

Argus Marine Fuels Outlook

Global conventional and alternative marine fuels



Overview

Shippers are gearing up for 2025's regulatory changes, which will affect their choice of bunker fuels. May will bring the introduction of an emissions control area in the Mediterranean, with a 0.1pc sulphur limit on all marine fuel. This is expected to favour use of MGO, with 0.1pc ULSFO still in short supply. Meanwhile, shippers will have to cover 70pc of their emissions through EU emissions trading system (ETS) allowances next year, up from 40pc this year, and also comply with FuelEU Maritime regulations. This is expected to boost interest in marine biodiesel blends — not only in Europe, but as far afield as Singapore.

But prices for these blends fell in November— even as prices for key feedstock Ucome rose to a 15-month high. Prices were dragged down by weaker VLSFO values. In Europe, advanced biodiesel blend prices dropped because of higher HBE ticket values in the Netherlands' key bunkering hub — biodiesel prices include a deduction of the value of these tickets.

LNG bunkering has lost its advantage over fossil fuels because of higher spot gas prices in Europe. But when 100pc of emissions need to be covered by EU ETS allowances in 2026, LNG should be the cheaper option again.

The latest postponement of planned Opec+ crude production hikes will support HSFO prices in 2025, which remain very strong relative to crude. VLSFO feedstock supply is high and continues to pressure dob prices.

Key bunker prices, dob					
	Oct 24	Nov 24	Dec 24	Jan 25f	Feb 25f
3.5%S fuel oil (HSFO) 380cst					
					\$/t
Rotterdam	481	457	445	445	444
Singapore	472	463	452	468	464
Houston	465	466	432	452	437
Fujairah	445	445	430	444	447
0.1%S (MGO)					
Rotterdam	651	657	632	664	671
Singapore	657	669	661	654	689
Houston	694	690	719	718	729
Fujairah	746	739	730	723	757
0.5%S (VLSFO)					
Rotterdam	529	504	494	515	516
Singapore	582	560	538	568	566
Houston	524	541	535	556	556
Fujairah	573	554	533	567	554
Marine biofuel					
					\$/t
B30 ARA (Fame Advanced & VLSFO)	730	672	685	738	757
B30 ARA (Ucome & VLSFO)	816	804	805	843	855
B100 ARA (Fame Advanced)	1109	975	1047	1168	1229
B24 Singapore (Ucome & VLSFO)	708	687	662	708	710
B24 Algeciras-Gibraltar (Ucome & VLSFO)	788	774	772	802	812
Grey methanol					
					\$/t VLSFOe
Methanol Rotterdam	887	924	986	940	932
Methanol southeast Asia	758	758	763	783	780
Methanol US Gulf coast	808	858	892	881	875
LNG					
					\$/t VLSFOe
LNG NWE bunker	631	691	662	702	683
Bunker marker					
					\$/t VLSFOe
Grey ammonia					
					\$/t VLSFOe
Ammonia cfr NWE	656	681	1356	1161	1110
Ammonia cfr east Asia	484	474	1038	982	959
Ammonia fob Caribbean	585	588	1194	1027	976
Ammonia fob Middle East	941	951	957	895	833

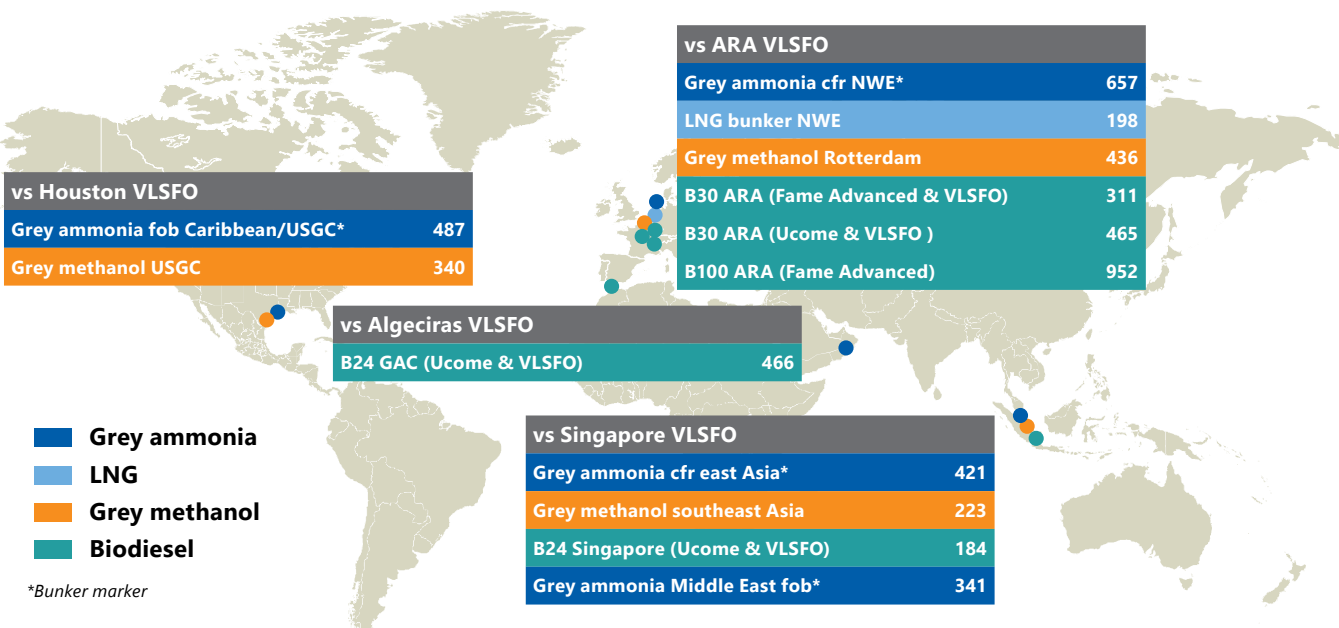
Petroleum

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Alternative marine fuel vs VLSFO next month forecast

\$/t VLSFO-equivalent



Argus Ammonia Analytics

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Price forecasts
(15-25 years)



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(15 years)



Cost curves
analysis



Project Analysis:
Grey, blue and
green ammonia

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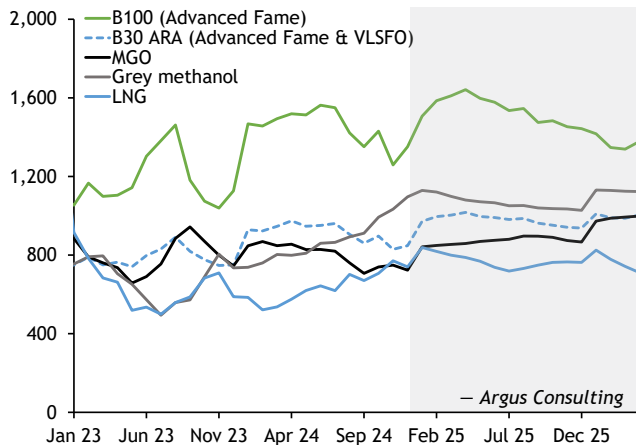
Quarterly reports and data | Annual long-term report
Cost curve online dashboard

EUROPE

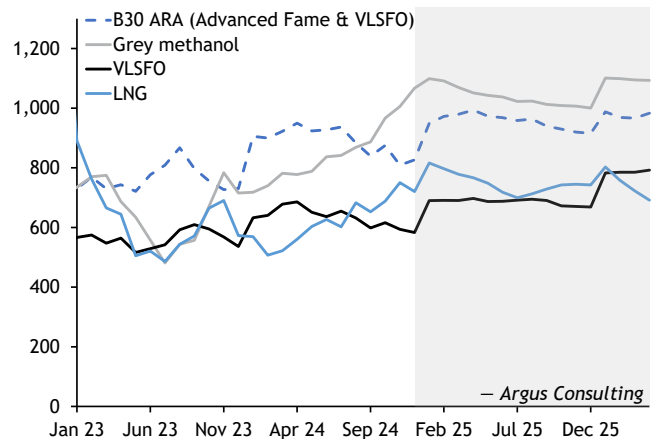
European bunker forecast											\$/t
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	2Q25	3Q25	4Q25	1Q26
Crude price forecast											
North Sea Dated	569	559	557	586	592	600	605	608	614	595	592
Conventional											
Fob NWE											
3.5%S HSFO 380cst	480	440	433	434	433	425	430	439	456	448	425
0.1%S MGO	651	672	641	664	664	664	672	680	697	668	664
0.5%S VLSFO	521	495	491	511	512	512	519	512	513	492	496
Dob											
3.5%S HSFO 380cst Rotterdam	481	457	445	445	444	437	442	450	470	454	430
0.1%S MGO ARA	651	657	632	664	671	676	681	690	713	699	695
0.1% fuel oil Rotterdam	634	635	614	646	653	658	662	671	695	681	677
0.5%S VLSFO ARA	529	504	494	515	516	516	522	516	517	496	500
3.5%S HSFO 380cst Algeciras	535	504	491	493	501	491	493	504	515	514	491
0.1% MGO Algeciras	714	724	711	732	741	739	730	736	742	731	731
0.5%S VLSFO Algeciras	557	539	534	541	542	541	548	542	543	521	526
Alternative											
Dob											
B30 ARA (Fame Advanced & VLSFO)	730	672	685	738	757	763	775	762	742	714	695
B30 ARA (Ucome & VLSFO)	816	804	805	843	855	855	861	856	841	806	797
B100 ARA (Fame Advanced)	1109	975	1047	1168	1229	1248	1272	1244	1177	1131	1060
B24 Algeciras-Gibraltar (Ucome & VLSFO)	788	774	772	802	812	812	818	813	801	769	762
\$/t VLSFOe											
B30 ARA (Fame Advanced & VLSFO)	814	746	764	827	850	857	871	856	832	799	775
B30 ARA (Ucome & VLSFO)	934	929	925	958	974	973	980	974	955	915	903
B100 ARA (Fame Advanced)	1392	1225	1315	1467	1543	1568	1598	1563	1478	1421	1332
B24 Algeciras-Gibraltar (Ucome & VLSFO)	989	972	969	1007	1020	1020	1028	1021	1006	966	957
Grey methanol Rotterdam	887	924	986	940	932	910	892	885	861	846	840
LNG bunker NWE	631	691	662	702	683	664	652	630	599	629	575
\$/t MGOe											
B30 ARA (Fame Advanced & VLSFO)	836	766	785	849	873	881	895	879	854	821	796
B30 ARA (Ucome & VLSFO)	960	954	951	984	1000	1000	1007	1001	981	941	927
B100 ARA (Fame Advanced)	1430	1259	1351	1507	1585	1611	1642	1606	1519	1460	1368
B24 Algeciras-Gibraltar (Ucome & VLSFO)	1017	999	995	1035	1048	1048	1056	1048	1034	992	983
Grey methanol Rotterdam	912	949	1013	966	958	935	917	909	884	870	863
LNG NWE bunker	648	710	680	721	701	682	670	647	616	646	591
European bunker marker											
Grey ammonia cfr NWE \$/t VLSFOe	656	681	1356	1161	1110	1071	1049	1004	945	1001	986
Grey ammonia cfr NWE \$/t MGOe	674	699	1393	1192	1141	1101	1078	1032	971	1028	1013

European bunker forecast with EU ETS CO2 added combustion cost									
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	1Q25	2Q25	3Q25	4Q25
Conventional including CO2 cost									
0.1%S MGO ARA	739	749	723	842	849	848	868	891	877
0.5% fuel oil Rotterdam	616	594	583	690	691	690	691	692	671
Alternative including CO2 cost									
B30 ARA (Fame Advanced & VLSFO)	791	735	748	861	879	875	884	865	836
B30 ARA (Ucome & VLSFO)	877	867	868	965	978	974	978	964	929
B24 Algeciras-Gibraltar (Ucome & VLSFO)	854	843	839	935	945	942	946	934	902
\$/t VLSFOe									
B30 ARA (Fame Advanced & VLSFO)	875	809	827	949	972	967	978	954	922
B30 ARA (Ucome & VLSFO)	995	992	988	1080	1096	1091	1096	1078	1038
B24 Algeciras-Gibraltar (Ucome & VLSFO)	1056	1041	1037	1140	1153	1149	1153	1139	1099
Grey methanol Rotterdam	967	1006	1067	1099	1091	1087	1044	1020	1005
LNG bunker NWE	688	750	720	816	797	797	745	714	743
\$/t MGOe									
B30 ARA (Fame Advanced & VLSFO)	897	829	848	972	996	990	1002	977	944
B30 ARA (Ucome & VLSFO)	989	924	942	1107	1123	1117	1123	1104	1063
B24 Algeciras-Gibraltar (Ucome & VLSFO)	1083	1067	1063	1168	1181	1177	1181	1167	1125
Grey methanol Rotterdam	993	1033	1096	1129	1121	1116	1073	1048	1033
LNG NWE bunker	707	771	740	839	819	819	765	733	764

European bunker forecast
with EU ETS CO2 added combustion cost **\$/t MGOe**

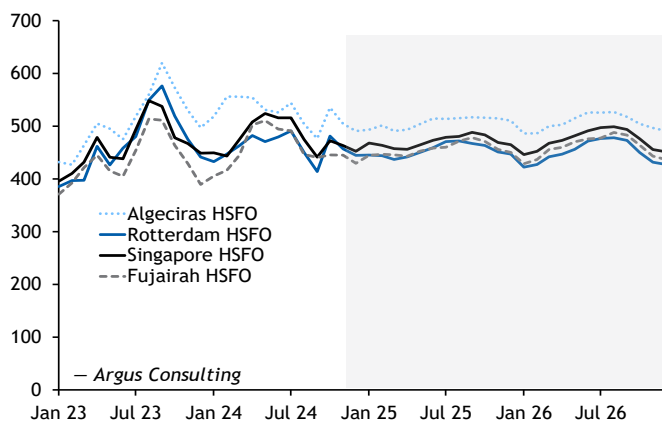


European bunker forecast
with EU ETS CO2 added combustion cost **\$/t VLSFOe**



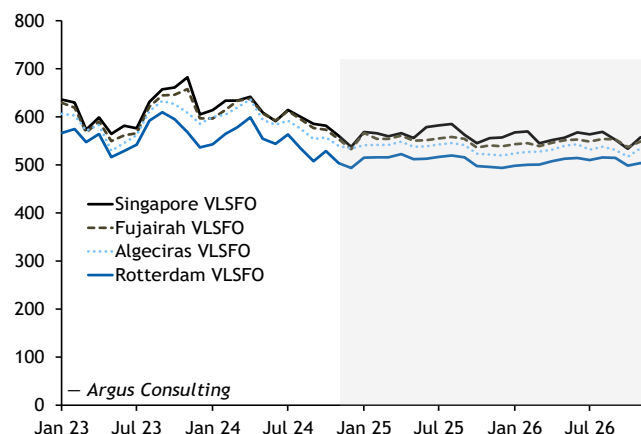
HSFO price forecast, dob

\$/t



VLSFO price forecast, dob

\$/t



Prices

Conventional fuels

Scrubber spread stable on weak VLSFO

Delivered very low-sulphur fuel oil (VLSFO) crack spreads in northwest Europe have weakened this month, following lower crude prices, with the spread out to a \$63.27/t discount to North Sea Dated from a \$55.35/bl discount in November. The bunker price has averaged \$493.58/t in the first few weeks of December — the lowest in more than three years — down from \$503.73/t in November, as a result of ample supplies.

Supply has probably been buoyed by the end of refinery maintenance. The only units still offline — because of fires and leaks — are in the Mediterranean. Motor Oil Hellas has a crude distillation unit (CDU) offline at the 180,000 b/d Corinth refinery in Greece, while Tupras has a CDU offline at the 236,000 b/d Izmir plant in Turkey. These outages are both disproportionately limiting heavy product supply because

the refineries are continuing to run their upgrading units. Meanwhile, Europe's import demand was stable in October-November, but more supplies are expected to be absorbed from the US and Latin America as the VLSFO spread between the US Gulf coast and northwest Europe has widened, which should support deliveries along this route.

The delivered scrubber spread has widened by \$1.46/t on the month to \$50.81/t in December — the highest since September — driven by weak high sulphur-fuel oil (HSFO) prices.

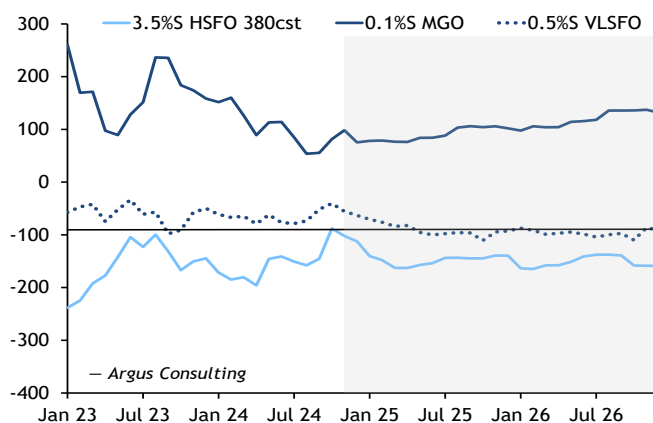
HSFO availability on the rise

Growing HSFO supply in Europe, driven by imports, has been reflected in weakening HSFO crack spreads. The delivered HSFO crack spread has widened to a \$112.24/t discount to North Sea Dated in December, out from a discount of \$102.18/t in November.

Iraqi exports of HSFO and high-sulphur straight-run fuel oil (HSSR) to Europe in November were at their highest since

NWE bunker cracks vs NSD

\$/t



NWE VLSFO-HSFO spread

\$/t



at least 2017, when European stocks were low. A total of 533,000t unloaded in Europe across November, according to Kpler data, roughly six times the total to have arrived in October, and the highest volume on the ship-tracking platform's records, which go back to 2017. The largest share was received by Greece, around 200,000t, all of which unloaded at Motor Oil Hellas' Corinth refinery. With one of Corinth's CDUs undergoing repairs since mid-September, Motor Oil Hellas has been forced to raise imports of high-sulphur straight-run feedstocks. Repairs to the CDU are not expected to be completed before the third quarter of 2025.

The Netherlands received over 170,000t of Iraqi HSSR in November, probably for use in marine fuel production. HSFO output from refineries in the Amsterdam-Rotterdam-Antwerp (ARA) hub fell as runs dropped, causing a bunker fuel shortfall at the hub. HSFO sales at Rotterdam totalled 905,000t in the third quarter, according to port data, the highest quarterly total since at least 2021. And the most

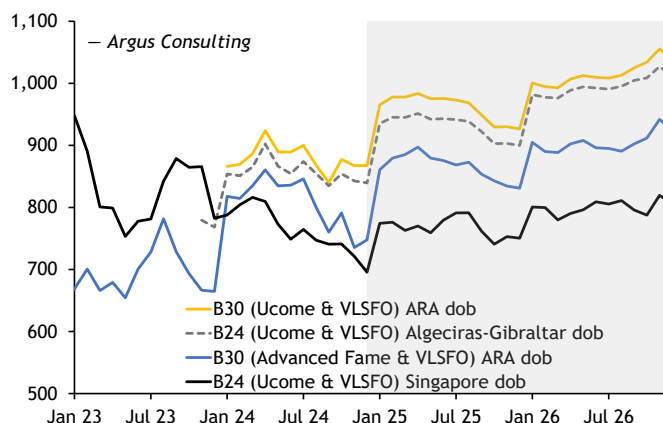
recent data from consultancy Insights Global show that independently held fuel oil stocks at ARA fell by 4.2pc in the week to 12 December to less than 1.3mnt, with volumes heading for west Africa, probably for use as bunker fuel.

Northwest Europe might be less reliant on large HSFO imports thanks to rising local production now most refineries have concluded seasonal turnarounds. But in the Mediterranean, fundamentals are less balanced, with suppliers leaning more on imports to keep up with HSFO demand from the shipping industry.

FuelEU Maritime regulations take effect next month and a greater proportion of the shipping sector's emissions must be covered by allowances in the bloc's emissions trading system (ETS). With shippers required to reduce the greenhouse gas intensity of fuels by 2pc in 2025 and up to 80pc by 2050 — against a 2020 baseline — HSFO demand is likely to fall next next year, depressing prices.

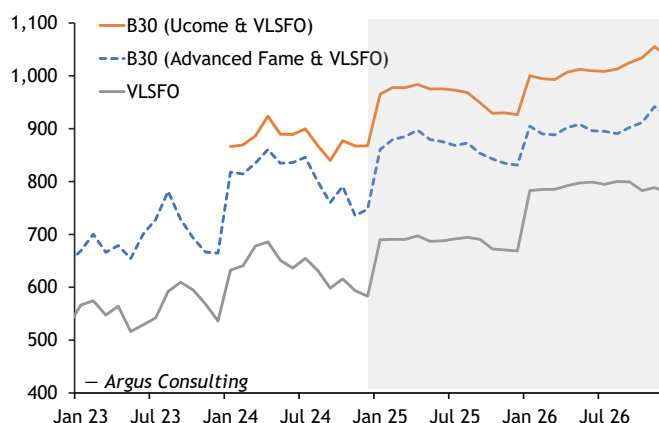
Marine biofuels Europe vs Singapore

\$/t



NWE marine biofuels vs conventional fuels

\$/t



Alternative fuels

Biofuels

Marine blend prices fall, despite firm biodiesel

Ucome fob ARA prices hit a 15-month high of \$1,423/t in November, propelled by tight vegetable oil markets, supporting crop-based biodiesel values. Rising palm oil prices in southeast Asia have squeezed the global complex, leading to higher UCO offers from suppliers, and greater competition from other industries for UCO.

To make matters worse for European biofuel producers, China said on 15 November that it will scrap its 13pc UCO export tax rebate from 1 December. This initially caused a sharp drop in domestic prices as suppliers with stocks tried to sell UCO quickly to make the most of the rebate while it was still in effect. But the following uncertainty around exports pushed UCO fob China values to a 14-month high as parties discussed who will bear the additional cost. We expect the removal of the rebate to raise the floor for UCO prices, which are forecast to remain firm in the coming months.

However, VLSFO prices continued to weaken in November while the Ucome-diesel spread at its widest since September 2022, weighing on prices for marine blends. The B30 Ucome dob ARA price was down by \$12/t to an average of \$804/t in November, and the B24 Ucome dob Algeciras-Gibraltar price fell by \$14/t to \$774/t. December prices for both grades have held stable at this level, with B30 Ucome up by just \$1/t and B24 Ucome down by \$2/t, as VLSFO prices continue to fall and Ucome prices hold firm.

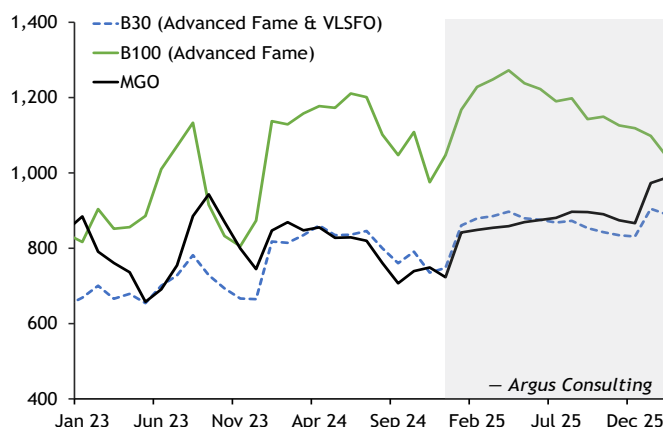
EU ETS costs added \$63/t to the price of B30 Ucome dob ARA and \$68/t to the B24 Ucome dob Algeciras-Gibraltar price in November. These extra costs are expected to hit \$122/t and \$133/t, respectively, from January as the percentage of CO₂ emissions covered rises to 70pc from 40pc.

Advanced blends fall on HBE tickets

Following Germany's confirmation that compliance ticket carryover will not be allowed in 2025 and 2026, Advanced Fame 0 fob ARA prices have regained a premium to Ucome, which

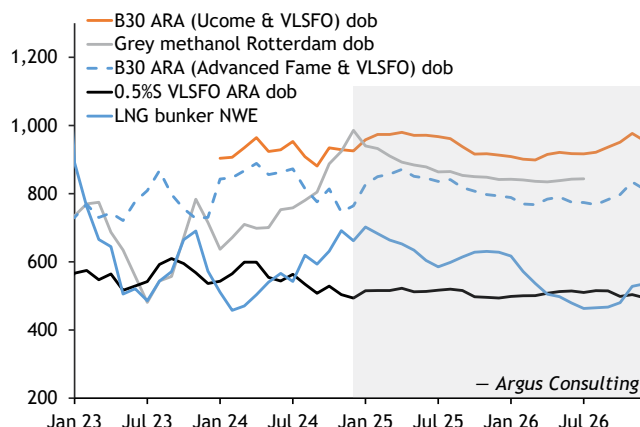
NWE LNG, B100 vs MGO

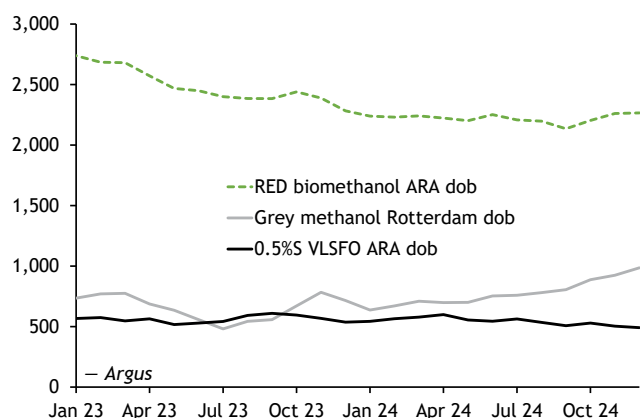
\$/t MGOe



Alternative marine fuels vs VLSFO

\$/t VLSFOe



Biomethanol, grey methanol vs VLSFO \$/t VLSFOe

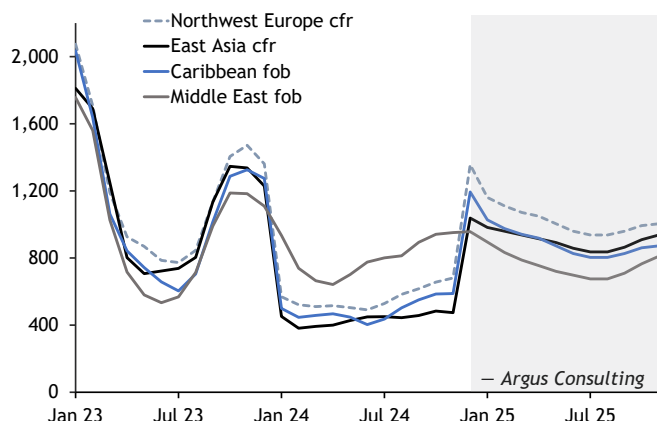
rose to \$25/t in November, although this is still well below a high of \$95/t in July. The higher spread is supported by bookings for delivery in the start of the new year, as German fuel suppliers seek product to meet blending obligations.

But B100 and B30 Advanced Fame 0 dob ARA prices have been more influenced by tight HVO markets driving up the price of Dutch advanced renewable fuel units (HBE-Gs). This is deducted from B100, and B30 Advanced Fame 0 dob ARA prices as marine fuel suppliers currently do not have an obligation and can trade the HBE-Gs generated by blending with VLSFO to other obligated parties.

A shortage of HBE compliance tickets is likely to have driven higher demand. The maritime sector has accounted for a large share of Dutch HBE-G generation in recent years — 35pc in 2022 and 27pc in 2023 — and as a result the multiplier for HBE-G generation from shipping was cut to 0.4 (or 0.8 after double counting) from January 2024. While biobunkering has not slowed as a result of this, HBE generation has dropped off and left the Dutch market short. In previous years, the number of HBEs saved and booked as of 1 October made up a quarter of the year's obligation. The figure this year is just 18pc.

Driven by a sharp rise in demand for either HVO or tickets, HBE-G prices averaged \$16.61/GJ in November, up by 51pc on October. And given strong HBE prices, B30 advanced Fame dob ARA values were down by \$58/t in November, at \$672/t, the lowest monthly average this year as the value of the HBE-Gs deducted from the blend price rose.

HBE-G prices have fallen slightly in December, but remain firm at \$15.04/GJ, despite HVO supply shocks easing, while B30 has risen by \$11/t on the lower HBE-G deduction. As

Grey ammonia bunker marker \$/t VLSFOe

Europe enters the next compliance year, advanced biofuel prices are forecast to rise because of higher demand, and as fewer tickets are carried over.

LNG

LNG to become competitive against VLSFO in 2026

The forecast for 2025 bunker LNG prices in Europe has been revised up, as a tighter underlying natural gas market emerges. The balance has been skewed to under-supply, with downward revisions to supply from Norway, north Africa and Azerbaijan. This is resulting in a greater call on storage withdrawals, but with the TTF forward curve only shallowly inverted, there is little incentive for this. Instead, Europe might have to rely on higher LNG imports, which will push up prices, particularly if stronger demand emerges from Asia.

Indeed, an upward revision to LNG demand in Asia next summer — plus expectations that reduced nuclear availability in Europe will buoy gas demand — underpin the upward revision to the 2025 TTF forecast. Further upwards pressure has been avoided as the EU has scaled back storage targets, so there should be less demand for storage injections.

But the upward revisions to the underlying TTF price profile leave bunker LNG prices looking less competitive against conventional oil-based marine fuels next year. In last month's report, we presented LNG bunker forecasts that dipped below VLSFO in the summer months of 2025, when the cost of complying with the EU ETS is taken into account. The revised forecast sees LNG only reaching parity with VLSFO in the summer, and remaining more costly for the rest of the year.

LNG still looks more competitive in 2026, when the all of carbon emissions from the shipping sector must be covered

by EU ETS allowances, up from 40pc this year and 70pc next year. LNG's lower carbon intensity means the price should remain lower than VLSFO, including the higher carbon cost burden for the entire year. This does, however, assume new liquefaction capacity comes on line on time at Qatar's Ras Laffan, the US' Golden Pass and Nigeria's Bonny complex.

LNG well suited to EU shipping regulations

Given LNG's potential advantage over conventional marine fuels in the coming years, vessel operators continue to add LNG dual-fuel vessels to their fleets. Norwegian operator United European Car Carriers (UECC) has added a dual-fuel LNG newbuild, the *Blue Aspire*, to its fleet on the route between the Mediterranean and northwest Europe. The pure car and truck carrier (PCTC) is 200m long and can carry 700 vehicles on 12 cargo decks. The company is aiming to achieve 20pc use of bio-LNG, 17pc use of biofuels, and 20pc use of LNG across its fleet by 2030. UECC chief operating officer Per Christian Mork says UECC has increased the pace of its fleet's "green transition" to comply with regulations, such as FuelEU Maritime and EU ETS.

An industry report from SEA-LNG, a group advocating for the use of bunker LNG, suggests LNG will be the most suitable option for vessel owners over the next 15 years as they look to comply with FuelEU. For a single ship, LNG complies with FuelEU Maritime rules until 2039 in its fossil form. Green fuels like liquefied biomethane are only needed for compliance from 2040.

CMA trials liquefied bio-methane on LNG vessel

Global shipowner CMA CGM has piloted liquefied bio-methane (LBM) on its LNG-fuelled *CMA CGM Tivoli*. It used 100t of LBM supplied by Shell for bunkering at Rotterdam on 19 October. The LBM was produced from waste-based feedstock and the bunkering trial applied mass balancing to track the movement of the fuel through the supply chain and meet EU-led compliance requirements. These standards are set by ISCC-EU, Renewable Energy Directive (RED) II and also include FuelEU Maritime regulations. In addition, Shell certified the LBM and issued proof of sustainability, proving the fuel meets EU standards. The trial is part of the Rotterdam-Singapore Green and Digital Shipping Corridor, a collaboration between the two port authorities, and is aimed at accelerating maritime decarbonisation and digitalisation. The bio-methane working group spearheading such initiatives is led by SEA-LNG. A similar pilot is planned at Singapore.

Regulations

Global

ISCC sets shipping, aviation PoC framework

International Sustainability and Carbon Certification (ISCC) has issued a framework to provide 'proof of compliance' (PoC) covering use of low-emission fuels in the aviation and maritime sectors.

PoC is intended to address challenges arising from the unavailability of proof of sustainability (PoS) documentation for downstream operators, such as airlines and shipowners. These are typically the obligated party in demonstrating compliance with regulations, such as the EU emissions trading system (ETS) and FuelEU Maritime. A major biofuel supplier says the framework could be used next month.

ISCC said the PoC was developed in alignment with regulatory requirements and will supplement the ISCC EU scheme. The ISCC has also published a guidance document, template, and audit procedures for PoC documents.

According to the guidance, issuing a PoC document for a batch of certified fuel is only possible if the PoS document has been surrendered to relevant competent authorities, and a claim for the same batch of fuel further downstream is not prohibited by the competent authorities. The PoC must also include a reference to the original underlying PoS to allow for cross-referencing, as well as information on which scheme the fuel has already been counted under in which the PoS was surrendered. ISCC added that the PoC document can in principle also be used for claims in voluntary markets, but recommended that parties examine the implications of claiming the same fuel volumes towards voluntary targets.

Market participants had reported regulatory uncertainty regarding use of some marine biodiesel blends this year. In the Netherlands, shippers that buy marine biodiesel blends, including fatty acid methyl ester (FAME), might not receive PoS for RED-certified biofuel, as suppliers further up the chain would probably have already submitted these to redeem the corresponding class of Dutch renewable tickets (HBEs). Buyers could instead receive a raw material and intermediary product delivery document, in the form of a sustainability declaration with many of the same details.

Most new ships to use alt fuels by 2026: Bimco

International shipping association Bimco expects 78pc of new ships ordered up to 2026 to be alternative fuel-capable and another 10pc to be ready for retrofitting.

According to Bimco's outlook for 2025 and 2026, two thirds of ships that will be able to use an alternative marine fuel upon delivery will be LNG-capable and one third will be methanol-capable.

The report also said deliveries of new ships this year will add 2.9mn 20ft-equivalent unit (TEU) to the global fleet, a new record. Bimco projects that rapid expansion of the global fleet will outpace supply growth in the next two years.

Ship demand growth will reach 18-19pc in 2024, according to Bimco, but just 3-4pc in 2025, followed by a decline of 5-6pc in 2026. Bimco says supply and demand could be unbalanced in the next two years, as a result.

UK

UK eyes ETS extension to maritime, CO2 transport

The UK government is consulting on proposals to expand the country's emissions trading scheme (ETS) to the maritime sector. Under the proposals, the UK ETS would apply from 2026 to emissions from domestic voyages — between UK ports, including those starting and ending at the same port, but excluding Crown Dependencies or British Overseas Territories — of ships of 5,000 gross tonnage (GT) or more, including while at anchor or moored. Emissions at berth or in port would be covered for all ships, regardless of provenance or destination.

The plans include an exception for voyages between Great Britain and Northern Ireland, which would only be liable to pay for 50pc of their emissions. This is to avoid rerouting of voyages to Ireland, which would only be liable for 50pc of their emissions as part of the EU ETS.

But the government is also considering whether to apply the UK ETS to 50pc of emissions from voyages between the UK and the European Economic Area. In this case, 100pc of emissions from trips between Great Britain and Northern Ireland would be covered by the scheme.

Demand

Global bunker demand to rise in 2024 and 2025

We still see global bunker demand being supported by diversions away from the Red Sea, although the extent of this support seems to be ebbing as shippers find more efficient routes. We estimate that in both 2024 and 2025 there will be an additional 5.4mn t of demand for conventional marine fuel because of the diversions. As a result, we expect global demand for conventional fuels to grow by 3pc to 282.5mn t in 2024, while in 2025 we expect demand to rise by 1pc to 285.3mn t. But by 2026 — assuming a return of traffic to the Red Sea and rising demand for alternative fuels — we expect demand for conventional fuels to fall to 278mn t.

European bunker demand to follow global trends

Additional bunker demand from the Red Sea diversions will be spread across regions on the extended route. We expect demand for conventional marine fuels in Europe to follow the same trend as global demand, rising in both 2024 and 2025, before falling in 2026. In 2024, we expect 60.3mn t of conventional fuel demand — 30.8mn t of VLSFO, 9.2mn t of HSFO and 20.3mn t of MGO. Demand is expected to rise to 61mn t in 2025 before falling to 59.9mn t in 2026. While demand for total conventional fuels will rise until 2026, demand for VLSFO has been falling since 2023, and will continue to fall. This reflects the growing fleet of scrubber-fitted vessels, which can burn HSFO while still meeting IMO regulations. According to DNV, there were 4,355 scrubber-fitted vessels in 2020, when IMO regulations limiting sulphur emissions were brought in, and the fleet will reach 6,070 in 2026. As a result demand for HSFO is expected to continue to rise by 0.9mn t to 11.1mn t in 2026, even as overall bunker demand begins to fall.

Mediterranean ECA to support MGO demand

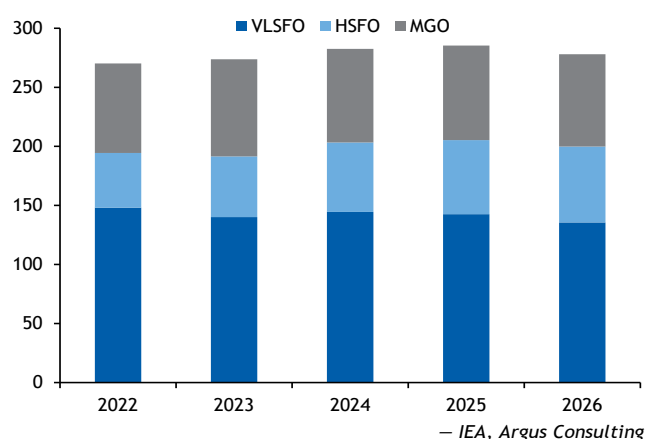
An uptick in MGO demand is expected in 2025 following the introduction of the Mediterranean emissions control area (ECA). The sulphur limit for bunker fuels burnt in the Mediterranean will be limited to 0.1pc from May. VLSFO, the most commonly used bunker fuel, has a maximum sulphur content of 0.5pc, so shippers will have to change fuel. We expect the majority of the shift to be to MGO. Although ULSFO is also compliant, we expect any moves here to be less pronounced because of limited supply — Mediterranean refiners produce little ULSFO. Ships can switch to a compliant fuel ahead of entering an ECA, but use VLSFO for the rest of the journey. Our initial estimates suggest around 70,000 b/d of demand will swap from VLSFO in 2025, rising to 120,000 b/d in subsequent years.

The impact of the new ECA on HSFO is less clear. Some scrubbers might not be able to clean exhaust gases all the way down to 0.1pc. Some bunker suppliers already say they have received requests for non-standard 2.5pc fuel oil, which would exert less wear-and-tear on scrubbers.

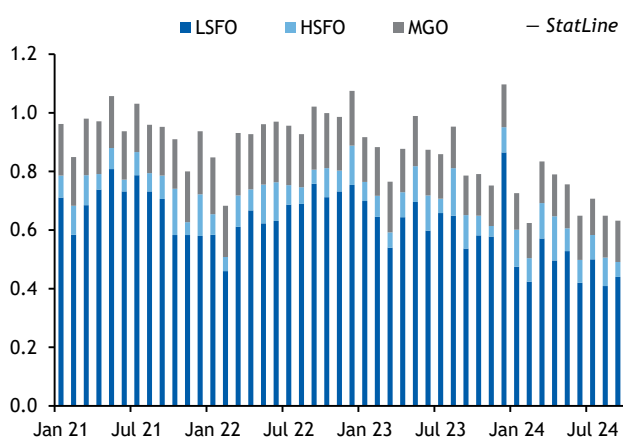
September demand falls in the Netherlands

Total bunker sales in the Netherlands fell on the year and the month in September, by 20pc and 3pc respectively, according to data from Statline. Sales were 632,000t in September, an eight-month low. Falling demand for HSFO drove the drop. Sales of HSFO were just 51,000t, down by 47pc on the month and 55pc on the year. LSFO sales were 440,000t up by 8pc on the month, with their share of overall sales rising to 70pc. Sales of MGO fell by 3pc on the month and 20pc on the year to 141,000t.

Global conventional bunker demand forecast mn t



Netherlands bunker sales mn t



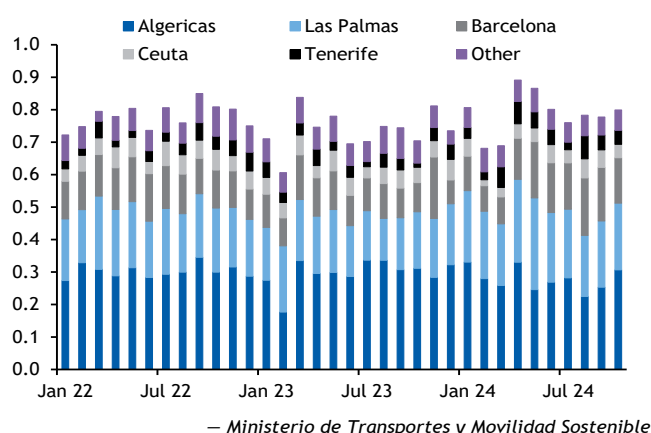
Europe bunker fuel demand					mn t
	2022	2023	2024	2025	2026
VLSFO	33.2	31.4	30.8	30.2	28.7
HSFO	6.6	8.1	9.2	10.2	11.1
MGO	18.3	19.5	20.3	20.5	20.1
Total	58.1	59.0	60.3	61.0	59.9

Rising bunker demand in Spain

Bunker sales at Spanish ports hit a four-month high in October, according to transport ministry data. Sales of marine fuels totalled 799,300t, up by 14pc. Algeciras continued to be the biggest bunkering hub in Spain, with 306,600t of sales, although this was down by 1.6pc on the year. Las Palmas was the next-biggest hub, with 205,500t, up by 18pc. Sales in Las Palmas have been up on the year every month since December 2023, supported by the diversions around the Cape of Good Hope. Tenerife, also in the Canary Islands, has seen strong support as well, with demand up on the year for the eighth consecutive month, at 43,200t. Sales in Barcelona were up by 56pc on the year to 139,700t, although this largely reflects weak demand in October 2023, when demand fell by 15pc on the month to a six-month low.

Spain bunker sales by port

mn t



Supply

ARA stocks stabilise on recovering output

Independently held fuel oil stocks in the ARA region trended lower and remained under 8mn bl in the second half of November. But higher HSFO receipts and domestic production have started to boost supply and halted the draw towards the end of November. Fuel oil stocks in ARA had risen to 8.57mn bl by the end of first week of December, but had shrunk back to 8.3mn bl by 12 December because of reduced transatlantic arrivals. Domestic output is recovering as main-

tenance concludes, including a lengthy turnaround at Shell's 404,000 b/d Pernis refinery that ended in early December.

Unplanned outages in Europe

In Turkey, a fire at Tüpraş' 238,000 b/d Izmir refinery on 25 November shut down a CDU. TotalEnergies' 246,900 b/d Gonfreville refinery in France had to shut a CDU after a leak was detected on 29 November. And MOH's 180,000 b/d refinery in Corinth, Greece, has been taking larger volumes of HSFO as feedstock for secondary units — a record of over 70,000 b/d of HSFO/HSSRFO was received in November — to produce more valuable products, including LSFO. Iraq supplied 45,000 b/d of fuel oil to the refinery, while 25,000 b/d came from Turkey, according to Kpler.

On top of unplanned outages, Europe is set to lose around 375,000 b/d of primary refining capacity next year as a result of the closure of the UK's 145,000 b/d Grangemouth plant and Germany's 146,000 b/d Wesseling refineries, and a part-closure at Germany's Gelsenkirchen site that will shut in over 85,000 b/d. Against the backdrop of weak refining margins, *Argus Consulting* forecasts that European fuel oil production could fall by 80,000 b/d in 2025 to around 910,000 b/d — close to 2020's level, when demand was disrupted by the Covid-19 pandemic.

Port Harcourt offers first LSSR cargo to Europe

LSFO output at Nigeria's 650,000 b/d Dangote refinery has dropped following start-up of the RFCC unit — the plant has not sent any LSSR cargoes to Europe since May, and the most recent LSSR offered by the refinery headed for Singapore, in October. But the recent restart of Nigeria's 210,000 b/d Port Harcourt refinery — shut in 2020 after years of low capacity utilisation — has buoyed fuel oil supply in the country. The plant recently sold its first LSSR cargo — 100,000 bl — and this is now on its way to Europe. But it will be challenging to raise output at the refinery, and market participants say now more than 40-50pc of nameplate capacity is achievable. State-run NNPC has said it expects the initial 60,000 b/d phase to produce 12,000 b/d of gasoline, 13,000 b/d of diesel, 8,600 b/d of kerosene, 19,000 b/d of fuel oil and 850 b/d of LPG in the first year of resumed operations.

Asia-Pacific

Asia-Pacific bunker forecast											\$/t
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	2Q25	3Q25	4Q25	1Q26
Crude price forecast											
Dubai	540	524	524	554	561	566	568	572	578	562	560
Conventional											
Fob Singapore											
3.5%S HSFO 380cst	441	443	435	449	448	441	440	449	467	457	439
0.5%S VLSFO	569	550	528	560	557	544	551	551	559	533	541
Dob Singapore											
3.5%S HSFO 380cst	472	463	452	468	464	457	456	465	483	472	455
0.1%S MGO	657	669	661	654	689	685	678	684	701	693	681
0.5%S VLSFO	582	560	538	568	566	560	566	567	577	553	561
Alternative											
Dob											
B24 Singapore (Ucome & VLSFO)	708	687	662	708	710	697	704	703	715	682	685
\$/t VLSFOe											
B24 Singapore (Ucome & VLSFO)	753	730	704	753	754	740	748	747	760	725	728
Grey methanol southeast Asia	758	758	763	783	780	773	763	752	738	745	755
\$/t MGOe											
B24 Singapore (Ucome & VLSFO)	773	750	722	773	775	760	768	767	780	744	748
Grey methanol southeast Asia	778	778	784	804	801	794	783	772	758	765	775
Asia-Pacific bunker marker											
Grey ammonia cfr east Asia \$/t VLSFOe	484	474	1038	982	959	937	915	888	845	928	930
Grey ammonia cfr east Asia \$/t MGOe	497	487	1066	1008	985	962	939	912	868	952	954

Prices

Conventional fuels

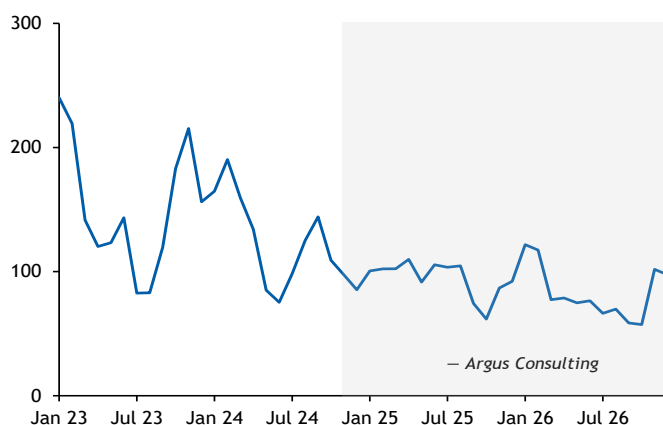
Ample VLSFO supply narrows scrubber spread

The delivered scrubber spread in Singapore has narrowed to a six-month of \$85.34/t this month, in from \$97.34/t in November, as the delivered VLSFO price fell to \$537.56/t from \$560.48/t over the same period.

Ample supplies and lower demand have weakened VLSFO crack spreads, which are down by more than half on No-

Singapore VLSFO-HSFO spread

\$/t

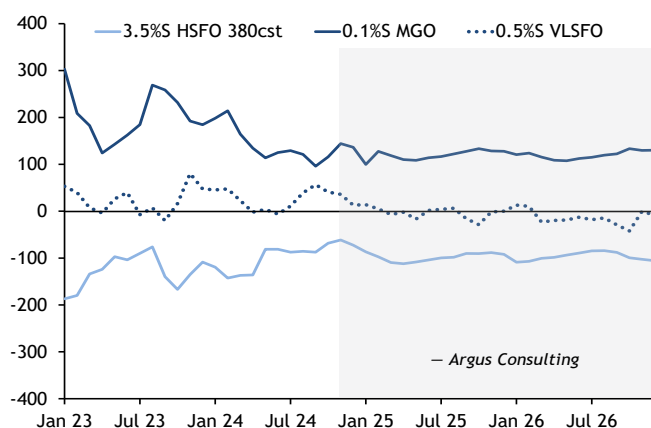


vember. The delivered VLSFO crack spread has dropped to a six-month low of a \$12.99/t premium to Dubai crude in December, down from a \$35.93/t premium in November.

Asia-Pacific imports of VLSFO and LSFO continue to rise, and hit a six-month high in November of 2.78mn t, according to Kpler. Also keeping the market well supplied is a steady flow of VLSFO blendstock, specifically Niger's heavy sweet Meleck crude. Around three Suezmax shipments are expected for December loading, market participants told *Argus*. The first shipment, on the *Samos* and probably chartered by trading firm Cathay Petroleum, left Benin's Seme port on 1 December and is due to arrive in Singapore in the first week of January. A second shipment, on the *Samsara* and chartered by Idemitsu, departed Seme around 12 December. The third shipment is expected to be loaded at the end of December on the *Aura M*, chartered by trading firm BB Energy. While the destinations of the latter two cargoes could not be confirmed, at least one cargo will be bound for Singapore to be used in VLSFO blending. But political instability and tension in the region is casting a shadow over loadings of Meleck crude, which flow from landlocked Niger to the single-point mooring at Seme through a 2,000km pipeline. The line has come under increased attacks during the unrest. Any disruption to supply can impact physical VLSFO supply in Singapore, with time-spreads and crack spreads reacting.

Singapore bunker cracks vs Dubai crude

\$/t



In China, imports of VLSFO in December are expected to be significantly lower than in November as domestic VLSFO export quota had less than 500,000t remaining by the end of November, which will probably keep the VLSFO market pressured. China's expected imports of fuel oil for December alone would be 710,000t, less than half November's imports of 1.53mn t, Vortexa data show.

HSFO market pressured by influx

The delivered HSFO crack spread weakened in the first three weeks of December to a \$72.35/t discount to Dubai crude, out from a \$61.41/t discount in November, following a rise in supplies. HSFO arrivals in Asia-Pacific hit a six-month high of 3.46mn t in November, according to Kpler data, the majority of which came from Russia and Venezuela. Russian volumes have been rising since June because of extensive refinery maintenance. Bad weather and reduced runs at Rosneft's

240,000 b/d Tuapse refinery undermined Tuapse product loadings in November. December Tuapse fuel oil exports are now scheduled 11pc higher than November, at 210,000t.

In China, the reduction in the value-added tax rebate could raise feedstock costs and dampen demand, leaving the region with a surplus of HSFO. But higher HSFO bunker demand in Singapore could set a floor to a weakening market, as Singapore's bunker sales are expected to rise to record highs by the end of this year. Total bunker sales at Singapore in 2024 are on track to exceed last year's 51.8mn t, with January-November sales already approaching 50.2mn t, according to preliminary estimates from the Maritime and Port Authority of Singapore (MPA).

January-November sales stood at some 18.3mn t, which is already 1.56mn t higher than full-year 2023 sales. Market participants have a positive outlook regarding near-term HSFO demand, with strong interest expected for December in the city state.

The disruption in the Red Sea continues to support bunkering demand for HSFO, while Singapore bunker prices remain lower than Zhoushan levels, which could see more diversions to Singapore away from Zhoushan. The Argus-assessed HSFO bunker price in Singapore averaged a discount of \$3.08/t to Zhoushan equivalents in the first half of December. Steady HSFO sales through the first quarter of 2025 can be expected, given more scrubber-fitted vessels and ample HSFO supplies in Singapore.

Alternative fuels

Biofuels

B24 Singapore prices fall on weak demand

Ucome fob China prices reached a four-month high in November, up by 3.2pc on the month to \$993/t. This was driven by rising UCO prices, which have firmed on stronger palm oil prices and China's announcement that it would halt its UCO export tax rebate, increasing feedstock costs for European biofuel producers. UCO and Ucome fob ARA prices rose in response, which in turn supported higher bids for Chinese Ucome, despite the imposition of anti-dumping duties. VLSFO prices, however, continued to fall on weak demand, and B24 Ucome dob Singapore prices averaged \$687/t in November, down by \$21/t from October. Market participants have reported a recent slowdown in trade, in part owing to the upcoming holidays, but also resulting from uncertainty around UCO feedstock prices, which has made suppliers wary about agreeing contracts.

European biodiesel grades are forecast to continue to strengthen in the coming months, as firm feedstock prices support higher bids for Chinese product. Support has also come from the European Commission publishing a definitive list of anti-dumping duties, with the minimum duty imposed on biodiesel producers falling from 23.7pc to 22.8pc. This should lift Ucome fob China prices, but still leave them viable in Europe. We expect Ucome fob China prices will rise to \$1,074/t by April, but B24 Ucome dob Singapore prices are unlikely to follow the same trend.

B30 Adv ARA briefly at discount to B24 Singapore

Although the B24 Ucome dob Singapore price has generally been lower than European grades this year, the B30 Advanced Fame 0 dob ARA price averaged a \$14/t discount to B24 Singapore in November. This is widest discount since February this year, and only the third month in which the B30 Adv grade priced lower. HBE-G prices have since fallen and B30 advanced fame 0 prices have risen in response, bringing the B24 Ucome dob Singapore price back to a discount in December.

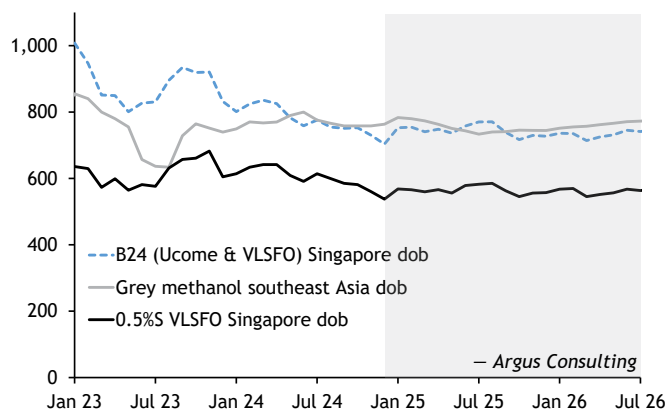
Biofuels regulation

EU sets definitive ADDs on Chinese biofuels

The European Commission has confirmed definitive anti-dumping duties on Chinese biodiesel and HVO that will come into force by 14 February. They have been slightly modified from provisional duties announced on 16 July, and now range from 11.8pc to 36.6pc, depending on the company's

Alternative marine fuels vs VLSFO

\$/t VLSFOe



co-operation with the investigation and whether they are an HVO or biodiesel producer. The commission also confirmed its decision to exclude SAF from the scope of the duties, as it is not immediately interchangeable with HVO. Definitive duties normally enter force for a period of five years, and a review can be requested after the first year.

China cancels UCO export tax rebate

On 1 December, China scrapped a 13pc export tax rebate applied to chemically modified animal, vegetable or microbial oils and fats under HS code 15180000 — the code used for exports by Chinese UCO sellers.

LNG

LNG prices rise in China on colder weather

Having fallen to a multi-month low, delivered China LNG premiums to northwest Europe rebounded in December to a three-month high. Colder weather is now gripping Europe and parts of northeast Asia, increasing competition for LNG. Heating demand is strongest in Asia, resulting in a widening of the China-northwest Europe premium. This could continue to be the pattern for the coming months, as cold weather is forecast for northeast Asia, while European temperatures are forecast above historical averages. LNG prices in Asia have, however, risen to a level that starts incentivising a switch to other fuels. In power generation, gas-to-coal switching can still take place in Asia — unlike in Europe, where a significant amount of coal-fired capacity has been closed. In India, gas-to-LPG switching is also now economical for the residential and commercial sectors.

Demand

Asia-Pacific bunker demand to rise in 2024 and 2025

Demand for conventional marine fuel in Asia-Pacific is being supported by Red Sea diversions, particularly at Singapore. In January-November, the average bunker volume at Singapore was 1.32mn t, up from 1.23mn t in the same period last year, as calculated from data published by the Maritime and Port Authority of Singapore (MPA). We expect conventional bunker demand to be 140.3mn t in 2024, up by 1.9mn t from 2023. And we expect demand to rise to 141.7mn t in 2025, before falling in 2026 to 137.2mn t.

In line with global trends we expect rising demand for HSFO in the region, due to an increasing numbers of scrubber fitted vessels, to weigh on VLSFO demand in 2025 and 2026. We see HSFO demand rising to 10.2mn t in 2025 and 11.1mn t in 2026, whilst VLSFO will fall to 30.2mn t in 2025 and 28.7mn t in 2026.

Singapore sales up on month in November

Bunker sales at Singapore rose by 5pc on the month to 4.46mn t in November, according to MPA. Demand in Singapore has been supported by diversions away from the Red Sea, and has been up on the year in all but one month in 2024. January-November sales hit 50.16mn t, against 51.82mn t for the whole of 2023, so full-year sales are on track to be well in excess of 2023.

LNG sales have been particularly strong this year, albeit rising from a low base. November sales hit 27,550t, up by 282pc on the year. January-November sales totalled 416,000t, already above full-year 2023 sales of 110,000t. LNG pricing at a discount to VLSFO has made it an attractive option for dual-fuel vessels. Demand for LNG is also supported by EU-led mandates, such as the emissions trading system (ETS) and carbon intensity index (CII) rating — burning LNG emits about 20pc less greenhouse gases than conventional fuels.

Asia-Pacific bunker fuel demand					mn t
	2022	2023	2024	2025	2026
VLSFO	73.5	69.0	71.7	71.0	67.3
HSFO	28.1	30.4	34.9	36.6	36.7
MGO	33.2	37.5	33.7	34.1	33.2
Total	134.7	136.9	140.3	141.7	137.2

Biofuels have been another popular choice to meet compliance mandates, as they are a drop-in fuel and require no retro-fitting by shipowners. November sales of bio-blended fuels totalled 115,000t, up by 73pc and the second highest on record after October. Demand for bio-blends is expected to continue to rise in 2025, with the introduction of FuelEU maritime regulations. Vessels operating between Asia and Europe will have half the energy consumed subject to FuelEU maritime regulations.

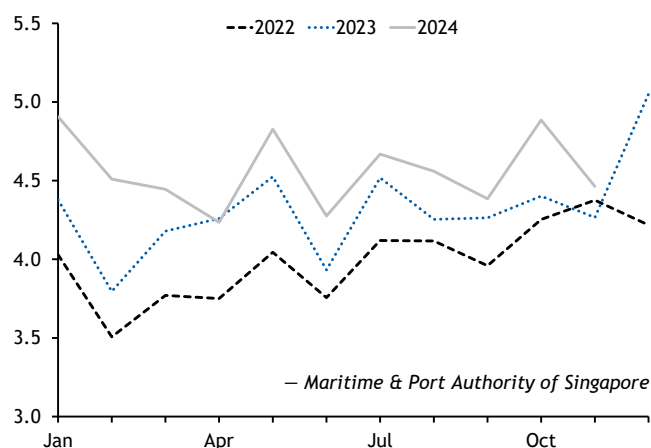
Although sales of alternative marine fuels have been strong, conventional fuels still dominate. In November, 97pc of sales were conventional fuels. LSFO continued to be the most sold fuel, with 2.4mn t of sales, up by 2.3pc on the year. This was the first time sales of LSFO have risen on the year in eight months. HSFO sales were 1.58mn t in November, up by 2.6pc. HSFO sales have risen through 2024, reflecting firm overall bunker demand and a growing scrubber-fitted fleet. HSFO demand is expected to stay firm into December thanks to seasonal increases and a supply crunch at Chinese ports. MGO sales in Singapore hit 338,000t in November, up by 8pc on the year.

Japan

Bonded bunker sales in Japan rose by 5pc on the year to 282,000t — a seven-month high. But sales were still 7pc down on the year. Lower refinery runs during unplanned outages and in the face of declining demand for products, has weighed on supply of marine fuels, in turn limiting sales.

Singapore bunker sales

mn t



Supply

Meleck cut could pressure VLSFO supply

Niger has stepped up exports of new Meleck crude since October, and most cargoes have headed for Asia, particularly Malaysia and Singapore. The properties of the new crude make it favourable for blending into VLSFO as well as processing by a refinery. But there are reports of sabotage on the Niger-Benin pipeline, which brings the crude to the export terminal at Port Seme.

Any disruption to exports of Meleck could be offset by the impending resumption of Dar Blend exports. Around 100,000 b/d of Dar Blend has been shut in since February because of ruptures and blockages along the Petrodar pipeline, which links fields in South Sudan to war-torn Sudan's Red Sea terminal at Bashayer. But exports are on course to return in January, with volumes expected to head for established buyers in the UAE and Singapore, where Dar Blend crude is processed mainly for production of VLSFO. Montfort's 67,000 b/d Fort refinery and Vitol's 80,000 b/d Fujairah plant have switched to processing more Nile Blend for VLSFO production during the absence of Dar Blend, but are expected to pivot back to the heavy sweet grade for better VLSFO yields.

Chinese independents wary of Iranian fuel oil

China's private-sector oil companies have been reducing imports of Iranian fuel oil in November-December, driven by rising premiums, stricter US sanctions and additional import quotas allowing them to directly source crude as feedstock from other suppliers. Loadings of Iranian fuel oil to Shandong province dried up in November, according to Vortexa.

And the tax rebate policy change has further limited the appeal of HSFO as refinery feedstock in China. The cut in the consumption tax rebate was smaller than previously signalled — most refiners still secured a 95-100pc rebate in November, whereas an earlier plan was for a rebate of just 70pc — but it has still pushed up refiner costs by \$1.30/bl. And uncertainty persists. Should the rebate be cut again, rising feedstock costs will turn Chinese refiners away from HSFO imports, which would then need to be absorbed in the wider Asian market.

Regulation

CMA, Nike to build electric barge in Vietnam

Global shipowner CMA CGM has partnered with Nike to build an electric barge (e-barge) for inland waterway transport in Vietnam. The barge is expected to begin operations in 2026. Retail company Nike will partner with CMA CGM to transport Nike goods using the e-barge between Binh Duong province and the Gemalink deep-sea terminal in Vietnam, the shipowner said. The battery-powered zero-emission e-barge will transport goods on a 180km round trip between Binh Duong and Cai Mep, and is expected to avoid 778 t/yr of CO₂ emissions.

The e-barge will transport over 50,000 20-foot equivalent units (TEUs) annually, with solar charging points at the Gemalink terminal in Cai Mep. A solar park will supply 1GWh/yr of green electricity for recharging the e-barge. Barge or harbour craft engines typically run on NGO at ports and the fuel is also used for heating and electricity generation on board vessels. Vietnam has a commitment to achieve net zero emissions by 2050.

Singapore is also progressing towards more electrification, with 11 electric harbour craft designs shortlisted in February this year. A pilot for electric harbour craft charging points was also launched in April.

Americas

North America bunker forecast											\$/t
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	2Q25	3Q25	4Q25	1Q26
Crude price forecast											
WTI Houston	569	555	552	589	595	605	607	608	611	592	596
Conventional											
Fob Houston											
3.5%S HSFO 380cst	433	412	415	434	420	417	428	434	456	443	420
0.5%S VLSFO	526	534	532	554	555	564	557	547	542	513	530
Dob Houston											
3.5%S HSFO 380cst	465	466	432	452	437	435	445	451	472	464	440
0.1%S MGO	694	690	719	718	729	729	731	730	749	732	727
0.5%S VLSFO	524	541	535	556	556	566	558	549	545	517	533
Alternative											
Dob US Gulf coast											
\$/t VLSFOe											
Grey methanol	808	858	892	881	875	860	842	773	771	777	773
\$/t MGOe											
Grey methanol	870	923	960	947	941	925	906	831	829	836	831
North America bunker marker											
Grey ammonia fob Caribbean \$/t VLSFOe	585	588	1194	1027	976	941	918	872	811	869	853
Grey ammonia fob Caribbean \$/t MGOe	630	633	1284	1105	1049	1012	988	938	872	934	918

Prices

Conventional fuels

USGC sulphur spread widens on weaker HSFO

Lower and higher-sulphur fuel oil prices at the US Gulf coast have weakened this month, tracking crude. The HSFO price is down most sharply, with the spread between VLSFO and HSFO Houston ex-wharf widening to \$102.88/t in the first three weeks of December from \$75.21/t in November.

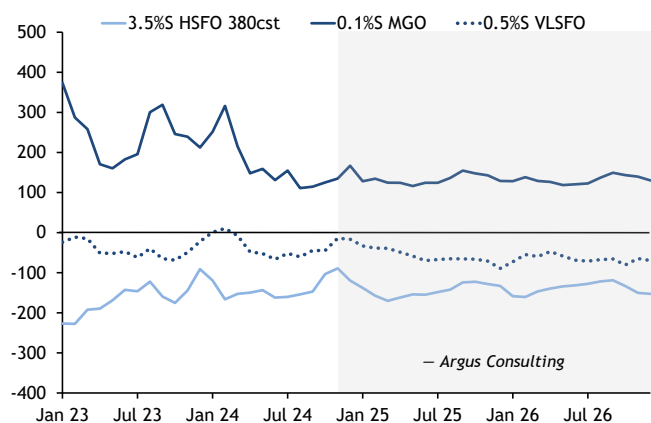
The ex-wharf HSFO crack spread has fallen to a \$119.46/t discount to WTI Houston from a discount of \$89.14/t, after

an increase in imports lifted stocks in the first two weeks of December from 42-year lows at the end of November. Imports rose by 28pc 141,000 b/d in first two weeks of December from November, according to the latest weekly data from the US Energy Information Administration (EIA). Stocks rose to 24.4mn bl from 23.1mn bl over the same period. Most of the imports are from Mexico and Iraq.

Iraq's state-owned Somo has just finalised a term tender to sell 1.12mn t/month of low sodium, high-sulphur straight-run fuel oil and 100,000 t/month of high-sodium fuel for loading between 1 January and 30 June from a floater tank at the Khor al-Zubair terminal.

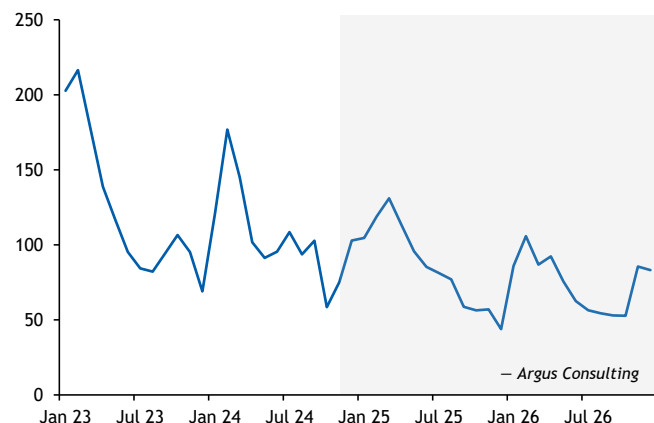
USGC bunker cracks vs WTI Houston

\$/t



VLSFO-HSFO Houston ex-wharf spread

\$/t



Iraqi fuel oil, typically a straight-run grade, is often exported to US Gulf coast, Asia-Pacific or Mediterranean refiners for upgrading into more valuable oil products. Iraqi fuel oil exports have hit record highs this year, averaging 1.68mn t/month in January-November, according to Kpler. Volumes exported were much higher than what was offered by tender from Somo. The surge in exports recently prompted a shut-down of Somo's 260,000 b/d Shuaiba refinery in Basrah after it ran out of storage for fuel oil.

On the VLSFO market, the ex-wharf crack spread has fallen to a \$16.58/t discount to WTI Houston in December from a discount of \$13.93/t in November, following a fall in crude prices over the same period.

While inventories have rebounded from 42-year lows, bunker demand is keeping the VLSFO market supported. Bunker demand should rise seasonally as we approach the holidays, particularly from containerships.

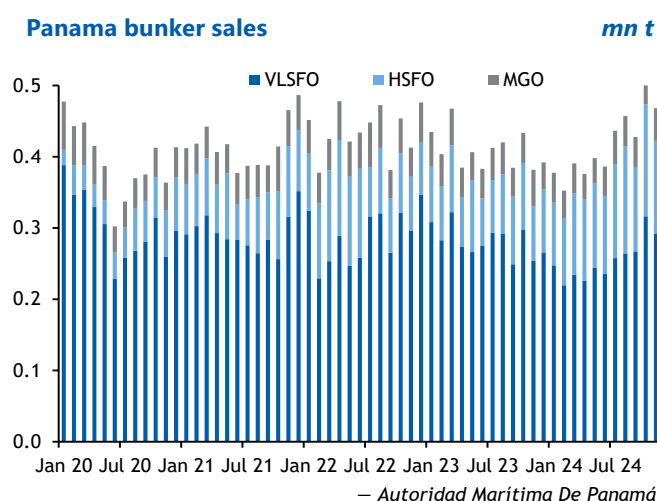
Demand

Americas demand to rise in 2024 and 2025

We see demand for conventional marine fuels rising in 2024 and 2025, even with the region having no additional demand from Red Sea diversions, then a slight fall in 2026. We expect demand to be 41.5mn t in 2024, 42.9mn t in 2025, and 41.6mn t in 2026. VLSFO demand is expected to fall in 2025 and 2026, to 19.5mn t and 19mn t respectively, with HSFO demand rising to 6.9mn t and 7.2mn t.

Panama bunker sales up in November

Bunker sales in Panama were up by 22pc on the year to 468,100t in November, according to canal authority ACP.



Americas bunker fuel demand					mn t
	2022	2023	2024	2025	2026
VLSFO	19.1	17.9	19.6	19.5	19.0
HSFO	5.2	5.3	6.5	6.9	7.2
MGO	14.5	14.7	15.4	15.5	15.4
Total	38.8	37.9	41.5	41.9	41.6

Sales were the second highest in 2024 behind October, when they hit the highest in more than five years. Sales have been up on the year since June, as rising water levels allowed caps on vessel transits to rise. Strong demand relative to the last two years should be maintained over the coming months as water levels at the Gatun Lakes are expected to stay high and reach record levels this month.

VLSFO sales totalled 291,500t, up 14.6pc on the year. HSFO sales rose by 71pc to 130,700t. Only MGO sales fell on the year, by 10pc to 45,900t.

Supply

US fuel oil exports slow down

US residual fuel oil stocks had trended lower to a new record low of 23.07mn bl by the end of November, down from a 2024 high of 30mn bl in March, EIA data show. But the week to 13 December saw a reversal in the trend, with stocks rising to 24.35mn bl. This probably reflects a slowdown in exports of VLSFO and HSFO. Loadings of VLSFO to Panama reached the highest in a year at 36,000 b/d in November, but no cargoes have been delivered along this route in December.

This could be the result of the slowdown in canal transits, which has also led to a month-on-month decline in bunker sales. Exports of HSFO — increasingly bound for bunker pools at Singapore and Rotterdam — also slowed in recent months, as increased refinery runs and demand for feedstock probably diverted more HSFO into the refining system.

Middle East

Middle East bunker forecast											\$/t
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	2Q25	3Q25	4Q25	1Q26
Crude price forecast											
Dubai	540	524	524	554	561	566	568	572	578	562	560
Conventional											
Fob Fujairah											
3.5%S HSFO 380cst	442	439	429	440	440	435	437	445	461	448	434
0.5%S VLSFO	570	551	529	563	551	550	557	551	552	535	539
Dob Fujairah											
3.5%S HSFO 380cst	445	445	430	444	447	446	443	451	470	459	440
0.1%S MGO	746	739	730	723	757	754	747	752	769	761	749
0.5%S VLSFO	573	554	533	567	554	554	561	554	556	538	543
Middle East bunker marker											
Grey ammonia Middle East fob \$/t VLSFOe	941	951	957	895	833	788	754	724	687	796	803
Grey ammonia Middle East fob \$/t MGOe	969	980	986	922	858	812	777	746	707	819	827

Prices

Conventional fuels

Fujairah scrubber spread at six-month low

VLSFO bunker's premium to HSFO has narrowed to a six-month low in December — \$103.13/t, from \$108.52/t in November — with VLSFO prices weakening more than HSFO. Both the VLSFO and HSFO markets in Fujairah continued to soften from last month following the decline in crude prices. The premium of delivered VLSFO prices in Fujairah to values in Singapore — used as a price basis by Fujairah traders — has risen to \$5/t in December from \$3.77/t in November.

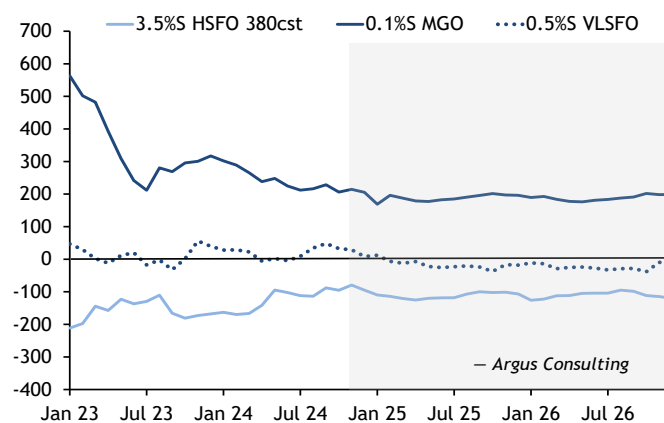
The steep fall in VLSFO prices follows November's drop in demand in Fujairah to at least a one-year low. And while demand for the higher-sulphur grade fell on the month, it seems to be steadier.

On both the VLSFO and HSFO fronts, the market is well supplied after restocking in the first half of December, with rising receipts, mainly from Kuwait and Iran. Adequate inventories in the run-up to the holidays will cap any significant upside to prices in the short term.

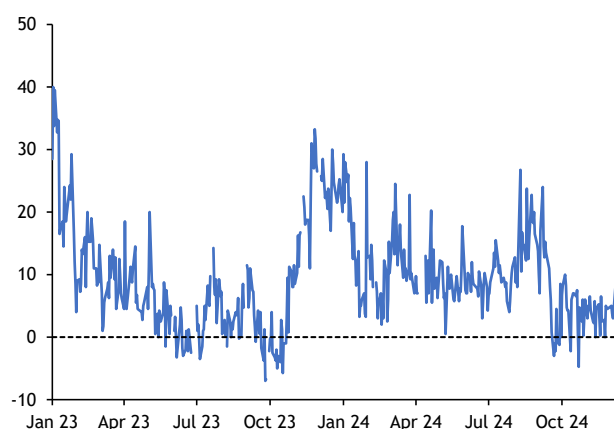
HSFO supplies are likely to fall once Bahrain's state-owned Bapco Energies launches the long-delayed Bapco Modernisation Project (BMP), boosting crude processing capacity at the Sitra refinery to 380,000 b/d from 267,000 b/d. BMP adds 21 new operating units and 15 new substations. The upgrade will primarily boost middle distillate output and curb fuel oil output once secondary units come on line in the second quarter of next year. In the run-up to these secondary units firing up, however, Bapco is likely to boost fuel oil loadings.

Iraq and Iran continue to contend with surplus fuel oil output. In the first half of this month, Iraq's state-owned Somo

Fujairah bunker crack spreads vs Dubai crude \$/t



Fujairah dob VLSFO diff. to VLSFO fob Singapore \$/t



paused operations at its 260,000 b/d Shuaiba refinery in Basrah on 3 December because it has little storage left for fuel oil. Weather-related disruptions at the Khor al-Zubair port delayed vessel loadings on 30 November and these exacerbated the impact of the storage bottleneck. Shuaiba is expected to resume operations in the second half of December, once tank levels fall.

Demand

Falling bunker demand in Fujairah in November

Bunker demand in Fujairah fell on the month and the year, by 5pc and 0.6pc, respectively, in November. Total sales came in at 590,500t, a 17-month low. Demand was eroded by competitive pricing at the nearby Khor Fakkan port, along with cautious sentiment deriving from geopolitical tensions.

Only HSFO sales rose on the year, by 3pc to 175,500t, although sales did fall on the year. VLSFO sales fell by 1.5pc on the year to 392,000t. MGO sales totalled, 23,000t down by 13pc. But sales of HSFO could fall in December, as supply is likely to be tight with a reduction in flows of Russian product.

Supply

Sitra refinery upgrade raises short-term supply

Bahrain's state-owned Bapco Energies has completed the long-delayed \$7bn Bapco Modernisation Project (BMP), boosting crude processing capacity at its Sitra refinery to 380,000 b/d from 267,000 b/d. The project should boost middle distillate and naphtha output, and lower production of fuel oil. But a change in yields is unlikely until the second quarter of next year, when the new hydrocrackers start operating. In the coming months, fuel oil output at Sitra will probably increase as a result of higher CDU capacity.

BMP will also enable the refinery to process heavier crudes. It currently runs mostly medium sour Arab Light, which is supplied by pipeline from Saudi Arabia.

Iraqi fuel oil exports slow in November

Iraqi fuel oil loadings dropped by over 90,000 b/d from a multi-month high of nearly 300,000 b/d in October to around 200,000 b/d in November — the lowest since September 2023 — Vortexa tracking data show. Volumes totalled 160,000 b/d on 1-18 December, while HSFO crack spreads weakened in Asian and European markets. By contrast, Iraq

exported nearly 260,000 b/d of fuel oil in January-October this year.

The recent drop probably also reflects winter stockbuilding. But the country's fuel oil output is expected to remain robust in the coming months, and exports will start recovering when winter power generation demand tails off, given strong bunkering demand. The country's fuel oil output and exports have increased steadily since the re-open of the 140,000 b/d Karbala refinery in 2023 and the CDU expansion of 70,000 b/d at Basrah refinery earlier this year. Operations at the 260,000 b/d Shuaiba refinery in Basrah halted recently there is no storage left for fuel oil, following weather-related disruptions at the Khor al-Zubair port in late November. The refinery is expected to resume operations towards late December, when storage levels fall.

Iraqi fuel oil, typically a straight-run grade, is often shipped to the US Gulf coast or Asia-Pacific for processing into higher-value products. But with HSFO 380cst crack spreads elevated on bunker demand, the incentive to use it as refinery feedstock has fallen away. Iraqi HSFO has been mainly heading for Fujairah and Singapore for bunkering, as the pricing gap between feedstock-grade cargoes and the lower-value bunker grade has also made it challenging to find buyers for Iraqi straight-run fuel oil.

HSFO still tight in December for UAE's Fujairah

HSFO makes up around a third of Fujairah monthly bunker fuels sales of 600,000-650,000t, and the Hi-5 spread — the differential between HSFO and more expensive 0.5pc sulphur marine fuel — narrowed to under \$100/t towards the end of November before rebounding to around \$100/t in the first half of December. But the spread dipped to below \$100/t again on 19 December. By contrast, the spread was wider in October, at \$128/t.

The tightness in recent months has been underpinned by lower imports from Russia, as Russian refineries carried out planned maintenance. Flows of HSFO from Russia to Fujairah are averaging around 30,000 b/d in the fourth quarter, almost halving from the third quarter. But as turnarounds wrap up, Russian fuel oil loadings are poised to recover to over 700,000 b/d in December, the highest since February.

Iranian exports typically fall in the final months of the year due to elevated power generation and heating demand. As Tehran is bracing for winter conditions, with rolling power cuts implemented in several provinces, HSFO exports will probably decline in December, reducing supplies into Fu-

jairah. Iran has shipped around 100,000 b/d of HSFO to the bunkering hub in the past few months.

Tight MGO in Durban turns focus to road diesel

Limited availability of MGO at the South African port of Durban has pushed prices up, prompting some bunker fuel buyers to switch to using road diesel. There is also a shortage at the South African port of Richards Bay, further driving up prices. Middle Eastern and Indian refiners are the main suppliers of diesel and gasoil to the port. Around 150,000 b/d of diesel and gasoil arrived at Durban in November, but inflows dropped to around 130,000 b/d on 1-19 December, Vortexa data show.

Durban is a major bunkering hub in South Africa, with demand coming from dry bulk carriers and container vessels. The tightness of MGO supply reflects the increased number of vessels sailing around the Cape of Good Hope this year.




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