

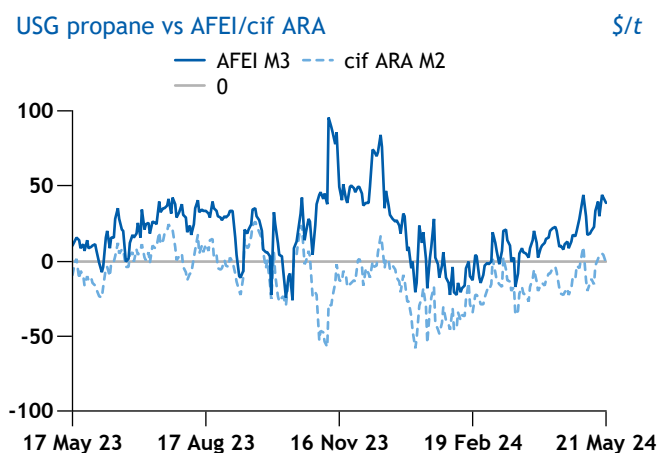
## OVERVIEW

Asia-Pacific: Prices edged down.

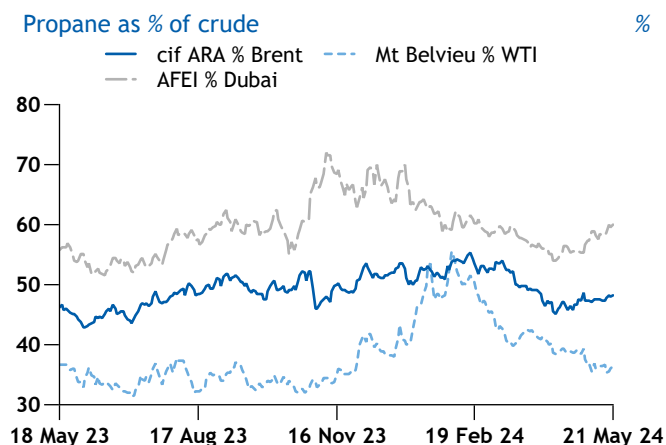
Europe; Spot discussions remain sparse

North America: Butane steady.

USG propane vs AFEI/cif ARA



Propane as % of crude



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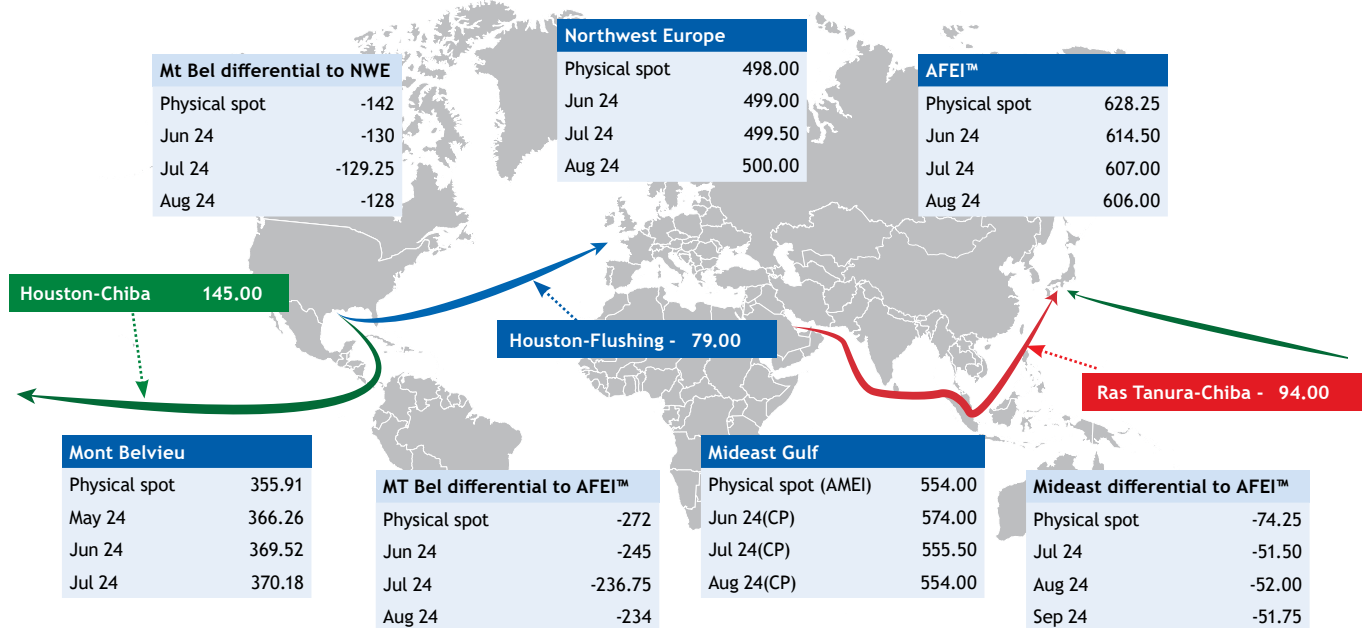
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## PRICES

Key prices: Large Cargo		\$/t
	Mid	±
<b>Propane</b>		
Argus Far East Index™ (AFEI™)	628.25	-2.25
Argus Chiba Index™ (ACI™)	620.25	-0.25
cif ARA (large cargoes)	498.00	-1.00
USGC export fob	422.17	+4.31
Enterprise Mont Belvieu	355.91	-1.63
AFEI™ propane calculated netback USGC	404.30	-5.40
Argus Middle East Index	554.00	-13.00
AFEI™ Far East to Mideast Gulf netback	534.25	-2.25
Argus Ningbo Index	632.25	-0.25
Argus South China Index	623.25	-0.75
AFEI™ diff to Propane (Jun 24)	+17.25	-0.25
cif ARA diff to Propane (Jun 24)	-1.00	nc
AFEI™ west Africa netback	475.07	-2.23
<b>Butane</b>		
Argus Far East Index™ (AFEI™)	615.25	-2.25
Argus Chiba Index™ (ACI™)	607.25	-0.25
cif ARA (large cargoes)	446.50	-2.00
USGC export fob	420.35	+5.50
Enterprise Mont Belvieu	373.16	nc
Argus Middle East Index	549.00	-13.00
AFEI™ Far East to Mideast Gulf netback	521.25	-2.25
Argus Ningbo Index	619.25	-0.25
Argus South China Index	610.25	-0.75
AFEI™ west Africa netback	462.07	-2.23
<b>Freight and Logistics</b>		
VLGC Ras Tanura-Chiba	94.00	nc
VLGC Houston-Chiba (via Panama)	145.00	nc
VLGC Houston-Flushing	79.00	nc
USGC terminal fee	+54.71	+3.91
USGC terminal fee €/USG	+10.500	+0.750
<b>International monthly prices</b>		\$/t
	Month	Propane Butane
Argus North Sea Index™	May 24	479.00 448.50
Argus North Sea Index™ (€/t)	May 24	446.51 418.07
Sonatrach fob Bethioua	May 24	500.00 490.00
Saudi Aramco	May 24	580.00 585.00
KPC (Kuwait)	May 24	580.00 585.00
<b>Naphtha</b>		
	Mid	±
cif northwest Europe	667.00	-0.25
cif Mediterranean	651.75	+0.25
cfr Japan	676.00	-9.50
fob Mideast Gulf	610.90	-9.50
<b>Ice Brent futures settlement</b>		
Jul 24	82.88	-0.83
Aug 24	82.70	-0.76
Sep 24	82.33	-0.72

## Propane Regional Comparisons

\$/t



## ASIA-PACIFIC

## Refrigerated

Asian prices fell slightly on Tuesday but lagged larger losses in the crude benchmarks. June Argus Far East Index (AFEI) propane swaps lost \$2/t on the day to settle at \$611/t while the front-month Brent contract shed \$1.25/bl.

Market participants were skeptical of sustained Chinese buying interest amid the run-up in cargo premiums for June shipments. Supply tightness in the June delivered market had sent offers into east China soaring to \$20s/t against the June AFEI, even as Tianjin Bohai was believed to have procured 23,000t propane for second-half June delivery to June AFEI +\$31-32/t. But another PDH operator in Guangxi had rebuffed the higher offers and had cancelled the tender to buy up to 46,000t propane for June delivery. A PDH operator in Fujian had reportedly procured a similar cargo last week at June CP +mid-\$70s.

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Propane Swaps (5pm Singapore)				\$/t
CP swaps		AFEI™ swaps		
Jun 24	567.00	Jun 24		611.00
Jul 24	550.00	Jul 24		604.00
Aug 24	548.00	Aug 24		603.00

Butane Swaps (5pm Singapore)				\$/t
CP swaps		AFEI™ swaps		
Jun 24	562.00	Jun 24		606.0

Asia-Pacific						\$/t
	CP basis	Timing	±	Bid	Ask	±
<b>Propane</b>						
Argus Far East Index™ (AFEI™)					628.25	-2.25
Argus Chiba Index™ (ACI™)					620.25	-0.25
AFEI™ diff to M1					+17.25	-0.25
Argus Ningbo Index					632.25	-0.25
Argus South China Index					623.25	-0.75
Japan cfr			-1.00	627.00	/ 629.50	-3.50
Japan CP cfr	Jun	2H Jun	+4.00	+60.00	/ +62.50	+1.50
Argus Middle East Index					554.00	-13.00
Gulf CP fob	Jun	Jun	-8.00	-18.00	/ -8.00	-8.00
India cfr					621.18	-12.93
India CP cfr	Jun	Jun	-7.93	+52.18	/ +56.18	-7.93
<b>Butane</b>						
Argus Far East Index™ (AFEI™)					615.25	-2.25
Argus Chiba Index™ (ACI™)					607.25	-0.25
Argus Ningbo Index					619.25	-0.25
Argus South China Index					610.25	-0.75
Japan cfr			-1.00	614.00	/ 616.50	-3.50
Japan CP cfr	Jun	2H Jun	+4.00	+52.00	/ +54.50	+1.50
Argus Middle East Index					549.00	-13.00
Gulf CP fob	Jun	Jun	-8.00	-18.00	/ -8.00	-8.00
India cfr					616.18	-12.93
India CP cfr	Jun	Jun	-7.93	+52.18	/ +56.18	-7.93
<b>Propane-Butane mix</b>						
Argus mixed index					617.75	-2.25
Argus Chiba mixed index					609.75	-0.25
Japan cfr			-1.50	616.50	/ 619.00	-3.00

## ASIA-PACIFIC

Chinese PDH run rates had averaged 75pc in the past two weeks which supported import demand. A policy boost to the property sector unveiled last Friday sent domestic polypropylene futures trading higher which in turn fuelled bullish sentiment in the upstream markets.

The afternoon window saw BP returned to bid for 46,000t propane arriving in second-half June basis Yantai at June AFEI +\$20/t, up from +\$16.8/t yesterday. There were no discussions heard on cargoes delivered basis Japan since a couple of traders looking to cover short positions on 23,000t propane arriving in second-half June basis Chiba had reportedly covered last week.

The Argus cfr Ningbo propane Index for cargoes arriving 15 June were valued at June AFEI + \$24/t or \$635/t, to reflect same backwardation structure as propane AFEI. Cargoes arriving in 16-30 June were assessed at June AFEI +\$21/t or \$632/t, in consideration of market discussions. The Argus propane Ningbo Index spanning 15-30 June averaged \$632.25/t.

The Argus cfr Ningbo butane Index for cargoes arriving 15 June were valued at \$622/t, reflecting the same propane-butane spread as first-half June AFEI. Cargoes arriving 16-30 June were valued at \$619/t, reflecting the same backwardation structure as propane AFEI. The Argus butane Ningbo Index spanning 15-30 June averaged \$619.25/t.

The Argus south China propane Index for cargoes arriving 15 June were valued at June AFEI +\$15/t or \$626/t, in consideration of market discussions. Cargoes arriving 16-30 June were assessed at June AFEI +\$12/t or \$623/t, to reflect same backwardation structure as propane AFEI. The Argus south China propane Index spanning 15-30 June averaged \$623.25/t.

The Argus south China butane Index for cargoes arriving 15 June were valued at \$613/t, reflecting the same propane-butane spread as first-half June AFEI. Cargoes arriving 16-30 June were valued at \$610/t, reflecting the same backwardation structure as propane AFEI. The Argus south China butane Index spanning 15-30 June averaged \$610.25/t.

The Argus Chiba Index (ACI) for propane cargoes arriving 15 June were valued at June AFEI +\$12/t or \$623/t, in consideration of trade discussions. Cargoes arriving in 16-30 June were assessed at June AFEI +\$9/t or \$620/t, reflecting the same backwardation structure as propane AFEI. The Argus Chiba Index for propane spanning 15-30 June averaged \$620.25/t.

The Argus Chiba Index for butane cargoes arriving 15 June were valued at \$610/t, reflecting the same propane-butane spread as first-half June AFEI, while cargoes arriving

Asia-Pacific						\$/t
	CP basis	Timing	±	Bid	Ask	±
<b>Propane pressurised</b>						
South China CP fob	Jun	Jun	nc	+47 /	+57	nc
South China fob		Jun	-5	614 /	624	-5
South China CP cfr	Jun	Jun	nc	+77 /	+87	nc
South China cfr	Jun	Jun	-5	644 /	654	-5
Vietnam CP cfr	Jun	Jun	nc	+123 /	+133	nc
<b>Butane pressurised</b>						
South China CP fob	Jun	Jun	nc	+47 /	+57	nc
South China fob		Jun	-5	609 /	619	-5
South China CP cfr	Jun	Jun	nc	+77 /	+87	nc
South China cfr	Jun	Jun	-5	639 /	649	-5
Vietnam CP cfr	Jun	Jun	nc	+123 /	+133	nc

China wholesale propane/butane mix					yuan/t
	±	Bid	Ask	±	
<b>South China</b>					
<b>Ex terminal</b>					
Dongguan	nc	5,140 /	5,180	nc	
Zhuhai	-50	5,090 /	5,180	nc	
Shenzhen	nc	5,140 /	5,180	nc	
Raoping	nc	5,000 /	5,040	nc	
Nansha	nc	5,140 /	5,180	nc	
Shantou	nc	5,000 /	5,040	nc	
Yangjiang	nc	5,110 /	5,150	nc	
Pearl River Delta Index		/	5,149	-11	
<b>Ex refinery</b>					
Maoming	nc	5,130 /	5,180	nc	
Guangzhou	nc	5,060 /	5,110	nc	
<b>East China</b>					
<b>Ex terminal</b>					
Ningbo	nc	5,100 /	5,200	nc	
Wenzhou	nc	5,200 /	5,300	nc	
Taicang	+50	5,150 /	5,250	+50	
Shanghai	+50	5,150 /	5,250	+50	
Zhangjiagang	+50	5,150 /	5,250	+50	
Fujian	nc	5,000 /	5,050	nc	
<b>Ex refinery</b>					
Shanghai	+100	5,000 /	5,050	+100	
Zhenhai	nc	5,020 /	5,070	nc	
Yangzi	nc	5,050 /	5,100	nc	
Fujian	nc	4,950 /	5,000	nc	
Gaoqiao	nc	4,800 /	4,850	nc	
Qingdao	nc	5,100 /	5,150	nc	
<b>Northeast China ex refinery</b>					
Daqing	-50	4,820 /	4,870	-50	
Dalian	-70	4,800 /	4,850	-70	
<b>Northwest China ex refinery</b>					
Urumqi	nc	3,790 /	3,830	nc	
<b>Inland China ex refinery</b>					
Yan-An	-35	4,895 /	4,900	-35	

## ASIA-PACIFIC

16-30 June were valued at \$607/t. The Argus Chiba Index for butane spanning 15-30 June averaged \$607.25/t.

The Argus Chiba Index for mixed cargoes arriving 15 June were valued at \$612.5/t, while cargoes arriving 16-30 June were valued at \$609.5/t. The Argus Chiba Mixed Index spanning 15-30 June averaged \$609.75/t.

11,500t+11,500t cargoes arriving 15 June were valued at June AFEI +\$12/t, or \$620.5/t, in consideration of the market discussions. Cargoes arriving 16-30 June were valued at \$617.5/t, reflecting the same backwardation structure as propane AFEI. The Argus Mixed Index spanning 15-30 June averaged \$617.75/t.

### Assessment rationale

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

June AFEI propane swaps were valued at \$611/t.

Cfr propane cargoes arriving 15 June were valued at June AFEI + \$20/t or \$631/t in consideration of market discussions. Cargoes arriving 16-30 June were valued at June AFEI +\$17/t or \$628/t in consideration of recent market discussions. The propane AFEI spanning 15-30 June averaged \$628.25/t.

The propane AFEI fell by \$2.25/t from the previous session.

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

June AFEI butane swaps were valued at \$606/t.

Cfr butane cargoes arriving 15 June were valued at June AFEI +\$12/t or \$618/t, reflecting the same backwardation structure as propane AFEI. Butane cargoes arriving 16-30 June were valued at June AFEI +\$9/t, or \$615/t, in consideration of market discussions. The butane AFEI spanning 15-30 June averaged \$615.25/t.

The butane AFEI fell by \$2.25/t from the previous session.

### Pressurised

Spot pressurised premiums for cargoes sold on a fob south China basis were assessed unchanged at June CP +\$52/t on a fob basis.

Cargoes for June delivery into north Vietnam were offered at June CP +\$128/t basis cfr Haiphong but there were no fresh spot demand reported.

China's domestic wholesale prices were mixed on Tuesday. Fresh imports continued to weigh on prices in south China prices, but terminal prices in east China rose on the back of tight propane supply.

The Pearl River Delta (PRD) index fell by yuan11/t to Yn5,149/t today amid ample supply. CNOOC Gaolan prices were lowered by Yn50/t to Yn5,050/t to spur demand, while Zhuhai Siamgas and New Ocean prices inched lower by Yn20/t to Yn5,160/t, so prices in Zhuhai were assessed lower by Yn25/t at Yn5,135/t today. Other terminal prices saw no changes.

In Raoping and Shantou, terminal prices were stable at Yn5,020/t, while CNOOC Yangjiang terminal prices held steady at Yn5,130/t.

In south China, Maoming and Guangzhou refinery prices were unchanged today.

In east China, terminal prices in Zhangjiagang, Taicang and Shanghai rose by Yn50/t on the back of low stockpiles and firm demand for propane. Shanghai refinery prices rose by Yn100/t today. Wholesale propane prices were firm at Yn5,280/t in Shandong where some buyers turned to purchase from nearby terminals.

In northeast China, Dalian refinery prices went down by Yn70/t today amid expectations that a local refinery is likely to restart after the completion of maintenance. But Daqing refinery prices fell by Yn50/t to mirror price weakness at neighbouring markets. In northwest China, Urumqi refinery prices held steady.

In inland China, Yan'an refinery prices fell by Yn35/t today.

### ARGUS BIOFUELS COVERAGE

Please see Argus Biofuels for daily biopropane prices, and prices, commentary and analysis from the global biofuels market.

See [www.argusmedia.com/en/bioenergy/argusbiofuels](http://www.argusmedia.com/en/bioenergy/argusbiofuels) to find out more.

### New Argus Chiba Index

Argus launched its new Chiba indexes for propane, butane and propane/butane mix on 6 November. The indexes are assessments of the price of product conforming to the Ginga II (Full Cargo) standard terms.

## MIDDLE EAST

Selling interest on evenly split ratio cargoes emerged after Sinochem International offered as a package to sell 22,500t+22,500t loading 16-30 June at \$565/t and buy 46,000t propane loading in July at \$545/t. BW Product Services offered 22,000t+22,000t loading 25-30 June at \$553/t which equated June CP -\$11.5/t.

Spot differentials for propane and butane cargoes loading 21-30 June from the Mideast Gulf were assessed at -\$13/t against June CP swaps in consideration of the offers.

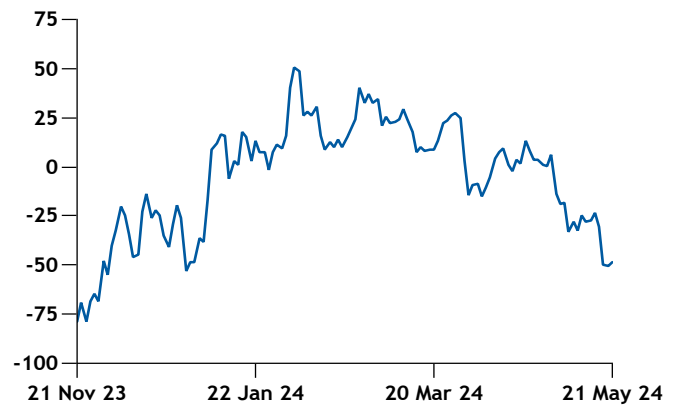
The Argus Middle East Index (AMEI) assessments for propane and butane were assessed at \$554/t and \$549/t respectively.

June propane CP swaps fell by \$5/t day-on-day to close at \$567/t at Asian timestamp, while its butane counterpart was assessed \$5/t lower at \$562/t.

Middle East and Asia-Pacific averages (May 24)		\$/t
	Mid	±
<b>Middle East Gulf</b>		
Propane	-12.143	-0.066
Butane	-12.143	-0.066
<b>Argus Middle East Index</b>		
Propane	534.429	+1.506
Butane	530.357	+1.434
<b>Argus Far East Index™</b>		
Propane	610.411	+1.373
diff to M1	17.020	+0.020
Butane	596.482	+1.444
11+11 propane-butane mix	598.518	+1.480
<b>Argus Chiba Index™</b>		
Propane	600.411	+1.526
Butane	586.482	+1.597
23+23 propane-butane mix	588.518	+1.633
<b>Argus South China Index</b>		
Propane	603.982	+1.482
Butane	590.054	+1.554
<b>Argus Ningbo Index</b>		
Propane	611.482	+1.597
Butane	597.554	+1.669
Pearl River Delta index Yn/t	5,123	+2

Propane: Saudi Aramco diff to AFEI

\$/t



Argus African LPG Indexes								
	South Africa		West Africa Propane		West Africa Butane		East Africa	
		±		±		±		±
Index \$/t	696.27	-14.12	520.99	+4.30	515.49	+5.47	588.58	-13.27
MTD average \$/t	678.73	+1.47	520.29	+0.06	512.77	+0.21	570.66	+1.50
Index local currency/kg	1,264.26 ZARc	-27.90	797.84 NGN	+39.11	789.42 NGN	+40.49	77.33 KES	-1.36
Calculation								
Underlying price \$/t	552.00	-13.00	422.17	+4.31	420.35	+5.50	550	-1.95
Freight + logistics \$/t	144.27	-1.12	97.77	-0.03	95.14	-0.03	38.83	-0.27

## NORTHWEST EUROPE

### Large Cargo

BP emerged again on the buy side with a bid for the same dates as on Monday, for a ToT23 over 10-14 June at \$485/t cif Flushing. There were no upward revisions and the value of the inquiry stood at an equivalent discount of -\$14/t to June cif ARA paper. The attempt failed to attract any selling interest and no deal was done.

Large cargo propane was assessed at \$498/t, down by \$1/t, while the physical differential to paper was steady at a small discount of -\$1/t. Demand for prompt dates looks weak but there is still some optimism of an uptick in spot inquiries around mid to late June. On the supply side, the theoretical transatlantic arbitrage has started opening, although Asia still offers higher netbacks, tempting US sellers to look east notwithstanding the current Panama Canal shipping issues.

On butane, spot discussions were muted, keeping pricing at 68pc of naphtha. Outright prices slipped in tandem with mildly weaker naphtha.

### Coasters

The short-term bull run on the delivered butane coaster market on an uptick in gasoline blending demand, in-part for export to west Africa, has now certainly passed. Naphtha-relative butane prices firmed six percentage points in the first-half May, reaching 74pc. But having first ticked southwards late last week, value fell again on Tuesday reaching 72pc as oversupply once more begins to determine price direction. Local demand for gasoline in Europe is below-seasonal levels this spring on improved efficiency of new gasoline-fuelled vehicles and rising electric vehicle sales over the past few years.

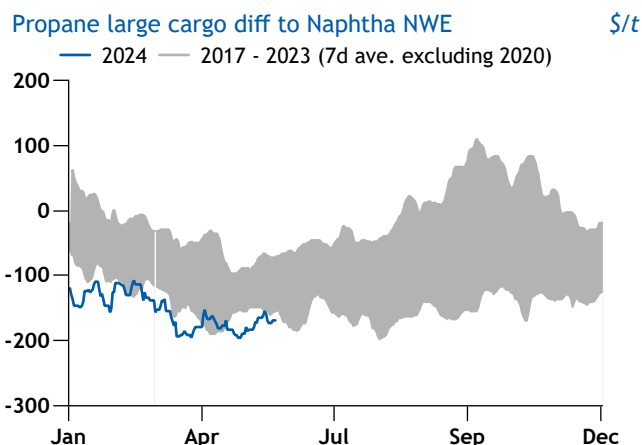
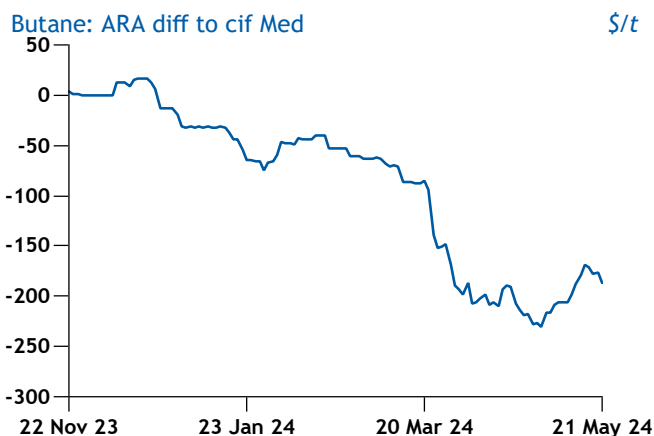
The fob propane coaster market was assessed down \$7/t to \$543/t as the premium to large cargoes dropped \$6/t to \$45/t with no public buying support present. The cif ARA coaster market fell \$8/t reaching \$613/t, under pressure from weak demand and falling freight costs for small coasters.

Northwest Europe and Mediterranean				\$/t
	Bid	Ask	Mid	±
<b>Propane</b>				
cif ARA (large cargoes)	495.00	/ 501.00	498.00	-1.00
fob northwest Europe (coasters)	540.00	/ 546.00	543.00	-7.00
cif ARA (coasters)	610.00	/ 616.00	613.00	-8.00
fob ARA (barge)	565.00	/ 571.00	568.00	nc
fca ARA (rail)	567.00	/ 573.00	570.00	nc
cif Mediterranean (large)	500.50	/ 506.50	503.50	-1.00
fob Mediterranean (coasters)	501.00	/ 507.00	504.00	-1.00
fca Mediterranean (rail)	555.00	/ 561.00	558.00	nc
<b>Butane</b>				
cif ARA (large cargoes)	443.50	/ 449.50	446.50	-2.00
fob northwest Europe (coasters)	432.00	/ 438.00	435.00	-13.00
cif ARA (coasters)	477.25	/ 483.25	480.25	-10.25
fob ARA (barge)	460.50	/ 466.50	463.50	-7.00
fca ARA (rail)	489.00	/ 495.00	492.00	-3.50
cif Mediterranean (large)	415.00	/ 421.00	418.00	-2.00
fob Mediterranean (coasters)	403.75	/ 409.75	406.75	-0.25
<b>Competing fuels, 16 May</b>				
NWE small-scale LNG €/MWh	34.25	/ 34.75	34.50	-0.43
NWE small-scale LNG \$/t C3 equiv	521.60	/ 529.22	525.41	-1.94

European olefins contract price		€/t
	May 24	±
Ethylene	1,250.00	-10.00
Propylene (polymer)	1,135.00	-10.00

Propane and Butane averages		\$/t
	Mid	±
<b>Propane averages</b>		
cif ARA (large cargoes)	492.018	+0.460
fob ARA (barge)	569.143	nc
<b>Butane averages</b>		
cif ARA (large cargoes)	448.696	-0.169
fob ARA (barge)	448.988	-2.667

Biopropane		\$/t
	Mid	±
Biopropane fca ARA range, outright	1,575.00	-10.00
Biopropane diff to propane cif ARA (large cargoes)	1,077.00	-9.00
Biopropane diff to propane fca ARA (rail)	1,005.00	-10.00





## NORTHWEST EUROPE

### Barges, Railcars

A trickle of spot demand for small amounts of propane appears to be just about enough to support prices, although crude falls are keeping buyers wary and volumes are tending to move in smaller than usual lots. Trucks for loading in May were heard offered at \$565/t fca ARA but trade was also reported at \$581/t and railcars values were assessed as unchanged at \$568/t fca.

Weakening gasoline undercut blending demand, pulling butane barges ratios down a point to around 72.5pc of naphtha on a delivered basis.

### 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

Spot position taking was once more muted after Monday's lull induced by public holidays across most of Europe. Prices fob Lavera were assessed unmoved versus spot naphtha at 61pc for butane, equating to a small move down outright, while propane value dipped with ailing crude oil.

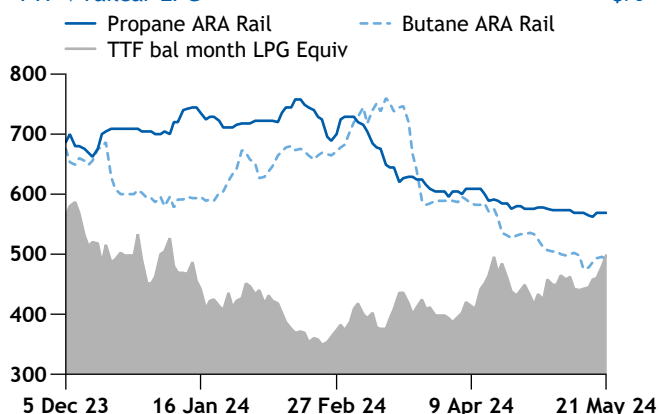
### ToT23 contract: Market feedback

Following a formal consultation period from 2-17 November, initial responses indicate that there is no consensus about the transition between ToT14 and ToT23 terms in large cargo propane trade, and Argus will treat the two contracts as equivalent for the purpose of its propane cif ARA (large cargoes) assessment, including market information about trades, bids and offers using either contract.

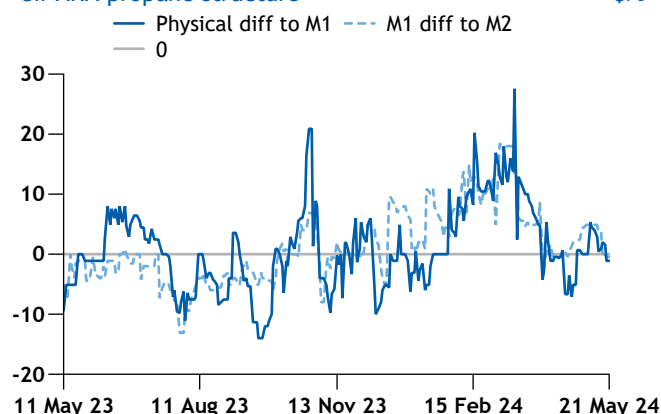
Argus will continue to seek feedback on how best to accommodate any change in the ToT contract in its assessments.

To discuss this, please contact Emma Reiss at [emma.reiss@argusmedia.com](mailto:emma.reiss@argusmedia.com) or Peter Wilton at [peter.wilton@argusmedia.com](mailto:peter.wilton@argusmedia.com).

TTF v railcar LPG



Cif ARA propane structure



## EASTERN EUROPE

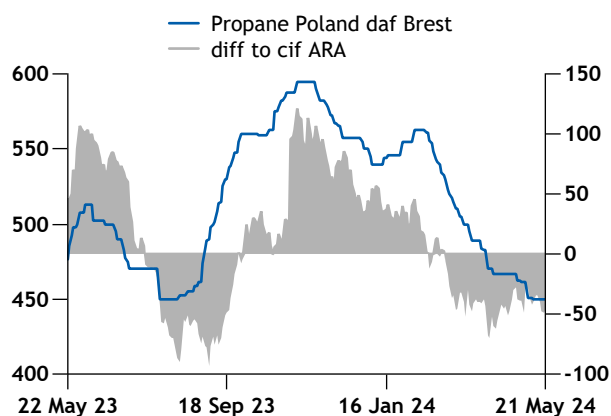
The daf Brest assessment for propane-butane mix decreased again due to ample product stocks, while demand remains weak. Prices for propane held steady in a balanced market.

Argus fob Black Sea assessments for propane-butane mix, propane and butane remained stable amid low spot trading activity through the region. The Bulgarian port of Burgas will resume operations by the end of the week.

Eastern Europe			\$/t
	±	Bid/Ask	±
<b>Daily</b>			
daf Brest pro-but mix	-2.00	390.00/ 407.00	-3.00
daf Brest pro-but mix €/t	-2.00	359.00/374.00	-3.00
daf Brest propane	nc	440.00/ 460.00	nc
daf Brest propane €/t	nc	405.00/423.00	nc
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)		-48.00	+1.00
Argus Polish Domestic Index		505.0	-2.0
fob Black Sea pro-but mix	nc	430.00/ 470.00	nc
fob Black Sea propane	nc	440.00/470.00	nc
fob Black Sea butane	nc	415.00/ 450.00	nc
fot Burgas (Lukoil posted) pro-but mix		647.0	nc
<b>Weekly</b>			
fca/fot Polish ports propane	nc	675.00/700.00	nc
daf Ukraine western border pro-but mix	nc	660.00/670.00	+5.00
daf Bekabad pro-but mix	nc	270.0/310.0	nc

Daf Brest propane vs cif ARA large

\$/t



## New ANSI freight for 2023-24

Following consultation with the shipping industry, the freight rate used in the Argus North Sea Index (ANSI) for October 2023-September 2024 will be \$28/t – up by \$3.50/t compared with 2022-23. The freight element is based on average time-charter rates for mid-size cargoes on North Sea routes.



## AMERICAS

### US Gulf exports

Bids for July-loading spot propane cargoes rose slightly as the number of liftings available for resale are tightening.

Buyers' ideas rose to 10¢/USG even as offers held firm despite a slightly narrower arbitrage to Asia, but no spot deals have been reported yet this week. Some suggested US terminals are likely sold out for July and that any available cargoes will have to come from the resale market.

Early gains at Mont Belvieu, Texas, narrowed the June arbitrage to Asia on paper Tuesday. June AFEI/LST traded at a narrower \$243/t during the morning.

LPG shippers reportedly paid \$1.6mn and \$1mn at auction Tuesday for Panama transits.

### Mont Belvieu light NGLs

Mont Belvieu, Texas, LST propane fell with overnight losses in delivered prices in Asia and weakness in crude. Prompt-month LST propane was valued at a slightly weaker 36.8pc of Nymex WTI.

May LST propane opened 1.625¢/USG lower at 68.75¢/USG and climbed to 70.25¢/USG in the afternoon. May/June LST propane traded at a 0.375¢/USG carry, and June propane was discussed between 70.5-71¢/USG in the afternoon. Buying sentiment weakened in a thin trading session ahead of expectations for another large seasonal build in US propane stocks when government data is reported Wednesday.

May EPC propane opened 0.625¢/USG lower at 68¢/USG and eased to 67.625¢/USG before rising to 69¢/USG at midday. June EPC propane was discussed between 70.25-70.5¢/USG in the afternoon. A May/July propane spread traded at a 1.5¢/USG carry. May spreads with Targa propane priced EPC at a 1¢/USG discount.

May EPC ethane edged up, opening in line with the previ-

ous session at 21¢/USG and rising to 21.25¢/USG thereafter. June EPC ethane was discussed between 21.25-21.75¢/USG in the afternoon. Prompt-month Targa/EPC ethane spreads priced both locations at parity.

May Targa ethane opened 0.75¢/USG higher at 21¢/USG and dipped to 20.875¢/USG before rising to 21.375¢/USG in the afternoon.

June Nymex light sweet crude futures fell by 54¢/bl, or 0.68pc, to \$79.26/bl.

### Mont Belvieu heavy NGLs

Mont Belvieu, Texas, EPC butane held firm, leaving butane valued at a stronger 43.7pc of Nymex WTI.

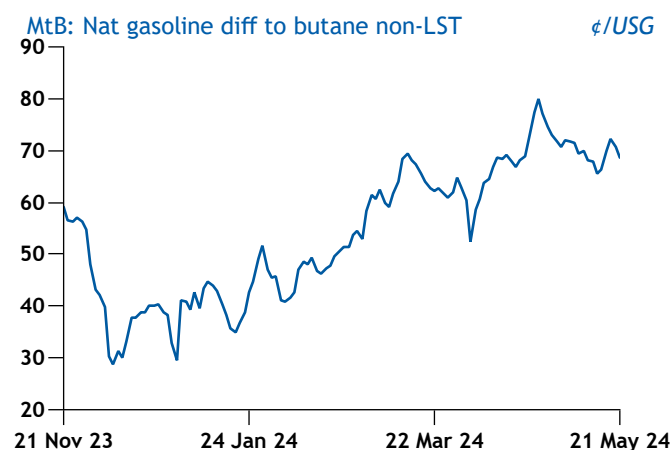
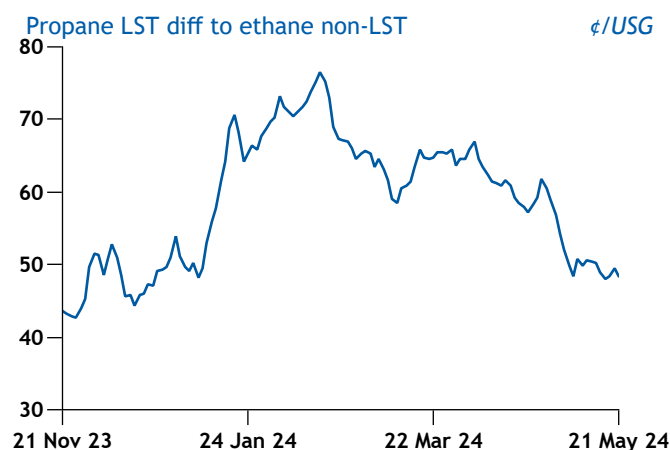
May EPC butane opened 0.875¢/USG lower at 81.5¢/USG and rose to 83.25¢/USG during the morning, leaving the day's midpoint unchanged versus the prior session. June butane was discussed between 83.125-83.5¢/USG during the afternoon.

Bids and offers for May LST refinery-grade butane remained wide, and refinery-grade was assessed at a 15¢/USG discount to normal.

May EPC isobutane fell alongside weakness in crude, opening 2.25¢/USG lower at 132¢/USG and rising as high as 134.75¢/USG thereafter. June isobutane was assessed at a steady 13.5¢/USG backwardation to May.

May EPC natural gasoline fell with crude, opening 2.875¢/USG lower at 150.25¢/USG and rising to 152¢/USG during the morning. June EPC natural gasoline was discussed between 152.25-152.5¢/USG during the afternoon.

May Targa natural gasoline was bid as high as 151.25¢/USG by midday and was assessed just above that level. No firm bids or offers emerged for May LST natural gasoline, and LST was assessed at parity to EPC.



## AMERICAS

Americas: Mont Belvieu in-well (May 24)					¢/USG
VWA	±	Low	High		±
<b>Propane</b>					
Enterprise	68.536	-0.375	67.625 /	69.000	-0.250
Enterprise \$/t		-1.95	352.33 /	359.49	-1.30
LST	69.866	-1.000	68.750 /	70.250	-0.750
Targa	70.875	+1.250	70.750 /	71.250	+1.500
<b>Butane</b>					
Enterprise	82.583	nc	81.500 /	83.250	nc
Enterprise \$/t		nc	369.20 /	377.12	nc
Enterprise Isobutane	133.375	-1.000	132.000 /	134.750	-0.750
LST	67.375	nc	66.500 /	68.250	+0.125
<b>Ethane</b>					
Enterprise ethane	21.208	+0.625	21.000 /	21.250	-0.250
Enterprise ethane \$/t		+4.61	154.98 /	156.82	-1.84
Targa	21.16	+0.75	20.88 /	21.38	+1.00
<b>Natural gasoline</b>					
Enterprise	151.458	-1.750	150.250 /	152.000	-2.250

US Gulf coast LPG				
	Low	High	Mean	
<b>Propane</b>				
fob USGC, spot terminal fee \$/t	+52.10 /	+57.31	+54.71	
fob USGC ¢/USG	80.531 /	81.531	81.031	
fob USGC \$/t	419.57 /	424.78	422.17	
del Japan (AUSJ) \$/t	564.5 /	570.0	567.25	
del ARA (AUSE) \$/t	498.5 /	504.0	501.25	
AFEI™ propane calculated netback USGC \$/t			404.30	
<b>Butane</b>				
fob USGC ¢/USG	92.293 /	93.293	92.793	
fob USGC \$/t	418.09 /	422.62	420.35	

LPG Freight rates		
	\$/t	±
VLGC Ras Tanura-Chiba	94.00	nc
VLGC Houston-Chiba (via Panama)	145.00	nc
VLGC Houston-Flushing	79.00	nc

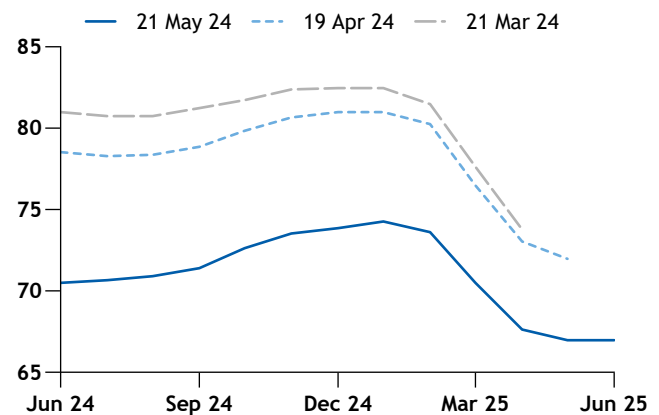
Delivered LPG Brazil		
	Mid	±
Propane Santos	524.63	+4.31
Propane-butane 90:10 Santos	524.45	+4.43
Propane-butane 70:30 Santos	524.08	+4.67
Propane-butane 50:50 Santos	523.72	+4.90
Propane Suape	501.80	+4.31
Propane-butane 90:10 Suape	501.62	+4.43
Propane-butane 70:30 Suape	501.25	+4.67
Propane-butane 50:50 Suape	500.88	+4.90

Americas: Mont Belvieu in-well (Jun 24)					¢/USG
	±	Low	High		±
<b>Propane</b>					
Enterprise	+0.250	70.250 /	70.500	nc	
Enterprise \$/t	+1.30	366.00 /	367.31	nc	
LST	+0.750	70.500 /	71.000	+0.750	
Targa	+0.750	71.250 /	71.500	+0.500	
<b>Butane</b>					
Enterprise	+0.625	83.125 /	83.500	+0.500	
Enterprise \$/t	+2.83	376.56 /	378.26	+2.27	
Enterprise Isobutane	-0.875	119.625 /	120.125	-0.875	
LST	+0.625	68.125 /	68.500	+0.500	
<b>Ethane</b>					
Enterprise ethane	+0.125	21.250 /	21.750	+0.250	
Enterprise ethane \$/t	+0.92	156.82 /	160.51	+1.84	
Targa	+0.50	21.25 /	21.75	+0.63	
<b>Natural gasoline</b>					
Enterprise	-0.750	152.250 /	152.500	-1.000	

US forward market					¢/USG
	±	Bid	Ask		±
<b>Mont Belvieu LST propane</b>					
May 24	+0.375	69.875 /	70.375	+0.375	
Jun 24	-0.125	70.500 /	71.000	-0.125	
Jul 24	-0.250	70.625 /	71.125	-0.250	
Aug 24	-0.125	71.000 /	71.500	-0.125	
3Q 24	-0.250	71.000 /	71.500	-0.250	
<b>Mont Belvieu EPC butane</b>					
May 24	-0.250	82.750 /	83.250	-0.250	
Jun 24	nc	83.000 /	83.500	nc	
Jul 24	-0.125	82.875 /	83.375	-0.125	
Aug 24	-0.125	83.500 /	84.000	-0.125	
3Q 24	-0.125	83.500 /	84.000	-0.125	

Americas: Enterprise in-well averages (May 24)			USC/USG
	Month to date		±
Propane	68.396		-0.006
Butane	81.629		+0.053

Mont Belvieu LST forward curves USC/USG

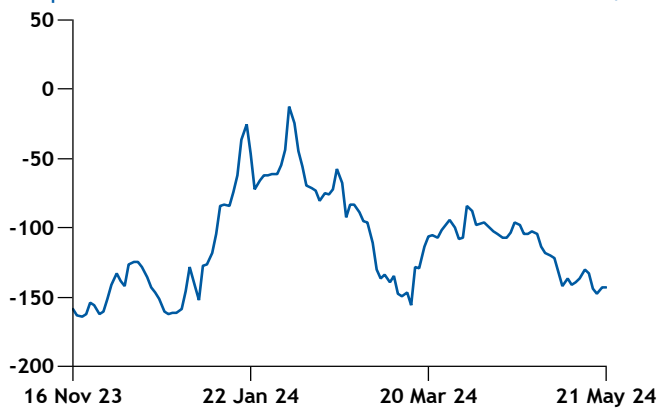


## US DEALS

Mont Belvieu spot deals				Mont Belvieu spot deals			
	Timing	¢/USG	bl		Timing	¢/USG	bl
Butane EPC	May	81.500	10,000		May	21.250	10,000
	May	83.000	10,000		May	21.250	10,000
	May	83.250	10,000		May	21.250	10,000
Ethane EPC	May	21.000	10,000		May	21.375	10,000
	May	21.125	10,000	Ethane Targa/Ethane EPC	May	0.000	20,000
	May	21.125	10,000		May	0.000	10,000
	May	21.250	20,000		May	0.000	10,000
	May	21.250	20,000		May	0.000	10,000
	May	21.250	10,000		May	0.000	10,000
	May	21.250	10,000		May	0.000	10,000
	May	21.250	10,000		May	0.000	10,000
	May	21.250	10,000		May	0.000	10,000
Ethane Targa	May	20.875	10,000		May	0.000	10,000
	May	21.000	10,000		May	0.000	10,000
	May	21.000	10,000		May	0.000	10,000
	May	21.125	10,000	Isobutane EPC	May	132.000	10,000
	May	21.250	20,000		May	134.750	10,000

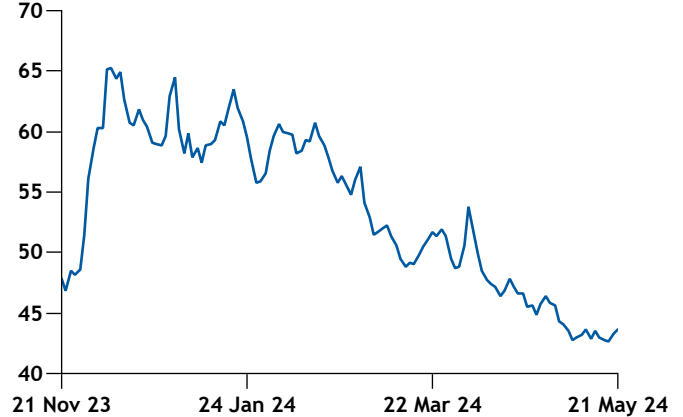
Propane: Mt Belvieu non-LST diff to cif ARA

\$/t



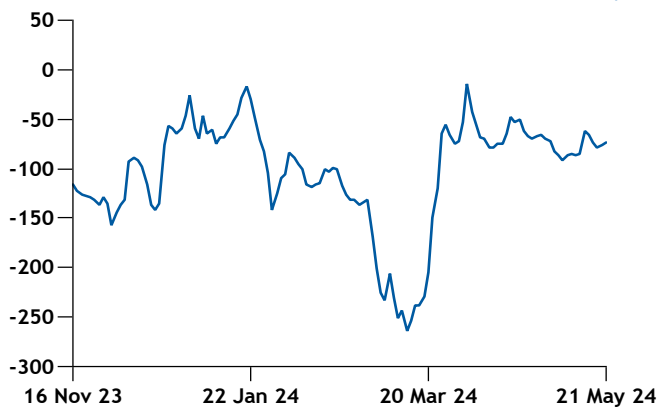
Butane: Mt Belvieu non-LST ratio to WTI

¢/USG



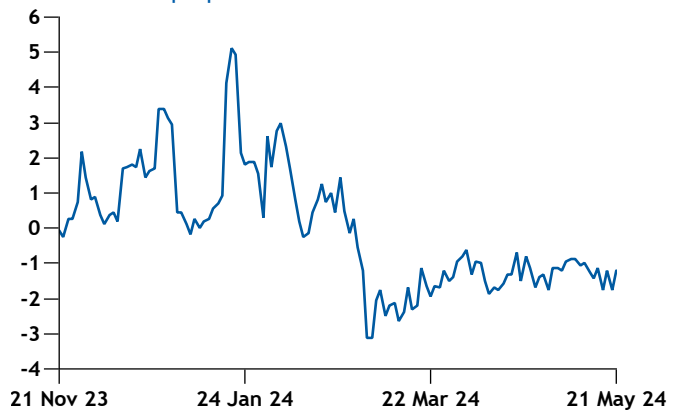
Butane: Mt Belvieu diff to cif ARA

\$/t



Mont Belvieu propane non-Tet vs Tet

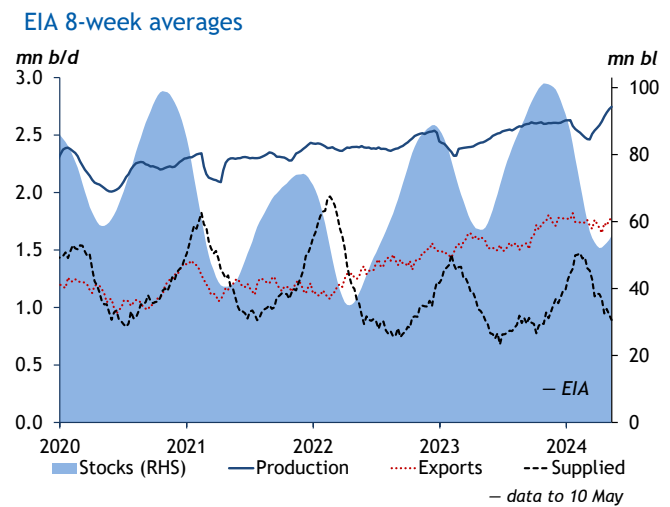
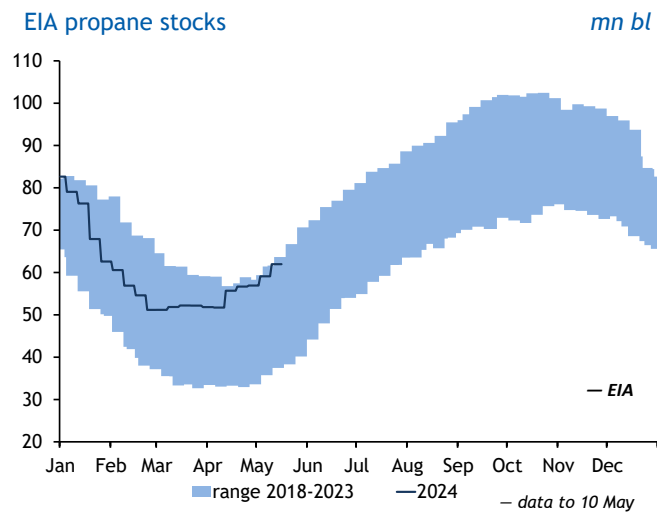
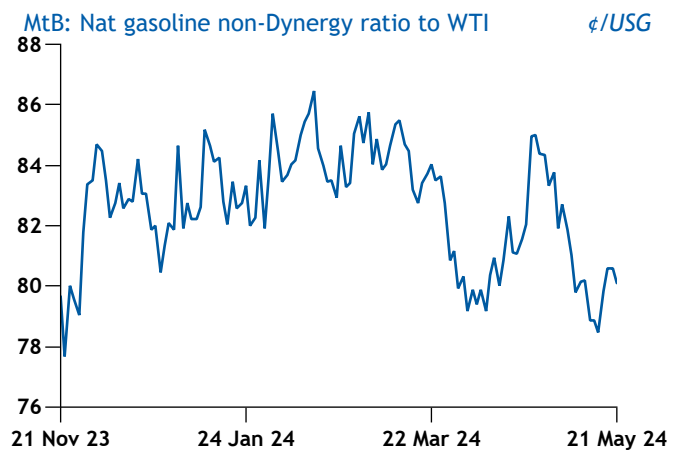
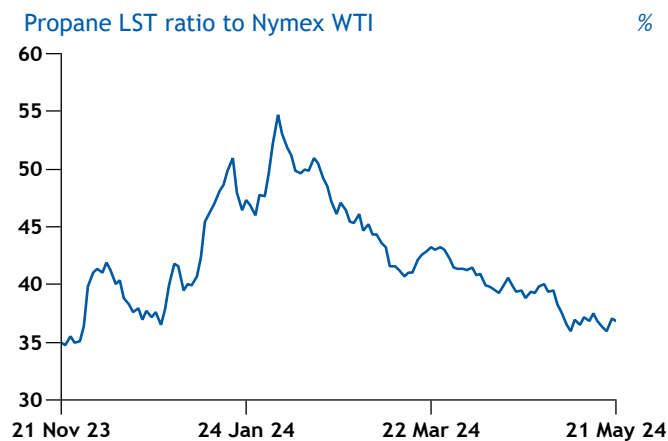
USC/USG



## US DEALS

Mont Belvieu spot deals			
	Timing	¢/USG	bl
Natgasco EPC	May	150.250	10,000
	May	151.250	10,000
	May	151.500	10,000
	May	151.875	20,000
Propane EPC	May	152.000	10,000
	May	67.625	20,000
	May	68.000	10,000
	May	68.875	10,000
	May	69.000	15,000
	May	69.250	5,000
	May	69.500	5,000
	May	69.500	5,000

Mont Belvieu spot deals			
	Timing	¢/USG	bl
Propane LST	May/Jul	-1.500	25,000
	May	68.750	10,000
	May	69.625	10,000
	May	69.875	10,000
Propane Targa	May	70.125	15,000
	May	70.250	25,000
	May/Jun	-0.375	100,000
	May	70.500	5,000
Propane Targa/Propane EPC	May	70.500	5,000
	May	71.000	30,000
	May	1.000	5,000
	May	1.000	5,000



## INTERNATIONAL SWAPS

Northwest European propane recorded marginal losses across the curve despite crude values decreasing at a steeper rate.

June and July cif ARA had no deals during the 16:15-16:30 liquidity session. June cif ARA was assessed at \$499/t, down \$1/t, and June-July spread stood at a contango of -\$0.50/t, in line with market views. July cif ARA was therefore assessed at \$499.50/t, down \$1/t.

The naphtha curve on the whole recorded larger losses than propane, reacting in more direct correlation to weaker crude values. June naphtha decreased by \$2.75/t to \$656.75/t, narrowing the propane naphtha spread by \$1.75/t to -\$157.75/t.

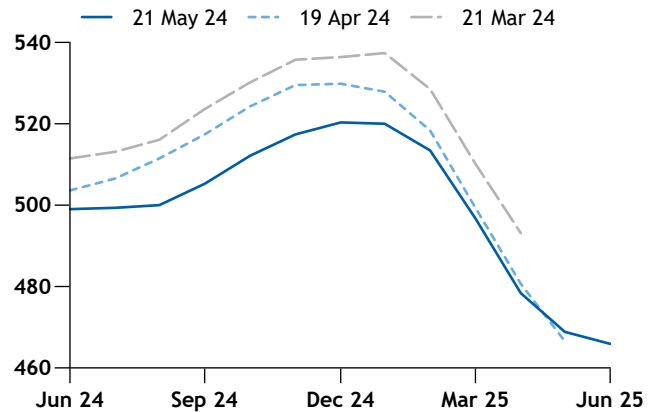
AFEI prices witnessed marginal gains across the curve despite lower crude values, amid tighter supply on the physical market. June AFEI increased by \$1.25/t to \$614.50/t, widening the east-west spread by \$2.25/t to \$115.50/t.

## Reported done (\$/t)

-0.5(2kt) Jun-Jul cif ARA  
 -23(3kt), -23(5kt) Jul-Dec cif ARA  
 610(2kt), 611(2kt), 612(2kt), 611(4kt), 610(2kt), 614(2kt) Jun AFEI  
 605.5(5kt), 605(8kt), 606(5kt), 607(2kt) Jul AFEI  
 608(2kt) Sep AFEI

7(15kt), 7(5kt), 7(2kt), 7.5(8kt), 7.5(2kt), 8(12kt) Jun-Jul AFEI  
 1(3kt) Jul-Aug AFEI  
 -11.5(5kt) Jul-Dec AFEI  
 -8.5(2kt) Sep-Dec AFEI  
 68(5kt), 68(2kt) Dec-Dec AFEI  
 104(2kt) Q3 AFEI-cif ARA  
 567(2kt), 567(5kt) Jun CP  
 1.5(6kt), 2(5kt), 2(2kt) Jul-Aug CP  
 -5(5kt) Aug-Sep CP  
 56(5kt), 56(3kt), 56(5kt), 56(4kt), 56(1kt) Jul AFEI-CP

Cif ARA propane forward curves



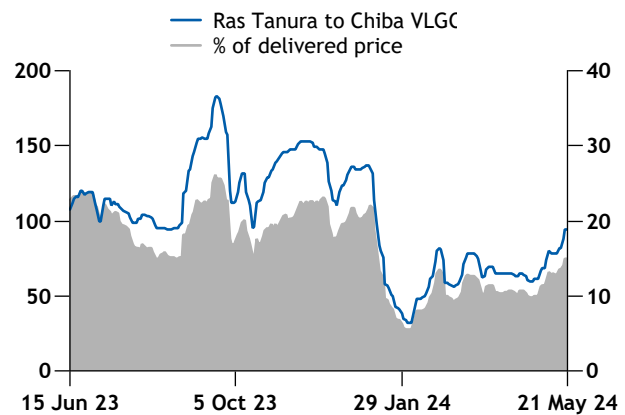
International swap prices (4:30pm London)										\$/t
	Propane cif ARA	Naphtha northwest Europe	Propane CP	Propane Far East Index (AFEI) <sup>™</sup>	Propane Mont Belvieu LST \$/USG	Propane less naphtha	AFEI <sup>™</sup> less propane cif ARA	Mont Belvieu less Propane cif ARA	Propane Mont Belvieu less AFEI <sup>™</sup>	AFEI <sup>™</sup> less propane CP
M1 differential to physical	-1.00	+10.25	-20.00	+13.75	-					
Jun 24	499.00	656.75	574.00	614.50	70.500	-157.75	+115.50	-131.69	-247.19	+40.50
Jul 24	499.50	647.25	555.50	607.00	70.625	-147.75	+107.50	-131.54	-239.04	+51.50
Aug 24	500.00	641.75	554.00	606.00	70.875	-141.75	+106.00	-130.74	-236.74	+52.00
Sep 24	505.25	637.50	559.00	610.75	71.375	-132.25	+105.50	-133.39	-238.89	+51.75
Oct 24	512.00	634.00	569.00	616.75	72.625	-122.00	+104.75	-133.62	-238.37	+47.75
Nov 24	517.50	630.50	577.50	621.00	73.500	-113.00	+103.50	-134.56	-238.06	+43.50
Dec 24	520.25	626.75	584.00	619.00	73.875	-106.50	+98.75	-135.36	-234.11	+35.00
Jan 25	520.00	623.50	584.00	612.00	74.250	-103.50	+92.00	-133.16	-225.16	+28.00
Feb 25	513.50	619.75	577.50	601.50	73.625	-106.25	+88.00	-129.91	-217.91	+24.00
Mar 25	496.75	615.25	557.50	579.50	70.500	-118.50	+82.75	-129.44	-212.19	+22.00
Apr 25	478.50	610.75	539.00	557.75	67.625	-132.25	+79.25	-126.17	-205.42	+18.75
May 25	468.75	607.00	527.00	546.50	67.000	-138.25	+77.75	-119.68	-197.43	+19.50
Jun 25	465.75	604.25	517.00	545.50	67.000	-138.50	+79.75	-116.68	-196.43	+28.50
3Q 24	501.50	642.25	556.25	608.00	70.958	-140.75	+106.50	-131.81	-238.31	+51.75
4Q 24	516.50	630.50	576.75	619.00	73.333	-114.00	+102.50	-134.44	-236.94	+42.25
1Q 25	510.00	619.50	573.00	597.75	72.792	-109.50	+87.75	-130.75	-218.50	+24.75

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

LPG Freight rates			\$/t
	Size	Rate	±
Ras Tanura-Chiba	VLGC	94.00	nc
Houston-Chiba (via Panama)	VLGC	145.00	nc
Houston-Flushing	VLGC	79.00	nc
Ras Tanura-New Mangalore/Haida (5-day rolling average)	VLGC	62.89	+2.28
Houston-Lagos (5-day rolling average)	MGC	100.47	-1.19
Houston-Callao/Pisco (5-day rolling average)	MGC	75.79	+0.13

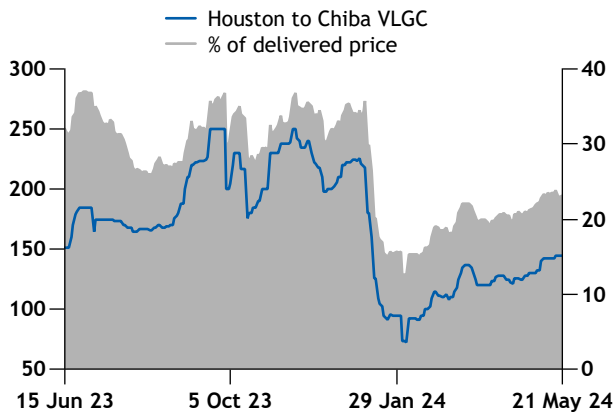
Ras Tanura-Chiba VLGC AFEI propane

\$/t



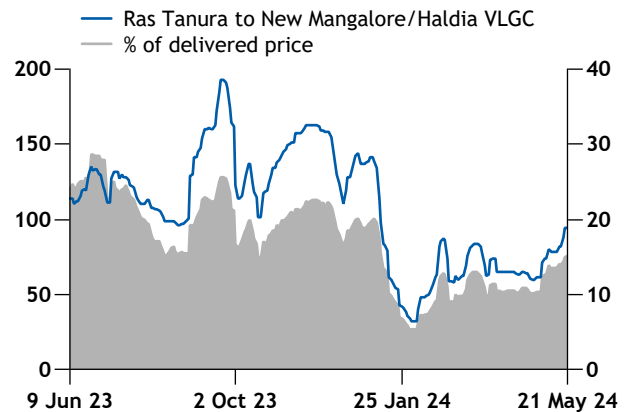
Houston-Chiba VLGC AFEI propane

\$/t



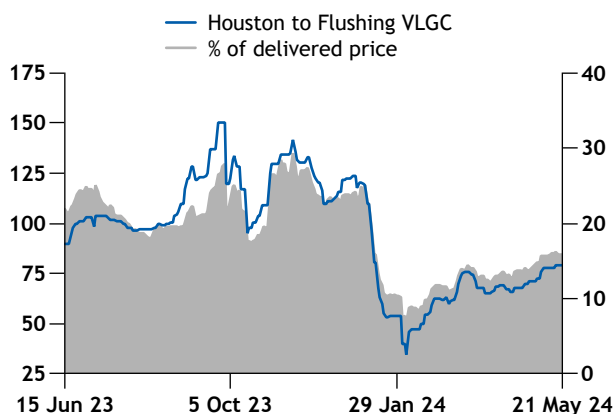
Ras Tanura - India VLGC 50:50

\$/t



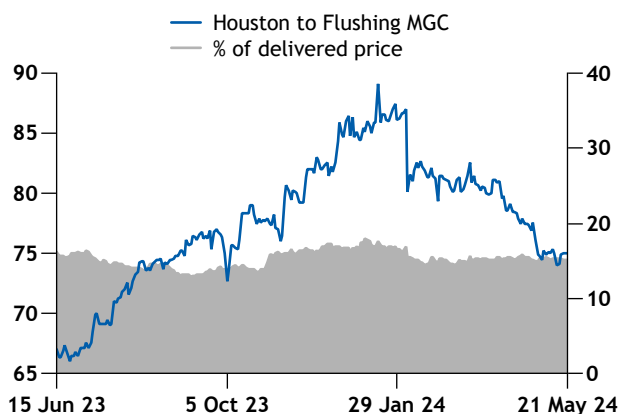
Houston-Flushing VLGC cif ARA propane

\$/t



Houston-Flushing MGC cif ARA propane

\$/t



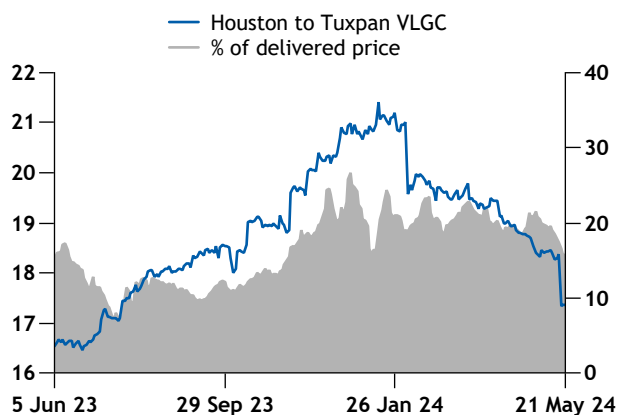
Full range of VLGC, MGC and coaster rates as well as commentaries, news and arbitrage maps are available in *Argus Gas Freight*. For more information, please e-mail: [FreightTeam@argusmedia.com](mailto:FreightTeam@argusmedia.com)



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

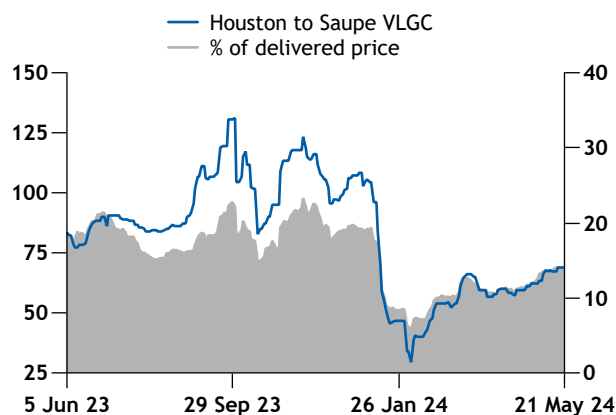
Houston-Tuxpan MGC Enterprise propane

\$/t



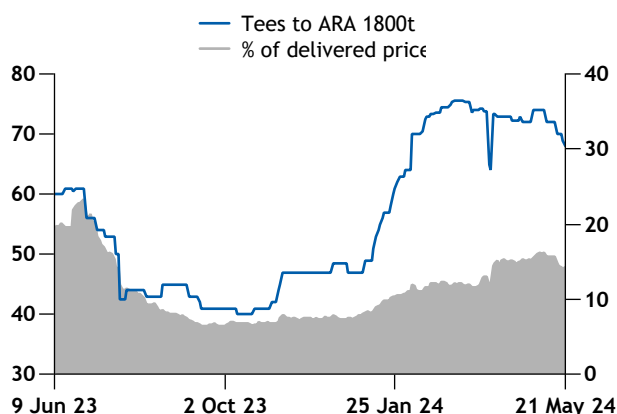
Houston-Suape VLGC 50:50

\$/t



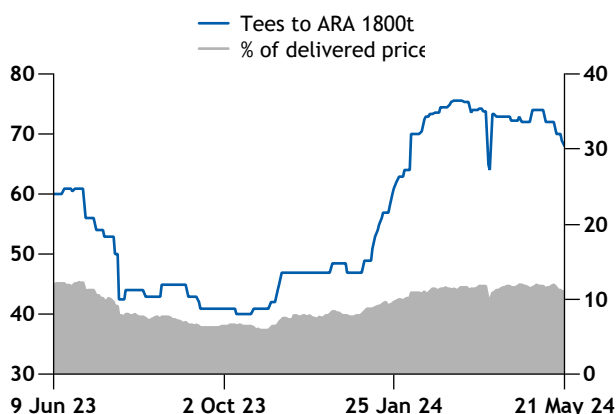
Tees-ARA 1,800t butane coaster

\$/t



Tees-ARA 1,800t propane coaster

\$/t



## 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

These Workspaces are curated by the Freight editorial team. For general information about Workspaces and Markets, please visit this [link](#).

## Argus Olefins Margins Service

*In an unpredictable energy environment, Argus Olefins Margins Service helps you make better decisions with:*

Upstream feedstock insight

Co-product credit, cash costs and margins

Forecasts for advanced planning

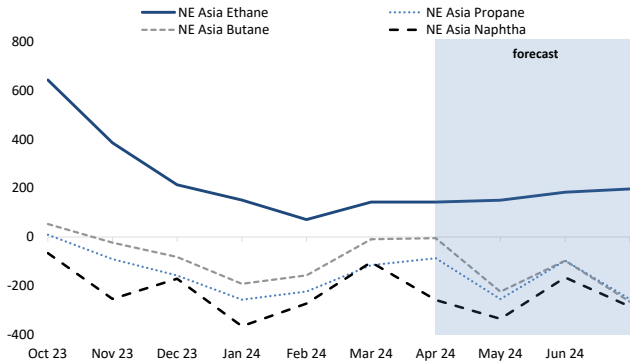
An integrated, global view



## PETROCHEMICALS CHARTS

NEA steam cracker net cash cost margin

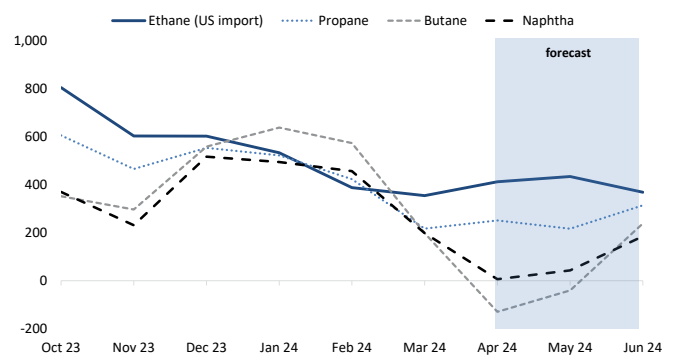
\$/t



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NWE steam cracker net cash cost margin

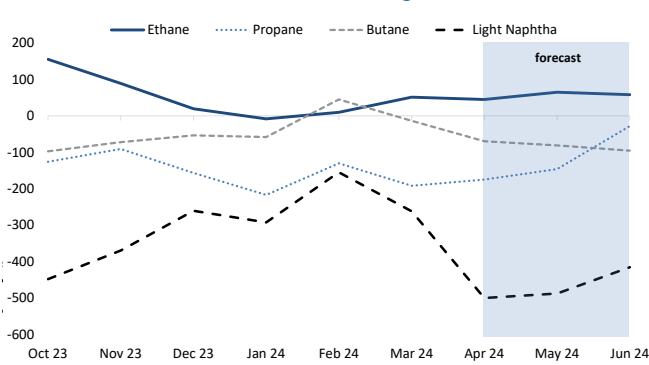
€/t



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US steam cracker net cash cost margin

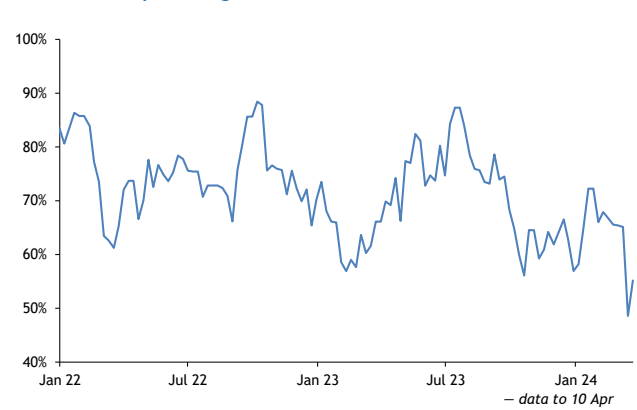
\$/t



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China PDH operating rates

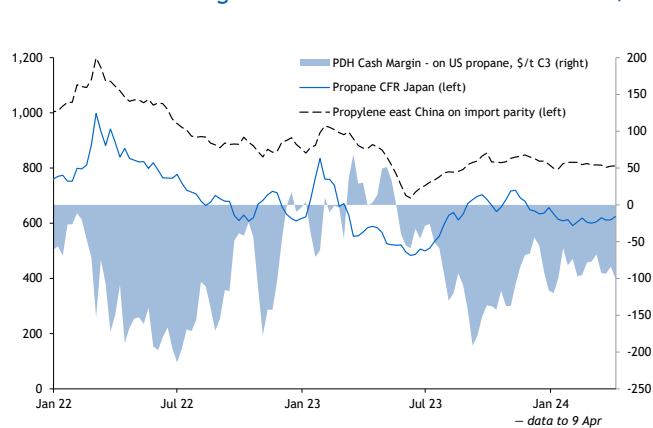
%



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Asia PDH cash margin

\$/t



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## INDUSTRY NEWS

### China April LPG imports fall on PDH demand

China's LPG imports fell on the month in April because of weaker propane feedstock demand from propane dehydrogenation (PDH) plants, whose cash margins fell below negative \$100/t for the first time since January.

China imported 2.92mn t of LPG in April, Chinese customs data show. Propane imports dropped to 2.43mn t, 8pc lower than March but 10pc higher than a year earlier. Butane imports rose by 11pc from March to 0.49mn t, although this was 4pc lower than a year earlier.

China imported around 10.72mn t of LPG from January-April, 21pc higher than a year earlier.

PDH operating rates fell in April because cash margins at Chinese plants dropped below negative \$100/t during the month for the first time since January. The weaker margins prompted operators to cut rates at PDH units to 49pc in early April, the lowest since 2015 August, from an average of 66pc in March. Operating rates at PDH units recovered to 75pc as of last week, with cash margins at negative \$73.90/t last week compared with an average of negative \$87.28/t in April.

But propane consumption was still high in April, supported by continuing PDH capacity expansions in China. Private-sector Shangdong Zhonghai Fine Chemicals started up a 400,000 t/yr PDH unit in April, taking China's total PDH capacity to 20.385mn t, based on an *Argus* survey.

Butane imports rose on the month because of strong demand from ethylene crackers and gasoline component MTBE producers looking to export during the month. MTBE is produced from butane. Higher international MTBE prices kept China's MTBE exports at a high level of 337,618t in April, which more than doubled from 148,086t last April. But the April MTBE exports were 9pc lower than March.

LPG remained the economically viable feedstock for steam crackers compared with naphtha in April. The front-month Asian butane-naphtha spread continued to widen in April, ending the month at -\$97.62/t, *Argus*' data show.

### ExxonMobil Fawley refinery maintenance

ExxonMobil will carry out planned maintenance on a unit at its 270,000 b/d Fawley refinery in southern England "over the coming days", the company said in a post on social media site X.

It did not disclose which unit nor the duration of the work.

A new diesel desulphurisation unit is due to start up at Fawley this year, which will increase the refinery's capacity to produce low-sulphur diesel by 38,000 b/d by the

first quarter of 2025, while at the same time cutting 0.1pc sulphur gasoil output.

One of Fawley's two crude distillation units underwent maintenance last year, according to sources. Crude imports to the refinery so far this month have been above the daily average in January-April, according to Votexa data. Fawley's diesel and gasoil exports have also been above average.

*By George Maher-Bonnett*

### US propane stocks to rise by 2.8mn bl: Survey

US market participants on average expect a 2.8mn bl increase in propane inventories for last week when the Energy Information Administration (EIA) reports weekly data Wednesday.

Predictions in an *Argus* survey of 12 market participants ranged from a build of 1.8mn bl to 3.7mn bl in US propane stocks in the week ended 17 May.

Expectations of a hefty build follow last week's inclement weather in Houston, which slowed the pace of propane exports, according to market participants.

Propane inventories rose by 2.87mn bl to 62mn bl during the week ended 10 May, leaving propane stocks 2.7pc below year-earlier levels, the EIA reported last week.

*By Abby Downing-Beaver*

### Dow declares force majeure on MDI

US chemical producer Dow has declared force majeure on its North American methylene diphenyl diisocyanate (MDI) products.

The company said the supply constraint is due to "inability to obtain certain raw materials", according to a 21 May letter to customers. Dow did not immediately respond to comment.

Dow MDI products go into an array of polyurethane foam and wood composite uses.

The force majeure could create some tightness in the polymeric MDI (PMDI) market, but the US has been well supplied for the past few months.

*By Catherine Rabe*

### Enterprise Mont Belvieu BEF unit flares

Enterprise Products reported flaring at the Belvieu Environmental Fuels (BEF) unit in Mont Belvieu, Texas, on 19 May, according to a filing with the Texas Commission on Environmental Quality.

The refrigeration compressor shut down, according to the filing, leading to flaring occurred at the octane-producing unit starting at 4pm ET that day and lasting 24 hours.

## INDUSTRY NEWS

Enterprise was not immediately available for comment.

The BEF unit has 737,000 metric tonnes (t)/yr capacity and produces the gasoline additive MTBE and iso-octane.

By Steven McGinn

### US BZ strength driven by demand, lower output

US benzene (BZ) prices have risen in May despite an overall weak US energy market as demand for downstream styrene monomer (SM) was up and US BZ production rates were low.

US BZ prices for May grew by 2pc to 399¢/USG since 26 April, the last day of the May BZ contract price trading window. In the same time period, Nymex light sweet crude futures declined by roughly 5pc to \$79.80/bl, boosting the BZ-to-crude ratio as high as 2.2. This means BZ is valued at a premium relative to crude. Historically, BZ is balanced to crude when the BZ-to-crude ratio hits 2.

BZ extraction at refineries has slowed with limited outlets into downstream ethylbenzene (EB), cumene and SM.

EB and cumene have been influenced heavily by the gasoline market. EB and cumene were popularly used as octane boosting components in gasoline blending in 2022 and 2023, as US gasoline blenders dropped sub-octane naphtha into gasoline. High-octane EB and cumene were among the blendstocks used to boost the octane rating of gasoline after naphtha was added.

This year, naphtha supply in the US has tightened with more exports into China as the Middle East – where China would typically get its naphtha – reported a heavy turnaround season. This has shortened the demand for higher octane blendstocks into the gasoline pool, thus limiting outlets for EB and cumene.

BZ into SM has been limited in May due to several planned and unplanned outages throughout the month. With lower production of SM, prices have held firm throughout the month around \$1,350/t.

BZ and SM operating rates in May hovered around 55-

60pc and could rise going into June with some SM producing units coming out of turnarounds.

By Jake Caldwell

### Canadian rail strike may not start for months

Members of the Teamsters Canada Rail Conference (TCRC) employed at Canadian National (CN) and Canadian Pacific Kansas City (CPKC) will not strike this week and potentially not anytime within the next two months.

CPKC said that on 15 May it offered to enter into binding arbitration to avoid a strike, but TCRC declined. However, CPKC and the union resumed negotiating with federal mediators on 17 May.

Even if negotiators fail to reach an agreement, “it is unlikely the parties will be in a position to initiate a legal strike or lockout within the next 60 days,” CPKC said on 16 May.

CN met with the union last week and offered to provide workers scheduled days off and to raise wages by 3pc in 2024 and then by another 2.5pc in 2025.

TCRC rejected that offer, saying it “decimates” existing collective agreements and compromises safety in favor of operational ease and profits.

But CN said its proposals have sought to modernize the collective bargaining agreement.

The union and the railroads have been holding contract talks for months. But with the negotiations unsuccessful, union members earlier this month authorized a strike as soon as 22 May.

Canadian minister of labour Seamus O'Regan stepped in last week after the Canadian Propane Association raised concerns about public health and safety if propane supplies were disrupted by a strike.

O'Regan has asked the Canadian Industrial Relations Board to determine whether rail service is essential for ensuring that propane supplies are adequate.

## ANNOUNCEMENT

### Argus successfully completes annual Iosco assurance review

Argus has completed the 12th 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>

## INDUSTRY NEWS

While the board evaluates that issue, any strike action is on hold. The board is taking comment on the propane concerns until 21 May, and then the parties have until 31 May to reply.

After the board completes its work, the union must provide a three-day notice to the railroad before a strike occurs.

Roughly 9,300 train operators and support staff work at CN and CPKC, while another 85 serve as rail traffic controllers at CPKC.

*By Abby Caplan*

### Braskem restarts Triunfo petrochemical hub

Brazilian petrochemical giant Braskem started the gradual resumption of operations at its plants in the Triunfo hub, Rio Grande do Sul state.

Braskem said it expects to complete the process in about 15 days, provided that climatic and logistical conditions remain stable.

On 7 May Braskem shut down all of its operations in Rio Grande do Sul state after extreme flooding since late April, but said its polymer inventories were safe and protected from the damage caused by heavy rainfall at its operations in southern Brazil during the past two weeks.

At the time, Braskem said there was no permanent damage to the industrial facilities, but critical water intake and effluent treatment systems were submerged, rendering them inoperable. Additionally, the Santa Clara River terminal, which was preemptively closed by the local port authority, has also been flooded.

Braskem said the decision to resume operations takes into account the safety of people, processes, and logistics, and stated that it will keep the market informed about relevant developments, including their impacts.

Since the Triunfo shutdown, Braskem was working with an operational capacity of 50pc. But the company was heard increasing its operating rates in other Brazilian plants to serve customers in the southern region. Braskem last week ruled out bringing material from Mexico.

The extreme weather in southern Brazil caused a humanitarian crisis in Rio Grande do Sul and left 161 people dead, 85 missing and over 581,000 people displaced, according to the state's civil defense.

Braskem owns and operates six industrial units at the Triunfo hub, with a combined production capacity of over 5mn tonnes (t)/yr of chemicals and thermoplastic resins such as polyethylene (PE) and polypropylene (PP), including a

260,000 t/yr bio-based PE plant.

*By Frederico Fernandes*

### Sumitomo to commercialize recycling tech

Japan-based Sumitomo Chemicals will commercialize two of its polymer recycling technologies in a partnership with US-based Lummus Technology.

Sumitomo is licensing one technology to recycle polymethyl methacrylate (rPMMA), and another that can recycle both low-density polyethylene (LDPE) and ethylene vinyl acetate (EVA).

Sumitomo currently operates a pilot plant with its PMMA recycling technology in Ehime prefecture in Japan.

The company uses waste aquarium panels as a feedstock for its demonstration plant.

Lummus Technology will license the technologies worldwide, and both companies will "further develop" the technology for early commercialization, the companies said.

*By Zach Kluver*

## Argus International LPG Forward Curves



*The Argus International LPG Forward Curves service is a powerful, independent market valuation tool used to support investment and trading decisions in LPG markets across Europe, Americas and Asia.*

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For more information:  
[www.argusmedia.com/forward-curves](http://www.argusmedia.com/forward-curves)

## ANNOUNCEMENT

**Argus expanding usage of spreads in methodology**

Following consultation, Argus will upload all individual legs on spread transactions, in addition to the spreads themselves, as part of its regular price assessments for Mont Belvieu, Texas, and Conway, Kansas, in keeping with industry practice. The legs on these spreads will be incorporated into both the traded ranges and volume-weighted averages for the daily assessments effective June 3, 2024, with the last assessed day prior to the change of May 31, 2024. For any questions, please contact Amy Strahan at [amy.strahan@argusmedia.com](mailto:amy.strahan@argusmedia.com) or 713-360-7537.

## ANNOUNCEMENT

**Argus Open Markets (AOM) platform for daf Brest suspended**

Following the introduction of the latest package of EU sanctions on Russian exports, from 21 December 2023, Argus has suspended operation of the Argus Open Markets (AOM) platform for daf Brest propane, propane-butane mix while we further consider the impact of the new sanctions on the market. Registered users are still able to log into the platform to view and manage counterparty permissions. Argus will continue to monitor the situation and will provide further announcements via the AOM platform, *International LPG Report* and email in due course. Please contact the AOM Support Team on +44 207 199 9430 or [aomsupport@argusmedia.com](mailto:aomsupport@argusmedia.com) with any questions about the AOM platform for daf Brest propane, propane-butane mix. Please note that the daf Brest propane, propane-butane mix assessments will continue to be published daily in *Argus International LPG* and *Argus Russian LPG and Condensate* as normal. For further questions regarding the assessment, please contact [svetlana.novolodskaya@argusmedia.com](mailto:svetlana.novolodskaya@argusmedia.com).



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