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Argus *Global Polyethylene*

Polyethylene prices and global coverage

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HIGHLIGHTS

US
November contracts start to settle flat

Latin America
Braskem lowers domestic prices in Brazil

Europe
Buyers await December offers, fundamentals weak

Russia and CIS
Prices fall on rising supplies

Turkey
Prices fall ahead of new offers

Middle East
Producers roll over prices

China
Import prices fall with crude

Southeast Asia and Vietnam
Mideast-origin supplies tighten

India
Stable prices on limited offers

Pakistan
Buyers stay cautious

Dalian Futures Market
LLDPE futures rise on improved fundamentals

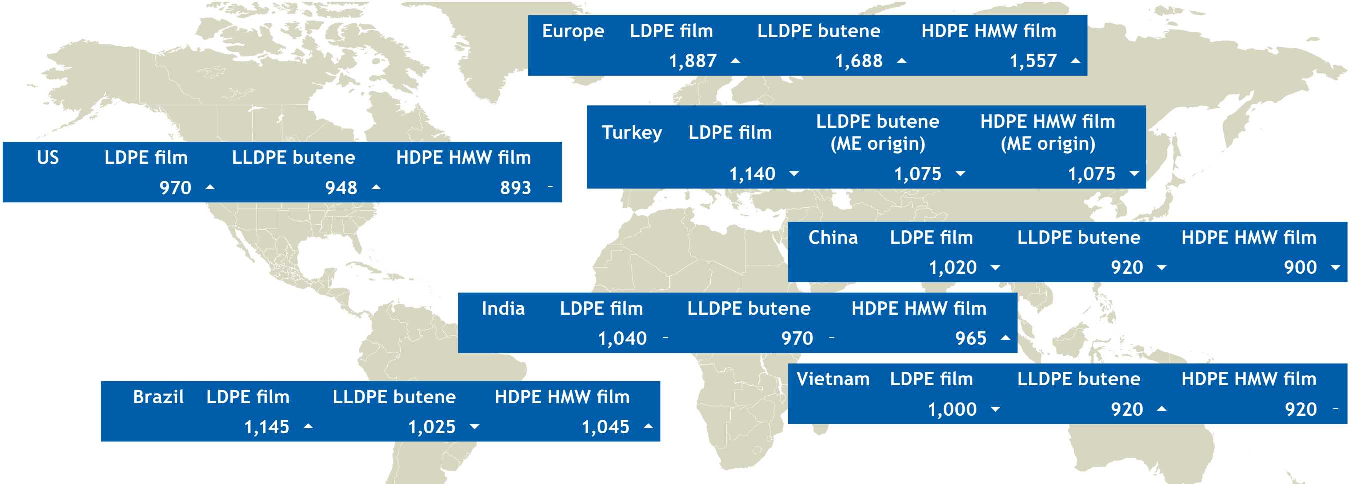
Fundamentals to watch
LyondellBasell restarting Berre complex ahead of plan
South Korean petchem producers cut cracker run rates
Lockdowns hammer petrochemical firm margins
Malaysia's PRefChem restarts Pengerang cracker
Packaging industry gives mixed response to EU rules
US Senate votes to avoid rail strike

Global polymer freight rates

Contract prices				$/t
	Timing	Contract marker		Argus Δ (month-on-month
US				
LDPE liner film	Nov	2,116	-	0.0
LLDPE butene	Nov	1,830	-	0.0
LLDPE hexene	Nov	1,874	-	0.0
LLDPE octene	Nov	1,918	-	0.0
HDPE injection	Nov	1,830	-	0.0
HDPE HMW film	Nov	1,830	-	0.0
HDPE BM	Nov	1,852	-	0.0
Western Europe				
LDPE liner film	Nov	1,887	▲	+54.0
LLDPE butene	Nov	1,688	▲	+51.0
HDPE injection	Nov	1,510	▲	+49.0
HDPE HMW film	Nov	1,557	▲	+49.0
HDPE BM	Nov	1,510	▲	+49.0

Spot prices				$/t
	Basis	Price		±
US exports				
LDPE liner film	fas/Houston bagged	948-992	▲	+11.0
LLDPE butene	fas/Houston bagged	926-970	▲	+99.0
HDPE injection	fas/Houston bagged	926-970	▲	+77.0
HDPE HMW film	fas/Houston bagged	882-904	-	0.0
HDPE BM	fas/Houston bagged	860-904	▲	+22.0
LDPE liner film	dap/Laredo railcar	860-926	▼	-66.0
LLDPE butene	dap/Laredo railcar	816-860	-	0.0
HDPE injection	dap/Laredo railcar	860-926	▼	-33.0
HDPE HMW film	dap/Laredo railcar	838-882	▼	-33.0
HDPE BM	dap/Laredo railcar	772-860	-	0.0
Brazil				
LDPE liner film	cfr	1,130-1,160	▲	+35
LLDPE butene	cfr	1,010-1,040	▼	-5
HDPE injection	cfr	1,000-1,020	▼	-30
HDPE HMW film	cfr	1,030-1,060	▲	+10
HDPE BM	cfr	980-1,000	▲	+10
West coast South America				
LDPE liner film	cfr	1,120-1,140	▲	+5
LLDPE butene	cfr	1,000-1,030	-	0
HDPE injection	cfr	980-1,030	▼	-20
HDPE HMW film	cfr	1,020-1,050	-	0
HDPE BM	cfr	980-1,040	▼	-5
Northwest Europe				
LDPE liner film	del	1,389-1,520	▼	-1
LLDPE butene	del	1,180-1,363	▼	-2
HDPE injection	del	1,180-1,389	▼	-2
HDPE HMW film	del	1,180-1,389	▼	-2
HDPE BM	del	1,180-1,363	▼	-2
Russia and CIS				
LDPE 15803	cpt	1,704-1,772	▼	-53
LDPE 15303	cpt	1,799-1,813	▼	-33
LDPE 10803	cpt	1,608-1,656	▼	-41
HDPE injection	cpt	1,526-1,567	▼	-20
HDPE HMW film	cpt	1,526-1,526	▼	-20
HDPE pipe/BM	cpt	1,526-1,676	▼	-42
Turkey				
LDPE liner film Mideast Gulf origin	cfr	1,120-1,160	▼	-10
LLDPE butene Mideast Gulf origin	cfr	1,050-1,100	▼	-30
LLDPE butene US origin	cfr	1,000-1,050	▼	-50
HDPE HMW film Mideast Gulf origin	cfr	1,050-1,100	▼	-20
HDPE BM Mideast Gulf	cfr	1,050-1,100	▼	-20
HDPE HMW film US origin	cfr	1,010-1,070	▼	-25

GLOBAL SNAPSHOT



Key prices $/t

	US fas Houston	Timing	Western Europe contract marker	Turkey spot cfr (Mideast origin)	China spot cfr (main origin)	Southeast Asia dutiable spot cfr	India spot cfr
LDPE liner film	948-992	Nov	1,887	1,120-1,160	1,010-1,030	1,030-1,050	1,030-1,050
LLDPE butene	926-970	Nov	1,688	1,050-1,100	900-940	950-970	950-990
HDPE HMW film	882-904	Nov	1,557	1,050-1,100	890-910	930-960	950-980

Spot prices $/t

	Basis	Price		±
Egypt				
HDPE HMW film Mideast Gulf origin	cif	1,070-1,150	-	0
LDPE liner film Mideast Gulf origin	cif	1,270-1,350	-	0
LLDPE butene Mideast Gulf origin	cif	1,070-1,150	-	0
GCC				
LDPE liner film	del	1,240-1,280	-	0
LLDPE butene	del	1,080-1,120	-	0
LLDPE hexene	del	1,540-1,610	-	0
LLDPE octene	del	1,660-1,760	-	0
HDPE HMW film	del	1,080-1,120	-	0
Jordan/Lebanon				
LDPE liner film	del	1,310-1,330	-	0
LLDPE butene	del	1,120-1,140	-	0
HDPE HMW film	del	1,100-1,120	-	0
Saudi Arabia (CMP)				
LDPE liner film	fob	983-1,003	▲	+11
LLDPE butene	fob	873-913	▲	+11
HDPE HMW film	fob	863-883	▲	+11
China				
LDPE liner film Main origin	cfr	1,010-1,030	▼	-10
LDPE liner film All origin	cfr	1,010-1,030	▼	-5
LDPE liner film domestic	import parity	1,037.74-1,078.78	-	-0
LLDPE butene Main origin	cfr	900-940	▼	-10
LLDPE butene All origin	cfr	900-940	▼	-5
LLDPE butene domestic	import parity	955.66-984.98	▲	+14
LLDPE hexene metallocene	cfr	1,140-1,160	▼	-10
HDPE HMW film Main origin	cfr	890-910	▼	-10
HDPE HMW film All origin	cfr	890-910	▼	-10
HDPE HMW film domestic	import parity	943.94-967.39	▲	+5
HDPE injection Main origin	cfr	880-910	▼	-10
HDPE injection All origin	cfr	880-910	▼	-10
HDPE BM Main origin	cfr	890-900	▼	-5
HDPE BM All origin	cfr	890-900	▼	-5

Notes: Main origin - Price of PE of GCC, Asean, South Korean and Indian origins. All origin - Price of PE, regardless of origin.

Spot prices $/t

	Basis	Price		±
Southeast Asia dutiable				$/t
LDPE liner film	cfr	1,030-1,050	-	0
LLDPE butene	cfr	950-970	-	0
LLDPE hexene metallocene	cfr	1,100-1,140	-	0
HDPE HMW film	cfr	930-960	▲	+5
Southeast Asia duty free				$/t
LDPE liner film	cfr	1,150-1,170	-	0
LLDPE butene	cfr	1,040-1,070	▲	+10
LLDPE hexene metallocene	cfr	1,160-1,200	-	0
HDPE HMW film	cfr	1,040-1,060	▲	+10
Vietnam				$/t
LDPE liner film	cfr	990-1,010	▼	-10
LLDPE butene	cfr	910-930	▲	+10
HDPE HMW film	cfr	910-930	-	0
Indonesia				$/t
LDPE liner film Mideast Gulf origin	cfr	1,030-1,050	-	0
LLDPE butene Mideast Gulf origin	cfr	950-970	▲	+10
HDPE HMW film Mideast Gulf origin	cfr	940-960	▲	+20
India				$/t
LDPE liner film	cfr	1,030-1,050	-	0
LLDPE butene	cfr	950-990	-	0
LLDPE hexene metallocene	cfr	1,150-1,170	▼	-105
HDPE HMW film	cfr	950-980	▲	+5
Pakistan				$/t
LDPE liner film	cfr	1,130-1,150	▼	-25
LLDPE butene	cfr	1,000-1,040	▼	-10
HDPE HMW film	cfr	950-990	-	0
Bangladesh				$/t
LDPE liner film	cfr	1,080-1,100	▼	-70
LLDPE butene	cfr	1,030-1,050	▼	-30
HDPE HMW film	cfr	1,020-1,050	▼	-25
Sri Lanka				$/t
LDPE liner film	cfr	1,160-1,180	▼	-80
LLDPE butene	cfr	1,050-1,080	▼	-75
HDPE HMW film	cfr	1,020-1,060	▼	-90
Nepal				$/t
LDPE liner film	cpt	1,160-1,180	▼	-50
LLDPE butene	cpt	1,100-1,120	▼	-20
HDPE HMW film	cpt	1,110-1,130	▼	-10

FEEDSTOCKS

Crude oil

Crude prices firmed this week as Covid-19 curbs eased in more parts of China, which might help to increase its oil demand. And US oil inventories posted the largest weekly drop in more than three years, owing to higher refinery runs and exports.

Crude prices also found support from a weaker dollar, spurred by signals from the Federal Reserve that it may slow its pace of rate hikes as soon as this month amid signs of easing US inflation. Meanwhile, US and other G7 policymakers are awaiting the outcome of the EU discussions in Brussels on setting a price cap level for Russian crude exports ahead of the 5 December implementation deadline.

Ethane

Mont Belvieu EPC ethane prices fell by 3.2pc from last week's levels, declining to 41.375¢/USG on 1 December, down from 42.75¢/USG on 23 November.

Naphtha

On the US Gulf coast, depressed buying interest persisted across the naphtha grades, but differentials for full-range N+A naphtha found room to inch higher behind a weakened gasoline basis. Some exports were heard done, which cleaned up some of the Gulf coast naphtha length and bolstering pricing sentiment. But year-end inventory taxes also weighed on naphtha demand, with most participants seeking to minimize inventory levels.

Northwest European naphtha margins fell to -$15/bl on 1 December, from around -$10/bl last week. Wider discounts for naphtha may point to annual destocking as trading firms are try to sell their supplies by the end of the year. One major demand outlet for naphtha, gasoline blending, is declining currently. The US, which is one of the biggest export markets for European gasoline, is building stocks of the product, limiting the westbound transatlantic gasoline arbitrage. This has combined with increased supply in northwest Europe as refinery runs rebound from a period of unplanned shutdowns, maintenance and strikes. Naphtha averaged around €28/t lower in November.

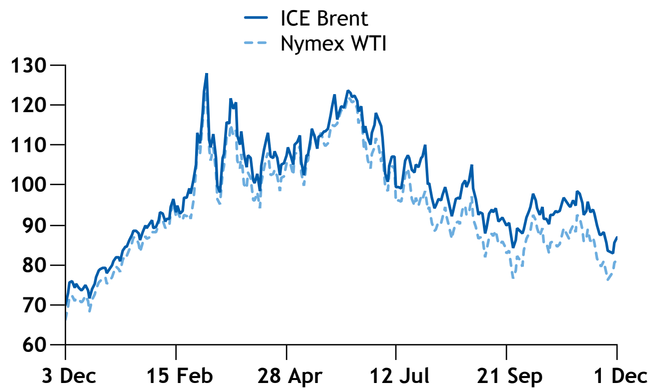
Activity was subdued in the Asian naphtha spot market. No petrochemical producers issued any tender to buy spot cargoes this week. But South Korean cracker operators have been engaging in private negotiations instead for their deals, market sources said. A South Korea-based trader said South Korean petrochemical producers have been doing private negotiations to get their cargoes from domestic suppliers or from commercial tank sources. This is likely because named

Crude				$/bl
	Effective date	Price		±
Ice Brent	2 Dec	85.57	▲	+0.16
Nymex WTI	1 Dec	81.22	▲	+3.28

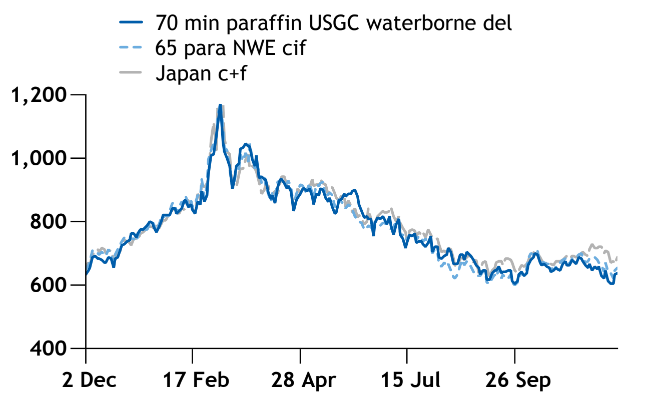
Naphtha				$/t
	Effective date	Price		±
70 min paraffin USGC waterborne del	1 Dec	638.30	▲	+24.88
65 para NWE cif	2 Dec	637.75	▼	-1.50
Japan c+f	2 Dec	670.00	▼	-29.00

Ethylene					
	Basis	Effective date	Price		±
del USGC ¢/lb	Oct	2 Nov	33.75	▼	-3.50
del USGC $/t	Oct	2 Nov	744.06	▼	-77.16
del Europe €/t	Dec	30 Nov	1,270.00	▼	-25.00
del Europe $/t	Dec	30 Nov	1,309.95	▼	-25.79
cfr NE Asia $/t	spot	30 Nov	880.00	-	0.00

Crude futures $/t



Naphtha spot prices $/t



origin cargoes are currently too expensive and would weigh further on cracker margins.

Ethylene

US spot EPC ethylene declined slightly to begin to the month, with December EPC volumes trading twice at 20¢/lb on 1 December. January EPC ethylene was offered as low as 20.75¢/lb. Baystar's 1mn t/yr ethane cracker in Port Arthur, Texas, returned to operations during the week after going down on 4 November on a system error. BASF-TotalEnergies' 1.14mn t/yr mixed-feed cracker, also in Port Arthur, Texas, remains down for planned maintenance.

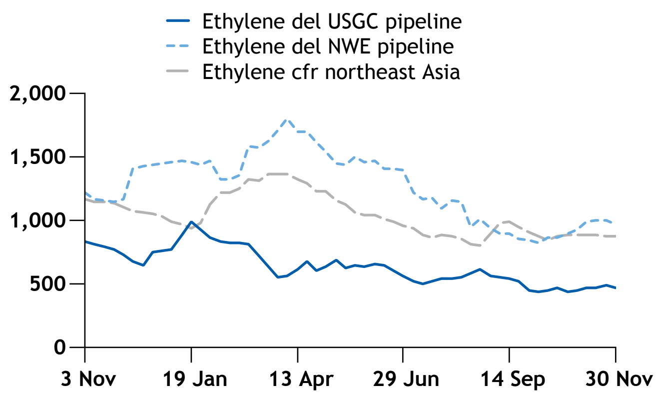
The European ethylene monthly contract price (MCP) for December settled on 30 November at €1,270/t, a decrease of €25/t from November. The reduction was driven by lower average naphtha costs, but the scale of adjustment was capped by negative cracker margins in some cases, despite weak demand. Operating rates across Europe are heavily reduced and are probably below those seen in the fourth quarter of 2008 at the start of the financial crisis. Producers with multiple crackers are choosing to run them all at lower rates rather than take one off line at this time of year, when freezing conditions can cause damage. *Argus* estimates that the overall operating rate is 60-65pc, against nameplate capacity. This includes crackers that are off line in France and the UK as well as those reduced for technical and commercial reasons. Operating rates vary widely, with some as low as 40pc while others are at 75pc — the higher rates are where crackers have access to alternative feedstock with stronger economics.

Asia-Pacific ethylene spot buying ideas on a fixed price basis hovered around $850-860/t cfr northeast Asia against selling ideas at $900-920/t cfr northeast Asia, during the week. No fixed price deals were heard done. Spot discussions were mainly on a floating price basis with premiums discussed at $20-25/t to cfr northeast Asia assessments. The 2023 term contract negotiations look tough and slow moving.

Market highlight

- The European ethylene monthly contract price (MCP) for December settled on 30 November at €1,270/t, a decrease of €25/t from November.

Ethylene spot prices $/t



Cracker margins

In the US, ethane cracking margins have remained steady throughout November as the ethane price has largely traded sideways, rangebound between 37.5-42.75¢/USG. Natural gas rose midmonth by a sharp 75pc from 3.57mm/Btu to 6.25mm/Btu in expectations of colder weather and uncertainty as to the expected restart timing of the Freeport LNG facility. Steady ethane prices have kept that feedstock's gross margins averaging just under 3¢/lb this month, according to an Argus model.

In Europe, the slight reduction in the monthly ethylene contract price was capped by negative cracker margins despite poor demand. Some buyers had targeted a larger decrease to reflect the weaker market fundamentals, but producers had little room to negotiate as naphtha cracking margins are already negative in some cases and a lower price would do nothing to increase demand in December.

In Asia-Pacific, feedstock naphtha prices were down by $27/t from the prior week, while propane prices were down by $6/t. Cracker margins remained depressed with naphtha cracker cash margins settled at negative $310/t, up by $63/t, while propane cracker cash margins were at negative $287/t, up by $11/t. Ethane-based cracker margins were largely stable at $142/t, given feedstock ethane and ethylene prices were steady.

PRICING ANALYSIS

US

US polyethylene (PE) contracts for November are starting to settle flat, marking the second rollover in two months. There has been some talk that some small-volume buyers who have not yet seen the price concessions that larger buyers saw earlier in the year might be offered some non-market adjustments to make their pricing more competitive, but for now, that information could not be confirmed.

PE operations in November remain at reduced rates with producers attempting to limit any inventory build at the end of the year. No major production problems were heard in the market, though sources indicated that many plants have been taking a few days of downtime here and there, which is keeping operating rates below 80pc. Shell is continuing to ramp up its new PE production in Monaca, Pennsylvania, with sources saying they are hearing very low prices being offered for widespec material.

Domestic spot prices are continuing to hold fairly steady, with ample availability of most grades. Generic prime high density polyethylene (HDPE) blow molding material was heard offered around 43-44¢/lb during the week, while generic prime linear low density polyethylene (LLDPE) was heard offered around 42-43¢/lb.

Final revised October production data showed total PE output reached 4.247bn lb, up by 5.3pc from September, with plants running on average at around 77.4pc of total capacity, according to the American Chemistry Council's Plastics Industry Producers' Statistics Group as compiled by Vault Consulting.

Total sales in October fell to 4.346bn lb, down by 5.9pc from September, with exports down by 8.8pc and domestic sales down by 3.8pc over the period. Year-to-date sales across all three resin families indicate certain applications, such as food packaging, continue to see year-over-year growth versus 2021, while other sectors, such as non-food packaging film, and non-packaging film are down for certain sectors such as construction and agricultural film. Sales into trash and can liners appear to be strong across all three major resin groups, while other applications are also seeing strength, such as HDPE pipe and conduit, which is up by 18.7pc year-to-date from 2021.

With sales exceeding output, producers drew down total inventories in October by around 99mn lb, with a 50mn increase in LLDPE inventory offset by declines in LDPE and HDPE inventories.

Demand in November and so far in December has been lacklustre, with buyers continuing to work down inventory levels before the end of the year. While some producers continue to describe demand as decent, recent economic news has been worrying. The Institute for Supply Management's Manufacturing PMI contracted in November for the first time since May 2020 following 29 consecutive months of growth. The November PMI fell to 49pc, with measures for new orders, new export orders, and employment showing contraction.

In positive news for the market, US President Joe Biden signed a bill to override union objections to a proposed rail worker contract, allaying the potential for a nationwide rail strike.

Export prices are in flux with some low prices still heard in the market, but other prices heard higher. LLDPE prices saw the biggest jump, with some traders saying that grade is slightly less available. Lower prices are available for certain destinations, and US producers are continuing to offer the lowest prices for direct sales to places such as Asia.

DAP Laredo prices are fairly steady, though traders said they do expect prices to fall by another few cents before the end of the year, particularly with new capacity ramping up.

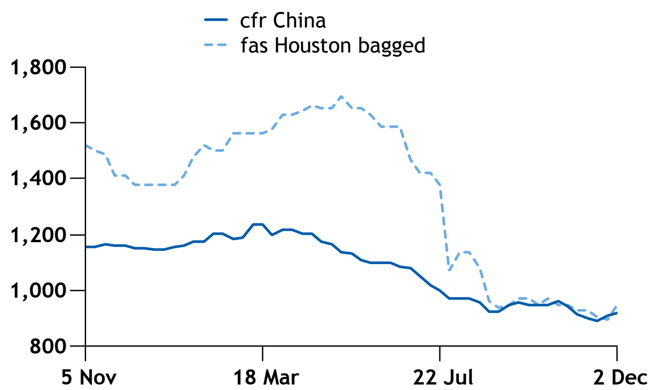
Mexico

Amid increasing supply of imported polyethylene (PE) from the US and falling prices, Mexican demand has diminished this week.

US contracts				¢/lb
	Timing	Argus Δ (month-on-month change)	Contract marker	Low / High ±
LDPE liner film	Nov	0.0	96.00	0.0/0.0
LLDPE butene	Nov	0.0	83.00	0.0/0.0
LLDPE hexene	Nov	0.0	85.00	0.0/0.0
LLDPE octene	Nov	0.0	87.00	0.0/0.0
HDPE injection	Nov	0.0	83.00	0.0/0.0
HDPE HMW film	Nov	0.0	83.00	0.0/0.0
HDPE BM	Nov	0.0	84.00	0.0/0.0

US exports			¢/lb
	Basis	Price	±
LDPE liner film	fas/Houston bagged	43-45	+0.5
LLDPE butene	fas/Houston bagged	42-44	+4.5
HDPE injection	fas/Houston bagged	42-44	+3.5
HDPE HMW film	fas/Houston bagged	40-41	nc
HDPE BM	fas/Houston bagged	39-41	+1.0
LDPE liner film	dap/Laredo railcar	39-42	-3.0
LLDPE butene	dap/Laredo railcar	37-39	nc
HDPE injection	dap/Laredo railcar	39-42	-1.5
HDPE HMW film	dap/Laredo railcar	38-40	-1.5
HDPE BM	dap/Laredo railcar	35-39	nc

US vs China LLDPE film prices $/t



This occurred as one of the country's PE producers is struggling to operate amid several accidents in its domestic operations.

On 27 November, Mexico's state-owned Pemex had to shut down its Cangrejera petrochemical hub in Coatzacoalcos after a pipeline blast occurred while workers were trying to fix an ethane leak.

The blast did not affect ethane supply from Pemex to PE producer Braskem Idesa, which operates in the same region, as the pipeline feeding the Pemex Cangrejera complex is separate from the ethane line that feeds the Braskem Idesa complex. Pemex has contractual obligations for the supply of ethane to Braskem Idesa.

The pipeline explosion occurred the same day as a furnace at the Cangrejera plant exploded, causing structural damage.

Pemex had to shut down its 300,000 t/yr capacity swing polyethylene (PE) plant in the petrochemical hub after this week's pipeline blast. Recent logistics problems have also affected the company's ability to move resin through railcars due to a contract renegotiation with rail operator Ferrosur.

Even with the plant down, Pemex said it has inventories of linear low density polyethylene (LLDPE) and low density polyethylene (LDPE) to provide customers with resin as soon as logistics allow.

Last week, the Mexican government issued its planned investments in Pemex for 2023, but made no mention to PE.

A company source told *Argus* that investments in the Cangrejera and Morelos complexes, where the crackers and PE plants are located, would have a positive impact on PE production, since many of the failures Pemex have had in recent years relate to the lack of reliability of auxiliary services such as energy, steam, and water.

Latin America

The upward trend seen in Latin American polyethylene (PE) demand since last week continued, with several deals heard done for imported material across the region as a result of increased consumption stimulated by the Fifa World Cup tournament in Qatar, which started on 20 November.

The increase in deals comes as there is more availability of import offers to Latin American buyers. *Argus* heard big customers in the west coast South America (WCSA) acquiring 700t of high density polyethylene (HDPE) injection molding this week.

But buyers of small volumes have a different concern, as they are trying to get rid of older inventories and are not buying imports at the moment, especially in Peru. This is also the case in Chile, where demand is not picking up and remains very low.

Many customers in the WCSA have contracts with Brazilian resin producer and exporter Braskem, which forces them to buy a certain amount on a monthly base. As a result, these customers are not importing other resin, as they just don't need more PE.

Meanwhile, offers of Middle Eastern PE were heard in Latin America too. Prices for this origin have been falling over the last few weeks but are still too high for most buyers in the region. But according to a trader acting in Brazil, Middle Eastern material is on the verge of becoming competitive. Decreased freight prices and lead times are also a positive advantage for sellers in the Middle East.

On the other hand, Chinese offers with higher fob prices are not competitive at the moment despite declining freight prices from Asia to South America.

In Brazil, *Argus* heard a South African resin producer looking for partnerships to distribute its material in the country and re-export it to neighboring countries of Argentina and Colombia through Atlantic Ocean ports. According to a source with knowledge of the matter, discussions are currently advanced.

US produced PE is also available for Latin American markets, but volumes has been decreasing week over week. However, this is expected to change with material from the new Shell PE plant in the US. A trader acting in Brazil said his company already allocated 25 railcars of this material and is expecting to offer it starting in January. An impact in prices should be felt with those increased volumes for Latin American markets.

In the meantime, Brazilian resins distributors complain about imports competition from the Manaus Free Zone. The PE sales from distributors fell 9pc in October from September and they are almost the same in the cumulative period year-on-year through October. Plastic packaging production in 2022 through September fell 7pc from 2021.

With more available PE from the international market at very competitive prices, Brazil's Braskem reduced domestic prices in December, after rolling them in November.

The December domestic prices adjustments, converted by the BRL/USD rate of 5,2747 recorded in November's average, were -\$57/t for HDPE and -\$38/t for linear-low-density PE (LLDPE) and low-density PE. PE domestics prices cumulate a price contraction from July to December of \$550/t for HDPE, \$645/t for LLDPE, and \$626/t for low density polyethylene (LDPE), converted by the same exchange rate.

In Argentina, the government announced a 20pc increase in the minimum wage to guarantee purchasing power in the face of high inflation in the country, forecast to hit 100pc this year. The government action happened after reaching an agreement with business and trade union entities. The measure will favor local consumers and producers.

In Honduras, *Argus* heard some US produced LLDPE contracts closed at $1,050/t cfr main ports.

Europe

The European polyethylene (PE) market remains fundamentally weak at the start of December, with demand depressed. Market participants remained largely on the sidelines and awaited clarity on feedstock ethylene's December monthly contract price (MCP), which settled earlier this week at a €25/t decrease. It remains too early to assess the pricing of freely negotiated PE contracts for December, with many sellers yet to table their offers. But against the backdrop of weak fundamentals and a lack of confidence in the market, producers are expected to continue to struggle to defend their margins.

Demand weakness stems from the entire value chain remaining focused on keeping inventories low, with buyers and sellers avoiding taking positions with excess inventories ahead of an uncertain economic outlook for the first quarter. The only exceptions are in cases where some buyers could be maintaining their contractual offtake to reach the thresholds required for higher rebates on their contract prices. But with fears of a prolonged recession, hesitation is widespread and buyers are mostly procuring on a hand-to-mouth basis.

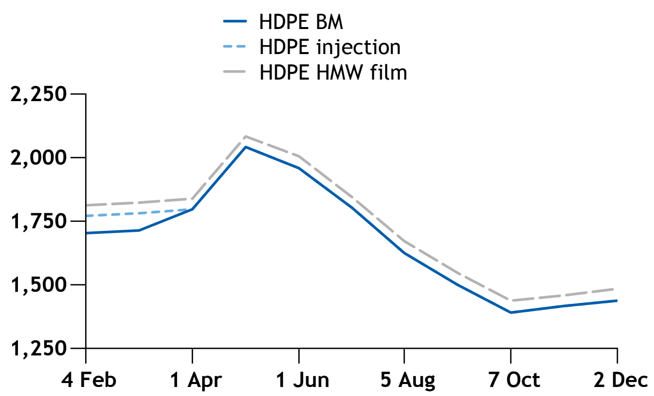
Economic indicators remain gloomy, with inflation remaining above average at double digits, with the latest reading of 10pc for November doing little to alleviate concerns, despite a slight decrease of 60 basis points from a month earlier. The eurozone's manufacturing sector contracted again in November, although by less than in October. The eurozone's manufacturing purchasing managers index (PMI) was 47.1 in November, compared with 46.4 in October. This was the fifth successive month of a reading below 50, which indicates contraction. But it is too early to interpret this as a turning point, especially as Europe's energy supply security will be put to the test in the coming weeks as temperatures are expected to drop and natural gas stocks are drawn down. In the worst case, another surge in natural gas and electricity prices could revive challenges for European industries, and the risk of power shutdowns continues to exacerbate the concerns of many, with the polymers value chain being no exception.

Consumer confidence remains low as the cost of living crisis continues to bite, dampening discretionary spending in particular but also on basic outgoings to an extent. Measures have been announced by various governments to alleviate the impact on social welfare, but so far hardly any segment appears to be immune from this cyclical downturn. The only exception arguably could be for medical applications, but that makes up a relatively small share of the market.

Western Europe contracts				€/t
	Timing	Argus Δ (month-on-month change)	Contract marker	Low / High ±
LDPE liner film	Nov	+25.0	1,800	0.0/+50.0
LLDPE butene	Nov	+25.0	1,610	0.0/+50.0
HDPE injection	Nov	+25.0	1,440	0.0/+50.0
HDPE HMW film	Nov	+25.0	1,485	0.0/+50.0
HDPE BM	Nov	+25.0	1,440	0.0/+50.0

Northwest Europe spot			€/t
	Basis	Price	±
LDPE liner film	del	1,325-1,450	-12
LLDPE butene	del	1,125-1,300	-12
HDPE injection	del	1,125-1,325	-13
HDPE HMW film	del	1,125-1,325	-13
HDPE BM	del	1,125-1,300	-12

West Europe HDPE contract prices €/t



Some converters have also hinted at their intention to reduce contractual offtake, or even to opt against renewing some of their annual contracts — particularly those with formula pricing tied to the ethylene MCP. These buyers are looking to take a more flexible position on procurement, replenishing supplies as needed through spot volumes. And a minority of buyers have also indicated their intent to shift to spot procurement entirely, to take advantage of lower prices — especially on imports — owing to the expected weakness ahead in the spot market. But not all buyers have the flexibility to switch supplies, especially when constrained by stringent requirements on specifications.

Producers in Europe are focused on keeping their plants' run rates reduced. In many cases, *Argus* understands these have been at around operational minimums so far in the fourth quarter. Some sellers are still keen to increase sales, where under pressure to reduce inventories, but many producers are not eager to produce and sell extra volumes, given the risks of supply overhangs and a further loss in margins. As such, constrained supplies in Europe are ample to meet weak demand, and a fragmented picture has emerged, with availability of some specific grades becoming more limited.

European producers remain at a cost disadvantage to their peers in other regions — particularly those in the US and Asia. And they have recognised that defending margins on their core demand base — as opposed to sales maximisation — could be a strategy more suited in the current market. This is leading market participants to anticipate a fragmented pricing picture persisting for an extended period, with prices of many European grades remaining at a disconnect to their substitutes from overseas.

The arbitrage remains wide open on PE imports from the US – with a supply overhang dragging down export prices in that region. Some logistical bottlenecks persist on transatlantic routes for container shipping, but vessel schedule reliability has improved in recent weeks. Given depressed demand in Europe, it remains unclear how many imports from the US will make it to Europe's main ports in December and the first quarter. For all PE grades, we have notionally reduced the low end of spot price ranges by €25/t this week. The high ends are assessed stable in a market devoid of any action and with market participants indicating largely stable prices for now, awaiting offers from European producers for December supplies.

We have finalised the November *Argus* deltas for all PE grades at €25/t increases this week. Given the €35/t increase in feedstock ethylene's November MCP, producers pushed to expand margins and targeted increases of as much as €50/t on freely negotiated PE contract prices. But buyers pushed back against these efforts and were focused on arresting the upside pressures on contract pricing. Consequently, settlements were heard in a wide range of between rollovers and €50/t increases, depending on grades and inventory positions of the counterparts, among other reasons. And settlements in the second half of November were more skewed towards the lower end of the range and rollovers were more prevalent, with some suggestions of buyers' appetite waning further.

Russia and CIS

Prices for LDPE grades continued to fall this week owing to rising supplies. Prices for HDPE pipe and blow-moulding grades also weakened.

LDPE-grade 15803 fell to Rbs104,167-108,333/t ($1,704-1,772/t) cpt Moscow this week from Rbs104,167-112,083/t.

LDPE produced by Sibur's Kazanorgsintez plant was available this week at Rbs108,333/t cpt Moscow. The product was last offered at this price in the first 10 days of September.

The price for LDPE-grade 15303 eased to Rbs110,000-110,833/t ($1,799-1,813/t) cpt Moscow from Rbs110,000-112,083/t a week earlier.

Russia and CIS domestic			Roubles/t
	Basis	Price	±
LDPE 15803	cpt inc VAT	125,000-130,000	-2250
LDPE 15303	cpt inc VAT	132,000-133,000	-750
LDPE 10803	cpt inc VAT	118,000-121,500	-1500
HDPE injection	cpt inc VAT	112,000-115,000	0
HDPE HMW film	cpt inc VAT	112,000-112,000	0
HDPE pipe/BM	cpt inc VAT	112,000-123,000	-1500

Prices for LDPE-grade 10803 this week were Rbs98,333-101,250/t ($1,608-1,656/t) cpt Moscow, compared with Rbs99,167-102,917/t a week earlier. Rosneft's Angarsk polymer plant increased LDPE production in December as a result of ethylene oversupply, market participants sais. Polyvinyl chloride (PVC) producer Sayanskkhimplast, which uses ethylene as a feedstock, reduced ethylene purchases owing to weak demand for PVC.

HDPE pipe and blow-moulding grades were assessed at Rbs93,333-102,500/t ($1,526-1,676/t) cpt Moscow this week, compared with Rbs93,333-105,000/t a week ago. HDPE pipe grade produced by Gazprom Neftekhim Salavat was sold out at the end of November, traders said. The plant is going to produce HDPE injection grade this month to supply its term contract, and will not be offering HDPE pipe grade to the market. HDPE blow-moulding grade produced by Kazanorgsintez was also sold out, and Sibur will load the product only on to meet long-term contract commitments until the end of the month.

Prices for HDPE film grades have remained unchanged at Rbs93,333/t ($1,526/t) cpt Moscow since the beginning of September.

The price range for HDPE injection grades has also stayed unchanged at Rbs93,333-95,833/t ($1,526—1,567/t) cpt Moscow.

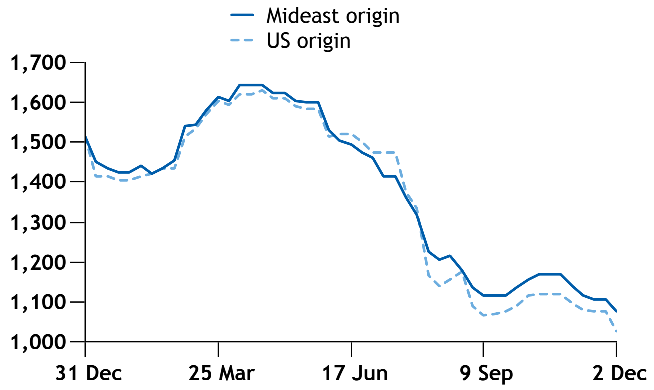
Turkey

Polyethylene (PE) import prices to Turkey fell this week as participants sought to run down stocks and owing to continued weak demand for end-products.

With year end approaching, market participants are seeking to reduce stocks to improve their financial liquidity. This is one factor pushing prices down, although most market participants believe they have reached a floor.

After significant disruptions to logistics over the past couple of months, Iranian suppliers have returned, which will gradually increase the downward pressure on PE prices. At last week's Plast Eurasia fair, they showed a willingness

Turkey LLDPE film prices $/t



to revise their pricing strategy to make Iran-origin materials more competitive in the market. But major suppliers are yet to announce December offers, despite the month having started. Prices will become clearer next week.

Middle East-origin HDPE film was assessed at $1,050-1,100/t cfr this week, down by $20/t at both ends of the range compared with the last week's assessment. US-origin HDPE film was assessed at $1,010-1,070/t cfr, $40/t lower at the low end and $10/t lower at the high end than last week. Russian material was available at $1,050-1,070/t cfr and Iranian material was offered at $1,090-1,150/t cpt. Uzbek-origin HDPE film was offered at $1,150-1,160/t cfr. No offers were heard from the South Korean suppliers owing to ongoing strike action by truck drivers.

Middle East-origin HDPE blow-moulding was assessed at $1,050-1,100/t cfr, down by $20/t at both ends, valuing it at around the same level as HDPE film grade. Iranian material was offered at $1,070-1,130/t cpt and offers from the US emerged at $1,020-1,080/t cfr. Russian offers were heard at $1,070-1,080/t cfr and Uzbek material was available at $1,150-1,160/t cfr.

Middle East-origin LDPE was assessed at $1,120-1,160/t cfr, a decrease of $10/t at both ends of the range from last week. Iranian offers were heard at $1,130-1,170/t cpt and offers from the US emerged at $1,100-1,160/t cfr. Russian offers were heard at $1,150/t cfr, and domestic Petkim offered its material at $1,260/t plus value-added tax (VAT).

Middle East-origin LLDPE butene was assessed at $1,050-1,100/t cfr, a decrease of $40/t at the low end and $20/t at the high end compared with last week's assessment. US-origin LLDPE butene was assessed at $1,000-1,050/t cfr, a decrease of $50/t at both ends of the range from last week. Iranian offers were available at $1,110-1,130/t cpt and Russian offers emerged at $1,050-1,080/t cfr.

Egypt

Polyethylene (PE) import prices in Egypt rolled over this week, with trading activity being very limited.

The market remains subdued and procurements are on standby, with buyers unable to obtain letters of credit for new transactions. The central bank has restricted buyers' access to credit and the government has prioritised clearing the material stuck at ports for the past several months, in efforts to improve the deficit on balance of payments and clear backlogs at ports. There are discussions as to whether to devalue the Egyptian pound further by 10pc to better align its value with the US dollar shortage in the country. Some PE sellers ask for full payment in advance as a condition to their offers. Upticks in shipments of new imports into Egypt are not expected to take place until January at the earliest.

Middle East-origin HDPE film prices were assessed at $1,070-1,150/t cif this week, stable on both ends. Middle East-origin LDPE was assessed at $1,270-1,350/t cif, unchanged compared with last week's assessment. Middle East-origin LLDPE butene was assessed at $1,070-1,150/t cif, rolled over from last week's assessment.

Middle East

Gulf Co-operation Council (GCC) PE prices were stable as key producers rolled over offers for December shipments. Low-density PE (LDPE) film remained at $1,240-1,280/t del GCC. Linear LDPE (LLDPE) film was rolled over at $1,080-1,120/t del GCC. LLDPE hexene held at $1,540-1,610/t del GCC. LLDPE octene was assessed stable at $1,660-1,760/t del GCC. High-density PE (HDPE) film was rolled over at $1,080-1,120/t del GCC.

PE prices were stable in Jordan and Lebanon as buyers await new offers for December shipments. LDPE film held at $1,310-1,330/t del Jordan/Lebanon. LLDPE film was rolled over at $1,120-1,140/t del Jordan/Lebanon. HDPE film was stable at $1,100-1,120/t del Jordan/Lebanon.

Shrinking global demand continues to keep market participants cautious. Buyers in the Middle East have avoided making unnecessary purchases. The continued price falls in previous months have deterred buyers from overstocking on fears of continued losses if the bearish run continues. Most buyers are only looking to purchase as needed to fulfill contractual obligations and orders of finished goods.

PE producers are also looking to offload excess inventories. Supplies have outweighed demand in recent months. Producers are keen on offloading excess cargoes to improve balance sheets for the end of the year. But this has not been easy with buyers' cautious attitudes. Some producers could have possibly reduced run rates because of inventory build-ups, according to participants. Further price cuts could happen in late December if inventories remain high and producers need to encourage buying.

As demand has stayed muted for an extended period this year, participants expect producers to announce more turnarounds scheduled for the first and second quarter of next year. This could hopefully balance out supply with demand, firm up prices and bring some stability to the market. Expectations for a V-shaped recovery in the coming months are limited. But participants are hoping for some stability heading into 2023.

Freight rates have helped producers recover netbacks to certain regions, as rates approach pre-Covid-19 pandemic levels. Demand for imports of consumer goods has shrunk globally, resulting in more available vessels. But the fall in demand for consumer goods has also resulted in weaker resin demand as consumers tighten their spending.

Saudi PE producer Yansab, an affiliate of state-owned petrochemical producer Sabic, will start a 53-day turnaround at its petrochemical complex in Yanbu on 10 January next year. The complex has a 1.3mn t/yr ethylene production capacity and 400,000 t/yr of LLDPE and HDPE.

Saudi PE producer Sharq will be carrying out planned maintenance during 17 November-16 December. It operates a 400,000 t/yr HDPE plant and a 1.15mn t/yr LLDPE/HDPE swing plant.

China

Chinese PE markets rebounded after falling on 28 November. Linear low-density polyethylene (LLDPE) futures on the Dalian Commodity Exchange rebounded to 8,100 yuan/t on 1 December compared with Yn7,981/t a week earlier. Rising Covid-19 cases forced some cities to tighten curbs again, although some such as south China's Guangzhou were easing their lockdown policies. Sentiment was mixed and high production costs lent support to prices.

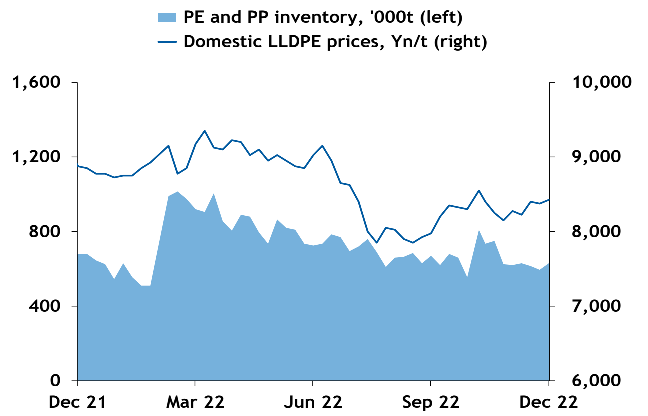
Inventories at major Chinese producers Sinopec and PetroChina rebounded to 630,000t from 595,000t a week earlier. Current inventories were lower compared with710,000t during the same period last year because of production cuts throughout the year.

Limited overseas offers to China were available. Saudi-origin LLDPE was offered at $970/t and low-density polyethylene (LDPE) at $1,010/t cfr China for December loading. Oman-origin LLDPE was offered at $900/t. Singapore-origin LLDPE with a zero import tariff was offered at $1,000/t cif China, loading in December. South Korea-origin high-density polyethylene (HDPE) injection was offered at $920/t.

The cfr market fell with falling crude earlier this week. Spot LDPE was down by $10/t to $1,010-1,030/t cfr China.

China domestic				Yn/t
	Basis	Price		±
LDPE liner film	ex-works	9,000-9,350	▼	-75
LLDPE butene	ex-works	8,300-8,550	▲	+50
HDPE HMW film	ex-works	8,200-8,400	▼	-25

Sinopec and PetroChina inventory vs LLDPE prices



Market highlight

■ 1mn t/yr of PE capacity in China is poised to start up in 2023

HDPE film prices fell by $10/t to $890-910/t cfr China, while LLDPE dropped by $10/t to $900-940/t cfr China. Offers for duty-free metallocene LLDPE fell to $1,180/t with spot trade prices also dropping to $1,140-1,160/t cfr China.

Chinese domestic LLDPE slightly rebounded along with the futures market to Yn8,300-8,550/t. HDPE film fell by Yn25/t to Yn8,200-8,400/t. LDPE film prices fell the most, down by Yn75/t to Yn9,000-9,350/t ex-works in east China.

South Korean truck drivers have gone on strike for the second time this year, threatening to disrupt transportation of petrochemicals. The export of South Korea-origin PE and PP has slowed since last week and may drop further.

China's apparent consumption of PE during January-October matched the same period in 2021, reversing negative growth during January-September with a marked increase in domestic production in October.

Export orders for finished goods are likely to dwindle from late November. The peak demand season for agricultural film has drawn to an end with downstream converters cutting their operating rates to 40pc, down by five percentage points from last week. Operating rates in east China's Shandong province also dropped to 42pc, down by six percentage points from last week.

Average operating rates at Chinese PE plants slightly increased to 86pc this week. A total of 2.41mn t/yr of production capacity is being shut for maintenance in late November and early December. Zhejiang Petrochemical has postponed maintenance on its 350,000 t/yr HDPE unit to early December. Sinopec Zhenhai phase 2's 300,000 t/yr HDPE No.1 unit will be taken off line from 10 December until February next year. Sinopec Sabic Tianjin's 300,000 t/yr HDPE unit was down from 30 November to 9 December.

Capacity growth slowed. About 2.2mn t/yr of new production capacity has delayed start-ups to the end of the year, including Shandong Jinhai's 400,000 t/yr HDPE, Guangdong Petrochemical's 400,000 t/yr HDPE and 800,000 t/yr LLDPE/HDPE and Sinopec Hainan's 300,000 t/yr HDPE and 300,000 t/yr LLDPE/HDPE units. But there could be further delays because of weaker margins.

A coal-based 300,000 t/yr LLDPE/HDPE unit is also under construction and its start-up schedule has been delayed with no specified dates. Another 1mn t/yr of PE capacity is poised to start up in 2023, adding to a total of 9.35mn t/yr during 2021-23.

China's PE exports remained largely subdued over the past three months. But total exports of PE in October still increased by 21pc from September to 58,830t.

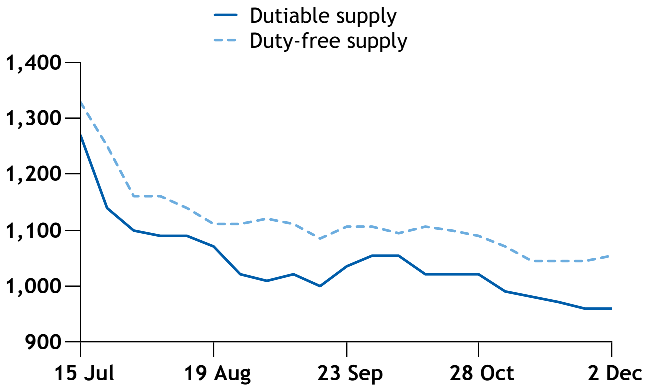
Southeast Asia and Vietnam

Southeast Asian PE prices increased slightly on the back of tighter supplies and narrower price gaps against PE prices in the key Chinese market. Continuing and scheduled maintenance plans have tightened PE allocations from selected Middle East producers to southeast Asia for December shipments, allowing these producers to keep their offers firm. The easing of Covid-19 restrictions in China has boosted sentiment and buying interest in the key Asian market in the past few weeks. Narrower price gaps between PE prices in China and southeast Asia have encouraged international sellers to increase exports to China for higher volume transactions.

But higher or more substantial price hikes are likely difficult to achieve, with regional converters continuing to buy on as-needed basis and unwilling to increase PE stocks approaching the end of the year. The availability of regional and domestic PE supplies seemed ample despite production cuts, forcing producers to sell with losses. While both overseas and regional PE supplies to southeast Asia have tightened, weaker downstream consumption has continued to balance the market, capping price gains. The uncertainty in Chinese demand in the near future and a challenging global economic outlook next year also continued to affect overall sentiment.

Regional producers are expected to maintain or further

SE Asia LLDPE film prices $/t



cut production from this month, although this could be balanced by a seasonal demand lull during the end of the year. Malaysia's PRefChem is restarting its 1.3mn t/yr naphtha cracker at Pengerang following a shutdown since 27 October. The producer is expected to restart its 350,000 t/yr LLDPE and 400,000 t/yr HDPE units in late December and January respectively.

Thailand's PTT shut its 250,000 t/yr HDPE unit for a 10-day maintenance from around 20 November. Thailand's SCG has extended the shutdown of its 800,000 t/yr Rayong-based cracker from November to the end of December, with its HDPE production expected to remain restricted during this period. Indonesia's Chandra Asri has shut its sole cracker and downstream 736,000 t/yr PE plant from 11 November for maintenance, in response to earlier unresolved issues at its cracker facilities. The shutdown's duration remained unclear. Malaysia's Lotte Titan and Philippine producer JG Summit have continued to run their PE units at 70-80pc because of weaker production margins.

Dutiable LDPE film prices were stable at $1,030-1,050/t cfr southeast Asia. Qatar-origin LDPE film offers were at $1,050/t cfr southeast Asia. LLDPE film prices were stable at $950-970/t cfr southeast Asia. Oman-, Saudi Arabia- and Qatar-origin LLDPE film offers were at $940-990/t cfr southeast Asia. HDPE film prices rose slightly to $930-960/t cfr southeast Asia. Oman- and Qatar-origin HDPE film offers were at $930-960/t cfr southeast Asia. LLDPE metallocene film prices were stable at $1,100-1,140/t cfr southeast Asia. South Korea-origin LLDPE metallocene film offers were at $1,170-1,200/t cfr southeast Asia.

Duty-free LDPE film prices were stable at $1,150-1,170/t cfr southeast Asia. Thailand-origin LDPE film offers were at $1,150-1,200/t cfr southeast Asia. Malaysia-origin LDPE film offers were competitive at $1,000/t cfr southeast Asia but further details were unclear. LLDPE film prices rose to

$1,040-1,070/t cfr southeast Asia. Malaysia- and Thailand-origin LLDPE film offers were at $1,040-1,090/t cfr southeast Asia. HDPE film prices rose slightly to $1,040-1,060/t cfr southeast Asia. Malaysia- and Thailand-origin HDPE film offers were at $1,050-1,080/t cfr southeast Asia. Duty-free LLDPE metallocene film prices were stable at $1,160-1,200/t cfr southeast Asia. Singapore- and Thailand-origin LLDPE metallocene film offers were at $1,150-1,200/t cfr southeast Asia.

PE prices were largely stable in Vietnam, with financing issues and lower orders of finished products continuing to cap resin purchases. LDPE film prices fell to $990-1,010/t cfr Vietnam. Qatar- and Saudi Arabia-origin LDPE film offers were at $980-1,030/t cfr Vietnam. LLDPE film prices rose by a modest $10/t to $910-930/t cfr Vietnam. Oman-, Saudi Arabia- and Qatar-origin LLDPE film offers were at $900-930/t cfr Vietnam with deals. US-origin LLDPE film offers were at $900-920/t cfr Vietnam. HDPE film prices were rolled over at $910-930/t cfr Vietnam on limited spot discussions. Qatar-, Kuwait- and Oman-origin HDPE film offers were at $930/t cfr Vietnam. Saudi Arabia-origin HDPE blow molding offers were at $930/t cfr Vietnam.

South Asia

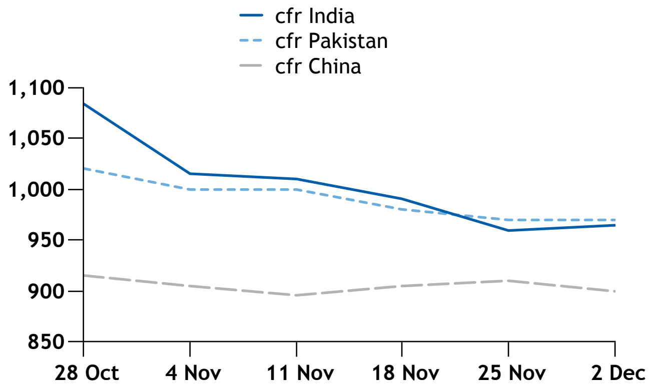
Indian PE prices were stable as discussions were limited. LDPE film was stable at $1,030-1,050/t cfr India. Middle East cargoes were offered at $1,050/t cfr. LLDPE film was stable at $950-990/t cfr India. Deals for cargoes from the Middle East were done at $950-990/t cfr this month. LLDPE hexene was $105/t lower at $1,150-1,170/t cfr. A key producer offered cargoes at $1,170/t cfr. HDPE film was $5/t higher at $950-980/t cfr India. Cargoes from the Middle East were sold at $960-980/t cfr for December shipments. A Saudi producer initially offered cargoes at $1,070/t but eventually sold cargoes at $980/t cfr.

Domestic producers reduced LDPE prices by 2,500 rupees/t across all grades except LDPE extrusion coating that was cut by Rs3,500/t. Producers cut HDPE prices by Rs4,000/t across all grades except for HDPE pipe that was reduced by Rs2,000/t. LLDPE prices were also reduced by Rs4,000/t except for LLDPE injection molding that was reduced by Rs5,000/t.

Margin pressures continue to affect Indian producers with some producers reducing run rates to manage narrowing margins. Higher feedstock costs and lower polymer prices have shrunk margins considerably. Producers with integrated refineries are also considering the possibility of selling feedstock instead of polymers, according to market participants. This is because of better profits that could be obtained from taking advantage of the current high feedstock environment.

Converters focused on exporting finished goods have

South Asia vs China HDPE prices $/t



been hit the hardest as demand for finished goods from the US and Europe has been muted, given current economic uncertainty. Run rates at these converters have fallen. Sellers have noted reduced buying interest from affected customers. But converters and final goods manufacturers that are focused domestically have shown more interest in restocking. These buyers were comfortable with restocking at current price levels as they feel that it is low enough.

The start-up of state-controlled HMEL's 800,000 t/yr LLDPE/HDPE swing plant and 450,000 t/yr HDPE plant has been delayed to January next year, according to market participants. The producer commissioned its dual-feed cracker with naphtha on 25 November. State-controlled IOC expects to end turnarounds at its 300,000 t/yr HDPE plant and 350,000 t/yr HDPE/LLDPE swing plant in Panipat in early December. The producer began maintenance on 30 September.

State-controlled PE producer Opal will be maintaining operating rates at 85-90pc until the end of the year as gas availability has been limited. The producer uses a mixed feed of naphtha and gas and will still be able to run its 340,000 t/yr HDPE and 720,000 t/yr LLDPE/HDPE swing plants despite shortages at reduced rates.

But state-controlled Gail has had to shut its PE operations entirely. Margins were negative and the producer would have incurred large losses if it continued running its plants, according to participants. Some expect the producer to keep PE operations shut until March. Gail produces 490,000 t/yr of HDPE and has two LLDPE/HDPE swing plants with a combined capacity of 610,000 t/yr.

Pakistani PE was soft to stable as producers continued announcing December offers. LDPE film was $25/t lower at $1,130-1,150/t cfr Pakistan. Offers from Qatar were at $1,140/t cfr. A Saudi producer offered cargoes in the range assessed. LLDPE film was $10/t lower at $1,000-1,040/t cfr Pakistan. Offers from Saudi Arabia were at $1,000 cfr. An Omani producer offered cargoes at $1,040/t cfr. A Qatari producer offered cargoes at $1,120/t cfr. But participants deemed this to be too high. HDPE film was stable at $950-990/t cfr Pakistan. Cargoes from Oman were offered at $960/t cfr. Buying interest has firmed on expectations of higher prices in the coming months. Some participants feel that markets are starting to bottom out. But this has been challenged by issues in securing credit. Buyers with access to credit are looking to buy up cargoes.

Bangladeshi PE prices fell as key producers announced new offers for December. LDPE film was $70/t lower at $1,080-1,100/t cfr Bangladesh. A Saudi producer offered cargoes at $1,100/t. LLDPE film was $30/t lower at $1,030-1,050/t cfr Bangladesh. A Saudi producer initially offered cargoes at $1,050/t cfr but later reduced it to $1,030/t. Cargoes from Oman were offered at $1,050/t cfr. HDPE film was $25/t lower at $1,020-1,050/t cfr Bangladesh. Cargoes from the Saudi Arabia were initially offered at $1,030/t cfr. This was later reduced to $1,020/t cfr. An Omani producer offered cargoes at $1,050/t cfr.

Sri Lanka's PE prices similarly fell as new offers were announced for December shipment. LDPE film was $80/t lower at $1,160-1,180/t cfr Sri Lanka. Cargoes from Saudi Arabia were offered at $1,180/t cfr. A Qatari producer offered cargoes at $1,180-1,210/t cfr. LLDPE film was $75/t lower at $1,050-1,080/t cfr Sri Lanka. Cargoes from Saudi Arabia were offered at $1,05001,070/t cfr. Qatari cargoes were offered at $1,080/t cfr. HDPE film was $90/t lower at $1,020-1,060/t cfr Sri Lanka. A Saudi producer offered cargoes at $1,010-1,020/t cfr. Cargoes from Qatar were offered at $1,080/t cfr.

Nepalese PE values fell with the rest of south Asia as key producers announced new offers. LDPE film was $50/t lower at $1,160-1,180/t cpt Nepal. A key Saudi producer initially offered cargoes at $1,260/t cif Kolkata. This was later reduced to $1,110/t cif Kolkata. LLDPE film was $20/t lower at $1,100-1,120/t cpt Nepal. A key Saudi producer initially offered cargoes at $1,110/t cif Kolkata then cut its offer to $1,050/t cif Kolkata. HDPE film was $10/t lower at $1,110-1,130/t cpt Nepal. A key Saudi producer cut its offer from $1,110/t cif Kolkata to $1,060/t cif Kolkata. Shipping costs from Kolkata to Nepal's inland port of Birgunj were $70/t.

FUNDAMENTALS

Global production news

LyondellBasell restarting Berre complex ahead of plan

LyondellBasell said it will begin the process of restarting its petrochemical and polymer complex in Berre-l'Etang, southern France on 5 December.

The steam cracker at the site has been offline since a fire on 2 August and its restart had previously been delayed until 2023 because of poor market conditions and high costs. The full restart of the stream cracker is now scheduled for 15-17 December and the restart phase for the whole site could last until late December.

The cracker has a capacity of 456,000 t/yr of ethylene and 250,000 t/yr of propylene. The ethylene and propylene feed LyondellBasell's own 320,000 t/yr low-density polyethylene (LDPE) and 340,000 t/yr polypropylene (PP) plants. The Berre complex is also part of a wider regional pocket of petrochemical and downstream production units, including for the vinyls chain.

South Korean petchem producers cut cracker run rates

Several South Korean petrochemical producers have further reduced their cracker operating rates to ease mounting inventory pressures, the result of an ongoing truckers' strike.

The indefinite truckers strike began on 24 November, causing disruptions to transportation of downstream goods including polyethylene, polypropylene and styrene monomer (SM). This resulted in inventory buildups, causing cracker operators to reduce run rates to balance excess olefins supplies.

Lotte Chemical is now running its 1.05 mn t/yr Daesan-based naphtha cracker and 1.2mn t/yr Yeosu-based naphtha cracker at 82pc and 85pc respectively, down from 90pc each. GS Caltex has also reduced run rates at its sole 700,000t/yr cracker in Yeosu from 80pc to 75pc this week. Hanwha Total has so far maintained its cracker run rates, but will have to cut rates at its cracker, polymer and SM units if the strike continues for another week.

The petrochemical sector is yet to see further impact of the strike, as there is no timeline for when the action will end.

Most South Korean cracker operators have opted for reduced operating rates this year also because of eroding production margins. Naphtha-based cracker margins have averaged minus $243/t this year, much lower than $96/t in 2021, according to *Argus*' calculations.

Chinese state-run oil firms' spending plans in doubt

China's leading state-run oil firms have gained from surging energy prices this year. But relentless Chinese Covid-19 lockdowns that have eroded domestic fuel demand may prompt a revision to capital expenditure (capex) that threatens Beijing's goal of boosting energy security.

PetroChina and Sinopec have planned combined capex of over $60bn for 2022, surpassing western majors Shell and ExxonMobil's combined $50bn. But this is looking increasingly

Plant maintenance, outages and disruptions							
Status	Plant	Location	Grade	Capacity '000t/yr	Duration	Remarks	Source
	Gazprom Neftekhim Salavat	Russia	LDPE	46	1 Aug - 10 Sep	Planned maintenance	Producer
	Ufaorgsintez	Russia	LDPE	90	30 Aug for a month	Planned maintenance	Producer
	Kazanorgsintez	Russia	HDPE	510	20 Sep - 10 Oct	Planned maintenance	Producer
	Stavrolen	Russia	HDPE	300	1 Oct for two weeks	Planned maintenance	Producer
	SHARQ	Saudi Arabia	HDPE	400	17 Nov - 16 Dec	Planned maintenance	Industry
	SHARQ	Saudi Arabia	LLDPE/HDPE	1150	17 Nov - 16 Dec	Planned maintenance	Industry
	Petro Rabigh	Saudi Arabia	LDPE	160	Dec for 45 - 50 days	Planned maintenance	Industry
	Yansab	Saudi Arabia	LLDPE/HDPE	400	10 Jan for 53 days	Planned maintenance	Producer
	Yansab	Saudi Arabia	HDPE	400	10 Jan for 53 days	Planned maintenance	Producer
NEW	Equate	Kuwait	LLDPE/HDPE	990	20 Jan - 20 Feb	Planned maintenance	Producer
	Indian Oil Corporation	India	LLDPE/HDPE	350	30 Sep - early Dec	Shutdown in Panipat alongside refinery turnaround	Industry
	Indian Oil Corporation	India	HDPE	300	30 Sep - early Dec	Shutdown in Panipat alongside refinery turnaround	Industry
	OPAL	India	HDPE	340	End Aug	Plant is operating at 85pc	Industry
	OPAL	India	LLDPE/HDPE	720	End Aug	Plant is operating at 85pc	Industry
	Gail	India	HDPE	120	1 Oct	Shutdown due to limited gas availability	Industry
	Gail	India	HDPE	120	1 Oct	Shutdown due to limited gas availability	Industry
	Gail	India	HDPE	250	1 Oct	Shutdown due to limited gas availability	Industry
	Gail	India	LLDPE/HDPE	210	1 Oct	Shutdown due to limited gas availability	Industry
	Gail	India	LLDPE/HDPE	400	1 Oct	Shutdown due to limited gas availability	Industry
	Sinopec Zhenhai Phase 2 No.2	China	HDPE	300	5 Mar - Nov	Maintenance extended	Producer
	Haiguo Longyou	China	LLDPE/HDPE	400	Early Apr - Nov	Maintenance	Producer
	Zhejiang Petrochemical	China	HDPE	350	Early Dec for 10 days	Maintenance	Producer
	Sinopec Shanghai	China	LDPE	100	11 - 30 Nov	Maintenance	Producer
	Wanhua Petrochemical	China	HDPE	350	12 Nov for one month	Maintenance	Producer
	Sinopec Qilu	China	HDPE	70	17 Nov for a few days	Maintenance	Producer
	Sinopec Shanghai	China	LDPE	100	21 Nov for a few days	Maintenance	Producer
	Sinopec Yanshan	China	LDPE	60	24 Nov for a few days	Maintenance	Producer
	Sinopec Zhenhai Phase 2 No.1	China	HDPE	300	10 Dec - Feb 2023	Maintenance	Producer
NEW	Sinopec Yanshan	China	HDPE	80	End Nov for a few days	Maintenance	Producer
NEW	Sinopec Sabic Tianjin	China	HDPE	300	30 Nov - 9 Dec	Maintenance	Producer
	SK Geo Centric	South Korea	LLDPE	180	31 Aug - mid-Sep	Shutdown expected to be extended up to 4Q	Industry
	Thai Polyethylene	Thailand	LDPE	152	May	Plant is operating higher than 80pc	Industry
	Thai Polyethylene	Thailand	LLDPE	120	May	Plant is operating higher than 80pc	Industry
	Thai Polyethylene	Thailand	HDPE	920	Mid-Sep - Dec	Plant is expected to operate at reduced rates alongside upstream 800,000 t/yr cracker shutdown	Industry
NEW	Lotte Chemical Titan	Malaysia	HDPE	115	End Sep	Plant is operating at 70pc	Producer
UPDATE	Lotte Chemical Titan	Malaysia	HDPE	220	Early Dec for two weeks	Maintenance	Producer
	Lotte Chemical Titan	Malaysia	LDPE	230	Mid-Aug	Plant is operating at 80 - 90pc	Producer
	PTTGC	Thailand	HDPE	250	Nov	Maintenance	Industry
	Chandra Asri	Indonesia	LLDPE/HDPE	400	11 Nov - end Nov	Plant shut alongside upstream cracker shutdown	Producer
	Chandra Asri	Indonesia	HDPE	336	11 Nov - end Nov	Plant shut alongside upstream cracker shutdown	Producer

like a tall order, with Sinopec giving early indications that it is likely to cut spending. The companies are focused on balancing energy security with capital discipline in the fourth quarter, after pandemic controls and rising costs slashed their profits in the third quarter. PetroChina says that it is prepared to inject its gas storage to maximum capacity this winter despite widening LNG import losses. "The goal is to raise output to minimise imports and reduce losses," company chief financial officer Wang Hua says.

PetroChina also plans to tweak its refineries' diesel yield, to ensure supply if seasonal demand is stronger than expected. Leading refiner Sinopec has a bigger market share for jet fuel, enabling it to keep output higher than PetroChina, but the latter's diesel yield is far higher owing to its crude slate (see graphs). But the companies' latest quarterly results reveal the challenges of balancing supply with profitability (see table). PetroChina's July-September profit was down on the quarter by 5.5bn yuan ($760mn). Sinopec's profit was down by around Yn8bn on the quarter and from a year earlier.

Both firms blamed lockdowns, high inventory, rising costs and low state-set fuel prices for lower-than-expected crude runs and product sales in July-September, although they are optimistic that fourth-quarter demand and refining margins will rebound on government stimulus and large product export quotas. Beijing went contrary to a policy of cutting emissions by handing out more oil product export quotas as a form of subsidy, an official from a Chinese state-run firm says. "The government is hoping to ease refiners' operational pressure," he says.

Sinopec, which took a Yn3.1bn crude inventory loss in Ju-

New start-ups							
Status	Plant	Location	Grade	Capacity '000t/yr	Start-up	Remarks	Source
	Gulf Coast Growth Ventures	US	LLDPE	650	4Q 2021		Industry
	Gulf Coast Growth Ventures	US	LLDPE	650	4Q 2021		Industry
	Shell Polymers	US	LLDPE	500	3Q		Industry
	Shell Polymers	US	HDPE	550	3Q		Industry
	Shell Polymers	US	HDPE	550	3Q		Industry
	Bayport Polymers	US	HDPE	625	4Q		Industry
	Nova Chemicals	Canada	LLDPE	500	End 2022		Industry
	Zhejiang Petrochemical	China	HDPE	350	Feb	Plant shut from 20 June for 15-day maintenance	Producer
	Zhejiang Petrochemical	China	LDPE	400	End Mar	Plant started	Producer
	Sinopec Zhenhai	China	HDPE	300	Feb	Plant shut from 5 March to July for maintenance	Producer
	Sinopec Zhenhai	China	HDPE	300	Feb	Plant shut from 21 June - 2 July due to technical issues	Producer
	Shandong Jinhai Petro-chemical	China	HDPE	400	4Q		Producer
	Guangdong Petrochemical	China	LLDPE/HDPE	800	Dec		Producer
	Guangdong Petrochemical	China	HDPE	400	Dec		Producer
	Sinopec Hainan	China	LLDPE/HDPE	300	Dec		Producer
	Sinopec Hainan	China	HDPE	300	Dec		Producer
	Lianyungang Petrochemical (Zhejiang Satellite)	China	HDPE	400	End Aug	Plant started	Producer
UPDATE	Qinghai Damei	China	LLDPE/HDPE	300	2023	Delayed from 2021	Producer
NEW	China Coal Yulin	China	HDPE	350	2023		Producer
NEW	Ningxia Baofeng Phase 3	China	HDPE	400	Jun 2023		Producer
NEW	Ningxia Baofeng Phase 3	China	LDPE	250	Jun 2023		Producer
	HPCL-Mittal Energy Limited	India	LLDPE/HDPE	800	1Q 2023	Start-up delayed from 4Q 2022	Producer
	HPCL-Mittal Energy Limited	India	HDPE	450	1Q 2023	Start-up delayed from 4Q 2022	Producer
	JG Summit Petrochemical	Philippines	HDPE	250	Nov	Started trial runs in mid-November	Industry
UPDATE	PRefChem	Malaysia	LLDPE/HDPE	350	Aug	Plant is shut after a fire at the Pengerang Integrated Complex, expected to restart in late December	Industry
UPDATE	PRefChem	Malaysia	HDPE	400	Sep	Plant is shut after a fire at the Pengerang Integrated Complex, expected to restart in January 2023	Industry
	Long Son Petrochemical	Vietnam	LLDPE	500	1Q 2023		Producer
	Long Son Petrochemical	Vietnam	HDPE	450	1Q 2023		Producer

ly-September as a result of falling crude prices, is optimistic that its refining margins will rebound for October-December and next year, helped by higher crude runs and more exports, company officials say. Crude prices have stayed above Sinopec's estimated upstream breakeven of $75/bl this year, but high naphtha costs ate into its petrochemical margins. Asian naphtha cracker margins are at an average of minus $233/t this year, according to *Argus* calculations.

Sinopec may cut chemical capex this year after it underspent in January-September, although its long-term focus on boosting chemicals and cutting oil products remains unchanged, Sinopec vice-president Huang Wensheng says. This could delay timelines for new ethylene capacity aimed at reducing China's import dependence.

Lockdowns hammer petrochemical firm margins

Rising costs and weak domestic demand are cutting into the margins of China's private-sector mega refiners. Poor profitability is likely to challenge their ability to repay massive debts brought on by heavy capital investments.

This modern generation of refiners — with Shenghong having recently joined established firms Rongsheng and Hengli — has proved resilient despite volatile transport fuel prices since the Covid-19 pandemic first emerged in 2020. Their high level of downstream integration allowed them to focus on petrochemicals — including materials needed to make personal protective equipment (PPE) — at times when other refiners were struggling because Covid lockdowns were squeezing gasoline margins. But the profitability of their operations deteriorated significantly in July-September owing to China's pandemic-related lockdowns continuing while global PPE demand was declining. Shanghai-listed Hengli was hardest hit, with profits tumbling by 150pc (see table).

China has massively expanded its domestic manufacturing capacity of propylene and ethylene in recent years. Shenghong is bringing another 1.1mn t/yr steam cracker on stream in late November. But depressed margins may discourage Shenghong from running the unit at full capacity — typically, steam crackers must operate above 95pc in order to be profitable.

Northeast Asian naphtha cash cracking margins are averaging minus $341/t this month. Things are little better further downstream. Hengli is operating its polypropylene (PP) and polyethylene (PE) units at 90pc of capacity — which is down by 10 percentage points from a year earlier. The firm is losing around Yn1,000/t ($153/t) on PP and PE sales, a company source says.

The companies' paraxylene (PX) output is used mainly to feed downstream purified terephthalic acid (PTA) units. But Chinese polyester plants — the major outlet for PTA — are running at 70pc of capacity, compared with normal rates of 80-85pc. Hengli, which relies on PTA sales for almost a quarter of its revenue, is on the verge of shutting its PTA units because of negative margins.

PTA sales account for around 12-14pc of total revenue for Shenghong and Rongsheng. Asia's regional PX surplus has doubled from the start of the year in response to sluggish PTA demand, to 800,000t, *Argus* estimates (see graph: Asia PX balance).

Hengli attributes the Yn1.9bn loss it reported in July-September — the firm's first since opening its Liaoning complex in 2019 — to a maintenance turnaround at its Changxing refinery in July-August, and on weak petrochemical margins. Rongsheng's 800,000 b/d ZPC refinery on Zhoushan island made just Yn300-400mn net income in July-September, compared with Yn2.8bn-2.9bn in April-June, analysts estimate. This is partly because of a write-down of the value of Rongsheng's crude inventory and a foreign exchange loss of Yn610mn for January-September — the yuan has fallen by over 12pc against the dollar this year. Shenghong produced on-specification PX at its 2mn t/yr PX unit in Lianyungang late last month, but the refinery is currently only running at 60pc of capacity. Even Shenghong reported a quarterly loss.

China’s Shenghong starts up naphtha-fed cracker

Chinese private-sector producer Shenghong Petrochemical started up on 1 December a new 1.1mn t/yr naphtha-fed cracker at Lianyunang in east China's Jiangsu province.

The cracker achieved on-specification ethylene production five days after it was fed with feedstock naphtha on 26 November. On-specification propylene was achieved two days after the feeding in. The company said it needs to observe operations for another three days to determine whether the cracker is running stably.

Shenghong is also due to start up its downstream integrated 100,000/900,000 t/yr ethylene oxide (EO)/ethylene glycol (MEG) unit and a 400,000/250,000 t/yr phenol/acetone unit to consume ethylene and propylene output.

The other derivative units — including 1mn t/yr of MEG, 300,000 t/yr of vinyl acetate monomer, 300,000 t/yr of ethylene vinyl acetate (EVA), 200,000/450,000 t/yr of propylene oxide/styrene monomer and 260,000 t/yr of acrylonitrile (ACN) — are expected to start operations through the first half of 2023.

Shenghong plans to shut its methanol-to-olefins (MTO) plant with 370,000 t/yr of ethylene capacity and 460,000 t/yr of propylene to balance out the excessive ethylene supplies, once the cracker reaches stable operations expected this weekend. Downstream units integrated to the MTO plant — including 300,000 t/yr of EVA, 260,000 t/yr of EO and 780,000 t/yr of ACN — will then be fed with ethylene and propylene from the cracker.

This is the fourth large-scale cracker started up in China this year. Sinopec Zhenhai's 1.2mn t/yr No.2 naphtha-fed cracker began operations at the beginning of the year, with Zhejiang Petrochemical's 1.4mn t/yr naphtha-fed cracker and Lianyungang Petrochemical's 1.25mn t/yr No.2 ethane-fed cracker starting up in late August.

Malaysia’s PRefChem restarts Pengerang cracker

Malaysia's PRefChem restarted its 1.29mn t/yr Pengerang-based naphtha cracker earlier this week after being shut since late October because of a fire.

The cracker is likely running at reduced rates of 50pc currently, according to sources close to the company. Downstream polymers units, including 750,000 t/yr polyethylene and 900,000 t/yr polypropylene production lines, are expected to restart by January 2023.

PRefChem is expected to have more olefins for sale with downstream plants idle for December. The company issued a tender this week to sell a 6,500t ethylene cargo loading over 8-9 December, which closed on 29 November. PRefChem also emerged last week with a propylene tender to sell a 5,000t propylene cargo for 10-11 December loading on a fob Pengerang basis.

PRefChem is a joint venture between Malaysia's state-owned Petronas and Saudi Arabia's state-controlled Aramco. The cracker was shut on 27 October after a fire hit an interconnecting pipeline at the complex.

Packaging and downstream applications

Eurozone Nov manufacturing contracted, inflation eased

The eurozone's manufacturing sector contracted again in November, although less so than in the prior month and the recent inflationary pressures showed signs of easing.

In its monthly survey, S&P Global said the region's manufacturing Purchasing Managers Index (PMI) was 47.1 in November, compared with 46.4 in October. This was the fifth successive month of a reading below 50, which indicates contraction.

S&P Global said output and new orders both fell, and input purchasing dropped at the fastest rate since May 2020, when public-policy reactions to the Covid-19 pandemic were at their peak. But stocks of inputs still rose, partly because of the arrival of previously-delayed orders, and stocks of finished goods are increasing as demand drops.

The survey found the supply chain issues that had caused delays earlier in the year are easing, and this contributed to a lessening of input-cost inflation to its weakest in almost two years. Output price inflation was its weakest since March 2021 as the sector shifts to a buyers' market from a sellers' market at both ends of the chain.

But S&P Global's chief economist Chris Williamson said there is "no immediate respite in sight" for manufacturers.

"How manufacturers fare over the winter months will of course be conditional to a large extent on the weather, with any cold snaps likely to fuel concerns over energy resources and potentially hitting production and supply chains further," he said.

EU polishes tighter recycling targets

The European Commission is expected to table a far-reaching proposal on 30 November calling for minimum recycling rates on plastics, wood, ferrous metals and aluminium packaging. EU member states and the European Parliament will have to approve the final text of the regulation.

The commission is also expected to propose a deposit and return system for single-use plastic beverage bottles up to three liters and single-use metal and aluminium beverage containers, also up to 3 liters. It calls for EU countries to have the system up and running by 1 January 2029.

Officials see packaging as a "key environmental concern", accounting for 36pc of municipal solid waste in the EU. Packaging has grown faster than gross national income in recent years, leading to "soaring" CO2 and other emissions and "overexploitation of natural resources, biodiversity loss and pollution", according to a leaked draft from the commission.

The commission wants recycling targets to be in place in EU countries by 31 December 2025, covering at least 65pc of all packaging waste by weight. From 31 December 2025 the commission proposes minimum recycling targets for packaging waste of 50pc for plastic, 25pc for wood, 70pc for ferrous metals and glass, 50pc for aluminium and 75pc for paper and cardboard — all by weight.

Under the proposal these targets rise from 31 December 2030 to 55pc for plastic, 30pc for wood, 80pc for ferrous metals, 60pc for aluminium, 75pc for glass, and 85pc for paper and cardboard. The commission will allow member states to postpone recycling deadlines by up to five years under certain conditions.

The commission is also targeting minimum recycled content in plastic packaging from 1 January 2030. It wants recycled content recovered from "post-consumer plastic waste" to exceed 30pc for contact sensitive packaging made from polyethylene terephthalate (PET), 10pc for non-PET plastic contact sensitive packaging and 30pc for single-use plastic beverage bottles. A target of 35pc recycled material is set for “other” packaging.

Post-consumer recycled plastics rose by nearly 20pc to 5.5mn t in 2021 compared with 2020, according to industry association Plastics Europe. Increased use of recyclates is "solid progress" but there is still a "need to hasten systemic change", it said.

The European Commission is also setting requirements for compostable packaging for a range of products including tea bags, filter coffee pods and pads, sticky labels on fruit and vegetables and very lightweight plastic bags. It proposes this takes effect 24 months after the regulation enters into force.

The 110-page draft regulation also calls for the weight and volume of packaging to be "reduced to the minimum necessary for ensuring its functionality". It sets out reuse requirements for "transport packaging" such as pallets, plastic crates, foldable plastic boxes, pails and drums. Reuse should exceed 30pc from 1 January 2030 and 90pc from 1 January 2040.

Packaging industry gives mixed response to EU rules

The EU's new draft recycling and reuse targets have received mixed responses from affected industries, while campaigners noted there are now lower targets than in earlier drafts.

The European Commission published targets on 30 November that will push EU countries to ensure, by 31 December 2025, a minimum of 65pc recycling by weight of all packaging waste generated, with specific minimums for plastic (50pc), wood (25pc), ferrous metals and glass (70pc), aluminium (50pc) and paper and cardboard (75pc).

The commission also proposed mandatory EU-wide targets for certain products to use reusable or refillable packaging, including 20pc by 2030 and 90pc by 2040 for cold and hot beverages, 10pc by 2030 and 20pc by 2040 for beer and 10pc by 2030 and 40pc by 2040 for take-away prepared meals. It said 10pc of e-commerce transport packaging must be reusable by 2030, and 50pc in 2040.

Packaging industry association European welcomed the harmonization of regulation across Europe, which it said could "end the plethora of divergent national measures that are… undermining the transition to a circular economy." But it said other measures would be required, such as mandatory collection and investment in collection and sorting infrastructure, and it criticized a "failure to recognize that packaging recyclability or reusability alone will not suffice unless backed up by a system capable of triggering investments in recycling infrastructure and reuse across Europe."

The proposed regulation contains a mandate for countries to introduce deposit return schemes for plastic beverage bottles, but this does not extend to all packaging types. Plastics Europe's managing director Virginia Janssens said the targets need to be "applied equally to all materials", and that the recycled content targets for contact sensitive plastic packaging will require a "significant" contribution from chemical recycling.

"There is a rapidly closing window of opportunity for industry to make the necessary investments in chemical recycling in Europe, which must be seized," said Janssens, pointing to a need for "clear and urgent" rules on plastic packaging's recycled and virgin feedstock balance.

There is a need for independent "science-based evaluation" of recyclable and reusable options, said the Confederation of the European Paper Industries (Cepi) director general Jori Ringman. Cepi said recycling is the first source for pulp and paper more than all other materials combined. The industry already has recycling targets of 90pc by 2030, far exceeding current legal requirements of 85pc.

European Aluminium said its sector is already recycling three out of four aluminium beverage cans on the European market. But packaging director Maarten Labberton said the group supports the focus on extended producer responsibility (EPR), notably whereby EPR fees are based on recyclability performance taking into account whether packaging is recycled multiple times or only with limits.

"Recycling performance grades are being introduced for the first time," he said. "However, the commission missed the opportunity to differentiate between the qualities of secondary raw materials and promote materials that can be recycled multiple times without losing their intrinsic properties."

Non-governmental organization the European Environmental Bureau welcomed the shift towards waste prevention, reuse and recycling but said measures lost ambition compared with previous drafts. Reuse targets were reduced by as much as 50pc, and a ban on expanded polystyrene was dropped, it said, and technical details defining recyclability were scaled back.

Stricter requirements may still be introduced to the proposal by the European Parliament but would require approval by EU member states.

Supply chain and shipping

US Senate votes to avoid rail strike

The US Senate has approved a bill to override union objections to a proposed rail worker contract, allaying the potential for a nationwide strike that threatened widespread economic disruption.

The Senate voted 80-15 to require unions to accept a rail labor agreement brokered by the White House in September, even though the contract remains unratified by four of the 12 major unions that collectively represent over 100,000 US rail workers. The House of Representatives passed the bill on 30 November.

Senate passage sends the bill to President Joe Biden, who said he would sign legislation to allay a strike that would have been set to begin on 9 December.

"This week's bipartisan action pulls our economy back from the brink of a devastating shutdown that would have hurt millions of families and union workers in countless industries," Biden said.

The White House had warned that a strike could spur 765,000 US job losses and "cripple the American economy" with shortages spanning virtually every segment of the US supply chain, ranging from gasoline and home heating fuels to fertilizers and retail goods.

"The Senate acted with leadership and urgency with today's vote to avert an economically devastating rail work stoppage," said Ian Jefferies, chief executive of the Association of American Railroads, a trade group representing major freight railroads.

The Senate voted down two amendments to the House rail bill. One amendment sponsored by Vermont independent

Global polymer freight rates $/t

Origin	Destination	Argus Low	Argus High	±	Source
Americas					
Houston	Shanghai	30	45	-	Freightos Derived
Houston	Mersin	52	52	-	Freightos Derived
Houston	Genoa	14	55	-	Freightos Derived
Houston	Valencia	14	40	-	Freightos Derived
Houston	Antwerp	24	43	-	Freightos Derived
Houston	Santos	37	65	-	Freightos Derived
Houston	Buenos Aires	46	71	-	Freightos Derived
Houston	Buenaventura	102	107	▲	Freightos Derived
Houston	Callao	102	111	▲	Freightos Derived
Houston	Guayaquil	102	107	-	Freightos Derived
Houston	Valparaiso	150	175	-	Freightos Derived
Santos	Rotterdam	89	89	▼	Freightos Derived
Middle East and North Africa					
Jubail	China	24	29	▼	Argus
Jubail	Indonesia	70	75	▲	Argus
Jubail	Karachi	78	82	-	Argus
Jubail	Mumbai	25	30	▼	Argus
Jubail	Turkey	100	105	▼	Argus
Jebel Ali	Shanghai	6	16	-	Freightos Derived
Jebel Ali	Singapore	8	8	-	Freightos Derived
Jebel Ali	Melbourne	214	220	-	Freightos Derived
Jebel Ali	Tauranga	243	269	-	Freightos Derived
Jebel Ali	Antwerp	101	101	-	Freightos Derived
Jebel Ali	Buenaventura	285	285	-	Freightos Derived
Jebel Ali	Callao	282	282	-	Freightos Derived
Port Said	Mersin	15	15	-	Freightos Derived
Port Said	La Spezia	20	25	-	Freightos Derived
Port Said	Antwerp	40	45	-	Freightos Derived
Southeast Asia					
Singapore	Karachi	40	57	-	Freightos Derived
Singapore	Mumbai Nhava Sheva	40	57	-	Freightos Derived
Singapore	Colombo	44	52	-	Freightos Derived
Singapore	Melbourne	159	200	-	Freightos Derived
Singapore	Tauranga	232	277	-	Freightos Derived
Vung Tau	Antwerp	112	160	▼	Freightos Derived
Vung Tau	Genoa	125	143	-	Freightos Derived

Global polymer freight rates $/t

Origin	Destination	Argus Low	Argus High	±	Source
Northeast Asia					
Busan	Mersin	100	121	▼	Freightos Derived
Busan	Koper	149	149	▼	Freightos Derived
Busan	Genoa	114	128	▼	Freightos Derived
Busan	Valencia	121	149	▼	Freightos Derived
Busan	Antwerp	75	113	▼	Freightos Derived
Busan	Durban	210	210	▼	Freightos Derived
Busan	Santos	71	101	▼	Freightos Derived
Busan	Buenaventura	91	101	▼	Freightos Derived
Busan	Callao	91	101	▼	Freightos Derived
Busan	Melbourne	88	95	-	Freightos Derived
Busan	Tauranga	154	178	-	Freightos Derived
Shanghai	Nagoya	20	22	-	Freightos Derived
Shanghai	Laem Chabang	19	21	▲	Freightos Derived
Shanghai	Port Klang	18	30	-	Freightos Derived
Shanghai	Karachi	48	63	▼	Freightos Derived
Shanghai	Mumbai Nhava Sheva	48	53	▼	Freightos Derived
Shanghai	Chennai	40	70	▼	Freightos Derived
Shanghai	Colombo	69	71	-	Freightos Derived
Shanghai	Chittagong	80	100	-	Freightos Derived
Shanghai	Mersin	108	155	-	Freightos Derived
Shanghai	Koper	146	158	▼	Freightos Derived
Shanghai	Genoa	114	134	▼	Freightos Derived
Shanghai	Valencia	111	140	▼	Freightos Derived
Shanghai	Antwerp	68	87	▲	Freightos Derived
Shanghai	Rotterdam	65	89	▲	Freightos Derived
Shanghai	Durban	207	210	▼	Freightos Derived
Shanghai	Santos	63	95	▼	Freightos Derived
Shanghai	Manzanillo	69	86	▼	Freightos Derived
Shanghai	Buenaventura	73	86	▼	Freightos Derived
Shanghai	Callao	72	78	▼	Freightos Derived
Shanghai	San Antonio, Chile	72	86	▼	Freightos Derived

FREIGHTOS

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.

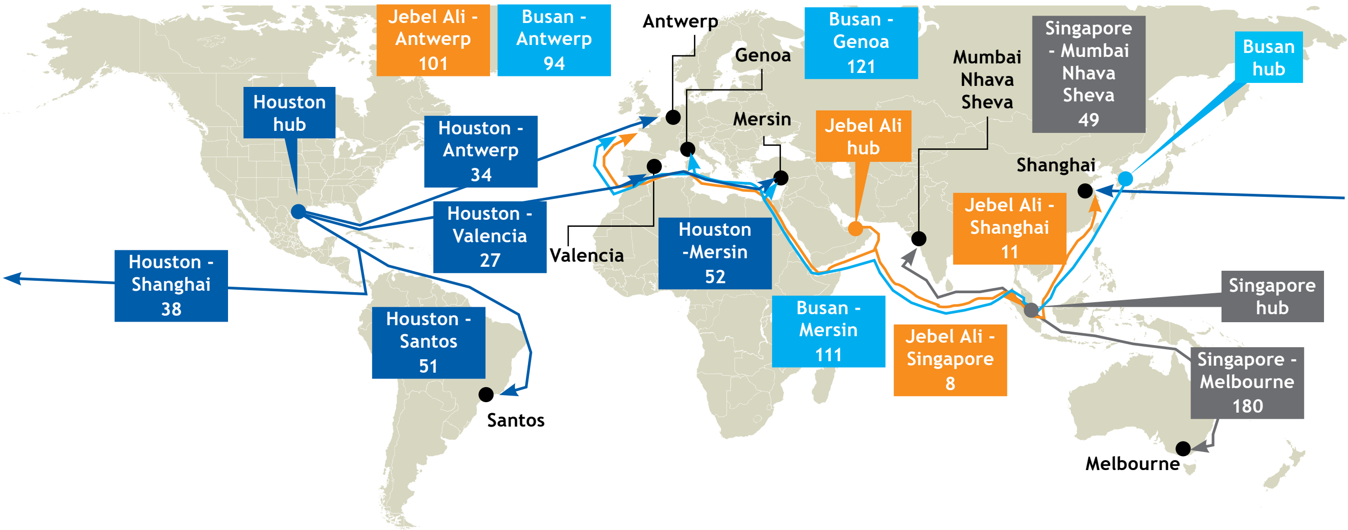
senator Bernie Sanders would have given more paid sick days to railroad workers, an issue that has been a key sticking point in the negotiations between the rail unions and the carriers. It would have matched a separate House-approved measure to raise the number of paid sick leave days to seven days from one day. Biden said he would seek future legislation to secure more paid sick leave for rail workers.

The other amendment would have required a 60-day "cooling off" period and sent the labor deal back to the parties for more negotiation. Republicans said Congress should not be placed in a position to arbitrate private industry labor deals. "We also don't want Congress to become the de facto end game for all future negotiations," said Alaskan Democrat senator Dan Sullivan, one of the amendment's sponsors.

Congress has acted to avert rail strikes 16 times in the past, most recently in 1992, under the authority of the Railway Labor Act, which gives lawmakers broad authority to intervene in rail labor disputes. The last national rail labor strike was in 1991 and lasted less than 24 hours before then-president George Bush signed congressional legislation to end it.

The American Fuel & Petrochemical Manufacturers, which lobbies for many US refiners, had warned that a strike

POLYETHYLENE ROUTES BY EXPORTING PORT



would "throttle production and delivery of critical products such as gasoline, diesel, heating oil, and petrochemicals" at a time of high demand and low inventories.

Cargo handling at Brazil's Santos port rose in Oct

Cargo handling in Brazil's Santos port rose to 14.4mn metric tonnes (t) in October, a record for the month, led by higher exports of agricultural products.

That is a 34.5pc increase from the same month last year.

Exports from the port totaled 10.5mn t, up by 48pc from a year earlier, according to the Santos Port Authority. Corn exports reached about 2.5mn t compared with 1.1mn t a year earlier. Soybean complex exports more than doubled to 1.5mn t.

Imports in the Santos port reached 3.9mn t in October, up by 8.1pc from a year earlier. Fertilizer imports totaled almost 727,250t, up by 0.3pc from October 2021.

Cargo handling in Santos rose by 5.9pc in October from the previous month and amounted to 138.2mn t during January-October this year, up by 12pc from the same period a year earlier. That is the highest volume for the first 10 months of a year in the port's history.

Soybean complex exports in the 10-month period rose to 32.9mn t, up by 17pc from a year earlier, while corn exports increased by 89pc to 11mn t. Fertilizer imports rose by 6pc from a year earlier to 6.9mn t.

The Santos port handles other commodities such as wheat, fuels and vegetable oils, as well as industrial goods.

QUOTE OF THE WEEK

“There are signs that things could be changing. But how long will it take?”

— *South Asia participant*

ANNOUNCEMENTS

Proposed origin restriction on European naphtha prices

Argus proposes that 65 para naphtha cif NWE prices for loading in or delivery to or within Europe will be for product of non-Russian origin beginning on 3 January 2023 because of the February 2023 imposition of EU sanctions restricting the trade of Russian-origin oil products.

Argus will accept comments on this proposal until 12 December. To discuss comments on this proposal, please contact Elliot Radley at Elliot.radley@argusmedia.com or 02077804205. Formal comments should be marked as such and may be submitted by email to londonproducts@argusmedia.com and received by 12 December. Please note, formal comments will be published after the consultation period, unless confidentiality is specifically requested.

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