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# Argus International LPG

Daily international LPG prices and market commentary

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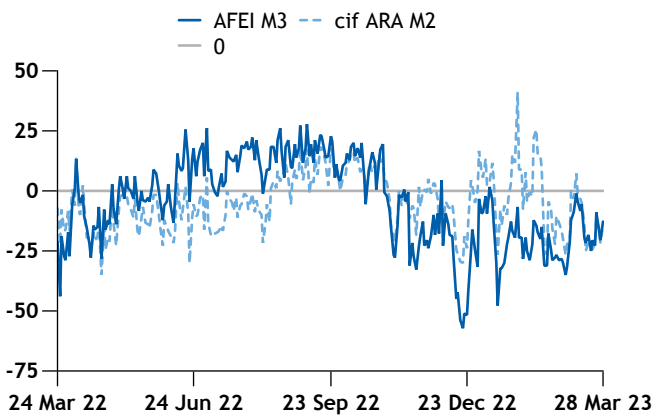
## OVERVIEW

Asia-Pacific: Prices rebound.

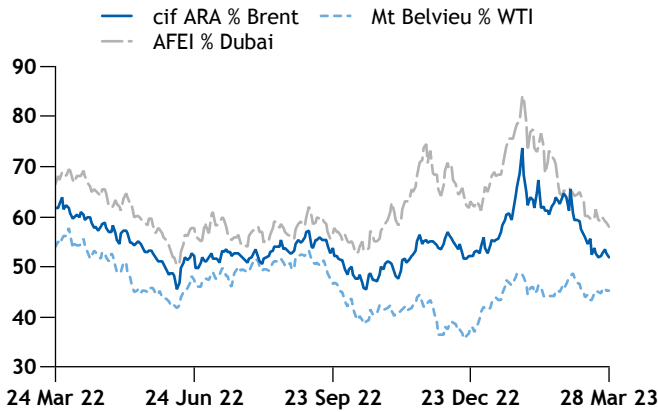
Europe: Prices see gains.

North America: Propane, butane rose.

USG propane vs AFEI/cif ARA



Propane as % of crude



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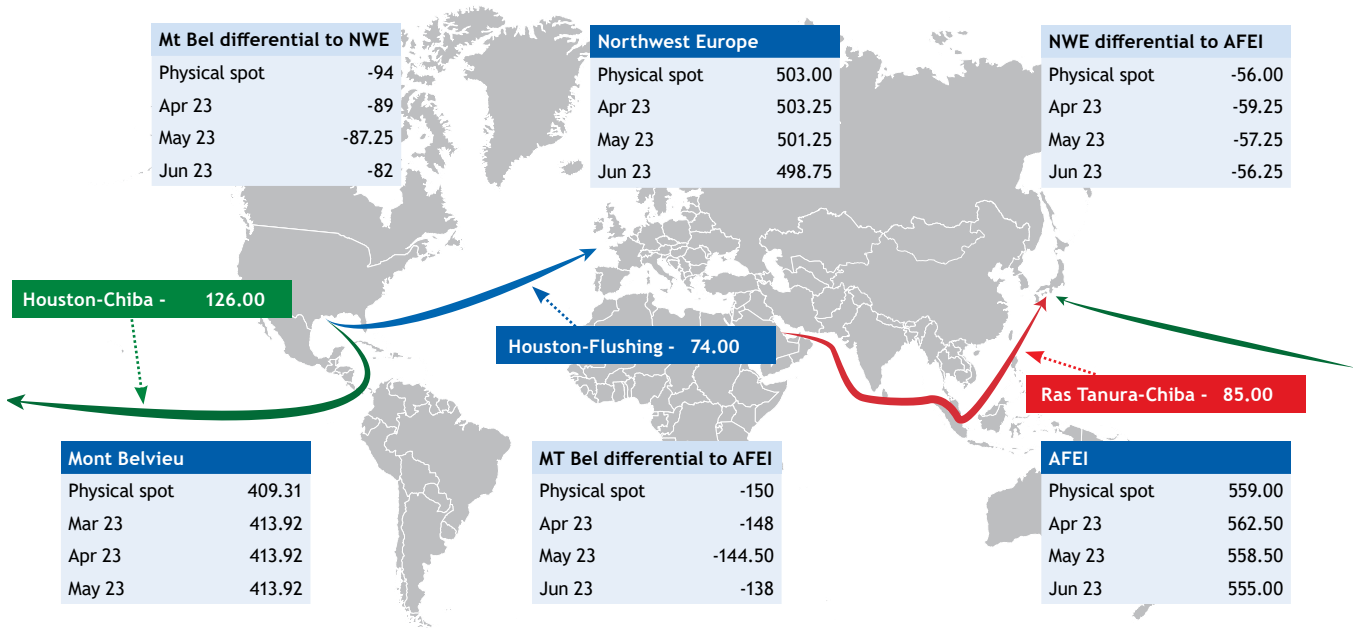
## PRICES

Key prices: Large Cargo		\$/t
	Mid	±
<b>Propane</b>		
Argus Far East Index™ (AFEI™)	559.00	+12.25
cif ARA (large cargoes)	503.00	+7.00
USGC export fob	441.55	+7.73
Enterprise Mont Belvieu	409.31	+11.07
AFEI™ propane calculated netback USGC	404.15	+19.00
Argus Middle East Index	524.00	+8.00
AFEI™ Far East to Mideast Gulf netback	474.00	+13.25
Argus Ningbo Index	567.00	+12.25
Argus South China Index	574.00	+12.25
AFEI™ diff to Propane (Apr 23)	-1.00	+0.25
cif ARA diff to Propane (Apr 23)	-0.25	-6.25
AFEI™ west Africa netback	420.02	+13.78
<b>Butane</b>		
Argus Far East Index™ (AFEI™)	547.00	+12.25
cif ARA (large cargoes)	519.50	+12.25
USGC export fob	446.63	+3.08
Enterprise Mont Belvieu	418.46	+1.98
Argus Middle East Index	512.00	+8.00
AFEI™ Far East to Mideast Gulf netback	462.00	+13.25
Argus Ningbo Index	555.00	+12.25
Argus South China Index	562.00	+12.25
AFEI™ west Africa netback	408.02	+13.78
<b>Freight and Logistics</b>		
VLGC Ras Tanura-Chiba	85.00	-1.00
VLGC Houston-Chiba	126.00	-8.00
VLGC Houston-Flushing	74.00	-2.00
USGC terminal fee	+27.35	nc
USGC terminal fee €/USG	+5.250	nc

International monthly prices		\$/t	
	Month	Propane	Butane
Argus North Sea Index™	Mar 23	624.00	674.50
Sonatrach fob Bethioua	Mar 23	640.00	690.00
Saudi Aramco	Mar 23	720.00	740.00
KPC (Kuwait)	Mar 23	720.00	740.00
<b>Naphtha</b>			
		Mid	±
cif northwest Europe		680.25	+20.75
cif Mediterranean		648.00	+20.75
cfr Japan		667.38	+18.50
fob Mideast Gulf		612.63	+18.50
<b>Ice Brent futures settlement</b>			
	May 23	78.65	+0.53
	Jun 23	78.14	+0.38
	Jul 23	77.98	+0.30

Propane Regional Comparisons

\$/t



ASIA-PACIFIC

Refrigerated

Asian prices lagged crude’s rebound on Tuesday. April Argus Far East Index (AFEI) propane swaps gained \$12/t on the day to settle at \$560/t at Asian timestamp despite a \$3.08/bl jump in front-month Brent values. Weakness in the paper market sent May AFEI to discounts of nearly \$90/t to its naphtha equivalent though demand from crackers could not be discerned amid a heavy turnaround season.

Matheson Energy was the sole participant in the afternoon window with a bid for 46,000t propane for second-half April delivery to Ningbo at April AFEI +\$2/t. BW Product Services was no longer offering 23,000t propane for the same arrival period amid news their requirement has been covered. Trading in the second-half April arrival market has largely concluded, market participants said, as hefty exports from the US in March programmed for Asia-Pacific had mostly found homes. The market’s attention is focused on China’s demand for 46,000t propane for first-half May shipment though buyers were unlikely to surface until after the

Propane Swaps (5pm Singapore) \$/t			
CP swaps		AFEI™ swaps	
Apr 23	562.00	Apr 23	560.00
May 23	552.00	May 23	557.50
Jun 23	539.00	Jun 23	554.50

Butane Swaps (5pm Singapore) \$/t			
CP swaps		Propane/Butane CP swaps diff	
Apr 23	550.00	Apr 23	+12.0

Asia-Pacific						\$/t
	CP basis	Timing	±	Bid	Ask	±
<b>Propane</b>						
Argus Far East Index™ (AFEI™)					559.00	+12.25
AFEI™ diff to M1					-1.00	+0.25
Argus Ningbo Index					567.00	+12.25
Argus South China Index					574.00	+12.25
Japan cfr			+12.00	557.00 /	561.00	+12.50
Japan CP cfr	Apr	1H May	+4.00	-5.00 /	-1.00	+4.50
Argus Middle East Index					524.00	+8.00
Gulf CP fob	Apr	Apr	nc	-43.00 /	-33.00	nc
India cfr					585.07	+7.14
India CP cfr	Apr	Apr	-0.85	+21.07 /	+25.07	-0.85
<b>Butane</b>						
Argus Far East Index™ (AFEI™)					547.00	+12.25
Argus Ningbo Index					555.00	+12.25
Argus South China Index					562.00	+12.25
Japan cfr			+12.00	545.00 /	549.00	+12.50
Japan CP cfr	Apr	1H May	+4.00	-5.00 /	-1.00	+4.50
Argus Middle East Index					512.00	+8.00
Gulf CP fob	Apr	Apr	nc	-43.00 /	-33.00	nc
India cfr					573.07	+7.14
India CP cfr	Apr	Apr	-0.85	+21.07 /	+25.07	-0.85
<b>Propane-Butane mix</b>						
Argus mixed index					553.00	+12.25
Japan cfr			+12.00	551.00 /	555.00	+12.50

ASIA-PACIFIC

April CP announcement expected this Thursday.

11,500t+11,500t cargoes arriving 22-30 April were valued at \$552/t or April AFEI -\$2/t in consideration of private discussions. Cargoes arriving 1-7 May were valued at \$554/t, to reflect the same contango structure as propane AFEI. The Argus Mixed Index spanning 22 April-7 May averaged \$553/t.

The Argus cfr Ningbo propane Index for cargoes arriving 22-30 April were valued at April AFEI +\$6/t or \$566/t in consideration of Matheson Energy's bid on 46,000t propane basis second-half April arrival into Ningbo. Cargoes arriving 1-7 May were valued at May AFEI +\$10.5/t or \$568/t, to reflect the same contango structure as propane AFEI. Argus propane Ningbo Index spanning 22 April-7 May averaged \$567/t.

The Argus cfr Ningbo butane Index for cargoes arriving 22-30 April were assessed at \$554/t, in consideration of private discussions. Cargoes arriving 1-7 May were valued at \$556/t, to reflect the same contango structure as propane AFEI. The Argus butane Ningbo Index spanning 22 April-7 May averaged \$555/t.

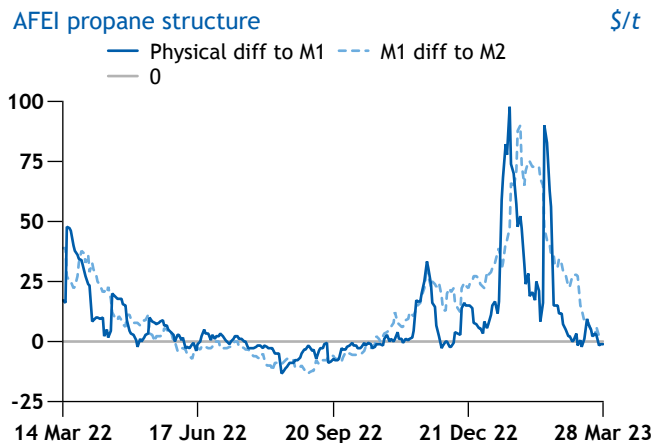
The Argus south China propane Index for cargoes arriving 22-30 April were valued at April AFEI +\$13/t or \$573/t, in consideration of private discussions. Cargoes arriving 1-7 May were valued at May AFEI +\$17.5/t or \$575/t, in consideration of private discussions. The Argus south China propane Index spanning 22 April-7 May averaged \$574/t.

The Argus south China butane Index for cargoes arriving 22-30 April were assessed at \$561/t, in consideration of private discussions. Cargoes arriving 1-7 May were valued at \$563/t to reflect the same contango as propane AFEI. The Argus south China butane Index spanning 22 April-7 May averaged \$562/t.

Asia-Pacific						\$/t
	CP basis	Timing	±	Bid	Ask	±
<b>Propane pressurised</b>						
South China CP fob	Apr	Apr	nc	+36	/ +46	nc
South China fob		Apr	+8	598	/ 608	+8
South China CP cfr	Apr	Apr	nc	+66	/ +76	nc
South China cfr	Apr	Apr	+8	628	/ 638	+8
Vietnam CP cfr	Apr	Apr	nc	+97	/ +107	nc
<b>Butane pressurised</b>						
South China CP fob	Apr	Apr	nc	+36	/ +46	nc
South China fob		Apr	+8	586	/ 596	+8
South China CP cfr	Apr	Apr	nc	+66	/ +76	nc
South China cfr	Apr	Apr	+8	616	/ 626	+8
Vietnam CP cfr	Apr	Apr	nc	+97	/ +107	nc

China wholesale propane/butane mix					yuan/t
	±	Bid	Ask	±	
<b>South China</b>					
<b>Ex terminal</b>					
Dongguan	nc	5,230	/ 5,270	nc	
Zhuhai	nc	5,170	/ 5,220	nc	
Shenzhen	nc	5,230	/ 5,270	nc	
Raoping	-80	5,200	/ 5,250	-70	
Nansha	nc	5,230	/ 5,270	nc	
Shantou	-80	5,200	/ 5,250	-70	
Yangjiang	nc	5,210	/ 5,250	nc	
Pearl			/		
<b>Ex refinery</b>					
Maoming	nc	5,230	/ 5,280	nc	
Guangzhou	nc	5,150	/ 5,200	nc	
<b>East China</b>					
<b>Ex terminal</b>					
Ningbo	+50	5,300	/ 5,400	+50	
Wenzhou	+50	5,300	/ 5,400	+50	
Taicang	nc	5,300	/ 5,400	nc	
Shanghai	nc	5,250	/ 5,350	nc	
Zhangjiagang	nc	5,300	/ 5,400	nc	
Fujian	-50	5,150	/ 5,200	-50	
<b>Ex refinery</b>					
Shanghai	nc	5,150	/ 5,200	nc	
Zhenhai	nc	5,250	/ 5,300	nc	
Yangzi	-100	5,250	/ 5,300	-100	
Fujian	-50	5,000	/ 5,050	-50	
Gaoqiao	-100	5,000	/ 5,050	-100	
Qingdao	nc	4,850	/ 4,900	nc	
<b>Northeast China ex refinery</b>					
Daqing	+50	5,050	/ 5,150	+50	
Dalian	nc	4,880	/ 4,920	nc	
<b>Northwest China ex refinery</b>					
Urumqi	nc	3,960	/ 4,010	nc	
<b>Inland China ex refinery</b>					
Yan-An	+50	4,905	/ 4,910	+50	

AFEI propane structure



## ASIA-PACIFIC

### Assessment rationale

Propane Argus Far East Index (AFEI) (PA0000403) was assessed based on and other market information.

The April AFEI and May AFEI propane swaps were valued at \$560/t and \$557.5/t respectively.

Cash differentials for second-half April arrival were maintained at -\$2/t against the April AFEI in consideration of private discussions. As such, propane cargoes arriving 22-30 April were valued at \$558/t while cargoes arriving 1-7 May were assessed at May AFEI +\$2.5/t or \$560/t, in consideration of the forward swaps structure and private discussions. The propane AFEI spanning 22 April-7 May averaged \$559/t.

The propane AFEI rose by \$12.25/t from the previous session.

Butane Argus Far East Index (AFEI) (PA0000361) was assessed on the based on other market information.

The April AFEI butane swaps were valued at \$548/t.

Cfr butane cargoes arriving 22-30 April were assessed at April butane AFEI -\$2/t or \$546/t, in consideration of private discussions. Cargoes arriving 1-7 May were valued at \$548/t to reflect the same contango structure as propane FEI. The butane AFEI spanning 22 April-7 May averaged \$547/t.

The butane AFEI rose by \$12.25/t from the previous session.

### Pressurised

Pressurised premiums in south China were stable on Tuesday amid limited trading interest as market participants awaited the release of April CP later this week.

Export terminals kept offers for April-loading parcels unchanged at April CP +\$42-45/t on a fob south China basis. Offers into north Vietnam were steady at April CP +\$103/t basis cfr Haiphong for April delivery.

China's domestic wholesale prices were mixed amid thin trading activity. Market participants stayed by the side-lines to await the announcement of April CP.

The Pearl River Delta index (PRD) was assessed stable at Yn5,230/t after regional importers left offers unchanged from the last trading session. Restocking efforts by gas bottling stations supported prices despite the broader bearish market outlook.

In Shantou and Raoping, terminal prices fell by Yn75/t to Yn5,225/t after a neighbouring refinery increased output. Yangjiang terminal prices were stable at Yn5,230/t.

In south China, Guangzhou and Maoming refinery prices were unchanged from yesterday amid a balanced supply and demand outlook.

In east China, terminal and refinery prices were largely steady from yesterday. Ningbo and Wenzhou terminal prices rose by Yn50/t, tracking firmer prices from nearby refineries. Yangzi refinery prices fell by Yn100/t after a neighbouring refinery lowered prices to boost sales today. While refinery supply was relatively tight, weak demand compelled sellers to lower offers, a refiner based in east China said. Fujian terminal and refinery prices fell by between Yn50-100/t in the wake of fresh imports.

In northeast China, Dalian refinery prices remained unchanged while Daqing prices rose by another Yn50/t today, bolstered by rising prices in neighbouring Harbin and Jilin. Urumqi refinery prices were stable from the last trading session.

In inland China, Yan'an refinery prices rose by Yn50/t on the back of crude's rebound.

### Early close for some LPG assessments, 6 April

Following consultation, Argus will close its Asia-Pacific and Mideast Gulf LPG assessments at the earlier time of 12:30pm (Singapore), its northwest Europe and Mediterranean LPG assessments at the earlier time of 12:30pm (London) and its eastern Europe LPG assessments at the earlier time of 1:00pm (London) on 6 April. Americas LPG assessments will close at the usual time on 6 April.

## MIDDLE EAST

Spot discounts for propane and butane cargoes loading 21-30 April from the Mideast Gulf were assessed stable at -\$38/t against the April CP in the absence of fresh trade discussions.

A second round of April CP recommendations was reportedly submitted to Saudi Aramco where propane was pegged at \$545-550/t while butane was \$5-10/t lower.

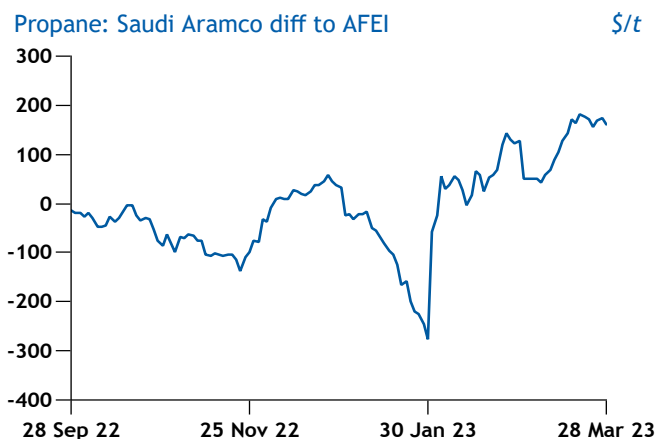
The Argus Middle East Index (AMEI) assessments for propane and butane were assessed at \$524/t and \$512/t respectively.

April propane CP swaps rose by \$8/t day-on-day to settle at \$562/t at Asian timestamp, while its butane counterpart was assessed \$12/t lower at \$550/t.

Middle East and Asia-Pacific averages (Mar 23)		\$/t
	Mid	±
<b>Middle East Gulf</b>		
Propane	-25.900	-0.637
Butane	-25.900	-0.637
<b>Argus Middle East Index</b>		
Propane	565.800	-2.200
Butane	565.250	-2.803
<b>Argus Far East Index™</b>		
Propane	602.125	-2.270
diff to M1	14.710	-0.830
Butane	604.125	-3.007
11+11 propane-butane mix	603.125	-2.638
<b>Argus South China Index</b>		
Propane	606.475	-2.078
Butane	608.475	-2.814
<b>Argus Ningbo Index</b>		
Propane	613.625	-2.086
Butane	615.625	-2.822
Pearl River Delta index Yn/t	5,438	-11

### Argus introduces CFR Ningbo Contract

Argus is pleased to publish its CFR Ningbo Contract, which is designed to facilitate LPG trade into eastern China. The Contract, which contains changes to a draft version previously provided for consultation purposes, may be [viewed here](#). Argus is in regular dialogue with the industry to ensure that its work is relevant to the physical markets. In addition, Argus will review this Contract on at least an annual basis. To facilitate discussion with market participants, Argus intends to form an advisory group comprised of representatives of key stakeholders that will meet at least once a year. Further details about the advisory group will be provided in due course. To discuss or provide feedback on the Contract, please contact Esther Phua at [esther.phua@argusmedia.com](mailto:esther.phua@argusmedia.com) or (65) 6496 9966.



Argus African LPG Indexes								
	South Africa	±	West Africa Propane	±	West Africa Butane	±	East Africa	±
Index \$/t	655.48	+8.88	539.47	+7.16	540.85	+2.50	550.78	+8.54
MTD average \$/t	703.18	-2.51	546.65	-0.38	560.54	-1.03	602.55	-2.72
Index local currency/kg	1,197.22 ZARc	+12.73	248.38 NGN	+3.30	249.01 NGN	+1.15	72.57 KES	+1.26
<b>Calculation</b>								
Underlying price \$/t	519.20	+8.00	441.55	+7.73	446.63	+3.08	514	+1.20
Freight + logistics \$/t	136.28	+0.88	96.83	-0.59	94.22	-0.58	36.98	+0.54

## NORTHWEST EUROPE

### Large Cargo

Large cargo propane reawakened from its three-day slumber as a propane offer emerged, pushing the pricing to a discount for the first time since early February.

Gunvor was the sole participant of the afternoon trading session, marketing a mid-April ToT cargo over 14-18 April first at 50pc \$507/t and 50pc April cif ARA +\$4/t, and subsequently trimmed to \$505.50/t and April +\$3/t. No buyers stepped forward. The offer was worth \$505.88/t, with the front-month paper assessed at \$503.25/t. The unmet length flipped large cargo propane to a mild discount of \$0.25/t, but outright pricing was lifted by recovering crude, surging to a two-week high.

The region is well supplied with four ex-US cargoes scheduled to arrive at European ports over the next week. The situation is unlikely to change soon as the Asian market remains subdued, weakening its ability to pull US tonnes away from northwest Europe. In related news, the Houston Ship Channel reopened to all vessel traffic on Monday afternoon. On the demand, propane's discount to the competing petrochemical feedstock continues to widen, supported by the latter's tightness, but crackers intake is nearing its ceiling with operating rates still reduced.

On butane, silence prevailed in both private and public discussions. Value remains pegged to 77.50pc versus front-month naphtha in the absence of either bullish or bearish developments.

### Coasters

A strengthening backdrop and the return of Equinor on the buy side saw fob propane coaster prices back on an upward trend.

Equinor bid for 2,400t of commercial propane loading on to the Crystal Valerian, Eco Green, Epic St Croix, or substitute on 3-5 April, starting at \$615/t fob ARA-UK east coast range, with a discount of \$6/t for Antwerp and \$10/t for Immingham. The bid was increase to \$625/t where it was booked by Eni and is likely to load at Tees. The deal puts values to their highest for more than two weeks on an outright basis, and the steepest premium to large cargoes for almost a year, reflecting the slow return of some sources of propane following several months of extraordinarily high natural gas prices.

Locally delivered butane values edged lower on a relative basis, to 89pc of naphtha, but gains in the underlying basis neutered the impact of this on outright pricing.

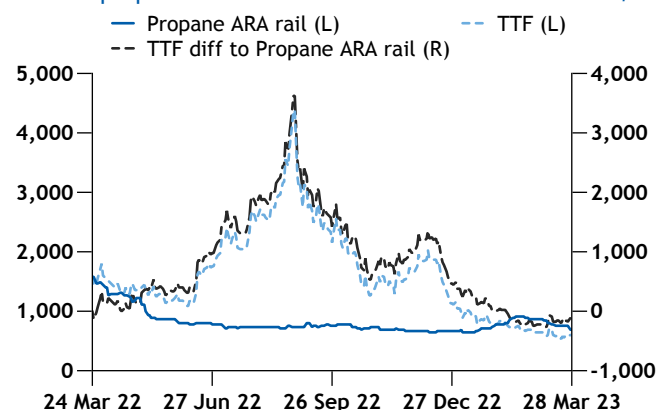
Fob values also gained, supported by a steady flow of tonnes moving south. Rising US exports may begin to

Northwest Europe and Mediterranean					\$/t
	±	Bid	Ask		±
<b>Propane</b>					
cif ARA (large cargoes)	+7.00	500.00 /	506.00		+7.00
fob northwest Europe (coasters)	+25.00	622.00 /	628.00		+25.00
cif ARA (coasters)	+33.00	699.00 /	705.00		+33.00
fob ARA (barge)	-10.00	672.00 /	678.00		-10.00
fca ARA (rail)	-10.00	687.00 /	693.00		-10.00
cif Mediterranean (large)	+7.00	494.50 /	500.50		+7.00
fob Mediterranean (coasters)	+15.00	622.00 /	628.00		+15.00
fca Mediterranean (rail)	nc	722.00 /	728.00		nc
<b>Butane</b>					
cif ARA (large cargoes)	+12.25	516.50 /	522.50		+12.25
fob northwest Europe (coasters)	+13.00	590.00 /	596.00		+13.00
cif ARA (coasters)	+12.00	602.50 /	608.50		+12.00
fob ARA (barge)	+17.75	560.25 /	566.25		+17.75
fca ARA (rail)	+17.75	575.25 /	581.25		+17.75
cif Mediterranean (large)	+12.25	497.25 /	503.25		+12.25
fob Mediterranean (coasters)	+14.50	696.50 /	702.50		+14.50
<b>Competing fuels, 14 Jan</b>					
NWE small-scale LNG €/MWh	-2.45	46.50 /	47.00		-2.55
NWE small-scale LNG \$/t C3 equivalent	-18.68	709.63 /	717.26		-19.97

European olefins contract price			€/t
	Mar 23		±
Ethylene del NWE	1,290.00		+30.00
Propylene (polymer) del Europe	1,185.00		+30.00

Propane and Butane averages			\$/t
	Mid		±
<b>Propane averages</b>			
cif ARA (large cargoes)	550.79		-2.52
fob ARA (barge)	755.22		-1.74
<b>Butane averages</b>			
cif ARA (large cargoes)	586.43		-3.52
fob ARA (barge)	606.12		+3.09

### TTF vs propane railcars



## NORTHWEST EUROPE

squeeze out some of this but the French strikes have left room for both to find homes despite demand slowing with the advent of spring.

### Barges, Railcars

Northwest European propane railcar pricing extended losses on Tuesday with the market shedding \$10/t after decreasing more than \$50/t on Monday as product availability improved, and demand slows. Buyers were absent once more and sellers were unsure if any buying interest would emerge before the end of the month. No deals were heard while offers were placed below the \$700/t mark on an fca ARA basis. Some market sources expect prices to continue their fall over the coming days. Much of mainland Europe is forecast to see below-average temperatures over the coming week but this may not be enough to bolster demand.

On butane the market was muted, and no fresh discussions were heard. Delivered butane barge value remained anchored in the mid-80s but could soon lose some ground as blending demand appears to be limited.

### Reported done (\$/t)

625 fob Tees (propane coaster, 2,400t, loading 3-5 April)

### Assessment rationale

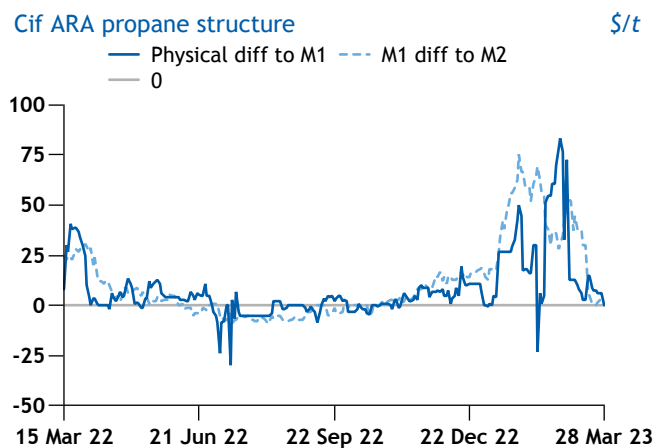
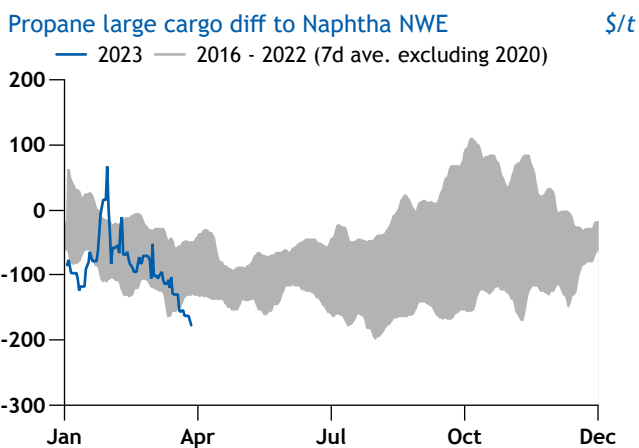
Propane ARA large cargo (PA0000400) was assessed on the basis of transactions, bids and offers, as and when these are identified in the market commentary, and other market data, in accordance with the methodology.

Butane ARA/UK large cargo (PA0000360) was assessed on the basis of transactions, bids and offers, as and when these are identified in the market commentary, and other market data, in accordance with the methodology.

## MEDITERRANEAN

French strikes continue to limit refinery supply and distort regional logistics to fill the resulting gaps. The arbitrage to bring tonnes down from northwest Europe is bringing in plenty of butane as values in the north slide with the end of gasoline blending and slowly increasing refinery output as natural gas prices remain below those for LPG.

A number of ex-US vessels are headed for the region, including the Eco Nical for Morocco's Agadir on 3 April, the Navigator Luga for Tanger on 2 April, and the VLGC Gas Libra, going to the Spanish petrochemical hub of Tarragona where it is due on 10 April. The Sunny Bright and Challenger are also pointed this way, but both are signalling Port Said so likely to be continuing further east through the Suez Canal.



**EASTERN EUROPE**

The daf Brest assessments for propane-butane mix and propane remained stable as all indications were reported within the current Argus range. Sibur International offered a 300t mix cargo on the Argus Open Markets platform (AOM) at 30pc \$439/t and 70pc with a \$16/t premium over the average of assessment five days before and five days after dispatch. No deals resulted.

Black Sea assessments for propane-butane mix, propane and butane decreased due to weaker local demand.

Eastern Europe		\$/t	
	±	Bid/Ask	±
<b>Daily</b>			
daf Brest pro-but mix	nc	430.00/ 443.00	nc
daf Brest pro-but mix €/t	-2.00	397.00/409.00	-2.00
daf Brest propane	nc	505.00/ 530.00	nc
daf Brest propane €/t	-2.00	467.00/490.00	-2.00
daf Brest pro-but mix floating premium		0.00	nc
daf Brest pro-but mix floating premium €/t		0.00	nc
daf Brest propane diff to cif ARA (large)		+14.50	-7.00
Argus Polish Domestic Index		533.0	-2.0
fob Black Sea pro-but mix	-10.00	490.00/ 510.00	-20.00
fob Black Sea propane	-20.00	500.00/520.00	-20.00
fob Black Sea butane	-10.00	490.00/ 510.00	-20.00
fot Burgas (Lukoil posted) pro-but mix		849.0	+4.0
<b>Weekly</b>			
fca/fot Polish ports propane	-65.00	700.00/760.00	-40.00
daf Ukraine western border pro-but mix	nc	700.00/720.00	-20.00
daf Bekabad pro-but mix	nc	315.0/350.0	nc

**AOM notice: EU sanctions on Belarus**

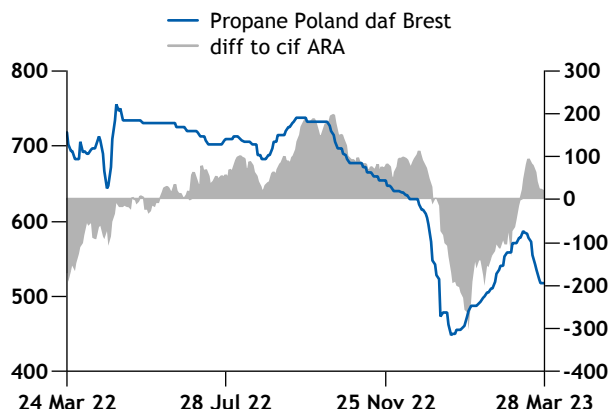
In light of the sanctions imposed by the EU on Belarus, and in particular, the application of the sanctions in relation to petroleum products of Belarus origin, please note that Argus requires all bids and asks posted on the Argus Open Markets (AOM) platform to include country(ies) of origin; this should be explicitly stated in the “notes” field.

Argus will not be able to take into account in its assessment of the daf Brest market any Deals (including bids or asks) that are not accompanied by an express statement of origin specification. Argus also take this opportunity to remind all participants of their ongoing obligations as set out in the AOM Terms of access, including the obligation to satisfy themselves that any transaction or counterparty to a Deal is not restricted or subject to any applicable sanctions regime or other legal prohibition.

If you have any questions related to this, please contact [aomoversight@argusmedia.com](mailto:aomoversight@argusmedia.com)

Daf Brest propane vs cif ARA large

\$/t



**ANNOUNCEMENT**

**Suspension of daf Ukraine LPG price assessments**

Argus has suspended its daf Ukraine propane-butane mix price assessments and weekly daf Ukrainian-Romanian border propane-butane mix price assessments because trading activity in the region has halted following Russia’s launch of military operations in Ukraine. Argus will continue to monitor the situation and will provide further announcements in due course.



AMERICAS

US Gulf exports

VLGC freight on a Houston-Chiba basis declined in discussions Tuesday but spot cargo activity remained scant as market participants monitored a weak arbitrage on paper. April AFEI/LST paper traded at a steady \$150-151/t during the morning. No firm bids or offers were discussed for May-loading spot cargoes, and the terminal fee assessment was left below 6¢/USG based on the last heard discussions.

Estimated waiting times at the Panama Canal stood at six days northbound and four days southbound Tuesday.

Mont Belvieu light NGLs

Mont Belvieu, Texas, LST propane opened higher after an overnight increase in delivered prices in Asia and extended gains, outpacing crude. Prompt-month LST propane was valued at a stronger 45.3pc of Nymex WTI. Prompt-month EPC ethane fell to a nearly two-year low.

March LST propane opened 1.5¢/USG higher at 78.375¢/USG and dipped to 78.25¢/USG before rising to a high of 79.5¢/USG. March/April LST propane traded at a 0.5¢/USG carry in the morning, and April volumes were discussed between 79-79.375¢/USG in the afternoon. A March LST/EPC spread priced the caverns at parity.

March EPC propane opened 1¢/USG higher at 77.5¢/USG and rose to 79.625¢/USG before easing to 79¢/USG in the afternoon. A small April EPC propane volume traded at 79¢/USG in the morning, at a 0.375¢/USG premium to the prompt month at the time. April EPC propane was discussed around 79.5¢/USG in the afternoon. A March spread with Hattiesburg, Mississippi, propane put EPC at a wider 5.625¢/USG discount.

March EPC ethane opened 0.25¢/USG higher at 23¢/USG

and fell to 22.125¢/USG, bringing the day’s midpoint to a 23-month low alongside declines in natural gas. March/April EPC ethane traded at a 0.25¢/USG backwardation, and April ethane was discussed between 21.875-22.375¢/USG in the afternoon.

May Nymex light sweet crude futures rose by 39¢/bl, or 0.54pc, to \$73.20/bl.

Mont Belvieu heavy NGLs

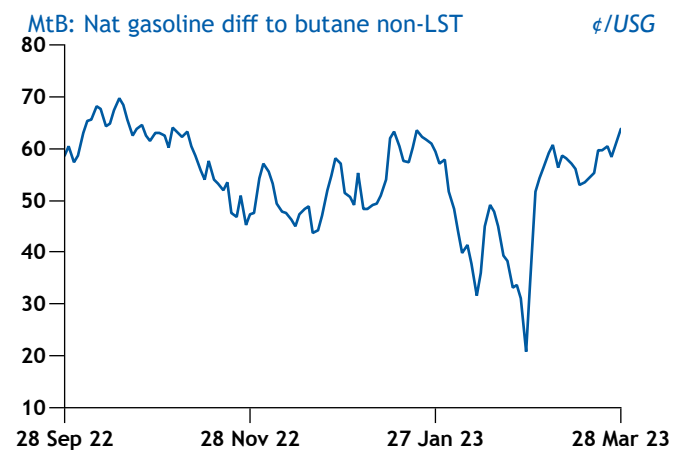
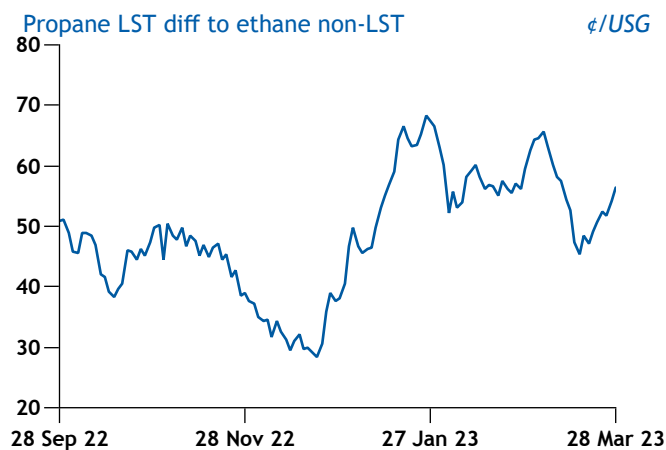
Mont Belvieu, Texas, EPC butane rose alongside gains in crude and propane, leaving the day’s midpoint at a steady 53pc of Nymex WTI.

March EPC butane opened more than 1¢/USG lower at 90.75¢/USG and rose as high as 94¢/USG during the morning. April butane was discussed between 94-94.25¢/USG during the afternoon, and a March/April spread traded at a 0.375¢/USG carry.

LST refinery grade butane saw wide bids and offers and was assessed at a discount to normal.

March EPC isobutane fell, opening 2.25¢/USG lower at 103.5¢/USG and traded between 98-106¢/USG thereafter. Spreads versus normal butane priced isobutane at a 10¢/USG premium.

March EPC natural gasoline opened 1.625¢/USG higher at 155¢/USG and eased to 154.5¢/USG before rising as high as 157.75¢/USG by midday. April natural gasoline was discussed between 157-158¢/USG during the afternoon, and a March/April spread traded at a 1¢/USG carry. March Targa natural gasoline traded at 159.5¢/USG, at a 1.75¢/USG premium to EPC at the time. Bids and offers for LST natural gasoline were thin, and LST was assessed at a premium to EPC based on discussions.



AMERICAS

Americas: Mont Belvieu in-well (Mar 23)					¢/USG
	VWA	±	Low	High	±
<b>Propane</b>					
Enterprise	78.478	+2.500	77.500	79.625	+1.750
Enterprise \$/t		+13.03	403.78	414.85	+9.12
LST	78.794	+2.750	78.250	79.500	+1.250
Targa	79.375	+0.875	79.125	79.625	+0.875
<b>Butane</b>					
Enterprise	92.774	-0.125	90.750	94.000	+1.000
Enterprise \$/t		-0.57	411.10	425.82	+4.53
Enterprise Isobutane	102.771	-5.500	98.000	106.000	-2.000
LST	84.250	nc	84.000	84.500	nc
<b>Ethane</b>					
Enterprise ethane	22.242	+0.125	22.125	23.000	-0.375
Enterprise ethane \$/t		+0.92	163.28	169.74	-2.77
Targa	22.63	-0.13	22.38	22.88	-0.13
<b>Natural gasoline</b>					
Enterprise	155.625	+4.500	154.500	157.750	+1.000

US Gulf coast LPG				
		Low	High	Mean
<b>Propane</b>				
fob USGC, spot terminal fee \$/t		+23.45	+31.26	+27.35
fob USGC ¢/USG		84.000	85.500	84.750
fob USGC \$/t		437.64	445.46	441.55
del Japan (AUSJ) \$/t		563.5	571.5	567.50
del ARA (AUSE) \$/t		511.5	519.5	515.50
AFEI™ propane calculated netback USGC \$/t				404.15
<b>Butane</b>				
fob USGC ¢/USG		97.969	99.219	98.594
fob USGC \$/t		443.80	449.46	446.63

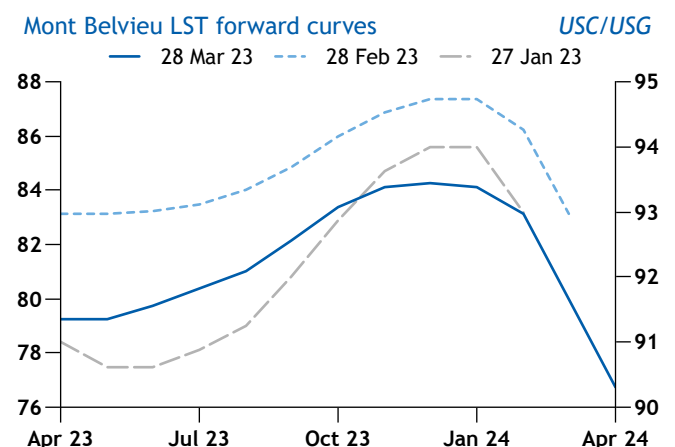
LPG Freight rates		
	\$/t	±
VLGC Ras Tanura-Chiba	85.00	-1.00
VLGC Houston-Chiba	126.00	-8.00
VLGC Houston-Flushing	74.00	-2.00

Delivered LPG Brazil		
	Mid	±
Propane Santos	535.50	+4.58
Propane-butane 90:10 Santos	536.01	+4.11
Propane-butane 70:30 Santos	537.03	+3.18
Propane-butane 50:50 Santos	538.05	+2.24
Propane Suape	512.44	+5.41
Propane-butane 90:10 Suape	512.95	+4.94
Propane-butane 70:30 Suape	513.97	+4.01
Propane-butane 50:50 Suape	514.99	+3.07

Americas: Mont Belvieu in-well (Apr 23)					¢/USG
		±	Low	High	±
<b>Propane</b>					
Enterprise		+3.250	79.250	79.750	+3.500
Enterprise \$/t		+16.93	412.89	415.50	+18.24
LST		+0.500	79.000	79.375	+0.375
Targa		+3.375	80.000	80.500	+3.375
<b>Butane</b>					
Enterprise		+0.500	94.000	94.250	+0.625
Enterprise \$/t		+2.27	425.82	426.95	+2.83
Enterprise Isobutane		nc	102.000	102.500	nc
LST		+0.625	90.875	91.375	+0.625
<b>Ethane</b>					
Enterprise ethane		nc	21.875	22.375	nc
Enterprise ethane \$/t		nc	161.44	165.13	nc
Targa		nc	21.88	22.38	nc
<b>Natural gasoline</b>					
Enterprise		+0.250	157.000	158.000	+0.750

US forward market					¢/USG
		±	Bid	Ask	±
<b>Mont Belvieu LST propane</b>					
Mar 23		+1.000	79.000	79.500	+1.000
Apr 23		+0.500	79.000	79.500	+0.500
May 23		+0.500	79.000	79.500	+0.500
Jun 23		+0.500	79.500	80.000	+0.500
2Q 23		+0.500	79.125	79.625	+0.500
<b>Mont Belvieu EPC butane</b>					
Mar 23		+0.500	93.500	94.000	+0.500
Apr 23		+1.000	94.125	94.625	+1.000
May 23		+1.250	93.250	93.750	+1.250
Jun 23		+1.375	93.000	93.500	+1.375
2Q 23		+1.250	93.500	94.000	+1.250

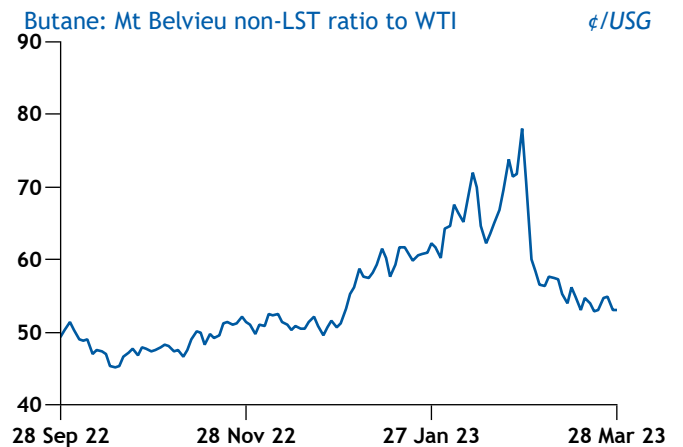
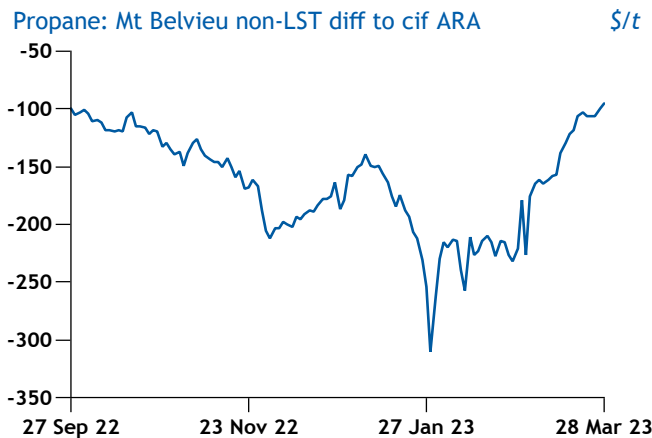
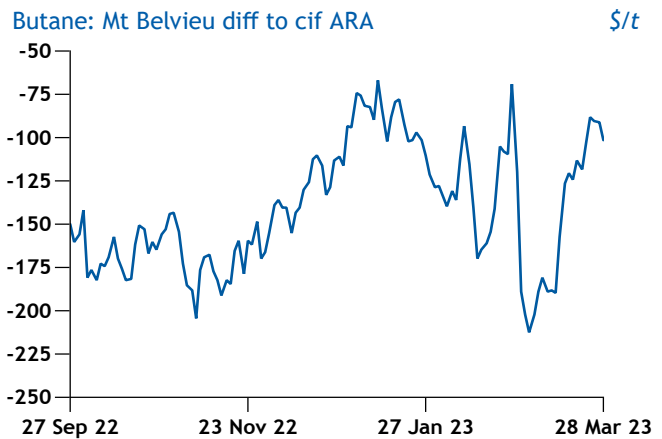
Americas: Enterprise in-well averages (Mar 23)			USC/USG
	Month to date		±
Propane	79.322		-0.040
Butane	96.681		-0.227



US DEALS

Mont Belvieu spot deals			
	Timing	¢/USG	bl
Butane EPC	Mar	90.750	10,000
	Mar	91.000	10,000
	Mar	92.000	10,000
	Mar	92.250	10,000
	Mar	92.500	10,000
	Mar	92.625	10,000
	Mar	93.000	10,000
	Mar	93.000	10,000
	Mar	93.000	10,000
	Mar	93.000	5,000
	Mar	93.250	10,000
	Mar	93.375	10,000
	Mar	93.500	10,000
	Mar	93.500	10,000
	Mar	93.750	10,000
Mar	94.000	10,000	
Mar/Apr	-0.375	25,000	
Butane EPC/Isobutane EPC	Mar	-10.000	
	Mar	-10.000	
Ethane EPC	Mar	22.125	40,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.125	10,000
	Mar	22.250	10,000
	Mar	22.375	10,000
	Mar	22.375	10,000
	Mar	22.500	10,000
	Mar	23.000	10,000
Mar/Apr	0.250	20,000	
Isobutane EPC	Mar	98.000	10,000
	Mar	100.750	10,000

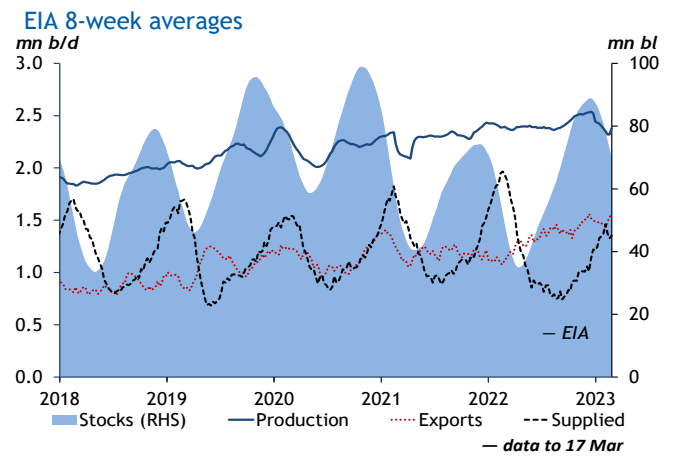
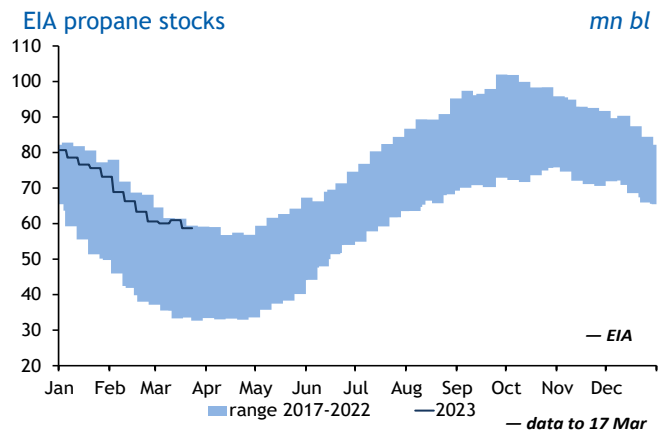
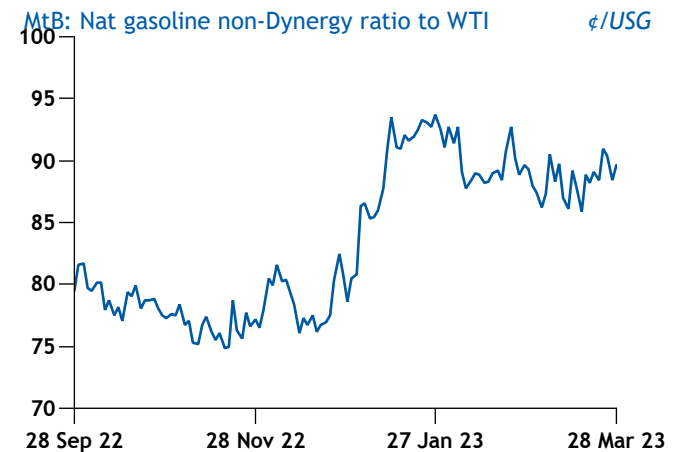
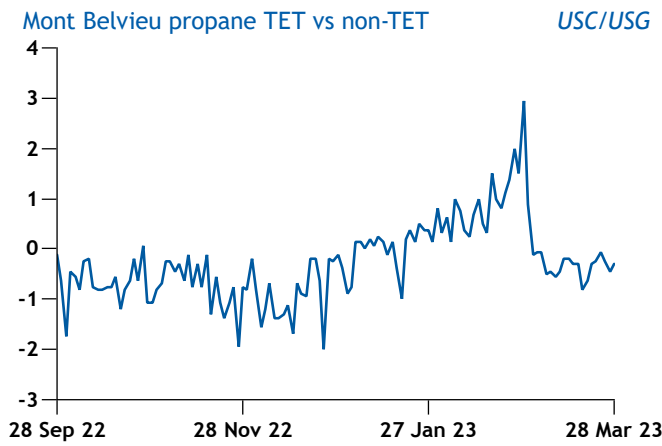
Mont Belvieu spot deals			
	Timing	¢/USG	bl
Natgasco EPC	Mar	103.375	10,000
	Mar	103.500	10,000
	Mar	105.000	10,000
	Mar	106.000	10,000
	Mar	154.500	10,000
	Mar	154.625	10,000
	Mar	154.750	10,000
	Mar	154.750	10,000
	Mar	154.875	10,000
	Mar	155.000	10,000
	Mar	155.250	10,000
	Mar	156.000	10,000
	Mar	156.875	10,000
	Mar	157.500	10,000
	Mar	157.750	10,000
Mar/Apr	-1.000	25,000	
Natgasco EPC/Natgasco Targa	Mar	-1.750	10,000



US DEALS

Mont Belvieu spot deals			
	Timing	¢/USG	bl
Natgaso Targa	Mar	159.500	10,000
Propane EPC	Mar	77.500	10,000
	Mar	78.000	20,000
	Mar	78.000	10,000
	Mar	78.000	10,000
	Mar	78.000	10,000
	Mar	78.250	5,000
	Mar	78.625	5,000
	Mar	78.750	10,000
	Mar	79.000	10,000
	Mar	79.375	5,000
	Mar	79.500	10,000
	Mar	79.625	10,000

Mont Belvieu spot deals			
	Timing	¢/USG	bl
	Apr	79.000	5,000
	Mar/Apr	-0.375	5,000
Propane LST	Mar	78.000	5,000
	Mar	78.250	10,000
	Mar	78.375	10,000
	Mar	78.375	10,000
	Mar	78.750	10,000
	Mar	79.000	10,000
	Mar	79.250	10,000
	Mar	79.250	10,000
	Mar	79.500	10,000
	Mar/Apr	-0.500	25,000
Propane LST/Propane EPC	Mar	0.000	10,000



## INTERNATIONAL SWAPS

Most international paper values saw strong gains following firmer crude while the propane-naphtha spread grew again, still hovering at multi-month lows.

April cif ARA had no deals within the 16.15-16.30 liquidity session and a bit offer range of \$503-504/t was recorded right before the timestamp. A few seconds after 16:30 a deal was done at \$503/t for 2,000t. The contract was assessed at \$503.25/t, up by \$13.25/t. The rest of the propane cif ARA curve saw similar gains, leaving the differentials largely unchanged.

April naphtha surged \$16.25/t higher to \$670.75/t, pushing the propane-naphtha spread deeper into a new ten-month low at -\$167.50/t, from -\$164.50/t.

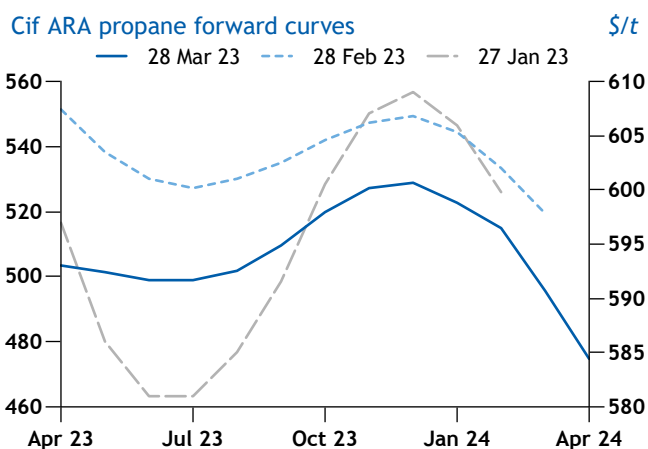
April AFEI also saw double-digit gains and was up by \$10.50/t to \$562.50/t, shrinking the east-west spread by \$2.75/t to \$59.25/t.

Prompt CP gained \$7/t to \$564/t, narrowing the AEI-CP differential by \$3.50/t to -\$1.50/t.

### Reported done (\$/t)

503(2kt) Apr cif ARA  
 560(2kt), 560.50(2kt), 560(6kt), 560(3kt), 560(2kt) Apr AFEI  
 558(2kt), 558(5kt), 559(10kt), 558(3kt), 559(2kt), 558(2kt), 558(3kt), 558(3kt) May AFEI  
 2.50(3kt), 2.50(5kt), 2.50(15kt), 3(1kt) Apr-May AFEI

562.50(5kt) Q3 AFEI  
 59(1kt) Q4 AFEI-cif ARA  
 567(2kt), 565(2kt), 562(2kt), 560(2kt) Apr CP  
 -10(5kt) Sep-Oct CP

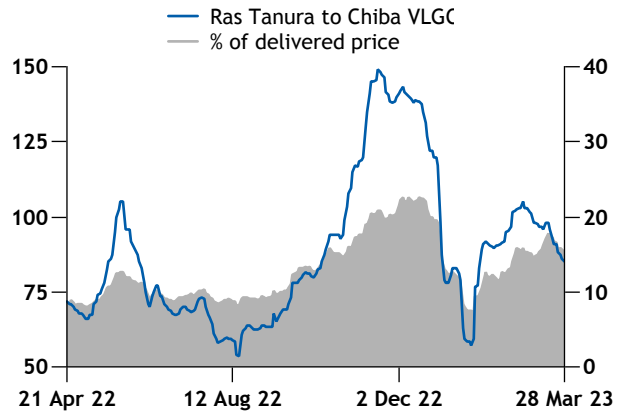


International swap prices (4:30pm London) \$/t										
	Propane cif ARA	Naphtha northwest Europe	Propane CP	Propane Far East Index (AFEI) <sup>™</sup>	Propane Argus Mont Belvieu LST \$/USG	Propane less naphtha	AFEI <sup>™</sup> less propane cif ARA	Mont Belvieu less Propane cif ARA	propane Mont Belvieu less AFEI <sup>™</sup>	AFEI <sup>™</sup> less propane CP
<b>M1 differential to physical</b>	-0.25	+9.50	-40.00	-3.50	-					
Apr 23	503.25	670.75	564.00	562.50	79.250	-167.50	+59.25	-90.36	-149.61	-1.50
May 23	501.25	654.75	549.00	558.50	79.250	-153.50	+57.25	-88.36	-145.61	+9.50
Jun 23	498.75	642.25	535.00	555.00	79.750	-143.50	+56.25	-83.25	-139.50	+20.00
Jul 23	498.75	634.00	534.00	556.00	80.375	-135.25	+57.25	-80.00	-137.25	+22.00
Aug 23	501.75	627.50	533.00	558.50	81.000	-125.75	+56.75	-79.74	-136.49	+25.50
Sep 23	509.75	622.75	538.00	566.50	82.125	-113.00	+56.75	-81.88	-138.63	+28.50
Oct 23	519.75	619.00	548.00	576.50	83.375	-99.25	+56.75	-85.37	-142.12	+28.50
Nov 23	527.25	614.75	558.00	585.00	84.125	-87.50	+57.75	-88.96	-146.71	+27.00
Dec 23	528.75	610.00	562.00	584.00	84.250	-81.25	+55.25	-89.81	-145.06	+22.00
Jan 24	522.75	606.00	562.00	578.00	84.125	-83.25	+55.25	-84.46	-139.71	+16.00
Feb 24	514.75	601.75	554.00	567.50	83.125	-87.00	+52.75	-81.67	-134.42	+13.50
Mar 24	495.75	597.25	537.00	546.50	80.000	-101.50	+50.75	-78.95	-129.70	+9.50
Apr 24	474.75	593.75	517.00	525.50	76.750	-119.00	+50.75	-74.88	-125.63	+8.50
2Q 23	501.00	na	549.25	558.75	79.417	na	+57.75	-87.24	-144.99	+9.50
3Q 23	503.50	628.000	535.00	560.25	81.167	-124.50	+56.75	-80.62	-137.37	+25.25
4Q 23	525.25	614.500	556.00	581.75	83.917	-89.25	+56.50	-88.04	-144.54	+25.75
1Q 24	511.00	601.75	551.00	564.00	82.417	-90.75	+53.00	-81.61	-134.61	+13.00
2024	484.00	594.00	520.00	531.00	77.500	-110.00	+47.00	-80.22	-127.22	+11.00

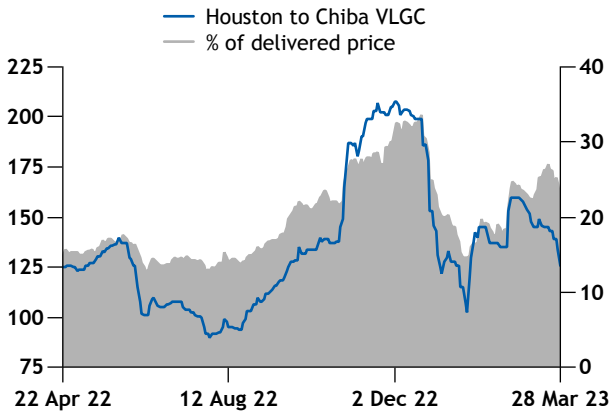
**FREIGHT SNAPSHOT (see Argus Gas Freight for more)**

LPG Freight rates			
	Size	Size t	±
Ras Tanura-Chiba	VLGC	85.00	-1.00
Houston-Chiba	VLGC	126.00	-8.00
Houston-Flushing	VLGC	74.00	-2.00
Ras Tanura-New Mangalore/Haida (5-day rolling average)	VLGC	63.05	-0.94
Houston-Lagos (5-day rolling average)	VLGC	97.62	-0.15
Houston-Callao/Pisco (5-day rolling average)	VLGC	71.05	-0.06

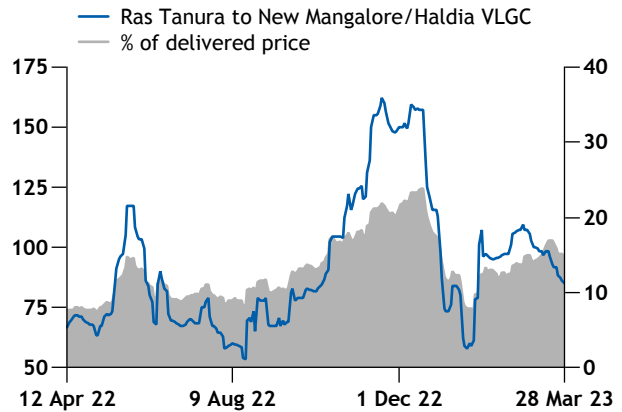
Ras Tanura-Chiba VLGC AFEI propane \$/t



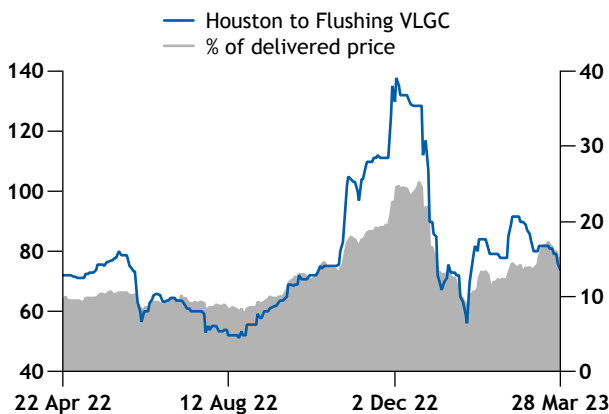
Houston-Chiba VLGC AFEI propane \$/t



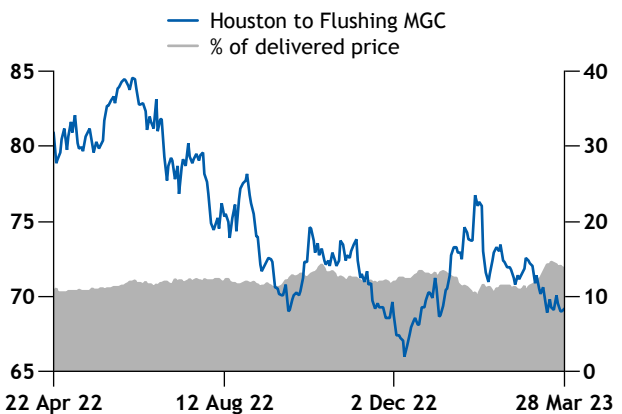
Ras Tanura - India VLGC 50:50 \$/t



Houston-Flushing VLGC cif ARA propane \$/t

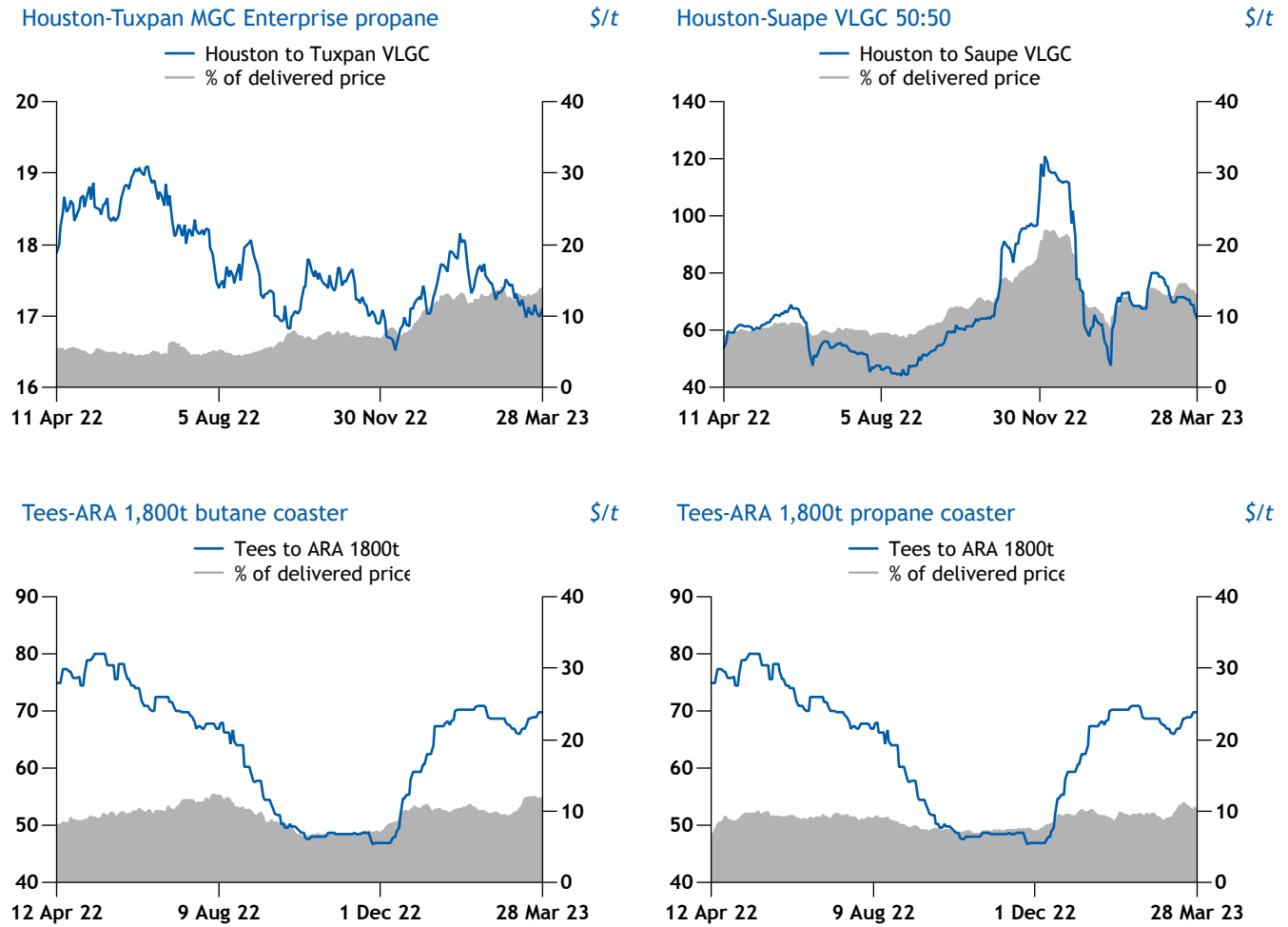


Houston-Flushing MGC cif ARA propane \$/t



Full range of VLGC, MGC and coaster rates as well as commentaries, news and arbitrage maps are available in **Argus Gas Freight**. For more information, please e-mail: [FreightTeam@argusmedia.com](mailto:FreightTeam@argusmedia.com)

**FREIGHT SNAPSHOT (see Argus Gas Freight for more)**



**Argus Gas Freight; ILPG**

**Workspaces:**

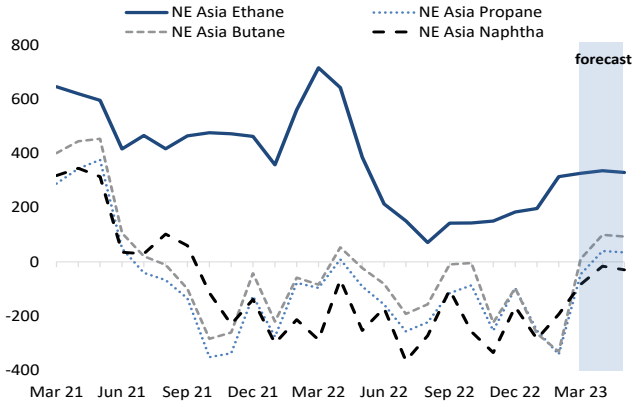
Below Workspaces combine content from Argus Gas Freight and Argus International LPG and require subscription to both services for full functionality. Please contact [support@argusmedia.com](mailto:support@argusmedia.com) for access support.

**LPG Imports + Freight - Global**

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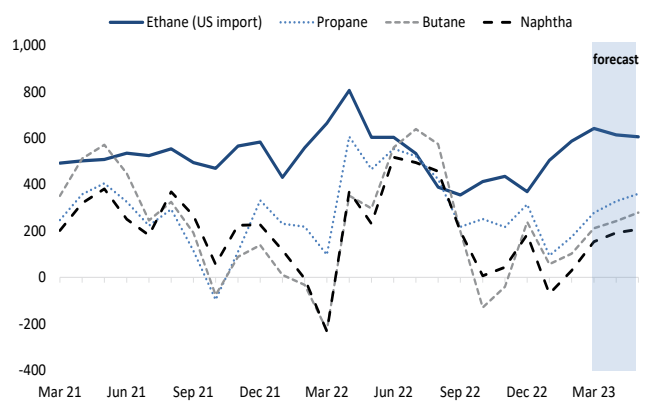
PETROCHEMICALS CHARTS

NEA steam cracker net cash cost margin \$/t



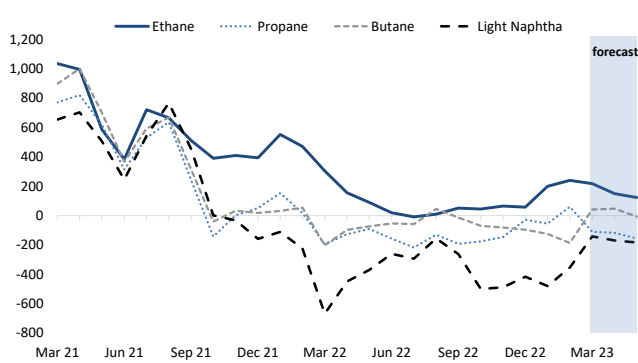
[Click here for Argus Global Steam Cracker Economics](#)

NWE steam cracker net cash cost margin €/t



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US steam cracker net cash cost margin \$/t



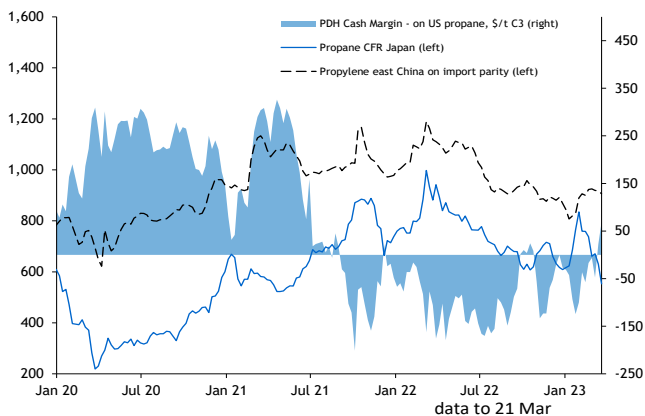
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## Argus Global Steam Cracker Economics

*In an unpredictable energy environment, Argus Global Steam Cracker Economics service helps you make better decisions with:*

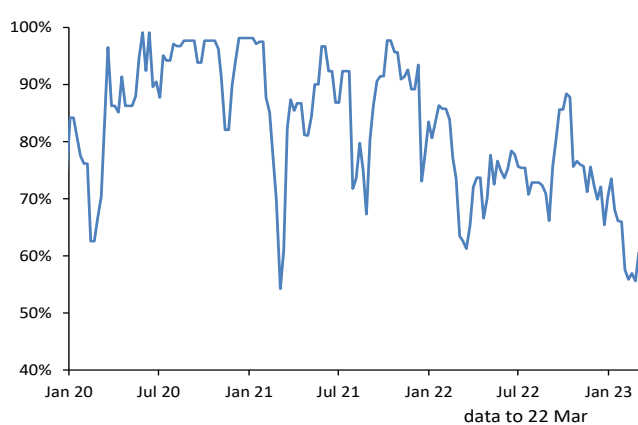
- Upstream feedstock insight
- Co-product credit, cash costs and margins
- Forecasts for advanced planning
- An integrated, global view

Asia PDH cash margin \$/t



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China PDH operating rates %



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## INDUSTRY NEWS

### Indonesia to re-evaluate coal gas plans

The Indonesian government is planning to re-evaluate its current efforts to expand its emerging coal downstream industry, following US industrial gas company Air Products withdrawing from two projects in the country.

Indonesia's energy ministry (ESDM) said the [exit of Air Products](#) highlights some underlying issues, which were originally unseen when the government initially pushed for the [development of the downstream coal industry](#).

A lack of common ground for the economic value of finished products and the difficulty in reconciling different business plans was one of the key factors that the ESDM said it will look into. It will look at ensuring the economic feasibility of a domestic dimethyl ether (DME) market in relation to LPG replacement projects to cut imports. It will also examine pricing schemes for coal meant for downstream purposes so as to ensure that production costs remain financially viable for long-term operations.

A study done by the ESDM in 2021 proposed that coal sold for gasification purposes should be priced at around \$20/t, which is far below current spot market prices. The same study estimated that the offtake price of DME would be in a \$400-420/t range. This significant price disparity makes it difficult for foreign companies to enter joint-venture partnerships in the country, the ESDM said.

It is vital to bring in foreign partners to Indonesian gasification projects because domestic companies neither have the technology nor the technical expertise to operate such facilities, the ESDM said. But economic difficulties remain the biggest stumbling block in achieving this, so progress in the coal gasification industry will be slow until this issue has been resolved, it added.

*By Antonio delos Reyes*

### Mitsui Chem to cut TDI production capacity

Japanese petrochemical producer Mitsui Chemicals has decided to reduce toluene diisocyanate (TDI) production

capacity at its Omuta plant in south Japan's Fukuoka prefecture by July 2025.

Mitsui Chemicals plans to cut Omuta's TDI production capacity to 50,000 t/yr from the current 120,000 t/yr as part of its polyurethane business optimisation. The company also halted TDI production at its 117,000 t/yr Kashima plant in east Japan's Ibaraki prefecture in December 2016, citing increased competition and reduced profitability.

The company does not produce TDI derivatives. The TDI output cut will not affect production of other goods including plastic lenses at the Omuta plant, said Mitsui Chemicals.

Fellow Japanese petrochemical producer Tosoh also plans to withdraw from TDI and TDI derivatives production in April by [closing its plant](#) at the Nanyo petrochemical complex in south Japan's Yamaguchi prefecture because of the prospect of reduced profitability. It produces 25,000 t/yr of TDI monomer at Nanyo.

*By Nanami Oki*

### No bioLPG, biofuels in EU cars e-fuel

EU energy ministers today formally adopted a regulation on CO2 emissions for new cars and vans. It includes a statement by the European Commission that officials will work on a delegated act specifying how e-fuels-only vehicles could be compliant.

Provisional political agreement [had been reached](#) in October 2022. But Germany led a coalition of countries [delaying formal adoption](#) and seeking [further commitment from the commission](#) for provisions for new cars running e-fuels after 2035.

In its statement, the commission does not extend the concept of e-fuels to biofuels or bioLPG. But renewable dimethyl ether (rDME) and renewable LPG (rLPG), produced from non-biogenic waste, could still qualify as renewable fuels of non-biological origin (RFNBOs).

For recycled carbon fuels (RCF) the commission is more strict.

## ANNOUNCEMENT

### Argus successfully completes annual Iosco assurance review

Argus has completed the 11th external assurance review of its price benchmarks covering crude oil, oil products, LPG, chemicals, thermal and coking coal, natural gas, biofuels, biomass, metals, fertilizers and agricultural markets. The review was carried out by professional services firm PwC. Annual independent, external reviews of oil benchmarks are required by international regulatory group Iosco's Principles for Oil Price Reporting Agencies, and Iosco encourages extension of the reviews to non-oil benchmarks. For more information and to download the review visit our website <https://www.argusmedia.com/en/about-us/governance-compliance>

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"An e-fuel that uses carbon from a fossil fuel burning system won't count as a carbon neutral fuel," said a senior commission official.

The commission commits to submitting an implementing regulation for a "robust and evasion-proof type approval process for vehicles that are fuelled exclusively, in a permanent manner, with RFNBOs". It will propose, in autumn 2023, a delegated act specifying how "e-fuels-only vehicles would contribute to the CO2 emission reduction targets".

A biofuels industry source said this is "a step in the right direction – by changing the methodology and finally embracing technology neutrality."

The senior commission official said that carbon neutrality is a "challenge that e-fuels can meet and biofuels not".

"Biofuels will always have a carbon footprint," he said, adding that biofuels "eat into our food and feed system".

The commission does, however, state it is committed to a "technologically-neutral climate regulation" of CO2 emission standards for cars and light duty vehicles. EU member states noted, without mentioning RFNBOs, that the commission would, following consultation with stakeholders, make a proposal for "registering vehicles running exclusively on CO2-neutral fuels" after 2035.

The new CO2 standards set a 55pc CO2 emission cut for new cars, and 50pc for new vans, from 2030 to 2034, both compared with 2021 levels. A 100pc CO2 cut will be implemented for both new cars and vans from 2035, effectively setting a ban on new passenger vehicles with an internal combustion engine (ICE).

*By Dafydd ab Iago*

### LyondellBasell, EEW explore plastic sorting

Chemical firm LyondellBasell and EEW, a German operator of energy from waste (EfW) incineration plants, have agreed to explore a strategic partnership to extract and recycle plastics from incineration waste streams.

The firms are discussing the construction of waste pre-sorting facilities at or near EEW incineration plants that would remove plastics from the waste streams going to incineration.

"The materials from these sorting facilities would... support our existing mechanical recycling facilities in the Netherlands and a potential advanced recycling unit in Germany," said LyondellBasell's executive vice president for Circular and Low Carbon Solutions, Yvonne van der Laan.

LyondellBasell has a 50pc stake in mechanical recycler QCP in the Netherlands, and it is planning to build a pyrolysis chemical recycling unit based on its proprietary technol-

ogy in Wesseling, Germany, although it is yet to announce a final investment decision.

Removing plastic from the EfW-bound waste stream will reduce carbon emissions that are associated with incineration of plastics, the firms said.

Plastic from EfW-bound waste is a longstanding target for the recycling industry, particularly pyrolysis-based chemical recycling. Regulations in the Flanders region of Belgium ban the incineration of plastic waste, and a market participant told *Argus* last week that the roll out of similar regulations across Europe could support the pyrolysis industry.

There are technical challenges associated with sorting plastic waste from the EfW stream, including oil and liquid contaminants that can confuse infra-red sorting equipment.

### Changes to Argus International LPG

With effect from 15 February 2023, the Argus International LPG report has been restructured and new content has been included to improve the readability and coverage of the service. The key changes are:

- Altered sequencing of market commentaries to better reflect the global trading day, with Asia-Pacific leading to Middle East, Europe and the Americas. Altered page one price table for greater clarity and visibility of key global LPG large cargo prices.
- Upgrade of all LPG charts including addition of EIA stocks data, LPG comparisons to regional crude benchmarks, European LPG pricing versus natural gas benchmarks, ex-US Gulf coast arbitrage comparisons and forward curve analysis.
- Addition of month-two Mont Belvieu in-well prices for propane, butane, ethane and natural gasoline.
- Addition of Petrochemical Charts section including Chinese PDH run rates and steam cracker margins for all regions.
- Addition of European monthly contract prices for ethylene del NWE and propylene (polymer) del Europe.
- Addition of Freight Snapshot section with key LPG freight assessments and charts.

The Argus LPG editorial department welcomes any feedback on the restructure at [lpgas@argusmedia.com](mailto:lpgas@argusmedia.com)

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Plastic sorted from the stream is also likely to have a relatively high level of organic contamination, which pyrolysis firms may look to remove depending upon the feedstock requirements of their process.

*By Will Collins*

### US propane stocks to fall by 1.1mn bl: Survey

US market participants predict on average a 1.07mn bl draw in propane inventories last week when the Energy Information Administration (EIA) reports weekly data tomorrow.

An Argus survey of 11 market participants expects anywhere from a 1.725mn bl draw to a 1mn bl build in US stocks the week ended 24 March.

Propane inventories fell by 2.27mn bl to 58.7mn bl the week ended 17 March, leaving US stocks up by 74.9pc versus last year, according to EIA data.

*By Abby Downing-Beaver*

### US ethane falls to nearly 2-year low

Mont Belvieu, Texas, EPC ethane prices fell to an almost two-year low today alongside seasonal weakness in natural gas.

March ethane prices on 28 March fell by 0.125¢/USG to 22.625¢/USG, the lowest value since 5 April 2021, following declines in natural gas in the previous session. Gas prices at the Henry Hub on 27 March fell to a one-month low of \$2.088/mn Btu on forecasts for mild weather in the coming weeks.

Declines in the feedstock have increased ethylene production margins on paper, according to an Argus model. Most US ethylene plants are configured to crack ethane, and estimated cash margins for ethane cracking reached a one-year high of \$346/t on 24 March owing to lower feed costs. Yet it remains to be seen whether operating rates at US steam crackers will increase, as Covid-19 induced lockdowns in China at the end of 2022 and rising interest rates have weakened demand for downstream polyethylene, leading to narrower ethylene-to-polyethylene margins. The spread between US ethylene at Mont Belvieu, Texas, versus high-density polyethylene in Houston stood at \$495/t this week, much narrower than the roughly \$896/t spread at this time last year, according to Argus data. The US consumed 1.8mn b/d of ethane in December, down from 2.1mn b/d in December 2021, according to the latest estimates from the US Energy Information Administration.

*By Abby Downing-Beaver*

### US Gulf VLGC rates slide to 2-month lows

Freight rates for very large gas carrier (VLGC) shipments out of the US Gulf coast have fallen steadily over the past month, reaching the lowest levels since late January, largely because of a narrowing arbitrage to ship LPG to Asia.

Between 28 February and 27 March, the Houston-Chiba VLGC rate fell by 16pc to \$134/metric ton (t), and the Houston-Flushing VLGC rate fell by 17pc to \$76/t. Despite the drops, time charter equivalent earnings for shipowners remain at levels of roughly \$70,000/d for a Chiba-bound voyage and \$79,000/d for a Flushing-bound voyage.

The continual drop in freight rates has been driven by building propane stocks in Asia, combined with falling propane stocks in the US, which has significantly narrowed the arbitrage to ship propane from Texas to Asia. April Argus Far East Index (AFEI)/LST paper traded at \$153/t yesterday, down from \$200/t in late February.

The narrower arbitrage has limited exports out of the Gulf, as just one VLGC fixture has been heard in the region since the start of last week.

This persistent lack of activity, along with minimal delays at the Panama Canal, has allowed tonnage to gradually build in the Gulf, priming rates for further losses. Shipbrokers expect activity will pick up either this week or next once charterers start working May-loading cargoes.

*By Michael Connolly*

### Mexico's LPG price caps hit record low

Mexico's average ceiling for retail LPG prices fell this week to its lowest since the program started in September 2021, as still higher level of inventories keep US LPG prices from increasing.

The average of 2,490 city-specific retail price caps set for 26 March-1 April fell by 4.6pc to Ps9.94/l (\$1.87/USG) from Ps10.42/l. This is the first time the price has been below Ps10/l since September 2021 when the government decided to start capping LPG prices to limit price volatility for Mexican consumers.

The lowest individual cap nationwide dropped to Ps8.99/l from Ps9.45/l the prior week, applicable in the border state of Chihuahua near US export centers. The highest maximum retail price allowed edged down to Ps12.25/l from Ps12.75/l, for Baja California Sur where logistics are more constrained.

Higher propane production in the US, combined with warmer weather, have contributed to pull down LPG prices down during 2023, compared with the same period of 2022.

After this week's record low, last week's average LPG

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price was the second lowest since the price cap program started at Ps10.42/l.

By Sergio Meana

### Illinois chemical recycling project advances

Plastics recycler Agilyx and styrenics supplier INEOS Styrolution are proceeding with engineering plans for a previously announced chemical recycling facility in Channahon, Illinois.

The proposed facility would use a chemical recycling process to turn polystyrene back into high purity styrene monomer.

The announcement comes as a proposed bill in the Illinois legislature, HB1616, that would extend to 2027 a law allowing chemical recycling facilities in both Will and Grundy counties to be classified as manufacturing instead of waste management, failed to advance out of committee. The original bill, HB2491, allows that classification through 2025.

Opponents of the bill, including Ocean Conservancy, say that allowing the facilities to be classified as manufacturing facilities instead of waste management facilities allows chemical recyclers to bypass the environmental review process.

Many US lawmakers have also [signed an open letter](#) for two chemical recycling methods to remain regulated as waste combustion units.

Illinois is one of 22 states that classify [chemical recycling facilities as manufacturing facilities](#) including Utah, Michigan, and Missouri.

The bill was first introduced by Lawrence Walsh (D) on 1 February and has now been re-referred to Illinois' Rules Committee on 27 March.

By Hunter Fite

### Gulf & Atlantic purchases 3 Midwest railroads

Short line operator Gulf & Atlantic Railways (G&AR) has purchased three Midwestern US railroads from Midwest & Bluegrass Rail.

G&AR purchased the Camp Chase Railroad, Chesapeake & Indiana Railroad and The Vermilion Valley Railroad.

Camp Chase Railroad operates 15 miles in the Columbus, Ohio, area. The railroad interchanges railcars with Norfolk Southern Railway and CSX Transportation. The railroad will give G&AR the opportunity for rail-truck transload and industrial development.

Chesapeake & Indiana Railroad operates 28 miles in northwestern-Indiana and Chicago. The railroad interchanges with Norfolk Southern Railway and CSX Transportation. It

handles unit grain trains and rail-truck transload services at La Crosse, Indiana.

The Vermilion Valley Railroad operates approximately 10 miles of track between Danville, Illinois, and Olin, Indiana. The railroad operates large-scale logistics projects that involve rail-truck transload and operates a full service locomotive shop, providing heavy maintenance on company owned diesels and third-party lessors' units.

The purchase increases the company's railroads from two to five. G&AR already owns regional railroad Florida, Gulf & Atlantic and short line Grenada Railway, operating approximately 660 miles of track.

Following the deal, Midwest & Bluegrass Rail will have just one railroad, Youngstown & Southeastern Railroad, which operates approximately 40 miles of track in Pennsylvania and Ohio.

By Deyzhah Knox

### Crescent Point to buy Alberta shale assets

Canadian oil and gas producer Crescent Point Energy agreed to acquire Spartan Delta's liquids rich shale assets in the Montney region of Alberta, growing its production profile by nearly 30pc.

The deal price of C\$1.7bn (\$1.25bn) includes rights to Gold Creek and Karr assets in northwest Alberta with production of 38,000 b/d of oil equivalent (boe/d). Crude oil and liquids account for about 55pc of production. The deal




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announced on 28 March between the two Calgary-based companies is expected to close in May.

The assets to be acquired are adjacent to Crescent Point's Kaybob Duvernay play.

Crescent Point produced about 132,000 boe/d in 2022, with 82pc of that coming from oil and liquids.

Crescent Point revised its 2023 annual guidance to between 160,000 and 166,000 boe/d, assuming the acquisition closes on schedule. This would grow to 195,000 boe/d by 2027, the company said.

The acquired production would break even when WTI is at \$40/bl, according to Crescent Point. The company plans to drill 25 new wells per year in the acquired assets at a

capital cost of C\$250mn/yr.

The Montney shale formation straddles the Alberta-British Columbia border and is known for its natural gas and natural gas liquids.

Spartan Delta also said it is spinning off other assets in the region under a newly formed company called Logan Energy. The subsidiary will manage Simonette, Pouce Coupe and Flatrock assets, representing about 4,500 boe/d of production, and a 50pc interest in a gas plant.

Spartan Delta will continue to operate about 40,000 boe/d of liquids rich production in the Alberta Deep Basin southeast of the Montney formation.

*By Brett Holmes*



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