production embargo, but another one imposed by a federal court remained in place with no timeline of when it may be lifted.

Norsk Hydro CEO Svein Richard Brandtzaeg said in November that the plant would have 350% more water reservoir capacity by the end of 2018 — ahead of the rainy season in January and February — and 50% more wastewater treatment capacity by mid-2019.

“Alunorte is much more robust today,” he said. “I am convinced that we will be back in full production at some day, but I cannot give you an exact date yet.”

— [Kristen Hays](#)

## AROMATICS

### US benzene to continue to be driven by styrene, imports

The US benzene market faced a number of obstacles in 2018 with weaker energy and soft demand from the derivative styrene market among the most prevalent.

Pricing has been subdued for most of the year with pricing through the first 11 months averaging near 286 cents/gal on a DDP USG basis. Perhaps the biggest impediment to stronger pricing has been the implementation of anti-dumping duties on styrene monomer by the Chinese government and the associated reduction in demand.

China had initially announced anti-dumping duties against US styrene producers early in 2018 and finalized the duties higher mid-year, hitting the four largest US styrene producers with duties of between 13.7%-13.9%. In addition to altering

traditional styrene trade flows, these actions had a negative impact on US benzene prices, driven by a decline in demand for benzene.

Prices saw further pressure from declines in the energy complex, particularly lower crude values seen in Q4. During the fourth quarter, WTI futures fell near 40% while Brent values fell near 38.50%. Benzene prices were also impacted by market length with strong import levels seen at near 95,000 mt/month and higher since April amid healthy refinery run rates domestically and strong toluene conversion run rates in the majority of Q4. So given the fundamentals seen in 2018, what can we expect to see in the US benzene market in 2019?

There are several variables expected to impact the US benzene market during the first half of 2019; however, one of the most notable being derivative demand from the styrene segment. Styrene maintenance throughout the first quarter, not only in the US but across the globe, is expected to suppress demand for benzene and accordingly pressure benzene prices lower.

In the US, sources have said that both LyondellBasell and Americas Styrenics were expected to undergo maintenance during the first quarter. Assuming a 30-day maintenance on both lines at the production facilities, which hold respective capacities of near 1.27 million and 952,000 mt, benzene demand could be reduced by well over 100,000 mt. In Asia, styrene producers TSMC and Lotte Chemical are expected to undergo maintenance from February to March while Idemitsu is poised to undergo maintenance at its styrene facility at Chiba in April and May. Combined, the three companies hold a cumulative styrene production capacity of 970,000 mt, according to S&P Global Platts estimates. In Europe, Trinseo recently underwent an unplanned outage and sources said that there were a number of planned turnarounds in Q1.

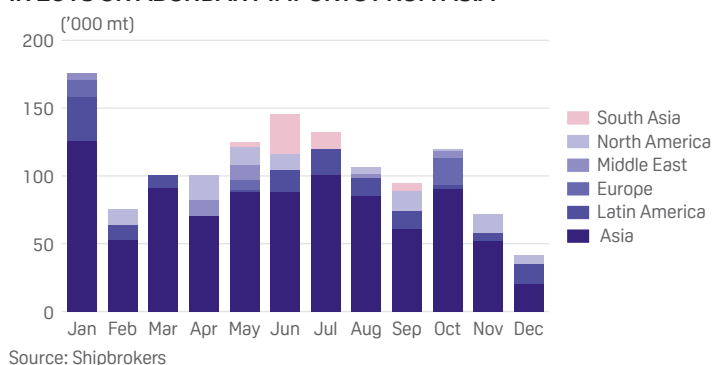
Imports were also expected to impact benzene pricing. The US benzene market entered 2019 plagued by market length as stronger refinery run rates at both the reformer and toluene conversion units was further bolstered by a string of six consecutive months of stronger import volumes, ranging between just under 95,000 mt to as high as just over 145,000

### US SPOT BENZENE PRICES SINK TO RECORD LOWS



Source: S&P Global Platts

## US BENZENE MARKET LENGTHENED IN 2018 ON ABUNDANT IMPORTS FROM ASIA



mt. December imports into the US however were lower with near 42,000 mt landing on US shores, according to shipbroker estimates. This trend was likely to continue as volumes from Korea, the largest supplier of US benzene, show export levels of near 20,000 mt loading in November and just over 42,000 mt loading in December.

China remains the key variable as benzene capacities are poised to increase by near 2 million mt in 2018-2019. This is evidenced by term contract negotiations, which are expected to be lower in 2019. Sources have said that if China sources less Korean benzene, then Korean producers will look to move the material to North America. Further pressure will come amid recent and expected benzene capacity additions in the Middle East where Petro Rabigh and Saudi Aramco are poised to bring more than 500,000 mt of capacity online.

Perhaps one of the more important factors to watch out for would be PET demand in Asia. PTA serves as the feedstock for PET with paraxylene serving as the feedstock for PTA. Asian paraxylene capacities are poised to grow by over 6 million mt between 2018 and 2019 and if PET demand is strong, it stands to reason that PTA and paraxylene run rates would be higher, translating to increased benzene output.

Crude pricing also remains a key variable in the benzene equation as stronger crude values historically tend to bolster benzene prices. While crude values were lower in Q4 amid stronger run rates, production is expected to be curtailed during the first half of 2019 following an OPEC agreement to slash output by 800,000 b/d. Additionally Russia was expected to cut back production by 400,000 b/d. The rate cuts were expected to lend support to crude pricing, a move that would impact downstream naphtha values and subsequently benzene, sources said. Benzene has been undervalued in relation to crude with the Q4 benzene-crude ratio averaging near 1.61. To put this into perspective, since late 2014 the average benzene-crude ratio has been closer to 2.0.

In sum, there are many factors which are expected to impact benzene and space constraints prohibit extensive elaboration on each however styrene is expected to have the greatest impact on benzene pricing in the first part of 2019. Planned and unplanned maintenance, coupled with capacity additions

in Asia and the Middle East, are expected to keep benzene pricing depressed in the first quarter of 2019 and likely well into the second as well.

— [Kevin Allen](#)

## New supply, changing trade flows to shape global methanol markets

- Additional supplies expected from Iran, Americas
- Methanol surplus tipped for China
- Global prices to remain volatile

The global methanol market begins 2019 amid general bearishness on the back of high inventory levels in Europe and Asia and in anticipation of more material hitting international markets as new capacities in Iran come online and the recently started ones in the Americas ramp up production. Net demand growth in Asia does not seem to be sufficient to absorb all the new production, despite two new methanol-to-olefins units in China starting up and biodiesel production increasing in Malaysia and Indonesia.

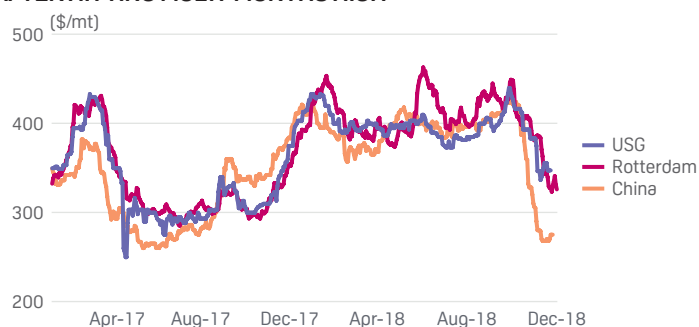
It is likely that the trade patterns will continue shifting this year, as US sanctions on Iran will push Iranian product to China and India and, especially, if the US and China continue to escalate trade tensions and choose to hike duties on each other's products.

Climate change and the resulting abnormal weather will probably continue throwing a spanner in the works, and persisting logistical issues on the Rhine is only one example of how it could manifest itself.

### Sanctions to channel Iranian molecules to China, India

Iran is expected to launch this year two new methanol plants, Bushehr Petrochemical Plant and Kaveh Methanol Complex, which together will add just under 4 million mt/year of new capacity. There could also be more material coming from the Marjan plant which started in September and has the capacity to produce 1.65 million mt/year of methanol. So far operating at 70%, Marjan has been producing around 90,000 mt/month.

## GLOBAL SPOT PRICES DECLINE IN Q4 AFTER HITTING MULTI-MONTHS HIGH





Despite the expected increase in production, there is no forecast of major growth in downstream markets within the country, where most downstream demand is generated by the formaldehyde market.

Instead, exports are expected to remain the key focus for Iranian producers.

Southeast Asia, South Korea, Taiwan, as well as European countries have strong geopolitical ties with the US and the reimposition of US sanctions on Iran on November 4 makes it more likely that Iran will continue targeting China and India as key outlets.

Iran already accounts for about 30% of total methanol imports into China and it is poised to increase its market share this year.

#### Asian demand growth unlikely to offset new supplies

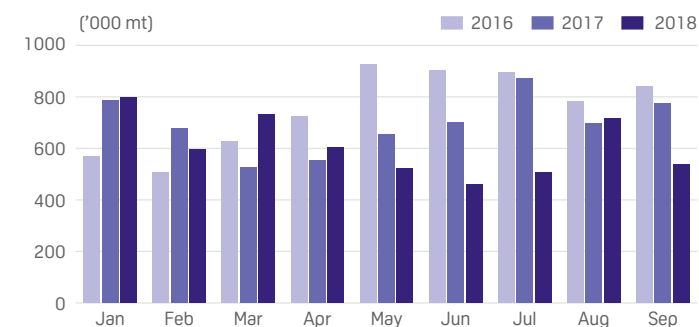
China's demand however is unlikely to rise drastically this year, as only two new MTOs, Connell Chemical's 300,000 mt/year plant in Jilin and 600,000 mt/year Nanjing Chengzhi Yongqing Energy Technology's plant, are slated for a start-up in 2019, adding around 2.7 million mt/year of methanol demand if they operate at full capacity.

It was previously estimated that two more MTO plants might come onstream this year, with a total demand of around 2.4 million mt of methanol, however there has been no confirmation whether these projects are still on track.

Separately, Jiutai Energy's 600,000 mt/year olefins plant is also earmarked for launch this year, however its start-up will not change the methanol balance as it is self-sufficient and uses coal as a feedstock.

China has become less dependent on imported methanol after building up domestic production capacity, a trend which is expected to continue into 2019. Hengli Petrochemical is starting up its 20 million mt/year greenfield refinery in Dalian, China, and the plant has the capacity to produce 500,000 mt/year of methanol from January.

#### YEAR-TO-DATE METHANOL IMPORTS TO CHINA AT THEIR LOWEST IN 3 YEARS



Source: Chinese Customs

China's methanol imports have been shrinking steadily over the past three years, and January–September 2018 imports were down 12.4% year on year to 5.47 million mt, latest China Customs data showed.

Some demand growth is projected in the Southeast Asia where Indonesia has increased its mandates for blending biodiesel to 20% and Malaysia is set to phase in a 10% biodiesel target (B10) replacing the current B7 mandate in February. Cumulatively these two measures should ramp up consumption of methanol by around 300,000 mt/year.

As a result, the net growth in Asian demand will likely be insufficient to absorb additional Iranian production should both methanol and downstream plants run at full rates.

#### More production in western hemisphere

Some additional supplies will be coming out of Americas too this year as Natgasoline and Methanex ramp up production at their sites in Texas and Chile. The 1.75 million mt/year Natgasoline plant in Beaumont, Texas, is now producing at full rates after a commercial start-up in June last year.

Methanex restarted its previously idled 800,000 mt/year Chile IV methanol plant in Cabo Negro in October. The plant had been idle since 2007 following difficulties securing natural gas supplies, but the company has now managed to secure supplies from Argentina following a move by the government in which permits were granted for the export of gas.

The fresh supply is expected to support a two-plant operation during the southern hemisphere's summer months, with the Chile I plant due to undergo refurbishment. Chile I currently has a capacity of 900,000 mt/year, but Methanex plans to spend \$50 million on revamping the plant and adding 800,000 mt to its current capacity.

It was previously expected that Yuhuang Chemical's plant 1.7 million mt plant in St. James and Big Lake Fuels' 1.4 million mt plant in Lake Charles, both in Louisiana, would be completed this year, adding further length. While there is no update on the latter plant, the former said that St. James's plant completion will be pushed back to mid-2020.

Despite the question marks over further drivers for global demand growth, American companies appear to be pushing ahead with their projects and are announcing new ones, probably banking on new applications, such as the use of methanol in industrial boilers.

Nauticol Energy proposed in October to build a 3 million mt/year methanol plant in Grand Prairie, Alberta, Canada capitalizing on the region's abundant natural gas resources and eyeing Asia as the main outlet.

Also in October, Methanex said it was carrying out front-end engineering and design work on its potential Geismar 3 production facility in Geismar, Louisiana, with the final

investment decision expected in the middle of 2019. The plant would be adjacent to the existing Geismar 1 and Geismar 2 facilities, which each have capacities of 1 million mt/year. Methanex did not disclose the planned capacity of Geismar 3, but said that the combined site would be capable of producing about 3.8 million mt/year, part of it coming from the currently undertaken debottlenecking at the existing lines.

### Trade restrictions, new capacities to crystallize trade flows

As a result of the growing production in the US, more product is expected to flow out of the US, into Japan, South Korea and Europe, as trade tensions between the US and China and concern over a potential hike in duties will deter the flow into China.

Methanol demand in Japan will be stable at about 1.7 million mt/year, but Japanese trade sources see an additional 40,000-50,000 mt/month of US methanol cargoes heading to Chiba and Hirohata.

South Korean demand, estimated at 1.8 million mt last year, is forecast to increase this year on the back of healthy MTBE production, Korean sources said. Some 40% of South Korea's imported volume comes from the US at the moment. This proportion is expected to increase to 60-70% next year, partly as a consequence of the US-China trade war. South Korea sources said that the country will also buy more methanol from Trinidad & Tobago as well as Venezuela and less from the Middle East.

"Middle East producers charge Korean buyers \$15-20/mt in deviation costs from China to South Korea, when it should be just \$5-10/mt," a South Korean trader said.

EU imports from the US grew from less than 1,000 mt at the beginning of last year to around 35,532 mt in October, according to the Eurostat data, and the trend is likely to continue. Total EU methanol imports over January to October last year have averaged at around 591,000 mt/month, up 8.4% year on year.

Additionally more supply will be coming to Europe from Trinidad & Tobago, which already accounts for just under a quarter of the EU's methanol imports. This year Proman, one of the world's largest methanol producers, expects better methanol production rates at its Trinidad & Tobago site following its investments in securing gas supplies.

### Logistics can continue fragmenting Europe

With this year's demand growth in Europe projected in line with GDP and with only one new capacity expansion earmarked for the region — BioMCN's doubling of its capacity in Delfzijl in the Netherlands to 438,000 mt/year — Europe will likely continue tracking global markets.

However within the region itself there is a risk of recurring fragmentation, as logistical issues will continue creating intra-regional imbalances. During the fourth quarter critically low water levels on the River Rhine prevented shipments of full loads on barges, which slowed down the outflow of methanol from storage in Rotterdam, creating shortages inland and overhang in the coastal locations.

With heavy and lower-than-usual precipitation alike detrimental to the shipments along the Rhine, logistical challenges are expected to persist at least until spring, sources said.

"Inventory levels in Rotterdam are increasing, forcing market players to get rid of volumes, which combined with the usual end of the year destocking, will add further pressure on prices," one source said in December.

Furthermore availability of truck shipments is also coming into question, with many anticipating an increase in inland freight costs on the back of driver shortage in Germany.

### Price volatility

While global fundamentals seem to paint a generally bearish picture, they are not necessarily going to manifest themselves in lower prices as capacity expansions do not automatically lead to higher production. What remains a constant from the past few years is that global markets will likely remain volatile.

During the second half of 2018, the European methanol spot price dipped from around Eur380-390/mt FOB Rotterdam in June, before declining to low-Eur280s/mt at the start of December, Platts data showed. Meanwhile, the European contract price had been on a continuous rise for the past year, settling at Eur428/mt for Q4, the highest level since 2014, but settling at a first decrease in over a year for the first quarter of 2019. The Q1 contract price has been agreed at Eur350/mt, down Eur78/mt.

"Oil price volatility put a dampener on expectations moving into Q1. Probably we will see a softening of prices," one market participant said in early December, before Equinor's 900,000 mt/year methanol unit in Tjeldbergodden, Norway, shut down after a fire. It remains unclear how long the plant would be out of operation, but according to Equinor's statement on December 20, the company was not going to be able to meet its planned deliveries.

In Asia, spot CFR was also on a rising trend through most of the second half of last year before a sharp slide throughout the tail end, with prices dropping from \$420s/mt at the end of October to around \$270/mt in December.

In the US, the volatility in the spot market was stark in Q4 too, with front-month values reaching both the highest level in more than four years and the lowest level of the year within a six-week span. A run-up in prices culminated on October 16, when front-month pricing reached 132 cents/gal (\$439.56/mt) FOB USG, on an unconfirmed production outage in Trinidad & Tobago, unconfirmed production cutbacks in New Zealand and a delayed cargo destined for Europe.

Less than two months later, front-month prices had dropped to the lowest level of the year, falling to 104 cents/gal FOB USG on November 27. Prices had been on a downward slide for nearly six weeks, with the downtick in values attributed to ripples from sustained weakness in global, particularly Asian, spot markets.

— [\*Esther Ng, Lara Berton, Ellie Valencia and Maria Tsay\*](#)

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