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Argus *Global Polypropylene*

Polypropylene prices and global coverage

Issue 21-37 | Friday 17 September 2021

HIGHLIGHTS

US
PP prices expected to fall on PGP

South America
Import prices rising on higher freight

Europe
Fundamentals stable, supplies vary between grades

Russia and CIS
Raffia prices decrease as a plant completes maintenance

Turkey
Demand eases as prices continue to rise

Middle East
Stable markets after deals conclude

China
Uptrend continues on prospects of further supply cuts

Southeast Asia and Vietnam
Regional producers kept offers stable

India
Prices stable on limited spot availability

Pakistan
Prices rise on higher buying and selling ideas

Dalian futures market
PP futures rallied on concerns of supply cuts

Fundamentals to watch
China applies to join Pacific Rim trade pact
China's DCE LPG futures hit new high ahead of winter
China's PE, PP futures rise on coal, oil gains
Ford to boost electric truck production
GM cuts more NorthAm auto production
Ferrero Rocher transitions to eco-friendly PP boxes

Global polymer freight rates

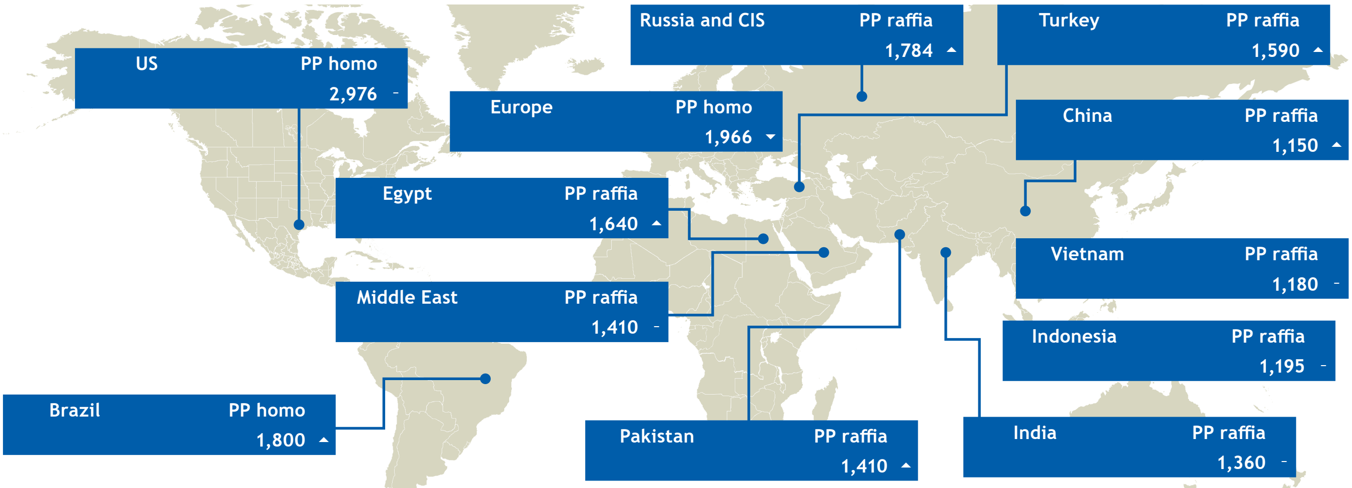
Contract prices $/t

	Timing	Contract marker	±
US			
Copolymer	Sep	3,020	0.00
Homopolymer	Sep	2,976	0.00
Western Europe			
Copolymer	Sep	2,465	-19.0
Homopolymer	Sep	2,365	-18.0

Spot prices $/t

	Basis	Price	±
Brazil			
Homopolymer	cfr	1,780-1,820	+35
Copolymer	cfr	1,830-1,850	+28
West Coast South America			
Homopolymer	cfr	1,780-1,840	+35
Copolymer	cfr	1,880-1,900	+55
Northwest Europe			
Homopolymer	del	1,878-2,054	-116
Raffia	del	1,872-2,048	-116
Russia and CIS			
Raffia	cpt	1,726-1,841	+1.0
Block copolymer	cpt	2,036-2,128	+31.0
Turkey			
Raffia Mideast Gulf origin	cfr	1,580-1,600	+30
Non-woven fibre Mideast Gulf origin	cfr	1,620-1,680	+15
Fibre Mideast Gulf origin	cfr	1,650-1,700	+15
Block copolymer Mideast Gulf origin	cfr	1,730-1,760	-35
Block copolymer South Korea origin	cfr	1,760-1,820	-15
Egypt			
Raffia Mideast Gulf origin	cif	1,610-1,670	+40
Fibre Mideast Gulf origin	cif	1,520-1,670	0
Middle East			
Raffia	del	1,400-1,420	0
BOPP film	del	1,430-1,450	0
Saudi Arabia (CMP)			
Copolymer	fob	1,074-1,094	-21
Raffia	fob	1,054-1,094	-21
China			
Copolymer	cfr	1,150-1,170	+25
Copolymer domestic	import parity	1,096-1,180	+48
Raffia	cfr	1,130-1,170	+25
Raffia domestic	import parity	1,089-1,173	+50
Raffia	fob	1,210-1,220	+40
Southeast Asia dutiable			
Copolymer	cfr	1,210-1,230	0
Raffia	cfr	1,180-1,200	0
Southeast Asia duty free			
Copolymer	cfr	1,260-1,280	0
Raffia	cfr	1,230-1,270	0

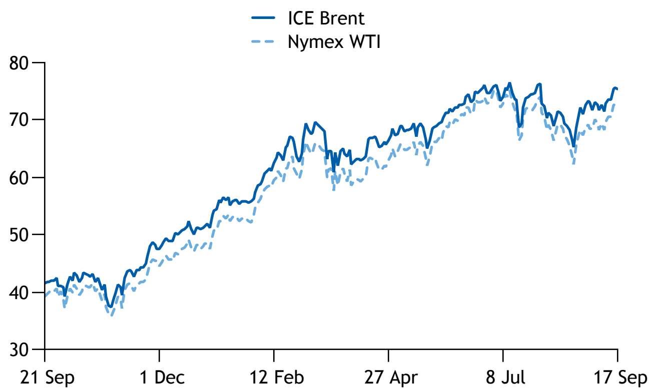
GLOBAL SNAPSHOT



Key prices								$/t
	Timing	US contract marker	Western Europe spot ddp	Russia and CIS spot cpt	Turkey spot cfr (Mideast origin)	China spot cfr	Southeast Asia dutiable spot cfr	India spot cfr
PP copolymer	Sep	3,020		2,036-2,128	1,730-1,760	1,150-1,170	1,210-1,230	
PP homopolymer	Sep	2,976	1,878-2,054					
PP raffia			1,872-2,048	1,726-1,841	1,580-1,600	1,130-1,170	1,180-1,200	1,350-1,370

FEEDSTOCKS

Crude futures $/t



Spot prices				$/t
	Basis	Price		±
Vietnam				
Raffia	cfr	1,170-1,190	-	0
Indonesia				
Copolymer Mid-east Gulf origin	cfr	1,210-1,230	-	0
Raffia Mideast Gulf origin	cfr	1,190-1,200	-	0
India				
Raffia	cfr	1,350-1,370	-	0
Pakistan				
Raffia	cfr	1,390-1,430	▲	+10
Bangladesh				
Raffia	cfr	1,350-1,390	-	0
Sri Lanka				
Raffia	cfr	1,350-1,380	-	0

Crude				$/bl
	Effective date	Price		±
Ice Brent	17 Sep	75.34	▲	+2.42
Nymex WTI	17 Sep	71.97	▲	+2.25

Crude oil

The Ice Brent front-month contract rose during most trading sessions this week as Hurricane Nicholas made landfall along the Texas coast, which briefly impacted crude production in Texas and shut ports in the Houston area. Crude loadings also briefly stopped at Libya's Es Sider and Marsa el-Hariga because of protests at the terminals. After climbing to above $75/bl prices retreated slightly, as crude production and exports in the US Gulf and Mediterranean looked set to resume. The contract closed at $74.87/bl on 16 September, up from $72.70/bl a week earlier.

The Nymex WTI front-month contract also took direction from similar factors and rose to above $72/bl, holding on to the gains as the market focused on declines in US crude and products inventories. The contract closed at $72.61/bl on 16 September, down from $68.14/bl on 9 September.

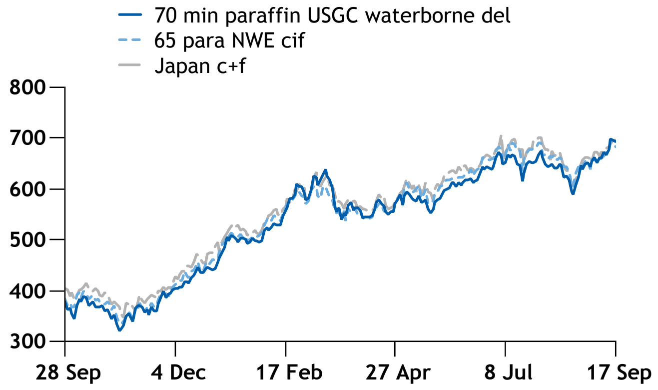
Naphtha

On the US Gulf coast, diminished domestic demand due to refinery interruptions closed export arbitrages, while volatile pricing for all naphtha grades set the stage for consecutive illiquid trading sessions this week. Refinery operations

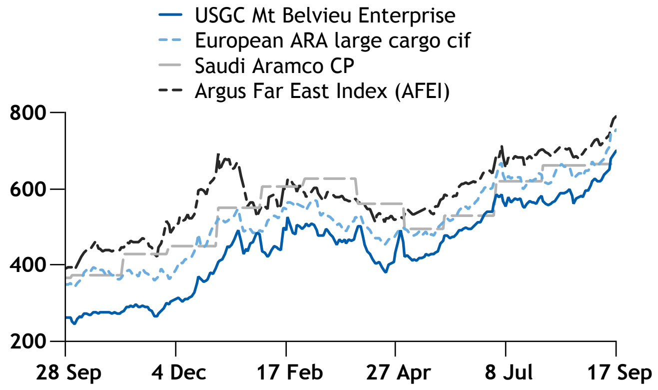
Naphtha				$/t
	Effective date	Price		±
70 min paraffin USGC waterborne del	17 Sep	692.77	▲	+21.64
65 para NWE cif	17 Sep	682.00	▲	+16.25
Japan c+f	17 Sep	696.38	▲	+22.88

Propane				$/t
	Effective date	Price		±
Mt Belvieu Enterprise	17 Sep	700.75	▲	+63.83
ARA large cargo	17 Sep	756.50	▲	+76.50
Saudi Aramco CP	17 Sep	665.00	-	0.00
Argus Far East Index (AFEI)	17 Sep	791.00	▲	+67.00

Naphtha spot prices $/t



Propane key prices $/t



gradually normalised across the Texas coast after Hurricane Nicholas made landfall early on Tuesday. But there were still a couple of lingering outages – in the aftermath of Hurricane Ida – on the Mississippi river.

Northwest European naphtha refining margins reached four-week highs on Thursday, supported by a firm demand outlook. Refining margins rose in response to continued firm demand from the petrochemical sector and a downturn in flows to northwest Europe from the US Gulf coast. At the same time, naphtha is trading at steep discounts to rival petrochemical feedstocks. The September propane/naphtha spread swap reached $55/t on Thursday. Naphtha intakes typically increase when naphtha is trading at a premium to propane of less than $50/t. A discount of more than $50/t has drawn more naphtha out of independent storage tanks in the Amsterdam-Rotterdam-Antwerp area and into petrochemical facilities during the week to 15 September. Naphtha so far has averaged €556/t in September, higher than the July average of €551/t. Its price stood at €587/t on 16 September, sharply up from end-August price of €555/t.

Asian naphtha margins seesawed this week, with demand remaining front active as petrochemical buyers sought cargoes for delivery in the second half of October and the first half of November. Indonesia's state-owned refiner Pertamina also reissued its previous tender to buy naphtha for November delivery. Selling interest was seen out of India and Thailand for end-September and October-loading cargoes, respectively.

Propane

US Gulf coast propane prices rallied this week to a seven-year high, buoyed by ongoing supply concerns and crude gains. Mont Belvieu, Texas, LST propane was valued at 76.35pc of Nymex WTI on 16 September. Propane inventories on the US Gulf coast saw a third consecutive weekly draw, falling by 313,000 bl to 33.1mn bl as the Gulf coast continued to see a smaller influx of barrels from the US midcontinent amid a closed arbitrage versus Conway, Kansas. The October LST/FEI arbitrage also narrowed to $107/t, with discussions for October-loading spot fob cargoes remaining thin as buying and selling ideas appeared wide this week.

In northwest Europe, propane spot prices rose sharply and hit a seven-year high, driven by gains across the energy complex, particularly for natural gas. Tightening refinery propane supply, as propane is substituted for more expensive natural gas in some refinery processes, has left little available to the spot market. Bids were seen in the large cargo market for early-October delivery, but no seller appeared. The current price level was deemed insufficient to attract any US product towards northwest Europe and the arbitrage from the US remains shut.

Propane spot prices in Asia had a bullish ride this week, with prices consecutively rising on every trading session to their highest levels since October 2014. Firmer demand was demonstrated on the open window for cargoes arriving in the second half of October, with some buyers snapping up any cargoes offered for those delivery dates. But selling

New PDH start-ups							
Status	Plant	Location	Grade	Capacity '000t/yr	Start-up	Remarks	Source
	Fujian Meide Petrochemical	China	Propylene	660	Jan	Plant operating at full capacity	Industry
	Ningbo Fuji (Oriental Energy)	China	Propylene	660	End Feb		Industry
	Anqing Taiheng	China	Propylene	300	Aug	Plant expected to achieve on-specification production by this week	Industry
	Ningxia Runfeng	China	Propylene	300	End Aug	Plant achieved on-specification propylene on 27 August	Industry
	Jinneng Technology	China	Propylene	900	Sep		Industry

interest was mostly seen for October-delivery cargoes in the first half of the month. The AFEI propane value stood at $791/t on 17 September, sharply up from $724/t on 10 September. The outlook has also firmed for propane's October contract price, with spot prices in the Middle East hovering in the mid-high $700s/t. In the previous week, the September contract price was set at $665/t by state-controlled Saudi Aramco.

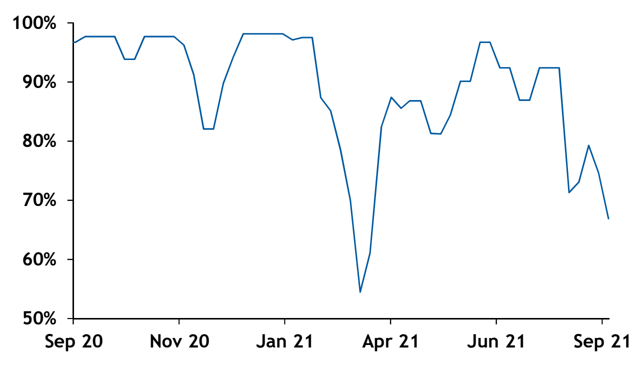
PDH margins

China PDH margins fell largely to negative $28/t, down by $43/t against last week because of higher feedstock prices. Propane prices rose by a substantial amount to a weekly average of $756/t in northeast Asia, up by $34/t against last week. AFEI propane prices rose to a seven-year high of $763.25/t on 15 September on the back of expectations of inadequate supplies from US export hubs to meet Asian demand. Propylene prices were stable at $1,005/t cfr northeast Asia. Discussions were limited following logistical problems caused by Typhoon Chanthu and as vessel availability tightens in China and south Korea.

China PDHs

Average operating rates for Chinese PDH producers were lower at 67pc, down by 8pc compared with last week. Wanhua started a scheduled 40-day turnaround at its 750,000 t/yr PDH unit on 10 September. Zhejiang Satellite's 450,000 t/yr PDH unit is expected to restart around mid-September, while another two Ningbo-based PDH units with a combined 1.32mn t/yr of propylene output will come on line again during the same period. Zhejiang Huahong's 450,000 t/yr PDH plant was shut on 2 September for planned maintenance and will restart by the end of September.

China PDH operating rates %

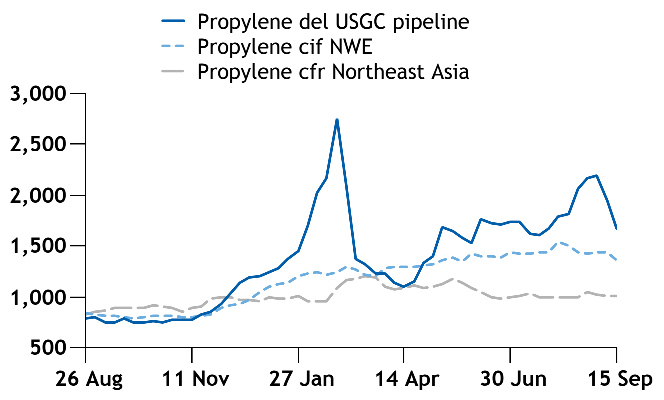


Propylene

Demand from propylene derivative manufacturers remains strong while polymer-grade propylene (PGP) prices dipped into the 73-79¢/lb range from highs that peaked at 100¢/lb on 19 August. Traders indicate supply and demand remain in

Propylene					
	Basis	Effective date	Price		±
PGP USGC contract ¢/lb	Aug	25 Aug	87.00	▲	+11.00
PGP USGC contract $/t	Aug	25 Aug	1,918.02	▲	+242.5
PGP NWE contract €/t	Sep	31 Aug	1,168.00	▼	-5.00
PGP NWE contract $/t	Sep	31 Aug	1,379.15	▼	-5.90
cfr NE Asia $/t	spot	15 Sep	1,005.00	-	0.00

Propylene spot prices $/t



Market highlight

- European propylene demand has been well covered by supply and recent derivatives issues are leading to a build-up of length.

relative balance. A Houston propane dehydrogenation (PDH) unit outage reported last week has traders' attention. The outage may have slowed the decline in PGP spot prices that buyers anticipated two weeks ago when all US PDH units were on line for the first time since April. In the wake of Hurricane Ida, producers and consumers of propylene went off line together in the lower Mississippi river (LMR) region, so the hurricane's influence on propylene pricing has been muted.

The European propylene market is delicately balanced, but unusually for this year it is on the cusp of being uncomfortably long. Estimated deep-sea imports of 73,000t were identified as arriving over July and August and, although slowing for October arrivals, at least 30,000t have been identified for September arrivals too. Domestic production has also been running relatively well since mid-August, including the earlier-than-anticipated restart of a cracker complex in the Netherlands. Unplanned production losses were minimal in the first part of September, compared with 5pc of total capacity in July and August. There are still expectations that the balance will improve and even tighten again in the fourth quarter, and new production issues are already helping absorb and alleviate some of this length. Spot market activity has been limited by the lack of prompt demand. October is also well covered, although there may still be some gaps. Buyers either have little room in their systems for prompt volumes or are waiting to see prices fall. Sellers are confident that the length is short term and that strong internal and contract demand will continue, so they are reluctant to sell at discounts now, unless required to do so.

Discussions were limited following logistical problems caused by Typhoon Chanthu, especially in South Korea and China. Congestion along the mouth of the Yangtze river because of Covid-19 pandemic controls earlier caused the delayed return of vessels from China to South Korea. This underpinned vessel availability for spot discussions in the cfr China and fob South Korea markets. Chinese domestic propylene prices were on an uptrend from limited incoming cargoes, higher PP futures and plant shutdowns. Jiangsu province failed to reach its energy consumption cut goals in the first half of 2021 and has received a first-level warning from the central government. The region has stepped up efforts in cutting energy consumption towards the end of the third quarter. Plants in Jiangsu, including Nanjing Chengzhi and Jiangsu Sailboat, were affected and shut their respective methanol-to-olefins units this week. Taiwan's CPC will head for a scheduled turnaround on 16 September for 60 days at its residual fluid catalytic cracker with 400,000 t/yr of propylene output. Its No.4 cracker with 230,000 t/yr of propylene capacity will also have planned maintenance from early November for 60 days. Asia-Pacific so far this year has added around 5.69mn t/ yr of propylene production capacity. China saw an increase of 3.9mn t/yr, followed by South Korea at 940,000 t/yr, Vietnam at 600,000 t/yr and Thailand at 250,000 t/yr. Hyosung's Vietnam subsidiary is still increasing output at its new 600,000 t/yr PDH unit in Ba Ria-Vung Tau province. It started up the unit in late August, aiming to achieve full operating rates by the end of September.

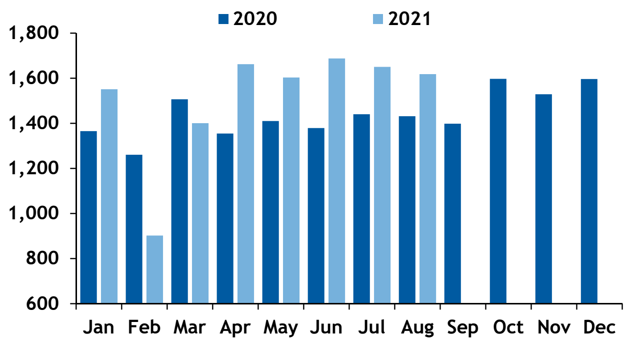
PRICING ANALYSIS

US

US polypropylene (PP) prices in September are expected to decline, tracking an expected drop in September polymer-grade propylene (PGP) contracts. While some producers are still officially seeking a 5¢/lb margin increase in September, one major participant did not announce, leaving a market-wide implementation of that increase unlikely. The amount of any PGP decline is still in question, with September PGP contract discussions ongoing.

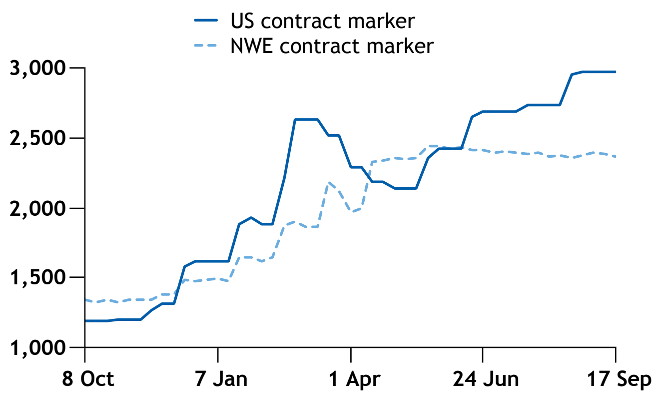
US contracts				¢/lb
	Timing	Argus Δ (month-on-month change)	Contract marker	Low / High ±
Copolymer contract marker	Sep	0.0	137	-5.0/+5.0
Homopolymer contract marker	Sep	0.0	135	-5.0/+5.0

North America PP production



– ACC/Vault

US vs west Europe PP homopolymer prices $/t



Spot PGP trading volume has been light, with bids reported at 79¢/lb during the week but no offers. Bid levels are up from last week, when prices were discussed as low as 73¢/lb. Based on spot levels, market participants have said they expect PGP contracts could fall as much as 5-6¢/lb this month. Spot prices have been fluctuating based on propylene outages, including ongoing maintenance at Flint Hills Resources' Houston PDH plant. With uncertainty about where PGP contracts will settle, the *Argus* preliminary mid-month assessment for PP holds prices flat, though that will change as a clearer picture develops about the September contract settlement.

US PP supply this month has been constrained due to outages caused by Hurricane Ida in Louisiana at the end of last month. However, most plants that went down in the storm are believed to have restarted, including ExxonMobil's 400,000 t/yr Baton Rouge, Louisiana, plant as well as Pinnacle Polymers 429,000 t/yr Garyville, Louisiana, PP plant. One train restarted first and began producing prime PP this week. The second train also restarted and is expected to be producing prime PP by the end of the week. That plant still remains on *force majeure*.

The decline in production this month is part of a trend started in August, when PP output fell by 2pc from July levels, with plants operating around 92pc of total capacity, according to preliminary data from the American Chemistry Council's Plastics Industry Producers' Statistics Group as compiled by Vault Consulting.

August PP sales also declined, falling to 1.551bn lb, down by 2.3pc from July. Exports rose by 5.12pc and domestic sales fell by 2.5pc over the period. Producers added around 67mn lb to inventories last month, leaving inventories at around 34 days of supply.

Demand in September remains steady. While some domestic demand has declined due to high prices, producers have said there are other buyers still interested in taking on extra pounds. There have been reports of some big-box retailers cutting orders for certain PP items, but with supply chain problems mounting in the US, other retailers are hesitant to cut any orders for fear of not having product.

Imports are continuing, as US prices remain much higher than the global market. But with PGP prices expected to fall, some buyers have said they see imports as a risky proposition given the long lead times.

Latin America

Latin American buyers of Chinese PP have seen prices rise by around $100/t this week, with PP homopolymer raffia reaching $1,260-1,280/t fob. Most PP grades have seen similar price increases.

To meet local demand, the region has been looking for material from the Middle East and Asia, but high freight costs and low availability of ships and container space has made the final price much higher.

Shipments from Asia to Latin America are only available from 25 October, with most shipments being pushed back to November and even early December. The proximity of the holiday season and the high demand for general imports from China are the main reasons for the lack of options for shipping resins to Latin America.

Due to the lack of import supplies, local participants have been offering a lot of material regionally, including Braskem (Brazil), Petroquim (Chile) and Esenttia (Colombia). These companies increased offers this week to other countries in the region, likely due to the reduced availability of Middle East and Asian imports.

Argus learned of PP offers from Braskem to Colombia and Ecuador at $2,400/t at the end of last week, a price considered too high by the market. The offer was not well accepted and on 14 September, it was withdrawn, according to a market participant.

Soaring futures prices in China are also believed to be contributing to the higher costs of Asian material.

So far this month, PP supply has largely increased in Latin America in line with improved demand in Brazil and the restoration of PP production in Ensenada, Argentina. Colombia has cut PP operating rates amid lower demand.

Brazil's PP domestic sales improved, resulting in lower inventories in August. Packaging for home and personal care and agriculture were the main sectors responsible for the domestic sales improvement. Other sectors, such as the automotive industry and electronics are limited by the lack of chips. PP producers expect 2021 domestic sales growth of 5pc to 7pc.

PP demand is improving modestly for some sectors in

Argentina. Petrocuyo resumed running its two PP units with a total of 310,000t/yr capacity after the Ensenada cracker restarted production on 1 September, in line with the end of the Ensenada refinery maintenance work. PP exports of 5,000-6,000 t/month should restart. Domestic propylene prices increased in September, adding $200/t to PP domestic prices.

In Colombia, PP production has fallen in line with lower domestic and export demand. Esenttia is running its PP unit hard, although rates have been cut since August, with margins compressed by local and imported propylene. However, since the beginning of this month, the US has had more propylene capacity available and spot prices are falling, which means that Esenttia should recover margins in the coming months.

Venezuelan propylene production has stopped at Profalca due to a lack of feedstock supply from Pequiven, resulting in interrupted PP output at Propilven.

Western Europe contracts				€/t
	Timing	Argus Δ (month-on-month change)	Contract marker	Low / High ±
Copolymer contract marker	Sep	0.0	2,100	-50.0/+30.0
Homopolymer contract marker	Sep	0.0	2,015	-50.0/+30.0

Northwest Europe spot			€/t
	Basis	Price	±
Homopolymer	del	1,600-1,750	-85
Raffia	del	1,595-1,745	-85

Europe

Fundamentals in the European polypropylene (PP) market appear balanced for September but supplies remain grade dependent and vary between sellers. Availability of homopolymer grades has continued to improve throughout the third quarter and looks set to further increase in the coming months. But supplies of PP copolymer grades remain tightly balanced for now, with little spare volume on the part of sellers. And overall demand from buyers remains healthy, with reports also heard of some increasing their contractual offtake in September, especially in cases where they had procured lower volumes in the summer months.

Some producers are engaged in stringent inventory management efforts ahead of planned maintenances at their plants in autumn. And these producers were keen to secure increases on freely negotiated contract prices in September. But most producers reported facing difficulties in securing any increases in contract prices. Settlements in September have so far been widely reported at a rollover to August contract prices, but there have been decreases on contracts that had high underlying prices — as producers have conceded ground in such instances to level the pricing field on contracts. Some buyers continue with their efforts to secure decreases of €30-50/t on contract prices in September. But with strong contractual demand being met by relatively limited supplies from some producers, these buyers are also prepared to see their September contract prices eventually settling at a rollover.

For PP homopolymer and copolymer grades, the preliminary assessments of the *Argus* deltas for September were made at a rollover to August. Given the modest €5/t decrease seen on feedstock propylene's September MCP, this would translate into a slight increase in producer margins. And most producers have been focused on keeping their margins intact, especially as PP inventories remain below historical levels, despite some replenishment in recent months.

But buyer sentiment is cautious for the fourth quarter, when they expect demand to ease. Some buyers expect contract prices to fall by €100-200/t in that period, but it is too early to say whether this will materialise.

There have been signs of demand dissipating from some sectors in recent months. The automotive sector continues to be constrained by a shortage of semiconductor chips, which may affect demand for PP copolymer grades ahead. The European Automobile Manufacturers' Association (ACEA) reported over a 24pc monthly drop in new car registrations in August — the second consecutive month of sharp decreases. Demand from the healthcare segment is expected to remain strong, but seasonal factors may negatively influence demand from the food packaging segment in the coming months.

There is evidence of offers in the spot market falling, particularly for offers of imports of homopolymer from India and Egypt. Buyers have been using these lower-priced offers on imports as leverage to negotiate down their contract prices. But there is also a healthy amount of scepticism about the volumes and timing of imports, which could limit the impact on the larger contract market. The workability of imports from the Middle East and Asia will continue to be affected by the lack of space available onboard container ships, particularly on front-haul routes, and this situation is not expected to improve until the second half of next year, if not beyond that.

The European spot market did see more aggressive offers from traders this week for PP homopolymer grades, with lower prices widely reported at €1,600-1,650/t ddp, pushing spot prices below the previous resistance threshold of €1,700/t. But these offers were mostly for homopolymer grades with lower melt flow index (MFI) specifications, which kept spot prices for homopolymer grades in a wide range this week. There were also rumours of even lower prices at close to €1,500/t ddp, but this was for imports of raffia grades, with very low MFI specifications and delivery for forward dates — with no certainty on the arrival dates in Europe or quantities being shipped.

The spot price for PP homopolymer was assessed in a slightly wider range this week, at €1,600-1,750/t ($1,878-2,054/t) ddp northwest Europe, down by €100/t on the low end and by €70/t on the high end.

Russia and CIS

Russian PP raffia grade prices fell this week after Bashneft's Ufaorgsintez plant finished maintenance that started at the beginning of September. Prices for PP co-polymers in Russia were largely unchanged from a week earlier.

Prices for PP raffia grade were Rbs125,000-133,333/t ($1,726-1,841/t) cpt Moscow this week, compared with Rbs125,000-135,833/t cpt Moscow a week ago.

Prices for PP raffia grade produced by Bashneft's Ufaorgsintez fell to Rbs131,667-133,333/t cpt Moscow from Rbs133,333-135,833/t cpt Moscow a week earlier. PP production at Ufaorgsintez restarted on 16 September. Prices for PP produced by Sibur Holding fell to Rbs125,000-127,500/t cpt Moscow from Rbs125,000-129,167/t cpt Moscow a week earlier.

PP raffia grade produced by Lukoil's Stavrolen plant this week traded at Rbs125,000-126,667/t cpt Moscow compared with Rbs125,000/t a week ago. Supplies were limited ahead of the plant stopping for maintenance from 12 October until the end of the month, traders said.

The Poliom plant, a joint venture between Sibur Holding and Gazpromneft, will stop PP production to carry out maintenance at the end of September, which is likely to last for two weeks, a source familiar with the operation said.

Feedstock supply to the Neftekhimiya plant, a joint venture between Sibur Holding and Gazpromneft, was disrupted this week. This was because of problems with the catalytic cracker at Gazpromneft's Moscow refinery, which led to a reduction in propane-propylene fraction output. This is unlikely to have a significant impact on PP supply in the Russian market because Neftekhimiya's PP output is relatively small, traders said.

PP co-polymers were offered at Rbs147,500-154,167t ($2,036-2,128/t) cpt Moscow this week, compared with Rbs145,833-154,167t cpt Moscow a week ago. Nizhnekamskneftekhim will stop PP production to carry out maintenance during the first 10 days of October, traders said.

Russia and CIS domestic				*Roubles/t*
	Basis	Price		±
Raffia	cpt inc VAT	150,000-160,000	▼	-1500.0
Block copolymer	cpt inc VAT	177,000-185,000	▲	+1000.0

Turkey

Polypropylene (PP) import prices into Turkey kept increasing this week, except for Middle East and South Korea-origin PP block co-polymer. Limited supply and problems in freight remain the major issue.

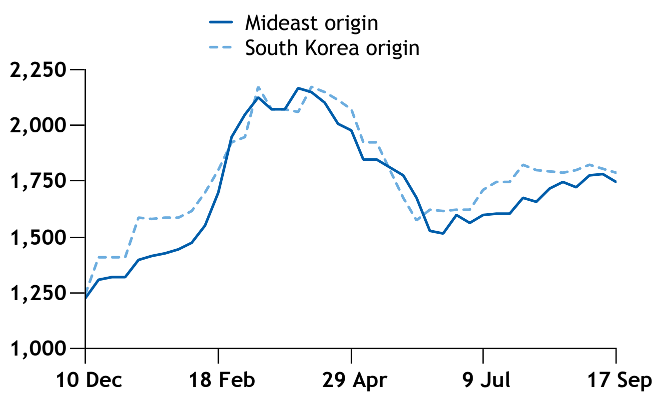
No one expects the issues to ease significantly in the short term and there were indications of new difficulties. A major Saudi producer will start offering on a fob basis as a result of the problems they have in finding containers. Whether traders can be more successful in finding space remains to be seen.

But demand for imports also slowed marginally this week, owing to the growing backlog in delayed shipments. Buyers see tight prompt availability but are mainly in a holding mode for future commitments as they await material.

Mideast-origin PP raffia was assessed at $1,580-1,600/t cfr this week, $30/t higher than last week. Indian offers were available at $1,560-1,580/t cfr, $10/t lower on the low end and stable on the high end.

Mideast-origin PP fiber was assessed at $1,650-1,700/t cfr, $10/t higher on the low end and $20/t higher on the high end. October-loading fiber sales are heard to be slow because of the increased prices. Indian offers were available at $1,640-1,660/t cfr. Mideast-origin PP fibre non-woven was

Turkey copolymer prices *$/t*



assessed at $1,620-1,680/t this week, stable on the low end and $30/t higher on the high end.

PP block co-polymer prices decreased this week from both Mideast and South Korea. Mideast-origin material was assessed at $1,730-1,760/t cfr, $30/t lower on the low end and $40/t lower on the high end. South Korea-origin material was assessed at $1,760-1,820/t cfr, stable on the low end and $30/t lower on the high end. South Korean product was not attractive to Turkish buyers due to freight prices of up to $600/t and container shortages, with producers offering on a fob basis. Although producers' offers have decreased, they are still not considered as competitive in the Turkish market owing to rising freight costs.

Egypt

Polypropylene (PP) import prices into Egypt increased this week. The market demand remains strong because of shipment delays and the absence of a major local producer still on planned maintenance, the supply is getting tighter, which is considered as an indication that the prices will increase even further in the upcoming weeks.

Mideast-origin PP raffia was assessed at $1,610-1,670/t cif, $60/t higher on the low end and $20/t higher on the high end compared with last week. Mideast-origin PP fibre was assessed at $1,520-1,670/t cif, $30/t lower on the low end and $30/t higher on the high end.

The impact of global freight issues in Egypt may grow in the near future because of the priority bookings for containers to China and India ahead of the expected rush for Christmas orders.

Middle East

PP prices were stable in the Middle East. PP raffia was assessed at $1,400-1,420/t del Middle East. Biaxially-oriented PP was assessed stable at $1,430-1,450/t del Middle East.

Demand is expected to increase in the coming months as the summer season draws to a close and downstream converters begin increasing their operating rates. The easing of Covid-19 travel restrictions across the Middle East is expected to see demand for finished goods increase. Packaging demand has been stable, with the food and beverage and pharmaceutical sectors being the main drivers for packaging demand. The Dubai Expo 2020, which begins on 20 October, should support demand in the months ahead. Dubai is targeting 25mn visitors over the event's six-month duration. This should also support demand in the coming months. The Middle East has already seen an increase in tourists from south Asia in recent months.

A propylene tightness that Saudi producers faced last week has currently eased. PP production in the Middle East was stable this week. There were no major production issues. PP supplies are currently unable to keep up with global demand. Some producers are unable to take on additional spot offers as their plants are already running at full capacity. Many are eager to raise operating rates beyond nameplate capacity to maximize economies of scale. But monomer shortages continue to limit this, especially for production of PP co-polymer.

Export PP raffia prices were assessed at $1,044-1,054/t fob Saudi Arabia China main ports. PP co-polymer was assessed at $1,054-1,064/t on the same basis.

Increased freight rates weighed heavy on export markets this week. The Chinese government's policy on coal production has affected the operating rates at coal-to-olefins producers this week, pushing up Middle East prices to China on a cfr basis. Chinese participants expect domestic supplies to tighten because of this and are looking at import markets more aggressively for cargoes this week.

Middle East producers continue to target the Americas on stronger netbacks. The impact of Hurricane Ida is still unclear. But Middle East producers have seen an increase in enquiries from the Americas for PP cargoes. Tropical storm Nicholas is expected to see an increase in buying interest from the Americas as major producers shut operations. Demand in markets like Turkey and Europe has also been stable. Middle East producers may prioritize these regions over Asia on higher netback opportunities. But shipping bottlenecks out of the Middle East remain a challenge.

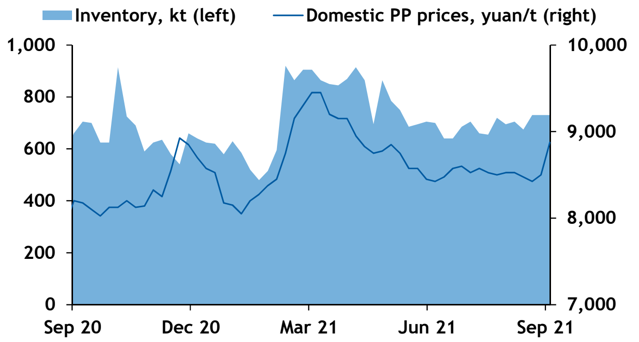
PP supplies have been lengthening this year with the start-up of OQ's new 300,000 t/yr PP plant in Sohar, Oman. The plant had an unplanned shutdown in August but it is currently operational and running at 80pc of capacity, according to market participants. Market participants are also looking to the start-up of Borouge's 480,000 t/yr PP plant in Ruwais, Abu Dhabi. The plant is expected to start commercial operations in next year's first quarter. This will help Middle East producers cope with PP shortages globally.

China

China's polypropylene (PP) market remained on an uptrend as there has been increasing expectations of higher feedstock coal prices and further production cuts among coal-based PP production capacity. Coal-based PP capacity accounts for around a quarter of Chinese total PP output. Some coal-to-olefins (CTO) producers in northwest China's Shaanxi province received government's orders early this week to cut their production by 50pc for the rest of the year so to not exceed energy consumption limits. There may be further production curbs among CTO producers entering the fourth quarter because of the potential power supply shortfall during the winter heating season.

Cfr offers for South Korean raffia cargoes were quoted at

Sinopec, Petrochina inventory vs domestic PP



Market highlight

- Coal-based PP capacity accounts for around a quarter of Chinese total PP output.

$1,150-1,170/t cfr China, with deals done at the same level. Some Middle East raffia supplies were quoted at $1,120-1,135/t cfr China earlier in the week. Offers for Indian raffia cargoes at $1,130/t cfr China, although these offers were no longer available later in the week. Raffia prices were assessed $10-40/t higher to $1,130-1,170/t cfr China. Co-polymer prices also firmed by $20-30/t to $1,150-1,170/t cfr China with muted buying interests. Offers for Middle East-origin co-polymer cargoes were at $1,150-1,170/t cfr China. Offers for South Korean co-polymer materials were quoted at $1,160/t. Some offers for off-specification co-polymer materials emerged at $1,110-1,130/t cfr China.

Chinese domestic producers tried to push up their offers along with higher futures prices, which encountered strong resistance from converters. China's PP futures on the Dalian Commodity Exchange rose by 5.3pc on 15 September, hitting a half-year high of 9,044 yuan/t. PP raffia prices firmed by Yn150-600/t to Yn8,550-9,200/t ex-works in east China. Co-polymer prices rose to Yn8,600-9,200/t ex-works in east China, Yn120-600/t higher than a week earlier.

Downstream demand has shown little sign of increasing, with slow order books from the packaging, automotive and home appliance sectors. China's retail sales in August grew by only 2.5pc from a year earlier, well below expectations of 7pc and down from 8.5pc in July. Converters have not started making replenishments for the mid-autumn festival on 21 September and National Day holidays over 1-7 October.

Inventories of PP and polyethylene at China's state-controlled Sinopec and PetroChina held steady from a week earlier at 730,000t on 16 September. This is the highest for the same period in the past a few years but was expected because of the massive capacity expansions since last year.

PP capacity losses are lighter in September compared

China domestic				Yn/t
	Basis	Price		±
Copolymer	ex-works	8,600-9,250	▲	+360
Raffia	ex-works	8,550-9,200	▲	+375

with August, although there are shutdowns at coal-based plants, including Yan'an Energy's 300,000 t/yr and Shanhua Baotou's 300,000 t/yr units from 1 September and 15 September respectively. Oriental Energy's 1.2mn t/yr PP units are expected to emerge from month-long turnaround this week. Zhejiang Petrochemical's 450,000 t/yr unit and Lianhong Group's 200,000 t/yr unit returned to production on 10 September after week-long maintenance. Shijiazhuang Refinery is having maintenance at its 200,000 t/yr plant from 20 August for two months, while Datang Petrochemical's 460,000 t/yr capacity shut on 6 September for maintenance until 30 September.

Chinese polypropylene (PP) export increased along with rising PP futures in domestic market. Deals were done at $1,210-1,220/t fob for raffia on Monday, destined for south Asia and south America.

But offers increased to $1,270-1,300/t after strong gains in PP futures on Wednesday and Thursday. Overseas buyers' idea remained at the same level on Monday. Deal volumes reduced to a trickle close to the weekend.

Buying interest from south Asia remained strong, but another surge in freight rates across east China ports has narrowed the export window. Freight rates from China to Indonesia increased to $80-90/t compared with $60/t in August, while from China to Vietnam are around $40/t. Freight from China to India has doubled to $280/t from $140/t in July.

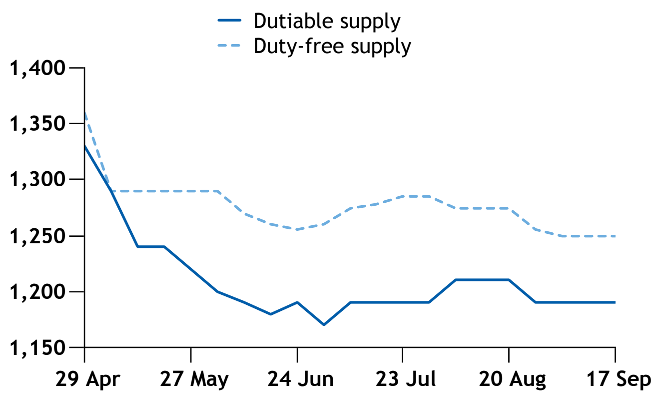
The availability of containers to overseas markets from China's main ports remained tight. Chinese producers were also monitoring bulk trade after container freight rates rose to unacceptable levels. There were a few deals were done with bulk trade together with PET cargoes to India. But issues such as unsteady shipments, longer deliveries and delayed bill of lading continue to linger.

Southeast Asia and Vietnam

Southeast Asian PP markets were stable with a lack of spot liquidity. While buying interest increased slightly among converters in selected countries, buyers resisted price hikes as downstream consumption of finished products remained low. Consumers remained cautious with most continuing to stay home as daily Covid-19 infection rates remained high, resulting in demand recovering at a slow pace.

Market participants in southeast Asia were watch-

SE Asia PP raffia prices $/t



ing closely the developments in the key Chinese market. Chinese PP futures recorded substantial gains, bolstered by expectations of further cuts in PP production among coal-to-olefins operators because of tighter coal supplies. But market participants were also expecting PP supplies from new plants in China to balance the current market.

Regional converters continued to source PP resin supplies on as-needed basis, capping any price gains in the region. The start-up of Vietnam Hyosung's 300,000 t/yr unit also exerted pressure in southeast Asian markets. Market participants expect Middle East producers to limit PP exports to southeast Asia in October, as higher freight rates and lower prices in the region squeeze their export margins. But higher freight rates and limited shipping availability continued to restrict the flow of southeast Asian PP supplies to other regions, with buyers not expecting any supply crunch in southeast Asia in the short term.

Regional producers are announcing new offers for October shipments, with prices holding at similar levels against last month because of continuing weak demand. Producers are expected to continue focusing on domestic and regional sales, leveraging on the Asean free-trade agreement for higher netbacks. The huge premium of PP prices in China against southeast Asia meant regional producers are unlikely to increase export to China, ensuring stable supplies in the region. Higher PP prices in south Asia had prompted some regional producers to increase export to this region. But higher freight rates and difficulty in securing shipping spaces are limiting such trade flows.

Vietnam's key economic hub Ho Chi Minh city will remain in a Covid-19 lockdown until 30 September. The Philippines will replace wide-scale lockdowns in its capital Manila with localized lockdowns in an effort to spur an economic recovery despite surging infection rates. A shift of focus towards the pandemic in other major southeast Asian economies like Indonesia, Thailand, Malaysia and Singapore is expected to raise consumption of finished goods in the fourth quarter, even though sentiment remained cautious with vaccination rates remaining below 20pc in countries with higher populations. Shipping constraints remained a major concern among converters, as they were cautious about accepting new export orders as higher freight rates and extreme difficulty in securing shipping space could squeeze their margins.

Regional PP supplies are expected to rise in September as producers complete planned maintenance. Vietnam's NSRP restarted its 370,000 t/yr PP plant last week following a three-week maintenance. The producer offered 5,000t of on-specification PP raffia supplies with a delivery window of 19-30 September through a spot tender. Vietnam's Hyosung started its new 300,000 t/yr PP unit and is expected to boost production once its upstream new 600,000 t/yr propane dehydrogenation unit achieves stable operations.

Dutiable PP raffia prices were stable at $1,180-1,200/t cfr southeast Asia. Middle East-origin PP raffia offers were $1,200-1,250/t cfr southeast Asia. South Korea-origin PP homopolymer offers were at $1,190-1,220/t cfr southeast Asia. PP block co-polymer prices were stable at $1,210-1,230/t cfr southeast Asia with a lack of new offers.

Duty-free PP raffia prices were stable at $1,230-1,270/t cfr southeast Asia. Thailand and Malaysia-origin PP raffia offers were at $1,270-1,280/t cfr southeast Asia for October shipments. Duty-free PP block co-polymer prices were at $1,260-1,280/t cfr southeast Asia. Thailand, Singapore and Malaysia-origin PP block co-polymer offers were in a wide range of $1,280-1,320/t cfr southeast Asia for October shipments.

PP prices were stable at $1,170-1,190/t cfr Vietnam with a lack of spot liquidity. Sporadic South Korea-origin PP homopolymer offers were at $1,190/t cfr Vietnam with deals possibly done. Oman-origin PP homopolymer offers were last at $1,210-1,220/t cfr Vietnam to consumers. Thailand-origin PP raffia offers were last at $1,220-1,230/t cfr Vietnam to consumers.

South Asia

Indian PP raffia remained at $1,350-1,370/t cfr India. Spot offers were limited this week. Buyers are awaiting announcements of new offers in the coming weeks. Producers rolled over PP prices in local markets. Demand remains stable, with more downstream converters continuing to restock on firm downstream demand. Many converters and final goods manufacturers are preparing for the festive season in the final quarter of the year. Demand for grain packaging is expected to increase in the coming months as the monsoon season draws to an end.

The export market for finished goods has been hampered by the current freight situation. Finished goods manufacturers have been facing difficulties with securing shipping lines for exports. This has led to increased inventory pressure as cargoes of finished products start to pile up at warehouses. But the impact on Indian resin demand is not expected to be severe, as local demand for finished goods has been strong and should be able to absorb any impact to export markets.

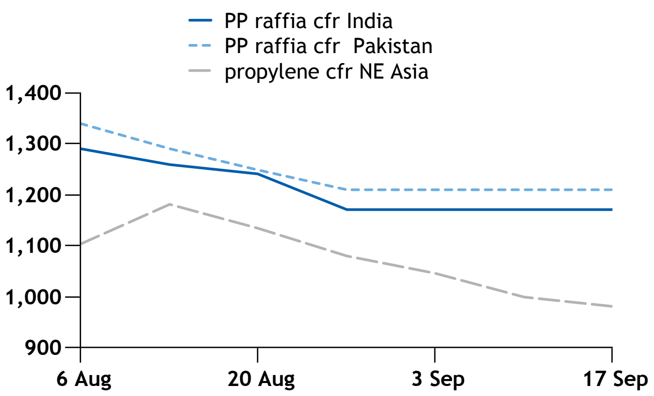
Some participants are concerned about potential supply tightness following Hurricane Ida and the arrival of tropical storm Nicholas this week. A winter storm that hit the US earlier this year resulted in production losses, which saw Middle East producers diverting cargoes designated for south Asia to the Americas. Supplies to south Asia tightened and PP prices rose sharply. Participants are concerned that this may happen again, with some US producers having declared force majeures following Hurricane Ida. But the impact of production losses in the US on south Asia remains unclear. Local PP supplies are expected to lengthen in the fourth quarter following the start-up of Hindustan Petroleum-Mittal Energy's P00,000 t/yr PP plant in Bathinda.

A major Chinese shipping line suspended routes from Ho Chi Minh city to major Indian polymer ports last week. Supplies could tighten as Vietnamese trading firms often re-export cargoes to India. This is especially crucial for PP markets, where Chinese-origin PP has become a new staple for buyers this year. Many Chinese producers have been selling PP on a fob basis as it has been difficult to secure shipping lines. Offers have been stable, hovering at $1,190-1,210/t fob over the past few weeks. Trading firms in Vietnam often re-export these Chinese cargoes for sale to south Asian participants. The reduced shipping availability on this key route may tighten supplies to south Asia.

Pakistan's PP raffia was $10/t higher at $1,390-1,430/t cfr Pakistan as buying and selling ideas increased this week. Participants have been bullish on prices with increasing industrial activities and operating rates at downstream converters. But tight credit terms are preventing buyers from purchasing additional volumes. PP imports from China remain sought after by participants because of concerns about a potential shortage of supplies from Middle East producers following plant outages in the US.

Bangladesh's PP raffia was stable at $1,350-1,390/t cfr Bangladesh. Spot offers were limited this week after key producers finished announcing their offers for September. Re-exported cargoes of PP homopolymer from China were offered at $1,200/t fob. Port congestion continued to delay shipments of Chinese cargoes to Bangladesh. A major Chinese shipping line was also rejecting Chattogram shipments because of port congestion. This has made it more difficult

South Asia PP vs propylene prices $/t



for buyers in Bangladesh to secure shipping for Chinese imports. Importing Middle East PP cargoes is also proving to be a challenge with some shipping lines avoiding Jubail-Chattogram routes.

Sri Lankan PP raffia was stable at $1,350-1,380/t cfr Sri Lanka. Spot offers were limited this week. US dollar liquidity issues continue to limit buyers' purchasing power. The freight situation has led to a build-up of final goods inventories at many final goods manufacturers in Sri Lanka. A lack of exports has hampered Sri Lanka's trade balance and worsened the US dollar liquidity issues.

FUNDAMENTALS

Global production news

Formosa fined for Clean Air Act violations

Formosa Plastics has agreed to pay a $3.85mn fine to the Environmental Protection Agency (EPA) for violations of the Clean Air Act (CAA) at its petrochemical manufacturing plant in Point Comfort, Texas.

The EPA alleges Formosa committed 20 violations of the Chemical Accident Prevention Provisions of the CAA. These provisions are designed to prevent the accidental release of hazardous substances that could cause injury to plant workers.

The EPA said, "Formosa repeatedly failed to comply with the chemical accident prevention provisions of the Clean Air Act at the Point Comfort plant, repeatedly placing their workers, neighbors and the environment in danger."

As part of the penalties, Formosa will be required to update incident response and safety plans. The company must also conduct third party audits on risk management procedures and make proper adjustments from audit results.

The EPA's investigation of Formosa was spurred by a series of fires, explosions, and accidental releases that caused injury to employees at the Point Comfort plant between 2013 and 2016.

Formosa manufactures olefins, LLDPE, HDPE, polypropylene, chlor-alkali, ethylene dichloride, and PVC at the Point Comfort plant.

China applies to join Pacific Rim trade pact

China has formally applied to join a major Pacific Rim trade agreement that was once pushed by the US as a way to extend its influence in the region at Beijing's expense.

China made an official application to join the Comprehensive and Progressive Agreement for the Transpacific Partnership (CPTPP) yesterday, the commerce ministry said.

The 11-nation pact has so far been ratified by eight members, most recently Peru. The other members comprise Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Singapore and Vietnam, while the UK has also applied to join.

The CPTPP is the successor to the 12-nation Trans-Pacific Partnership (TPP), which was initially proposed by the US under then President Barack Obama as a way to unite some of the region's biggest economies — notably excluding China — under a single free-trade agreement.

The US withdrew from the TPP in the early days of President Donald Trump's administration, leaving the 11 other members to forge ahead with a revised version. President Joe Biden has indicated he will not attempt to rejoin the agreement.

The CPTPP allows for inputs from member countries to be treated as local content, encouraging trade within the bloc. Several of the members — including Australia, Canada, Chile, Malaysia and Peru — are major exporters of minerals and other commodities, while petrochemical producers such as Singapore and Vietnam will benefit from selling finished products to other CPTPP members.

China's entry to the CPTPP, which would have to be approved by all other members, could tip the balance of trade in its favour given the sheer size of its economy. China dominates a rival Asia-Pacific trade deal, the Regional Economic Comprehensive Partnership, which was signed late last year.

Petrochemical producers elsewhere in Asia-Pacific are already expressing concerns about the prospect of oversupply given huge new capacity additions in China this year. The expansions have prompted Chinese polypropylene producers to seek export opportunities, a trend that is expected to continue despite current shortages of containers.

China has been lobbying other CPTPP members to support its application to join the pact, including Australia, a move that raised the prospect of an end to political tensions between Beijing and Canberra that have hit trade in coal and other commodities. But a potential detente is looking less likely after Australia, the UK and US announced a new military pact yesterday that could help cement US-China rivalry in the region.

China to intensify clampdown on industrial energy use

China will start clamping down on industrial energy consumption after some provinces missed their energy use and intensity targets in the first half of this year, increasing pressure on major energy-intensive sectors in the country.

Top economic planner the NDRC unveiled a policy document yesterday, detailing "double control" methods to curb energy use and intensity. The government will set total energy consumption quotas for each year during 2021-25 and tighten approvals for new projects with high energy use and intensity, as well as ban approvals for new energy-intensive projects if a provincial government misses its energy-control target for a certain period.

New projects with energy consumption of more than 50,000t of standard coal will need to be approved by the NDRC, while projects with consumption below that level can be approved by local governments.

Top government agencies will plan projects with "national strategic importance", which will be allocated additional energy consumption quotas, with provincial governments to set energy use cap and breakdown for other projects. More energy-use quotas will be also allocated to regions that can raise their energy efficiency or have lower energy consumption per unit of GDP.

The Chinese government has set a target to cut energy use per unit of GDP by 3pc this year compared with 2020.

The NDRC also encourages local governments to look at renewable energy use and development at energy-intensive projects, as provinces that exceed minimum utilisation of renewable energy can have more flexibility on their total energy use cap, although they will still need to meet the basic requirement of cutting energy intensity.

The NDRC will also raise the frequency of energy use reviews of each province to quarterly instead of annually for the 2021-25 period. Some provinces would rush to cut industrial output or rapidly reduce electricity use in the last quarter of the year or in the last year of the five-year evaluation cycle.

The NDRC last month issued code-red warnings to nine provincial governments that failed to control their energy intensity during January-June, while seven other provinces missed their targets to cap energy use in the period.

Provinces such as Yunnan have since intensified efforts

Plant maintenance, outages and disruptions

Status	Plant	Location	Grade	Capacity '000t/yr	Duration	Remarks	Source
UPDATE	Pinnacle Polymers	US	PP	429	End Aug to mid-Sep	Garyville plant restarted, FM remains in place	Industry
	Stavrolen	Russia	PP	120	23 Sep - end Nov	Planned maintenance	Producer
	Ufaorgsintez	Russia	PP	120	2 - 12 Sep	Planned maintenance	Producer
	Sinopec Qilu	China	PP	70	2 Aug - 20 Sep	Maintenance	Industry
	Ningbo Fuji (Oriental Energy)	China	PP	400	10 Aug for one month	Maintenance	Industry
	Zhongtian Hechuang	China	PP	350	10 Aug for a few days	Maintenance	Industry
	Shijiazhuang Refinery	China	PP	200	20 Aug - 29 Oct	Maintenance	Industry
UPDATE	Fujian Refinery	China	PP	550	25 Aug - 9 Sep	Maintenance	Industry
	Yanchang Yanan Chemical	China	PP	300	1 Sep for 45 days	Maintenance	Industry
	Datang Petrochemical	China	PP	460	6 - 30 Sep	Maintenance	Industry
UPDATE	Zhejiang Petrochemical	China	PP	450	3 - 10 Sep	Maintenance	Industry
UPDATE	Lianhong Group	China	PP	200	6 - 10 Sep	Maintenance	Industry
NEW	Shenhua Baotou	China	PP	300	15 Sep for 40 days	Maintenance	Industry
UPDATE	Nghi Son Refinery and Petrochemical	Vietnam	PP	370	15 Aug for three weeks	Plant restarted	Industry

to reduce energy use and intensity in high energy-consuming sectors, such as aluminium, indium and fertilizers. Fertilizer plants in Jiangsu have also received urgent notices from the provincial government to cut output from this month.

China's DCE LPG futures hit new high ahead of winter

The front-month LPG futures contract on China's Dalian Commodity Exchange (DCE) rose to a record high of 5,919 yuan/t in midday trading today. Prices have increased by 11.62pc from the week's low of Yn5,303/t on 13 September.

The rally was attributed to a demand recovery across the energy sector in the run-up to winter. Retail investors with increased expectations of winter fuel shortages had entered into long positions in the domestic futures market, a trader in an asset management company said. Futures traders parlayed strength in the natural gas market to LPG futures instead, since natural gas futures have yet to be listed on the DCE, he added. Chinese buyers accounted for nearly half of *Argus* Far East Index (AFEI) and Saudi Contract Price paper open interest, a futures trader said.

Chinese LPG futures also tracked the international market higher. AFEI propane prices rose to a seven-year high of $763.25/t on 15 September on the back of expectations of inadequate supplies from US export hubs to meet Asian demand.

Asian LPG values hit multi-year highs on low US stocks

The Argus Far East Index (AFEI) hit fresh multi-year highs yesterday, with seasonally low US propane stocks ahead of winter pushing prices to their highest level in more than seven years.

Mont Belvieu LST propane prices on the US Gulf coast (USGC) hit $119.25¢/USG ($622.84/t) yesterday, the highest in more than seven years. The rise extended to Asia with *Argus* Far East Index (AFEI) propane prices yesterday also at their highest in almost seven years at $717.75/t. But the Asian delivered benchmark lagged its US fob counterpart with weaker seasonal residential demand and Covid-19 related lockdowns in China that depressed commercial and industrial demand. The October LST-AFEI spread narrowed to $105/t from $115/t a week ago.

AFEI butane prices, which have been at parity to propane prices since the end of August, also hit their highest level since October 2014.

Bullish fundamentals in the US market has helped LPG prices in Asia-Pacific evade a seasonal summer slump, which has in turn pressured downstream profit margins for regional petrochemical producers. Propane cracker cash margins retreated to a negative $37/t in the week ending 1 September, while propane dehydrogenation margins remained under pressure at $15/t.

The US is increasingly emerging as the single largest exporter of LPG to Asia-Pacific, accounting for 13.8mn t, or 45pc of the region's total imports in this year's first half. This compared with 11.8mn t, or around 39pc of total imports over the same period last year, data from Vortexa showed.

The firmer domestic prices and weaker arbitrage economics for delivery to Asia-Pacific could entice USGC terminal operators to again buy-back cargoes, leaving less volumes available for export.

China's PE, PP futures rise on coal, oil gains

Linear-low-density polyethylene (LLDPE) and polypropylene (PP) futures on China's Dalian Commodity Exchange rose

New start-ups

Status	Plant	Location	Grade	Capacity '000t/yr	Start-up	Remarks	Source
	OQ	Oman	PP	300	2Q	Plant is in operation	Industry
	Borouge	UAE	PP	480	1Q 2022		Industry
	Dongming Petrochemical	China	PP	200	Mar	Plant started	Industry
	Haiguo Longyou Daqing Lianyi Petrochemical	China	PP	200	Mar	Shut from 10 - 22 August for maintenance	Industry
	Haiguo Longyou Daqing Lianyi Petrochemical	China	PP	350	Mar	Shut from 14 July - 19 August for maintenance	Industry
	Sinopec SK Wuhan Petrochemical	China	PP	300	End Mar	Plant started	Industry
	Ningbo Fuji (Oriental Energy)	China	PP	400	Early May	Shut from 10 August for one-month maintenance	Industry
	Ningbo Fuji (Oriental Energy)	China	PP	400	Early Jun	Shut from mid-August for one-month maintenance	Industry
	Sinopec Tianjin	China	PP	200	Mid-May	Plant started	Industry
	Zhejiang Hongji	China	PP	240	End May	Plant started	Industry
	Jinneng Technology	China	PP	450	Aug	Plant started	Industry
	Gulei Refinery	China	PP	350	Aug	Plant started	Industry
	PetroChina Liaoyang	China	PP	300	Aug	Achieved on-specification production on 16 August, ramping up operating rates	Industry
	Shandong Shouguang Luqing Petrochemical	China	PP	340	Sep	Delayed from August	Industry
	Zhejiang Petrochemical	China	PP	450	End Sep		Industry
	Zhejiang Petrochemical	China	PP	450	Oct		Industry
	Tianjin Bohua	China	PP	300	3Q	Delayed from 2Q	Industry
	Shandong Huifeng Haiyi Petrochemical	China	PP	150	4Q	Delayed from 2Q	Industry
	Huating Zhongxu Coal Chemical	China	PP	160	4Q	Delayed from 2Q	Industry
	Ningxia Runfeng	China	PP	300	4Q		Industry
	Hanwha Total	South Korea	PP	400	Mar	Plant started	Producer
	SK Advanced-Polymirae	South Korea	PP	400	20 Mar	Plant shut briefly in mid-July but resumed operations	Industry
	Hyundai Chemical	South Korea	PP	500	End 2021		Producer
	HPCL-Mittal Energy Limited	India	PP	500	4Q		Producer
	JG Summit Petrochemical	Philippines	PP	300	Mid-Jun	Plant expanded from 190,000 t/yr to 300,000 t/yr, operating close to full capacity	Producer
	Hyosung Vietnam	Vietnam	PP	300	Mid-Aug	Plant started and operating at 70pc	Industry
	PRefChem	Malaysia	PP	900	End 2021/Early 2022		Industry

sharply today, driven mainly by rallies in coal and crude oil prices.

LLDPE futures increased by 450 yuan/t or 5.3pc to close at Yn8,980/t ($1,139/t on an import parity basis), while PP futures also surged by 5.3pc or Yn453/t to Yn9,036/t ($1,146/t on an import parity basis).

Major Chinese producers raised their ex-works offers by Yn100-200/t, tracking the uptrend in futures.

There are several factors driving the price increase. China's coal prices have surged to record highs, forcing Chinese coal-to-olefin (CTO) producers to raise their offers as their margins were squeezed to breakeven levels. Crude prices have also risen, with Brent crude futures closing at a 1½-month high on 14 September.

Power cuts in the northwestern province of Shaanxi also supported price increases, as the measures will cut half of the region's PE production for the remainder of the year.

The Yulin Development and Reform Commission in Shaanxi has ordered three major local CTO producers to reduce their operations to 50pc from September to December, to meet their annual targets for total energy consumption and energy reductions. The three producers are Yanchang & China Coal Yulin, which has 300,000 t/yr of full-density PE, 300,000 t/yr of HDPE and 300,000 t/yr of LDPE/EVA capacity; China Coal Yulin with 300,000 t/yr of full-density PE capacity; and Shenhua Yulin with 300,000 t/yr of LDPE capacity.

Domestic LDPE supply has further tightened after the shutdown of Shenhua Yulin. Supply has already been squeezed by the closure of state-controlled Sinopec Qilu's 140,000 t/yr LDPE unit from 2 August for a 50-day turnaround, together with its cracker.

Import supply has remained tight since March and fell again recently following Hurricane Ida in the US, especially for LDPE, prices of which rose the most among all PE grades.

Increasing demand with the onset of Christmas orders and the delayed start-up of new capacity also supported the polymers market in China. Sinopec SK Wuhan is expected to delay the start of its new 300,000 t/yr HDPE unit to late September from July as earlier planned. Zhejiang Petrochemical has also postponed the start-up of its 350,000 t/yr HDPE and 450,000 t/yr full-density PE unit, likely to late September.

Japan’s Mitsui moves towards recycled PP business

Japanese trading house Mitsui has agreed with the US' PureCycle Technologies to develop a recycled polypropylene (PP) business in Japan, in efforts to promote chemical recycling.

Mitsui has signed a memorandum of understanding with PureCycle Technologies, which owns the technology to generate original PP-equivalent material ultra-pure recycled PP (UPRP) from used plastics.

Mitsui plans to undertake a feasibility for a year to see if it can manufacture and use UPRP for products such as car interiors, food containers and consumer goods. The trading house may consider building a UPRP production plant in Japan, but it has not decided on further details. Mitsui has faced difficulty in recycling PP as the resins usually contain inseparable additives like colourants.

Japan's chemical industry has been trying to achieve chemical recycling by partnering foreign companies with advanced technologies. Fellow petrochemical producer Mitsubishi Chemical signed a license agreement with UK-based plastic recycling firm Mura Technology to introduce recycled naphtha to its ethylene crackers. Mitsui Chemicals plans to import bio-naphtha from Finnish biofuels producer Neste to manufacture bio-petrochemical products.

South Korea’s Hyosung to restart PDH unit in October

South Korea's Hyosung Petrochemical is targeting to restart its propane dehydrogenation (PDH) unit in early October after an unplanned shutdown earlier this month.

The 200,000 t/yr PDH unit at its Ulsan complex was forced to shut on 4 September after a fire. Hyosung will probably consume domestic propylene from other nearby producers in the Ulsan area to cover its shortage, said market participants. Hyosung's larger 300,000 t/yr PDH unit is currently operating at full operating rates.

Hyosung's Vietnam subsidiary is still increasing output its new 600,000 t/yr PDH unit in Ba Ria-Vung Tau province. It started up the unit in late August, aiming to achieve full operating rates by the end of September. The PDH unit successfully achieved on-specification propylene in early September, according to a market source close to the company.

Taiwan’s CPC to shut its RFCC for turnaround

Taiwanese state-controlled refiner and petrochemical producer CPC will commence a 60-day scheduled turnaround at its Dalin-based 80,000 b/d residual fluid catalytic cracker (RFCC) in Kaohsiung tomorrow.

The refinery has a propylene output of 450,000t/yr. CPC supplies the propylene to downstream term takers such as Chang Chun Petrochemical, LCY Chemical, Taiwan Prosperity Chemical and CPDC in the Kaohsiung area via pipeline. CPC's planned maintenance will also mean lesser supply of propylene, possibly leading to more spot enquiries of propylene for delivery to Taiwan.

CPC operates another RFCC in Taoyuan with a propylene output of 90,000 t/yr, and will be running this at full rates during the shutdown of its Dalin refinery.

The operator will also begin a 60-day scheduled turnaround at its Linyuan-based No.4 cracker in the Kaohsiung area from early November. The cracker can produce up to 385,000t/yr and 230,000t/yr of ethylene and propylene respectively. Its 700,000t/yr No.6 cracker will be operating as per normal during the shutdown of the No.4 cracker.

Packaging and downstream applications

OEM and automotive stocks					*per share*
Company	Ticker	16 Sep	9 Sep	±	
Toyota	NYSE: TM	$ 181.94	$ 180.07	1.04%	▲
Bosch	NSE: BOSCHLTD	Rs 15,279.60	Rs 14,345.00	6.52%	▲
Continental AG	FRA: CON	€ 95.49	€ 106.80	-10.59%	▼
Daimler	FRA: DAI	€ 72.46	€ 68.24	6.18%	▲
BMW	FRA: BMW	€ 67.10	€ 65.45	2.52%	▲
Honda	NYSE: HMC	$ 31.20	$ 30.91	0.94%	▲
General Motors	NYSE: GM	$ 51.52	$ 48.42	6.40%	▲
Denso Corp	TYO: 6902	¥ 7,848.00	¥ 7,932.00	-1.06%	▼
Tesla	NASDAQ: TSLA	$ 756.99	$ 754.86	0.28%	▲
Ford	NYSE: F	$ 13.40	$ 12.76	5.02%	▲
Motherson Sumi	NSE: MOTHERSUMI	Rs 224.30	Rs 213.05	5.28%	▲
Magna International Inc	TSE: MG	C$ 96.72	C$ 100.99	-4.23%	▼

Ford to boost electric truck production

Ford plans to invest $250mn to increase production of its electric F-150 Lightning trucks to help supply catch up with demand for the vehicles produced in Dearborn, Michigan.

The investment in the Rouge Electric vehicle center in Dearborn will increase production capacity for the F-150 Lightning to 80,000 trucks a year, the US automaker said today.

Ford, which expects to begin selling the electric F-150 in spring 2022, has taken more than 150,000 reservations for the vehicle. The company today debuted the first pre-production units produced at the Dearborn factory.

The truck is the first full-size electric pickup truck from a preexisting North American automaker. Electric truck and SUV maker Rivian, an upstart automaker, recently celebrated its first production vehicle rolling off the line.

GM cuts more NorthAm auto production

General Motors (GM) announced new automotive production cuts related to global semiconductor shortages.

The automaker is cutting production through 3 October at its Michigan plants in Lansing Delta Township and Lansing Grand River, and its plant in Ramos, Mexico.

The company will extend closures at its small SUV plants in Ontario, Canada, and San Luis Potosi, Mexico, through 17 October.

GM will cut production of its Malibu sedan at its Fairfax plant in Kansas through 31 October. The company will resume production of the Cadillac XT4 sedan on 20 September.

The Orion electric vehicle plant in Michigan will shutter through 17 October as the company struggles with continuing battery pack shortages related to a safety recall linked to Chevrolet Bolt vehicles.

Its the latest cuts for GM and the wider North American auto industry, which has been hobbled this year by part shortages linked to Covid-19-related restrictions, leading to a lack of inventory on many dealer lots.

FMCGs

FMCG stocks						*per share*
Company	**Industry**	**Ticker**	**16 Sep**	**9 Sep**	**±**	
Unilever	Consumer goods	NYSE: UL	$ 54.54	$ 54.85	-0.57%	▼
Procter & Gamble	Consumer goods	NYSE: PG	$ 144.11	$ 143.99	0.08%	▲
Nestle	Food and beverages	SWX: NESN	SFr 114.24	SFr 114.82	-0.51%	▼
Coca-cola	Food and beverages	NYSE: KO	$ 55.35	$ 55.86	-0.91%	▼
Pepsico	Food and beverages	NASDAQ: PEP	$ 155.56	$ 155.73	-0.11%	▼
AB InBev	Food and beverages	NYSE: BUD	$ 57.39	$ 57.93	-0.93%	▼
Johnson & Johnson	Pharmaceuticals	NYSE: JNJ	$ 165.22	$ 168.07	-1.70%	▼
Mondelez	Food and beverages	NASDAQ: MDLZ	$ 60.71	$ 60.61	0.16%	▲
Colgate-Palmolive	Personal care	NYSE: CL	$ 76.47	$ 77.30	-1.07%	▼
Danone	Food and beverages	EPA: BN	€ 59.66	€ 60.11	-0.75%	▼

Ferrero Rocher transitions to eco-friendly PP boxes

Italian chocolate manufacturer Ferrero Rocher will start packing its hallmark golden-wrapped hazelnut chocolates in eco-friendly polypropylene (PP) boxes from this month, cutting virgin plastic use by an initial 2,000 t/yr.

The boxes will be introduced in a phased rollout globally and will begin with its 16-piece and 30-piece sets. PP was used as it would be easier to be recycled globally, according to the company. The boxes will also use 40pc less plastic for the 16-piece set and 38pc less plastic for the 30-piece set.

Sustainable plastic packaging has been paramount for many consumer goods firms globally, given the increasing pressure on corporations to be conscious about the impact that their products have on the environment. Consumer goods companies like Nestle and Unilever have also made sustainability pledges to reduce virgin plastic use for packaging.

The company plans to expand this box to the entire range of products under the Ferrero Rocher portfolio, and estimates that this will cut virgin plastic use by 10,000 t/yr.

These changes aid the firm's ambition of making all of its packaging reusable, recyclable or compostable by 2025.

P&G signs PPA for Spanish wind, solar power

Consumer goods firm Procter and Gamble (P&G) has signed a 15-year power purchase agreement (PPA) with Portuguese renewable power producer EDPR for power supplied from a solar photovoltaic (PV) facility and a wind farm it is developing in Spain.

EDPR, a subsidiary of Portuguese utility EDP, has agreed to supply a combined 127.5MW from its planned 100MW Penaflor solar PV and its 47.5MW Sierra de La Venta wind farm from 2023, after the capacity is connected to Spain's power grid. Power from the solar plant will be fully allocat-

QUOTE OF THE WEEK

"All eyes will be on China and the US for the rest of the year."
— *Southeast Asian participant*

ed to P&G, while around 27.5MW from the wind farm refer to the agreement, EDPR said.

Consumer goods companies have become increasingly conscious of the sustainability impact that they are making, given increasing environmental pressure to do so. In February, global food company Danone received delivery of a biomass boiler to power its dairy processing facility in Balclutha on New Zealand's South Island. Commissioning of this boiler is expected to begin this year.

P&G last week committed to aid digital plastic-waste sorting trials by contributing more than 100 digitally watermarked products for sorting.

Supply chain and shipping

UAE port of Fujairah issues warning on air pollution

The UAE port of Fujairah has issued a pollution warning and said that it will take strict action against any violations of smoke emission rules.

The port authority told mariners to take necessary measures to prevent soot from polluting air during their stay in Fujairah waters, calling it "a serious concern".

"Failure to comply with this regulation will expose the offenders to strict actions," the authority said.

It is unclear if the warning is linked to any particular incident with air pollution in the port or the Fujairah anchorage area. Fujairah is the world's third-largest bunkering centre.

The UAE authorities have been recently enhancing environmental laws and regulations in ports and waters as part of the government's environmental policy goals, launched in December 2020.China set up its first pilot FTZ in Shanghai in 2013 and now has 21 such FTZs, which the government uses as test beds for reforms.

Global polymer freight rates *$/t*

Origin	Destination	Argus Low	Argus High	±	Source
Americas					
US	Asia	80	100	-	Argus
US	Turkey	60	70	-	Argus
Houston	Genoa	96	127	-	Freightos Derived
Houston	Antwerp	419	428	-	Freightos Derived
Houston	Santos	104	166	-	Freightos Derived
Houston	Buenos Aires	106	177	-	Freightos Derived
Houston	Buenaventura	123	163	-	Freightos Derived
Houston	Callao	123	160	-	Freightos Derived
Houston	Guayaquil	117	164	-	Freightos Derived
Houston	Valparaiso	115	115	-	Freightos Derived
Santos	Rotterdam	268	268	-	Freightos Derived
Russia and CIS					
Vladivostok	Shanghai	16	16	-	Freightos Derived
St Petersburg	Antwerp	74	74	-	Freightos Derived
Middle East and North Africa					
Jubail	Mumbai	45	50	-	Argus
Jubail	Karachi	65	70	▲	Argus
Jubail	China	72	80	▲	Argus
Jubail	Indonesia	76	84	▲	Argus
Jubail	Turkey	190	210	-	Argus
Jebel Ali	Shanghai	13	13	-	Freightos Derived
Port Said	Mersin	30	30	-	Freightos Derived
Port Said	La Spezia	26	26	-	Freightos Derived
Port Said	Antwerp	43	43	-	Freightos Derived
Southeast Asia					
Vung Tau	Antwerp	639	639	-	Freightos Derived
Vung Tau	Genoa	477	477	-	Freightos Derived
Northeast Asia					
South Korea	Turkey	580	600	-	Argus
Busan	Genoa	511	538	-	Freightos Derived
Busan	Antwerp	636	664	-	Freightos Derived
Busan	Santos	507	507	-	Freightos Derived
Busan	Buenaventura	505	505	-	Freightos Derived
Busan	Callao	505	505	-	Freightos Derived
Shanghai	Karachi	229	290	-	Freightos Derived
Shanghai	Mumbai Nhava Sheva	263	267	-	Freightos Derived
Shanghai	Mersin	489	490	-	Freightos Derived
Shanghai	Genoa	494	501	-	Freightos Derived
Shanghai	Antwerp	601	625	-	Freightos Derived
Shanghai	Santos	440	440	-	Freightos Derived
Shanghai	Buenaventura	507	507	-	Freightos Derived
Shanghai	Callao	507	507	-	Freightos Derived

Argus freight rates are as of the day of publication. Rates derived from Freightos data are of the previous day. Selected polymer spot freight rates are calculated by Argus methodology, based on underlying data from the online freight marketplace, Freightos. Visit www.freightos.com for complete lists of $/FEU rates in the wider spot container market.

Argus *Global Polypropylene* is published by Argus Media group

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ISSN: 2634-7962

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Petrochemicals

illuminating the markets