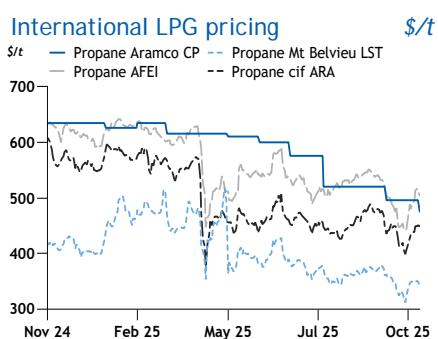


The LPG surplus in the US market means trade between the two countries is likely to pick up, but the subdued Chinese PDH sector will dampen flows



US-China trade truce boosts Asian LPG sentiment

Chinese LPG imports from the US are set to rise again following the two countries agreeing to pause punitive trade tariffs and port fees for one year, although China's demand continues to be subdued by weak petrochemical margins.

China is expected to keep 10pc tariffs on US LPG and suspend port fees on US-linked ships for a year under the agreement, boosting Asian market sentiment despite no official announcement yet from Beijing. Propane Argus Far East Index prices for northeast Asian imports rose by \$53/t, or 11pc, to \$517.25/t on 30 October from 23 October, when trade talks reopened. The fact that the US market is oversupplied makes resumed trade with China more likely, market participants say.

This comes after a three-week period in October when Chinese importers retreated from the spot market because of the US sanctions on Iranian LPG carriers and China's special port fees on US-linked vessels. The US and Iran supplied 51pc and 23pc of China's LPG imports, respectively, in 2024, Kpler data show. The US Office of Foreign Asset Control on 9 October added 33 Iranian vessels including 14 LPG carriers, of which 11 are VLGCs, to a specially designated list of sanctioned ships. The new sanctions cover about 20pc of Iran's VLGC fleet, bringing the total under sanctions to 40pc, a market participant says.

Beijing then announced on 10 October it would introduce port fees on US-linked vessels from 14 October — the same day US port fees on Chinese-linked vessels began. This means a US-related VLGC would need to pay an additional 400 yuan/net tonne (\$56/nt), equivalent to Yn6.8mn (\$955,000).

China's LPG imports from Iran have slowed as a result of the latest sanctions. The VLGC *Sea Opera* failed to discharge a cargo at its second scheduled destination in Guangdong following the 9 October announcement, a market participant says. Rumours of a cancelled Iranian cargo also circulated on the market but this could not be confirmed. Iranian LPG supply is likely to tighten in the short term but may recover gradually as ship-to-ship transfers are used to avoid sanctions.

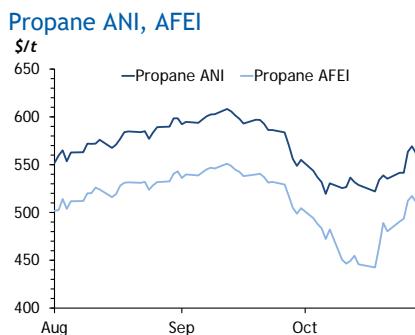
US sanctions on China's *Shihua Oil crude import terminal in Rizhao* announced on 9 October caused some nearby refineries to cut runs and reduce LPG production. The terminal — a joint venture with state-owned Sinopec — supplies nearly 1mn b/d of crude to five major refineries. Some of these plants have cut LPG production since the announcement, an east China-based LPG trader says.

Port fees and uncertainty over paused Chinese import tariffs on US LPG had further curbed Chinese import demand last month. More than 50 VLGCs are either owned or operated by US companies, but the total number would be larger if US-listed companies are included, a shipbroker says. Meanwhile, Chinese importers need to pay higher premiums for non-US LPG on vessels with no US ties, making them more reluctant to buy such cargoes. The VLGC *Shahrastani* was delayed from discharging at Dongjiakou port for more than two weeks, which could be because of a disagreement between the US-listed charterer and Singapore-based shipowner

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US-CHINA



over who should pay the port fee, according to market participants. Chinese importers may be willing to bear part of the port fees, but they do not want to pay the demurrage cost caused by delays, an east China-based propane dehydrogenation (PDH) plant says.

But although the new trade agreement should support US LPG exports to China, demand from Chinese crackers and PDH plants remains subdued owing to weak production margins. Under the 10pc tariffs, LPG is still less competitive than naphtha as a cracker feedstock. China has opened five new crackers with a combined capacity of 6.7mn t/yr of ethylene this year, while PDH operating rates hover at 70pc. This has kept downstream polypropylene (PP) prices at five-year lows since September, while the propane-to-PP spread at \$239/t reached a two-year low on 31 October.

NORTHEAST ASIA

Japan has reaffirmed its 16pc decarbonisation goal for 2035-36, despite a downgrade to demand and uncertainty over what qualifies, writes Reina Maeda

Japan green LPG goals, 2035-36 '000 t/yr		
	Min	Max
Imported RLG	530	880
Domestic RLG production	177	350
Carbon-offset LPG	177	177
Equipment efficiency gains*	267	350
Fuel oil switching to LPG	267	350
Total	1,418	2,107
*Reduced conventional LPG usage		
— JLPGA		

Japan's green LPG targets robust but confusing

Japan's government and LPG industry have recommitted to decarbonising LPG demand by 16pc by fiscal year 2035-36, despite a sharp downgrade in projected consumption. But what counts as "green LPG" remains unclear as the target includes both demand reductions from efficiency gains and increased conventional LPG use, a committee hearing on 21 October heard.

Japan's LPG demand is now forecast to fall to 11.1mn t/yr by 2035-36 from 12mn t in 2024-25, compared with an earlier projection of **12.5mn t by 2035 from 14mn t in 2023**. The updated roadmap, issued by the Institute of Japan Green LPG Promotion — comprising distributors Astomas, Eneos Globe, Gyxis, Japan Gas Energy and Iwatani — energy ministry Meti and the Japan LPG Association (JLPGA), retains the 16pc decarbonisation target, equal to about 1.8mn t/yr.

But the 16pc goal includes a 15-20pc reduction in demand through energy efficiency improvements, and 15-20pc is more LPG use from switching from higher carbon-emitting fuel oil. Imported renewable liquid gases (RLGs) such as renewable LPG and DME will account for 30-50pc, or 530,000-880,000 t/yr, while 10-20pc will come from domestic RLG production and 10pc from carbon-offset LPG. The goals are unclear and the figures confusing, committee chairman Takeo Kikkawa and Japanese LPG Sales Association executive director Koji Murata said.

Domestic LPG demand is projected to fall to 9.3mn t/yr by 2050-51, with this still to be 100pc green LPG. Demand is shrinking in line with Japan's declining population and greater equipment efficiency, the JLPGA says. Other product sectors have seen their 2050 transition targets **revised downwards on a percentage basis**, but the LPG sector's roadmap is more progressive, Kikkawa said.

Japan has a total of nine domestic RLG production projects, moving through five phases — research and development, bench-scale testing, scale-up demonstration, social verification and full-scale production. Most are in the bench or scale-up stage, producing 3-1,000 t/yr of renewable synthetic LPG or bioLPG.

RLG production in Japan is expected to accelerate from 2035 with the expansion of carbon capture, utilisation and storage and renewable hydrogen. State-owned research body AIST and engineering firm Kanadevia announced in January that they had synthesised LPG from CO₂ and green hydrogen — the project is now scaling up to 36.5 t/yr. Importer Gyxis invested in start-up iPEACE223, which is developing catalysts and processes for biopropylene and biopropane from bioethanol, producing 20 t/yr in its bench-scale phase.

Outside Japan, Astomas and engineering firm Furukawa Electric in October extended a partnership with European distributor SHV Energy's Futuria Fuels division to develop manure-derived bioLPG.

EDITORIAL

A recent report touting the benefits of electrified cooking in India unfortunately seems to not understand the realities and challenges the country faces

The ultimate solution?

India should transition to electric cooking from LPG and piped natural gas (PNG) as it is “cleaner, safer, cheaper and more sustainable”, a report from US non-profit IEEFA, which promotes clean energy transitions, finds. But the report fails to address the feasibility of such a transition when many Indian homes do not receive reliable electricity, nor its consequences from a grid powered largely by coal.

“E-cooking” is the “ultimate clean cooking solution for India”, the report says. Although it acknowledges the role LPG has played in replacing harmful traditional cooking fuels, backed by the PMUY subsidy scheme, it notes LPG is still “carbon-intensive” and high emitting. Nearly 40pc of Indian homes still use traditional fuels despite the PMUY, it adds. Meanwhile, e-cooking was 37pc cheaper than non-subsidised LPG in fiscal year 2024-25, and 14pc cheaper than PNG. India’s dependence on LPG imports also lifted its import bill by 50pc in the past six years, IEEFA says.

India should “at least” focus first on transitioning urban areas, with government support a requisite. But a countrywide switch is “the logical choice” for a country now “100pc” electrified. The only things slowing e-cooking uptake are high up-front costs, limited device options and a lack of awareness and regulatory support.

Yet scratch the surface and the choice begins to look less logical. E-cooking has an inarguable benefit over LPG – it produces nearly no indoor air pollution. But this ignores the vast improvement made from switching from firewood to LPG, something likely to dwarf the health benefits of moving from LPG to e-cooking, and as the report states, 40pc of homes – in poorer, rural areas – still use wood. It is true Indian power is not “import-dependent”. Why? Thanks to domestically produced coal. About three-quarters of Indian electricity comes from coal-fired plants – far more harmful in terms of pollution and greenhouse gas emissions. Presumably the report is basing future e-cooking use on lower-emitting fuels. Perhaps gas – which would need to be imported. Or maybe renewables, but the challenges and timescales involved in scaling this adequately are not mentioned.

Safety is another important metric, with e-cooking safety “high” and LPG “low”. This is probably linked to accidents within Indian homes – deaths from such accidents in India stood at about 31 in 2021. What it ignores is the 78,000-112,000 people a year who die prematurely from coal-fired power in India from pollution, a PNAS study from 2021 found, not to mention casualties at coal-fired power plants and coal mines required to support an e-cooking transition. The report also ignores the LPG industry’s robust safety record in well-regulated markets.

Taking the report’s cost calculations at face value, one must also admit that India can only achieve these power prices thanks to its abundant domestic coal reserves. If, as IEEFA likely wants, the country transitions to cleaner power sources, prices will inevitably climb. For LPG, the PMUY has proven successful because it reduced up-front and fuel-cost barriers for rural, low-income homes. What are the hopes of getting more expensive e-cooking equipment in their hands if electricity costs rise as the power sector transitions and demand grows?

Unreliable source

But perhaps the report’s biggest problem is its glossing over of Indian electricity access. The government puts connectivity at 99.2-99.5pc – not 100pc. Yet some villages are “connected” if 10pc of homes have access. Only 44pc of rural households in India truly have access to electricity, a study from 2024 found. These often receive less than 12 hours of power daily and outages are frequent. It seems absurd to ask Indian homes to rely on something so unreliable. The government should instead focus on improving electricity access in rural areas, transitioning power to cleaner sources and continuing to move rural users of firewood for cooking to LPG, as well as PNG and e-cooking in urban areas – where appropriate.

ARGUS LPG CONFERENCE

Q&A: Sonatrach bullish on future LPG trade growth

Algerian state-owned oil company Sonatrach is the largest producer and exporter of LPG in the Mediterranean region. The firm produces about 130bn m³/yr of natural gas, 8mn t/yr of condensate and 9mn t/yr of LPG, while Algerian LPG exports stand at about 6mn t/yr. The company established its trading and shipping arm, Sonatrach Petroleum Corporation (SPC), in London in 1989 to carry out its international LPG and oil products trade. Argus' David Appleton spoke to Sonatrach's gas marketing division director, Samia Hamadache, and SPC's LPG trading general manager Idir Ait-Feroukh on stage at this year's Argus LPG Conference in Istanbul, Turkey, on 16 October, on the future of Algerian production and exports:

How important is Turkey as an importer and consumer of LPG for Algeria?
Turkey represents a strategically important, sophisticated and transparent LPG market, characterised by advanced storage, distribution and autogas logistics capabilities. For Sonatrach, Turkey is both a major regional demand centre and a trusted commercial partner, not only for LPG but also for LNG – the first Turkish LNG regasification terminal was established in the 1990s to receive Algerian LNG – the first LNG cargo was delivered to the Turkish market in the 1990s. Another historical milestone in the bilateral relationship was Algeria's rapid delivery of an LPG cargo as humanitarian aid following the devastating earthquake in Turkey at the end of the 1990s. Since then, the co-operation has grown steadily, with direct Algerian LPG exports to Turkey now exceeding 1.7mn t/yr. Algerian LPG contributes to Turkey's supply diversification and energy security, while Turkey provides efficient logistics and competitive access to broader regional markets.

'We continue to modernise and expand our LPG infrastructure, investing in maintenance, digital scheduling and incremental storage where it delivers value'

LPG supply is growing in several countries, most notably in the US and Mideast Gulf. What is the expectation in terms of Algerian supply in the coming years? In the short term, we anticipate a measured growth trajectory supported by ongoing upstream optimisation, effective associated gas management and reliability enhancements across our processing network. Our approach is pragmatic – we prioritise operational availability, flare reduction and debottlenecking before pursuing large greenfield projects. This ensures a steady, credible supply profile that customers can rely on, rather than pursuing volume for its own sake. For the medium and long term, we are executing an ambitious investment plan to expand capacities, with more than 80pc of investments allocated to oil and gas exploration and production to ensure sustainable growth.

Are there plans in Algeria to expand LPG infrastructure and can you give us an overview of your current infrastructure including any shipping assets?
Algeria benefits from an integrated and robust infrastructure, encompassing gas processing plants, LPG separation facilities and coastal storage and export terminals along the Mediterranean. We continue to modernise and expand this infrastructure, investing in maintenance, digital scheduling and incremental storage where it delivers value. Future expansions will be in a phased and economically disciplined manner. In shipping, we combine owned and time-chartered capacity with long-term partners to optimise flexibility and efficiency in all export markets. Our subsidiaries, Hyproc Shipping Company and SPC, manage a diversified fleet for transport of LPG, oil products and LNG, strengthening our logistics capabilities.

Is there any intention to use additional supply domestically – be it in petrochemicals, autogas or other segments such as residential or industrial – or do you expect this LPG to be all available for export?

Our strategy balances domestic use with export growth. Supplying local demand



ARGUS LPG CONFERENCE

'Algeria as an LPG supplier stands out for its geographic position, flexible lot sizes and split ratios, and the option to sell on a fob or cfr basis'

— across residential, industrial, autogas and petrochemical sectors — remains a priority, while keeping sustainability in focus. At the same time, Algeria is a trusted exporter to international markets. Striking the right balance between domestic needs and exports ensures energy security, maximises value for the country and meets long-term international commitments. Of the 9mn t/yr of LPG produced in Algeria, about a third serves the domestic market, with the rest exported.

Sonatrach and China's Wanhua Chemical recently signed a landmark deal for propane supply. Do you expect more Algerian LPG to go to Asia, particularly in light of some of the uncertainty in trade policy out of the US?

The deal is now in its third consecutive year, demonstrating the satisfaction of both parties, and is part of a broader strategy by Asian, particularly Chinese, players to diversify their supply sources — and for Sonatrach to diversify its portfolio. Algeria stands out for several reasons — its central geographic position, flexible lot sizes and split ratios, and the option of delivering on a fob or cfr basis. Above all, Sonatrach's pragmatic approach and transparent pricing allow Algerian LPG to reach where it generates the most value while preserving long-term relationships in core markets. Our objectives also include developing new, high-value markets where energy demand and industrial growth are accelerating, and pursuing opportunities in any region or country that Sonatrach considers economically advantageous.

The supply to China goes to the petrochemical sector. Could you tell us about the quality of Algerian propane and butane and whether it typically makes the specification required for petrochemical feedstock usage?

Algerian propane and butane are well-recognised internationally, with a long history of supplying major petrochemical customers while meeting globally accepted specifications. You mentioned Wanhua Chemical, a major global petrochemical player. To add to this, in the past three months alone, we supplied more than 120,000t of butane to petrochemical end users in northwest Europe, including in Rotterdam, a key petrochemical hub, and in Immingham, UK. This demonstrates that Algerian LPG quality meets the stringent purity and international standards required by the petrochemical sector, and by extension other sectors as well, including residential and autogas markets. Algerian propane is particularly suited for propylene production, while our butane, with about 30pc isobutane content, is attractive for petrochemical applications. Our gas processing and LPG separation facilities ensure consistent composition, high purity and stable quality, and we can tailor products to meet specific customer requirements.

IN BRIEF

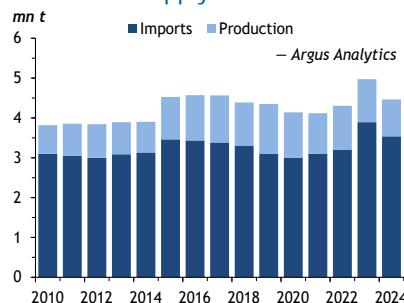
EU to ban Russian butane imports

The EU has included a ban on Russian normal butane and isobutane under its 19th sanctions package. Butane was exempted under the [wider Russian LPG embargo from December 2024](#) to secure Hungarian approval, given Hungary's industrial reliance on butane. The ban will take effect after a three-month transition allowing fulfilment of contracts signed before 24 October. Hungary will have an extra six months to phase out Russian supplies, provided they are not re-exported. The move follows a surge in Russian butane imports, with EU arrivals more than doubling on the year to 270,000t in January-August, Eurostat data show, driven by low-priced Russian butane feeding Poland's 1.8mn t/yr autogas market. Poland joined the Baltic states in [pushing to include butane in the sanctions](#). Poland's LPG association unsuccessfully urged the EU to reconsider, warning the ban could disrupt its aerosol industry, which relies on Russian isobutane.

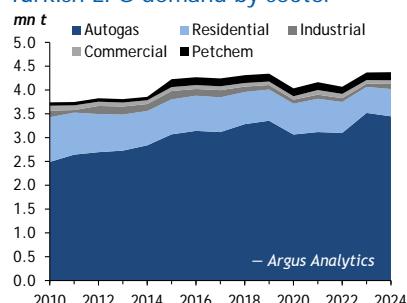
ARGUS LPG CONFERENCE

The world's largest autogas fleet is facing multiple challenges with prices rising this year, writes Efcharis Sgourou

Turkish LPG supply



Turkish LPG demand by sector



Turkish autogas sales to ease on economic drags

Turkey's demand is set to decline in 2025 for a second consecutive year as economic headwinds weigh on the country's autogas sales, delegates heard at the Argus LPG Conference in Istanbul over 16-17 October.

Domestic LPG distributor Aygaz expects LPG imports to decline by 4-5pc this year owing to an erosion in household purchasing power that is dragging on consumption. But the market should recover in the next few years, with autogas remaining the bedrock of domestic consumption given its persisting cost advantage over gasoline, Aygaz supply chain director Elifcan Yazgan told delegates.

Turkey consumes about 4.1mn t/yr of LPG, of which more than 3.5mn t/yr was imported in 2024, according to Aygaz. The country's autogas consumers, mainly consisting of a middle-income demographic, account for just over 80pc of domestic consumption. Autogas use stood at about 3.4mn t in 2024, down from 3.5mn t in 2023, Argus Analytics data show.

The country has 5.2mn autogas cars representing about 35pc of the total vehicle fleet, Aygaz says, making it the world's largest autogas market based on fleet numbers – Russian autogas sales slightly exceeded Turkey's last year. But the sector's resilience is being tested by economic difficulties. Inflation has remained stubbornly high throughout 2025, jumping by more than 30pc this year despite interest rate hikes by the country's central bank. The lira has also fallen to record lows against the US dollar, lifting fuel import costs and squeezing consumers already burdened by rising expenses. Autogas prices have climbed steadily this year but have largely retained their significant price advantage over gasoline and diesel, offering savings of about 40-45pc on an energy equivalent basis.

Gasoline prices in Turkey in 2019, prior to the crash in the lira's value and the impact of post-pandemic inflation, stood at about TL6.8/litre, equivalent to \$1.11/l at the time. They are now at about TL52.3/l. Diesel prices climbed to TL55.4/l from TL6.4/l over the same timeframe, while autogas jumped to TL27.7/l, still putting it about 59c/l lower than gasoline.

Although autogas use eased in 2024 and may do so again this year, it is still on a robust upward trajectory viewed over a longer timespan (see graph). The country's residential, industrial and commercial demand is conversely continuing to contract over the long term owing to natural gas pipeline rollouts. Cylinder LPG sales have dropped by 73pc to about 573,000 t/yr since 2000, according to Turkish distributor Milangaz's commercial director, Can Toydemir. Bulk LPG sales to mainly the industrial and commercial sectors have fallen by an even greater degree – by 89pc to 120,000 t/yr, he said. Autogas use by contrast has almost tripled to about 3.45mn t/yr from 1.28mn t/yr, Milangaz data show. "Cylinder consumption has been falling about 5pc/yr as stronger natural gas grid penetration displaces bottled and bulk LPG use, and this trend will persist," Toydemir said.

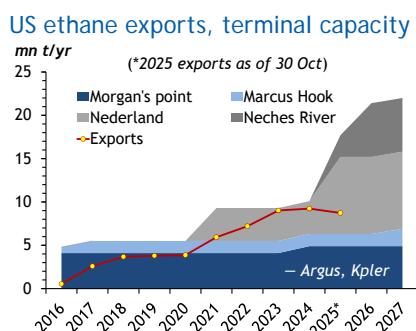
Grid unlocked

Turkish gas grid development over the past 20 years has brought pipeline access to most urban areas, while government policies have continued to support the adoption of natural gas for household and industrial usage. As a result, LPG's role in these sectors has slowly diminished while retaining a foothold in off-grid areas. But the non-autogas LPG sector remains strategically important for Turkey. When natural gas prices surged in 2023 following Russia's invasion of Ukraine, many industrial and commercial users temporarily switched to LPG, supporting record import volumes that year and underscoring LPG's value as a back-up alternative.

The LPG market is expected to regain momentum over the longer term, anchored by autogas, delegates heard, with residential, industrial and commercial use expected to continue to wane.

ETHANE

US ethane exporters have been busy expanding capacity, but this growth may be met by hesitant demand from weary Chinese ethylene steam crackers



Trade fears may hinder China's US ethane needs

The substantial growth in US ethane export capacity that is largely founded on expected demand growth from the country's largest importer, China, may overshoot these estimates as a result of concerns in China over future trade relations.

US ethane exporters Energy Transfer and Enterprise Products have expanded capacities on the Gulf coast this year. US exports stand at about 8.7mn t as of late October, putting them on course to reach 10.4mn t in 2025, up from 9.2mn t in 2024, Kpler data show. And US export capacity could reach more than 20mn t/yr by 2027 as ongoing expansion projects are completed, Energy Transfer's vice-president for China, Vicky Ye, told an olefins conference in Xi'an on 16 October.

US export growth is supported by rapidly growing output, although Ye noted that the US rejected about 14mn t/yr of ethane in 2023 and 2024 owing to flat domestic demand of about 38mn t/yr, pointing to already abundant supply to meet international demand growth. Both firms are nevertheless expanding their natural gas liquid (NGL) fractionation capacities alongside their NGL midstream peers, which will significantly raise production capacity in the coming years. Energy Transfer is developing a ninth NGL fractionator at Mont Belvieu, Texas, with a capacity of 165,000 b/d that is due to **start up in late 2026**, while Enterprise is due to open a **13th 150,000 b/d fractionator at Mont Belvieu this quarter**.

US ethane export capacity is set to grow to 1.05mn b/d (21.7mn t/yr) in 2026 and 1.07mn b/d in 2027, based on Energy Transfer's and Enterprise's plans. This is being supported by the former's 250,000 b/d propane and ethane expansion of its Nederland terminal on the Gulf coast, the **first phase of which opened earlier this year**, as well as a **20,000 b/d rise to 95,000 b/d at its Marcus Hook terminal on the east coast by mid-2027**. Also, Enterprise has begun shipments from its 120,000 b/d Neches River ethane terminal near Beaumont, Texas, where capacity is due to grow by **180,000 b/d of ethane or 360,000 b/d of propane by the first half of 2026**.

But this capacity growth may be met by increasingly hesitant demand owing largely to lingering trade concerns between China and the US. China has accounted for more than 50pc of US ethane exports over the past two years, and its petrochemical sector was increasingly turning to the feedstock for **new investments and retrofits as a way to combat weak production margins**. But ethane-fed project developments are now facing delays.

Deferred cracker formation

China's demand comes from its ethane-fed ethylene steam crackers, five of which totalling 5.1mn t/yr opened over 2019-24, with eight due to start up this year with a combined capacity of 11mn t/yr (see table) – representing about 8.8mn t/yr of ethane use combined. Another four projects totalling 5.5mn t/yr have been deferred as a result of US trade relation concerns, market participants say.

The mismatch between future supply and demand is further reflected in the ethane shipping sector, where new very large ethane carrier (VLEC) deliveries continue apace. About 21 VLECs will be delivered in 2026 and another 17 in 2027, bringing the global fleet to 74. A considerable portion of these vessels was originally intended for specific projects in China, so any delays to these will divert the ships to the spot market from next year.

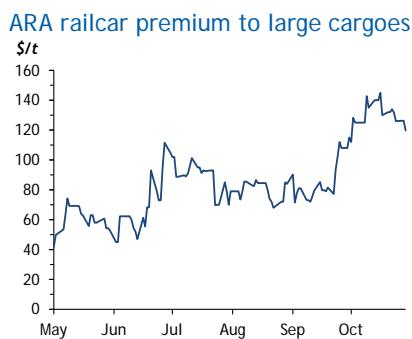
Enterprise and Energy Transfer expressed concerns that **the US government's interventions in ethane trade with China** would create reputational damage that would affect Chinese firms' willingness to proceed with US ethane-fed projects. The US Commerce Department in late May blocked ethane exports to China, citing military uses, which most participants put down to leverage in trade negotiations, before lifting the ban on 2 July. The order gave the US and its NGL sector a "black eye", Energy Transfer co-chief executive Mackie McCrea said at the time.

Chinese ethane-fed crackers			
Cracker	Cap. mn t/yr	Ethane mn t/yr	Start
SP Chemicals*	0.75	0.75	2019
Satellite 1	1.25	1.63	2021
Satellite 2	1.25	1.63	2022
Sanjiang Petchem*	1.00	0.43	2023
Huatai*	0.85	0.56	2024
Projects 2025			
Shenghong*	1.40	0.50	May
Wanhua 2*	1.20	0.50	Apr
Luqing*	1.20	-	Mid-25
ZPC 1, 2, 3*	4.80	0.80	Oct
Wanhua 1*	1.20	1.56	Dec
Sinopec-Ineos†	1.20	0.40	End-25
Delayed projects			
Satellite 3, 4	3.00	3.90	2027
PetroChina Lanhai*	1.00	0.70	2028
Secco*	1.20	0.50	2027
Dingjide Petchem	0.30	0.39	-

*Mixed-feed crackers †Cracker started in 2024 – opening of integrated ethane terminal

NORTHWEST EUROPE

The disruption last month occurred against a backdrop of tighter inland availability, with more industrial action on the horizon, write Waldemar Jaszczyszyn and Yasmin Zaman



ARA railcar propane prices spike on Antwerp strikes

Railcar propane premiums to large cargo imports at the Amsterdam-Rotterdam-Antwerp (ARA) hub spiked last month after a series of labour strikes in Belgium disrupted logistics at Antwerp port in mid-October.

The premium for 45t fca ARA railcars to the cif ARA large cargo assessment for 22,400t lots surged by nearly a third in the first half of last month to a seven-month high of \$145/t by 16 October following a nationwide strike in Belgium on 14 October, triggered by opposition to government cost-cutting measures. This forced a three-day closure of the 75,000t Antwerp Gas Terminal (AGT). The nearby 65,000t Vopak terminal in Flushing, the Netherlands, became the only source of prompt supply with AGT off line, boosting railcar premiums. But they then rapidly retreated, shedding 17pc to \$119.75/t over the two weeks to 29 October — a four-week low — after the strikes ended and AGT reopened.

AGT is one of the key import and inland distribution terminals for northwest Europe's heating market as it can accept VLGCs from the US and sell on supplies on smaller barges, railcars and trucks. Activity at nearby refineries, including TotalEnergies' 310,000 b/d Antwerp plant, was also affected, market participants say. The Antwerp refinery has been under maintenance since the start of October, with supply to term customers provided by imports, they say.

Delays to seaborne LPG deliveries into Antwerp put pressure on AGT's stocks, prolonging its shutdown. Industrial action by Flemish sea pilots that began on 5 October in response to pension reforms slowed maritime traffic significantly. At the peak, 188 ships were waiting at the port to berth or depart, including three inbound US-origin LPG vessels — *BW Gemini*, *Aeolian Pearl* and *Sifnos Lady* — carrying up to 112,000t of LPG, according to Kpler.

The disruption also tightened supply for local petrochemical producers. Antwerp hosts Austrian petrochemical firm Borealis' 78,500t propane tank that feeds its 250,000 t/yr propane dehydrogenation unit in Kallo, and German peer BASF's 76,000t LPG storage supporting its 1mn t/yr ethylene cracker. Both firms have recently shifted infrastructure to favour local selling, intensifying barge competition. But traders reported cancelled barge sales as crackers prioritised internal supply at a time of delayed imports.

No Schwedt

The disruption to terminal suppliers occurred against a backdrop of tighter inland availability owing to refinery maintenances and outages. German buyers reported lower propane volumes from PCK's 226,000 b/d Schwedt refinery in eastern Germany after the plant entered maintenance in early October, which originally was meant to affect only butane. The Miro group's 310,000 b/d Karlsruhe refinery in the west encountered production problems at the start of the month, also limiting term loadings. Closer to the ARA hub, issues at ExxonMobil's 180,000 b/d Rotterdam refinery delayed its start-up until early November.

The drop in supply also coincided with a gradual increase in heating demand as overnight temperature lows in Essen, Germany, dropped to 9°C over 19-25 October compared with 10.9°C at the start of the month, Speedwell weather data show. But market tightness eased after the maritime pilots suspended their strikes on 15 October in order to resume negotiations with the Flemish government. The congestion cleared in the following week, with LPG arrivals at Antwerp more than tripling to 242,000t in the second half of the month from 67,000t in the first half.

Logistical challenges stemming from industrial action at the ARA hub could resume this month, raising railcar and barge prices again. Belgium's rail unions announced a three-day protest on 23-26 November, with the last day coinciding with a national strike.

ARGUS LPG CONFERENCE

An increase to the terminal's capacity will allow the Black Sea region to accommodate further midsize carriers

US LPG deliveries to Burgas				
Vessel type	Vessel name	Cargo t	Origin	Arrival
VLGC*	Hallasan Explorer	21,000	Marcus Hook	8 May
Midsized	Cerro Alto Explorer	17,000	Marcus Hook	20 Aug
Midsized	Winnipeg	21,000	Marcus Hook	21 Sep
Midsized	Hallasan Explorer	16,500	Marcus Hook	19 Oct

* part discharge on to smaller vessels

Bulgaria's Burgas to receive midsized ships by 2026

LPG imports to the Black Sea region on midsized carriers are set to rise from late 2026, following an expansion of Bulgaria's Burgas terminal, market participants said on the sidelines of the Argus LPG Conference in Istanbul over 16-17 October. Upgrades have come in response to changing trade patterns in the Black Sea since the Ukraine conflict and after the EU banned Russian LPG imports in December.

The terminal's capacity has increased to 3,000 t/d (1.1mn t/yr) from 1,800-2,000 t/d in June, while ongoing dredging at the port will enable it to accommodate vessels with drafts of 10.3m by the end of 2026, up from 6.3m. The Burgas facility is Bulgaria's only marine terminal and can currently accept pressurised carriers of up to 4,500dwt and 170m long. It only has 300m³ storage capacity, and as it is close to residential areas, it cannot expand this, an industry source said at the event. It can also load six railcars at a time.

The Black Sea region has received three midsized carriers and one very large gas carrier accommodating US LPG so far this year. The supply was transshipped on to smaller pressurised coasters offshore Bulgaria, which takes about 13-20 days, for delivery to Romania and Ukraine. Bulgarian trading firm Bulmarket bought the cargoes under contract with Trafigura, a market participant said.

Other Balkan importers will consider purchasing 20,000-25,000t cargoes, including from the US, if all expansion plans at the Burgas terminal are realised, market participants said at the conference. Prices for long-haul shipments to the region "have been quite reasonable this year", one participant said. "The only thing that could limit such deliveries is the lack of storage at Burgas." About 500 railcars are required to fully unload a midsized carrier.

Most additional imports to Burgas would need to be re-exported as Bulgarian demand has plateaued in recent years, importers said. Bulgarian arrivals increased by 10,000-20,000t on the year to 300,000-320,000t in January-September, according to market participants, partly driven by a drop in output at the Burgas refinery.

JAPAN PETCHEM

Poor demand and weak margins have pushed producers to carry out a major restructuring of Japan's petchems industry

Japan to speed up petchem rationalisation

Japan's struggling petrochemical sector is looking towards a more aggressive rationalisation strategy on the back of similar strategic restructuring announcements from China and South Korea.

Japanese petrochemical producers have suffered from weak margins since the Covid-19 pandemic, a situation exacerbated by the rapid growth in Chinese propane dehydrogenation and ethylene steam cracker capacity in the past five years, as well as the retrofitting of southeast Asian crackers. Polymer units in the country stood at about 75pc for polypropylene (PP) last month and below 60pc for polyethylene (PE). Japanese producer Prime Polymer shut one of its 110,000 t/yr PP units in 2023, while peer Mitsui Chemicals is considering closing a PE and a PP unit. Prime and Sumitomo Chemical plan to [integrate their polyolefin capacities](#).

But clarity on how much capacity will be phased out is still limited. "[China](#) and [South Korea](#) are on the same rationalisation campaigns, [and] we also need to take their decisions into consideration," a major producer in Japan says.

Japan's petrochemical sector consumed about 1.6mn t of LPG feedstock last year, steady from 2023 but down from a peak of 3.1mn t in 2014, Argus Analytics data show. The country has 13 crackers with a combined capacity of 6.8mn t/yr, of which 11 have the flexibility to consume a certain degree of butane, propane or both. One of the most significant of these is integrated firm Eneos' 460,000 t/yr Kawasaki unit, which uses a minimum 54pc of butane feedstock, 41-46pc of naphtha and up to 5pc propane, Argus data show.

CHINA PETCHEM

The new anti-involution campaign will focus more on market competition than supply-side, capacity-cutting reforms

China's 'anti-involution' reforms to benefit petchems

China's "anti-involution" campaign is more market-driven than supply-side reforms in 2015, and could benefit a domestic petrochemical sector grappling with excessive competition, delegates at a recent conference heard.

"Industrial output growth has outpaced GDP growth for seven consecutive quarters, reflecting structural overcapacity," China Galaxy Securities' chief economist Zhang Jun said at the Commodities Forum on 22-23 October in Hangzhou. Involution refers to a cycle of excessive internal competition, while anti-involution signals the government's growing emphasis on tackling the issue.

China's producer price index fell by 2.3pc year on year in September, marking the 36th consecutive month of decline, the National Bureau of Statistics says.

The new anti-involution campaign focuses on "improving industrial competitiveness, optimising market mechanisms and promoting high-quality development, rather than relying on administrative orders to eliminate excess capacity", Zhang said. It also involves more private-sector companies than in 2015.

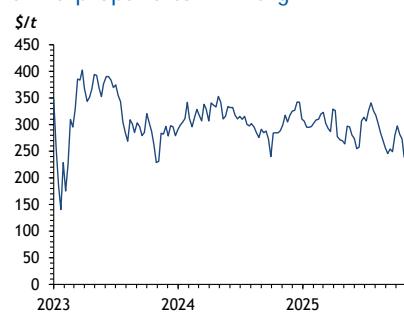
China's petrochemical sector is in need of urgent restructuring to upgrade or eliminate excess capacity, which has shrunk profit margins to 4.9pc in the first half of 2025 from 8pc in 2021, China Petroleum and Chemical Industry Federation vice-director Fu Xiangsheng says. The sector has been plagued by lower efficiency, resource waste and slow technique innovation owing to [excessive competition](#).

Domestic ethylene and propylene production capacity has risen by 59pc and 55pc, respectively, since 2021, driven by an expanding fleet of steam crackers and propane dehydrogenation (PDH) plants. Oversupply has depressed production margins and forced many PDH plants to cut operating rates or temporarily shut.

CHINA PETCHEM

Slow downstream demand and increased competition have weighed on PP prices

China propane-to-PP margin



China's propane-to-PP margins hit two-year low

China's propane-to-polypropylene (PP) margins hit a two-year low at the end of October as the easing of US-China trade tensions boosted propane prices, while PP values remained at a five-year low.

Under the latest [US-China trade agreement](#), China is likely to maintain its 10pc additional tariff on US LPG and suspend [port fees on US-linked ships](#) for one year.

The propane Argus Ningbo Index (ANI) rose by \$30.50/t, or 5.7pc, to \$569.25/t by 30 October from 23 October, when [trade talks resumed](#). Market participants expect abundant US propane supplies could re-enter the Chinese market. [US propane inventories rose to a record high](#) of 105.7mn bl (8.52mn t), as exports fell to nearly a three-month low in the week ending 24 October, according to data from the US Energy Information Administration.

But east China raffia-grade PP prices have remained at five-year lows since September, and fell to 6,530 yuan/t (\$808/t), excluding 13pc value-added tax, in the week to 30 October. This has resulted in the propane-to-PP spread narrowing to \$239/t by 30 October, a two-year low. Slow downstream demand and greater competition in the petrochemical market weighed on PP prices from late August, and prices have remained at a five-year low since September, Argus data show.

China added [five new steam crackers](#) with 6.7mn t/yr of ethylene capacity and 3.3mn t/yr of propylene capacity this year, and three propane dehydrogenation (PDH) plants with propylene capacity of 2.5mn t/yr. About 60-70pc of propylene plants are integrated with downstream PP production in China.

China will resume importing US propane once the 10pc additional tariffs are implemented, but given current narrow PDH margins, it is difficult to boost run rates or import demand, an east China PDH operator says. Average PDH run rates have hovered around 70pc since September and were at 71pc on 31 October.

SHIPPING

China-linked vessels are again operating freely between the Pacific and Atlantic, likely rebalancing fleet distribution across basins, writes Yohanna Pinheiro

VLGC markets rally on US, China port fee suspension

A one-year suspension of retaliatory port fees between the US and China triggered a swift reshuffling of VLGC fleets, which lifted freight rates in the Pacific basin and erased the two-tier market that emerged in the Atlantic basin earlier in October.

Chinese-linked vessels that had flooded the Pacific basin to avoid US port fees began moving back to the Atlantic market on 30 October, tightening availability in the Mideast Gulf and prompting shipowners to raise their offers sharply. The Ras Tanura-Chiba VLGC rate jumped by \$9/t on the day to \$60/t, nearly a two-week high.

The Mideast Gulf market had been under pressure for weeks, weighed down by the surplus of China-linked vessels avoiding US port fees in the Atlantic basin from 14 October. This imbalance led shipowners' daily time charter equivalent (TCE) revenues for US to east Asia voyages to average \$18,000/d and \$11,000/d more than Mideast Gulf routes in September and October, respectively, compared with a \$3,500/d difference from January to August.

Additionally, the port fee suspension allowed US and China-linked vessels to again operate freely between the Pacific and Atlantic basins. This shift is likely to rebalance the fleet distribution across basins and narrow the difference in shipowners' daily revenues for Pacific and Atlantic long-haul routes.

China's retaliatory port fees on US-linked vessels in early October had split rates from the US Gulf coast to east Asia relative to whether the vessel held the option to discharge in China. Discounts previously offered by US-linked shipowners for cargoes excluding China discharge disappeared on 30 October, which ended the two-tier rate structure. The difference had centred around \$10/t in the days that followed the announcement and later dwindled as tensions between the US and China eased.

In the Atlantic, Houston-Chiba rates rose at a slower pace to \$119/t on 30 October from \$115/t a day prior, following sharp gains earlier in the week on surging chartering demand that trimmed fleet availability in the US Gulf.

EUROPE

High transloading costs and market oversupply owing to term overcommitment have pressured importers' margins at Gdynia, writes Waldemar Jaszczyk

Poland's Glob-Terminal loses LPG import licence

Polish LPG trading firm Glob-Terminal has lost its import licence, according to state regulator URE, forcing an early termination of its transloading contract at Alpetrol's 420,000 t/yr Gdynia terminal.

Glob-Terminal's licence to import LPG was withdrawn by URE on 27 October, reducing the number of national importers to 39.

The company had already exercised an exit clause in its contract with the Alpetrol-run facility in September, according to the operator's announcement. The decision was meant to take effect on 30 June after an eight-month notice period, but the concession's loss forced an immediate termination today.

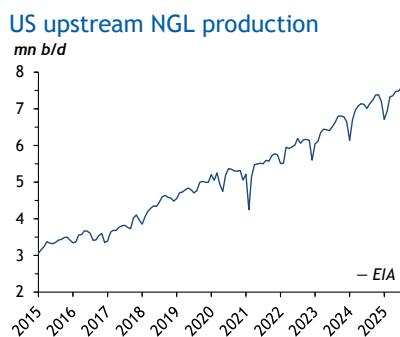
Glob-Terminal, alongside several other Polish importers, had shifted its supply to the northwest European coasters market through Gdynia this year in response to the EU's embargo on Russian LPG. As a result, deliveries into the site more than doubled to 24,000 t/month in the first 10 months of 2025 from just 11,000 t/month in 2022. But high transloading costs and market oversupply owing to term overcommitment have pressured importers' margins.

The company will now probably use third parties to procure coasters on the spot market as it still holds licences to produce and sell LPG, according to market participants.

Glob-Terminal also operates a 300,000 t/yr terminal at the Mamonowo-Braniewo border crossing with Russia's Kaliningrad exclave.

NORTH AMERICA

US NGL output has surged, but rising demand for gas and higher prices could lead to increased rates of ethane rejection, writes Joseph Barbour



AI data centres to lift US NGL output, cut processing

A surge in demand for US natural gas to fuel artificial intelligence (AI) data centres will boost associated natural gas liquids (NGLs) production, but the need for more natural gas could also reduce the amount of ethane and propane processed from the gas stream, industry figures said at the Petrochemical Feedstocks Association of the Americas conference on 22-24 October in Louisiana.

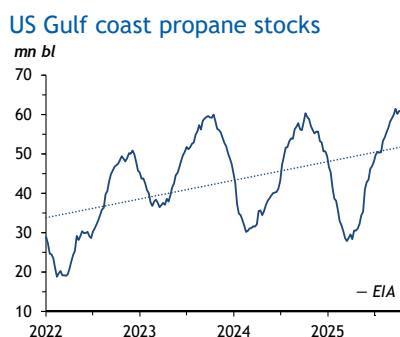
US NGL output surged to 7.04mn b/d in 2024 from 5.18mn b/d in 2020, according to the Energy Information Administration, largely driven by higher natural gas production. But increasing demand for gas and higher prices could lead to higher rates of ethane rejection, midstream operators and consultants said at the conference. US data centres' growing electricity needs could constitute 22bn ft³/d (226bn m³/yr) of natural gas demand to by 2035 if all planned projects come on line, analytics firm East Daley said at the event.

Ethane rejection at the Marcellus shale region in eastern US will be more than 250,000 b/d (5.2mn t/yr) from 2026 as power demand encourages more drilling in NGL-rich acreage, which is more profitable than drier gas plays, consultancy ESI's founder Mark Woods said. Another US consultancy, RBN Energy, forecasts US ethane rejection to climb to roughly 1.75mn b/d by 2030 from about 1.3mn b/d this year.

The uptime reliability required by AI data centres could also lead to more propane being left in the gas stream as well as ethane, midstream firm Enterprise Products' vice-president of natural gas and NGL marketing, Tyler Duffie, told attendees. Most AI investors are seeking "behind-the-meter" dedicated natural gas supplies separate from utilities, which must balance demand between residential consumers and AI operations. The steady draw on gas supplies may result in "situations where ethane has to be rejected", Duffie said.

NORTH AMERICA

US stockbuilding could continue into December, with forecasts of a warmer winter, write Joseph Barbour and Dennis Kovtun



Propane supply ample for winter

North American supplies of propane are ample heading into heating demand season between October and March, with overall stocks up by 8.6mn bl (695,000t) in October compared with a year earlier.

US propane stocks stood at a record 105.7mn bl (8.52mn t) by 24 October, up 4.1pc on the year and 14pc higher than the five-year average, Energy Information Administration (EIA) data show. In western Canada, where most of the country's propane is stored, stocks have built more slowly this year, remaining lower than levels in 2024 for most of the summer owing to stronger export demand from the west coast. LPG exports, mainly propane, from the British Columbia coastline were 110,000 b/d (296,600t) in October, according to Kpler. But propane inventories stood at 7.02mn bl in October, up slightly on a year earlier, Canada Energy Regulator data show. Supplies in both countries totalled 115.8mn bl, up by 8.6mn bl compared with US and Canadian stocks ending and beginning October 2024, respectively.

Supplies are readily available in the US as a fall in exports – to 1.2mn b/d in May following the start of the US-China trade war – has led some to suggest stockbuilding may continue into December, pushing inventories past the record.

The EIA forecasts 3,153 heating degree days – how many degrees below 65°F (18°C) a day's average temperature falls – in November-March, down by 3pc on the year. It expects propane demand to be 12pc lower this season as a result.

Propane prices at the LST cavern at Texas' Mont Belvieu hub averaged 65.69¢/USG (\$341.59/t) last month, down by 5.99¢/USG on the year. Edmonton prices in western Canada averaged 52.03¢/USG, down by 8.57¢/USG. Edmonton trades at a discount to prices at Conway in the US midcontinent, and the spread narrowed to a five-year low of 6¢/USG at the start of October following steeper losses at Conway.

IN BRIEF

Asia-Pacific

Wanhua to become net ethylene seller

Chinese private-sector petrochemical company Wanhua Chemical could flip to a net seller of ethylene by 2026 from a net buyer after it completes a retrofit of its 1mn t/yr Yantai cracker in Shandong province in December. It will switch from using propane to ethane as feedstock when it restarts in the second half of December and its capacity will rise to 1.2mn t/yr of ethylene. The switch will also halt propylene and butadiene production. Wanhua imports ethylene as feedstock for its downstream ethylene oxide facility in Yantai and polyvinyl chloride plants in Fujian. Wanhua will supply ethylene from the cracker to its downstream facilities, reducing ethylene imports by 70,000-80,000 t/month, a source close to the company says. Excess supply could be exported, sold locally or consumed, the source says.

Middle East

Aramco lowers monthly LPG prices again

State-controlled Saudi Aramco has lowered its propane contract price (CP) by \$20/t to \$475/t and its butane CP by \$15/t to \$460/t for November. The drop followed the [surprise cuts made in October](#) in response to Indian tenders to buy US LPG and comes despite the market moving into peak demand season. But it was not as sharp as term customers' recommendation of \$455-475/t for propane and \$5-10 lower for butane. The price cut also came despite firming propane Argus Far East Index swaps after the US and China reached an agreement to pause high tariffs and port fees for a year. This is expected to reignite US-China LPG trade, supported by US propane oversupply, although Chinese petrochemical sector demand is weak. But Indian demand for Mideast Gulf supply has firmed for November.

West Africa

Dangote to grow to 1.4mn b/d by 2028

Nigeria's 650,000 b/d Dangote refinery in Lagos is to add a 750,000 b/d processing line, taking its overall capacity to 1.4mn b/d. "Upon completion, this will make it the largest refinery in the world, ever, surpassing Reliance's [1.2mn b/d] Jamnagar refinery in India," chairman Aliko Dangote says. The refinery will be listed on the Nigerian stock exchange in 2026, but there are no plans for an international listing. A 10pc stake will be offered to the public, the firm told *Argus*. The expansion will lift polypropylene output to 2.4mn t/yr from 900,000 t/yr, boost linear alkyl benzene production and add base oil capacity, Dangote says, but securing sufficient Nigerian crude remains a challenge.

Moroccan imports fall on subsidy cuts

Morocco's LPG imports have fallen sharply this year as the government rolls back long-standing subsidies. Imports fell by 13pc on the year to 2.2mn t in January-September – the lowest for the period since 2021 – the latest Kpler data show. A brief shutdown at the Mohammedia terminal limited activity early this year, but volumes failed to rebound, signalling a structural demand shift. Imports were 220,000t in October, down from a rolling six-month average of 250,000 t/month, the latest Kpler data show. Subsidised retail prices have supported domestic demand for years, with LPG imports reaching a record high of 3.3mn t in 2024. But the government phased out subsidies in May 2024, raising a 12kg butane cylinder price to 60 dirham (\$6.45) from Dh40, with another increase to Dh70 due in 2026. This increase is expected to hit butane demand despite its importance as a fuel.

Europe

DCC buys UGI's Austrian and UK arms

Dublin-based LPG distributor DCC has acquired rival firm UGI International's subsidiaries in Austria and the UK as the company continues to expand its European footprint.

DCC has agreed to acquire UGI's Austrian LPG arm Flaga for €55mn (\$77.5mn). Flaga is the largest LPG distributor in the country with sales of 45mn litres/yr (24,000 t/yr) and 15,000 term customers.

The deal is expected to close at the end of the 2025-26 financial year in March pending regulatory approval. DCC has separately bought the cylinder business of UGI's UK-based firm Avantigas for an undisclosed fee in a deal completed last month. This will expand DCC's share of the UK market, where it already operates under distributor Flogas.

The purchases are part of DCC's strategy to prioritise its energy division. The distributor recorded strong LPG sales growth in continental Europe, specifically in Germany, where it benefited from the previous year's acquisition of LPG supplier Progas for £140mn (\$183.9mn).

In contrast, recent declines in sales have pushed UGI International to divest from several European assets as it focuses on markets it holds a leading position in. The company sold its Italian retail arm Univergas to three domestic suppliers in July. Its operating income fell to \$43mn from \$57mn in the second quarter, contributing to the parent company UGI's overall loss of \$127mn before interest and taxes.

IN BRIEF

Latin America

Investors discuss Panama LPG pipeline

The Panama Canal's operator ACP met with firms interested in developing LPG terminals on the country's Atlantic and Pacific shores as part of its plan to build an LPG pipeline to bypass the canal. The invitation-only meeting includes terminal operators APM, PSA International and DP World, shipping firms Maersk, Cosco, Hapag Lloyd and CMA CGM, and the Port of Houston, among others. ACP [announced in September](#) it would launch the bidding process for the project, described as a 76km, 2.5mn b/d pipeline that can ship LPG and butane, freeing up space on the Panama Canal. Companies that pre-qualify will be able to participate in the process, which is set to conclude by the end of 2026. The project comes as canal congestion and higher transit fees push some LPG shippers away from the canal despite its importance for US exports to Asia-Pacific. The terminals need about \$2.6mn in investment combined and could increase container transits on the canal, ACP says.

Braskem to invest in ethane expansion

Brazilian petrochemical producer Braskem has approved a 4.2bn real (\$780mn) investment to expand its ethane-fed capacity in Rio de Janeiro. This is set to boost ethylene production by 220,000 t/yr and raise polyethylene capacity by the same amount. The project, scheduled to be completed by the end of 2028, is part of the company's broader plan to enhance competitiveness by shifting production towards natural gas liquids from naphtha. Braskem's board has also authorised the negotiation of a long-term ethane supply contract with state-controlled Petrobras.

North America

EIA forecasts dip in US heating demand

The US' household heating use of propane this winter is set to decline by 2pc from a year earlier to 493 USG per household (1t/household) because of milder weather, the EIA says in its latest *Winter Fuels Outlook*. Heating degree days – a measure of demand based on how far temperatures fall below norms – are set to fall by 3pc to 3,153. The midcontinent, where the majority of residential heating demand for propane is found, will use 1pc less at 639 USG/household, the EIA predicts, with prices in the region dropping by 7pc to \$1.98/USG. The agency predicts household propane expenditures to decrease by 9pc from last winter to \$1,210, on declining overall consumption and retail prices. Average retail propane prices to households are expected to average about \$2.46/USG, down from \$2.64/USG in the winter of 2024-25. US propane production will increase by 2pc compared with last winter.

AltaGas' surging exports spur expansion

Canadian midstream company AltaGas' LPG exports increased by about 3.8pc on the year to a record high 133,100 b/d (1.05mn t/quarter) in the third quarter, spurring it to make a final investment decision on a 25,000 b/d expansion of its Ridley Island energy export terminal, which is currently under construction.

AltaGas moved ahead with the \$79mn, 55,000 b/d [Reef terminal project in June 2024](#). The facility will be adjacent to its Ridley Island propane terminal (Ripet). It is scheduled to start up in late 2026. The expansion to 80,000 b/d will then come on line in the second half of 2027. A third phase to expand the terminal by another 60,000 b/d is still under consideration, the firm says.

AltaGas' LPG exports in July-September grew on strong demand from Ripet and its Ferndale terminal in Washington state, US, with 13 very large gas carriers shipping out of the former and 10 from the latter. The company's exports are fully hedged at \$16.84/bl on an Argus Far East Index to North America basis.

"Canada needs to increase Asian exports to maximise the value of our product," chief executive Vern Yu says.

AltaGas' domestic gas processing throughput grew by 5pc in the third quarter on greater natural gas production in Montney, Canada. The firm's new Pipestone II gas processing plant near Grande Prairie, Alberta, which will add 20,000 b/d of natural gas liquid capacity, is expected to start up in December.

Rapauno LPG terminal to expand storage

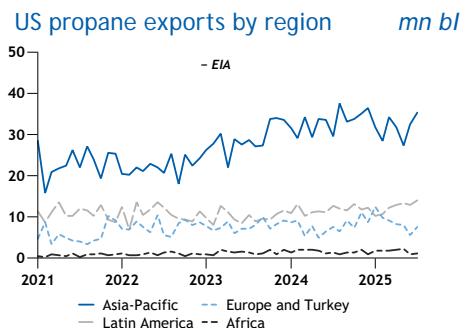
US terminal operator Delaware River Partners (DRP) is to construct 1.2mn bl (103,000t) of LPG storage capacity at its Rapauno port and rail terminal on the Delaware River in New Jersey, northeast US, lifting the total to 1.38mn bl. New Jersey's environment department approved development of two 600,000 bl LPG granite underground storage caverns. The Rapauno terminal, which [opened in January 2021](#), can export about 7,000 b/d (220,000 t/yr) of LPG, mainly butane on midsized carriers. Exports from the facility stood at about 188,000t in January-September, of which 68,000t went to Africa and 60,000t to Europe, Kpler data show.

Energy Transfer to add NGL storage

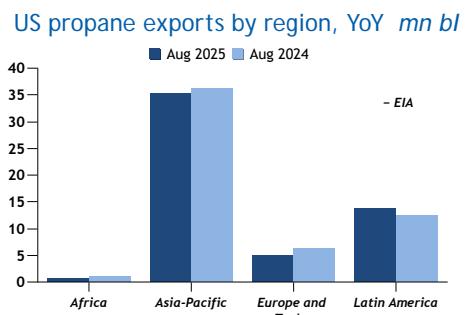
US midstream firm Energy Transfer will add 3mn bl (300,000t) of additional natural gas liquid (NGL) storage at Mont Belvieu, Texas, the company said at the Petrochemical Feedstock Association of the Americas conference in Louisiana last month. The addition is part of improvements the firm is making at its Mont Belvieu and Beaumont facilities, it said. Energy Transfer currently has 27 active salt caverns with a total of 62mn bl of storage at Mont Belvieu.

TRADE FLOWS: NORTH AMERICA EXPORTS

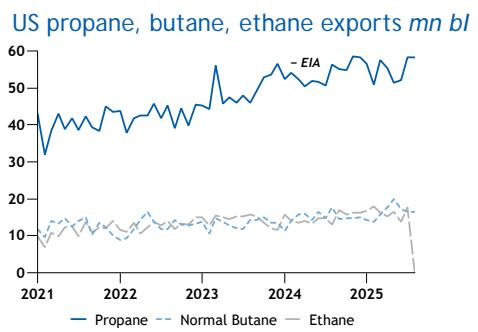
US propane exports '000 bl				
	Aug	±% Aug 24	Jun-Aug	±% Jun-Aug 24
Region				
Asia-Pacific	35,233	-3.0	102,967	3.7
Latin America	13,610	8.6	40,713	15.3
Europe and Turkey	4,933	-22.1	18,129	-11.7
Africa	768	-20.7	2,808	-16.9
North America	138	43.8	457	51.3
Middle East	0	-	0	-
Total	54,682	-2.8	165,074	4.0
				436,488
Country				
Japan	14,965	-0.9	42,686	-7.1
China	7,048	-42.9	19,932	-29.5
South Korea	3,729	-31.6	11,741	-23.9
Indonesia	3,424	68.3	9,796	68.8
Mexico	5,969	19.9	17,493	20.7
Netherlands and Belgium (ARA)	1,457	-46.3	9,027	-3.8
				33,603



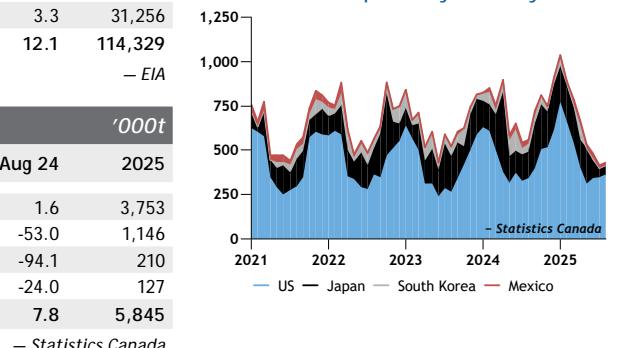
US normal butane exports '000 bl				
	Aug	±% Aug 24	Jun-Aug	±% Jun-Aug 24
Region				
Asia-Pacific	6,738	-17.0	23,287	14.1
Latin America	1,708	29.5	4,665	6.4
Europe and Turkey	3,181	23.4	8,346	7.9
Africa	4,614	-18.9	13,639	-15.1
Middle East	0	-	0	-
North America	99	-23.8	298	-55.1
Total	16,340	-8.4	50,235	2.0
				131,346
Country				
Indonesia	2,401	46.9	6,821	62.4
South Korea	740	-64.0	3,889	-30.2
Morocco	1,236	-49.2	4,317	-32.0
Egypt	542	-48.4	1,776	-54.4
Turkey	492	94.5	1,556	16.3
China	0	-100.0	254	-91.9



US ethane exports '000 bl				
	Jul	±% Jul 24	May-Jul	±% May-Jul 24
China	9,601	35.0	21,586	3.4
India	1,580	0.0	7,307	54.2
UK	1,694	111.8	3,740	110.0
Norway	910	-3.3	3,812	-10.1
Other	3,921	-10.6	11,685	3.3
Total	17,706	19.5	48,130	12.1
				114,329

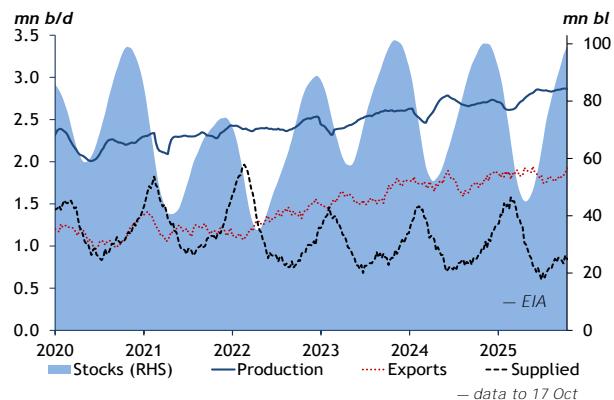


Canada LPG exports '000t				
	Aug	±% Aug 24	Jun-Aug	±% Jun-Aug 24
US	365	7.1	1,057	1.6
Japan	50	-66.5	199	-53.0
South Korea	0	-100.0	12	-94.1
Mexico	16	-20.4	60	-24.0
Total	617	10.4	1,887	7.8
				5,845

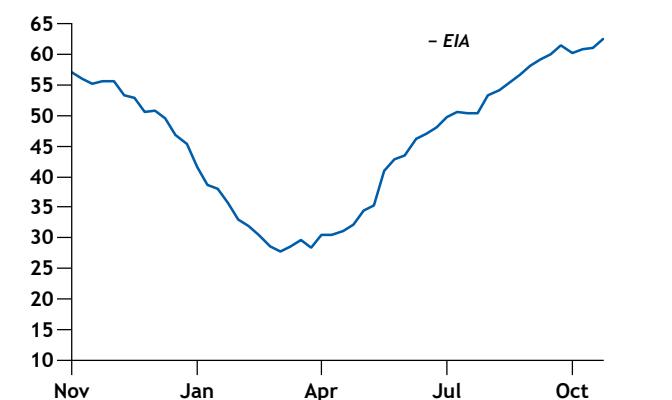


INVENTORIES: US

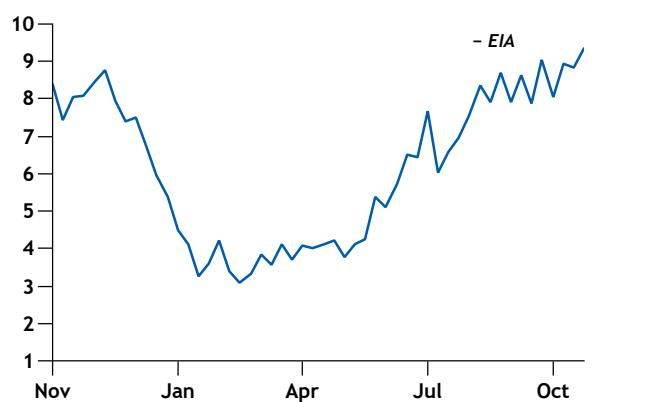
US propane fundamentals



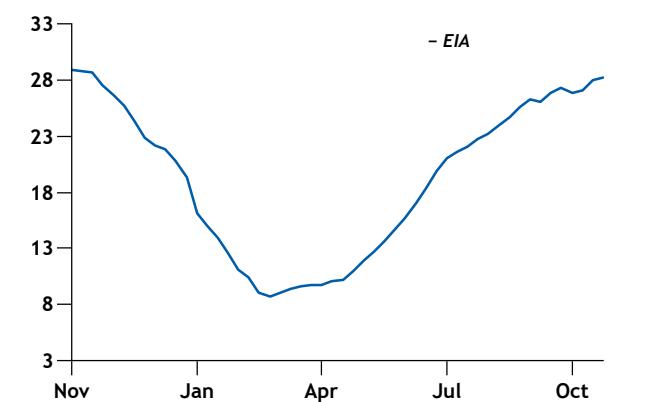
US Gulf coast stocks



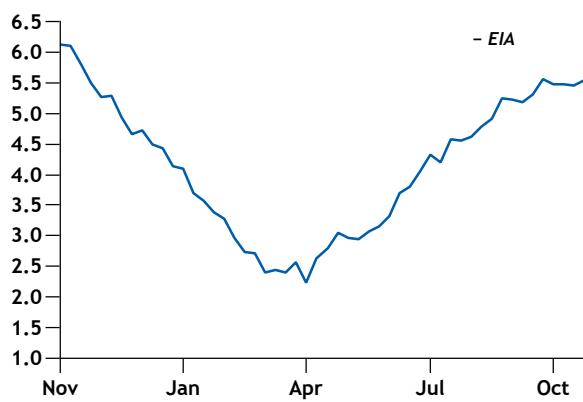
US east coast stocks



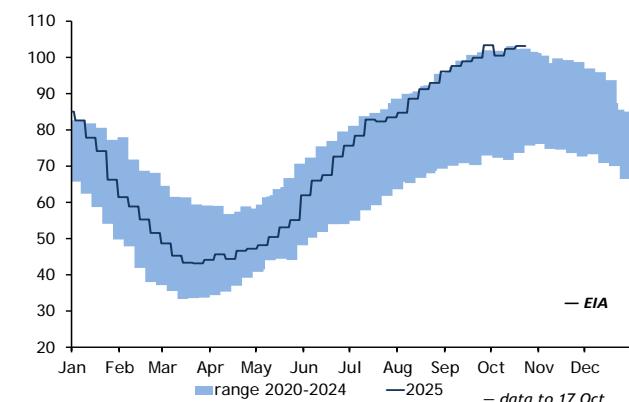
US midcontinent stocks



US west coast stocks



US Propane stocks



MARKET ANALYSIS

- US propane stocks rose by 2.5mn bl to a record high of 105.7mn bl (8.52mn t) during the week to 24 October as exports fell to nearly a three-month low, the latest data from the Energy Information Administration show.
- The unseasonal stockbuild left propane inventories 14pc above the five-year average for the time of year.

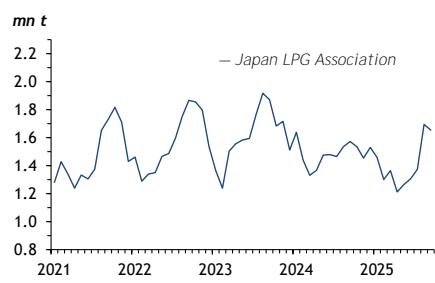
- US Gulf coast stocks rose by 1.7mn bl to 62.6mn bl, mid-continent stocks grew by 237,000 bl to 28.2mn bl and east coast stocks climbed by 503,000 bl to 9.3mn bl.

- Domestic sales firmed by 50,000 b/d to 964,000 b/d, while exports fell to 1.6mn b/d from 1.9mn b/d. US propane output from gas processing edged up to 2.9mn b/d.

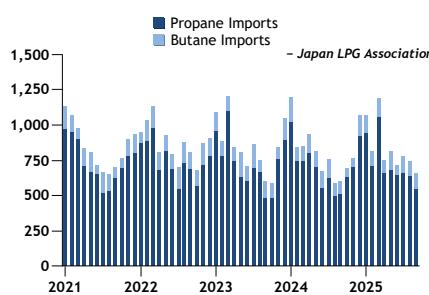
TRADE FLOWS: JAPAN, SOUTH KOREA

Japanese LPG imports							'000t
Imports by country	Sep	Jul-Sep	Jul-Sep 24	25/24 ±%	Jul-Sep 23	25/23 ±%	2025
US	628.4	2,073.3	1,276.1	62.5	1,298.6	59.7	5,944.3
Canada	0.0	0.0	431.3	-100.0	470.0	-100.0	842.0
Australia	3.0	80.6	212.7	-62.1	372.8	-78.4	491.1
Middle East	0.0	0.3	18.0	-98.4	72.5	-99.6	178.9
Others	25.2	27.8	4.7	490.8	3.7	641.8	82.6
Total imports	656.7	2,182.0	1,942.8	12.3	2,217.7	-1.6	7,538.9
Imports by product							
Propane	543.8	1,849.3	1,635.7	13.1	1,850.2	-0.1	6,554.8
Butane	112.8	332.8	307.1	8.4	367.5	-9.5	984.1

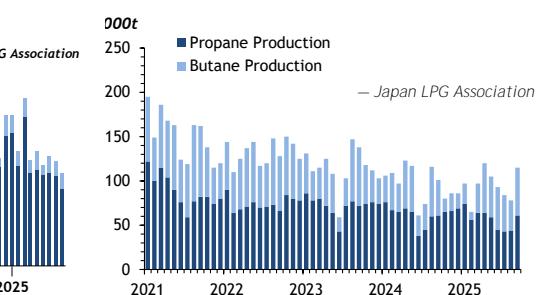
Japan: LPG stocks



Japan: LPG imports



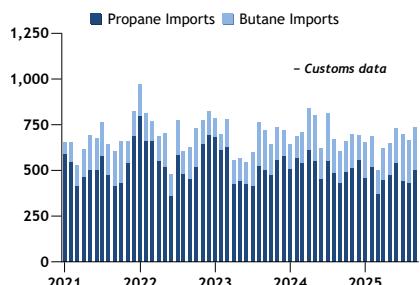
Japan: LPG production



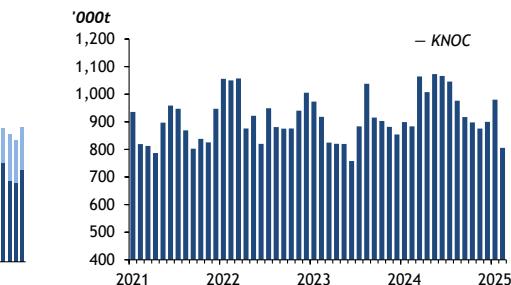
South Korean LPG imports

South Korean LPG imports							'000t
Imports by country	Sep	Jul-Sep	Jul-Sep 24	25/24 ±%	Jul-Sep 23	25/23 ±%	2025
US	667.6	1,877.2	1,855.5	1.2	1,828.3	2.7	5,181.9
Canada	0.0	11.5	184.6	-93.8	137.6	-91.7	165.4
Saudi Arabia	74.2	219.6	7.2	2,941.1	47.5	362.2	537.6
Australia	0.0	0.0	43.8	-100.0	23.1	-100.0	23.4
Others	0.0	0.6	3.7	-83.2	49.6	-98.8	48.1
Total imports	741.8	2,108.9	2,094.8	0.7	2,086.1	1.1	5,956.3
Imports by product							
Propane	505.3	1,384.9	1,468.4	-5.7	1,441.9	-3.9	4,202.2
Butane	236.5	724.0	626.4	15.6	644.2	12.4	1,754.1

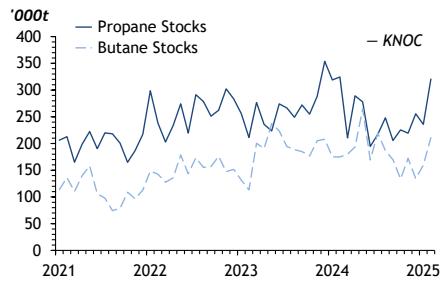
South Korea: LPG imports



South Korea: LPG consumption



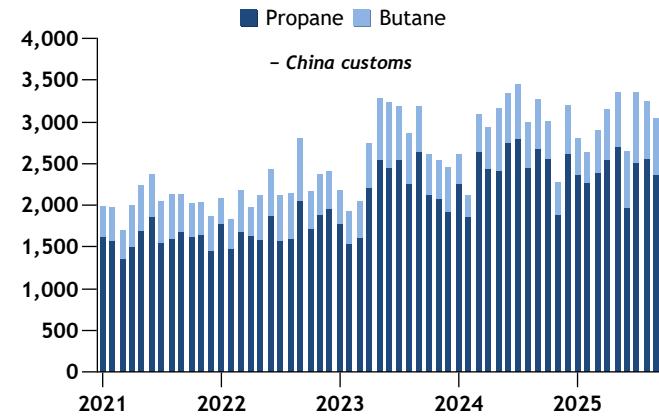
South Korea: LPG stocks



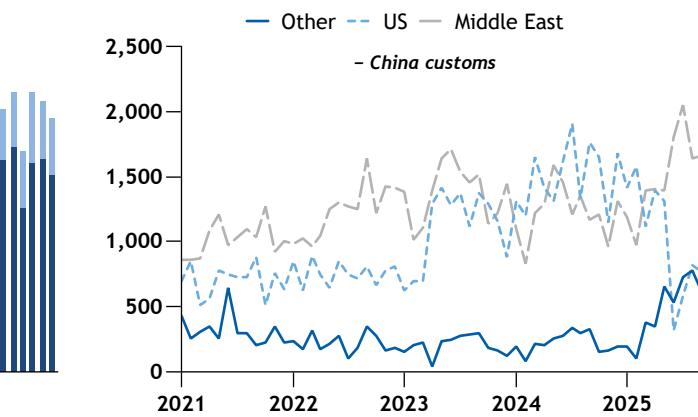
TRADE FLOWS: CHINA

China LPG imports							'000t
Imports by country	Sep	Jul-Sep	Jul-Sep 24	25/24 ±%	Jul-Sep 23	25/23 ±%	2025
US	770.2	2,169.7	4,999.0	-56.6	3,852.0	-43.7	9,301.2
UAE	583.9	1,969.7	1,724.6	14.2	2,231.2	-11.7	5,755.4
Oman	306.9	1,128.7	594.3	89.9	768.8	46.8	2,967.8
Qatar	348.9	1,165.7	677.8	72.0	888.3	31.2	2,501.3
Saudi Arabia	190.1	559.2	434.7	28.7	364.1	53.6	927.9
Kuwait	209.6	510.2	280.3	82.1	259.1	96.9	1,270.0
Australia	111.1	454.6	237.6	91.3	165.8	174.2	815.1
Algeria	57.6	199.2	281.7	-29.3	281.5	-29.2	451.5
Others	464.4	1,486.1	467.5	217.9	415.2	258.0	3,145.3
Total imports	3,042.7	9,643.1	9,697.5	-0.6	9,226.0	4.5	27,135.4
Imports by product							
Propane	2,370.9	7,447.4	7,910.2	-5.9	7,445.0	0.0	21,714.0
Butane	671.8	2,195.7	1,787.4	22.8	1,781.0	23.3	5,421.4

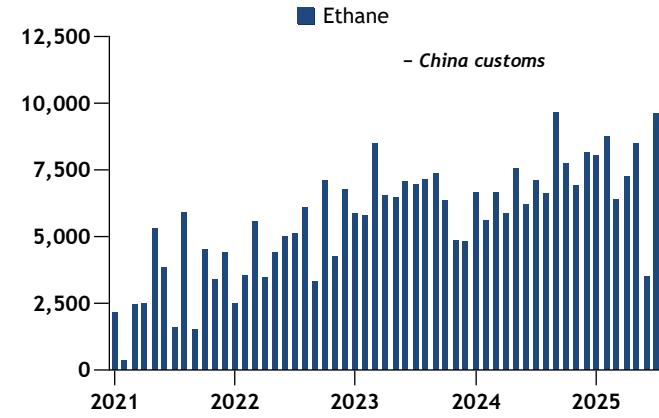
China LPG imports by product



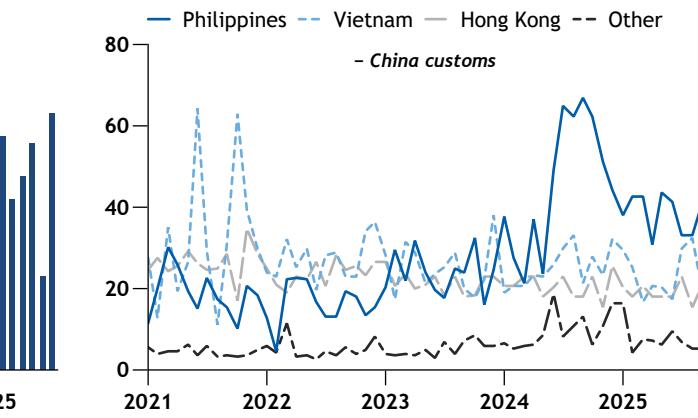
'000t China LPG imports by origin



US ethane exports to China



'000t China LPG exports by destination

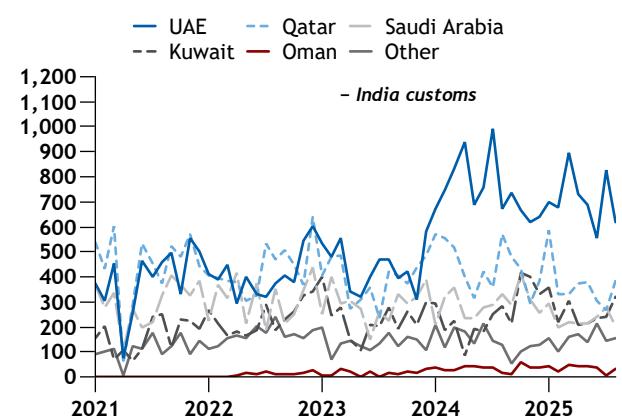


TRADE FLOWS: INDIA

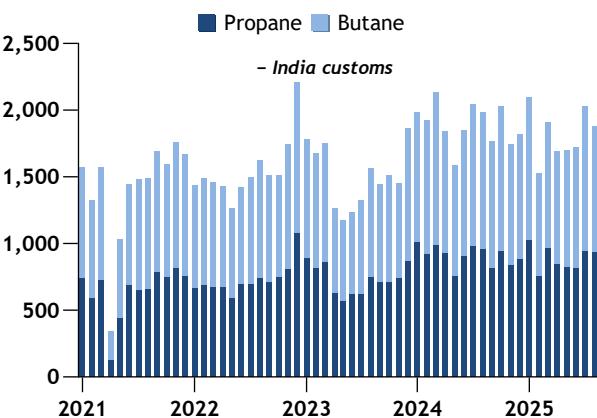
India LPG imports							'000t
Imports by country	Aug	Jun-Aug	Jun-Aug 24	25/24 ±%	Jun-Aug 23	25/23 ±%	2025
UAE	619.0	1,999.2	2,420.6	-17.4	1,338.1	49.4	6,329.6
Qatar	386.5	957.1	1,346.4	-28.9	1,014.3	-5.6	3,337.8
Saudi Arabia	200.7	718.3	899.6	-20.2	634.2	13.3	2,104.4
Kuwait	319.1	794.6	714.0	11.3	685.1	16.0	2,425.6
Singapore	22.0	90.5	158.2	-42.8	109.1	-17.1	249.3
Norway	21.4	93.8	97.1	-3.4	119.1	-21.2	342.1
US	194.0	643.5	0.0	-	21.9	2,838.5	808.2
Oman	34.5	74.1	93.2	-20.5	40.1	84.7	307.8
Others	79.2	252.9	138.4	82.8	143.2	76.6	466.3
Total imports	1,876.4	5,624.1	5,867.7	-4.2	4,105.1	37.0	16,371.0
Imports by product							
Propane	938.8	2,703.7	2,852.6	-5.2	1,991.1	35.8	8,029.6
Butane	937.5	2,920.4	3,015.1	-3.1	2,114.0	38.1	8,341.4

— Indian customs

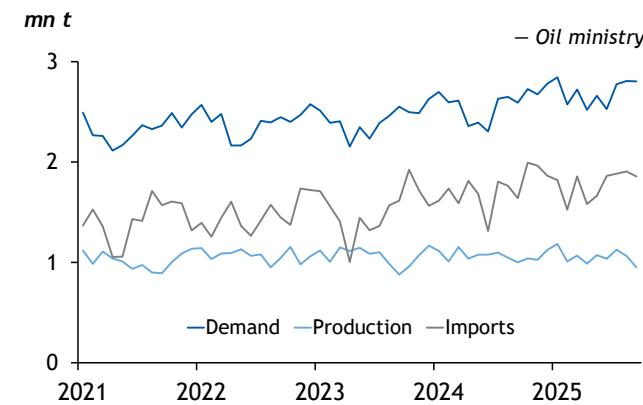
India LPG imports by ME country '000t India LPG Imports by product '000t



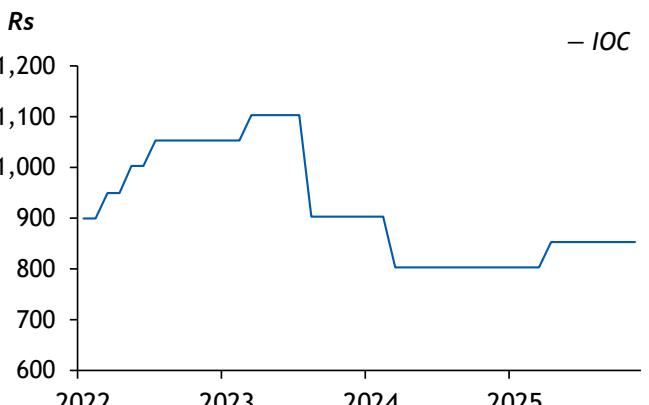
India LPG Imports by product '000t



India LPG demand and output mn t

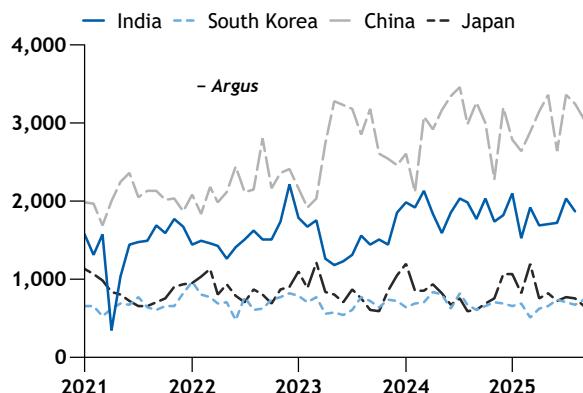


India 14kg cylinder LPG prices Rs



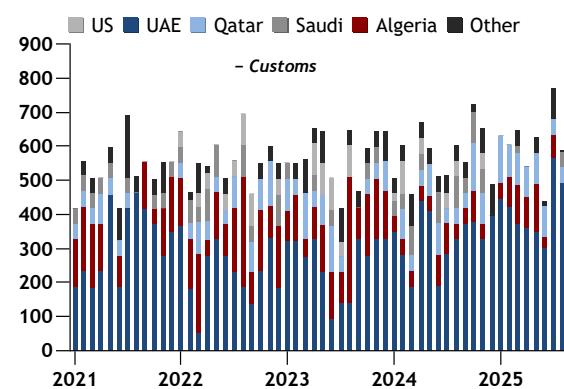
TRADE FLOWS: ASIA

Key Asia-Pacific LPG importers



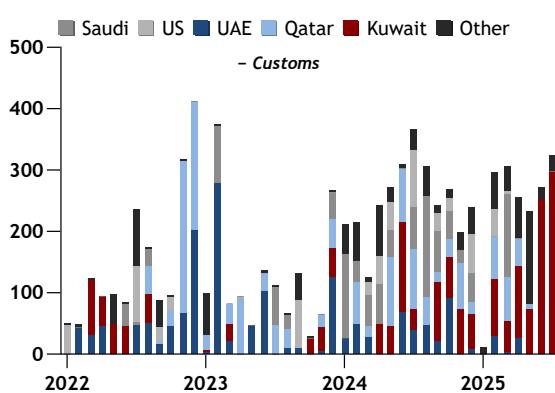
'000t

Indonesia: LPG imports origin



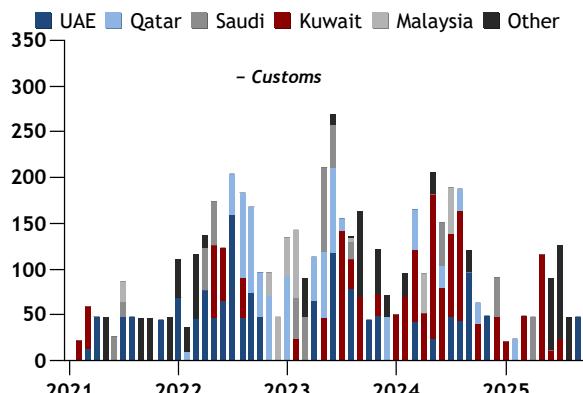
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Vietnam: LPG imports origin



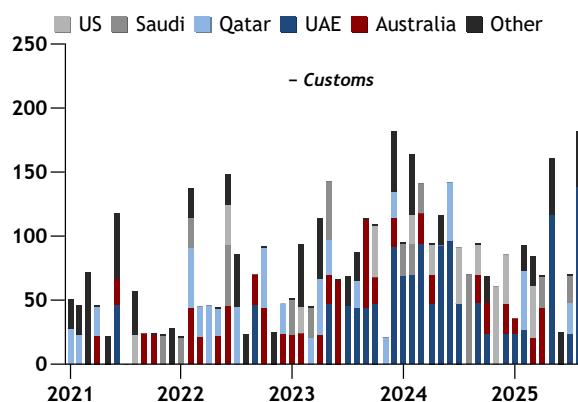
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Thailand: LPG imports origin



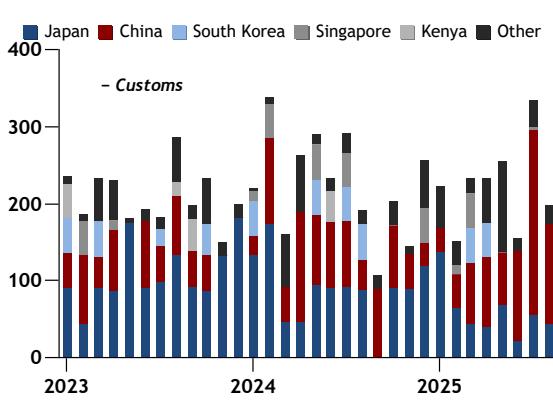
'000t

Taiwan: LPG imports origin



'000t

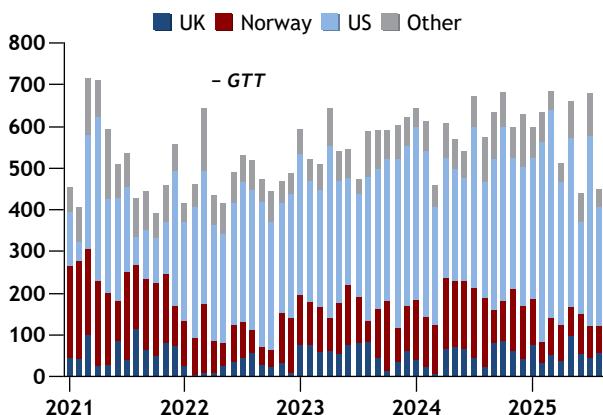
Australia LPG Exports



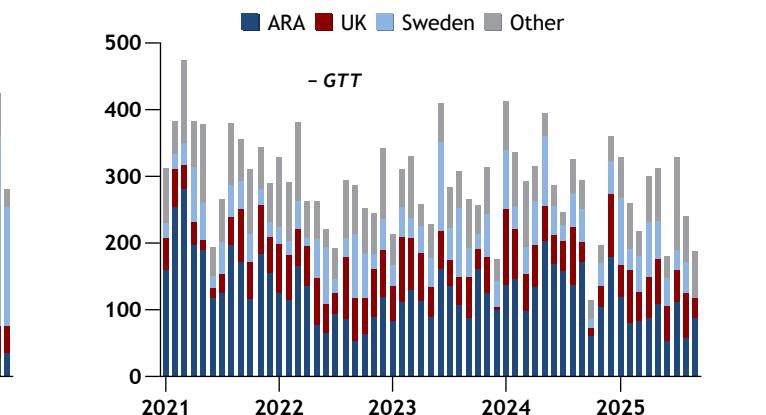
'000t

STATISTICS: EUROPE

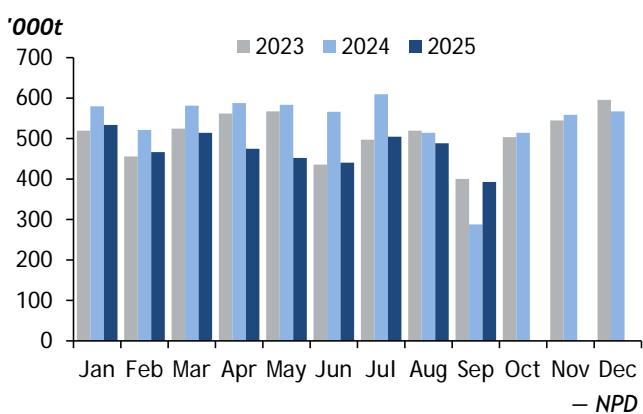
Netherlands, Belgium: LPG imports



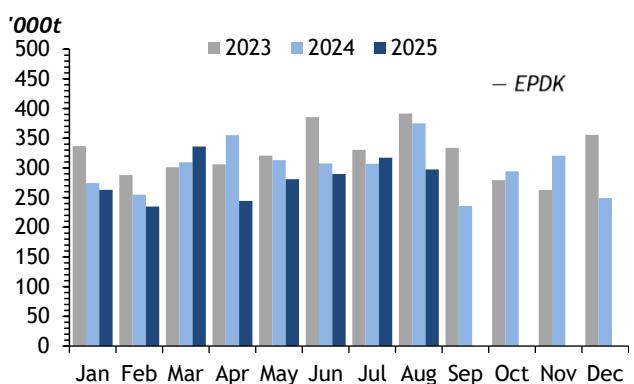
'000t Norway: LPG exports



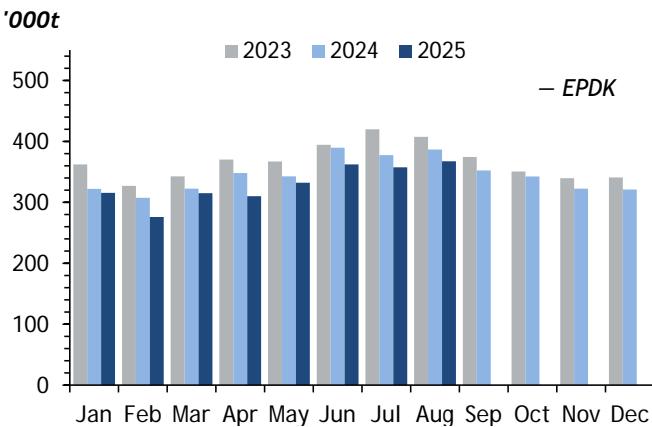
Norway: NGL production



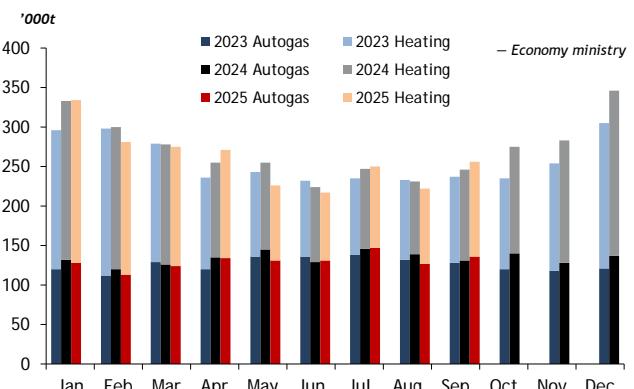
Turkey: LPG imports



Turkey: LPG consumption



Italy: LPG transport and heating consumption



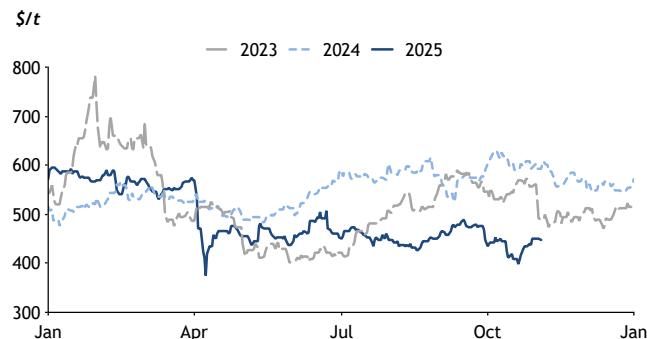
EUROPEAN PROPANE

- Spot trade on the large cargo propane market was limited over 16-30 October, weighed owing to uncertainty surrounding the US-China trade war. The price fell to a multi-month low of \$398/t cif Amsterdam-Rotterdam-Antwerp (ARA) on 20 October, but gradually recovered after the announcement of a one-year trade truce between the US and China, reaching \$449/t by 30 October.
- The physical differential to November cif ARA paper narrowed to flat from a premium of \$4.50/t as earlier buying interest faded. Market sentiment was bearish as record US arrivals kept supply ample and prices under pressure. The truce may eventually divert more US cargoes towards Asia, but any rebalancing in Europe is likely to be slow.
- Fob coaster prices firmed by \$43/t to \$519/t as stronger regional demand and tightening supply lifted premiums to large cargoes by \$13/t to \$70/t, the highest since mid-April.
- Railcar fca assessments increased by only \$5.75/t to \$568.75/t and the railcar premium to large cargoes eased by \$25.25/t to \$119.75/t as the boost to prices from strikes in Antwerp dissipated, while mild weather capped growth in heating demand.
- Algeria's state-owned Sonatrach reduced its November propane price by \$15/t from October to \$455/t.

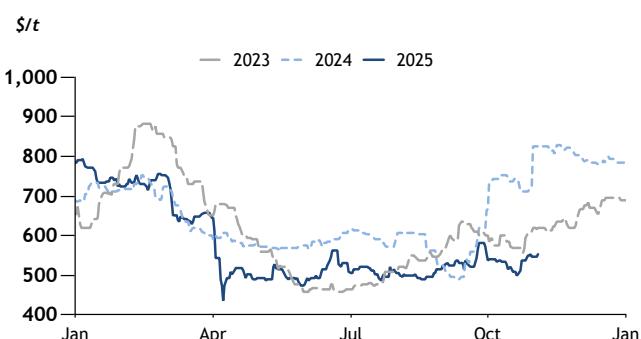
EUROPEAN BUTANE

- The large cargo butane price was anchored at just under 89.5pc of naphtha paper over 16-30 October, as limited buying interest was matched by equally thin selling. The outright value rose by \$28.75/t to \$481/t cif Amsterdam-Rotterdam-Antwerp by 30 October from \$452.25/t on 16 October, supported by firmer naphtha.
- Delivered butane coaster prices surged by four percentage points to 105pc of naphtha as buying interest from gasoline blenders intensified after stronger exports to Nigeria. Butane value in the fob market for cargoes up to 6,000t edged one percentage point higher to 97pc in response to the tightening supply in the Mediterranean region.
- Butane barges edged two percentage points higher to 109pc on a delivered basis as strong gasoline blending demand mopped up all available refinery supply. On an outright basis, the fob assessment jumped by \$51.75/t to \$570.50/t, finding additional support from naphtha.
- Algeria's state-owned Sonatrach left its November butane price unchanged from a month earlier at \$465/t.

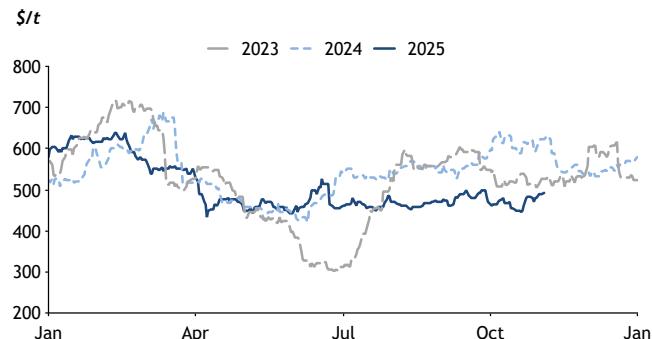
Propane cif NWE cargoes large



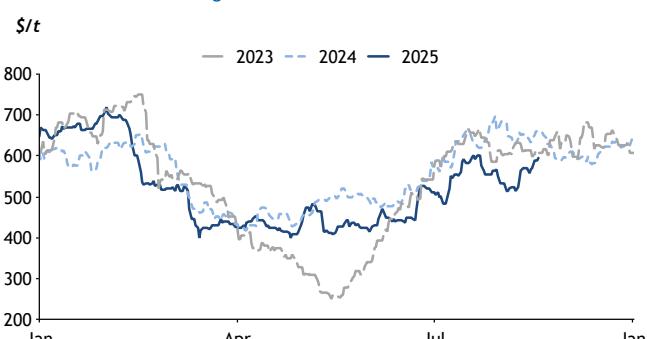
Propane fob ARA barge



Butane cif NWE cargoes large



Butane fob ARA barge



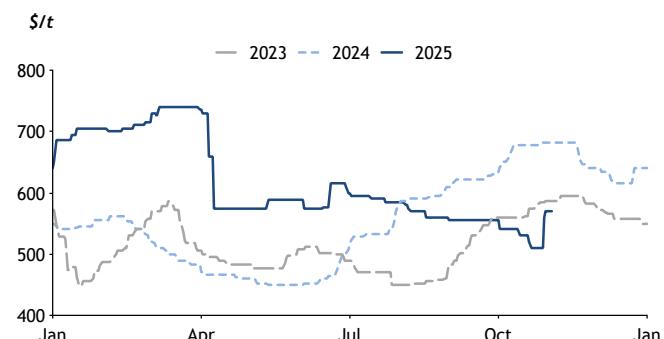
EURASIA LPG

- Several Russian producers raised LPG prices in the second half of October on limited product availability. Supplies fell regionally despite seasonally weak demand owing to repair works at some plants and delays to rail shipments.
- Propane-butane mix railcar prices on the Poland-Belarus border fell by \$20/t to \$500/t daf Brest on 16-30 October amid limited trade. Propane daf Brest railcar prices rose by \$40/t to \$570/t in line with rising northwest European assessments and livelier buying interest on the Polish market.
- The spot butane daf Brest assessment declined by \$13/t to \$505.50/t owing to weak demand in mid-October. But buying interest strengthened and prices began to increase after the EU announced its 19th package of EU sanctions against Russia, including the ban on butane and isobutane imports from 25 January 2026.
- Propane railcar and truck prices at Polish ports rose by \$10/t to \$667.50/t fca/fot, tracking firming northwest European prices and in line with stronger downstream demand.
- Propane-butane mix prices at the Uzbekistan-Tajikistan border increased by \$37.50/t to \$482.50/t daf Bekabad as Kazakh producer Tengizchevroil reduced supplies in October owing to maintenance. In addition, local traders reported demand growth as prices for gasoline rose.
- Propane-butane mix values at the Uzbekistan-Afghanistan border firmed by \$30/t to \$515/t cpt Galaba owing to reduced supplies from Russia.

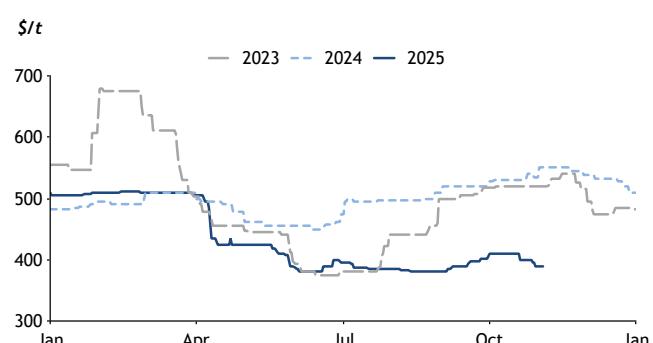
BLACK SEA LPG

- Black Sea coaster cargo prices eased on 16-30 October because of a seasonal weakening in demand and after Algeria's state-owned Sonatrach cut its November prices. Propane-butane mix values dropped by \$18/t to \$385/t fob Black Sea, propane fell by \$20/t to \$390/t and butane edged lower by \$5/t to \$390/t.
- Midsize carrier *Guadalupe Explorer* arrived in Bulgaria on 19 October with 16,500t of US propane – some supply was unloaded near Greece's Kalamata port before arriving in Bulgaria. The propane was then transshipped on to the *Enigma*, *Kempton* and *Gas Spanakopita* for delivery to Bulgaria and Ukraine. All operations finished by 29 October.
- Petrotel refinery in Romania and Mol refinery in Hungary were hit by fires on 20 October. Maintenance at Petrotel, that started on 17 October, will last until 4 December, while the Mol plant will be closed from 10 November, traders say.

Propane Argus daf Brest



Propane Argus fob Black Sea



ASIA PROPANE

- Delivered northeast Asian propane prices on the Argus Far East Index (AFEI) rose by \$65/t, or 15pc, to \$510.75/t over 17-31 October. A one-year trade truce between the US and China late last month shored up market sentiment on renewed demand for US exports. The heightened outlook for prompt demand narrowed November AFEI swaps' discount to December AFEI to \$4/t from \$10.50/t.
- Chinese importers bought non-US cargoes for November and December delivery at \$80-88/t premiums to Mideast Gulf contract price paper values for the equivalent months prior to the deal – nearly a 20pc premium to US shipments.
- Spot premiums for 23,000t propane cargoes for delivery to Chiba, Japan, in the second half of November rebounded to a \$3/t discount to paper from a \$19.50/t discount.
- State-run Saudi Aramco cut its November propane contract price by \$20/t to \$475/t alongside weaker crude.

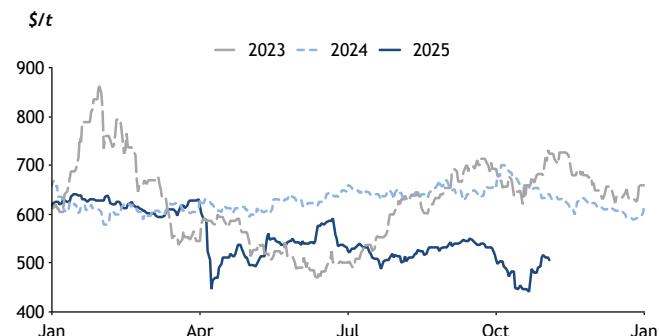
ASIA BUTANE

- Delivered northeast Asian butane prices on the Argus Far East Index (AFEI) fell by \$40.75/t, or 10pc, to \$540.75/t over 17-31 October. But northeast Asian crackers bought 23,000t butane cargoes at \$20-30/t discounts to equivalent naphtha assessments, indicating a near \$40/t premium to propane owing to limited butane availability.
- State-controlled Saudi Aramco lowered its November butane contract price (CP) by \$15/t to \$460/t. Strong demand for evenly split propane-butane cargoes from India and southeast Asia supported values in recent sales.
- Chinese importers bought November deliveries at \$80-85/t premiums to Aramco's November CP, representing netbacks of \$20-30/t.

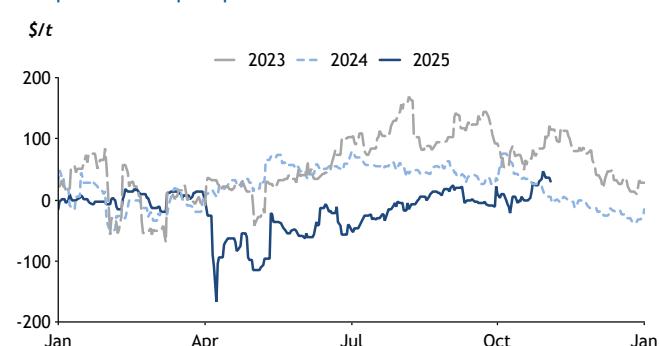
ASIA PRESSURISED

- South China fob coaster cargo prices were steady at \$48/t premiums to state-run Saudi Aramco's November contract price (CP) in the second half of October. Delivered north Vietnam cargo prices were unchanged at \$100/t premiums to the November CP.
- Chinese wholesale prices rose with rebounding international levels. The Pearl River Delta index rose by \$3.80/t, or 0.6pc, to \$630.30/t over 17-31 October. Terminal prices in south China were steady despite weak demand, as higher import costs and tight supply supported rates.

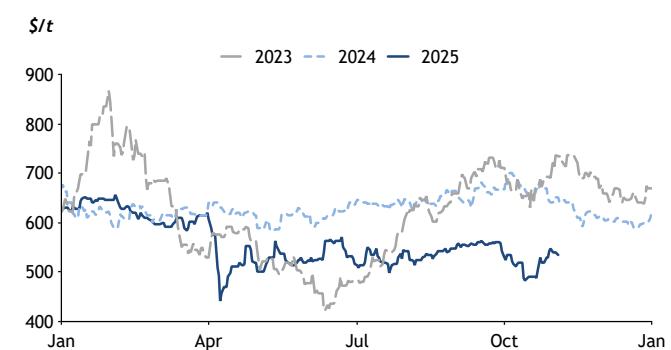
Propane Argus Far East index



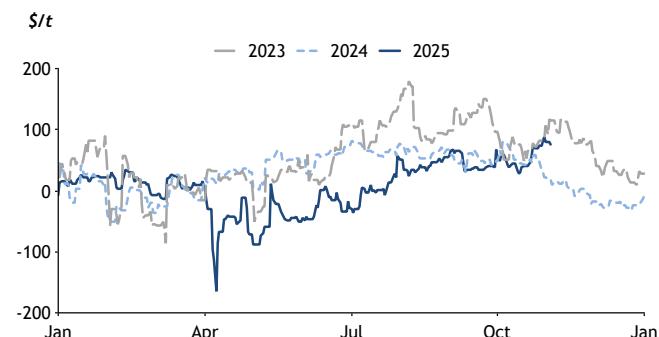
Propane cfr Japan premium to CP



Butane Argus Far East Index



Butane cfr Japan premium to CP



AMERICAS PROPANE

■ Mont Belvieu LST propane prices on the US Gulf coast increased by 4.25¢/USG to 67.375¢/USG (\$351/t) over 16-30 October. The assessment fell to its lowest since 30 September on 20 October at 60¢/USG, before rebounding with Nymex WTI crude futures and delivered prices in Asia-Pacific and northwest Europe after the US-China trade agreement was reached late in the month.

■ Conway hub prices in the US midcontinent firmed by about 1¢/USG to 58.5¢/USG, pulled higher by the more significant gains at Mont Belvieu. Conway's discount to Mont Belvieu widened by 3.25¢/USG to 8.875¢/USG.

■ Edmonton in-well propane prices in Alberta, western Canada, weakened relative to Conway. Edmonton's discount to Conway increased to 8¢/USG from 7.25¢/USG.

AMERICAS ETHANE

■ Mont Belvieu EPC ethane prices on the US Gulf coast declined by 1.375¢/USG to 25¢/USG (\$184.50/t) over 16-30 October. Sustained positive natural gas prices at the Waha hub in west Texas may have weighed on ethane prices, with earlier negative gas prices at the hub having shuttered some Permian production.

■ Mont Belvieu ethane shrugged off gains in Nymex natural gas at the Henry Hub in Texas, reaching a four-month low to its fuel value relative to gas futures by 30 October at about a 1.14¢/USG discount.

AMERICAS BUTANE

■ Mont Belvieu EPC butane prices on the US Gulf coast firmed to 86.5¢/USG (\$391.85/t) from 80.875¢/USG during 16-30 October alongside gains in Mont Belvieu propane and Nymex WTI crude.

■ US Gulf coast butane's value relative to Nymex Rbob gasoline declined to 43.2pc from 44.6pc in late October as gasoline futures increased with the contango in the forward curve at the end of the month.

■ Conway butane prices in the US midcontinent increased by 4.5¢/USG to 87¢/USG. Conway butane's value relative to gasoline futures fell to 43.4pc from 45pc.

■ Edmonton in-well butane prices in Alberta, western Canada, strengthened in late October, rising to 45.3pc from 42.5pc of the calendar month average of Nymex WTI crude.

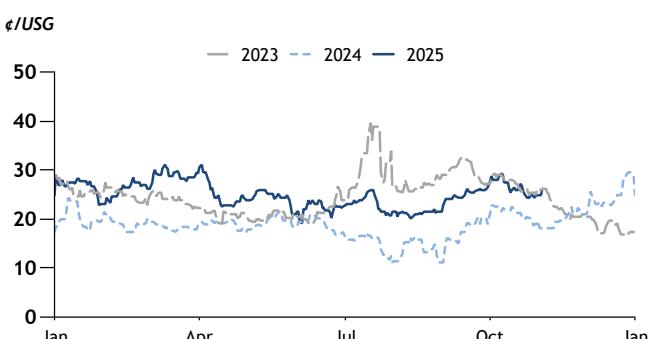
Propane Mont Belvieu non-LST



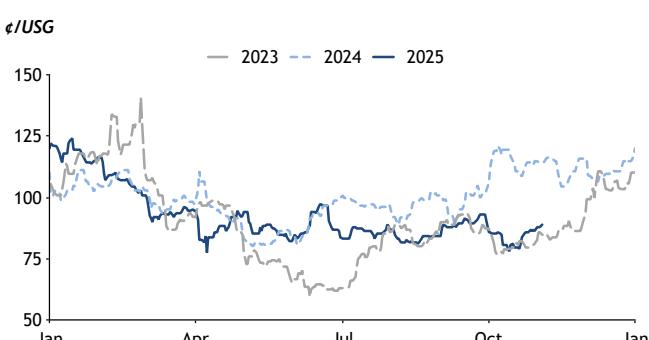
Propane Mont Belvieu LST % to Nymex WTI



Ethane Mont Belvieu



Butane Mont Belvieu non-LST



NGL ECONOMICS/SHIPPING

Ethylene plant total variable cash cost*					
	1 Oct	8 Oct	15 Oct	22 Oct	29 Oct
Purity ethane	15.12	15.99	14.24	14.53	14.32
Propane	22.98	22.53	21.48	21.37	22.66
N-Butane	24.46	25.58	23.91	25.45	27.08
Light naphtha	37.80	42.37	37.10	36.22	38.58
Gasoil	78.94	79.25	73.35	75.58	85.44

*at Mont Belvieu, Texas

Ethylene plant gross margins* (see graph below)					
	1 Oct	8 Oct	15 Oct	22 Oct	29 Oct
Ethane	4.82	4.51	4.76	3.97	3.05
Propane	-3.04	-2.03	-2.48	-2.87	-5.28
Butane	-4.52	-5.08	-4.91	-6.95	-9.70
Light naphtha	-17.86	-21.87	-18.10	-17.72	-21.21
Gasoil	-59.00	-58.75	-54.35	-57.08	-68.06

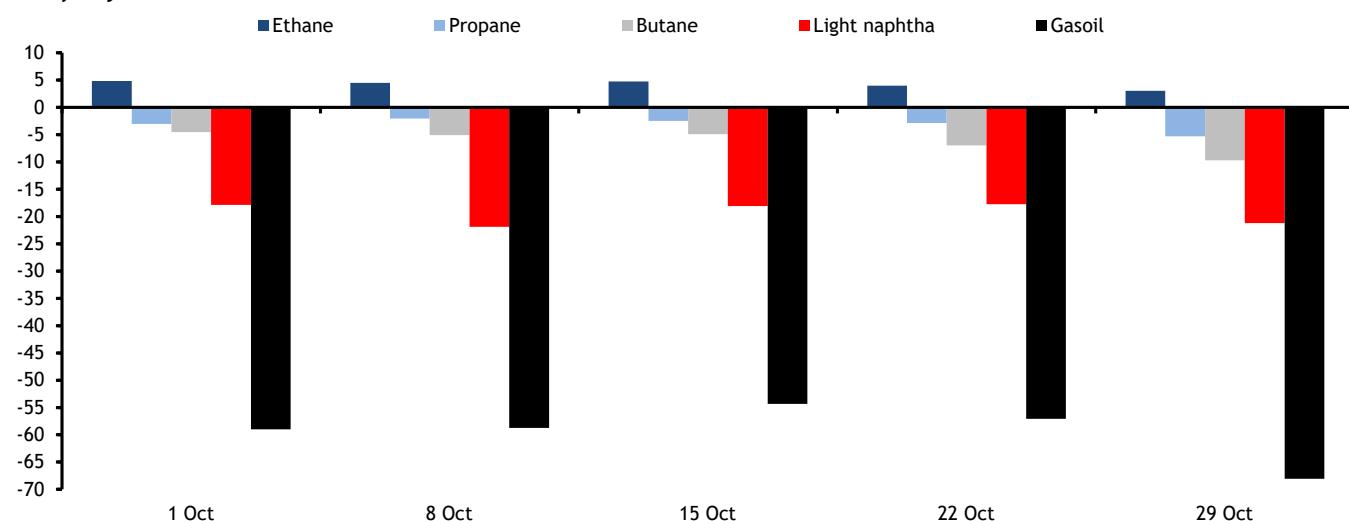
*at Mont Belvieu, Texas

— Argus

— Argus

US Ethylene plant gross margins (Mont Belvieu, Texas)

€/lb of ethylene



Shipping

■ Midsize LPG carrier *MV Falcon* caught fire and was left adrift in the Gulf of Aden after an unspecified incident in mid-October. UK Maritime Trade Operations initially said the *MV Falcon* may have been hit by a projectile but later reclassified its alert and failed to rule out an onboard accident. Ship tracking data suggest the ship is still in the Gulf of Aden and is destined for Djibouti. The ship is assumed to have been carrying an Iranian cargo and has been active from Ust-Luga, Russia, this year, Kpler data show.

Shipping rates

- The Houston-Chiba VLGC rate increased to \$124.50/t from \$108/t over 17-31 October as charterers rushed to secure US cargoes after the US and China agreed to a trade truce late in the month. This trimmed vessel availability in the Atlantic basin.
- The Tees-ARA rate fell to \$38.50/t mid-month before returning to \$43.50/t by 31 October as charterers absorbed vessels and petrochemical demand for LPG picked up.

Shipping rates			\$/t
Spot			
44,000t	Ras Tanura-Chiba	▼	60.00
44,000t	Houston-Chiba	▲	124.50
44,000t	Houston-Flushing	▲	67.00
1,800t	Tees-ARA	▲	43.50
1,800t	Tees-Lisbon	▲	113.50
4,000t	Tees-Mohammedia	▲	73.00

— Argus Gas Freight

Shipping rates			\$/calendar month
12-month time charter			
84,000m ³		↔	1,350,000
38,000m ³		↔	890,000
35,000m ³		↔	760,000
3,500m ³ pressurised (west)		↔	310,000
3,500m ³ pressurised (east)		↔	230,000

— Gibsons

DATA

PROPANE													
	Nov 24	Dec	Jan 25	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Middle East \$/t													
Saudi Arabia	635.00	635.00	625.00	635.00	615.00	615.00	610.00	600.00	575.00	520.00	520.00	495.00	475.00
Kuwait	635.00	635.00	625.00	635.00	615.00	615.00	610.00	600.00	575.00	520.00	520.00	495.00	475.00
Mediterranean \$/t													
Algeria (Sonatrach)	595.00	585.00	550.00	565.00	560.00	550.00	490.00	445.00	445.00	445.00	450.00	470.00	455.00
Spot prices \$/t													
Large cargo cif ARA*	574.00	549.50	575.50	559.00	555.50	477.25	454.00	468.00	448.50	444.00	473.00	434.00	na
Large cargo cif Lavera	576.83	554.24	578.48	568.14	550.60	461.56	452.04	467.25	452.97	435.01	466.92	427.25	na
Large cargo Japan cfr	625.61	605.58	630.27	619.79	607.82	524.91	532.10	555.74	519.38	520.19	539.21	480.70	na
Large cargo India cfr	664.56	647.74	657.95	625.07	619.46	619.75	601.36	600.88	560.14	561.81	589.88	521.29	na
Large cargo Argus South China Index	624.07	602.08	624.51	615.96	608.09	610.93	616.33	609.69	564.33	564.18	587.84	533.97	na
Large cargo Argus Ningbo Index	626.29	607.04	630.36	619.86	609.59	613.17	613.83	613.64	570.41	571.99	595.02	539.92	na
Large cargo Argus Far East Index*	627.50	593.25	630.75	610.75	617.50	538.25	545.50	549.50	505.50	532.00	531.25	490.50	na
Asia spot premiums to CP \$/t													
Mideast Gulf	1.71	-21.00	-15.75	-23.70	-17.95	-1.71	-32.05	-44.38	-41.09	-22.10	-8.86	11.36	na
India cfr	37.93	20.89	26.16	11.12	22.16	34.20	16.75	13.18	17.51	42.38	47.55	57.29	na
South China (pressurised)	81.67	79.14	78.00	78.00	78.00	78.00	78.00	78.00	78.00	78.00	78.00	78.00	na
Japan	-3.73	-24.00	-1.19	4.64	3.42	-70.19	-63.20	-38.60	-28.84	1.34	4.16	10.79	na
Mont Belvieu ¢/USG													
LST	80.44	77.63	89.68	92.53	87.85	85.82	74.86	76.50	71.93	68.19	71.04	65.70	na
Non-LST	80.44	76.85	90.05	92.22	87.14	85.27	73.37	74.79	70.70	66.66	68.37	63.67	na
Europe \$/t													
Coasters fob NWE	665.25	602.44	669.05	685.09	660.08	530.60	493.48	513.70	502.45	489.96	519.51	489.77	na
Barges fob NWE	817.95	788.30	752.86	737.91	659.48	516.10	497.18	514.42	509.32	499.25	537.31	530.87	na
Coasters fob Med	665.48	626.15	645.65	671.76	634.57	537.23	534.09	539.56	708.87	672.01	729.86	684.97	na
*as of Apr 2019 spot price on 25th or nearest working day to 25th of the month													
— all prices from Argus International LPG													
Ethane													
	Oct 24	Nov	Dec	Jan 25	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Mont Belvieu	21.16	19.91	24.88	26.59	26.00	29.22	25.28	24.57	22.18	23.15	21.14	25.13	26.52
Naphtha													
	Oct 24	Nov	Dec	Jan 25	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Cargoes cif NWE	647.35	623.30	611.59	649.49	654.76	611.45	548.56	547.24	559.06	556.09	559.49	563.30	528.16
Cargoes c+f Japan	673.73	643.84	637.91	672.42	666.63	634.66	571.88	565.46	591.17	582.50	581.12	600.71	569.45
BUTANE													
	Nov 24	Dec	Jan 25	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Middle East \$/t													
Saudi Arabia	630.00	630.00	615.00	625.00	605.00	605.00	590.00	570.00	545.00	490.00	490.00	475.00	460.00
Kuwait	630.00	630.00	615.00	625.00	605.00	605.00	590.00	570.00	545.00	490.00	490.00	475.00	460.00
Mediterranean \$/t													
Algeria (Sonatrach)	600.00	585.00	560.00	600.00	585.00	545.00	490.00	435.00	435.00	415.00	425.00	465.00	465.00
Spot prices \$/t													
Large cargo cif ARA*	545.50	570.75	625.75	572.75	548.25	477.50	456.50	461.25	457.25	467.25	492.25	484.00	na
Large cargo cif Lavera	537.86	521.31	582.97	580.64	519.15	444.43	426.56	444.25	432.11	431.50	449.69	434.92	na
Large cargo Japan cfr	625.16	602.64	640.17	621.29	600.29	522.69	524.05	541.26	525.25	533.86	556.21	515.70	na
Large cargo India cfr	657.93	642.99	648.21	614.75	607.56	597.95	575.25	570.48	538.96	538.28	565.83	516.61	na
Large cargo Argus South China Index	623.62	599.15	634.41	617.46	600.56	604.71	592.63	543.12	534.79	550.32	576.55	535.78	na
Large cargo Argus Ningbo Index	625.83	604.11	640.26	621.36	602.06	606.95	594.23	550.02	540.88	558.13	583.73	541.74	na
Large cargo Argus Far East Index*	617.50	600.25	648.75	604.75	604.50	553.25	523.50	542.50	515.50	547.00	559.25	530.50	na
Asia spot premiums to CP \$/t													
Mideast Gulf	1.71	-21.00	-15.75	-23.70	-17.95	-1.71	-32.05	-44.38	-41.09	-22.10	-8.86	11.36	na
India cfr	37.93	20.89	26.16	11.12	22.16	34.20	16.75	13.18	17.51	42.38	47.55	57.29	na
South China (pressurised)	81.67	79.14	77.95	78.00	78.00	78.00	78.00	78.00	77.91	78.00	78.00	78.00	na
Japan	3.11	-22.03	18.47	16.39	7.64	-52.83	-46.85	-23.17	-0.32	40.72	46.43	53.97	na
Mont Belvieu ¢/USG													
LST	111.35	110.75	117.64	90.67	81.72	73.44	73.83	77.04	67.44	75.22	86.96	81.38	na
Non-LST	111.95	111.06	117.93	106.64	93.62	88.02	87.12	89.08	85.95	83.17	89.85	83.68	na
Europe \$/t													
Coasters fob NWE	600.83	601.99	665.35	653.46	545.11	456.83	445.16	432.93	481.16	470.23	510.90	510.33	na
Barges fob NWE	614.13	614.75	662.90	681.44	530.08	440.16	431.45	436.00	433.16	465.95	552.77	548.45	na
Coasters fob Med	640.69	660.11	718.20	726.48	668.77	510.00	463.41	493.58	631.30	537.88	623.41	541.05	na
*as of Apr 2019 spot price on 25th or nearest working day to 25th of the month													
— all prices from Argus International LPG													

DATA

Chinese domestic prices												Yuan/t	
	Oct 24	Nov	Dec	Jan 25	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
East China terminal													
Ningbo ex terminal	na	5,087	5,087	5,119	5,119	5,163	5,265	4,971	4,798	4,613	4,522	4,598	4,581
Wenzhou ex terminal	na	5,151	5,165	5,209	5,272	5,269	5,335	5,050	4,882	4,730	4,625	4,687	4,660
Zhangjiagang ex terminal	na	5,093	5,133	5,244	5,294	5,278	5,273	5,025	4,935	4,720	4,585	4,650	4,581
Shandong ex terminal	na	5,347	5,300	5,331	5,331	5,300	5,360	5,202	5,065	4,799	4,650	4,802	4,572
Fujian ex terminal	na	5,083	5,083	5,118	5,163	5,163	5,291	4,959	4,713	4,682	4,422	4,552	4,538
East China refinery													
Shanghai ex refinery	na	4,756	4,911	4,804	4,731	4,925	5,075	4,689	4,481	4,392	4,330	4,366	4,222
Zhenhai ex refinery	na	4,850	4,949	4,869	4,810	4,985	5,091	4,689	4,513	4,409	4,388	4,450	4,258
Yangzi ex refinery	na	4,911	5,149	5,184	5,119	5,072	5,232	4,842	4,652	4,608	4,465	4,559	4,555
Fujian ex refinery	na	4,918	4,844	4,900	4,929	5,005	5,160	4,839	4,635	4,603	4,358	4,377	4,275
Gaoqiao ex refinery	na	4,706	4,849	4,722	4,661	4,875	5,025	4,639	4,441	4,342	4,316	4,366	4,181
South China terminal													
Zhuhai ex terminal	na	5,020	5,046	5,135	5,244	5,112	5,252	4,960	4,698	4,611	4,446	4,600	4,475
Shenzhen ex terminal	na	5,084	5,079	5,163	5,254	5,124	5,275	4,988	4,722	4,609	4,465	4,600	4,481
Raoping ex terminal	na	5,093	5,132	5,168	5,273	5,161	5,302	5,056	4,790	4,648	4,458	4,548	4,445
Nansha ex terminal	na	5,084	5,079	5,163	5,254	5,124	5,275	4,988	4,722	4,609	4,465	4,600	4,481
Shantou ex terminal	na	5,093	5,132	5,168	5,273	5,161	5,302	5,056	4,790	4,648	4,458	4,548	4,445
Yangjiang ex terminal	na	5,002	5,039	5,231	5,336	5,157	5,203	4,961	4,688	4,638	4,467	4,636	4,491
South China refinery													
Maoming ex refinery	na	4,873	4,963	5,139	5,347	5,141	5,183	4,897	4,670	4,565	4,478	4,669	4,440
Guangzhou ex refinery	na	4,967	4,942	5,064	5,184	5,090	5,187	4,908	4,645	4,553	4,394	4,470	4,431
Northeast China refinery													
Daqing ex refinery	na	4,380	4,573	4,527	4,521	4,429	4,558	4,250	4,113	4,165	3,990	4,053	4,044
Dalian ex refinery	na	4,285	4,529	4,619	4,601	4,527	4,713	4,524	4,104	4,330	4,208	4,167	4,159
Northwest China refinery													
Urumqi ex refinery	na	3,590	3,690	3,894	3,757	3,470	3,870	3,616	3,158	3,174	3,288	3,667	3,346
Inland China refinery													
Yan-An ex refinery	na	4,628	4,648	4,819	4,638	4,621	4,850	4,674	4,366	4,348	4,323	4,350	4,473

— all prices from Argus International LPG



Argus LPG World is published by Argus Media group

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ISSN: 1364-3711

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