

CRUDE MARKETS AT A GLANCE

\$/bl

Europe					
	Basis	Diff	Bid	Ask	Change
North Sea Dated	Jul Nsea	+0.16	75.11	75.17	-0.33 ▼
Ice Brent mth 1	Jul			74.91	-0.32 ▼
Argus Brent Sour	Dated	0.01	75.12	75.18	-0.32 ▼
WTI cif R'dam period 1	Dated	+1.35	76.46	76.52	-0.33 ▼
Johan Sverdrup	Dated	+0.55	75.66	75.72	-0.33 ▼

North America					
	Basis	Diff	Outright	Change	
Nymex WTI mth 1	Jun		70.86	-0.25 ▼	
WTI Midland	Jun WTI	+0.70	71.56	-0.25 ▼	
WTI Houston	Jun WTI	+0.88	71.74	-0.27 ▼	
Mars	Jun WTI	-0.45	70.41	-0.26 ▼	
WCS Houston	Jun CMA Nymex	-5.25	65.52	-0.55 ▼	

Russia					
	Basis	Diff	Bid	Ask	Change
Urals fob Primorsk	Dated	-26.40	48.71	48.77	-0.03 ▼
ESPO fob	Jul Dubai swaps	-8.50	64.97	65.07	+1.13 ▲

Delivered China					
	Basis	Diff	Bid	Ask	Change
Tupi	Sep Ice Brent	+3.00	77.74	78.14	+1.11 ▲

Mideast Gulf					
	Basis	Diff	Bid	Ask	Change
Dubai	Jul		74.51	74.61	+1.14 ▲
Oman	Jul		74.47	74.57	+1.31 ▲
Murban	Jul		74.81	74.91	+1.10 ▲

West Africa					
	Basis	Diff	Bid	Ask	Change
Qua Iboe	Dated	+0.25	75.36	75.42	-0.33 ▼
Girassol	Dated	+1.00	76.11	76.17	-0.33 ▼
Doba	Dated	-3.00	72.11	72.17	-0.33 ▼

Prices inch lower slightly

June Nymex WTI slipped by 25¢/bl to \$70.86/bl while July Ice Brent fell 32¢/bl to \$74.91/bl. The July Brent-July WTI spread narrowed to \$4.07/bl.

TOP HEADLINES

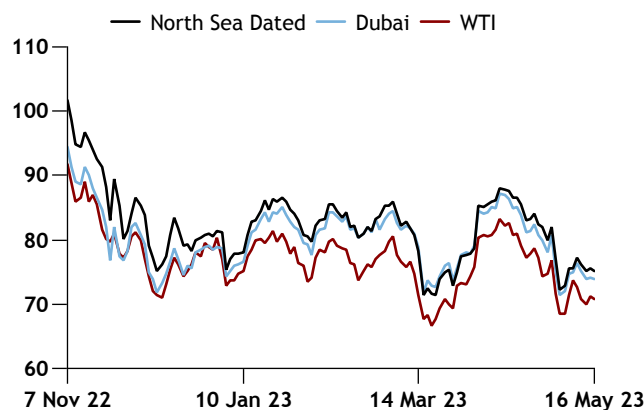
IEA hikes global oil demand growth on China
Opec sec gen invites Ecuador to rejoin group
India removes windfall tax on oil production

CONTENTS

Key spreads	2
US Gulf Coast and Midcontinent	3
Latin America	8
Canada	9
North Sea Dated	10-13
Russia-Caspian	14-15
Mediterranean	16
West Africa	17
Mideast Gulf	18-19
Asia-Pacific	20-22
Official prices	23
Futures and forward markets	24
Daily netbacks	25
Deals done	26-28
News and announcements	29

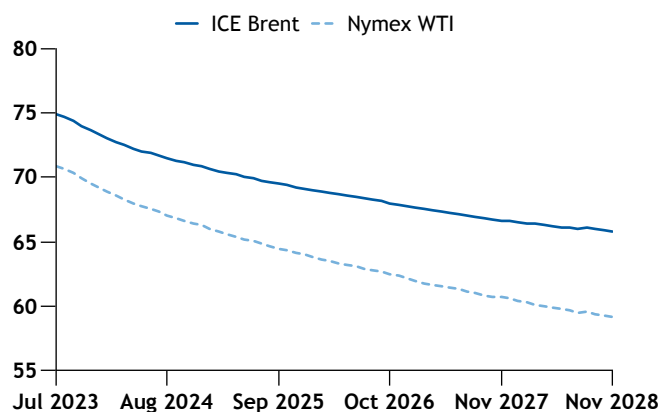
Key benchmarks

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WTI vs Brent forward curve

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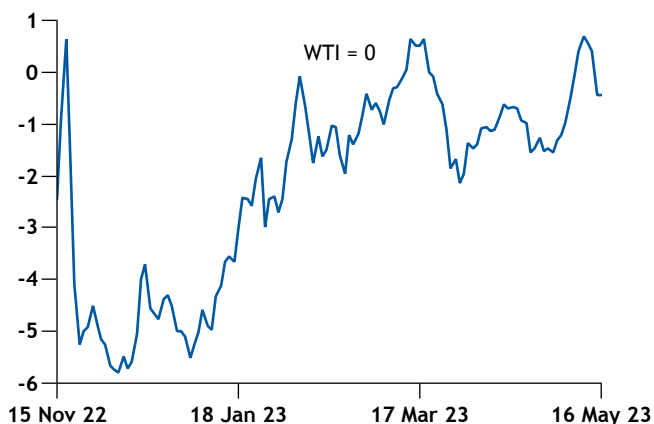
KEY SPREADS

\$/bl

	Spread	±
Interregional Spreads		
Transatlantic		
Ice Brent vs Nymex WTI mth 1	+4.15	0.06
North Sea Dated vs WTI fob Houston	+3.02	0.02
Argus Brent Sour vs ASCI	+4.88	-0.09
Qua Iboe vs WTI Houston	+3.65	-0.06
Atlantic Basin to Asia		
Brent-Dubai EFS	+1.98	-0.04
Forties vs Murban	+0.63	-1.43
Qua Iboe vs Kimanis	-6.75	0.00
Americas to Asia		
WTI Houston vs Kimanis	-10.40	0.06
ANS USWC vs ESPO fob	+10.81	-1.42
Mars vs Oman	-4.11	-1.57
Regional Spreads		
Americas pipeline		
WTI Houston vs WTI Midland	+0.18	-0.02
WTI Houston vs Mars	+1.33	-0.01
WTL Midland vs WTI Midland	-0.40	0.00
WTS vs WTI Midland	-0.75	0.00
WCS Hardisty vs WCS Houston	-8.43	0.07
WCS Cushing vs WCS Houston	-1.05	0.00
Americas waterborne		
WTI fob Houston vs Ekofisk	-4.77	-0.02
WTI cif Rotterdam vs CPC cif Med	+4.95	-0.05
North Sea		
Dated vs Nsea Forward mth 2	-0.67	-1.35
Nsea forwards mth 1 vs mth 3	+0.47	-0.09
Asia-Pacific		
Dubai mth 1 vs mth 3	+1.04	0.01
Murban cfr China vs WTI del NE Asia	-1.66	-0.98
Oman cfr China vs ESPO fob	+11.06	0.23

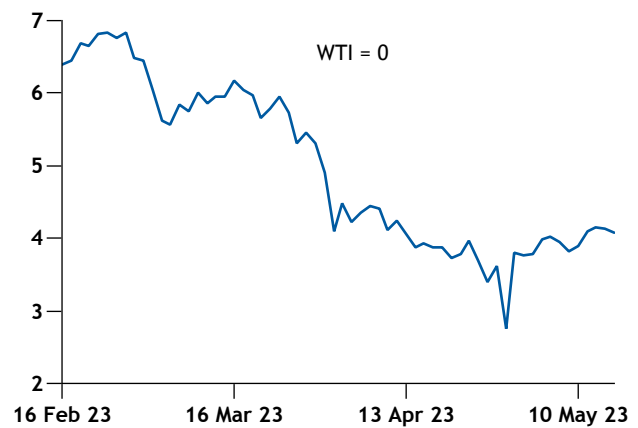
Mars vs WTI

\$/bl



Ice Brent month 1 vs Nymex WTI

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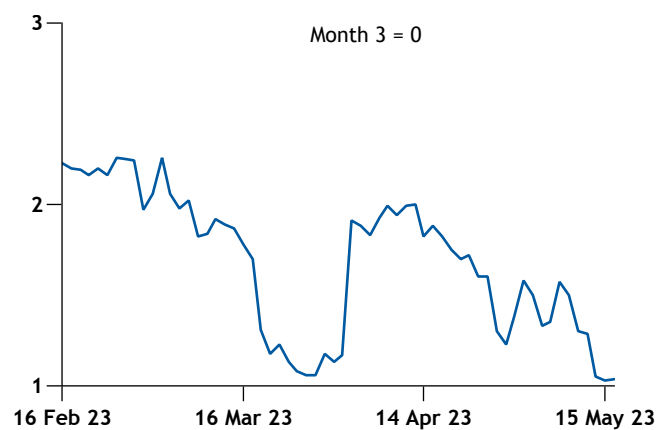
Brent-Dubai Exchange of Futures for Swaps (EFS) m1

\$/bl



Dubai month 1 vs month 3

\$/bl



ANNOUNCEMENT

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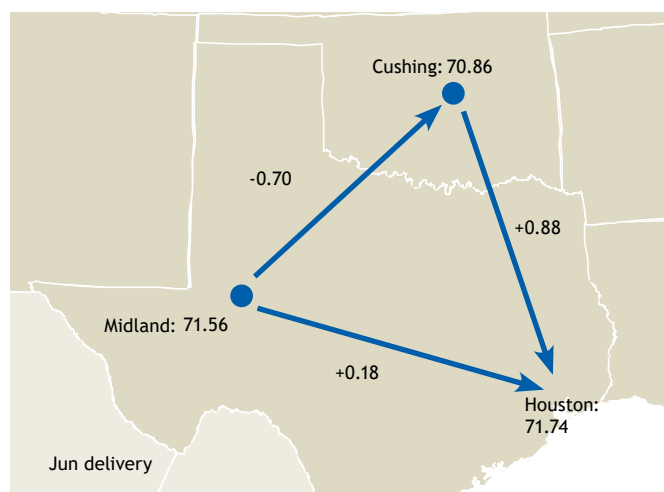
ANNOUNCEMENT

The holiday calendar showing which Argus reports are not published on which days is now available online <https://www.argusmedia.com/en/methodology/publishing-schedule>

US GULF COAST AND MIDCONTINENT

WTI regional prices and spreads

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US Gulf coast crude differentials to Nymex-quality WTI in Cushing, Oklahoma, were volatile this session with large intra day price moves seen for several grades.

In Texas, near Houston, Southern Green Canyon (SGC) traded earlier in the session at a \$1.25/bl discount to the Cushing benchmark. But later on, the grade traded at a \$2.50/bl discount. SGC's weighted-average discount widened by about 50¢/bl from the prior session, which saw trades done at discounts between \$1.10-\$1/bl.

Heavy Louisiana Sweet (HLS) traded at a \$1.40/bl premium to Cushing, with trade also done at a 75¢/bl premium. HLS narrowed its weighted-average premium to Cushing by 76¢/bl from the prior session.

Light Louisiana Sweet (LLS) traded at a \$2.15/bl premium. Other discussion heard was wide with the grade's bid/ask spread at premiums of \$1.50/bl to \$2.75/bl.

In Cushing, Oklahoma, heavy sour Canadian crude discounts to the CMA Nymex WTI widened.

Cold Lake Cushing traded at a \$6.30/bl discount to the CMA Nymex. On Monday, the grade traded at a \$6/bl discount.

Elsewhere at the US midcontinent, the spread between Bakken crude at the DAPL North Dakota pipeline origin and Patoka, Illinois, widened.

Bakken DAPL trades were reported at parity to the CMA Nymex, and up to a 10¢/bl premium.

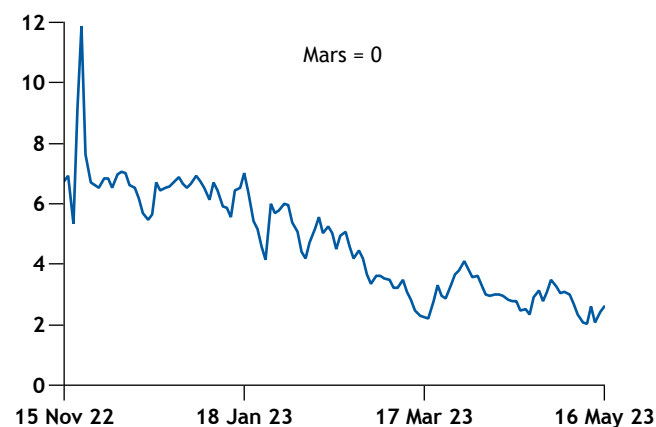
Bakken Patoka was reported trading at a \$2/bl premium to CMA Nymex.

The spread between the two locations widened by 23¢/bl from the prior session to about \$2/bl, and has widened by

Argus Sour Crude Index (ASCI™)				\$/bl
	Month	Basis	Diff	Price
ASCI	Jun	Jun WTI	-0.59	70.27
ASCI 2	Jun	CMA Nymex + Argus WTI diff to CMA	-0.59	70.34

LLS vs Mars

\$/bl



about \$1.30/bl since the start of June trade.

In other news, a fatal fire at Marathon's 593,000 b/d Galveston Bay, Texas, refinery on Monday was caused by a pump leak in a reformer unit.

A splitter pump in the refinery's ultraformer unit number three developed a leak and caught fire, according to a filing with the Texas Commission on Environmental Quality (TCEQ).

The fire began at approximately 10:30am ET on 15 May and killed one Marathon employee, according to the company. The fire was under control as of 12:50pm ET, according to Texas City officials.

Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for Bakken Cushing month, LLS, Mars, Poseidon, Southern Green Canyon, WCS Cushing, WTI Diff to CMA Nymex, WTI Houston, WTI Midland Enterprise, WTI Midland, WTL Midland and WTS. The Bakken at Clearbrook assessment was left unchanged as no fresh trade or market discussion emerged.

In the absence of sufficient transaction information for WCS Houston, market value was assessed using intelligent judgment according to the methodology.

US GULF COAST AND MIDCONTINENT

WTI							\$/bl			
	Timing	Low	High	WTI formula basis price	WTI formula basis MTD	Roll to next month				
WTI Cushing	Jun	70.84	70.88	70.86	72.26	-0.02				
WTI Cushing	Jul	70.82	70.86	70.84		-0.18				
WTI Cushing	Aug	70.64	70.68			-0.33				
WTI Cushing	Sep	70.31	70.35							
	Timing	Price	WTI Nymex spread							
CMA Nymex	Jun	70.77		+0.09						
CMA Nymex	Jul	70.54		+0.30						
CMA Nymex	Aug	70.21								
CMA Nymex	Sep	69.81								
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	MTD weighted average
Argus AGS Marker	Jun						71.64	71.74	71.67	73.06
Argus AGS	Jun	Jun WTI	+0.78	+0.88	+0.81	+0.81	71.64	71.74	71.67	
WTI Houston	Jun	Jun WTI	+0.85	+0.95	+0.88	+0.88	71.71	71.81	71.74	
WTI Houston	Jul	Jul WTI	+0.95	+1.15	+1.05	+1.11	71.79	71.99	71.89	
WTI Midland	Jun	Jun WTI	+0.65	+0.75	+0.70	+0.68	71.51	71.61	71.56	
WTI Midland	Jul	Jul WTI	+0.80	+0.85	+0.83	+0.86	71.64	71.69	71.67	
WTI Midland Enterprise	Jun	Jun WTI	+0.65	+0.75	+0.70	+0.68	71.51	71.61	71.56	
WTI diff to CMA Nymex	Jun	CMA	+0.14	+0.18	+0.16	+0.27				
WTI postings-plus	Jun	Postings	+3.52	+3.56	+3.54	+3.65				
Midcontinent							\$/bl			
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	Cumulative MTD VWA
Bakken DAPL	Jun	CMA Nymex	0.00	+0.10	+0.02	+0.22	70.77	70.87	70.79	+0.10
Bakken Patoka	Jun	CMA Nymex	+1.90	+2.10	+2.00	+1.70	72.67	72.87	72.77	+1.69
Bakken Clearbrook	Jul	CMA Nymex	+1.75	+1.85						
Bakken Cushing	Jun	Jun WTI	+0.20	+0.30	+0.25	+0.44	71.06	71.16	71.11	
Light Sweet Guernsey	Jun	CMA Nymex	-1.30	-1.20	-1.25	-0.57	69.47	69.57	69.52	-0.80
DJ Light	Jun	Jun WTI	-0.70	-0.60	-0.65	-0.44	70.16	70.26	70.21	
White Cliffs	Jun	Jun WTI	-0.70	-0.60	-0.65	-0.46	70.16	70.26	70.21	
Niobrara	Jun	Jun WTI	+0.70	+0.90	+0.80	+0.76	71.56	71.76	71.66	
WCS Cushing	Jun	CMA Nymex	-6.40	-6.20	-6.30	-6.66	64.37	64.57	64.47	
Canadian High TAN Cushing	Jun	CMA Nymex	-7.10	-6.90	-7.00	-7.28	63.67	63.87	63.77	
Texas							\$/bl			
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	
WTL Midland	Jun	Jun WTI	+0.25	+0.35	+0.30	+0.15	71.11	71.21	71.16	
Bakken Beaumont/ Nederland	Jun	CMA Nymex + Argus WTI diff to CMA	+1.25	+1.35	+1.30	+1.32	72.18	72.28	72.23	
WTS	Jun	Jun WTI	-0.10	0.00	-0.05	-0.29	70.76	70.86	70.81	
WTS	Jul	Jul WTI	-0.70	-0.35	-0.53	-0.61	70.14	70.49	70.31	
Southern Green Canyon	Jun	Jun WTI	-2.50	-1.25	-1.56	-1.07	68.36	69.61	69.30	
WCS Houston	Jun	CMA Nymex	-5.35	-5.15	-5.25	-5.52	65.42	65.62	65.52	
Canadian High TAN Houston	Jun	CMA Nymex	-6.10	-5.90	-6.00	-6.10	64.67	64.87	64.77	
Louisiana							\$/bl			
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	
LLS	Jun	Jun WTI	+2.00	+2.30	+2.15	+2.13	72.86	73.16	73.01	
LLS	Jul	Jul WTI	+2.15	+2.20	+2.18	+2.15	72.99	73.04	73.02	
HLS	Jun	Jun WTI	+0.75	+1.40	+0.99	+1.82	71.61	72.26	71.85	
Thunder Horse	Jun	Jun WTI	+0.80	+1.00	+0.90	+1.51	71.66	71.86	71.76	
Poseidon	Jun	Jun WTI	-1.25	-0.75	-1.25	-1.17	69.61	70.11	69.61	
Mars	Jun	Jun WTI	-0.75	-0.25	-0.45	-0.58	70.11	70.61	70.41	
Mars	Jul	Jul WTI	-1.10	-0.80	-0.95	-1.19	69.74	70.04	69.89	

ARGUS AGS

Midland-quality WTI at the US Gulf coast inched lower but remained little changed this session as concerns over Chinese growth countered a higher forecast for global oil demand from the IEA.

The AGS Marker eased by 2¢/bl to a volume-weighted average of \$71.67/bl, while the AGS index differential to Nymex fell by 2¢/bl to an 81¢/bl premium.

Liquidity was based at the Magellan East Houston (MEH) terminal, where 20 deals totaling 75,500 b/d were transacted at premiums to the US light sweet crude Cushing, Oklahoma, benchmark between 85¢/bl and 95¢/bl.

Reported AGS spot trade volume has totaled 597,500 b/d since the 26 April start to the June US trade month, reflecting a 17.8pc decrease compared to volume reported over the same period of May trade.

The AGS Marker has averaged \$73.06/bl, down by \$6.52/bl, or 8.2pc, compared to an average of \$79.58/bl over the same period the prior month, while the average AGS index differential to Nymex has narrowed by just 3¢/bl to an 81¢/bl premium.

The International Energy Agency (IEA) hiked its forecast for world oil demand growth this year by almost 200,000 b/d, with a stronger than previously expected rebound in China outweighing a deterioration in the global economic picture.

The Paris-based energy watchdog's latest Oil Market Report (OMR) puts world oil demand at 102mn b/d in 2023, an increase of 2.2mn b/d on last year and around 1.3mn b/d higher than pre-pandemic 2019. Its previous forecast had demand growing by about 2mn b/d this year to 101.9mn b/d.

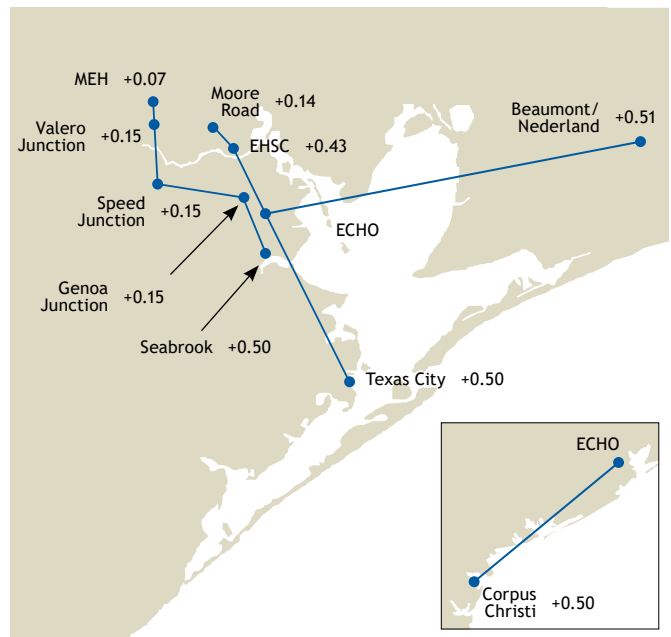
Meanwhile, President Joe Biden's administration is preparing to start refilling the US Strategic Petroleum Reserve (SPR) by purchasing up to 3mn bl of sour crude for delivery in August.

The administration this week issued a request for proposals to buy US-produced crude through a "firm-fixed-priced contract" that would be delivered to the Big Hill SPR site near Beaumont, Texas, from 1-31 August. The administration said it intends to buy more crude later this year as part of its plan to replenish the SPR, which with 359.6mn bl in inventory is at its lowest level in more than 40 years.

Argus AGS				\$/bl	
	Timing		Low/high	VWA	VWA MTD
Argus AGS Marker	Jun		71.64/71.74	71.67	73.06
Argus AGS	Jun		71.64/71.74	71.67	
	Timing	Basis	Diff low/high	VWA	VWA MTD
Argus AGS	Jun	Jun WTI	+0.78/+0.88	+0.81	+0.81

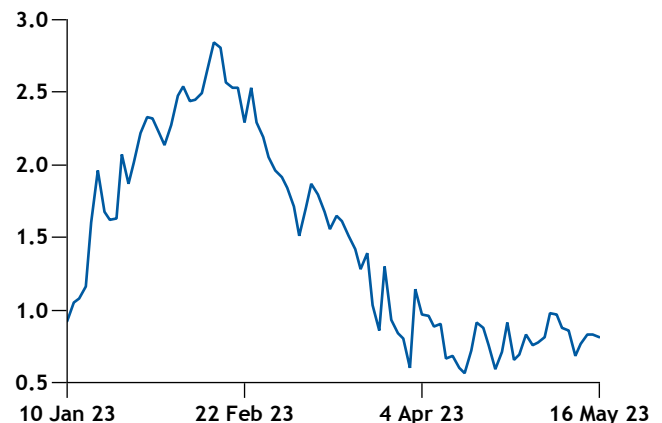
AGS locational differentials vs Echo

\$/bl



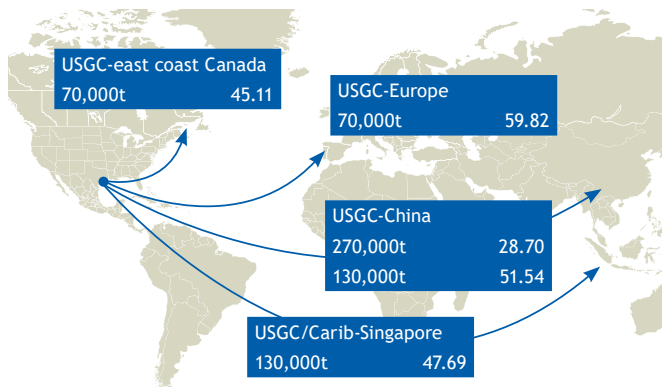
AGS index diff to Nymex WTI

\$/bl



US WATERBORNE

Freight snapshot (full view in Argus Tanker Freight) \$/t



Freight rates are five-day rolling averages.
The full range of tanker freight rates, including Crude-specific USD/bl freight is available in [Argus Tanker Freight](#).

Freight rate	\$ lumpsum
	Five-day rolling average
USGC Aframax reverse lightering	719,000

Assessments for WTI loading at the US Gulf coast weakened marginally against August Ice Brent this session as April industrial production and refinery runs in China eased from March levels.

WTI loading 15-45 days forward at the US Gulf coast inched down against August Ice Brent to discounts between \$2.80/bl and \$2.40/bl, circling a roughly 40¢/bl premium to the secondary coastal benchmark WTI Houston, compared to about a 45¢/bl premium last session.

Offers of WTI loading in mid to late-June ranged between premiums of 35¢-60¢/bl to WTI Houston, with third-

US Gulf coast waterborne				\$/bl
	Timing	Basis	Diff low/high	Low/High
WTI fob USGC	Prompt	Jun CMA Nymex	+1.15/+1.55	71.92-72.32
	Prompt	Jun WTI Houston	+0.18/+0.58	
	Prompt	Aug Ice	-2.80/-2.40	
Bakken fob Beaumont/ Nederland	Prompt	Jun CMA Nymex	+1.35/+1.80	72.12-72.57
	Prompt	Jun WTI Houston	+0.38/+0.83	
	Prompt	Aug Ice	-2.60/-2.15	

WTI intramonth spreads				\$/bl
Load window (dates)	Timing	Basis	Diff low/high	Diff midpoint
1-10 M1	Jun	Jun WTI Houston	+0.30/+0.60	+0.45
	Jun	Aug Ice	-2.68/-2.38	-2.53
11-20 M1	Jun	Jun WTI Houston	+0.25/+0.60	+0.43
	Jun	Aug Ice	-2.73/-2.38	-2.56
21-30 M1	Jun	Jun WTI Houston	+0.20/+0.40	+0.30
	Jun	Aug Ice	-2.78/-2.58	-2.68

Workspaces:

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- Russian-origin Crude + Freight - Global
- WTI Arbitrages + Freight - Global
- Crude Imports + Freight - China
- Crude + Freight - Atlantic Basin
- Crude Exports + Freight - US
- Crude Imports + Freight - India

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

Anticipated US crude export cargoes – 15-45 days forward

Tanker name	Approximate volume '000 bl	Estimated grade	Load window	Load port	Chartered destination	ETA
Sea Urchin	700	WTI	31 May	Houston, Texas	Europe	tbd
Alex	2,100	WTI	1 Jun	tbd	China	3 Aug
Hatteras	2,100	WTI and/or WTL	1 Jun	Corpus Christi, Texas	South Korea	1 Aug
Nissos Kythnos	2,100	WTI and/or WTL	4-8 Jun	Corpus Christi, Texas	Europe	tbd
Landbridge F.	2,100	WTI	6-10 Jun	Corpus Christi, Texas	Europe	tbd
Dickens	2,100	WTI and/or Mars	10 Jun	tbd	China	12 Aug
Jaladi	2,100	WTI and/or Mars	10 Jun	tbd	Asia-Pacific	tbd
Atlantas	2,100	WTI	10-15 Jun	tbd	Europe	tbd
G Future	2,100	WTI	12 Jun	tbd	Europe	tbd
Nectar	2,100	WTI	13 Jun	tbd	China	15 Aug
Seavoice	2,100	WTI and/or Mars	15 Jun	tbd	South Korea	15 Aug
Eagle Vancouver	2,100	WTI and/or Mars	15-20 Jun	tbd	China	17 Aug
Grand Ambition	2,100	WTI and/or Mars	22 Jun	tbd	South Korea	22 Aug

US WATERBORNE

decade offers representing the bottom of the range. Bids surfaced at premiums between 15¢-25¢/bl.

WTI Houston's volume-weighted average declined by 2¢/bl against Nymex light sweet crude to a premium of 88¢/bl, reflecting a \$2.98/bl discount to August Ice Brent as the Nymex benchmark held at a \$3.86/bl discount to the international basis.

Outright crude prices declined this session as China's industrial production in April rose by 5.6pc from a year earlier but was 0.47pc lower against March, according to National Statistics Bureau (NBS) data.

Crude throughputs in China eased by 2pc to 14.5mn b/d in April compared to March levels on refinery turnaround activity but were up by 18pc compared to a year earlier. Refinery runs will likely dip further this month as intensive maintenance continues.

State-controlled refiner PetroChina plans for 540,000 b/d of capacity to have maintenance this month. The 60,000 b/d Shandong independent refiner Kenli and state-controlled CNOOC's 120,000 b/d Taizhou refinery have started 40-day and 45-day turnarounds respectively this week.

Separately, a fatal fire was reported last session at Marathon Petroleum's 593,000 b/d Galveston Bay, Texas, refinery, one of the largest in the US. It was later extinguished. The company said it will conduct a full investigation into the cause of the fire. The impact of the fire on the refinery's operations is unclear at this point, but if its operations were disrupted, the refiner could export some crude through the Buckeye Partners' South Texas Gateway terminal, in which Marathon has partial ownership.

WTI continued to dominate the North Sea forward market, with a 17th cargo of June-loading WTI entering the chains process.

BP put a 700,000 bl WTI Midland cargo with arrival dates of 16-18 June into chains this week – the 17th cargo of WTI to enter chains since the start of the month, although this was unconfirmed. No cargoes of Brent, Forties, Oseberg, Ekofisk or Troll have been put into chains in that time, traders said. The low price of WTI relative to North Sea grades made it uneconomical to nominate local grades into the process, according to traders.

Chevron plans to charter the VLCC *Grand Ambition* to begin loading at the US Gulf coast on 22 June and deliver to South Korea, according to vessel fixture reports. ST Shipping, Glencore's trading arm, fixed the VLCC *Cyan Nova* to start loading on 25 May before heading to Europe shortly after its attempted fixture of the VLCC *Cyan Nova* fell through.

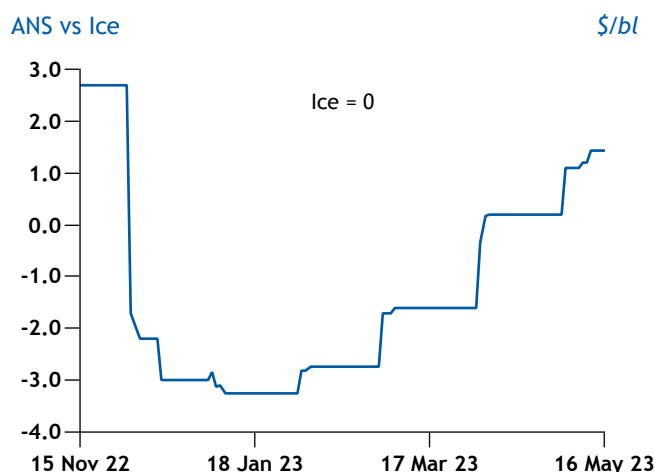
Suncor plans to charter an unnamed Aframax vessel

US west coast pipeline, 15 May				\$/bl
	Basis	Diff to Ice Brent		Outright
Light postings avg	Jul	-1.32		73.91
Heavy postings avg	Jul	-5.16		70.07

US west coast waterborne					\$/bl
	Timing	Basis	Diff low/high		Low/High
ANS del	Jul	CMA Nym	+5.21/+5.36		75.75-75.90
	Jul	CMA Ice	+1.35/+1.50		
ANS del concurrent	Jul	Jul WTI	+5.21/+5.36		76.05-76.20

ANS del USWC monthly volume-weighted average				\$/bl
		Basis		Diff
Apr		Ice CMA		-2.80
May		Ice CMA		-1.62
Jun MTD		Ice CMA		+0.03
Jul MTD		Ice CMA		+1.19

ANS vs Ice



to load on 20 May and deliver to Eastern Canada. Repsol scheduled the Suezmax *Front Thor* to load on 26 May before leaving for Europe.

The dirty Suezmax rate from the US Gulf coast to Europe for a WTI-quality cargo rose by 46¢/bl to \$4.14/bl this session.

Assessment rationale

The ANS assessment against CMA Nymex WTI was adjusted to maintain the spread to CMA Ice Brent established when the grade last traded.

LATIN AMERICA

Ecuador's state-owned PetroEcuador will close a pair of tenders this week to sell 1.08mn bl of of Napo and 2.52mn bl of Oriente crudes for loading in June.

PetroEcuador is offering seven 360,000 bl cargoes of Oriente to be loaded from the Balao terminal in Ecuador and three 360,000 bl cargoes of Napo crude for loading from the OCP terminal. Bidders will have the option to lift the Oriente and Napo cargoes on a Panamax or Aframax tanker.

The load windows for the cargoes will range from 23 June to 1 July.

Bids are due by 19 May against Nymex WTI.

The Argus assessment for the Ecuadorean grades was steady against Nymex WTI with medium sour Oriente at a \$8.45/bl discount and heavy sour Napo at a \$14.20/bl discount.

Opec secretary general Haitham al-Ghais has invited Ecuador to rejoin the producer group, three and a half years after it left. The secretary general said Opec saw Ecuador's return "as a top priority" that would "greatly benefit" the South American nation.

Ecuador joined Opec in 1973, and suspended its membership in 1992. It reactivated that in 2007, only to leave again at the end of 2019 as part of a government belt-tightening campaign.

At that time, Ecuador's crude production was around 550,000 b/d, making it the Opec group's fourth smallest producer behind Congo (Brazzaville), Equatorial Guinea and Gabon. Its output has been edging down ever since, with latest figures from the Ecuadorean central bank putting production at 461,000 b/d in the first quarter of this year.

The energy ministry in March revised down its production target for the year, by 6pc to 490,000 b/d from 521,000 b/d, because of indigenous communities' strikes, power outages and the shutdown of main pipelines at the start of the year.

Venezuela is the only member of the group from Latin America.

Latin America's leading non-Opec producers are Brazil, Colombia and Mexico.

South America				\$/bl
	Timing	Basis	Diff low/high	Low/High
Colombia				
Vasconia	Prompt	Sep WTI	-2.08/-1.58	68.25-68.75
		Sep Ice	-6.15/-5.65	
Castilla	Prompt	Sep WTI	-5.48/-4.18	64.85-66.15
		Sep Ice	-9.55/-8.25	
Argentina				
Escalante	Prompt	Aug WTI	+1.71/+2.21	72.37-72.87
		Aug Ice	-2.35/-1.85	
Medanito	Prompt	Aug WTI	-1.24/-0.24	69.42-70.42
		Aug Ice	-5.30/-4.30	
Ecuador				
Oriente	Prompt	Aug WTI	-8.95/-7.95	61.71-62.71
		Aug Ice	-13.01/-12.01	
Napo	Prompt	Aug WTI	-14.70/-13.70	55.96-56.96
		Aug Ice	-18.76/-17.76	
Mexico				\$/bl
	Timing	Basis	Diff	Price
Maya				
Excluding USWC	May	Jun Nymex	-10.65	60.21
USWC	May	Jun Nymex	-7.70	63.16
Europe	May	Jul Dated Brent	-13.93	61.21
India	May	Jul Dated Brent	-13.63	61.51
Asia-Pacific	May	Jul Dubai	-8.17	66.39
Isthmus				
Excluding USWC	May	Jun Nymex	-5.45	65.41
USWC	May	Jun Nymex	-7.75	63.11
Europe	May	Jul Dated Brent	-12.63	62.51
India	May	Jul Dated Brent	-16.33	58.81
Asia-Pacific	May	Jul Dubai	-6.37	68.19
Olmecca				
Americas	May	Jun Nymex	-4.65	66.21
Europe	May	Jul Dated Brent	-8.48	66.66
India	May	Jul Dated Brent	-12.18	62.96
Mexico K-factors				\$/bl
	Timing	K-factor		
Maya USGC	May	-12.65		
Maya USWC	May	-9.70		
Maya Europe	May	-13.70		
Maya India	May	-13.40		
Maya Asia	May	-8.15		
Isthmus USGC	May	-7.45		
Isthmus USWC	May	-9.75		
Isthmus Europe	May	-12.40		
Isthmus India	May	-16.10		
Isthmus Asia	May	-6.35		
Olmecca USGC	May	-6.65		
Olmecca Europe	May	-8.25		
Olmecca India	May	-11.95		

CANADA

Canada domestic							\$/bl		
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average
Syncrude (SSP)	Jul	CMA Nym	+2.20	+2.65	+2.43	+2.43	72.74	73.19	72.97
WCS	Jul	CMA Nym	-13.70	-13.20	-13.45	-13.45	56.84	57.34	57.09
WCS Cushing	Jun	CMA Nym	-6.40	-6.20	-6.30	-6.66	64.37	64.57	64.47

Canada domestic					\$/bl	
	Timing	Basis	Diff low/high		Low/High	
AWB	Jul	CMA Nym	-16.10/-15.60		54.67-55.17	
CDB	Jul	CMA Nym	-14.85/-14.35		55.92-56.42	
Cold Lake	Jul	CMA Nym	-13.95/-13.45		56.82-57.32	
Condensate	Jul	CMA Nym	-3.75/-2.25		66.79-68.29	
MSW	Jul	CMA Nym	-5.25/-4.75		65.29-65.79	
LSB	Jul	CMA Nym	-4.40/-3.60		66.14-66.94	
LLB	Jul	CMA Nym	-13.45/-11.55		57.09-58.99	

Canada waterborne prices					\$/bl	
	Timing	Basis	Diff low/high		Low/High	
Hibernia	Dated	North Sea	+0.85/+1.15		75.99-76.29	

Shippers submitted nominations to Enbridge's Mainline while Alberta continues to experience wildfires that have shut-in upstream production.

The implied outright price of Western Canadian Select (WCS) at Hardisty, Alberta, is now \$57.09/bl, down from an outright price of \$97.10/bl a year prior.

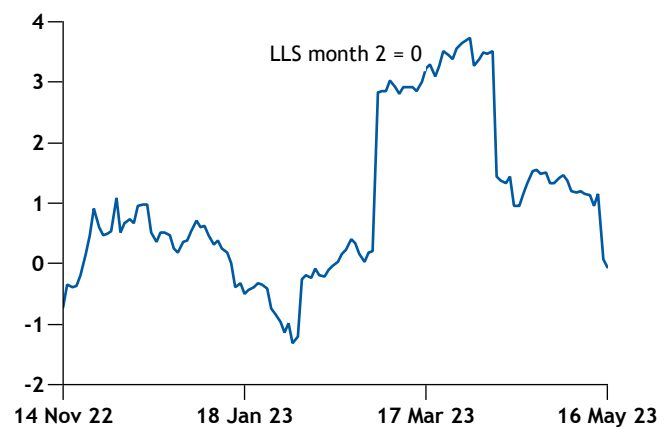
South of the border, the implied outright price of Bakken at Clearbrook, Minnesota, is now \$72.34/bl. This compares to an outright price of \$116.38/bl a year earlier.

The province of Alberta remains in a state of emergency because of wildfires. The number of active wildfires was up to 89 today from 73 on Friday, with 24 of those considered out of control. Crescent Point Energy have shut-in 45,000 b/d of oil equivalent (boe/d) that had been brought back online last week as wildfire conditions worsened because of unseasonably hot temperatures. Evacuation orders are in place in parts of the province, with the Canadian Armed Forces now on-site to offer assistance.

Shippers will now wait for an announcement from Enbridge regarding apportionment on the 3mn b/d Mainline for June flow. There has now been no apportionment on the pipeline system for two consecutive months. Flows on the Mainline are expected to be reduced by 5-10pc when the Trans-Mountain Expansion (TMX) project becomes operational in the first quarter of 2024, as crude is pulled west to the ports at Burnaby, British Columbia.

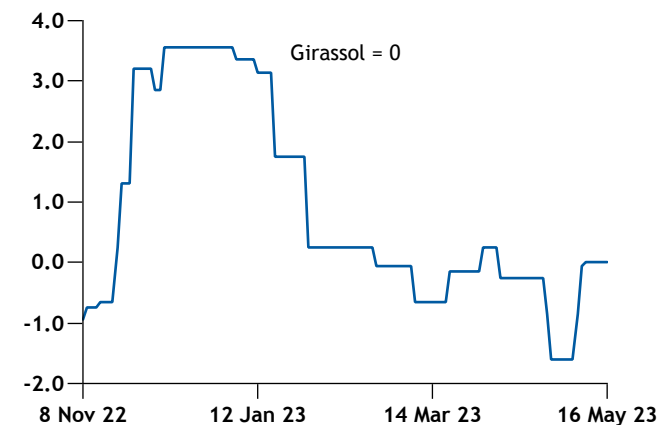
Canadian Synthetic vs LLS month 2

\$/bl



Hibernia vs Girassol

\$/bl



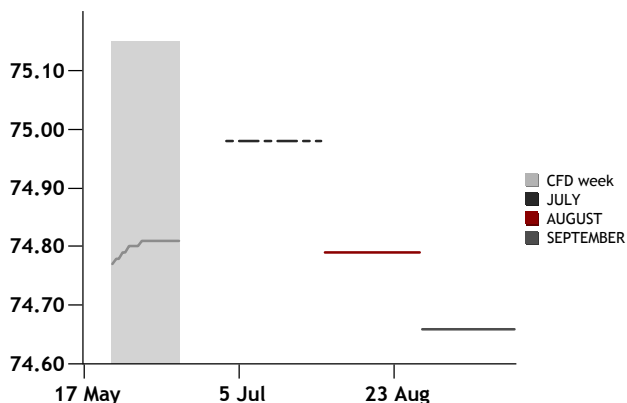
Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for WCS Cushing. In the absence of sufficient transaction information for WCS Houston, market value was assessed using intelligent judgment according to the methodology.

NORTH SEA DATED

North Sea Dated calculation				\$/bl
North Sea flat price				
North Sea partial trade	Delivery period	Volume bl	Price	
volume weighted average (VWA)	Jul	300,000	74.98	
CFD value against relevant basis month				
		Basis	Midpoint	
22 May-26 May		Jul	-0.22	
29 May-2 Jun		Jul	-0.18	
5 Jun-9 Jun		Jul	-0.17	
12 Jun-16 Jun		Jul	-0.17	
19 Jun-23 Jun		Jul	-0.18	
26 Jun-30 Jun		Jul	-0.23	
CFD value for 26 May-16 Jun		Jul	-0.18	
North Sea Anticipated Dated calculation				
		Month	Price	
VWA of North Sea partial trade		Jul	74.98	
CFD value for 26 May-16 Jun		Jul	-0.18	
Anticipated Dated			74.80	
Physical differentials for 26 May-16 Jun				
Grade		Basis	Diff midpoint	
Brent		Dated	+1.45	
Forties		Dated	+0.35	
Oseberg		Dated	+2.90	
Ekofisk		Dated	+1.75	
Troll		Dated	+3.50	
WTI cif Rotterdam		Dated	+1.35	
Freight adjustment				
WTI North Sea freight adjustment factor 16 May			1.01	
WTI North Sea freight adjustment factor 17 May			1.03	
North Sea quality premiums (QP) for 26 May-16 Jun				
Oseberg			+1.17	
Ekofisk			+0.84	
Troll			+1.47	
North Sea Dated calculation				
	Anticipated Dated	Add Diff midpoint	Subtract QP and freight	Price
Brent component of Dated	74.80	+1.45		76.25
Forties component of Dated	74.80	+0.35		75.15
Oseberg component of Dated	74.80	+2.90	+1.17	76.53
Ekofisk component of Dated	74.80	+1.75	+0.84	75.71
Troll component of Dated	74.80	+3.50	+1.47	76.83
WTI component of Dated	74.80	+1.35	+1.01	75.14
North Sea Dated is the lowest component on each day				75.14

North Sea forward curve establishing Anticipated Dated \$/bl



North Sea flat price

Argus derives a flat price from trade of a month-ahead forward contract for the delivery of Brent, Forties, Oseberg, Ekofisk, Troll and WTI on a cif Rotterdam basis, taking a weighted average of trade between 4:29pm and 4:30pm in London. In the absence of trade, a combination of the Ice Brent futures one-minute marker and the exchange of futures for physical (EFP) market is used.

Anticipated Dated

We then look at contracts for difference (CFDs), with which the market anticipates North Sea Dated in the coming weeks at differentials to the forward month. Prices falling between 10 days and a full calendar month ahead are averaged.

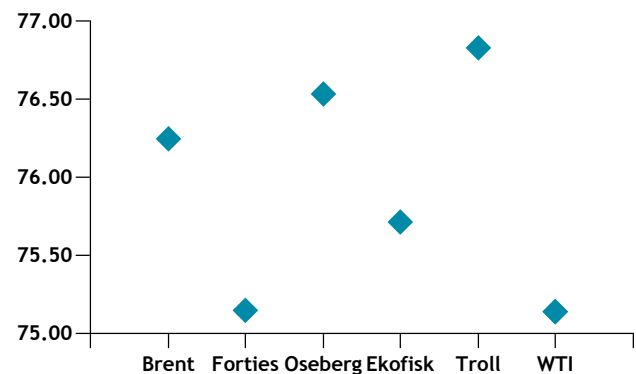
Physical differentials

Argus assesses trade in physical cargoes of Brent, Forties, Oseberg, Ekofisk, Troll and WTI crude, assigning differentials to North Sea Dated to each grade for the 10-days to month-ahead range.

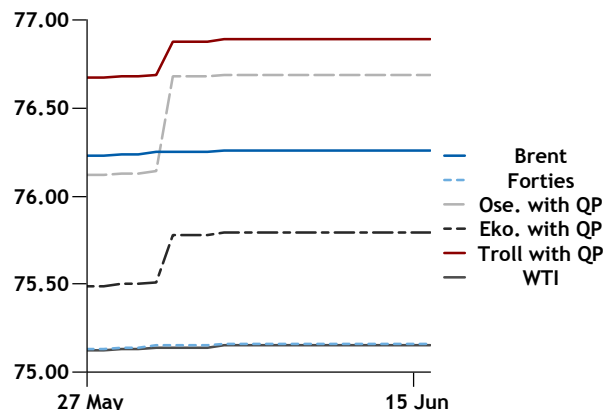
Dated components

The combination of the Anticipated Dated and the physical values gives each grade's component of North Sea Dated for each day of the assessment period. Quality premiums are deducted from Oseberg, Ekofisk and Troll for benchmarking purposes. Argus adjusts the WTI component by removing from the delivered price the freight cost to Rotterdam. The lowest-priced of the six components on each day is used to set the price of North Sea Dated.

Components of North Sea Dated \$/bl



Dated components-establishing North Sea Dated \$/bl



NORTH SEA

WTI continued to dominate the North Sea forward market, with a 17th cargo of June-loading WTI entering the chains process.

BP put a 700,000 bl WTI Midland cargo with arrival dates of 16-18 June into chains this week – the 17th cargo of WTI to enter chains since the start of the month, although this was unconfirmed. No cargoes of Brent, Forties, Oseberg, Ekofisk or Troll have been put into chains in that time, traders said. The low price of WTI relative to North Sea grades made it uneconomical to nominate local grades into the process, according to traders. But some traders suggested that values for WTI will have to correct upwardly in the coming weeks, which could make North Sea grades more competitive.

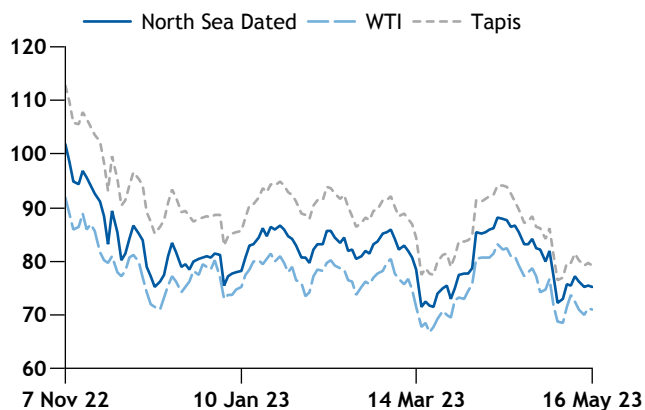
A VLCC laden with WTI was discharging in Sweden after transferring a part of its cargo onto an Aframax at the ship-to-ship (STS) transfer hub of Scapa Flow. The VLCC *Agios Sostis I* arrived at Gothenburg on 15 May laden with its remaining 1.4mn bl of crude and was discharging as of 16 May, according to Vortexa. Two refineries are located near Gothenburg – a 106,000 b/d plant run by Preem and the 80,000 b/d refinery operated by ST1.

The Aframax *Oslo TS*, which loaded nearly 600,000 bl of the grade via STS from the *Agios Sostis I* at Scapa Flow last week, arrived at Pembroke on 16 May, tracking data showed.

For the avoidance of doubt, 600,000 bl May-loading cargoes of Brent, Forties, Oseberg, Ekofisk and Troll and 700,000 bl June-loading cargoes of Brent, Forties, Oseberg, Ekofisk and Troll and June-arriving cargoes of WTI are considered for inclusion in the Argus North Sea Dated assessment.

North Sea Dated, WTI, Tapis

\$/bl



North Sea					\$/bl
	Basis	Diff	Bid	Ask	±
Dated*	Jul	+0.16	75.11	75.17	-0.33
Dated BFOET**	Jul	+0.17	75.12	75.18	-0.32
Argus Brent Sour	Dated	0.01	75.12	75.18	-0.32
Brent†	Dated	+1.45	76.56	76.62	-0.33
Forties	Dated	+0.35	75.46	75.52	-0.33
Oseberg	Dated	+2.90	78.01	78.07	-0.33
Ekofisk	Dated	+1.75	76.86	76.92	-0.33
Troll	Dated	+3.50	78.61	78.67	-0.33
Statfjord cif Rotterdam	Dated	+2.60	77.71	77.77	-0.33
Statfjord fob platform	Dated	+1.32	76.43	76.49	-0.33
Gullfaks cif Rotterdam	Dated	+3.20	78.31	78.37	-0.33
Gullfaks fob platform	Dated	+1.92	77.03	77.09	-0.33
Flotta Gold	Dated	+1.00	76.11	76.17	-0.33
Grane	Dated	+0.70	75.81	75.87	-0.33
Johan Sverdrup	Dated	+0.55	75.66	75.72	-0.33

*Argus North Sea Dated is the equivalent of Platts Dated Brent

**Dated BFOET is a Dated illustration, which excludes WTI.

†Argus Brent is the price of physical Brent calculated using Argus North Sea Dated plus the Dated-related market differential for Brent

North Sea EFP					
	Basis	Diff			
Jul	Ice	+0.06			
Aug	Ice	+0.05			
Ice minute markers					
			1-minute	±	
Jul			74.93	-0.28	
Aug			74.75	-0.23	
Sep			74.43	-0.20	
Dated CFDs, Singapore close					
	Basis	Bid	Ask	±	
22 May-26 May	Aug	+0.11	+0.19	+0.04	
29 May-2 Jun	Aug	+0.11	+0.19	+0.05	
5 Jun-9 Jun	Aug	+0.08	+0.16	+0.10	
12 Jun-16 Jun	Aug	+0.05	+0.13	+0.14	
Dated CFDs, London close					
	Basis	Bid	Ask	±	
22 May-26 May	Aug	-0.07	+0.01	-0.18	
29 May-2 Jun	Aug	-0.03	+0.05	-0.14	
5 Jun-9 Jun	Aug	-0.02	+0.06	-0.10	
12 Jun-16 Jun	Aug	-0.02	+0.06	-0.07	
19 Jun-23 Jun	Aug	-0.03	+0.05	-0.08	
26 Jun-30 Jun	Aug	-0.08	0.00	-0.06	
Delivered northwest Europe assessments					
	Basis	Diff	Bid	Ask	±
WTI cif Rotterdam (period 1)*	Dated	+1.35	76.46	76.52	-0.33
WTI cif Rotterdam (period 2)*	Dated	+1.80	76.91	76.97	-0.31

*Period 1 covers cargoes arriving at Rotterdam from 12 days forward to one month ahead + two days. Period 2 covers cargoes arriving at Rotterdam from one month ahead + three days forward to 60 days.

NORTH SEA

Valero runs the 210,000 b/d refinery near Pembroke.

Draft restrictions in the Danish straits might have caused the STS transfer. Maximum draft for cargoes passing Skagen is limited to 15m, while the draft of a fully-loaded VLCC can exceed 21m.

Last week's STS operation was the first for WTI at Scapa Flow. WTI has transferred STS previously at the Danish Skaw hub, with the vast majority of those cargoes destined for Kalundborg. WTI joined the Dated basket as the sixth grade this month.

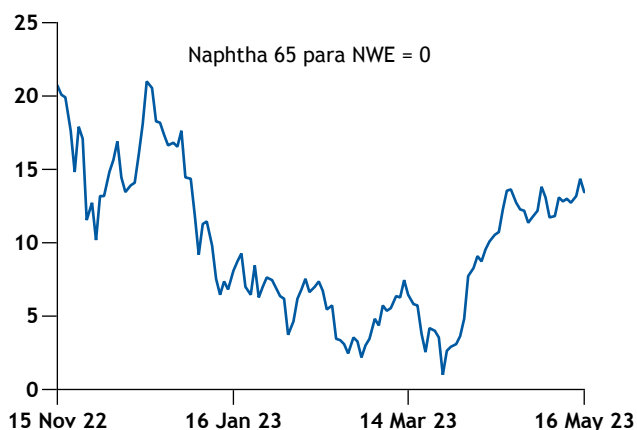
A cargo of Norwegian crude was in effective floating storage. The Aframax *Eagle Barents* departed from Mongstad with around 650,000 bl of crude on 4 May and reached Skagen on 7 May – where it has been floating ever since. Both medium sour Johan Sverdrup and light sweet Troll load at Mongstad.

No bids or offers emerged in the afternoon trading window – the second consecutive session of muted activity.

Forward prices inched lower. The Argus July North Sea price was \$74.98/bl, a drop of 25¢/bl from the previous session, based on 300,000 bl of trade in the minute leading up to the timestamp. CFDs also declined. The front-week 22-26 May CFD fell by 18¢/bl to August North Sea -3¢/bl, while the second-week 29 May - 2 June CFD shed 14¢/bl to August North Sea +1¢/bl.

Ekofisk vs naphtha 65 para NWE cif

\$/bl



North Sea \$/bl

North Sea quality premiums (QP)

	May	Jun
Ekofisk	1.04	0.77
Oseberg	1.56	1.02
Troll	1.61	1.42

De-escalators

Sulphur	0.30
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North Sea calculations

	Basis	Price
Volume-weighted average of North Sea partial traded	Jul	74.98
Ice Brent marker	Jul	74.93
Exchange of futures for physical (EFP)	Aug	+0.05
North Sea basis (flat price)	Jul	74.98

Anticipated Dated based on 10 days-month ahead CFD strip:

	Price	±
26 May-16 Jun	74.80	-0.32
Argus Brent component of Dated	76.25	-0.32
Argus Forties component of Dated	75.15	-0.32
Argus Oseberg component of Dated (QP applied)	76.53	-0.30
Argus Oseberg component of Dated (no QP applied)	77.70	-0.32
Argus Ekofisk component of Dated (QP applied)	75.71	-0.30
Argus Ekofisk component of Dated (no QP applied)	76.55	-0.32
Argus Troll component of Dated (QP applied)	76.83	-0.31
Argus WTI component of Dated (QP applied)	75.14	-0.33

*the lowest component on each day of the 10-day - month-ahead assessment period sets Dated.

Argus alternative Dated illustration

	Basis	Diff	Price	±
Argus Dated Average	Jul	+1.54	76.520	-0.320

Dated to Ice Brent frontline, London close

	Bid	Ask	±
May	-0.06	+0.02	-0.08
Jun	+0.03	+0.11	-0.06
Jul	+0.11	+0.19	-0.04
Aug	+0.19	+0.27	-0.03
1Qc"	+0.17	+0.25	-0.03
2Qc"	+0.16	+0.24	nc
2024	+0.04	+0.10	-0.01

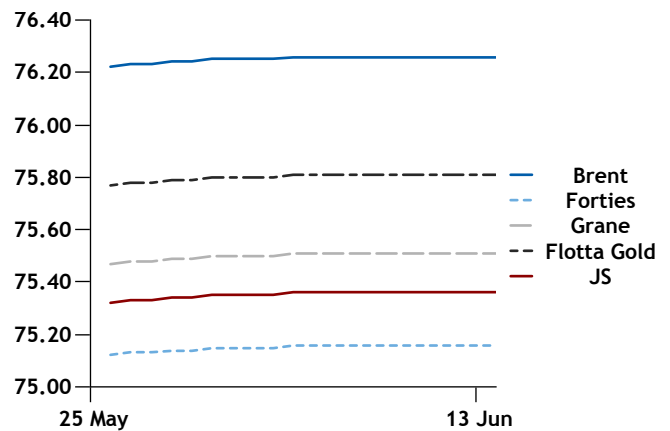
Ice Bwave, 15 May 23

Jul	74.77
Aug	74.56
Sep	74.24
Saudi formula base	75.09

ARGUS BRENT SOUR

Argus Brent Sour calculation				\$/bl
Anticipated Dated				74.80
Argus Brent Sour calculation				
Components of Argus Brent Sour	Anticipated Dated	Add Diff midpoint		Price
Brent	74.80	+1.45		76.25
Forties	74.80	+0.35		75.15
Grane	74.80	+0.70		75.50
Flotta Gold	74.80	+1.00		75.80
Johan Sverdrup fob Mongstad	74.80	+0.55		75.35
Argus Brent Sour is the lowest component on each day of the assessment period				75.15

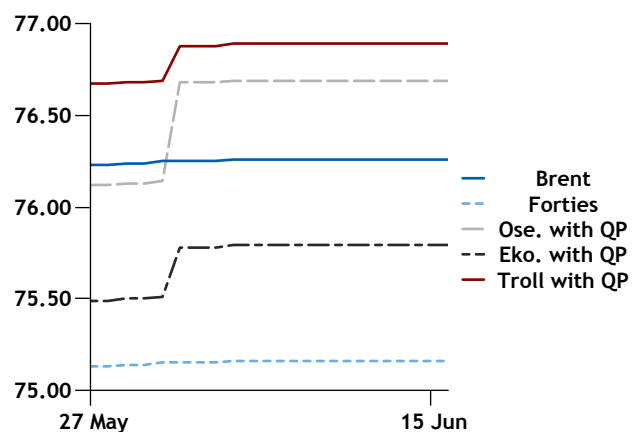
Components of Argus Brent Sour



ALTERNATIVE NORTH SEA DATED ILLUSTRATIONS

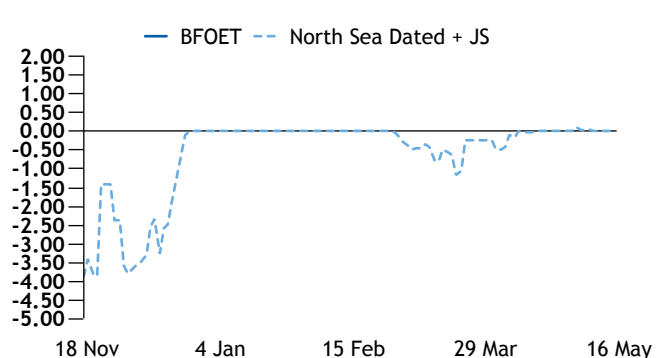
Dated BFOET calculation				\$/bl
Anticipated Dated				74.80
Dated BFOET quality premiums (QP) for 26 May-16 Jun				
Oseberg				+1.17
Ekofisk				+0.84
Troll				+1.47
BFOET calculation				
Components of Dated BFOET	Anticipated Dated	Add Diff midpoint	Subtract QP	Price
Brent	74.80	+1.45		76.25
Forties	74.80	+0.35		75.15
Oseberg	74.80	+2.90	+1.17	76.53
Ekofisk	74.80	+1.75	+0.84	75.71
Troll	74.80	+3.50	+1.47	76.83
Dated BFOET is the lowest component on each day of the assessment period				75.15

Components of Dated BFOET



North Sea Dated + JS calculation				\$/bl
Anticipated Dated				74.80
North Sea quality adjustments (QA) for 26 May-16 Jun				
Oseberg				+1.17
Ekofisk				+0.84
Troll				+1.47
Johan Sverdrup fob Mongstad				-1.68
North Sea Dated + JS calculation				
Components of North Sea Dated + JS	Anticipated Dated	Add Diff midpoint	Subtract QA	Price
Brent	74.80	+1.45		76.25
Forties	74.80	+0.35		75.15
Oseberg	74.80	+2.90	+1.17	76.53
Ekofisk	74.80	+1.75	+0.84	75.71
Troll	74.80	+3.50	+1.47	76.83
Johan Sverdrup fob Mongstad	74.80	+0.55	-1.68	77.03
North Sea Dated is the lowest component on each day of the assessment period				75.15

Dated illustrations vs North Sea Dated



RUSSIA-CASPIAN

Russian Urals prices were discussed higher in the Baltics but broadly steady in the Black Sea, while Caspian CPC Blend slightly gained ground.

Some traders pegged medium-sour Urals shipments out of Primorsk and Ust-Luga higher than North Sea Dated -26 fob, but others indicated that June-loading cargoes were changing hands at around Dated -27.00/-26.00 on the same sale terms. Traders indicated that the June cycle had begun this week, while other traders said they have not sold any June-loading cargoes yet.

In the Black Sea, traders discussed prices for 80,000t Urals cargoes loading from Novorossiysk at Dated -25.25 on a fob basis, broadly unchanged from last week, although no deals were heard concluded at these levels.

On Caspian supplies, traders discussed CPC Blend broadly steady at around Dated -3.65 cif Augusta, while others said that the light sour crude was changing hands at around -3.50 on the same sale terms. Prices for CPC Blend have receded in recent sessions as the key long-haul buyer, South Korea, is at the peak of its maintenance season.

Deteriorating economics for sales of Atlantic Basin crude east may further erode buying interest for CPC Blend in Asia-Pacific. July's Brent-Dubai EFS, the premium of July Ice Brent futures to the same month's Dubai swaps, was at \$2.00/bl so far this week, up from \$1.87/bl last week.

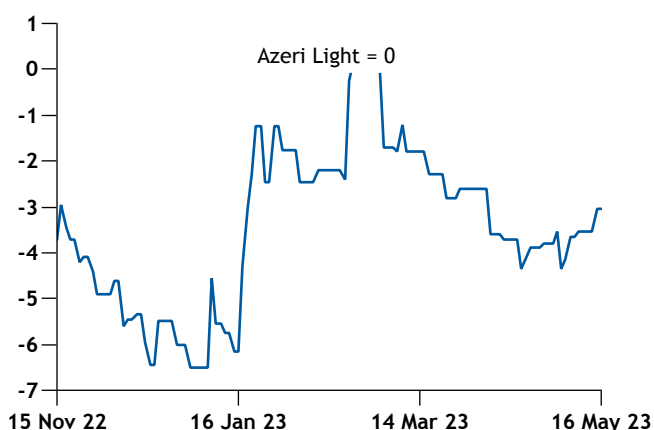
Elsewhere, crude shipments by rail for export from Russia fell by 30pc on the month and by 55pc on the year to 27,100 b/d in April, according to freight forwarders. Crude supplies by rail to the CPC system also fell by 3pc to 69,100t, as small producer Centergenco reduced supplies by 4pc to 65,100t.

Azerbaijan produced 512,000 b/d of crude last month, compared with 515,000 b/d in March, according to the

Russia-Caspian					\$/bl
	Basis	Diff	Bid	Ask	±
fob Russia					
Urals fob Primorsk	Dated	-26.40	48.71	48.77	-0.03
Urals fob Ust-Luga	Dated	-26.40	48.71	48.77	-0.03
Urals Aframax fob Novo	Dated	-25.25	49.86	49.92	-0.33
Urals Suezmax fob Novo	Dated	-25.45	49.66	49.72	-0.33
Siberian Light fob Novo	Dated	-24.25	50.86	50.92	-0.33
Urals dap West Coast India	Dated	-11.75	63.36	63.42	-0.33
Delivered					
Kebco cif Augusta	Dated	+1.15	76.26	76.32	-0.33
CPC Blend cif Augusta	Dated	-3.60	71.51	71.57	-0.28
BTC Blend cif Augusta	Dated	+3.50	78.61	78.67	-0.33
Azeri Light cif Augusta	Dated	+3.30	78.41	78.47	-0.33
Netforwards					
Urals NWE cif Rotterdam	Dated	-23.75	51.36	51.42	+0.01
Urals Med Aframax cif Augusta	Dated	-20.84	54.27	54.33	-0.33
Urals Med Suezmax cif Augusta	Dated	-23.44	51.67	51.73	-0.33
Siberian Light cif Augusta	Dated	-19.84	55.27	55.33	-0.33
Netbacks					
Urals cif Black Sea	Dated	-23.56	51.55	51.61	-0.33
CPC fob terminal	Dated	-6.44	68.67	68.73	-0.28
BTC fob Ceyhan	Dated	+1.35	76.46	76.52	-0.36
Azeri Light fob Supsa	Dated	+0.34	75.45	75.51	-0.33
Retrospective netbacks					
Urals fob Primorsk	Dated	-26.97	48.14	48.20	-0.14
Urals fob Ust-Luga	Dated	-26.97	48.14	48.20	-0.14
Urals fob Novo (Aframax)	Dated	-26.83	48.28	48.34	-0.11
CPC Blend fob	Dated	-5.33	69.78	69.84	-0.33
Turkish straits demurrage					
Delay days					4.00
Aframax demurrage rate \$/d					60,000
Suezmax demurrage rate \$/d					60,000

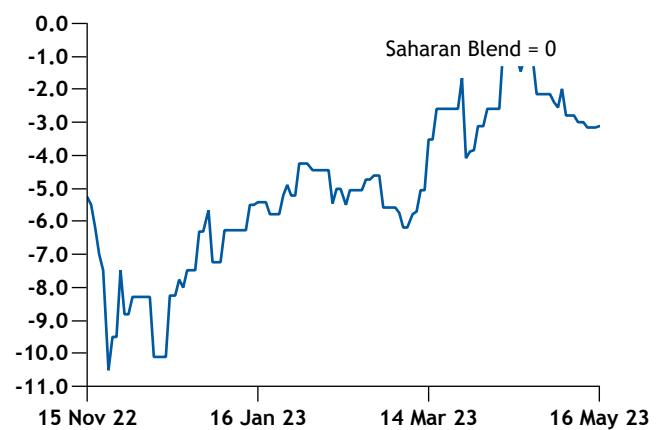
Bonny Light vs Azeri Light

\$/bl



CPC Blend vs Saharan Blend

\$/bl



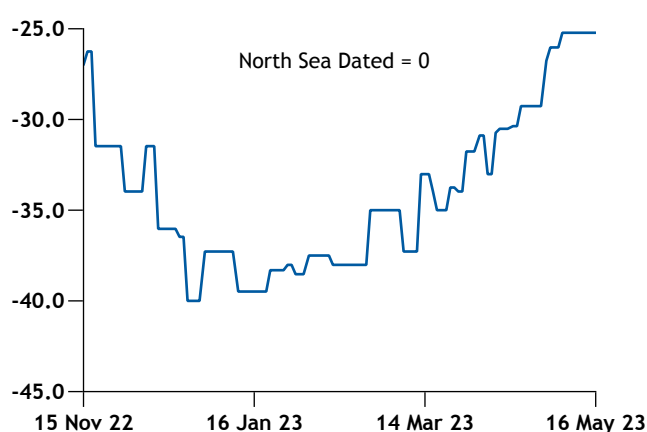
RUSSIA-CASPIAN

country's energy ministry. Production from the BP-led Azeri-Chirag-Guneshli (ACG) complex in the Caspian Sea was 2,000 b/d lower on the month at 372,000 b/d, while output from fields operated by state-owned Socar inched down by 1,000 b/d to 140,000 b/d. Azerbaijan was 172,000 b/d below its Opec+ crude target last month. The quota is set at 684,000 b/d until the end of 2023.

No deals, offers, or bids surfaced in the afternoon trading window.

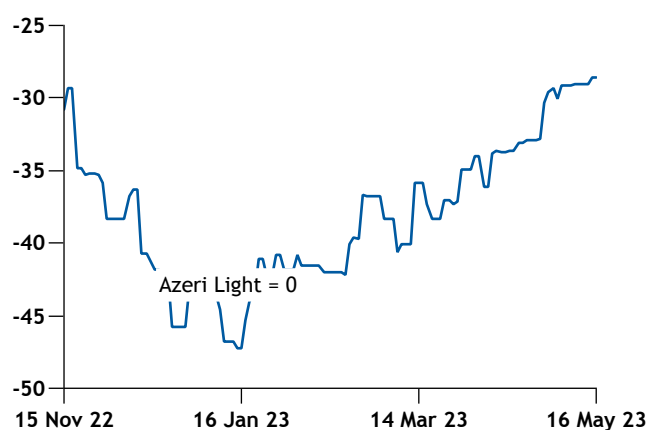
Urals fob Novo vs North Sea Dated

\$/bl



Urals fob Novo vs Azeri Light

\$/bl



Druzhba pipeline — Urals (monthly prices)

\$/bl

	Basis	Diff low	Diff high	Low	High
Slovakia					
Apr	Monthly avg of Dated	-28.66	-28.60	56.18	56.24
Mar	Monthly avg of Dated	-34.77	-34.73	43.52	43.56
Feb	Monthly avg of Dated	-35.99	-35.92	46.51	46.58
Hungary					
Apr	Monthly avg of Dated	-32.70	-28.60	52.14	56.24
Mar	Monthly avg of Dated	-39.30	-34.73	38.99	43.56
Feb	Monthly avg of Dated	-40.50	-35.92	42.00	46.58
Poland					
Jan	Monthly avg of Dated	-38.23	-37.73	44.63	45.13
Dec	Monthly avg of Dated	-33.69	-33.19	46.67	47.17
Nov	Monthly avg of Dated	-26.89	-26.39	64.21	64.71
Germany					
Dec	Monthly avg of Dated	-33.24	-33.09	47.12	47.27
Nov	Monthly avg of Dated	-27.00	-26.29	64.10	64.81
Oct	Monthly avg of Dated	-	-	-	-

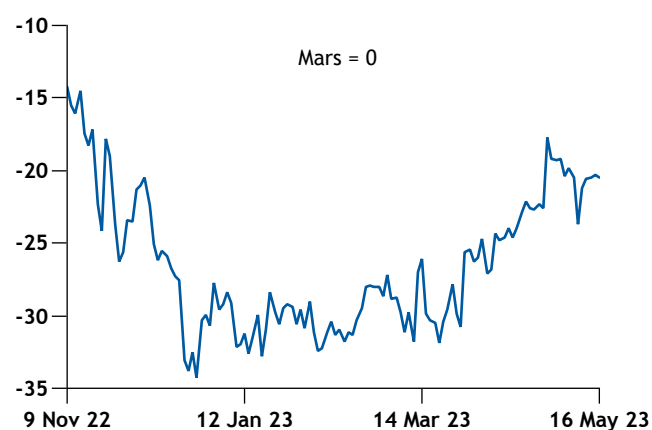
North Sea Dated month average

\$/bl

Apr	84.844
Mar	78.291
Feb	82.501

Urals fob Novo vs Mars

\$/bl



MEDITERRANEAN

Some supplies of Saudi Arabia crude for Germany's Schwedt refinery arrived at the Polish port of Gdansk.

An 800,000 bl cargo of Saudi Arab Light was unloading at Gdansk terminal on 16 May, according to oil analytics firm Vortexa. The ministry of economic affairs in Berlin said the Saudi crude will be supplied by pipeline to the 226,000 b/d Schwedt plant in eastern Germany within days.

Germany halted all Russian oil imports at the end of 2022, including deliveries through the Druzhba pipeline, on which Schwedt was previously dependent. The refinery is sourcing crude through a 143,000 b/d pipeline from the German Baltic port of Rostock, but this route can cover only around 60pc of Schwedt capacity. Schwedt has regarded Gdansk as an important route for its crude supplies. But since November, the refinery has imported only a few cargoes via Gdansk – steady supplies were blocked by Polish demands to remove the Russian oil company Rosneft as a shareholder of the Schwedt refinery. Germany's upper house of parliament last week approved an amendment to its Energy Security Act that will enable the sale of Russian state-controlled Rosneft's local businesses.

German demand for north African crudes, particularly for Libyan grades, has also become increased since last August as the country's refineries intensified their efforts to diversify away from Russian Urals. Around 34,000 b/d of Libyan crude has been shipped to Germany between August 2022 and April this year, according to Argus tracking. This compares with just 3,000 b/d of Libyan crude departed to Germany in 2021.

Elsewhere on sweets, values for June-loading cargoes of Algerian flagship Saharan Blend were discussed broadly in line with the latest Argus assessments at North Sea Dated -0.50 fob Algeria. Traders said that trade had been broadly muted of late. Receding refining margins in Europe were likely to be pressuring the sweet light grade.

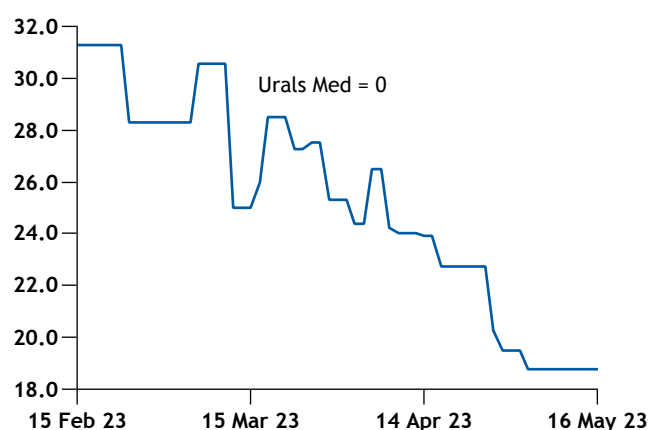
The Mediterranean crude market commentary on 15 May incorrectly stated the German port of Wilhelmshaven serves the 226,000 b/d Schwedt refinery operated by the PCK consortium. Wilhelmshaven terminal serves the 103,000 b/d Holborn refinery in Hamburg, BP's 94,000 b/d Lingen and 257,000 b/d Gelsenkirchen plants and Shell's 147,000 b/d refinery in Wesseling.

Mediterranean					\$/bl
	Basis	Diff	Bid	Ask	±
Saharan Blend	Dated	-0.50	74.61	74.67	-0.33
Zarzitine	Dated	-0.60	74.51	74.57	-0.33
Es Sider	Dated	+0.80	75.91	75.97	-0.33
Kirkuk	Dated	-6.50	68.61	68.67	-0.33
Basrah Medium fob (Med)	Dated	+1.20	71.71	71.77	-0.33
Basrah Heavy fob (Med)	Dated	+0.60	68.31	68.37	-0.33
Iranian Light fob Sidi Kerir	Dated	-1.17	73.94	74.00	-0.33
Iranian Heavy fob Sidi Kerir	Dated	-3.97	71.14	71.20	-0.33
Suez Blend	Dated	-1.30	73.81	73.87	-0.33

Official formula prices					\$/bl
Basis					
Algeria		Mar	Apr	May	
Saharan Blend	Dated	2	0.5	0.6	
Syria		Aug	Sep	Oct	
Syrian Light	Dated	na	na	na	
Souedie	Dated	na	na	na	
Libya		Mar	Apr	May	
Al-Jurf	Dated	-4	-4	-2.5	
Amna	Dated	0	-0.05	0.25	
Bouri	Dated	-5.5	-5.5	-4	
Brega	Dated	-0.85	-1.15	-1.05	
Bu Atiffel	Dated	-0.55	-0.55	-0.15	
Es Sider	Dated	-0.9	-0.9	-0.5	
Esharara	Dated	0.2	-0.1	0.1	
Mellitah	Dated	-1	-1.25	-1.15	
Mesla	Dated	-1.15	-1.25	-1.05	
Mesla ex Ras Lanuf	Dated	na	na	na	
Sarir	Dated	-3	-3	-2.6	
Sirtica	Dated	-0.65	-0.65	-0.45	
Zueitina	Dated	-0.6	-0.7	-0.3	

Kirkuk vs Urals fob Novo

\$/bl



WEST AFRICA

China's state-owned Unipet again offered Angolan Olombendo in the afternoon window but did not draw any buying interest.

The firm sought a buyer for a 950,000 bl cargo of the light sweet grade loading on 22-23 June at North Sea Dated +0.35. It then lowered its indication to Dated -0.25, to no avail. The offer was not confirmed.

Elsewhere, some Nigerian crude supplies were about to complete a transatlantic journey to south America, according to Vortexa. The Suezmax *Eagle San Jose* was expected to arrive at the Peruvian port of La Pampilla on 17 May, laden with nearly 1mn bl of Nigerian medium sweet Bonga, having departed from the grade's namesake terminal on 12 April. It is the first shipment of west African crude to head to Peru since December 2022. La Pampilla is home to a 117,000 b/d refinery operated by Spain's Repsol.

Overall west African exports to South America averaged 173,000 b/d in April, up from 54,000 b/d in March and the highest monthly rate since November last year.

The rise in transatlantic flows comes as west African grades are displaced from historically important destinations. Nigerian crude in particular is still facing stiff competition east of the Suez canal, where India – which used to be a key outlet for grades from the country – has been favouring discounted Russian supplies since the start of the conflict in Ukraine.

Vortexa data show that around 197,000 b/d of light sweet ESPO Blend discharged at various Indian ports last month. This was almost double the 99,000 b/d that unloaded in India in March.

India resumed imports of ESPO Blend in March after a three-month pause, as refiners in the country capitalised on the grade's discounted price. Purchases of the light sweet grade were also boosted by the prospect of reduced availability of India's preferred Urals grade. Russia's pledge to cut its crude output by 500,000 b/d from March until the end of this year was expected to reduce Urals volumes, rather than those of the higher-quality ESPO Blend.

Meanwhile, ESPO Blend was continuing to sail to India this month. Three Aframax tankers have departed for Indian destinations from Russia's far eastern Kozmino port so far in May, according to Vortexa. The vessels were carrying a total of around 2.3mn bl of the grade.

West Africa					\$/bl
	Basis	Diff	Bid	Ask	±
Agbami	Dated	-3.00	72.11	72.17	-0.33
Amenam	Dated	-2.00	73.11	73.17	-0.33
Bonga	Dated	+0.90	76.01	76.07	-0.33
Bonny Light	Dated	+0.25	75.36	75.42	-0.33
Brass River	Dated	-0.75	74.36	74.42	-0.33
CJ Blend	Dated	+1.65	76.76	76.82	-0.33
EA Blend	Dated	+1.75	76.86	76.92	-0.33
Egina	Dated	+2.45	77.56	77.62	-0.33
Erha	Dated	+0.45	75.56	75.62	-0.33
Escravos	Dated	+0.80	75.91	75.97	-0.33
Forcados	Dated	+0.45	75.56	75.62	-0.33
Qua Iboe	Dated	+0.25	75.36	75.42	-0.33
Usan	Dated	-3.80	71.31	71.37	-0.33
Cabinda	Dated	+2.00	77.11	77.17	-0.33
Dalia	Dated	-1.30	73.81	73.87	-0.33
Girassol	Dated	+1.00	76.11	76.17	-0.33
Hungo	Dated	-1.40	73.71	73.77	-0.33
Kissanje	Dated	+0.45	75.56	75.62	-0.33
Mostarda	Dated	-2.20	72.91	72.97	-0.33
Nemba	Dated	-0.80	74.31	74.37	-0.33
Zafiro	Dated	+1.00	76.11	76.17	-0.33
Jubilee	Dated	-0.10	75.01	75.07	-0.33
Doba	Dated	-3.00	72.11	72.17	-0.33
Djeno	Dated	-1.35	73.76	73.82	-0.33

Nigerian official formula prices					\$/bl
	Basis	Mar	Apr	May	
Abo	Dated	+0.65	+0.99	-0.60	
Agbami	Dated	-2.59	-2.71	-3.63	
Ajapa	Dated	+1.90	+1.86	+0.66	
Aje	Dated	+1.15	+1.19	-0.98	
Akpo	Dated	-2.69	-2.92	-3.75	
Amenam	Dated	-1.79	-1.80	-2.97	
Antan	Dated	-1.20	-0.37	-0.75	
Asaramatoru	Dated	+1.59	+1.64	-0.29	
Bonga	Dated	+2.23	+2.05	+0.59	
Bonny Light	Dated	+0.95	+1.04	-0.19	
Brass River	Dated	-0.21	-0.31	-1.45	
CJ Blend	Dated	+2.46	+2.40	+1.19	
EA	Dated	+2.56	+2.45	+1.29	
Ebok	Dated	-4.26	-1.84	-4.34	
Egina	Dated	+2.95	+2.80	+1.71	
Eremor	Dated	-19.01	-12.51	-8.67	
Erha	Dated	+1.87	+1.86	+0.44	
Escravos	Dated	+1.85	+1.81	+0.66	
Forcados	Dated	+1.86	+1.73	+0.31	
Ima	Dated	-1.41	-0.71	-0.77	
Jones Creek	Dated	+1.86	+1.73	-2.11	
Obe	Dated	-0.58	-0.02	-1.34	
Okono	Dated	+2.12	+1.94	+0.13	
Okoro	Dated	+4.55	+5.13	+1.38	
Okwori	Dated	+2.95	+2.89	+0.70	
Okwubome formula	Dated	+1.27	+1.34	+1.02	
Otakikpo	Dated	+1.15	+1.19	-1.70	
Oyo	Dated	+4.37	+4.10	+0.58	
Pennington	Dated	+2.70	+2.51	-0.40	
Qua Iboe	Dated	+1.27	+1.34	+0.02	
Ukpokiti	Dated	+2.07	+2.09	-0.05	
Usan	Dated	-3.31	-3.37	-4.28	
Yoho	Dated	+1.22	+1.24	+0.17	
Zafiro*	Dated	-1.66	+1.00	+0.75	
Premium for advanced pricing	Dated	+0.07	+0.07	+0.07	
Premium for deferred pricing	Dated	+0.07	+0.07	+0.07	

*Equatorial Guinea, priced by NNPC

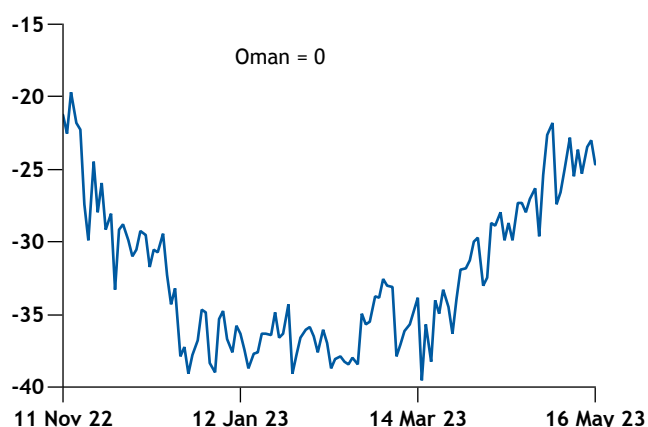
MIDEAST GULF

Chinese private-sector Rongsheng has bought medium sour Abu Dhabi Upper Zakum in its latest crude tender.

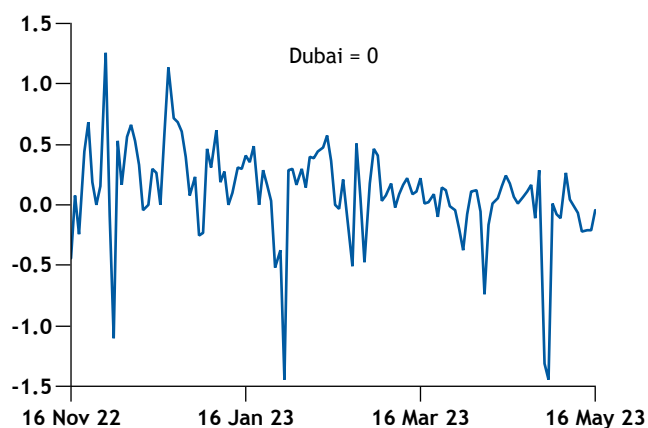
Rongsheng bought three very large crude carriers (VLCC) of Upper Zakum in its tender that closed on 16 May, traders said. One VLCC is likely for July-loading and was likely purchased around an 80¢/bl premium to front-line Dubai assessments in July. The other two VLCCs of Upper Zakum will load in August, according to traders, and were heard purchased at a premium of around 40¢/bl to front-line Dubai assessments in July. The seller of the July cargo was not clear although Totsa and PetroChina were heard the sellers of the August-loading cargoes, traders said.

Rongsheng had bought 4mn bl of Upper Zakum via tender in April, but subsequently took another 1mn bl from the spot market.

Urals vs Oman



Oman vs Dubai



Mideast Gulf					\$/bl	
	Month	Basis	Diff	Bid	Ask	±
Dubai	Jul			74.51	74.61	+1.14
Oman	Jul	Dubai swaps	+1.00	74.47	74.57	+1.31
Murban	Jul	Dubai swaps	+1.34	74.81	74.91	+1.10
Das	Jul	Dubai swaps	+0.34	73.81	73.91	+1.10
Upper Zakum	Jul	Dubai swaps	+0.80	74.27	74.37	+0.98
Umm Lulu	Jul	Dubai swaps	+1.54	75.01	75.11	+1.10
Qatar Land	Jul	QP	0.00	74.42	74.52	+1.13
Qatar Marine	Jul	QP	0.00	74.42	74.52	+1.13
Qatar Al-Shaheen	Jul	Dubai swaps	+1.35	74.82	74.92	+1.13
Banoco Arab Medium	Jul	Aramco	-0.90	75.07	75.17	+1.22
Basrah Medium fob Iraq†	Jun	Somo	+1.20	75.19	75.29	+1.28
Basrah Heavy fob Iraq†	Jun	Somo	+1.20	72.04	72.14	+1.28
DFC fob Qatar	Jul	Dubai swaps	-1.05	72.42	72.52	+1.13
LSC fob Qatar	Jul	Dubai swaps	-1.50	71.97	72.07	+1.13

†Asia-Pacific destination-restricted cargoes

RGV differentials to Murban			\$/bl	
		Diff		±
Das		-0.33		nc
Upper Zakum		-1.79		-0.07
Umm Lulu		-0.35		-0.04
Qatar Land		-0.79		-0.01
Qatar Marine		-1.98		-0.06

Differentials to Murban, 4:30pm Singapore					\$/bl	
	Month	Basis	Diff			±
Mideast Gulf						
Dubai	Jul	Jul Murban	-0.30			+0.04
Oman	Jul	Jul Murban	-0.34			+0.21
Qatar Al-Shaheen	Jul	Jul Murban	+0.01			+0.03
Banoco Arab Medium	Jul	Jul Murban	+0.26			+0.12
Basrah Medium fob Iraq	Jun	Jul Murban	+0.38			+0.18
Basrah Heavy fob Iraq	Jun	Jul Murban	-2.77			+0.18
DFC fob Qatar	Jul	Jul Murban	-2.39			+0.03
LSC fob Qatar	Jul	Jul Murban	-2.84			+0.03
Russia Asia-Pacific						
ESPO Blend		Jul Murban	-9.84			+0.03
Sokol		Jul Murban	-10.34			+0.03
Sakhalin Blend		Jul Murban	-13.34			+0.03
Substitute North Sea Dated		Jul Murban	+0.91			-0.29

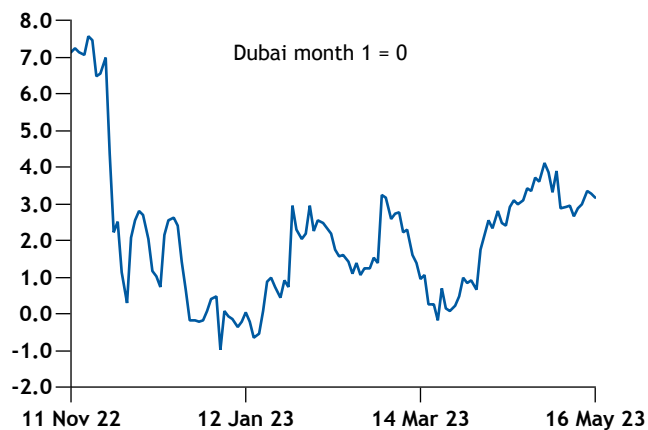
MIDEAST GULF

Traders were now watching for awards of state-owned QatarEnergy's (QE) sell tender, where QE is offering five cargoes of Al-Shaheen crude to load on 1-2, 2-3, 14-15, 24-25 and 27-28 July, along with cargoes of Qatar Land and Qatar Marine.

July Dubai partials were heard to have traded at \$74.45-74.60/bl. Glencore declared a cargo of July-loading Oman crude to PetroChina following the convergence of 20 partials. Vitol also declared a cargo of July-loading Upper Zakum crude to Totsa.

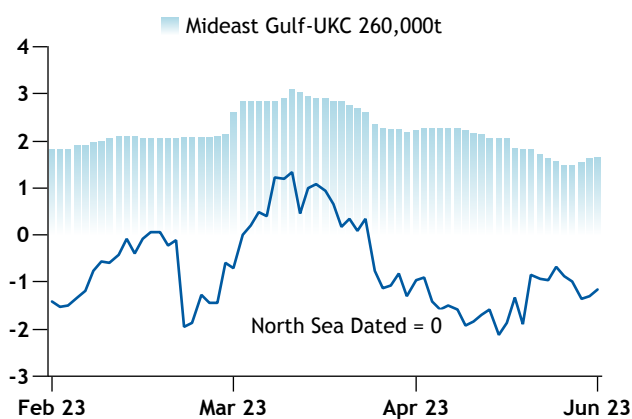
Cabinda vs Dubai month 1

\$/bl



Dubai vs North Sea Dated, MEG freight

\$/bl



Mideast Gulf		\$/bl		
		Bid	Ask	±
Dubai forward, 4:30pm Singapore				
Jul		74.51	74.61	+1.14
Aug		73.96	74.06	+1.14
Sep		73.47	73.57	+1.13
Oct		72.95	73.05	+1.09
Dubai forward, 4:30pm London				
Jul		73.94	74.02	-0.20
Aug		73.38	73.48	-0.20
Sep		72.89	72.99	-0.21
Oct		72.37	72.47	-0.25
Dubai intermonths, 4:30pm Singapore				
Jul/Aug		0.55		nc
Aug/Sep		0.49		+0.01
Sep/Oct		0.52		+0.04
Dubai swaps, 4:30pm Singapore				
Jun		73.96	74.06	+1.14
Jul		73.47	73.57	+1.13
Aug		72.95	73.05	+1.09
Sep		72.43	72.53	+1.04
<i>Dubai swaps months are pricing months</i>				
Dubai EFS, 4:30pm Singapore				
Jul		+1.98		-0.04
Aug		+2.28		+0.02
Sep		+2.46		+0.07
Ice Brent, 4:30pm Singapore				
Jul		75.50		+1.09
Aug		75.28		+1.11
Sep		74.94		+1.11
Oct		74.55		+1.08
Oman forward, 4:30pm Singapore				
	Diff	Dubai swaps	Bid	Ask ±
Jul	+1.00	Jul	74.47	74.57 +1.31
Aug	+1.37	Aug	74.32	74.42 +1.43
Sep	+1.40	Sep	73.83	73.93 +1.43

Methodology				\$/bl	
Dubai forward month calculator					
Ice Brent month 1	Jul				75.50
Dubai EFS month 1	Jul		-		+1.98
Dubai swap month 2*	Jul		=		73.52
Dubai forward month 3*	Sep		=		73.52
Dubai intermonth	Aug/Sep		+		0.49
Dubai forward month 2	Aug		=		74.01
Dubai intermonth	Jul/Aug		+		0.55
Dubai forward month 1	Jul		=		74.56
*Dubai swap month 2 = Dubai forward month 3					
Oman forward month calculator					
	MOG formula	Dubai-Oman spread	Diff to Dubai swaps	Dubai swaps outright	Oman forward midpoint
Jul	0.00	+1.00	+1.00	73.52	74.52
Aug	0.00	+1.37	+1.37	73.00	74.37
Sep	0.00	+1.40	+1.40	72.48	73.88

ASIA-PACIFIC

More offers emerged for July-loading Vietnamese and Malaysian crude cargoes.

Vietnam's state-owned PVOil has issued a tender to sell 300,000 bl of medium sweet Bunga Orkid loading on 1-7 July. Bids are due in on 23 May and must remain valid until 26 May. June-loading Bunga Orkid had been sold to a Thai buyer back in April, at a premium of about \$4-5/bl to North Sea Dated.

Malaysia's state-owned Petronas is due to load one cargo of Malaysian light sweet Labuan crude at the end of July. Labuan had faced downward pressure last month from weak refining margins. Petronas sold June-loading Labuan to a trading firm at a premium above \$6/bl to Dated, compared with a premium of above \$8/bl to Dated achieved for a May-loading cargo.

More details emerged on the July-loading programme for Malaysian light sweet Kimanis crude. US firm ConocoPhillips will load two Kimanis cargoes over 7-11 and 23-27 July. Shell will load one Kimanis cargo on 18-22 July. Malaysia's state-owned Petronas will load a Kimanis cargo on 13-17 July and a cross-month cargo on 29 July-2 August. June-loading Kimanis had been sold in April at a premium of about \$7/bl to Dated.

Asia-Pacific					\$/bl
	Basis	Diff	Bid	Ask	±
Minas	ICP	+1.00	73.25	73.35	+1.09
Duri	ICP	+1.00	74.25	74.35	+1.09
Cinta	ICP	+0.30	70.85	70.95	+1.09
Widuri	ICP	+0.30	71.35	71.45	+1.09
Senipah	ICP	0.00	65.25	65.35	+1.09
Attaka	ICP	+1.50	72.75	72.85	+1.09
Ardjuna	ICP	0.00	72.25	72.35	+1.09
Belida	ICP	+1.00	74.25	74.35	+1.09
Sutu Den	Dated*	+4.00	79.09	79.19	-0.33
Bach Ho	Dated*	+4.00	79.09	79.19	-0.33
Tapis	Dated*	+4.10	79.19	79.29	-0.33
Kikeh	Dated*	+6.00	81.09	81.19	-0.33
Kimanis	Dated*	+7.00	82.09	82.19	-0.33
Labuan	Dated*	+6.50	81.59	81.69	-0.33
Miri Light	Dated*	+4.20	79.29	79.39	-0.33
Kutubu Light	Dated*	-4.85	70.24	70.34	-0.33
Cossack	Dated*	-4.85	70.24	70.34	-0.33
North West Shelf	Dated*	-9.20	65.89	65.99	-2.03
Ichthys	Dated*	-1.00	74.09	74.19	-0.33
Vincent	Dated*	+3.50	78.59	78.69	-0.33
Pyrenees	Dated*	+7.50	82.59	82.69	-0.33
Van Gogh	Dated*	+3.10	78.19	78.29	-0.33
Sudan					
	Basis	Diff	Bid	Ask	±
Nile Blend	Dated*	-3.75	71.34	71.44	-0.33
Dar Blend	Dated*	-2.00	73.09	73.19	-0.33

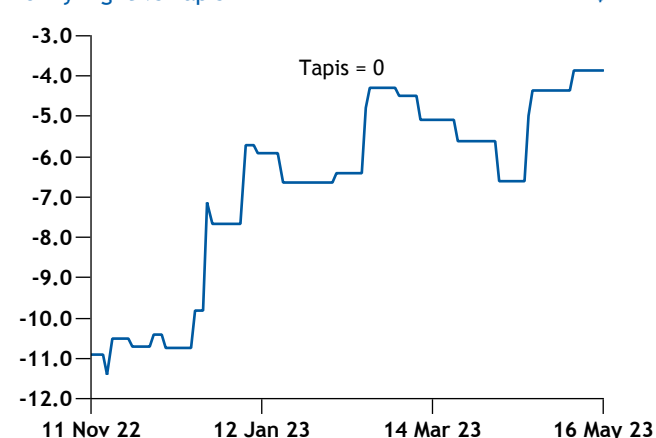
*when North Sea Dated is unavailable owing to a UK holiday, Substitute Dated will be used

Benchmarks	
North Sea Dated	75.14
Substitute Dated	75.77
Tapis Singapore close	79.87

Argus Condensate Index (ACI)	
	\$/bl
ACI, Qatar DFC	68.27
Qatar DFC cfr Singapore	73.32
Australia North West Shelf (NWS) cfr Singapore	68.27
DFC cfr differential to NWS cfr	5
	\$/t
VLCC Qatar-Singapore freight	7.16
Aframax northwest Australia-Singapore freight	15.92

Argus Japanese Crude Cocktail Index					\$/bl
	Nov	Dec	Jan	Feb	Mar
Argus JCC (fixed)	100.4646	94.9921	88.2598	87.8752	-
Argus JCC (preliminary)					85.3519

Bonny Light vs Tapis



ASIA-PACIFIC

Delivered China

Limited activity kept spot differentials for key grades unchanged on a delivered ex-ship (des) Shandong basis.

June-delivery ESPO Blend was stable at a \$5.70/bl discount to August Ice Brent. Some ESPO Blend deals may have concluded for July-delivery cargoes, but this could not be confirmed and there were no details available, traders said.

Oman was at a \$12/bl discount to August Ice Brent for June-delivery cargoes. August-delivery Oman Export Blend on a net forward basis was at around a \$1.90/bl premium over October Ice Brent.

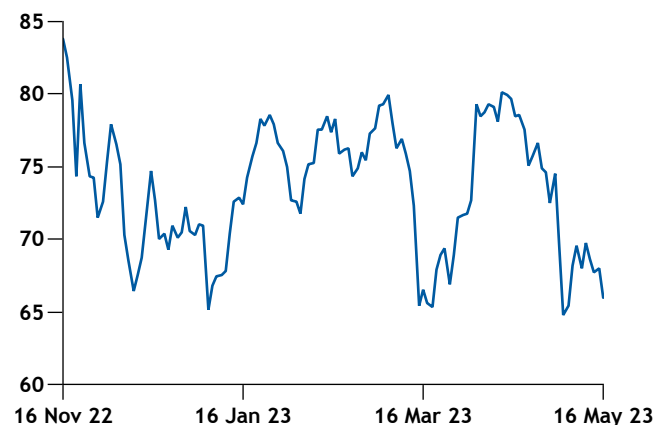
July-delivery Tupi was stable at a \$2.50/bl premium to North Sea Dated in June, which was equivalent to a \$3/bl premium over September Ice Brent.

Delivered Northeast Asia						\$/bl
	Month	Basis	Diff	Bid	Ask	±
WTI del NE Asia	Aug	Jul Dubai	+4.50	77.97	78.07	+2.13

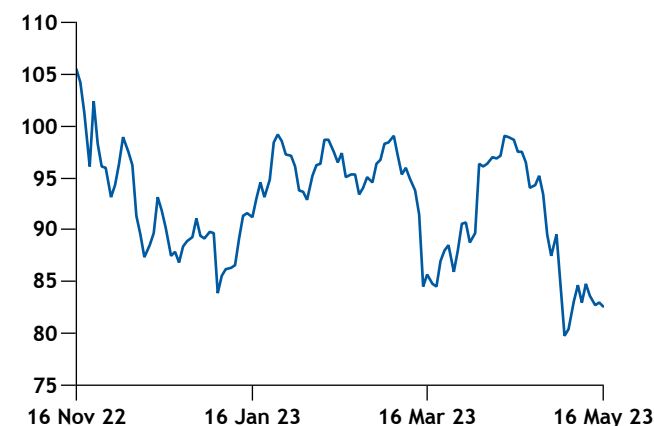
Delivered ex-ship Shandong prices							\$/bl
Grade	Timing	Basis	Diff Mid	Low	High	Price	±
ESPO Blend	Jun	Aug Ice Brent	-5.70	69.28	69.88	69.58	+1.11
Djeno	Jul	Sep Ice Brent	+2.50	76.84	78.04	77.44	+1.11
Tupi	Jul	Sep Ice Brent	+3.00	77.74	78.14	77.94	+1.11
	Jul	Jun Dated	+2.50	na	na	na	nc
Johan Sverdrup	Jul	Sep Ice Brent	+4.20	78.14	80.14	79.14	+1.11
Oman	Jun	Aug Ice Brent	-12.00	62.78	63.78	63.28	+1.11

Mideast Gulf and Atlantic basin crude cfr Asia (fob plus freight)					
	Month	Singapore \$/bl	±	China \$/bl	±
Mideast Gulf					
Dubai	Jul	75.63	+1.18	76.14	+1.19
Oman	Jul	75.57	+1.34	76.08	+1.36
Murban	Jul	75.87	+1.13	76.36	+1.15
Upper Zakum	Jul	75.37	+1.02	75.87	+1.03
Umm Zulu	Jul	76.06	+1.13	76.55	+1.16
Qatar Marine	Jul	75.50	+1.16	76.00	+1.18
Al-Shaheen	Jul	75.94	+1.17	76.45	+1.18
Basrah Medium	Jun	76.32	+1.31	76.85	+1.34
Basrah Heavy	Jun	73.21	+1.32	73.75	+1.34
West Africa					
Cabinda	Dtd	80.03	+0.89	80.58	+0.92
Girassol	Dtd	79.05	+0.90	79.60	+0.92
Bonny Light	Dtd	78.25	+0.89	78.79	+0.92
Qua Iboe	Dtd	78.23	+0.90	78.76	+0.92
Escravos	Dtd	78.81	+0.90	79.35	+0.92
North Sea					
Forties	Dtd			79.58	+1.22
US Gulf coast					
WTI	Prompt	77.43	+1.84	77.91	+1.84
Mars	Jun	76.13	+0.83	76.65	+0.83
WCS	Jun	71.03	+1.85	71.58	+1.85

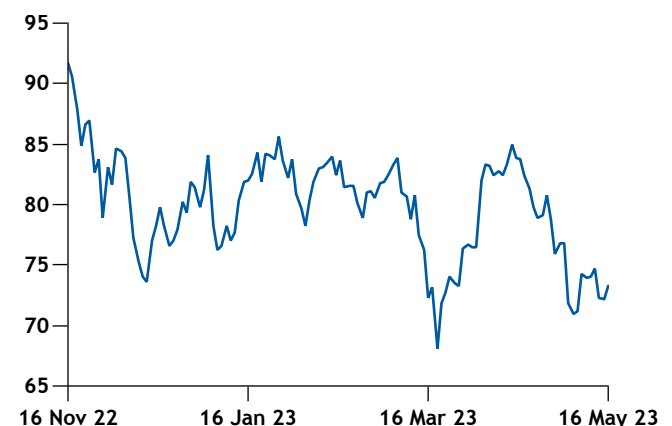
Northwest Shelf



Pyrenees



Minas



RUSSIA ASIA-PACIFIC

Traders were mulling the outlook for Chinese oil demand, with the country's crude runs set to fall in April-May, while the IEA projects a bullish recovery in China's oil demand growth.

China's April crude runs fell from the previous month as gasoline and diesel refining margins dipped on slowing domestic consumption, reduced exports and increased refinery turnarounds. The crude runs will likely continue to dip in May as intensive refinery maintenance is weighing on throughputs.

But the IEA has hiked its forecast for world oil demand growth this year by almost 200,000 b/d, with the upwards revision underpinned by China, where the recovery in demand "continues to surpass expectations".

On the supply side, the agency warns that global oil stocks may come under pressure as Opec+ cuts take effect this month, but it notes Russian output continues to prove resilient, with Moscow's crude and product exports hitting a post-Ukraine conflict high of 8.3mn b/d in April.

Assessment rationale

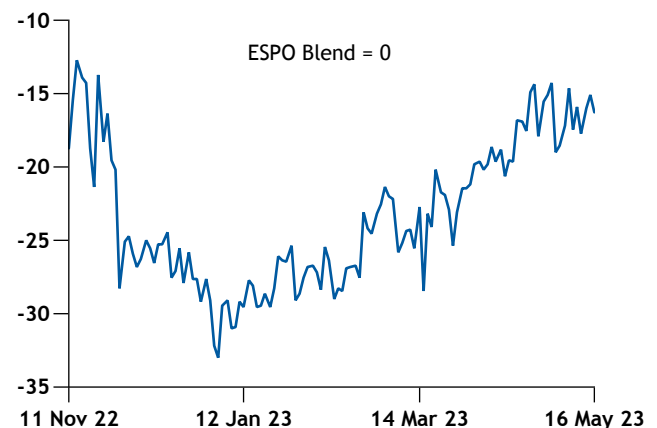
ESPO Blend fob Kozmino (PA0007196) is assessed on the basis of transactions, as and when these are identified in the market commentary, in accordance with the methodology.

Russia Asia-Pacific						\$/bl
	Basis		Diff	Bid	Ask	±
ESPO Blend	Jul	Dubai swaps	-8.50	64.97	65.07	+1.13
ESPO Blend*	Jul	Ice Brent	-10.48	64.97	65.07	+1.13
Sokol	Jul	Dubai swaps	-9.00	64.47	64.57	+1.13
Sakhalin Blend	Jul	Dubai swaps	-12.00	61.47	61.57	+1.13
*Jul-loading cargoes						
Russia-Caspian crude cif basis Singapore						
				Bid	Ask	±
BTC Blend				81.54	81.60	-0.26
Urals (Black Sea)				56.00	56.06	-0.28

Dirty freight rates from Kozmino (ESPO) 100,000t		\$/bl
		Rate
To Yeosu		2.40
To north China		2.97
To Chiba		2.97
To Singapore		3.51

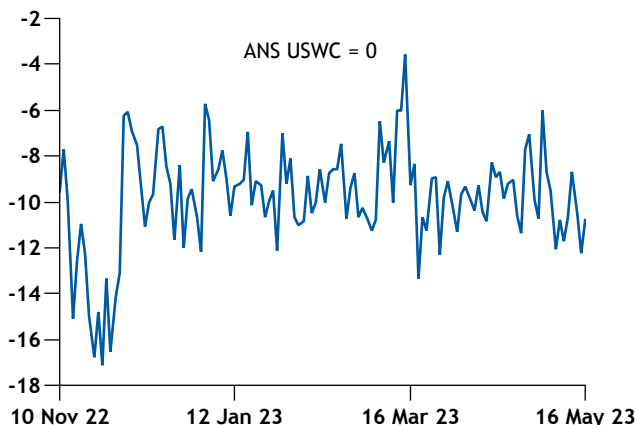
Urals fob Primorsk vs ESPO Blend

\$/bl



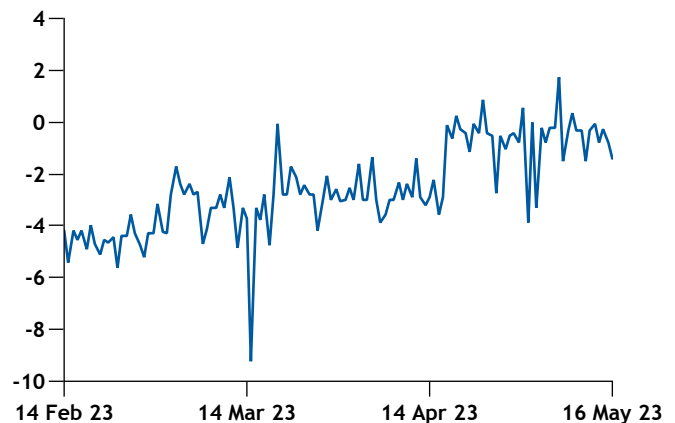
ESPO Blend vs ANS USWC

\$/bl



Azeri Light vs Tapis

\$/bl



OFFICIAL PRICES

Official formula prices		\$/bl		
Basis				
Saudi Arabia		Apr	May	Jun
Saudi Arabia to US: fob Ras Tanura				
Arab Extra Light	ASCI	+8.20	+8.40	+8.40
Arab Light	ASCI	+6.65	+6.75	+6.25
Arab Medium	ASCI	+6.45	+6.95	+6.95
Arab Heavy	ASCI	+6.00	+6.50	+6.50
Saudi Arabia to US: delivered US Gulf				
Arab Extra Light	ASCI	+9.50	+9.70	+9.70
Arab Light	ASCI	+7.95	+8.05	+7.55
Arab Medium	ASCI	+7.75	+8.25	+8.25
Arab Heavy	ASCI	+7.30	+7.80	+7.80
Saudi Arabia to NW Europe: fob Ras Tanura*				
Arab Extra Light	Ice Brent Settlement	+1.60	+1.60	+2.70
Arab Light	Ice Brent Settlement	+1.00	+1.00	+2.10
Arab Medium	Ice Brent Settlement	+0.50	+0.50	+1.60
Arab Heavy	Ice Brent Settlement	-2.60	-2.60	-0.80
Saudi Arabia to Mediterranean: fob Sidi Kerir*				
Arab Extra Light	Ice Brent Settlement	+2.10	+2.10	+3.20
Arab Light	Ice Brent Settlement	+0.80	+0.80	+1.90
Arab Medium	Ice Brent Settlement	+0.50	+0.50	+1.60
Arab Heavy	Ice Brent Settlement	-3.10	-3.10	-1.30
Saudi Arabia to Mediterranean: fob Ras Tanura*				
Arab Extra Light	Ice Brent Settlement	+2.10	+2.10	+3.20
Arab Light	Ice Brent Settlement	+0.80	+0.80	+1.90
Arab Medium	Ice Brent Settlement	+0.50	+0.50	+1.60
Arab Heavy	Ice Brent Settlement	-3.10	-3.10	-1.30
Saudi Arabia to Asia-Pacific: fob Ras Tanura				
Arab Super Light	Oman/Dubai avg	+4.95	+5.00	+4.30
Arab Extra Light	Oman/Dubai avg	+2.70	+2.80	+2.10
Arab Light	Oman/Dubai avg	+2.50	+2.80	+2.55
Arab Medium	Oman/Dubai avg	+2.50	+2.80	+2.00
Arab Heavy	Oman/Dubai avg	+0.75	+1.25	+0.35
Iran		Feb	Mar	Apr
Iran to Mediterranean: fob Kharg Island				
Iranian Light	Ice Brent Settlement	-3.55	-1.60	-1.20
Iranian Heavy	Ice Brent Settlement	-5.85	-3.90	-2.80
Foroozan Blend	Ice Brent Settlement	-6.00	-3.80	-2.90
Soroush	Ice Brent Settlement	na	na	na
Nowruz	Ice Brent Settlement	na	na	na
Iran to NW Europe: fob Kharg Island				
Iranian Light	Ice Brent Settlement	-3.40	-1.35	-0.75
Iranian Heavy	Ice Brent Settlement	-5.80	-3.70	-2.30
Foroozan Blend	Ice Brent Settlement	-5.90	-3.65	-2.40
Iran to Asia-Pacific: fob Kharg Island				
Iranian Light	Oman/Dubai avg	+1.80	+2.00	+2.50
Iranian Heavy	Oman/Dubai avg	-0.25	+0.35	+1.25
Foroozan Blend	Oman/Dubai avg	-0.25	+0.40	+1.15
Soroush	Oman/Dubai avg	-5.70	-5.00	-2.45
Nowruz	Oman/Dubai avg	-5.70	-5.00	-2.45
Kuwait		Apr	May	Jun
Kuwait to Asia-Pacific				
Kuwait	Oman/Dubai avg	+2.15	+2.40	+1.70
Kuwait to US				
Kuwait	ASCI	+6.45	+6.95	+6.95
Kuwait	Arab Medium	0.00	0.00	0.00
Kuwait to Mediterranean				
fob Kuwait	Dated	-0.30	-0.30	+0.20
fob Sidi Kerir	Dated	0.00	0.00	+0.50
Kuwait to northwest Europe				
fob Kuwait	Dated	-0.25	-0.25	+0.25

*months prior to July were priced against Ice Bwave

Official formula prices (continued)		\$/bl		
Basis				
Dubai		Apr	May	Jun
Dubai fob	Oman MOG OSP	-0.20	-0.20	-0.10
Yemen fob Salif/Ash Shihr				
Marib Light	Dated	na	na	na
Masila	Dated	na	na	na
Iraq		Apr*	May*	Jun†
Iraq to Europe				
Kirkuk (fob Ceyhan)	Dated	-1.45	-1.45	-0.30
Basrah Medium	Dated	-5.70	-5.55	-4.60
Basrah Heavy	Dated	-9.50	-8.90	-7.40
Iraq to US				
Kirkuk (fob Ceyhan)	ASCI	1.00	1.10	1.25
Basrah Medium	ASCI	-1.20	-1.00	-1.00
Basrah Heavy	ASCI	-6.15	-5.75	-5.45
Iraq to Asia-Pacific				
Basrah Medium	Oman/Dubai avg	-0.15	-0.15	-0.15
Basrah Heavy	Oman/Dubai avg	-4	-3.40	-3.30
Official selling prices		\$/bl		
Abu Dhabi		Apr	May	Jun
Murban		83.36	79.55	84.11
Das premium to Murban		-1.30	-0.95	-1.00
Umm Lulu premium to Murban		+0.05	+0.05	+0.20
Upper Zakum premium to Murban		-1.20	-1.10	-0.70
Qatar		Apr	May	Jun
Dukhan/Land premium to Oman/Dubai avg		+1.35		
Marine premium to Oman/Dubai avg		+1.00		
Dukhan/Land premium to Dubai avg			+1.40	+0.95
Marine premium to Dubai avg			+1.00	+0.95
Oman		Apr	May	Jun
Oman		82.23	78.49	83.28
Indonesia		Feb	Mar	Apr
Minas		80.76	76.02	81.63
Duri		87.78	83.23	88.68
Widuri		79.60	74.86	80.47
Belida		81.11	75.86	80.56
Attaka		81.04	75.83	80.54
Ardjuna		80.07	74.82	79.52
Cinta		79.05	74.31	79.92
Senipah		74.87	70.12	74.89
Malaysia		Feb	Mar	Apr
Tapis		86.45	83.24	87.66
MCO Alpha Premium		+9.00	+9.30	+6.65
Labuan		91.49	87.86	91.59
Miri		91.49	87.86	91.59
Kikeh		91.49	87.86	91.59
Bintulu		88.31	84.89	88.96
Dulang		93.29	89.27	92.96
Brunei		Oct	Nov	Dec
Seria Light		100.38	99.19	88.00
Champion		100.48	99.29	88.10
Reference prices		\$/bl		
Opec reference basket monthly avg		Mar	Apr	May
Opec		81.88	78.45	84.13
Argus Japanese Crude Cocktail Index		Dec	Jan	Feb
Argus JCC		94.99	88.26	87.88

The Argus Japanese Crude Cocktail Index is created by Argus based on data published by the Customs and Tariff Bureau of Japan's Ministry of Finance.

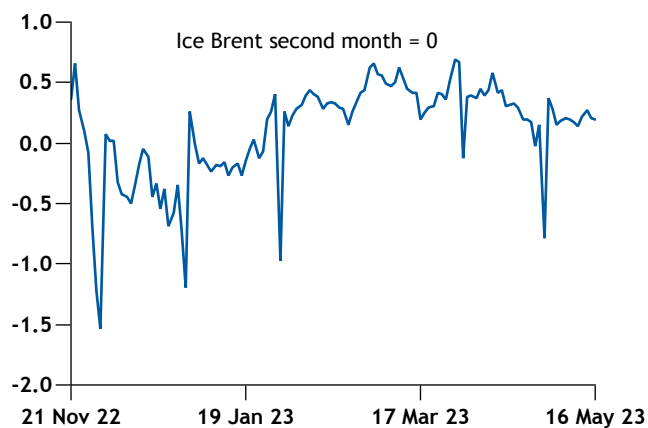
FUTURES AND FORWARD MARKETS

Futures markets							\$/bl
	Open	High	Low	S'pore*	London†	Settle	±
Ice Brent							
Jul	75.55	75.95	74.50	75.50	74.93	74.91	-0.32
Aug	75.33	75.74	74.32	75.28	74.75	74.72	-0.30
Sep	75.00	75.40	74.01	74.94	74.43	74.40	-0.29
*4:30pm Singapore minute marker, †4:30pm London minute marker							
Nymex Light Sweet							
Jun	71.32	71.79	70.45	71.35	70.88	70.86	-0.25
Jul	71.28	71.76	70.44	71.33	70.87	70.84	-0.25
Aug	71.11	71.55	70.27	71.14	70.70	70.66	-0.25
Sep	70.85	71.23	69.96	70.85	70.36	70.33	-0.25
Dec 23						69.22	-0.24
Dec 24						66.26	-0.11
Dec 25						64.03	-0.05
Dec 26						62.20	-0.03
Dec 27						60.59	-0.04
DME Oman							
Jul				74.52			+1.31
Aug				74.37			+1.43
Sep				73.88			+1.43
Oct				73.50			+1.43
Volume bl				2,373,000			
IFAD Murban							
Jul				74.86			+1.10
Aug				74.36			+1.05
Sep				73.93			+1.02
Oct				73.61			+1.01
Volume bl				2,699,000			
Tocom Mideast Gulf (day session)							
Jul					72.59		+0.95
Aug					71.69		+0.98
Sep					70.92		+0.88
Oct					70.21		+0.77
Volume bl					3,701,875		

INE crude futures				
Timing	Settle Yuan/bl	±	Settle \$/bl	±
Jun	504.50	+6.80	72.58	+1.13
Jul	507.60	+6.70	73.03	+1.12
Aug	508.00	+5.20	73.09	+0.90
Sep	508.60	+5.60	73.17	+0.96
Volume bl			82,307,000	

Ice Brent: First month vs second month

\$/bl



Forward markets				\$/bl
	Bid	Ask		±
North Sea, Singapore close				
Jun	75.77	75.85		+1.02
Jul	75.53	75.59		+1.09
Aug	75.30	75.38		+1.11
Sep	74.96	75.04		+1.11
North Sea, London close				
Dated	75.11	75.17		-0.33
Jun	75.11	75.19		-0.33
Jul	74.95	75.01		-0.25
Aug	74.75	74.83		-0.20
Sep	74.62	74.70		+0.02
Dubai, Singapore close				
Jul	74.51	74.61		+1.14
Aug	73.96	74.06		+1.14
Sep	73.47	73.57		+1.13
Oct	72.95	73.05		+1.09
Dubai, London close				
Jul	73.94	74.02		-0.20
Aug	73.38	73.48		-0.20
Sep	72.89	72.99		-0.21
Oct	72.37	72.47		-0.25
WTI Cushing, 1:30pm Houston				
Jun	70.84	70.88		-0.25
Jul	70.82	70.86		-0.25
Aug	70.64	70.68		-0.25
Sep	70.31	70.35		-0.25

Intermonths		\$/bl
		Mid
North Sea Singapore close		
Jun/Jul		0.250
Jul/Aug		0.220
Aug/Sep		0.340
North Sea London close		
Jun/Jul		0.170
Jul/Aug		0.190
Aug/Sep		0.130

Forward spreads 4:30pm London				\$/bl
	N Sea/Dubai	WTI/N Sea	WTI/Dubai	
Jun	-	-4.27		
Jul	-	-4.11		-3.11
Aug	1.36	-4.09		-2.73
Sep	1.72	-4.30		-2.58

DAILY NETBACKS

Northwest Europe (16 May)								\$/bl	
	Complex					Simple			
	Yield	Freight	Netback	± 15 May		Yield	Freight	Netback	± 15 May
Arab Light	84.42	1.64	82.78	+0.28		81.30	1.64	79.66	+0.16
Arab Heavy	79.76	1.70	78.06	+0.27		76.22	1.70	74.52	+0.18
Azeri	89.55	2.96	86.59	+0.36		86.43	2.96	83.47	+0.13
Bonny Light	90.47	3.19	87.28	+0.40		87.81	3.19	84.62	+0.21
Brass River	90.43	3.09	87.34	+0.41		88.35	3.09	85.26	+0.25
Brent	87.80	1.48	86.32	+0.35		84.88	1.48	83.40	+0.17
Es Sider	86.45	2.94	83.51	+0.30		83.38	2.94	80.44	+0.09
Forties	87.22	1.46	85.76	+0.28		84.31	1.46	82.85	+0.21
Iranian Light	84.86	1.64	83.22	+0.26		81.43	1.64	79.79	+0.13
Kirkuk	83.89	1.63	82.26	+0.34		80.84	1.63	79.21	+0.21
Kuwait	81.09	1.67	79.42	+0.29		77.94	1.67	76.27	+0.18
Murban	87.49	1.57	85.92	+0.24		84.54	1.57	82.97	+0.21
Saharan Blend	88.31	2.79	85.52	+0.35		85.76	2.79	82.97	+0.23
Urals	85.18	0.00	85.18	+0.32		81.61	0.00	81.61	+0.17
Zueitina	86.89	2.92	83.97	+0.30		83.93	2.92	81.01	+0.18

Singapore (16 May)									\$/bl
	Complex					Simple			
	Yield	Freight	Netback	± 15 May		Yield	Freight	Netback	± 15 May
Arab Light	81.84	1.68	80.16	+1.63		75.32	1.68	73.64	+1.39
Arab Heavy	78.64	1.74	76.90	+1.46		70.55	1.74	68.81	+1.07
Dubai	82.14	1.71	80.43	+1.56		74.45	1.71	72.74	+1.27
ESPO Blend	83.00	3.50	79.50	+1.82		74.04	3.50	70.54	+1.43
Iranian Heavy	80.61	1.72	78.89	+1.46		71.74	1.72	70.02	+1.10
Minas	82.60	3.39	79.21	+1.80		72.56	3.39	69.17	+1.31
Murban	83.01	1.61	81.40	+1.67		76.13	1.61	74.52	+1.42
Oman	80.70	1.72	78.98	+1.48		71.57	1.72	69.85	+1.12

US Gulf coast (16 May)									\$/bl
	Complex					Simple			
	Yield	Freight	Netback	± 15 May		Yield	Freight	Netback	± 15 May
Arab Light	89.11	1.96	87.15	-0.31		83.59	1.96	81.63	-0.46
Arab Medium	87.77	1.99	85.78	-0.24		81.03	1.99	79.04	-0.35
Bonny Light	95.05	3.90	91.15	-0.24		77.22	3.90	73.32	-0.17
LLS	91.98	0.00	91.98	-0.22		87.88	0.00	87.88	-0.28
Mars	87.86	0.00	87.86	-0.12		80.31	0.00	80.31	-0.29
Maya	80.23	5.14	75.09	-0.08		70.23	5.14	65.09	+0.97
WTI	92.20	0.00	92.20	-0.02		88.99	0.00	88.99	-0.16

US west coast (16 May)									\$/bl
	Complex					Simple			
	Yield	Freight	Netback	± 15 May		Yield	Freight	Netback	± 15 May
ANS	96.30	0.00	96.30	-0.14		83.22	0.00	83.22	+0.54
Oriente	93.72	9.25	84.47	+0.13		84.94	9.25	75.69	+0.73

DEALS DONE

Argus AGS deals done							\$/bl
Location	Differential basis	Reported differential	price	Adjusted		Volume	bl
				AGS index differential	AGS Marker price	b/d	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	1,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	1,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	2,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	2,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	1,000	
Magellan East Houston	Jun WTI	+0.95		+0.88	71.74	2,000	
Magellan East Houston	Jun WTI	+0.95		+0.88	71.74	2,000	
Magellan East Houston	Jun WTI	+0.95		+0.88	71.74	2,000	
Magellan East Houston	Jun WTI	+0.95		+0.88	71.74	1,000	
Magellan East Houston	Jun WTI	+0.95		+0.88	71.74	4,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	3,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	3,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	500	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	3,000	
Magellan East Houston	Jun WTI	+0.90		+0.83	71.69	14,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	15,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	8,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	5,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	3,000	
Magellan East Houston	Jun WTI	+0.85		+0.78	71.64	3,000	

*Table shows deals as reported and also normalized values for the calculation of VWAs

North America pipeline deals done							
Grade	Location	Trade month	Basis month	Differential basis	Differential	Price \$/bl	Volume b/d
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.14		1,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.14		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.14		3,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.14		5,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.15		4,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		1,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		1,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		3,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		3,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		4,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.16		5,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.17		500
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.17		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.17		2,000
WTI	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	+0.18		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		1,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		1,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		3,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		3,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		3,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.65		5,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		3,000

DEALS DONE (CONTINUED)

North America pipeline deals done							
Grade	Location	Trade month	Basis month	Differential basis	Differential	Price \$/bl	Volume b/d
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		3,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		3,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		4,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		4,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		5,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		5,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		5,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.70		10,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		1,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		2,000
WTI	Midland Enterprise	Jun	Jun	WTI	+0.75		5,000
WTI	Midland Plains	Jun	Jun	WTI Midland Enterprise	+0.03		2,000
Bakken	Cushing Oklahoma	Jun	Jun	CMA Nymex + Argus WTI Diff to CMA	+0.25		3,000
Bakken	Cushing Oklahoma	Jun	Jun	WTI	+0.25		2,000
Bakken	Cushing Oklahoma	Jun	Jun	WTI	+0.25		3,000
Bakken	DAPL North Dakota	Jun	Jun	CMA Nymex trade days	+0.00		4,500
Bakken	DAPL North Dakota	Jun	Jun	CMA Nymex trade days	+0.10		1,000
Bakken	Patoka Illinois	Jun	Jun	CMA Nymex trade days	+2.00		1,667
Bakken	Patoka Illinois	Jun	Jun	CMA Nymex trade days	+2.00		6,667
Cold Lake Cushing	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	-6.30		3,333
Cold Lake Cushing	Cushing Oklahoma	Jun	Jun	CMA Nymex trade days	-6.30		3,333
HLS	Empire Louisiana	Jun	Jun	WTI	+0.75		5,000
HLS	Empire Louisiana	Jun	Jun	WTI	+1.40		1,000
HLS	Empire Louisiana	Jun	Jun	WTI	+1.40		2,000
LLS	St. James Louisiana	Jun	Jun	WTI	+2.15		4,000
Light Sweet Guernsey	Guernsey Wyoming	Jun	Jun	CMA Nymex trade days	-1.25		500
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.75		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.75		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.75		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.60		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.60		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.60		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.60		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.50		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.50		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.50		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.50		3,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.40		3,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.35		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.35		5,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.30		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.30		2,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.30		3,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.25		1,000
Mars	Clovelly Louisiana	Jun	Jun	WTI	-0.25		3,000
Poseidon	Houma Louisiana	Jun	Jun	WTI	-1.25		2,000
Saddlehorn Light	Cushing Oklahoma	Jun	Jun	WTI	-0.65		2,000
Southern Green Canyon	Nederland / Texas City	Jun	Jun	WTI	-2.50		1,000
Southern Green Canyon	Nederland / Texas City	Jun	Jun	WTI	-1.25		3,000

DEALS DONE (CONTINUED)

North America pipeline deals done							
Grade	Location	Trade month	Basis month	Differential basis	Differential	Price \$/bl	Volume b/d
Thunder Horse	Clovelly Louisiana	Jun	Jun	WTI	+0.80		5,000
Thunder Horse	Clovelly Louisiana	Jun	Jun	WTI	+1.00		5,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		1,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		1,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		1,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		1,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		2,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		5,000
WTL Midland	Midland Texas	Jun	Jun	WTI Midland	-0.40		5,000
WTS	Midland Texas	Jun	Jun	WTI Midland	-0.75		2,000
WTS	Midland Texas	Jun	Jun	WTI Midland	-0.75		2,000

Global crude deals										\$/bl
Region	Grade	Deal date	Delivery period	Volume bl	Price	Diff timing	Diff basis	Diff price	Loading from	Loading to
Northwest Europe	North Sea	16 May 23	Jul	200,000	74.99					
Northwest Europe	North Sea	16 May 23	Jul	100,000	74.96					
Northwest Europe	North Sea Dated CFD	16 May 23		100,000		Aug	North Sea	+0.01	19 Jun 23	23 Jun 23
Northwest Europe	North Sea Dated CFD	16 May 23		200,000		Aug	North Sea	+0.02	12 Jun 23	16 Jun 23
Northwest Europe	North Sea Dated CFD	16 May 23		100,000		Aug	North Sea	+0.00	12 Jun 23	16 Jun 23
Northwest Europe	North Sea Dated CFD	16 May 23		200,000		Aug	North Sea	+0.02	5 Jun 23	9 Jun 23
Northwest Europe	North Sea Dated CFD	16 May 23		100,000		Jul	North Sea	-0.21	22 May 23	26 May 23

INFRASTRUCTURE NEWS

P66 Texas refinery begins FCC maintenance

The fluid catalytic cracking unit (FCC) at Phillips 66's 149,000 b/d refinery in Borger, Texas, will undergo planned maintenance starting today.

Planned work was scheduled to begin the morning of 16 May

and will last until 30 May, Phillips 66 said in a filing with state regulators that cites a "possible shutdown" of the Unit 29 FCC.

FCC's convert vacuum gasoil primarily to gasoline blendstocks.

By Gordon Pollock

INDUSTRY NEWS

IEA hikes global oil demand growth on China

The IEA has hiked its forecast for world oil demand growth this year by almost 200,000 b/d, with a stronger than previously expected rebound in China outweighing a deterioration in the global economic picture.

The Paris-based energy watchdog's latest *Oil Market Report* (OMR) puts world oil demand at 102.01mn b/d in 2023, an increase of 2.21mn b/d on last year and around 1.3mn b/d higher than pre-pandemic 2019. Its previous forecast had demand growing by 2.03mn b/d this year to 101.94mn b/d.

The upwards revision is underpinned by China, where the recovery in demand "continues to surpass expectations", the IEA said. Chinese demand set an all-time record of 16mn b/d in March, driven by "burgeoning personal mobility", according to the IEA. The agency now sees Chinese demand increasing by 1.29mn b/d this year, which is almost 60pc of global growth and 130,000 b/d higher than its previous forecast.

The IEA describes China's demand rebound as a "two-speed recovery", with the abrupt increase in personal activity and travel brushing up against "persistently gloomy measures of industrial activity". Globally, this is fuelling a widening gap in the trajectories of gasoil and gasoline demand, it said.

The sharp post-lockdown revival in Chinese demand is in stark contrast to the advanced economies of the OECD, where the IEA estimates cumulative oil consumption dropped by an estimated 310,000 b/d in January-March, the second quarterly decline in a row. "Economic growth in advanced economies is decelerating in the wake of much higher interest rates, with outlooks increasingly turning to hard landings and recessions," the IEA said.

The IEA expects OECD demand to return to growth in the current quarter but "its average 2023 increase of 350,000 b/d pales compared to 1.9mn b/d in non-OECD gains", it said.

On the supply side, the agency warns that global oil stocks may come under pressure as Opec+ cuts take effect this month, but it notes Russian output continues to prove resilient, with Moscow's crude and product exports hitting a post-Ukraine invasion high of 8.3mn b/d last month. Moscow

will need to cut a further 300,000 b/d from its crude production this month to bring itself into line with the 500,000 b/d reduction it has pledged, according to the IEA. "By our estimates, Moscow did not deliver its announced 500,000 b/d supply cut in full. Indeed, Russia may be boosting volumes to make up for lost revenue," the IEA said.

The agency has raised its forecast for Russian oil output by 180,000 b/d this year, but this is offset by a downwards revision to supply from countries outside the Opec+ alliance. The IEA has left its global oil supply growth forecast unchanged at 1.2mn b/d for 2023, with an increase of 1.7mn b/d from non-Opec+ countries partially offset by a 560,000 b/d decline from the Opec+ group.

By James Keates

Opec sec gen invites Ecuador to rejoin group

Opec secretary general Haitham al-Ghais has invited Ecuador to rejoin the producer group, three and a half years after it left.

In a letter to Ecuadorean energy minister Fernando

ANNOUNCEMENTS

Change to Qatar Land and Qatar Marine prices

Argus has changed the way it calculates outright prices for Qatar Land and Qatar Marine crudes, following a change in QatarEnergy's (QE) formula for its official prices.

From January 2023, QE formula prices for Qatar Land and Qatar Marine are differentials to the monthly average of front-month Dubai prices. Argus continues to assess Qatar Land and Qatar Marine spot prices at differentials to the grades' anticipated official prices for the loading month. Outright prices for the grades have been republished for the period between 8 December 2022 and 25 January 2023. For any queries please contact Azlin Ahmad at azlin.ahmad@argusmedia.com.

INDUSTRY NEWS

Santos, dated 12 May and made public by the ministry today, al-Ghais said Opec saw Ecuador's return "as a top priority" that would "greatly benefit" the South American nation.

"Ecuador is an important oil producer and exporter, and the secretariat believes that your esteemed country would greatly benefit from the information and knowledge that Opec shares with its member countries, as well as the possibility of strengthening diplomatic ties with like-minded oil producing countries," the letter said.

Al-Ghais said he was prepared to visit Ecuador "to personally explain the multiple advantages of joining Opec" to Santos and President Guillermo Lasso.

The country joined Opec in 1973, and suspended its membership in 1992. It reactivated that in 2007, only to leave again [at the end of 2019](#) as part of a government belt-tightening programme.

"The decision is based on the internal affairs and challenges that the country has to assume, related to fiscal sustainability," the ministry said at the time, adding that it aligned with the government's plan to cut spending and generate new revenues.

At that time, Ecuador's crude production was around 550,000 b/d, making it the Opec group's fourth smallest producer behind Congo (Brazzaville), Equatorial Guinea and Gabon. Its output has been edging down ever since, with latest figures from the Ecuadorean central bank putting production at 461,000 b/d in the first quarter of this year.

The energy ministry in March [revised down](#) its production target for the year, by 6pc to 490,000 b/d from 521,000 b/d, because of indigenous communities' strikes, power outages and the shutdown of main pipelines at the start of the year.
By Nader Itayim

India removes windfall tax on oil production

India has cut its windfall tax on domestic crude production to zero in the latest review of its tax scheme.

India cut the windfall levy on domestic crude production to zero from [4,100 rupees/t \(\\$6.84/bl\)](#) on [2 May](#), according to a notification by the Central Board of Indirect Taxes and Customs on 15 May. The changes take effect on 16 May. The federal government revises windfall tax rates every two weeks.

This is the second time the windfall tax on crude has been removed since the introduction of the tax scheme in July 2022. The Indian government had [cut the tax on crude output to zero](#) from Rs3,500/t in early April, before reimposing it at Rs6,400/t on 19 April and then cutting it in early May.

Indian oil minister Hardeep Singh Puri said in November 2022 that India will need to raise domestic crude output and

purchase assets abroad to make up for the surge in demand. The government aims for 25pc of India's total crude demand by 2030 to be produced domestically.

But India's crude and condensate production during the April 2022-March 2023 fiscal year fell compared with a year earlier. [India produced 29.2mn t \(586,000 b/d\) of crude and condensate](#) during 2022-23, down from 596,000 b/d in 2021-22, according to oil ministry data.

India crude import dependency was over 87pc in 2022-23. Crude demand was 5.14mn b/d in 2022 and is projected to rise to 5.39mn b/d in 2023, according to Opec's *May Monthly Oil Market Report*.

Diesel, jet fuel tax holds at zero

India also kept export taxes on diesel and jet fuel at zero in its latest review.

India scrapped diesel export duties on 19 April for the first time since the introduction of the tax regime in July 2022, continuing with this policy ever since. Export duties on jet fuel were removed from 4 March and remain at zero in the latest review.

By Pranav Joshi

Azeri crude output broadly flat in April

Azerbaijan produced 512,000 b/d of crude last month, compared with 515,000 b/d in March, according to the country's energy ministry.

Production from the BP-led Azeri-Chirag-Guneshli (ACG) complex in the Caspian Sea was 2,000 b/d lower on the month at 372,000 b/d, while output from fields operated by state-owned Socar inched down by 1,000 b/d to 140,000 b/d.

Azerbaijan was 172,000 b/d below its Opec+ crude target last month. The quota is set at 684,000 b/d until the end of 2023.

The target excludes condensate output, which edged down by 3,000 b/d to 114,000 b/d in April, the energy ministry said.

Azerbaijan's total crude and condensate production was 10.2mn t, or around 639,000 b/d, in January-April, according to the ministry. This comprised 6.2mn t of ACG crude, 1.5mn t of condensate from the BP-operated Shakh Deniz project and 2.5mn t of crude and condensate from Socar-operated fields.

By Anastasia Krasinskaya

Ineos boss Ratcliffe 'fears for' N Sea future

Ineos boss Jim Ratcliffe has waded into the debate over the UK's windfall tax on oil and gas producers, stating that he "fears for the future" of the country's North Sea sector.

The UK government announced a [25pc tax surcharge](#) on oil and gas producers — the Energy Profits Levy — last May. Initially introduced as a temporary measure designed to last

INDUSTRY NEWS

until the end of 2025, the government increased the levy to 35pc from January this year and extended it until 2028.

Ineos – whose Forties Pipeline System business connects more than 85 North Sea fields – claims a “unique view” of the development plans of oil and gas producers operating there. Ratcliffe believes the government’s 75pc tax burden on oil and gas producers – which includes 30pc corporation tax, the 10pc Supplementary Charge and the 35pc Energy Profits Levy – will lead to a collapse in investment in the basin.

“The UK has hiked the tax take in the North Sea from 40pc to 75pc and we are now seeing many operators pausing or cancelling their investment plans. The big winners are in the US where operators in the Gulf of Mexico can pay just 37pc tax and investment is at its highest level for a decade,” Ratcliffe said today.

The UK’s biggest offshore producer, independent operator Harbour Energy, last week [confirmed it had seen work programmes cancelled](#) by its partners at the Elgin/Franklin and Beryl fields. It also confirmed that 350 jobs would be lost in its UK business as a result of a review it launched following the increase in the Energy Profits Levy.

Despite North Sea producers [meeting with UK ministers](#) in December and urging the introduction of a price floor to the Energy Profits Levy, the government has not budged. The windfall tax was not mentioned at all in finance minister Jeremy Hunt’s spring budget in March.

Ratcliffe today described the windfall tax as “really primitive politics” by the UK government. “There has been no thought given to the long-term consequences of this “tax it to death” move. Taxes are now so high that profits no longer fund future investments and on top of this, new investments have poor returns with invariably high tax rates,” he said, adding that the country needs energy security, “which means encouraging developments in our strategic energy reserves in the North Sea, not taxing it out of existence and shutting down the basin”.

Ineos said it is currently investing £1bn (\$1.25bn) to upgrade the Forties Pipeline System, in order to keep it fit for purpose until the 2040s, but emphasised “this is dependent on the basin remaining a viable oil and gas hub”. The pipeline network currently carries 575,000 b/d from 85 fields to the Kinneil processing facility at Grangemouth.

By Jon Mainwaring

EU has diesel from Russian crude in sights

EU member states could and should ban imports of diesel and other products refined from Russian crude in third countries, EU officials said, but such a move is unlikely to form

part of any EU-wide sanctions.

The bloc’s rules only ban imports of products refined in Russia and there has been concern voiced, notably from some refiners in the Mediterranean region, about large amounts of diesel arriving in the EU from India – now the biggest destination for Russian crude exports.

“If diesel or gasoline is entering Europe... coming from India and being produced with Russian oil, that is certainly a circumvention of sanctions and member states have to take measures,” EU high representative for foreign affairs Josep Borrell said, in comments first published by the *Financial Times* and confirmed by his office. His spokesman said this does not have to be through sanctions.

“You can just introduce a [national-level] ban,” he told *Argus*, adding that member states would have to evaluate what legally constituted a circumvention of sanctions. EU foreign ministers will discuss [further sanctions](#) against Russia on 22 May. An extension of the bloc’s embargo on Russian products to include those refined in third countries is unlikely.

A few companies in the EU already reject diesel made from Russian crude, according to diesel traders, but only a small minority. Croatia’s Ina made this stipulation in a recent diesel tender, which was awarded to Italy’s Saras. The latter has [expressed specific concern](#) about Indian refiners tak-

ANNOUNCEMENTS

Proposal to end Russia cif Rotterdam, cif Augusta prices

Argus proposes to discontinue Urals cif Rotterdam, Urals Med Aframax cif Augusta and Urals Med Suezmax cif Augusta, and Siberian Light Med cif Augusta prices because of a lack of liquidity in Europe following legislation against imports from Russia. Fob assessments will continue to be published. *Argus* will accept comments on this proposal until 1 June. To discuss the proposal, please contact crude editor Michael Carolan at michael.carolan@argusmedia.com. Formal comments should be marked as such and may be submitted by email to crude@argusmedia.com or by post to Michael Carolan, Argus Media, Lacon House, 84 Theobald’s Rd, London WC1X 8NL, and received by 1 June. Please note, formal comments will be published after the consultation period unless confidentiality is specifically requested.

INDUSTRY NEWS

ing advantage of cheap Russian crude and then exporting their diesel output to the Mediterranean "at very favourable prices".

India has been the second-largest supplier of diesel to the EU since its ban on Russian products and the largest supplier in May so far, according to Vortexa. Around 26,000 t/d (197,000 b/d) has arrived in the EU from India since the EU ban on Russian products came into effect on 5 February, which is around 20pc of all EU imports from outside the bloc. In the same period a year earlier this was just 8,000 t/d, or 5pc of EU imports.

Ample imports of diesel, from India and elsewhere, has contributed to a steep decline in EU prices and margins in the three months since 5 February. Diesel cargoes delivered to northwest Europe were \$12.43/bl above North Sea Dated crude at the end of April, down from above \$40/bl in January and nearly \$80/bl at one point in 2022.

Indian private-sector oil giant Reliance handles most of the country's diesel exports to the EU, mainly from its 1.2mn b/d Jamnagar refinery and the port of Sikka on India's west coast. More than 500,000 b/d of Russian-origin crude has arrived at the Reliance Jamnagar terminal at Sikka since the EU imposed its embargo in December. India has been the largest buyer of Russian crude, with around 1.54mn b/d in that time. This is around half of Russia's seaborne crude exports and a third of India's imports. India only received around 140,000 b/d, or 5pc of Russia's seaborne crude exports in the same period a year earlier.

By Benedict George and Dafydd ab Iago

Russian railed crude to Belarus fell in April

Crude shipments by rail for export from Russia fell by 30pc on the month and by 55pc on the year to 27,100 b/d (112,200t) in April, according to freight forwarders.

The drop reflects the halving of supplies to Belarus to 41,800t, because of maintenance at the 323,000 b/d Mozyr refinery. Neftisa exports to Mozyr slumped by 76pc on the month to 15,000t, while supplies to Belarus' 240,000 b/d Novopolotsk refinery were 15pc higher at 26,800t – shipped by an unnamed trading firm. Sweet crude exports by rail are scheduled at an unchanged 1mn t this year – 700,000t for Mozyr and 300,000t for Novopolotsk.

Crude supplies by rail to the Caspian Pipeline Consortium (CPC) system fell by 3pc to 69,100t, as small producer Centergco reduced supplies by 4pc to 65,100t.

Rail condensate supplies for export from Russia, including transit shipments, fell by 10pc on the month to 32,000 b/d (118,600t) in April, but were significantly higher than the

6,200 b/d (22,900t) exported in April 2022.

The decline mainly reflects reduced Gazprom exports to Uzbekistan because of maintenance at the 61,000 b/d Bukhara refinery. Russian condensate deliveries to the CPC system increased by a quarter on the month to 83,100t. Novatek boosted rail shipments from its Purovsky condensate processing plant to 34,400t – up from 8,500t in March, when it exported along this route for the first time.

Novatek's Sakhalin 2 entry delayed

Moscow's plan for Novatek to replace Shell at Russia's far east Sakhalin 2 project has not yet been realised.

The initial 11 May deadline, set by the Russian government last month, for the Rbs94.8bn (\$1.16bn) transfer to Novatek of a 27.5pc stake in Sakhalin 2 operating consortium Sakhalinskaya Energiya has passed, without the deal completing. A government decree on 6 May removed the deadline, without giving a reason. Novatek has not responded to a request for comment.

Moscow offered all shareholders in Sakhalin 2 the opportunity to join Gazprom-controlled Sakhalinskaya Energiya when it was established by presidential decree in August. Japanese companies Mitsubishi and Mitsui accepted, but Shell did not. Gazprom holds 50pc, and Mitsubishi and Mitsui a combined 22.5pc. Shell's 27.5pc was transferred to Sakhalinskaya Energiya.

In a related development, a Sakhalin regional court has ordered the seizure of four tugboats operated by Danish shipping firm Maersk subsidiary Svitzer, which are deployed under contract for Sakhalin 2 operations.

Sakhalinskaya Energiya requested the seizure, after Svitzer informed it of plans to suspend the lease contract for the vessels. Maersk announced plans to withdraw from Russia in March 2022. The court ruled in April that the tugboats will remain seized at least until 18 May. Sakhalinskaya Energiya is preparing a legal challenge contesting the contract termination by Svitzer.

The 9.6mn t/yr Sakhalin 2 LNG plant operated 21pc above capacity in 2022, producing 11.6mn t. Output of ultra-light sweet Sakhalin Blend crude declined by 6.5pc to 3.94mn t (86,000 b/d). But production will be reined-in this year because of [planned maintenance](#) in June-September and a [change of strategy](#).

The LNG plant will no longer operate above capacity, to help prolong the lives of the mature Lunskeye gas field and "equipment, and extend maintenance cycles, allowing the longer-term utilisation of production facilities", which is vital under sanctions, Sakhalinskaya Energiya said in February.

INDUSTRY NEWS

US and EU sanctions ban the supply of LNG technology and equipment to Russia. The Sakhalin 2 LNG plant deploys Shell liquefaction technology.

Activist claims Total proxy 'breakthrough'

Climate investor group Follow This is claiming as “a breakthrough in the fight against the climate crisis” the decision by proxy advisor International Shareholder Services (ISS) to recommend shareholders vote for its climate resolution at TotalEnergies' annual general meeting on 26 May.

In late April, TotalEnergies' board added the non-binding advisory resolution – which had been submitted by a group of shareholders – to the agenda of the French major's annual shareholders' meeting, which is scheduled to take place on 26 May.

TotalEnergies' board itself recommends that shareholders do not support the climate resolution, which calls for the company to align its 2030 target for the reduction of Scope 3 emissions – those emissions that come from the use of its oil and gas production – with the 2015 Paris climate agreement. Follow This argues that absolute emissions from oil and gas companies need to be reduced significantly by 2030, but that the current strategies of the majors will see their emissions increase.

In a research report sent to *Argus* by ISS, the proxy advisor recommends that TotalEnergies' investors vote for the resolution, although it caveated its recommendation by pointing out the advisory nature of the resolution. Still, Tarek Bouhouch of Follow This France, hailed the decision as “a breakthrough in the fight against the climate crisis that one of the two most influential voting advisors is finally starting to back our fair ask”.

Proxy advisors help asset management firms – which invest in shares in thousands of companies across multiple sectors – by providing them with governance solutions, including recommendations on whether to support or oppose certain shareholder resolutions. Because their recommendations have generally been followed by institutional investors in the past, proxy advisors have had significant influence on voting outcomes. But Follow This believes that when it comes to climate resolutions this is changing, and ISS is now beginning to take its lead from investors.

Follow This founder Mark van Baal argued that despite proxy advisers ISS and Glass Lewis recommending against voting for his organisation's resolution since it was first proposed at Shell's AGM in 2016, support for the resolution at the UK major has grown from 2.7pc of votes to as much as 30pc. “This was already a very strong signal that they're

losing their influence,” he told *Argus*. “You see that their influence on climate [voting] is waning.”

Van Baal added that he thinks a reason for the change in advice from ISS is that the Follow This resolution was filed by a consortium of 17 institutional investors. TotalEnergies noted in its late April statement that these investors hold less than 1.4pc of its capital.

TotalEnergies remains opposed to the Follow This climate resolution, stating it “does not provide a credible response to the challenges of climate change and would be contrary to the interests of the company, its shareholders and its customers”. The company argued that it should not be held responsible for the indirect emissions that it reports under Scope 3 and which correspond to Scope 1 (direct) emissions of oil and gas consumers, who ultimately decide how oil and gas products are used.

Total also pointed out that it “has a consistent and effective strategy to be a major player in the energy transition” and that the proposed resolution undermines the company's governance because, although a favourable outcome for the resolution would not infringe on the board's powers, its support would introduce “some confusion in the governance of the company”.

By Jon Mainwaring

Opec+ output cuts spur VLCC rally on US Gulf

Freight rates for US-loading very large crude carriers (VLCCs) have risen sharply over the last week as Asian refiners look to the Atlantic basin for crude in the face of Opec+ production cuts, reversing a fall that began in early April when the cuts were announced.

The US Gulf coast-China VLCC rate on Monday rose by \$1.25mn to \$8.75mn lump sum, equivalent to \$4.16/bl for WTI, including \$250,000 load-port fees, marking a 35pc increase from a [10-month low reached on 10 May](#). Over that span, the Mideast Gulf to Asia-Pacific VLCC rate rose by a more moderate 11.4pc to \$1.56/bl for Arab Light from \$1.40/bl, underscoring uneven VLCC demand between the two regions.

As rates increased between 10 and 15 May, shipowner earnings for scrubber-fitted VLCCs bound for China from Texas, represented in the time-charter equivalent (TCE) rate, nearly doubled to \$44,110/d, according to *Argus* data, while the TCE rate for a VLCC on a Mideast Gulf-China voyage climbed to \$27,440/d from \$20,792/d. A prolonged spread in earnings between the two regions could entice shipowners to send their tankers to the US Gulf coast to capitalize on the higher rates.

INDUSTRY NEWS

A surge of charterers began scooping up the ample supply of 2mn bl tankers in the Gulf of Mexico last week, enticed by the lowest rates since last summer, with 16 VLCCs fixed for US-loading voyages between 8 and 16 May, nine of which are bound for Asia, according to *Argus* data. Over the previous two weeks, charterers fixed only seven VLCCs for US-loading voyages.

Rates for 2mn bl tankers had fallen globally since the production cuts were announced in early April. With 68pc of Opec+ producers' crude exports, or about 18.2mn b/d, over the last full 12 months going to Asian markets, refiners there are looking to the Atlantic basin for replacement barrels.

An increase in VLCC voyages from the US Gulf coast to Asia strains tonnage and puts upward pressure on rates. Voyages to China from the US take about 53 days, compared with about 21 days for voyages from the Mideast Gulf.

By Tray Swanson

Mexico still far from ending crude exports

State-owned Pemex's crude exports increased in the first quarter compared to the same period in 2022, far from the Mexican government's initial goal of ending such trade this year to instead feed domestic refineries.

Pemex's crude exports rose by 9pc to 967,000 b/d in the first quarter, up from 886,000 b/d in the same period of 2022.

In the fourth quarter of 2022, Pemex exported 921,000 b/d crude, averaging 953,000 b/d in the year, according to the company's results, missing its goal to reduce exports to 435,000 b/d.

The oil company produced 1.85mn b/d crude in the first quarter and exported about 50pc of it.

The Mexican government in 2021 had said it aimed to stop importing fuel by 2023, by redirecting crude exports to its six-refinery domestic system, its 340,000 b/d Deer Park refinery in Texas and the planned 340,000 b/d Olmeca refinery in Tabasco, Mexico – which is still under construction. But this would also compromise the highly indebted Pemex, as exporting crude is the company's main revenue source.

Pemex expects to process 995,000 b/d crude in its refining system in 2023, according to Pemex's 2023-2027 business plan designed by president Andres Manuel Lopez Obrador's administration and published in December 2022.

But in the first quarter, Pemex's oil products output stood at 856,000 b/d, 14pc or 139,000 b/d below the company's expectations for the year.

Pemex's combined gasoline and diesel output of 403,000 b/d in the first quarter is just above a third of Mexico's

1.12mn b/d demand of these products.

On to 2025

Now Pemex [has said it will end fuel imports by 2025](#) – one year after Lopez Obrador's term ends.

New cokers being installed in the 315,000 b/d Tula and 330,000 b/d Salina Cruz refineries will make the country self-sufficient in gasoline and diesel by then, Pemex chief executive Octavio Romero said in March. The past administration began the construction of Tula's coker in 2014, but it has faced several delays over the years.

Lopez Obrador announced the restart of construction in May 2021, and during his visit to the Tula refinery this week-end, the president said the coker will be ready by the end of the year. The coker in Salina Cruz refinery will be ready by September 2024, Lopez Obrador said on 21 March.

While the cokers are under construction, Pemex's gasoline output decreased by 1pc to 270,000 b/d in the first quarter, down from 273,000 b/d in the same period of 2022.

In addition, diesel output declined by 11pc to 133,000 b/d from 150,000 b/d year over year.

By Antonio Gozain

Work held back Petroreconcavo's oil output

Unplanned maintenance on third-party midstream infrastructure weighed on Brazilian independent oil company Petroreconcavo's first quarter oil and gas output and slowed the company's investment plans, but acquisitions helped maintain overall hydrocarbons production on an upward trajectory.

In the first quarter, the company's oil output reached 13,890 b/d, up by 12pc from the first quarter of 2022, when output totaled 12,380 b/d. Gas production reached over 1.67mn m³/d, up nearly 50pc from the 1.12m³/d produced a year earlier.

A share of the increase in output came from assets acquired from Maha Energy Brasil, which the company began operating on 1 March. The acquisition includes a 75pc stake in the Tartaruga shallow-water field in the Sergipe basin and a 100pc stake in the Tie field in the Reconcavo basin.

Despite the overall increase in output, the company was forced to suspend production at several fields because of unplanned maintenance at infrastructure controlled by third-parties.

"The positive surprises we have seen in our oil and gas production have created bottlenecks and reinforced the need to invest in infrastructure," the company's chief executive Marcelo Magalhaes said in a conference call with analysts on 15 May.

INDUSTRY NEWS

Petroreconcavo was forced to transport a share of its production by truck and to suspend gas production following unscheduled maintenance in both pipelines and gas processing units.

The company sees these logistics bottlenecks as temporary and expects to normalize production by the third quarter.

It is also evaluating building new pipeline infrastructure as part of a broader strategy to increase production and rely less on third parties to transport and process its output. Currently the natural gas produced at fields acquired from Maha needs to be compressed and transported by truck, but new pipeline infrastructure would reduce costs for gas sales.

Petroreconcavo will also renegotiate several of its gas supply agreements that expire at the end of this year. The company will seek to index its future contracts to international prices. Earlier this year, the company reached a 10-year contract with Sergipe state natural gas distributor Sergas. The contract's price is a combination of 13.6pc of the Brent crude contract price plus the transport cost from 2023-2024, falling to 12.6pc of Brent plus transport in 2025-2032.

The company posted net income of R199.5mn (\$40.5mn) in the first quarter, down by 50pc from the same period of 2022.

US court tosses gathering line safety rule

President Joe Biden's administration erroneously "plowed ahead" with requiring advanced shutoff valves on oil and gas gathering lines without allowing a chance for input on compliance costs, a federal appeals court ruled today.

The US Pipeline and Hazardous Materials Safety Administration (PHMSA) failed to scrutinize the costs and benefits of requiring remote controlled or automatic shutoff valves on gathering lines until it finalized the rule in 2022, the US Court of Appeals for the DC Circuit said today. That violated a standard requirement to give the public a chance to offer input on regulations, the court found.

"PHMSA said nothing about the practicability or the costs and benefits of the standard for gathering pipelines until promulgating the final rule, even though the law required it to address those subjects," judge Douglas Ginsburg wrote on behalf of a three-judge panel on the court.

The court ruling deals a setback to PHMSA, which has faced criticism for years of delays in issuing safety standards for pipelines and providing sufficient oversight of the thousands of miles of oil and gas pipelines across the US. Completing a replacement rule requiring safety valves on

gathering lines would likely take at least a year.

PHMSA did not immediately respond to a request for comment.

PHMSA began work on the rule in 2012, seeking to fulfill a congressional mandate to require remote or automatic shut-off valves on gas "transmission" lines that was passed after the San Bruno pipeline explosion in California. In the final rule a decade later, the agency said many gathering lines with a diameter more than 6 inches also needed the safety valves because, in practical terms, they have similar sizes and safety risks of gas transmission lines.

But two industry groups — GPA Midstream and the American Petroleum Institute — say the last-minute expansion of the rule to cover oil and gas gathering lines failed to follow standard rulemaking procedures, such as studying costs and benefits and giving the public a chance to comment.

The DC Circuit agreed with the industry groups and vacated the part of the rule that applies to gathering lines. Industry groups had not challenged the requirement for transmission lines. PHMSA "plowed ahead" with the rule despite having no analysis or data related to gathering lines, the court said, and the agency said "nothing at all" about gathering lines in the proposed rule. PHMSA also failed to show the benefits of the rule would justify its costs, the court said.

By Chris Knight

US makes some progress on debt limit talks

President Joe Biden and Republican leaders are still far apart on a plan to raise the limit on federal debt but made some progress today during a meeting at the White House, participants in the talks said.

The specifics of a debt limit bill are still being negotiated, but congressional leaders said today's session was more productive than an [initial meeting](#) a week ago. US House of Representatives speaker Kevin McCarthy (R-California) said Biden has agreed to have more direct negotiations with his team, which he said provided a better opportunity for a deal.

"It is possible to get to a deal by the end of the week," McCarthy said.

Biden said the meeting was "productive," noting that daily negotiations among staff would continue. Biden today canceled plans to visit Papua New Guinea and Australia after the G7 summit in Japan so he can return to Washington for negotiations.

The US is at risk of defaulting as soon as 1 June, according to the federal officials, meaning congressional leaders

INDUSTRY NEWS

have slightly more than two weeks to reach an agreement and get it through the US Congress. That leaves little room for error in avoiding a potential US default, which most economists believe could set off a global economic and financial catastrophe.

A protracted default could wipe out all of the economic gains over the last three years, cause 8mn job losses in the US and send the value of the stock market crashing by 45pc, according to an analysis by the White House Council of Economic Advisers. A default could also set off chaos in markets because of the importance of US government bonds to the global financial system.

"It's very conceivable that we'd see a number of financial markets break, with worldwide panic triggering margin calls, runs and fire sales," US treasury secretary Janet Yellen said today.

Former president Donald Trump, who is leading the field to be the Republican nomination in the 2024 presidential race, has said that a default "could be, maybe, nothing."

House Republicans last month passed a bill raising the debt ceiling but only in exchange for deep spending cuts, the elimination of nearly all clean energy spending in last year's Inflation Reduction Act and major energy policy changes. Democrats at the meeting today said they saw encouraging signs that McCarthy agreed that a debt limit bill would have to be bipartisan.

"What gave me the most hope — there were a bunch of things — is that everyone, including the speaker, agreed we need to be bipartisan," said US Senate majority leader Chuck Schumer (D-New York). Schumer described the meeting as

more cordial, with more honest discussions than a week ago.

The negotiations over the debt limit could include an overhaul of federal permitting, a goal of many Republicans and Democrats in hopes of making it faster to build energy infrastructure, highways and other projects.

White House officials have indicated that permitting should not be part of the debt limit. But US energy secretary Jennifer Granholm today urged business and union leaders to get lawmakers, "particularly Democrats, on board with permitting reform" given the need to expedite the approval of energy infrastructure needed to support the switch to clean energy.

"This is a singular moment," Granholm said at an event held by the lobbying group Business Roundtable. "The debt ceiling talks and the discussions about permitting right now are so ripe for your input."

By Chris Knight

Ecuador arraigns former energy minister Vera

Ecuador's former energy minister Xavier Vera will remain in jail after he was arrested yesterday as part of an investigation into alleged bribery during his tenure last year.

The national court of justice today during Vera's arraignment accepted the petition of attorney general Diana Salazar to hold Vera, saying there was evidence he was planning to flee to Spain. The attorney general's office accused Vera of receiving bribes in exchange for management positions in state-owned power distribution companies and of receiving bribes from illegal miners.

Vera took office in April and [resigned on 28 October](#) after the public prosecutor's office raided his office and residences in two cities the previous night.

The prosecutor opened an investigation against Vera after media outlets and members of the national assembly accused him of taking bribes.

Vera was the energy minister for six months and the vice-minister of mining for 10 months. Ecuador produced around 495,000 b/d of crude while he was minister, a 6pc increase from the 463,000 b/d output in January-April this year.

By Alberto Araujo

Crude for Schwedt arrives in Gdansk

A 800,000 bl cargo of Arab Light crude is unloading for Germany's 226,000 b/d Schwedt refinery at the Polish port of Gdansk, according to oil analytics firm Vortexa. The Saudi Arabian crude will be supplied by pipeline to Schwedt, in eastern Germany, within days, the ministry of economic af-

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>

INDUSTRY NEWS

fairs in Berlin says.

Germany halted all Russian oil imports at the end of 2022, including deliveries through the Druzhba pipeline, on which Schwedt was previously dependent. The refinery is sourcing crude through a 143,000 b/d pipeline from the German Baltic port of Rostock, but this route can cover only 55pc of Schwedt capacity.

The refinery received 1,000 b/d (50,000t) of Kazakh crude delivered through the Druzhba pipeline in April and shipments to Germany from Kazakhstan are scheduled at 2,000 b/d this month.

From Gdansk, crude flows through Poland's Pomeranian pipeline to the Druzhba system, for onward delivery to Schwedt. But the refinery has imported only a few cargoes through Gdansk since November, with Warsaw reluctant to commit to regular supplies while Rosneft remains the majority shareholder in Schwedt.

Germany's upper house of parliament recently approved an amendment to the energy security act that enables the swift sale of Rosneft's German downstream businesses, which have been under federal trusteeship since September. Rosneft has stakes in three German refineries – 54pc in Schwedt, 24pc in the 299,000 b/d Karlsruhe plant and 28.6pc in the 206,000 b/d Vohburg-Neustadt refinery.

Schwedt is expected to operate at 70pc of capacity or higher from June, with output rising after maintenance is completed by the end of May, the ministry of economic affairs says. The refinery is running at below 50pc of capacity.
By Marc Hauschild

Romania's Midia refinery ramps up 1Q runs

Romania's 105,000 b/d Midia refinery managed a significant increase in throughput and production in the first quarter despite planned maintenance, its Kazakh-owned operator Rompetrol Rafinare said.

Midia processed 1.28mn t of feedstock in January-March, up by 31pc from a year earlier. The crude it refined was "exclusively" imported from Kazakhstan, the company said. Kazakh state-owned Kazmunaigaz owns 48.1pc of Rompetrol Rafinare, the Romanian government holds 44.7pc and other shareholders the remaining 7.2pc.

Midia ran at 86pc of its capacity in the first quarter, having partially shut for about 10 days in early February for planned maintenance. The refinery was shut down for a 20-day turnaround in March 2022.

Midia's gasoline production climbed by 32pc on the year to 343,000t in January-March, while combined diesel and jet fuel output rose by 23pc to 620,000t. Midia's net cash

refinery margin returned to positive territory at \$11.70/bl in the first quarter from minus \$10.80/bl a year earlier. Motor fuel sales were up by 28pc on the year at 901,000t.

Rompetrol Rafinare's polymers output fell by 7pc from a year earlier to 26,000t, while its total petrochemical sales were down by 10pc at 36,000t. First-quarter throughput at the Vega specialty products plant in Ploiesti, the only producer of bitumen and hexane in Romania, increased by 10pc on the year to 76,000t.

The company swung to a \$14.4mn profit in the first quarter from a \$132.8mn loss a year earlier. It expects to pay a [windfall tax, or solidarity contribution](#), of \$28.8mn to the Romanian government for the January-March period.

By Bela Fincziczki

ANNOUNCEMENT

Argus Sour Crude Index ("ASCI")

Proportional assessment

Following the end of the first trading quarter of 2023 and in accordance with the ASCI price methodology, Argus has revised the proportionality assigned to Mars, Poseidon and SGC to be used in the event that the combined volume minimum of 6,000 b/d is not met in any given trade day. The latest proportional assessment values are based on the volume of trade over the last six trade months and will be applicable for the next three trade months starting 27 February 2023 and ending 25 May 2023. Each grade has been assigned the following percentage values:

- Mars: 67pc
- Poseidon: 16pc
- SGC: 17pc

A table containing a history of the proportional assessment values can be found in the ASCI price methodology, which is available at <http://www.argusmedia.com/asci>. If you have any questions or would like to comment on these changes, please contact Gustavo Vasquez at gustavo.vasquez@argusmedia.com and (713) 968-0014, or Amanda Smith at amanda.smith@argusmedia.com and (713) 968-0013.

INDUSTRY NEWS

China's April crude runs ease back

China's April crude runs fell from the previous month as gasoline and diesel refining margins dipped (*see graph*) on slowing domestic consumption, reduced exports and increased refinery turnarounds.

Crude throughput in April eased to around 14.88mn b/d (61.14mn t), down by around 0.18pc from March but still up significantly by 18pc compared with the same period last year during strict Covid-19 lockdowns, data released on 16 May from China's National Bureau of Statistics show. Crude runs during January-April were 14.61mn b/d (240.18mn t), up by 8.3pc from the previous year, following an economic recovery after the lifting of Covid-19 restrictions.

Trading firms and state-controlled refiners increased gasoline stockpiling in April before the 29 April-3 May Labor Day holiday. The volume of travelers during the holiday hit a new record, with the number of passenger cars rising by around 25pc from the same period in 2019 to around 280mn, according to the transport ministry.

But the domestic demand recovery remains slower than expected. State-controlled refiner Sinopec's gasoline sales at retail outlets in multiple provinces during the holiday were below 2021 levels, according to the company, influenced by the rapidly growing new energy vehicle market. Gasoline restocking has slowed this month, with around 54,000 b/d

of 92R gasoline trading in the Bohai bay spot market in May compared with around 99,000 b/d last month.

Chinese refiners have found it difficult to ship the surplus overseas, especially with thin export margins to the Singapore market. China's **oil product exports in April** — including gasoline, diesel, kerosene and fuel oil — fell to a nine-month low of 980,000 b/d, down by 30pc from a five-month low of 1.4mn b/d in March and lower by 2pc from 1mn b/d in April last year, customs data show.

The crude runs will likely continue to dip in May as intensive refinery maintenance is weighing on throughputs. State-controlled refiner PetroChina plans for 540,000 b/d of capacity to have maintenance this month. The 60,000 b/d Shandong independent refiner Kenli and state-controlled CNOOC's 120,000 b/d Taizhou refinery have started 40-day and 45-day turnarounds respectively this week.

Correction

The 15 May story entitled "US to buy up to 3mn bl of crude for SPR" should have said the final award price will be based on the average daily settlement of the Nymex WTI prompt-month price over three trading days, starting on the trading day that the award is notified, adjusted for the Argus Mars prompt month weighted average for sour crude, plus an adjustment submitted by bidders.

Argus Marine Fuels

Argus has launched a marine fuels service, delivering daily bunker prices and the latest market-moving news for all key global markets. The new service provides robust price assessments for high and low-sulfur marine fuels at over 60 ports worldwide.

Contact us at moreinfo@argusmedia.com for more information.

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For more information, please contact us at moreinfo@argusmedia.com.

illuminating the markets

Argus Crude Methodology

Argus uses a precise and transparent methodology to assess prices in all the markets it covers. The latest version of the Argus Crude Methodology can be found at:

www.argusmedia.com/methodology.

For a hard copy, please email info@argusmedia.com, but please note that methodologies are updated frequently and for the latest version, you should visit the internet site.

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