

Oil Market Report

13 July 2023

- Global oil demand is projected to climb by 2.2 mb/d in 2023 to reach 102.1 mb/d, a new record. However, persistent macroeconomic headwinds, apparent in a deepening manufacturing slump, have led us to revise our 2023 growth estimate lower for the first time this year, by 220 kb/d. Buoyed by surging petrochemical use, China will account for 70% of global gains, while OECD consumption remains anaemic. Growth will slow to 1.1 mb/d in 2024.
- World oil supply rose 480 kb/d to 101.8 mb/d in June but is set to fall sharply this month as Saudi Arabia makes a sharp 1 mb/d voluntary output cut. For 2023, global production is forecast to increase by 1.6 mb/d to 101.5 mb/d, as non-OPEC+ expands by 1.9 mb/d. In 2024, global supply is set to rise by 1.2 mb/d to a new record of 102.8 mb/d, with non-OPEC+ accounting for all of the increase.
- Refinery crude throughput estimates for 2023 and 2024 have been raised by 130 kb/d and 90 kb/d, respectively, to 82.5 mb/d and 83.5 mb/d. Higher Russian crude runs and the start-up of new refining capacity underpin the revision. Refining margins remain robust, with very strong Atlantic Basin gasoline cracks and rapid gains in diesel, jet fuel and fuel oil more than offsetting weak naphtha cracks.
- Russian oil exports fell 600 kb/d to 7.3 mb/d in June, their lowest since March 2021. Estimated export revenues plunged by \$1.5 bn to \$11.8 bn – nearly half the levels of a year ago. Moscow has promised a further 500 kb/d cut to exports from August to stem declining prices and revenues, but may hold production steady as domestic oil demand rises seasonally.
- A substantial 44.2 mb build in non-OECD countries, led by a surge in China, pushed global observed oil inventories up by 19.4 mb in May to the highest since September 2021. By contrast, OECD oil stocks drew by a marginal 1.8 mb. Oil on water declined by 23 mb as additional OPEC+ output cuts saw seaborne oil exports falling to their lowest since January. Preliminary data show a 9.2 mb draw in June.
- Amid range-bound trading, ICE Brent futures fell by \$1/bbl m-o-m in June to \$75/bbl, as hawkish central bank policies continued to weigh on investor sentiment. Additional voluntary cuts by some OPEC members and a weaker US dollar failed to dispel the macro gloom. Asian crude benchmark Dubai outperformed WTI and Brent, as a tight East of Suez sour crude market contrasted sharply with a comfortably supplied Atlantic Basin. At the time of writing, Brent was trading around \$78/bbl.

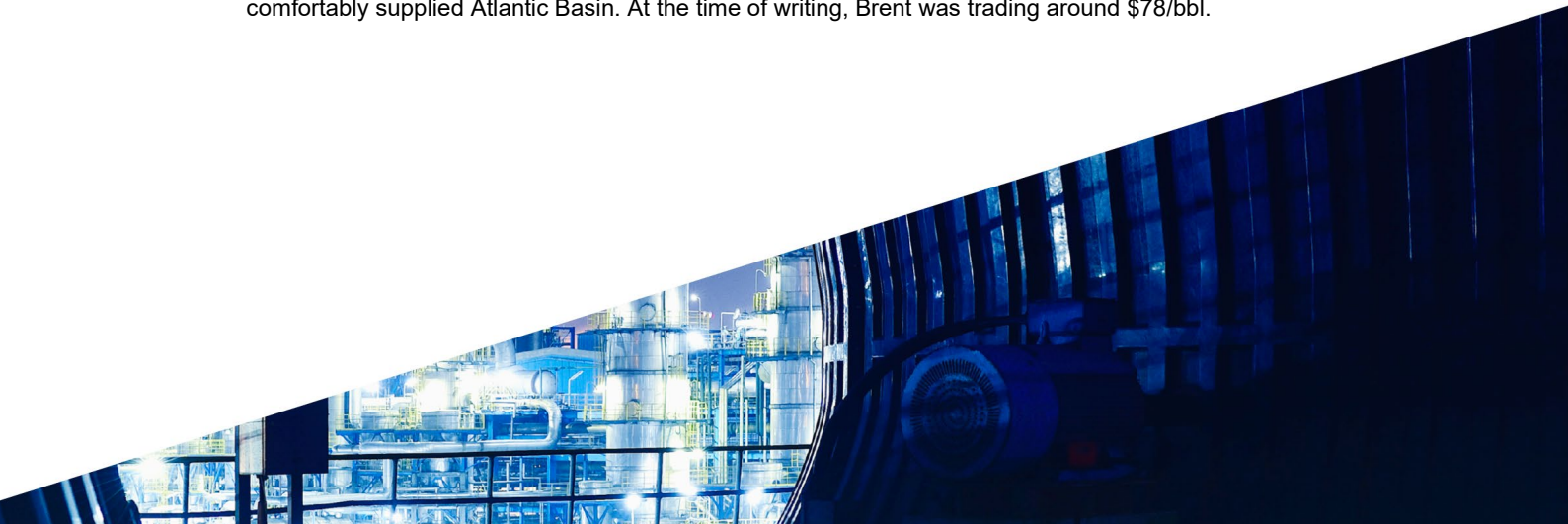


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Running out of steam

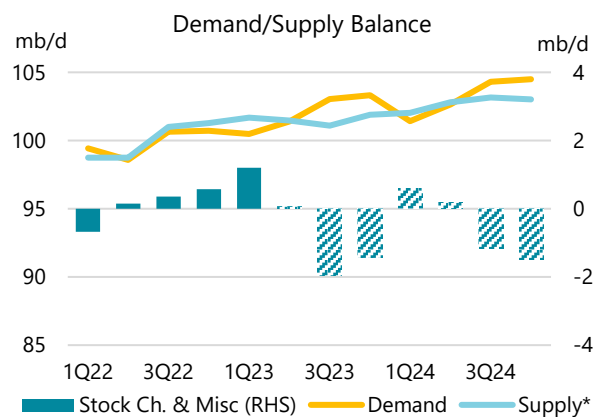
Benchmark crude oil prices traded in a narrow range in June as persistent economic woes overshadowed deepening supply cuts from some OPEC+ countries. Amid an overall slackening in oil demand growth, China's widely anticipated reopening has so far failed to extend beyond travel and services, with its economic recovery losing steam after the bounce earlier in the year. North Sea Dated hovered around \$75/bbl for the month, marginally below May levels and a staggering \$49/bbl less than a year ago. At the time of writing, the North Sea benchmark had inched up to \$80/bbl.

Lower production from Saudi Arabia and core OPEC+ members since production cuts were first implemented last November has so far been offset by higher output from other producers. In June, global oil supply was a mere 70 kb/d below October levels just before the first round of OPEC+ cuts kicked in. Iran, exempt from cuts due to sanctions, ramped up production by 530 kb/d over

the same period, reaching a five-year high. At the same time, output recovered in Kazakhstan and Nigeria. Outside of the alliance, supply from the United States rose by 610 kb/d as natural gas liquids output surged to all-time highs while biofuels increased seasonally. But global supply could tumble by more than 1 mb/d this month as Riyadh implements steeper cuts. The Kingdom's crude output is set to plunge to a two-year low of around 9 mb/d in July and August, leaving it trailing behind Russia as the bloc's top crude producer.

World oil demand is coming under pressure from the challenging economic environment, not least because of the dramatic tightening of monetary policy in many advanced and developing countries over the past twelve months. Growth in 2023 has been revised down for the first time this year, to 2.2 mb/d from 2.4 mb/d expected previously, with China poised to account for 70% of the total. While Chinese demand growth continues to surprise to the upside, a surge in domestic petrochemical activity has undermined steam cracker margins and activity elsewhere. Demand in the OECD, and Europe in particular, is languishing amid a grinding slowdown in industrial activity. African countries have seen imports and demand decline by higher retail fuel prices after subsidies were dismantled. Even so, global oil demand is set to rise seasonally by 1.6 mb/d from 2Q23 to 3Q23, and to average 102.1 mb/d for the year as whole. Growth will slow to 1.1 mb/d in 2024, as the recovery loses momentum and as ever-greater vehicle fleet electrification and efficiency measures take hold.

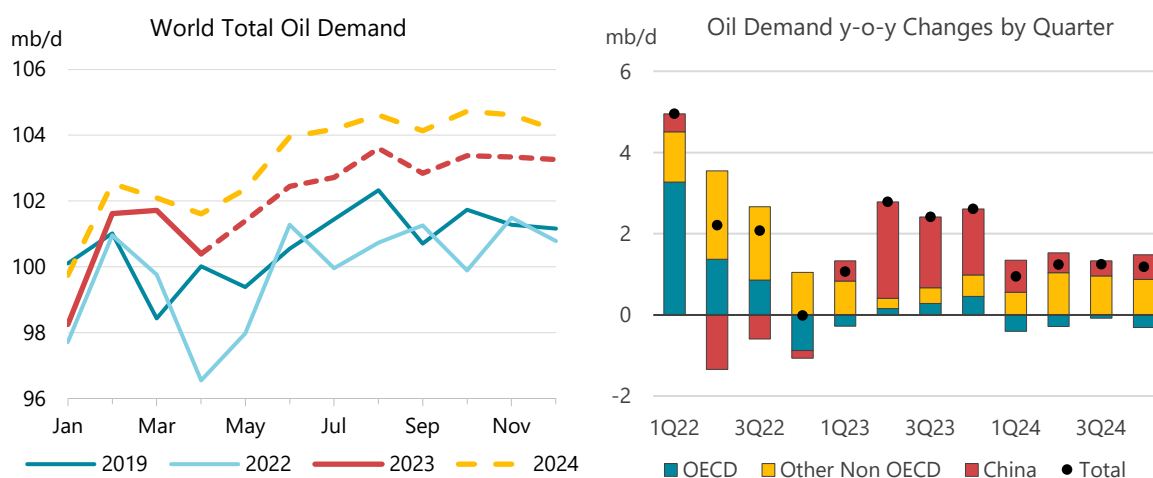
Global observed oil inventories look relatively comfortable, having recovered to their highest level since September 2021. OECD industry stocks rose by 170 kb/d in May. At the same time, China posted its largest monthly increase in crude stocks in a year, at a steep 1.1 mb/d, fuelled by a sharp rise in crude oil imports and despite near-record refinery throughput rates. China's recent buying spree included heavily discounted Russian and Iranian barrels. Global oil balances imply a marginal stock build in 2Q23. But with the surplus mostly in Chinese crude and US LPG tanks, ongoing draws in oil on water and deeper supply cuts starting this month suggest the oil market may soon see renewed volatility.



Demand

Overview

Global oil demand is on course to rise by 2.2 mb/d y-o-y in 2023, to an average 102.1 mb/d. More than 90% of this increase occurs in non-OECD countries, with China's contribution of 1.6 mb/d the largest by far. This compares to 2.4 mb/d of worldwide growth in last month's *Report*, the downward revision of 220 kb/d largely due to a deteriorating global economic outlook that weighs especially heavily on OECD economies. Conversely, 2024 global demand growth has been revised up by 290 kb/d to 1.1 mb/d. This upgrade is mainly apparent in higher gasoil use in the wake of improved prospects for China and a more positive longer-term economic outlook.



The contrast between a lacklustre OECD and resilient non-OECD continued to sharpen in recent months. By and large, non-OECD oil consumption remained robust. Demand in the OECD, and Europe in particular, is languishing amid a deepening slump in manufacturing. OECD Europe demand looks set to contract for four consecutive quarters, between 4Q22 and 3Q23. The divergence between the two blocks will become even more apparent in 2024. As OECD demand begins its structural decline (-270 kb/d y-o-y), non-OECD consumption growth of 1.4 mb/d y-o-y will resume its stronger pre-pandemic trend.

Non-OECD oil usage has been notably resilient in the face of an economic outlook that has become progressively more challenging. Soaring interest rates and falling commodity prices would traditionally spell trouble for emerging markets. However, Brazil and India continue to defy expectations of an economic slowdown, amid buoyant industrial and agricultural production, with retail fuel demand additionally buttressed by government subsidies. However, not all countries are impervious to the weaker economic climate. Egypt, Argentina and Pakistan recently raced to secure IMF lifelines and avert acute liquidity and currency crises. Oil demand in each of the three countries, and the African continent as a whole, is forecast to decline in 2023.

At the same time, China's oil demand remained robust despite rising unemployment, renewed property market stress and a general slump in business and consumer sentiment. Apparent oil demand in May subsided somewhat from April's record highs, as gasoline and jet fuel saw monthly declines in usage that were echoed in mobility indicators retreating from their 1Q23 record highs. However, China's petrochemical feedstock demand continues to go from strength to strength as the

country structurally expands its steam cracker and aromatics production capacities. This means that, as in 2022, naphtha will remain the largest driver of demand growth among refined products in 2023 and 2024.

Global Demand by Region								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
Africa	4 045	4 275	4 255	4 451	- 20	196	-0.5	4.6
Americas	30 318	31 219	31 478	31 322	259	- 156	0.8	-0.5
Asia/Pacific	36 007	36 157	38 155	39 181	1 998	1 026	5.5	2.7
Europe	13 875	14 288	14 183	14 137	- 105	- 46	-0.7	-0.3
FSU	4 884	4 942	4 926	4 919	- 16	- 7	-0.3	-0.1
Middle East	8 434	8 970	9 084	9 219	114	135	1.3	1.5
World	97 563	99 851	102 080	103 229	2 229	1 149	2.2	1.1
OECD	44 802	45 947	46 104	45 833	158	- 271	0.3	-0.6
Non-OECD	52 761	53 905	55 976	57 396	2 071	1 420	3.8	2.5

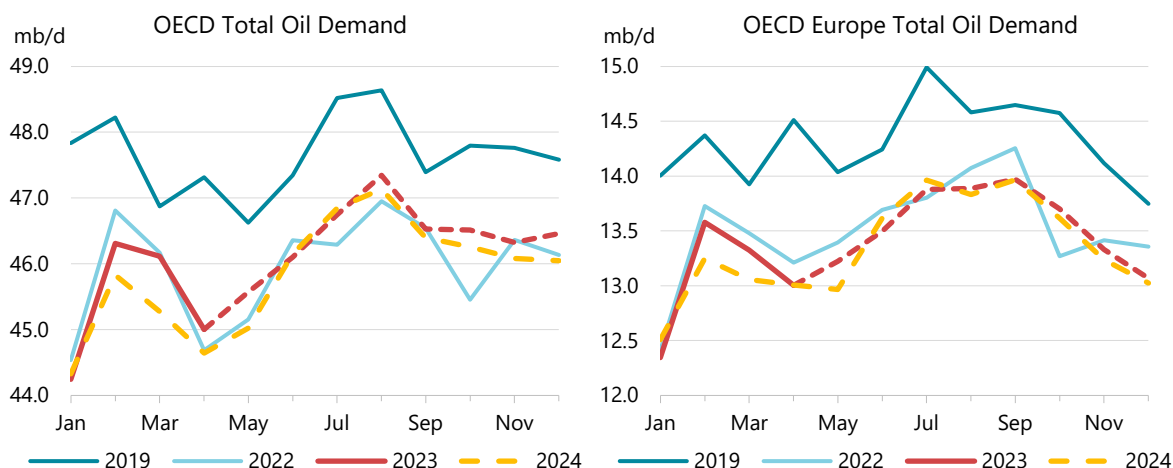
Growth in China's capacity to produce petrochemical commodities has rapidly outpaced expansion in its domestic demand for polymers and fibres, which was already the largest in the world. As a result, China's imports of petrochemical commodities have fallen sharply since 2021. Suppliers from other countries who have historically relied on Chinese buyers, such as its East Asian neighbours and major Middle Eastern exporters, as well as European producers, have suffered in an increasingly oversupplied global market. The full force of these strategic Chinese investments is now beginning to be felt all around the world and is dramatically reshaping trade flows in chemicals and feedstock markets (See *Petrochemical world map being redrawn as massive wave of Chinese plants ramp up*).

Gasoline and gasoil continue to move along very different tracks, driven by diverging macroeconomic fundamentals. The slump in global manufacturing, closely associated with gasoil demand, contrasts with a far more resilient picture for the services sector, which is typically aligned with personal mobility and gasoline use. Purchasing managers' indices (PMIs) for manufacturing are significantly underperforming their services equivalents across major economies. Globally, gasoil grew by only 0.1% (+10 kb/d) y-o-y in 1Q23 and 0.9% (+250 kb/d) in 2Q23. Meanwhile, gasoline demand accelerated from 1.6% (+420 kb/d) y-o-y in 1Q23 to 2.9% (+770 kb/d) in 2Q23 as China's reopening gathered pace. On average in 2023, gasoline will grow almost ten times faster than gasoil, at 500 kb/d versus 60 kb/d, or 1.9% versus 0.2%, respectively. From 2024 onwards, gasoline demand growth is expected to lose momentum and move into a slight contraction due to ever-greater vehicle fleet electrification, but this year gasoline is delivering a resounding swansong.

Global Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
LPG & Ethane	13 732	14 140	14 549	14 797	409	248	2.9	1.7
Naphtha	6 944	6 791	7 125	7 502	334	377	4.9	5.3
Motor Gasoline	25 700	26 171	26 673	26 668	502	- 5	1.9	0.0
Jet Fuel & Kerosene	5 172	6 106	7 119	7 298	1 012	179	16.6	2.5
Gas/Diesel Oil	27 474	28 244	28 304	28 518	60	214	0.2	0.8
Residual Fuel Oil	6 260	6 540	6 603	6 670	63	67	1.0	1.0
Other Products	12 282	11 859	11 707	11 776	- 152	69	-1.3	0.6
Total Products	97 563	99 851	102 080	103 229	2 229	1 149	2.2	1.1

OECD

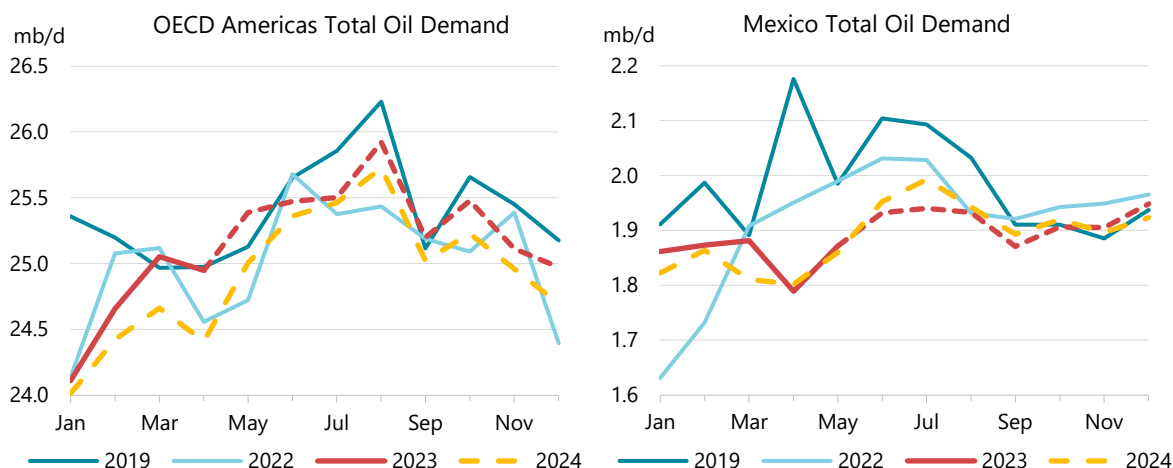
Overall OECD oil deliveries gained ground in 2Q23, increasing by 160 kb/d, or +0.4% y-o-y, following a contraction in 1Q23 of 270 kb/d, or -0.6%. Demand will narrowly surpass year-earlier levels during the second half of the year, resulting in an average increase of 160 kb/d for the year as a whole. OECD demand will rise to 46.1 mb/d in 2023, 45% of the global total and 1.6 mb/d below 2019, but is forecast to decline 270 kb/d, (-0.6%) in 2024 as vehicle electrification accelerates and steady increases in efficiency standards continue to erode transport fuel demand.



Demand remained subdued in **OECD Europe** during 2Q23, dropping by 190 kb/d y-o-y (-1.4%). Latest data for April and May underscore the continued weakness among industrial consumers, with gasoil (-260 kb/d, -4.3%) and naphtha (-130 kb/d, -12.4%) deliveries posting the largest declines. According to recent indicators, the travails of European manufacturers continued in June. The *HCOB Eurozone Manufacturing PMI* tumbled further, from 44.8 in May, to 43.4 in June. This marked the twelfth successive month in contraction amid weak demand for goods, destocking and as the impact of interest rate hikes from the European Central Bank continued to undermine consumption.

With the detrimental macroeconomic environment set to persist, average 2023 European oil demand is projected to slide by 110 kb/d (-0.8%), to 13.4 mb/d. This comes despite a 140 kb/d (+10.7%) increase in jet/kerosene consumption, with gasoil use dropping by 210 kb/d (-3.4%) and naphtha set to fall by 70 kb/d (-7%), following a 150 kb/d (-13.7%) collapse in 2022. Growth will remain negative in 3Q23 (-130 kb/d) before turning narrowly positive (+20 kb/d) in 4Q23, largely due to baseline effects in comparison to late 2022 when an unusually mild winter and high energy costs substantially reduced heating and industrial demand, respectively. The decline in deliveries is expected to continue into 2024 (-60 kb/d), with falling demand for road fuels and little prospect for a meaningful recovery in the region's petrochemical sector.

Demand in **Germany** – Europe's largest economy and the region's major centre for manufacturing and petrochemicals – tumbled by 90 kb/d (-4.3%) in 2Q23 and is projected to fall by 80 kb/d (-3.5%) on average in 2023, the sharpest decline in the OECD and second largest decrease of any country globally. The June *HCOB Germany Manufacturing PMI* was deep into negative territory and the weakest amongst major economies, at 40.6. Meanwhile, the *Ifo Business Climate* indicator for Germany fell to 88.5, the lowest mark of the year so far.



OECD Americas oil deliveries are estimated at 25.3 mb/d in 2Q23, climbing by 1.1% y-o-y (290 kb/d) as the US economy remained surprisingly robust in the face of higher interest rates and slowing global growth. We expect modest growth to continue through the remainder of 2023, for an average annual increase of 140 kb/d (+0.6%). However, demand growth is projected to go into reverse during 2024, falling by 240 kb/d (-0.9%). Gasoline demand will see the sharpest drop at 230 kb/d as electrification and vehicle efficiency gains gather pace. This suggests that 2023 will mark the post-pandemic peak for the region's oil consumption.

Quarterly demand exceeded equivalent 2019 levels for the first time during 2Q23 (+20 kb/d higher). This was largely due to a major structural increase in LPG/ethane use (+720 kb/d), as several new petrochemical facilities have been commissioned over the past four years, while all other major fuels have seen substantial declines in demand over the same period. However, this contrasts sharply with the other two OECD regions, which remained far below 2019 levels in 2Q23 (Europe -1 mb/d, Asia Oceania -540 kb/d).

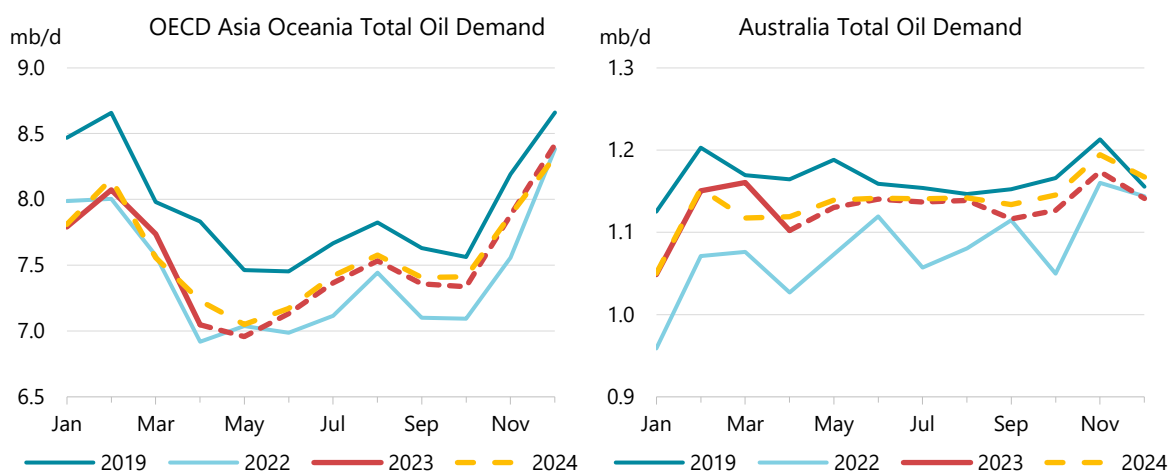
US deliveries for April showed the world's largest oil consumer returning to y-o-y growth of 490 kb/d, or +2.5%, after four straight months of contraction. In part, this resulted from a modest rebound in petrochemical ethane intake as operating levels recovered slightly for export-focused Gulf Coast steam crackers. By contrast, petrochemical usage of propane was much weaker. Combined LPG/ethane deliveries rose by 100 kb/d y-o-y. However, the largest increase came from gasoline (240 kb/d y-o-y, 2.8%). Preliminary data for May and June suggest average growth of 210 kb/d compared with 2022, when the traditional US summer driving season was extremely muted. Preliminary data also show a significant slowdown in gasoil demand in June (-300 kb/d y-o-y), likely connected to slowing manufacturing activity, and we project an average 2023 fall of 70 kb/d for the product.

In addition to robust demand for gasoline, the cornerstone of US oil product markets, higher US GDP bodes well for continued growth over the remainder of the year. The GDP growth assumptions used for modelling purposes have been revised up by about 1.4 percentage points for 2H23, with output steady despite Federal Reserve interest rate hikes. Mirroring the diverging fortunes for gasoil and gasoline, the *S&P Global US Manufacturing PMI* showed an accelerating decline (falling to 46.3 in June from 48.4 in May) while the equivalent *Services PMI* saw continued expansion (easing to 54.4 in June from 54.9 in May). We now expect an overall increase in oil demand of 110 kb/d for 2023, up by 50 kb/d compared with last month's *Report*.

Following an explosive, albeit deferred, rebound from Covid-disruptions in 2022, **Mexican** demand growth is now rapidly cooling. Estimated April demand showed a 160 kb/d y-o-y contraction followed

by a 120 kb/d decline in May. Gasoline (average -80 kb/d) and gasoil (-90 kb/d) accounted for almost the entire decrease. As with its northern neighbour, Mexican economic growth has been resilient in the face of rate hikes from the Banco de México and the fall in demand more likely reflects the unwinding of the release of pent-up demand, common to many countries emerging from the pandemic and which characterised Mexican oil consumption in 1H22.

Oil use in **OECD Asia Oceania** posted modest overall growth in 2Q23 (+60 kb/d, 0.9%), as weaker demand in Korea (-30 kb/d) was countered by upturns in Australia (+50 kb/d) and Japan (+40 kb/d). Jet/kerosene deliveries dominated regional growth, rising by 24% y-o-y (+120 kb/d), while naphtha and LPG/ethane demand fell by a combined 60 kb/d. Overall, demand growth is set to average 120 kb/d (1.6%) in 2023 before slowing to 30 kb/d in 2024, to an average of 7.6 mb/d. In each case, the rise will be dominated by jet fuel, buttressed by the resumption of Chinese international travel, despite the overall benefit of the country's reopening to neighbouring economies being comparatively limited.



Korean consumption is in the grip of a deep slowdown, dropping by 190 kb/d y-o-y (-7.3%) in May as deliveries of all products, with the exception of jet/kerosene, declined. Gasoil demand dipped by 40 kb/d and combined naphtha and LPG/ethane use fell by 60 kb/d. Overall Korean exports plunged by 15% y-o-y in May and 6% in June, and have now fallen for nine months in a row, reflecting weaker manufacturing globally, and especially in China. The *S&P Global South Korea Manufacturing PMI* also indicated a worsening climate in May (48.4) and June (47.8). A modest recovery in domestic petrochemical operations and the comparison to an already weak baseline in the second half of the year will see 2023 demand marginally higher, by 10 kb/d.

By contrast, **Japanese** deliveries posted an increase of 180 kb/d y-o-y (+6%) in April and preliminary data showed this upswing continuing in May at 60 kb/d (+2%). In April, naphtha demand rebounded by 100 kb/d, compared to a period of very soft demand in 1H22, while jet/kerosene demand was 80 kb/d higher. Firmer May preliminary figures reflect steady demand for major fuels. The *au Jibun Bank Japan Manufacturing PMI* indicates a renewed decline in activity in June at 49.8 but remains much stronger than other OECD economies. We expect Japanese demand to rise by an average of 50 kb/d (1.4%) this year.

Australian demand is also forecast to modestly increase, up by around 50 kb/d (4.9%) this year, one side effect of its unusually extended period of anti-Covid restrictions, which moderated oil consumption well into 2022. Jet/kerosene will lead gains, climbing by 40 kb/d. With domestic flight numbers exceeding pre-pandemic levels and international flights gradually recovering, according to

RadarBox data, potential for limited further growth remains. However, total 2024 demand is still 30 kb/d lower than in 2019 at 1.1 mb/d (+10 kb/d y-o-y).

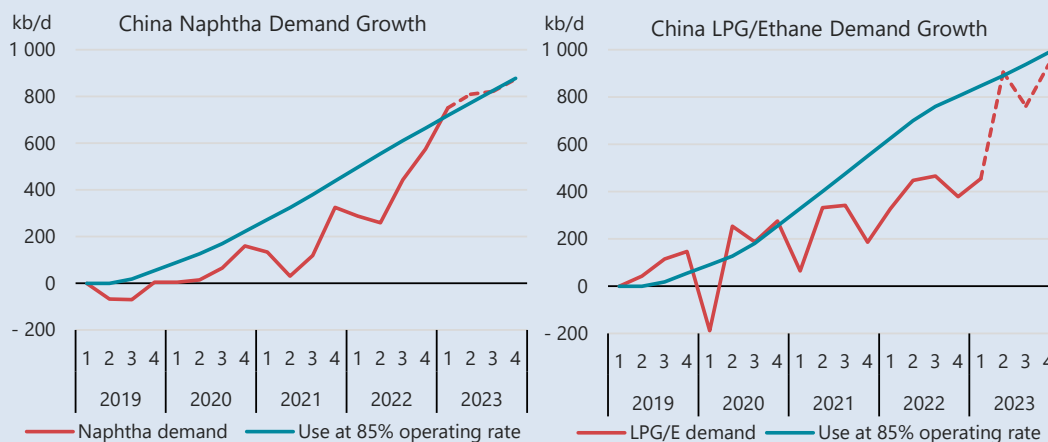
OECD Demand based on Adjusted Preliminary Submissions - May 2023																
(million barrels per day)																
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		LPG/Ethane		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD Americas	10.93	1.3	1.86	2.3	3.38	1.6	1.79	0.6	3.72	5.3	0.51	-8.4	3.20	9.5	25.39	2.7
US*	9.33	2.1	1.60	0.6	2.49	1.2	1.47	1.3	2.93	3.9	0.32	-16.4	2.62	9.6	20.76	2.6
Canada	0.79	3.0	0.14	24.0	0.34	46.1	0.27	-0.5	0.43	18.0	0.00	-99.4	0.40	14.6	2.37	11.6
Mexico	0.72	-9.1	0.09	-2.1	0.35	-19.0	0.06	-11.5	0.31	3.6	0.18	24.5	0.16	0.0	1.87	-6.0
OECD Europe	2.14	4.2	1.42	11.0	4.74	-3.8	1.15	1.2	13.3	13.3	0.81	-8.2	1.97	-12.1	13.22	-1.3
Germany	0.48	13.8	0.20	2.8	0.67	5.0	0.29	6.8	0.11	-1.8	0.05	-15.5	0.28	-36.4	2.08	-2.7
United Kingdom	0.30	4.7	0.30	8.1	0.45	-3.0	0.11	-9.2	0.09	-12.4	0.02	-41.9	0.11	0.2	1.37	-1.0
France	0.26	7.0	0.13	9.4	0.69	-6.7	0.09	43.4	0.10	9.4	0.04	24.5	0.19	1.1	1.49	1.5
Italy	0.20	9.1	0.10	13.8	0.50	1.5	0.05	0.3	0.10	9.4	0.09	-10.4	0.22	2.1	1.26	3.2
Spain	0.13	0.8	0.15	10.6	0.44	-6.7	0.17	-5.6	0.07	42.4	0.14	-6.3	0.17	-19.2	1.27	-4.1
OECD Asia & Oceania	1.34	-1.4	0.58	14.1	1.46	-0.4	0.44	2.2	0.72	-8.4	0.45	6.7	1.96	-4.8	6.96	-1.1
Japan	0.68	1.7	0.25	3.7	0.40	2.6	0.29	2.0	0.38	-7.4	0.25	13.1	0.76	3.1	3.01	2.0
Korea	0.27	-8.0	0.15	26.1	0.43	-8.3	0.08	0.9	0.27	-12.1	0.17	-2.8	1.04	-10.1	2.41	-7.3
Australia	0.27	-0.5	0.14	28.5	0.57	5.0	-	-	0.05	1.8	0.01	-10.7	0.10	-2.2	1.13	5.3
OECD Total	14.41	1.5	3.87	7.1	9.59	-1.4	3.38	1.0	5.44	4.6	1.77	-4.9	7.12	-1.3	45.57	0.9

* Including US territories

Petrochemical world map being redrawn as massive wave of Chinese plants ramp up

As the vast wave of strategic Chinese investments in petrochemicals crests, a massive reorganisation of global polymer trade flows is underway. Obscured by three years of Covid disruptions, the impact of these plants was initially relatively muted. However, Chinese feedstock intake is now rocketing following a pronounced acceleration since zero-Covid restrictions were lifted in late 2022. This is piling pressure on increasingly oversupplied global chemicals markets as exporters search for alternative outlets.

Apparent Chinese demand for the major petrochemical feedstocks (naphtha and LPG/ethane) lagged the pace of capacity additions significantly during 2020 and 2021, indicating that new plants were being underutilised. The volume of feedstocks produced in China's refineries and brought into the country have surged in recent quarters and are currently consistent with operating rates of around 85% at recently built facilities. Naphtha, LPG and ethane have long been the lynchpins of Chinese oil consumption growth, accounting for 1.5 mb/d, or 74%, of the total projected 2.1 mb/d 2019-2023 increase.



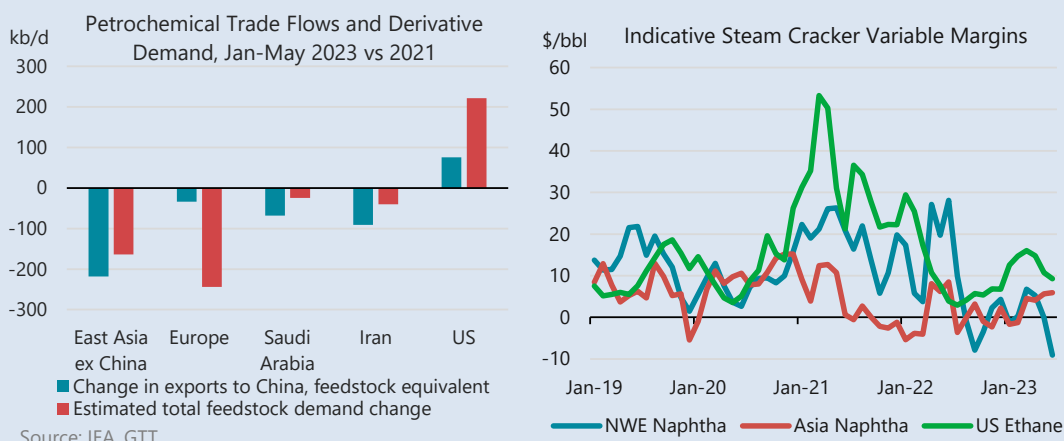
Crucially, much of this new feedstock demand is displacing imports of polymers and synthetic fibres, so is largely independent of the growth of the Chinese economy itself. According to *Global Trade Tracker*

(GTT) data, China's imports of commodity polyethylene (PE), polypropylene (PP) and ethylene glycol (MEG) for the first five months of 2023 dropped by almost 20%, compared with the same period in 2021. This implies the relocation of some 400-500 kb/d of feedstock use from exporting countries to China during this period, or roughly half the increase in demand.

The relatively sluggish start for the new plants dampened Chinese naphtha and LPG/ethane demand growth during 2020 and 2021. Importantly, it also shielded petrochemical producers in other regions from the full impact of these investments. However, the implications are now becoming apparent, with producers across the world and up and down the cost curve forced to cut output.

The first sign of this was in late-2022, when naphtha demand in Europe and East Asia (excluding China) tumbled. European naphtha use collapsed by 28% y-o-y (-330 kb/d) in 4Q22, with Asian demand falling by 12% (-400 kb/d). This was the result of anaemic local end-user demand, as producers and their customers struggled with elevated energy costs, and the implications of an increasingly oversupplied global marketplace. Reportedly, some US producers have also encountered difficulties. While US ethane demand has been fairly robust, propane use has suffered as export opportunities for PP have become more limited.

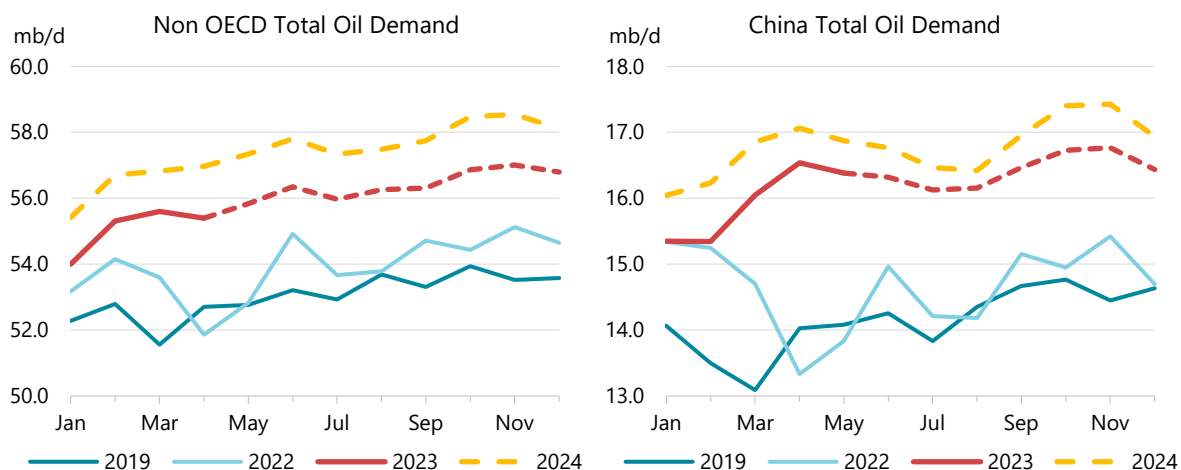
Other major exporting countries, most notably Saudi Arabia and Iran, have also seen petrochemical shipments to China drop substantially. Iranian export volumes to China tumbled by 40% over the two years, while Saudi flows to China have dropped by 13%. China received more than 80% of Iran's exports in 2022, so this slowdown has been especially severe for the country's producers. An analysis of GTT trade data indicates that year-to-date Iranian petrochemical export volumes are down by almost one-third since 2021. Even Saudi Arabia's world-class petrochemical sector, which we estimate to account for more than 1.1 mb/d of oil consumption, has seen an overall fall in exports of 12% for these commodities since 2021. Notably, this period has seen spikes in propane exports from Saudi Arabia and Iran, as well as the US, contributing to the global supply glut for the product.



Margins in major petrochemical centres have already collapsed, in some places to unsustainable levels, and there may be more pain to come. New Chinese plants continue to come into service, and the anaemic performance of global manufacturing suggests that underlying demand will not rise quickly enough to accommodate all new capacity. Feedstock consumption figures already hint at idled plants in higher cost producing regions. Without an abrupt change in course, the prospect of large-scale permanent shutdowns is coming into increasingly sharp focus.

Non-OECD

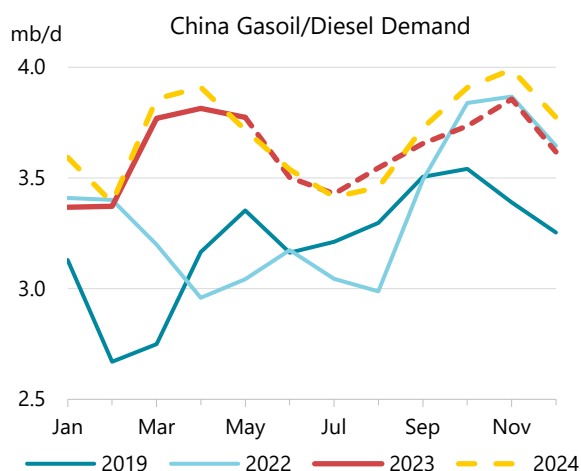
Non-OECD deliveries rose by 2.7 mb/d y-o-y in 2Q23, to 55.9 mb/d. There was considerable variance between the different regions, with continued momentum in China, India and Brazil counterbalanced by slowdowns in Africa and the Middle East. This comes amid a flare-up in emerging market turmoil, as Argentina, Egypt and Pakistan hurried to secure IMF bailouts to prevent acute liquidity crunches. For 2023 as a whole, we forecast a demand increase of 2.1 mb/d y-o-y to 56 mb/d, followed by growth at a more subdued pace of 1.4 mb/d y-o-y to 57.4 mb/d in 2024.



China's apparent oil demand declined by 160 kb/d m-o-m in May, to 16.4 mb/d (+2.5 mb/d y-o-y), as net imports and refinery runs dipped slightly. Monthly consumption fell modestly for the main product categories, with petrochemical feedstocks the key outlier. Nonetheless, this constitutes the second highest month on record, behind April 2023.

For 2023 as a whole, Chinese demand growth is forecast to average 1.6 mb/d (+80 kb/d compared to last month's *Report*), with increases spread more or less evenly among the main products. Annual gains are expected to decelerate to 560 kb/d in 2024, as China's oil use normalises post-pandemic amid macroeconomic headwinds.

Gasoil deliveries fell by 40 kb/d m-o-m in May (+730 kb/d y-o-y), in line with their historical seasonal pattern, showing some resilience despite China's economic rebound continuing to lose steam. Amid persistent slumps in both manufacturing and trade, the hoped-for recovery in consumer spending remained elusive. Households are reluctant to spend amid record-high youth unemployment and often negative home equity, as the housing market remains in the doldrums. Retail sales rose by a lacklustre 0.4% m-o-m in May, while consumer confidence has so far only recovered marginally from 2022's all-time lows. Official June PMIs showed a third straight month of contraction in the manufacturing sector, to 49, while services, still expansionary at 53.2, also eased for a third consecutive month. The slew of disappointing data sent the yuan to a

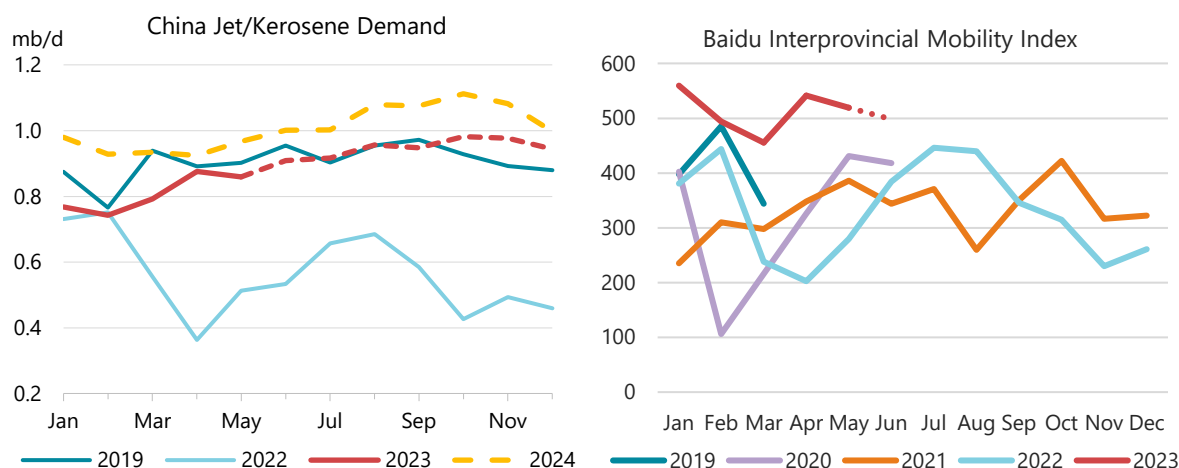


seven-month low against the US dollar in June. Aiming to revive the flagging economy, Beijing unveiled a raft of fiscal stimulus measures, while the People's Bank of China lowered its key policy rate for the first time in almost a year.

Gasoline consumption fell by 80 kb/d m-o-m in May (+390 kb/d y-o-y). Mobility indicators remain robust, largely defying macroeconomic woes and retreating only moderately from their elevated 1Q23 levels. City-level road congestion calculated from *Baidu* data surged to new 2023 highs around the end-of-June during the Dragon Boat Festival. A similar pattern was apparent in other categories, such as *Baidu*-derived interprovincial travel and metro passenger volumes. In addition, a minor contribution came from lower retail fuel prices, with gasoline and diesel pump prices around four percent lower year-to-date, according to data from *GlobalPetrolPrices.com*.

China: Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
LPG & Ethane	1 943	2 116	2 476	2 554	361	77	17.0	3.1
Naphtha	1 577	1 817	2 239	2 454	422	215	23.2	9.6
Motor Gasoline	3 513	3 373	3 583	3 627	210	44	6.2	1.2
Jet Fuel & Kerosene	787	562	890	1 007	328	117	58.3	13.2
Gas/Diesel Oil	3 242	3 337	3 621	3 690	284	69	8.5	1.9
Residual Fuel Oil	545	592	631	633	39	2	6.7	0.3
Other Products	3 480	2 867	2 785	2 822	- 82	38	-2.9	1.3
Total Products	15 088	14 664	16 225	16 787	1 561	562	10.6	3.5

Jet/kerosene deliveries fell by 20 kb/d in May (+350 kb/d y-o-y). Flight traffic continued to recover according to data from *RadarBox*, as domestic activity climbed to new record highs at the end of June. At the same time, international air traffic was around 17% below pre-pandemic levels. This compares to 70% before Covid restrictions were lifted in December of last year. We see jet/kerosene demand finally regaining its 2019 level during 3Q23.

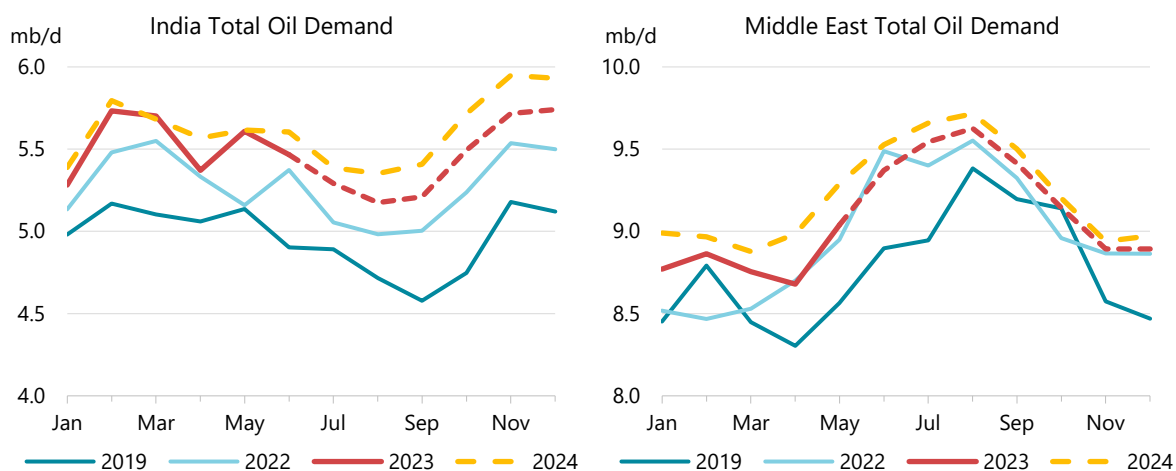


The petrochemical complex reinforced its status as the main growth driver in May, as record imports of LPG and ethane fuelled the products' highest consumption on record at 2.7 mb/d (see *Petrochemical world map being redrawn as massive wave of Chinese plants ramp up*). With annual gains this year expected to average 420 kb/d for naphtha and 360 kb/d for LPG/ethane, petrochemical feedstocks will account for about half of 2023's total demand increase. Naphtha consumption consolidates its role as the main driver of product growth in 2022-24 – a testament to the sector's relentless pace of capacity expansion.

Non-OECD: Demand by Region								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
Africa	4 045	4 275	4 255	4 451	- 20	196	-0.5	4.6
Asia	28 625	28 725	30 604	31 600	1 879	995	6.5	3.3
FSU	4 884	4 942	4 926	4 919	- 16	- 7	-0.3	-0.1
Latin America	6 003	6 207	6 322	6 405	115	83	1.9	1.3
Middle East	8 434	8 970	9 084	9 219	114	135	1.3	1.5
Non-OECD Europe	770	784	784	801	0	17	0.0	2.1
Total Products	52 761	53 905	55 976	57 396	2 071	1 420	3.8	2.5

Indian deliveries fell by 30 kb/d m-o-m in June (+200 kb/d y-o-y), slightly ahead of their customary weakness as the June-September rainy season got underway. Despite a late start to the monsoon, rainfall accelerated towards the end of the month. The Indian Meteorological Department forecasts a normal monsoon season, although the possible formation of an El Niño weather pattern may lead to less rainfall than normal.

Although government price controls have kept retail gasoline and diesel unchanged since June 2022, profit margins for India's state-run refiners have been bolstered by massive imports of discounted Russian crude, raising the possibility of price cuts during 3Q23. We see a solid Indian demand expansion in 2023, led by gasoil, of 210 kb/d y-o-y to 5.5 mb/d (40 kb/d above our estimate in last month's *Report*). While India's economy continues to defy economists' expectations of an imminent slowdown, we see the pace of oil demand growth slowing to 130 kb/d in 2024 – comparatively resilient in the face of a struggling global economy.



Brazilian deliveries rose by 200 kb/d m-o-m in May (+180 kb/d y-o-y). Brazil's economy continues to outperform expectations. A feared 1H23 slowdown has failed to materialise, reflected in a current consensus estimate for 2023 GDP growth of 2%, compared to 0.8% at the start of the year. Ongoing price cuts by state-owned Petrobras to fuel distributors have also helped domestic sales, as will a 5% reduction in gasoline prices implemented in early July. Aggregate demand, helped by fiscal spending, remains robust, while stellar agricultural production contributes to a record trade surplus, buoyed by sugar and soybean exports. A case in point for the economic outperformance is the real's ongoing strength. Already 2022's best-performing major currency, it appreciated by another 10% against the US dollar in the first half of 2023. We see average demand growth of 100 kb/d and 40 kb/d for 2023 and 2024, respectively.

Argentina's outlook could not be more different from neighbouring Brazil's. Even by its own low standards – its economy is in perpetual deadlock. Argentina faces its worst crisis in decades, as its economic woes are compounded by a drought-induced soybean crop failure. With inflation above 100%, the country is heading for recession, with economists forecasting GDP contracting in 2Q23 and 3Q23. Deliveries fell by 20 kb/d m-o-m in May (-20 kb/d y-o-y). We anticipate a 10 kb/d y-o-y contraction in 2023, followed by flat consumption in 2024.

Saudi demand was higher by 30 kb/d y-o-y in April, while **Iraqi** deliveries fell by 20 kb/d y-o-y. In both countries, strength in fuel oil was counterbalanced by weakness in other product categories. In recent years, Saudi Arabia and Iraq have been progressively burning more crude and fuel oil in power generation. As usage approaches its peak seasonal electricity load, 2023 may well see a repeat of last year's summer surge, when Iraq declared a state of emergency as its power grid was unable to cope with extreme temperatures of above 50°C. Lower natural gas imports from Iran will make Iraq's electricity sector even more reliant on liquid fuels. We forecast roughly similar power generation demand to last year for the June-August peak period for both countries. For 2023 as a whole, we see average consumption growth of 60 kb/d y-o-y for Saudi Arabia and 30 kb/d y-o-y for Iraq, resulting in a total **Middle East** increase of 110 kb/d y-o-y. This is 80 kb/d lower than in last month's *Report*, largely due to a downward revision for LPG/ethane growth by 50 kb/d. Domestic regional production is undermined by intensifying competition in global petrochemical trade (see *Petrochemical world map being redrawn as massive wave of Chinese plants ramp up*).

Egypt finds itself in the opposite situation to Iraq – the country's fuel oil use fell by 30 kb/d m-o-m in April to its lowest level since October 2021 amid record gas imports from Israel and lower LNG exports. A bleak economic climate acts as an additional weight on oil use, as the country vies to secure a financing deal with its Gulf allies to meet demands of an IMF review, with further devaluations of the Egyptian pound on the cards. We have reduced our 2023 forecast by 30 kb/d y-o-y and now see 60 kb/d lower consumption this year.

The combination of weaker currencies, curtailed subsidy schemes and higher retail fuel prices is weighing on **African** demand in general. Among the products, gasoline is the most affected, apparent in lower imports in countries such as **Nigeria, Kenya** and **South Africa**. We now anticipate a 20 kb/d y-o-y decline in 2023 African consumption, 80 kb/d below last month's *Report*.

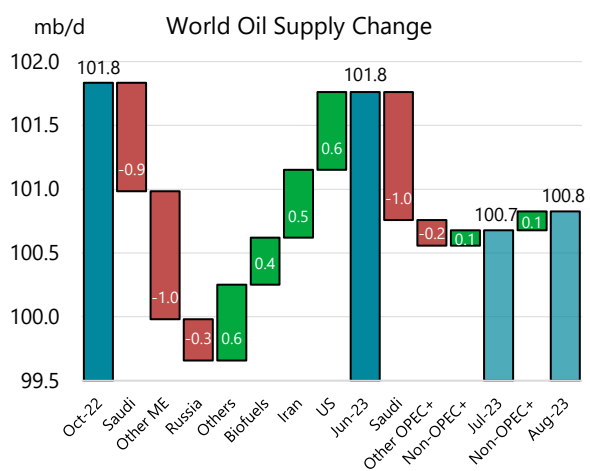
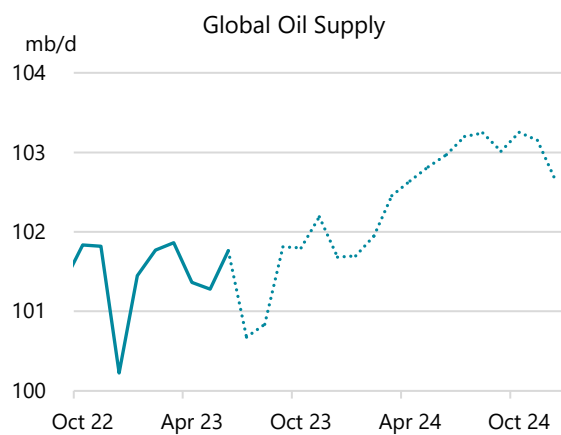
Non-OECD: Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
LPG & Ethane	8 170	8 447	8 802	9 073	355	271	4.2%	3.1%
Naphtha	3 619	3 752	4 127	4 444	375	317	10.0%	7.7%
Motor Gasoline	12 081	12 344	12 717	12 961	373	244	3.0%	1.9%
Jet Fuel & Kerosene	2 146	2 314	2 977	3 102	663	125	28.6%	4.2%
Gas/Diesel Oil	14 280	14 890	15 233	15 571	343	337	2.3%	2.2%
Residual Fuel Oil	4 502	4 667	4 743	4 814	76	71	1.6%	1.5%
Other Products	7 963	7 490	7 377	7 430	- 113	53	-1.5%	0.7%
Total Products	52 761	53 905	55 976	57 396	2 071	1 420	3.8%	2.5%

Pakistan, its economic distress exacerbated by last year's floods and escalating political unrest, secured a \$3 billion IMF lifeline in June, averting immediate financial meltdown. Authorities had already begun to raise retail fuel prices during 1H23 as part of budgetary reform demanded under the agreement, with another 8% hike in gasoline prices on the cards in July. Pakistan's projected demand decline for 2023 is the largest of any country at -110 kb/d y-o-y.

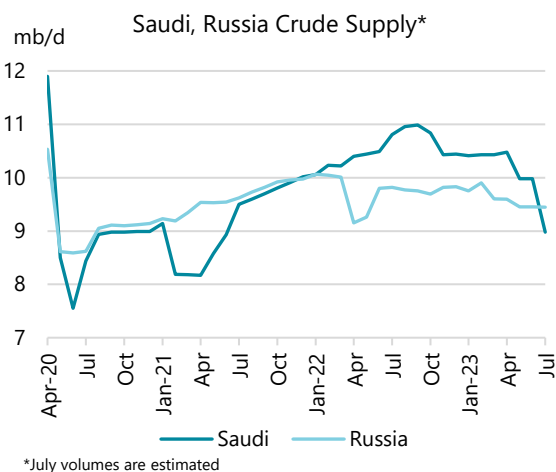
Supply

Overview

World oil supply rose 480 kb/d to 101.8 mb/d in June after Canada bounced back from wildfires and maintenance. However, global output looks set to tumble this month as Saudi Arabia makes a deep voluntary reduction in production. Higher flows from Iran, Kazakhstan, Nigeria, the United States and other non-OPEC+ producers have so far blunted the impact of cutbacks by some OPEC+ countries but supply should shift towards a lower trajectory in the coming months as Riyadh implements steeper cuts.



Lower output mainly from OPEC+ Middle Eastern countries and Russia has been offset by higher volumes from other producers. Global oil supply in June was down a mere 70 kb/d on last October – just before the Saudi-led OPEC+ cuts kicked in. Iran, exempt from OPEC+ cuts due to sanctions, ramped up by 530 kb/d in the October versus June period. Further mitigating the impact of OPEC+ cuts on the market, supply from the US climbed by 610 kb/d as natural gas liquids surged to record highs while global biofuels increased seasonally. As a result, even deeper cuts promised from May by the Kingdom, along with other members of the bloc (including Russia), have, so far, not led to a steep decline in global supply.



That may be about to change. Saudi Arabia has promised to slash another 1 mb/d in July and August. The Kingdom's crude output could plunge to a two-year low of around 9 mb/d and leave it trailing behind Russia as the bloc's top crude producer. With the exception of the 2020-21 Covid-19 period, Saudi crude supply has not been this low since 2011. For its part, Russia has vowed to reduce exports by 500 kb/d next month. With recent non-OPEC+ gains expected to slow and Iran's output now projected to hold

broadly steady, we anticipate that the Saudi supply curbs could push global oil production more than 900 kb/d below June for this month and next.

For the year as a whole, global oil supply is projected to expand by 1.6 mb/d to a record 101.5 mb/d. Led by the US, non-OPEC+ drives the gains, with volumes rising 1.9 mb/d. Non-OPEC+ is also set to dominate world supply growth next year, adding 1.2 mb/d. As for OPEC+, the bloc extended its existing curbs through 2024 and readjusted some targets to better reflect actual supply. Those adjustments will not materially impact OPEC+ supply this year, but the extension of quotas suggests that, after a 330 kb/d decline in 2023, output could hold broadly steady next year.

World Oil Production by Region (OPEC+ based on current agreement)											
(million barrels per day)											
	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024
Africa	7.1	7.2	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Latin America	6.4	6.7	6.8	7.0	7.1	6.9	7.3	7.4	7.4	7.4	7.4
North America	25.6	26.7	26.8	27.1	27.3	27.0	27.2	27.4	27.6	27.7	27.5
China	4.2	4.3	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3	4.3
Other Asia	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0
Europe	3.3	3.4	3.3	3.2	3.4	3.3	3.4	3.3	3.3	3.4	3.3
FSU	13.9	14.1	13.7	13.5	13.6	13.7	13.7	13.7	13.7	13.8	13.7
Middle East	31.0	31.1	30.7	29.8	30.5	30.5	30.6	30.6	30.6	30.6	30.6
Total Oil Production	94.7	96.7	95.9	95.2	96.4	96.0	96.8	97.0	97.0	97.3	97.0
Processing Gains	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.9	2.6	3.3	3.5	3.1	3.1	2.8	3.4	3.7	3.3	3.3
Total Supply	100.0	101.7	101.5	101.1	101.9	101.5	102.0	102.8	103.2	103.0	102.8
<i>OPEC Crude</i>	<i>29.1</i>	<i>29.3</i>	<i>28.8</i>	<i>28.1</i>	<i>28.8</i>	<i>28.7</i>	<i>28.8</i>	<i>28.7</i>	<i>28.7</i>	<i>28.7</i>	<i>28.7</i>
<i>OPEC NGLs*</i>	<i>5.4</i>	<i>5.4</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>
<i>Non-OPEC OPEC+</i>	<i>17.7</i>	<i>18.0</i>	<i>17.6</i>	<i>17.4</i>	<i>17.5</i>	<i>17.6</i>	<i>17.6</i>	<i>17.6</i>	<i>17.5</i>	<i>17.6</i>	<i>17.6</i>
Total OPEC+	52.2	52.8	51.9	51.0	51.7	51.8	51.8	51.9	51.7	51.8	51.8

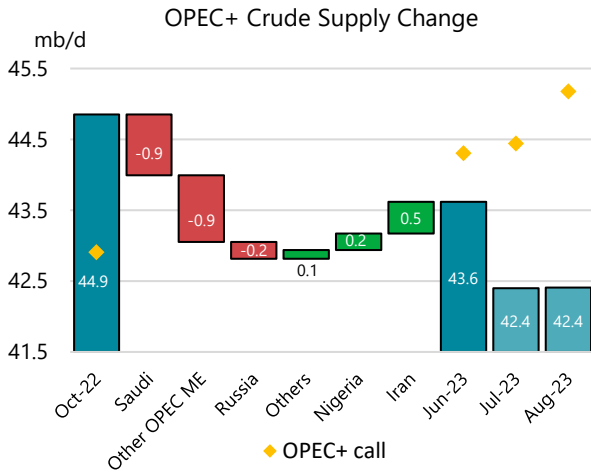
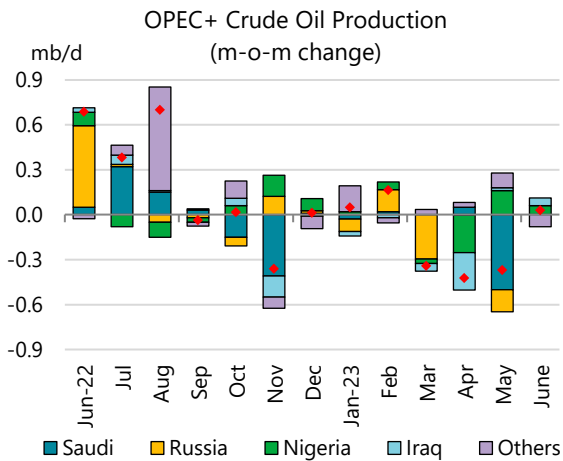
* Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. GTL in Nigeria and non-oil inputs to Saudi Arabian MTBE

OPEC+ crude supply

OPEC+ crude oil production from all 23 member countries inched up 30 kb/d to 43.62 mb/d in June. Higher supply from Nigeria and Iraq was partly offset by slight declines elsewhere. Output from Iran, exempt from OPEC+ cuts, hovered around five-year highs. Production from Saudi Arabia and Russia held steady.

Supply from OPEC countries in June was unchanged from the previous month at 28.7 mb/d, while volumes from non-OPEC nations in the OPEC+ group crept up 30 kb/d to 14.92 mb/d. Overall production from the 19 members subject to quotas edged up 70 kb/d higher to 37.03 mb/d. That left the bloc's effective spare capacity, excluding volumes of crude oil shut in by sanctions in Iran and Russia, at 4.6 mb/d with Saudi Arabia and the UAE holding roughly 70% of the surplus.

In June, the group's crude supply was down 1.2 mb/d compared with last October, just before OPEC+ output curbs were put in place. At that point, the producer coalition was pumping 1.9 mb/d above the implied requirement for its crude. Extra cuts from core OPEC+ countries, led by Saudi Arabia and including Russia, went into effect in May. But significantly higher output from Iran, along with further increases from Nigeria and elsewhere, tempered the overall decline. Many countries – such as Nigeria, Angola and Malaysia – continue to pump far below quotas due to operational issues and capacity constraints so are not taking part in extra cuts.



The bloc's crude oil output this month is expected to take a dive on the back of a further 1 mb/d voluntary production cut by Saudi Arabia that has been extended into August, and potentially beyond. Russia has pledged a 500 kb/d reduction in exports and Algeria promised to trim supply by an extra 20 kb/d. Based on our assumptions for demand and non-OPEC+ supply, OPEC+ could be producing 2 mb/d below the call on its crude in July and close to 3 mb/d below in August.

OPEC+ Crude Oil Production ¹						
(million barrels per day)						
	May 2023	Jun 2023	Jun Prod vs	Jun 2023	Sustainable	Eff Spare Cap
	Supply	Supply	Target	Target	Capacity ²	vs Jun ³
Algeria	0.97	0.94	-0.07	1.01	1.0	0.1
Angola	1.11	1.12	-0.34	1.46	1.1	0.0
Congo	0.28	0.27	-0.04	0.31	0.3	0.0
Equatorial Guinea	0.06	0.07	-0.05	0.12	0.1	0.0
Gabon	0.21	0.21	0.03	0.18	0.2	0.0
Iraq	4.12	4.17	-0.26	4.43	4.7	0.6
Kuwait	2.57	2.55	-0.13	2.68	2.8	0.3
Nigeria	1.18	1.24	-0.50	1.74	1.3	0.1
Saudi Arabia	9.98	9.98	-0.50	10.48	12.2	2.3
UAE	3.26	3.24	0.22	3.02	4.2	1.0
Total OPEC-10	23.74	23.79	-1.63	25.42	28.0	4.2
Iran ⁴	3.01	3.01			3.8	
Libya ⁴	1.15	1.12			1.2	0.1
Venezuela ⁴	0.80	0.78			0.8	0.1
Total OPEC	28.70	28.70			33.9	4.4
Azerbaijan	0.50	0.50	-0.18	0.68	0.5	0.0
Kazakhstan	1.60	1.60	-0.03	1.63	1.7	0.1
Mexico ⁵	1.68	1.68		1.75	1.7	0.0
Oman	0.81	0.80	-0.04	0.84	0.9	0.0
Russia	9.45	9.45	-0.49	9.95	10.0	
Others ⁶	0.85	0.87	-0.18	1.06	0.8	0.0
Total Non-OPEC	14.89	14.92	-0.92	15.91	15.5	0.2
OPEC+ 19 in cut deal⁴	36.96	37.03	-2.55	39.57	41.9	4.4
Total OPEC+	43.59	43.62			49.4	4.6

1 Excludes condensates.

2 Capacity levels can be reached within 90 days and sustained for extended period.

3 Excludes shut in Iranian, Russian crude.

4 Iran, Libya, Venezuela exempt from cuts.

5 Mexico excluded from OPEC+ compliance.

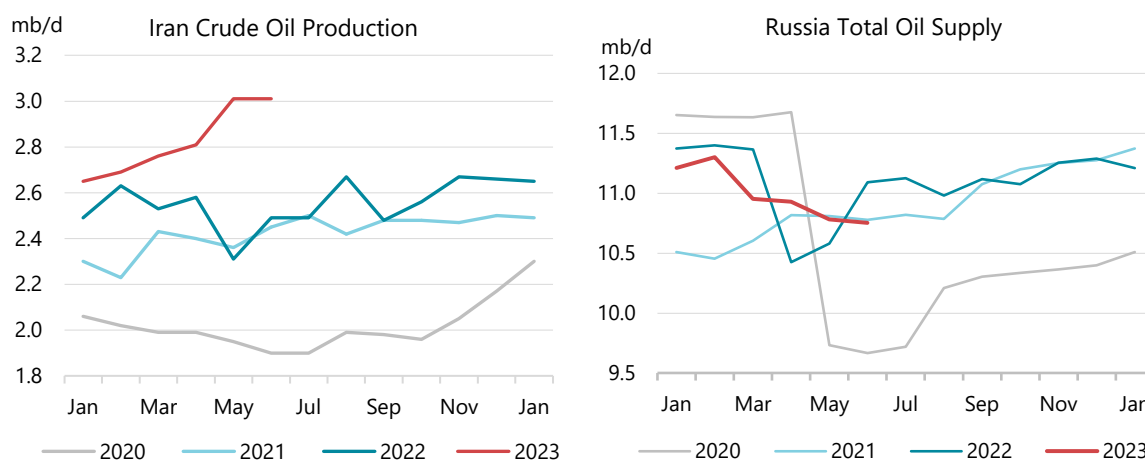
6 Bahrain, Brunei, Malaysia, Sudan and South Sudan.

Saudi crude output was steady at 9.98 mb/d in June. Since the first round of OPEC+ curbs were agreed last October, Saudi Arabia's production has declined by 860 kb/d. The Kingdom has pledged to cut another 1 mb/d for July and August, which would reduce its supply to around 9 mb/d – the lowest in two years. That could also leave Saudi crude oil production below Russia for the first time

since early 2022. Crude oil supply in the **UAE** eased by 20 kb/d to 3.24 mb/d but it was still pumping far above its June target (before factoring in its promised additional cut of 144 kb/d). **Kuwaiti** production dipped to 2.55 mb/d while supply in **Oman** slipped to 800 kb/d.

Iraqi production rose 50 kb/d in June to 4.17 mb/d thanks to higher exports and production from southern oil fields. Much of the output from the northern Kurdish region remains shut in due to a halt to the Iraq-Türkiye export pipeline. Türkiye stopped shipping about 450 kb/d of crude on 25 March following an arbitration ruling by an international business tribunal. In a boost to its upstream, Baghdad and TotalEnergies have formally signed a long-delayed deal that intends to raise oil and energy production through investment of more than \$10 billion. The deal to build four separate oil, gas and renewables projects was initially signed in 2021 and finally closed in April when Baghdad accepted a smaller 30% share. TotalEnergies will hold 45% and QatarEnergy 25%.

In neighbouring **Iran**, crude oil supply held steady in June at 3.01 mb/d – the highest in five years – and Tehran is on course to rank as the world's second largest source of supply growth after the United States in 2023. We made a substantial upward revision to our estimate for May as exports to China were far stronger than originally estimated. According to *Kpler* data, shipments of oil in May reached 1.51 mb/d, the highest since October 2018, and last month were running just shy of 1.4 mb/d. Before the former US administration withdrew from the Joint Comprehensive Plan of Action nuclear deal (JCPOA) in 2018, exports of Iranian oil, including condensates, had been running above 2 mb/d. Talks to revive the 2015 Iran nuclear deal, which would ease sanctions, have been on ice since September 2022. However, reports have recently emerged suggesting the potential for some sanctions relief for Tehran. If it were released from sanctions, we believe production could ramp up gradually by roughly 800 kb/d to reach capacity of 3.8 mb/d.



Russian crude output held broadly steady in June at 9.45 mb/d as a decline in exports was offset by higher domestic refinery runs. That means Moscow has largely fulfilled its voluntary cut of 500 kb/d based on its February crude oil production level, which was recently revised upward from 9.828 mb/d to 9.949 mb/d. On top of that, Russia has vowed to cut oil exports by 500 kb/d in August. We assume there will not be a corresponding reduction to production on expectations that higher domestic refinery throughput will offset the anticipated drop in oil shipments. Additionally, Russian oil companies reportedly have so far not been ordered to make extra cuts. Total output of crude oil, condensates and NGLs in June was relatively stable versus May at 10.75 mb/d – 645 kb/d lower than before Russia invaded Ukraine in February 2022. Russian oil supply has proved resilient following its invasion of Ukraine with exports re-routed to new markets as deep price discounts attract traders and refiners willing to risk handling the barrels. We expect average oil production of 10.87 mb/d in 2023, down 220 kb/d y-o-y.

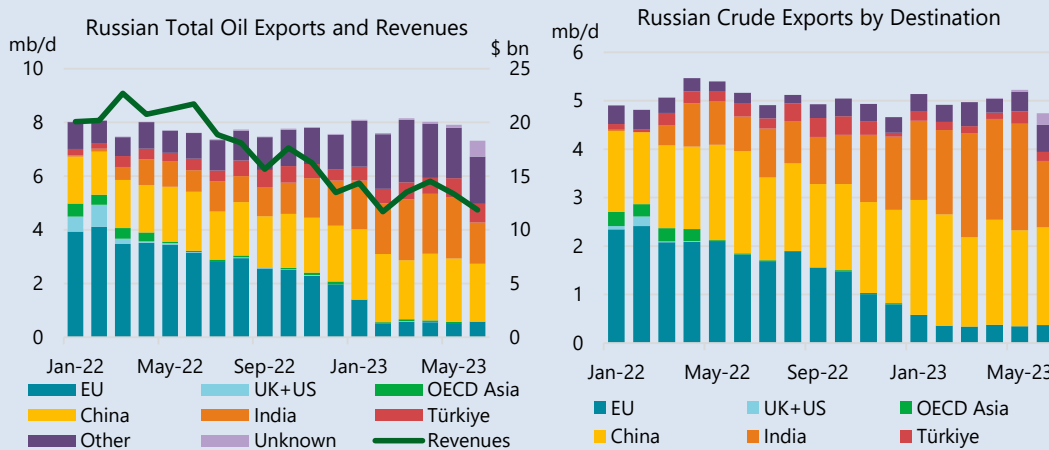
Russia oil exports slump in June with revenues falling to lowest since January 2021

Russian oil exports fell by nearly 600 kb/d in June to 7.3 mb/d while fuller data lifted May export estimates by 100 kb/d from the last *Report*. A narrow decline for products (-100 kb/d) was compounded by lower crude exports (-500 kb/d) as many refiners ended turnarounds and as some fields entered summer maintenance. Lower volumes cut estimated oil export revenues by \$1.5 bn m-o-m to \$11.8 bn (-\$9.9 bn y-o-y). This is the lowest export revenue level since February 2023 and prior to that January 2021, reflecting the continuing bite of sanctions.

Russian Oil Exports (mb/d)												
	EU	UK+US	Türkiye	China	India	OECD			Total	Crude	Products	Est. export revenue \$bn
						Asia	Other	Unknown				
2021 avg	3.4	0.7	0.2	1.6	0.1	0.5	1.0	0.0	7.5	4.6	2.9	15.1
2022 avg	3.1	0.2	0.4	1.9	0.9	0.2	1.1	0.0	7.7	5.0	2.7	18.9
May 2022	3.4	0.1	0.3	2.0	1.0	0.1	0.8	0.0	7.7	5.4	2.3	21.2
Jun 2022	3.2	0.0	0.4	2.2	0.8	0.0	1.0	0.0	7.6	5.2	2.5	21.7
Jul 2022	2.8	0.0	0.4	1.8	1.1	0.1	1.1	0.0	7.4	4.9	2.5	18.9
Aug 2022	2.9	0.0	0.6	2.0	1.0	0.1	1.1	0.0	7.7	5.1	2.6	18.1
Sep 2022	2.6	0.0	0.6	1.9	1.1	0.0	1.2	0.0	7.5	4.9	2.5	15.7
Oct 2022	2.5	0.0	0.6	2.0	1.2	0.1	1.4	0.0	7.8	5.0	2.7	17.6
Nov 2022	2.3	0.0	0.5	2.0	1.5	0.1	1.3	0.0	7.8	4.9	2.9	16.2
Dec 2022	2.0	0.0	0.4	2.1	1.7	0.1	1.3	0.0	7.6	4.7	2.9	13.5
Jan 2023	1.4	0.0	0.5	2.6	1.8	0.0	1.7	0.1	8.1	5.1	3.0	14.3
Feb 2023	0.5	0.0	0.5	2.5	1.9	0.0	2.0	0.0	7.6	4.9	2.7	11.7
Mar 2023	0.6	0.0	0.6	2.2	2.3	0.1	2.3	0.0	8.1	5.0	3.2	13.5
Apr 2023	0.6	0.0	0.6	2.5	2.2	0.1	2.0	0.1	8.0	5.1	3.0	14.5
May 2023	0.5	0.0	0.7	2.4	2.3	0.0	1.9	0.1	7.9	5.2	2.7	13.3
Jun 2023	0.6	0.0	0.7	2.2	1.5	0.0	1.8	0.6	7.3	4.7	2.6	11.8
M-o-M chg	0.0	0.0	0.0	-0.2	-0.8	0.0	-0.1	0.5	-0.6	-0.5	-0.1	-1.5
Y-o-Y chg	-2.6	0.0	0.3	0.0	0.7	0.0	0.8	0.6	-0.3	-0.4	0.1	-9.9

Sources: IEA, Argus, Kpler.

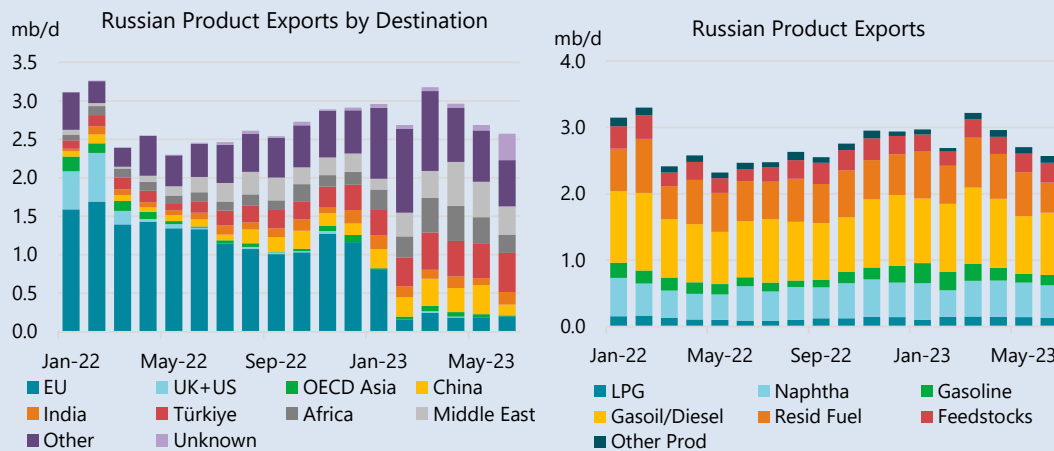
Note: Data in this table were derived by granular analysis and estimates of country of origin data in cases where shipments transit via third countries. They may differ from customs information due to calculation methodology and estimates updates.



Russian crude exports fell by around 500 kb/d in June to 4.7 mb/d, their lowest level since December 2022. While June data is not yet final, known loadings eased for many destinations including China and India. EU crude imports into East Europe rose by 45 kb/d. Crude imports by Türkiye fell 70 kb/d over the month to 190 kb/d. Of note, the 'Other Destinations' category (up 150 kb/d m-o-m) includes other FSU countries, the UAE, Saudi Arabia and Cuba.

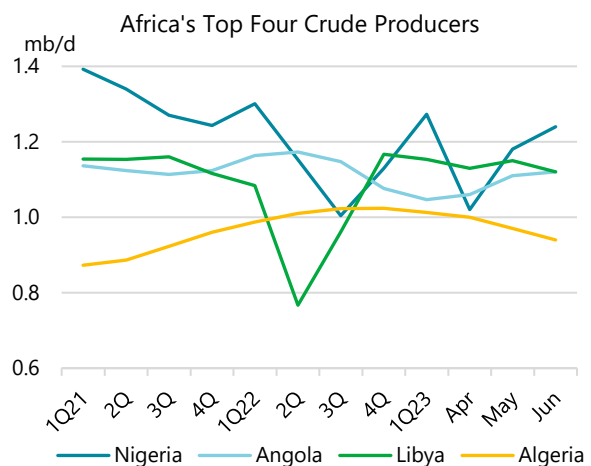
The fall in Russian product exports was dominated by fuel oil (-210 kb/d m-o-m) and naphtha (-25 kb/d) while gasoil exports rose by around 75 kb/d. Other products remained roughly unchanged. Türkiye's product imports reached an all-time high of over 500 kb/d (+60 kb/d m-o-m), India's rose 75 kb/d to

160 kb/d while those for China fell to 140 kb/d, the lowest since mid-2022, as its domestic refinery activity picked up.



Kazakh and **Azeri** crude oil supply in June was broadly steady at 1.6 mb/d and 500 kb/d, respectively. Kazakh production is expected to decline this month after a major power outage in early July disrupted oil field operations.

Combined output from African members of OPEC+ edged up 30 kb/d in June. **Nigerian** crude supply rose 60 kb/d to 1.24 mb/d as output from the key Forcados export stream pushed above 200 kb/d and flows picked up elsewhere. Nigeria has reportedly given the go-ahead to two new crude oil export terminals that could handle more than 400 kb/d. TotalEnergies announced a shallow-water oil and gas discovery in offshore Block OML 102 (Ntokon) that it plans to develop as a tieback to production facilities for the Okon field.



Algerian crude supply eased 30 kb/d to 940 kb/d. Sonatrach signed a production sharing contract with Repsol and Indonesia's Pertamina for the Menzel Ledjmet Block. Crude supply in **Angola** inched up to 1.12 mb/d.

Libyan crude oil production eased to 1.12 mb/d in June. Output from the North African producer has been relatively stable owing to the Tripoli-Benghazi pact of last July that ended an oil blockade. However, a rival administration based in eastern Libya is threatening to block the country's oil exports unless all petroleum revenue is frozen and distributed equitably.

Crude supply in **Congo** dipped to 270 kb/d. Eni has agreed to sell several oil assets in the country to Perenco in a deal estimated at roughly \$300 million.

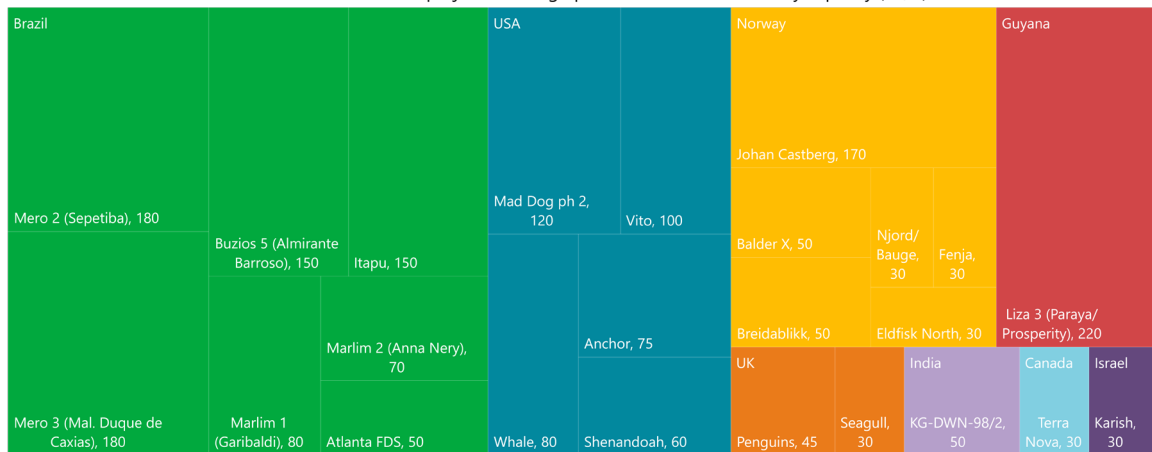
Mexico's total oil production inched up 10 kb/d to 2.1 mb/d in June. On 7 July, the Nohoch platform, part of the Cantarell complex, caught fire. Two workers died, six were injured and one other was

reported missing after the incident. Initial reports stated that 700 kb/d of oil was shut-in due to safety measures. At the time of publishing, 100 kb/d was still offline with Pemex stating it would return “in the coming days”. The installation itself only produced 10 kb/d of oil and has been removed from our forecast for the remainder of the year pending further updates. Through the end of 2023, supply is forecast to be flat, holding at 2.1 mb/d, up 120 kb/d y-o-y. Next year, output is expected to dip by 20 kb/d to 2.1 mb/d on average.

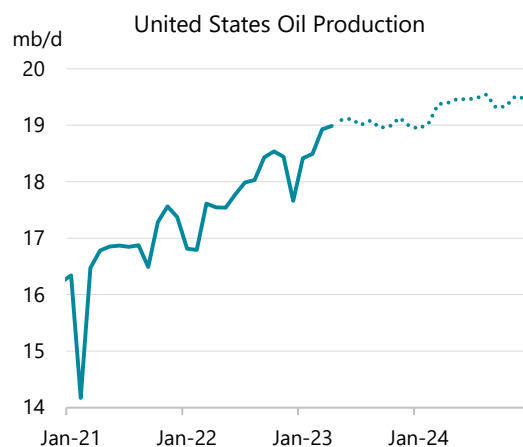
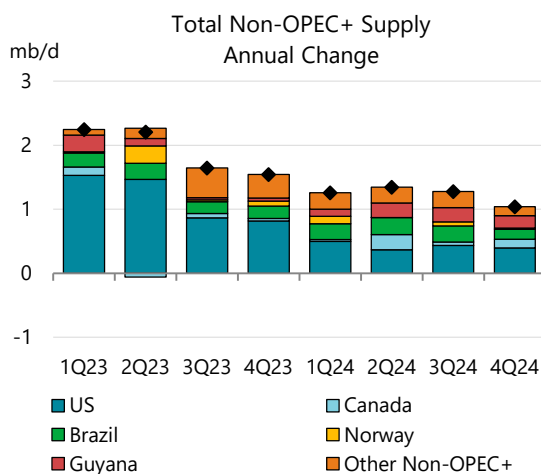
Non-OPEC+ oil supply

Increased output from the US and Canada, along with seasonally higher biofuels production, pushed non-OPEC+ supply up by 430 kb/d to 50 mb/d in June. But after increasing 1.4 mb/d year-to-date through June, production is expected to fall by 100 kb/d over the remainder of 2023. Higher output in the second half of the year from Canada, Brazil and Australia will fail to offset declines from the US, China and biofuels. For the 2023, non-OPEC+ supply is forecast to rise by 1.9 mb/d on average to 49.7 mb/d. The US is projected to contribute 1.2 mb/d to growth, accounting for over 60% of the non-OPEC+ gains.

Select conventional oil projects starting up in 2023 and 2024 sized by capacity (kb/d)

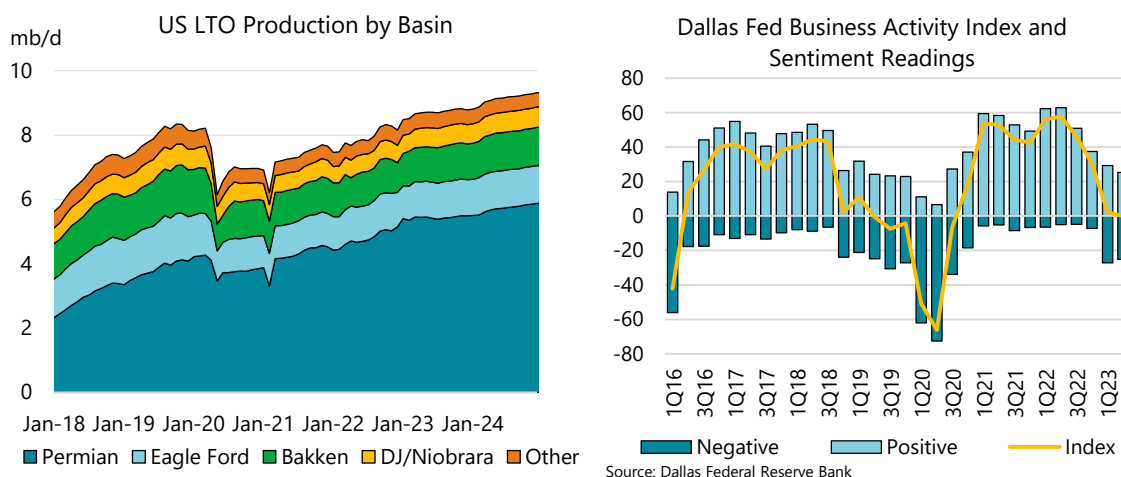


In 2024, production rises 1.2 mb/d to reach 50.9 mb/d as US output slows dramatically – but continues as the largest source of growth – adding 420 kb/d or 35% of the gains. Brazil and Guyana round out the top three contributors of growth as new projects continue to come online and ramp up.



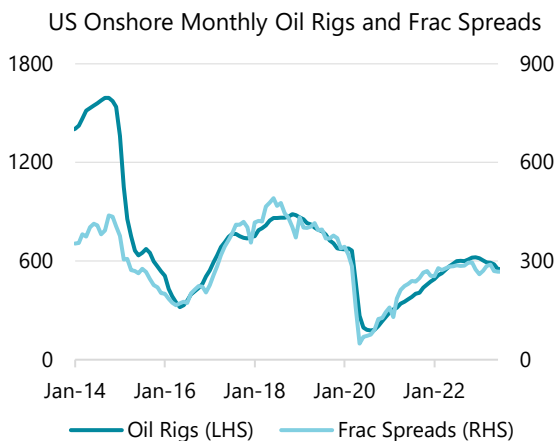
US output increased by 40 kb/d in June to reach 19.2 mb/d, with the Gulf of Mexico's ongoing recovery from April's lows accounting for all the change. Production was up 1.3 mb/d compared with a year ago and 730 kb/d year-to-date. From June through the end of the year, US total liquids are expected to fall by 170 kb/d as NGLs see seasonal losses of 240 kb/d. Annual gains will decelerate from 1.2 mb/d in 2023 to 420 kb/d next year as light tight oil (LTO) growth slows to just 430 kb/d. Total supply in 2024 is forecast to reach 19.5 mb/d, with crude accounting for 13.1 mb/d and NGLs for 6.3 mb/d.

US LTO accounts for 780 kb/d of the gains this year, representing 94% of the US crude growth. The latest Dallas Fed Survey indicates that business activity and sentiment continue to decline, although at a slower rate than in previous quarters, with the index reaching the zero line – last seen in 3Q20. The survey also suggests that larger producers will be better positioned in the second half of the year to benefit from any deflation in oilfield service costs, although oilfield service companies expect slightly higher labour costs by end-2023 compared with a year earlier. This aligns with recent rig and frac spread data, indicating a weakening in demand for both, and a potential peak in oil rig activity since November. Data from *Rystad Energy* also indicates weakened rig utilization from private operators.

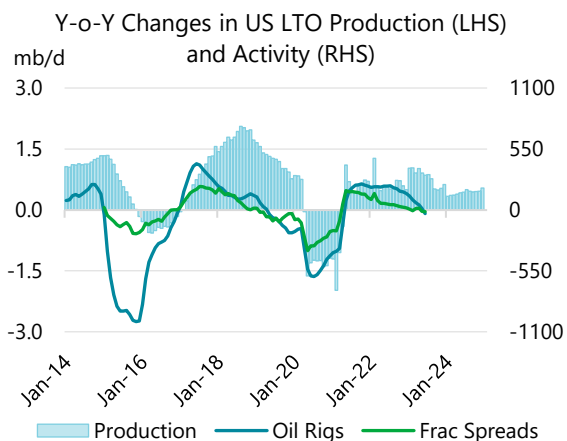


The slowdown in oilfield services activity comes at a point that is different than the last two times that the y-o-y change in activity levels turned negative. The first happened after the November 2014 OPEC meeting when the group pivoted from providing price stability to maintaining market share. The second occurrence began in the first quarter of 2019 after prices crashed by nearly 50% in late 2018. This time around, falling prices coinciding with tightening credit conditions may be the catalyst. The Dallas Fed Survey reveals that nearly half the firms have been affected by changing lending standards, with two-thirds expecting to be impacted through the remainder of the year. These factors, combined with higher breakeven prices and lower productivity trends, are expected to weigh on LTO output, resulting in slower growth of 430 kb/d in 2024.

In April, the last month for which official data from the Energy Information Administration (EIA) is available, total oil supply increased by 50 kb/d. April's growth was driven by NGLs (+160 kb/d), partially offset by losses in crude (-100 kb/d) and nonconventional production (-10 kb/d). The lower crude production was due to a 140 kb/d contraction in Gulf of Mexico barrels, while lower 48 output increased by 40 kb/d.



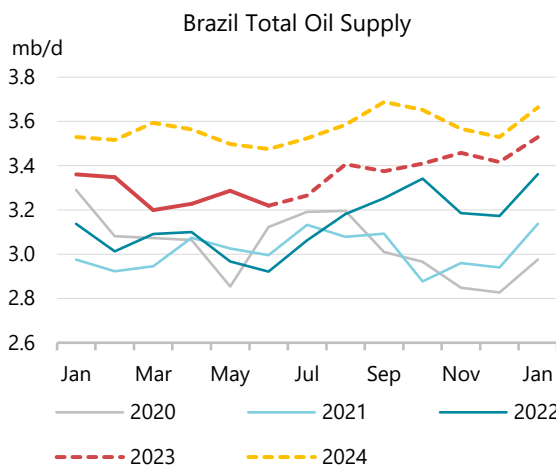
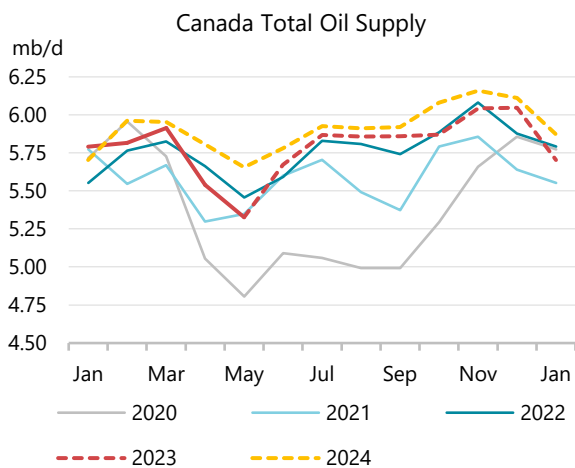
Sources: Primary Vision, Baker Hughes



Sources: Primary Vision, Baker Hughes.

The rise in NGLs primarily resulted from associated LTO production in the Permian, Eagle Ford and Bakken basins. By April, natural gas liquids had surged by 500 kb/d from a year ago and by 860 kb/d from December lows to a record 6.4 mb/d. If US NGL output was a stand-alone country, it would be the 4th largest liquids producer globally behind the US, Saudi Arabia, and Russia.

Canadian supply fell by 210 kb/d to 5.3 mb/d in May, according to data from the Alberta Energy Regulator, as wildfires shut-in of approximately 100 kb/d of crude and 60 kb/d of NGLs. Combined with seasonal maintenance, production was 130 kb/d lower than year-ago levels. However, June saw a strong rebound, with total volumes rising by 350 kb/d to 5.7 mb/d as maintenance activities concluded and the impact of the wildfires diminished. Through the end of the year, output is forecast to rise by another 370 kb/d to an annual average of 5.8 mb/d, an increase of 40 kb/d from 2022. Next year, supply is expected to grow by a further 110 kb/d to 5.9 mb/d.

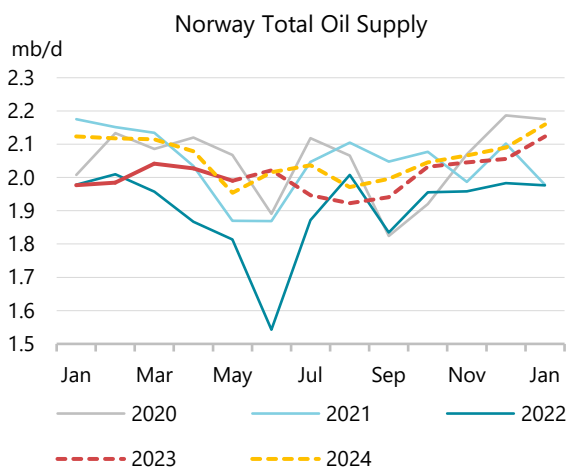
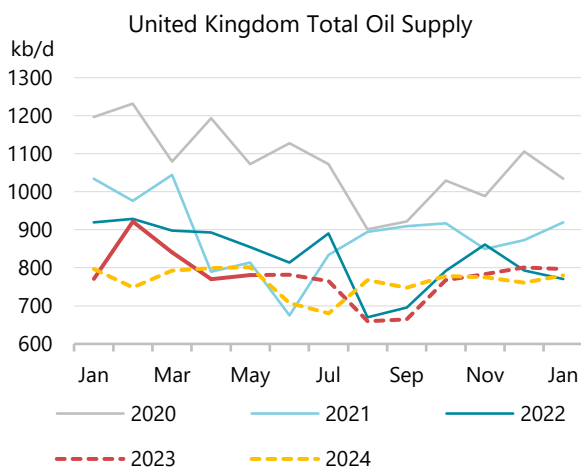
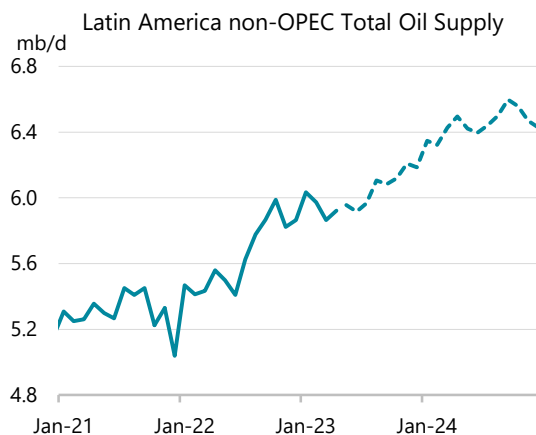


Brazilian output dropped by 70 kb/d to 3.2 mb/d in June, primarily due to downtime at the Tupi and Búzios oil fields, according to provisional daily data from the Agencia Nacional do Petroleo (ANP). In May, Petrobras took delivery of the Anna Nery floating production storage and offloading vessel (FPSO) in the Campos basin, with a second unit, the Anita Garibaldi FPSO, expected to produce first oil in August. Additionally, the Búzios Almirante Barroso FPSO began operations on schedule in early June. These three installations have a combined capacity of 300 kb/d. By the end of the year, total Brazilian production is projected to increase by 200 kb/d to an annual average of 3.3 mb/d. In 2024, supply is forecast to rise by 230 kb/d to reach 3.6 mb/d.

Argentinean supply saw a gain of 10 kb/d in June, reaching 770 kb/d after plateauing at 760 kb/d for four months. In May, deliveries began on the cross-border Transandino pipeline to Chile, which has capacity of 120 kb/d. The pipeline was recommissioned after a 17-year hiatus and will significantly reduce Empresa Nacional del Petróleo’s (ENAP) reliance on seaborne imports for its largest refinery. ExxonMobil also announced infrastructure developments within the basin to increase their takeaway capacity by 60 kb/d. The Neuquén Basin will continue to drive Argentinean growth, with total oil production forecast to rise by 60 kb/d this year and 40 kb/d in 2024, to an average 770 kb/d and 810 kb/d, respectively.

In other parts of Latin America, **Ecuadorian** output is expected to increase by nearly 10 kb/d in July to 460 kb/d after Petroecuador brought four new wells online in the Oriente Basin. Supply is forecast to modestly decline by 10 kb/d to 450 kb/d in 2023 before recovering those losses in 2024. **Guyana’s** ongoing bid round received a boost after an exploration well in the Corentyne block showed potentially commercial quantities of oil. Guyana's production is forecast to increase by 110 kb/d this year to 390 kb/d and by 190 kb/d in 2024, reaching 580 kb/d.

UK supply remained flat on the month in June at 780 kb/d, slightly above the lows of 770 kb/d seen in April. Production is expected to decrease marginally in July before seasonal maintenance has a greater impact in August and September. In 2023, output is forecast to be 770 kb/d, down 60 kb/d compared to the previous year. Next year, production is expected to decrease slightly to 760 kb/d as the Penguins and Seagull projects help mitigate declines at mature fields.

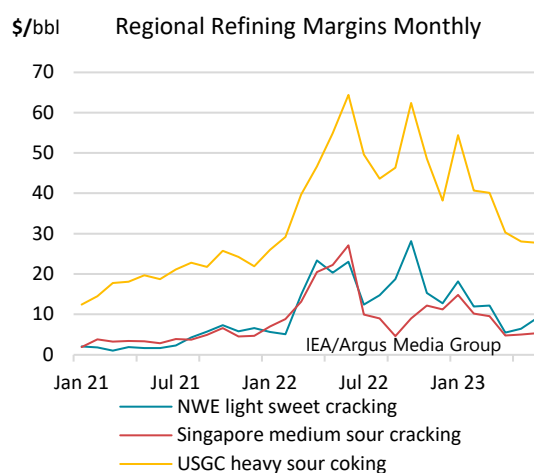
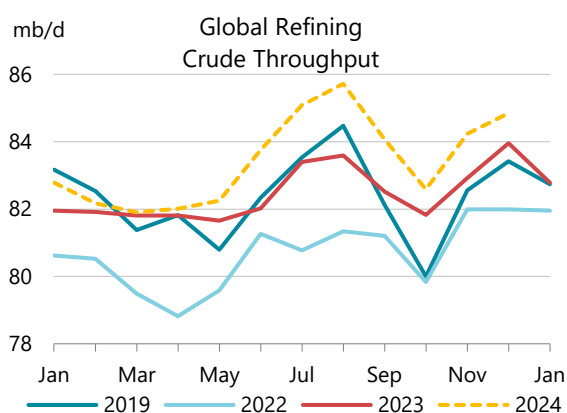


Data from the **Norwegian** Petroleum Directorate (NPD) show that production in May fell by 40 kb/d to 2 mb/d, as gains from Johan Sverdrup Phase 2 were offset by planned maintenance at other fields. June saw a modest increase of 30 kb/d. Additionally, in late June, the NPD approved 19 projects on the Norwegian continental shelf that are expected to add volumes starting in 2026. The new projects will extend the country's production plateau and consolidate Norway's position as a stable long-term oil and gas supplier through the rest of the decade. Supply in 2023 is expected to grow by 100 kb/d to 2 mb/d, with an additional 50 kb/d gain forecast for the following year, reaching 2.1 mb/d.

Refining

Overview

Refinery crude throughput estimates for 2023 have been raised by 130 kb/d to 82.5 mb/d in this *Report*, approximately 100 kb/d ahead of 2019's average level, following baseline revisions and an improved outlook for Russian runs. While Chinese and Indian crude throughputs have exceeded expectations, reaching record highs. Elsewhere in Asia activity has been below our estimates and 2H23 projections have been trimmed accordingly. The start-up of Oman's Duqm refinery and the third train at Kuwait's Al Zour refinery also lift our forecasts. Global refinery runs are set to rise from 82 mb/d in June to 83.6 mb/d in August, with 2H23 1.2 mb/d higher than in 1H23 on average.



Global refinery crude runs for 2024 are forecast to average 83.5 mb/d, with higher Russian crude throughput forecasts offset by a more cautious view on Chinese, US and Mexican activity. Annual growth is largely unchanged at 1.8 mb/d for 2023 and 1 mb/d for 2024.

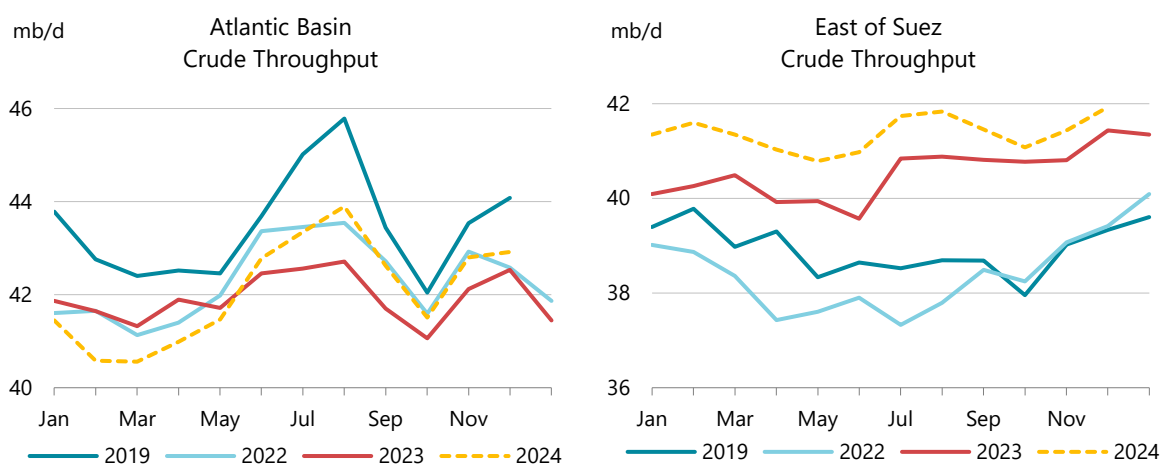
Global Refinery Crude Throughput ¹														
	(million barrels per day)													
	2019	2020	2021	2022	1Q23	2Q23	Jun-23	Jul-23	Aug-23	Sep-23	3Q23	4Q23	2023	2024
Americas	19.1	16.6	17.7	18.7	18.0	18.8	19.1	19.0	19.0	18.7	18.9	18.7	18.6	18.4
Europe	12.2	10.7	11.0	11.5	11.3	11.2	11.1	11.1	11.5	11.0	11.2	11.0	11.2	11.1
Asia Oceania	6.8	5.9	5.8	6.0	6.1	5.7	5.3	6.1	6.0	5.7	6.0	5.8	5.9	5.8
Total OECD	38.1	33.1	34.5	36.2	35.4	35.6	35.4	36.1	36.5	35.5	36.1	35.6	35.7	35.3
FSU	6.8	6.4	6.8	6.5	6.7	6.4	6.5	6.8	6.6	6.4	6.6	6.6	6.6	6.6
Non-OECD Europe	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
China	13.4	13.7	14.4	13.7	14.8	15.0	15.1	15.4	15.4	15.8	15.5	15.2	15.1	15.3
Other Asia	10.4	9.4	9.7	10.2	10.8	10.4	10.2	10.3	10.4	10.0	10.2	10.5	10.5	10.8
Latin America	3.2	3.0	3.3	3.5	3.6	3.6	3.7	3.7	3.5	3.5	3.6	3.6	3.6	3.5
Middle East	7.8	7.1	7.7	8.2	8.4	8.5	8.8	8.8	8.9	9.1	8.9	9.3	8.8	9.4
Africa	2.2	1.9	2.0	1.9	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	2.1
Total Non-OECD	44.2	41.9	44.2	44.5	46.5	46.2	46.6	47.3	47.1	47.0	47.1	47.3	46.8	48.2
Total	82.3	75.1	78.7	80.6	81.9	81.8	82.0	83.4	83.6	82.5	83.2	82.9	82.5	83.5
<i>Year-on-year change</i>	<i>-0.1</i>	<i>-7.3</i>	<i>3.6</i>	<i>1.9</i>	<i>1.7</i>	<i>1.9</i>	<i>0.8</i>	<i>2.6</i>	<i>2.3</i>	<i>1.3</i>	<i>2.1</i>	<i>1.6</i>	<i>1.8</i>	<i>1.0</i>

¹ Preliminary and estimated runs based on capacity, known outages, economic runcuts and global demand forecast.

In 2024, growth in crude refinery runs slows substantially from the post-pandemic increases witnessed in recent years. Refinery crude processing is limited by overall refined product demand

growth and the increased market share of competing sources of supply, such as US NGL's and biofuels. Against the backdrop of increased refinery capacity in Nigeria, Oman, and Kuwait, and within the restraints of OPEC+ production policy, refineries elsewhere will be limited by available crude supply and a projected slowdown in global demand growth in 2024. Competitive factors, such as access to low-cost crude, natural gas, and electricity as well as low operating costs and advantaged market access will all help the market determine where activity levels may come under pressure. So too, refinery configurations biased towards diesel and jet fuel should find an advantage over gasoline. Consequently, we expect refinery runs to decline in OECD regions next year, and for activity levels in China, the Middle East and Other Asia to all increase.

Although largely imperceptible on a monthly basis, the inexorable draw of refining activity towards Asia continues. Against the pre-Covid-19 baseline, runs have recovered more strongly East of Suez than in the Atlantic Basin. China's extensive shutdowns depressed refinery throughput levels East of Suez last year and almost wholly explain the 2.6 mb/d y-o-y growth in runs we expect to see in July. In the coming quarters, the divergence between the Atlantic Basin and East of Suez will increase, thanks to the start-up of new Middle Eastern refineries. 2024 could see a brief reprieve in the shift towards Asia, following Nigeria's Dangote refinery starting. However, the timing and speed with which this refinery will achieve commercial operations remains highly uncertain.



Furthermore, the recent policy shift by the Nigerian government to scrap gasoline subsidies appears to be curtailing the country's import demand. This in turn will likely impact European refineries who optimise their gasoline pool blending requirements by sending approximately 20% of exports to Nigeria. Consequently, higher runs in Nigeria could further undermine European refinery activity if alternative destinations for surplus gasoline are uneconomic. Against the medium-term backdrop of slowing global demand growth and a peak in OECD gasoline demand, the pressure on refineries to balance the supply of middle and light distillates will intensify. Consequently, there remains a risk that Atlantic Basin runs will not reflect the full impact of this new capacity if it results in European activity levels declining in response to a more constrained operating environment.

Refinery margins and product cracks

Refining margins improved during June versus average May levels across the three refining enclaves we track in this report, except for US Gulf Coast (USGC) heavy sour coking margins. European margins outpaced gains elsewhere as a softer North Sea crude market helped boost margins given the tight regional product markets. Gains in Singapore were more muted, with cracking margins across both sweet and sour crudes underperforming versus the Atlantic Basin.

Despite their recent underperformance, coking refinery margins remain extremely profitable on the USGC. The premium to medium sour cracking narrowed to around \$4/bbl in June, versus a five-year average above \$11/bbl. In large part, this can be explained by the recovery in heavy sour crude pricing compared with regional benchmarks such as WTI in Houston. The discount of Canadian WCS to WTI in Houston narrowed from \$16/bbl in January to just \$4/bbl in early July due to the tightness in Atlantic Basin sour crude markets. Imports of Middle Eastern heavy sour crudes have dwindled in the face of OPEC+ production cuts and higher OSPs for OPEC+ Middle Eastern crude sold to the United States.

IEA Global Indicator Refining Margins										
\$/bbl	Monthly Average				Change		Average for week starting:			
	Mar 23	Apr 23	May 23	Jun 23	May - Jun	05 Jun	12 Jun	19 Jun	26 Jun	03 Jul
NW Europe										
Light sweet hydroskimming	6.84	2.15	4.06	6.61	2.56	5.29	7.28	7.73	7.03	6.02
Light sweet cracking	12.16	5.47	6.44	8.95	2.52	7.73	9.64	10.29	8.92	7.86
Light sweet cracking + Petchem	13.40	6.45	6.56	7.93	1.37	6.40	8.70	9.35	8.23	7.34
Medium sour cracking*	17.54	10.93	10.64	13.75	3.11	12.94	14.29	14.93	13.30	12.41
US Gulf Coast										
Light sweet cracking	25.41	18.65	18.13	19.72	1.59	20.04	21.20	19.72	18.92	18.84
Medium sour cracking	30.92	23.75	22.27	23.71	1.43	24.01	25.37	24.01	22.31	21.89
Heavy sour coking	40.14	30.31	28.05	27.74	-0.31	28.87	29.16	27.22	25.83	25.78
Singapore										
Light sweet cracking	7.75	2.82	2.54	4.16	1.62	3.41	4.69	4.16	4.71	3.63
Light sweet cracking + Petchem	8.93	4.00	3.94	5.37	1.43	4.48	5.89	5.43	6.04	4.76
Medium sour cracking	9.52	4.77	4.99	5.33	0.34	5.70	5.80	4.66	4.99	4.92
Medium sour cracking + Petchem	10.69	5.93	6.37	6.53	0.16	6.75	6.98	5.91	6.30	6.04

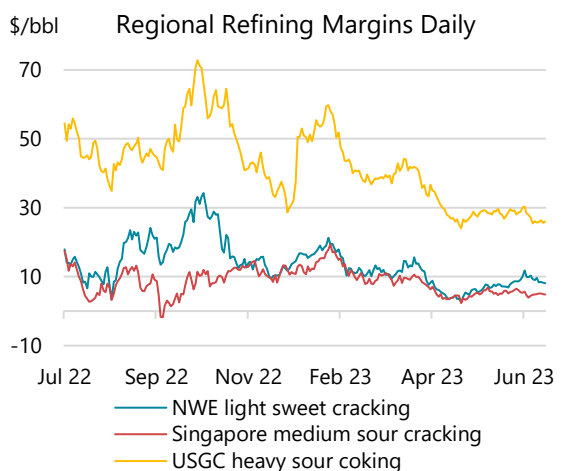
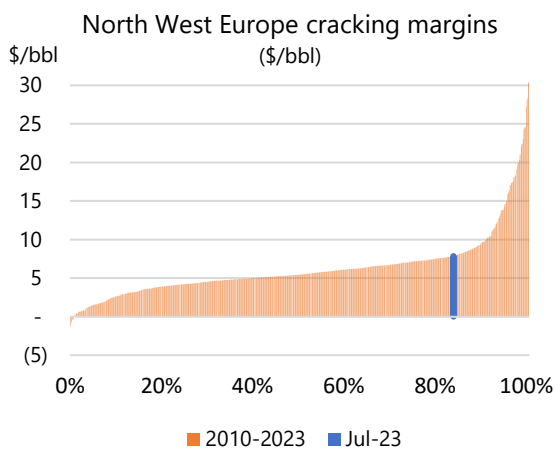
Note: Mediterranean and US Midcontinent margins are available in Table 15 of this Report.

Source: IEA/Argus Media Group prices.

Methodology notes are available at <https://www.iea.org/topics/oil-market-report#methodology>

*From 1/12/2022, the basis has changed from Urals NWE to Argus Brent Sour

Unusually, June saw the margin assessment for integrated petrochemical operations in Europe fall below stand-alone cracking refinery configurations. The integrated refinery margin for June 2023 in Europe was \$1.03/bbl below the comparable stand-alone cracking refinery margin, its steepest discount since the start of our time-series in 2010. The record weakness reflects the poor state of petrochemical profitability in an oversupplied market.



Global refining margins remain extremely healthy by almost any measure, with the exception of 2022 and 1Q23. Shell noted in its 2Q23 quarterly update that its global indicator margin has slumped by

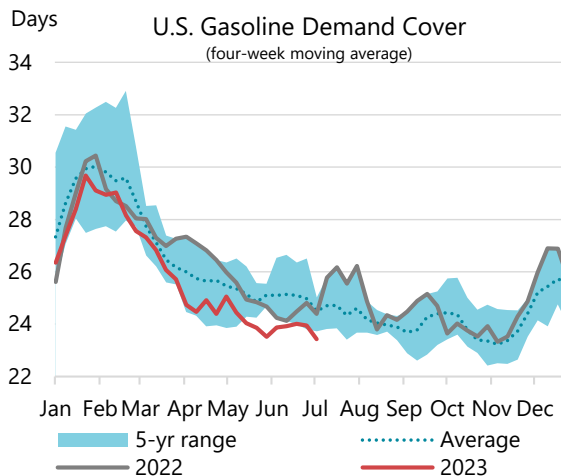
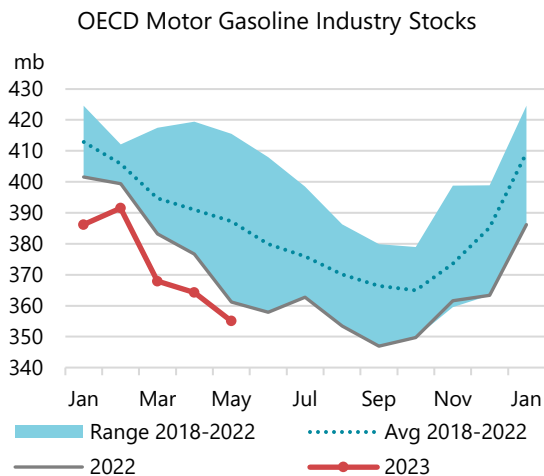
40% q-o-q. Similarly, indicative margin data from Valero show q-o-q declines of 34%, 14% and 12%, respectively, for USGC, Midcontinent and North Atlantic refining operations. Nevertheless, weekly average Northwest Europe cracking margins in early July, at \$7.86/bbl, were better than for 83% of the period since 2010. Excluding 2022 and 1Q23, would lift the measure to 90%.

Product cracks rallied during June, with the notable exception of naphtha which weakened globally. Gains in diesel and jet fuel outpaced those for gasoline, while high sulphur fuel oil cracks hit their strongest levels since late 2020. Gasoline cracks remain at a premium to middle distillates in the Atlantic Basin but are close to a \$5/bbl discount in Singapore.

Product Prices and Differentials (\$/bbl)												
	Prices			Differentials				Week Starting				
	Apr	May	Jun	Apr	May	Jun	May-Jun chg	05-Jun	12-Jun	19-Jun	26-Jun	03-Jul
Northwest Europe												
				to North Sea Dated								
Gasoline	103.69	97.06	98.12	18.84	21.57	23.39	1.82	22.76	24.26	24.68	23.13	21.15
Diesel	100.97	91.52	96.34	16.13	16.03	21.61	5.58	18.86	22.62	24.61	21.77	21.77
Jet/Kero	100.50	91.73	94.64	15.65	16.24	19.91	3.67	17.73	19.98	21.07	22.15	22.83
Naphtha	76.17	65.87	61.81	-8.68	-9.61	-12.92	-3.30	-10.35	-12.76	-14.33	-15.96	-17.88
HSFO	70.30	63.97	69.68	-14.54	-11.52	-5.05	6.47	-8.54	-3.97	-3.39	-2.70	-6.14
0.5% Fuel Oil	83.18	76.06	78.84	-1.66	0.57	4.11	3.54	3.28	4.13	4.96	5.03	2.56
US Gulf Coast												
				to WTI Houston								
Gasoline	109.52	101.24	101.70	29.21	28.67	29.87	1.20	31.83	31.59	28.61	28.10	28.02
Diesel	105.72	96.61	98.68	25.41	24.04	26.85	2.81	24.34	28.04	29.21	27.65	28.33
Jet/Kero	99.44	91.39	94.14	19.13	18.82	22.31	3.49	21.97	23.19	22.74	22.48	23.55
Naphtha	77.93	74.69	72.30	-2.38	2.12	0.47	-1.66	6.06	5.82	-3.03	-7.63	-8.90
HSFO	66.85	60.29	65.53	-13.46	-12.29	-6.30	5.99	-9.51	-4.93	-5.71	-2.99	-2.21
0.5% Fuel Oil	88.34	78.88	80.06	8.04	6.31	8.23	1.93	7.84	8.81	9.27	7.96	7.16
Singapore												
				to Dubai								
Gasoline	96.26	85.69	87.43	11.30	9.70	11.02	1.32	11.68	12.25	10.03	9.85	7.93
Diesel	98.44	89.05	92.31	13.48	13.06	15.91	2.85	15.21	16.22	16.25	16.35	16.66
Jet/Kero	96.68	88.49	90.06	11.71	12.50	13.65	1.15	13.05	13.91	14.13	13.90	14.24
Naphtha	71.48	62.12	57.01	-13.49	-13.87	-19.39	-5.52	-16.51	-18.31	-22.66	-21.72	-20.00
HSFO	72.77	66.96	66.28	-12.19	-9.03	-10.13	-1.10	-10.50	-10.27	-10.43	-9.45	-6.83
0.5% Fuel Oil	89.84	84.10	87.25	4.88	8.11	10.84	2.73	9.12	11.01	12.48	11.32	8.84

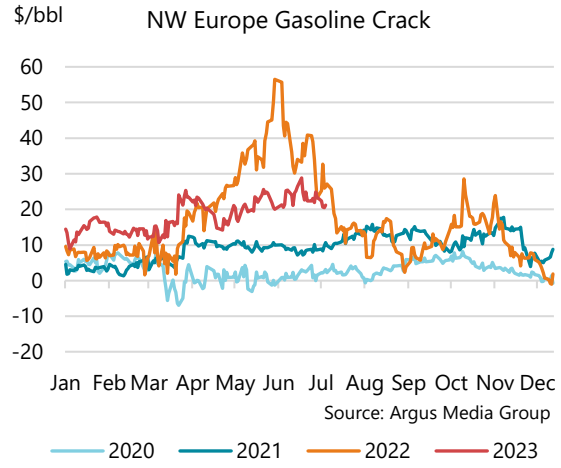
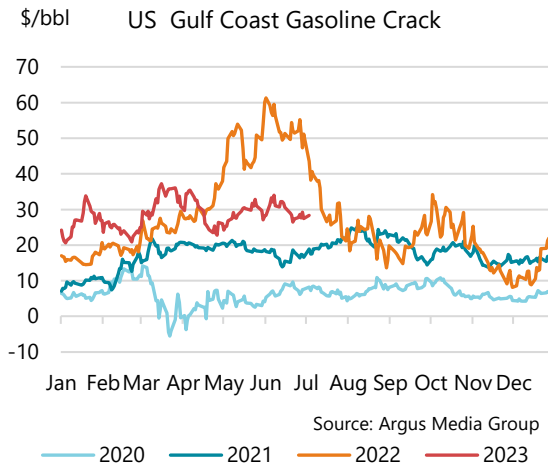
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Unplanned refinery outages in the USGC boosted gasoline cracks, with a knock-on impact on Europe. Gasoline cracks in Europe and the US are supported by low stock levels. OECD total gasoline inventories remain below the five-year range, and in the US, weekly EIA data indicate that gasoline stock cover – measured as days of demand – has fallen below the five-year range.



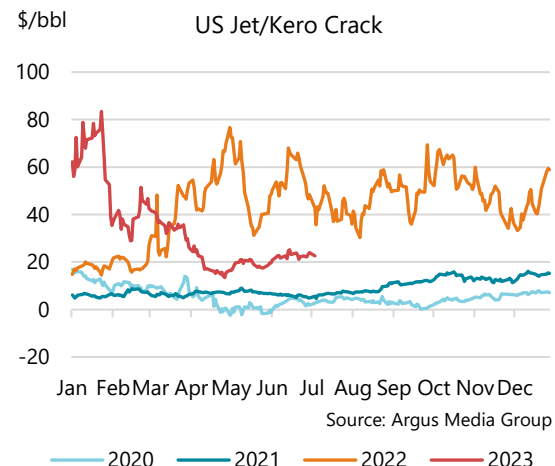
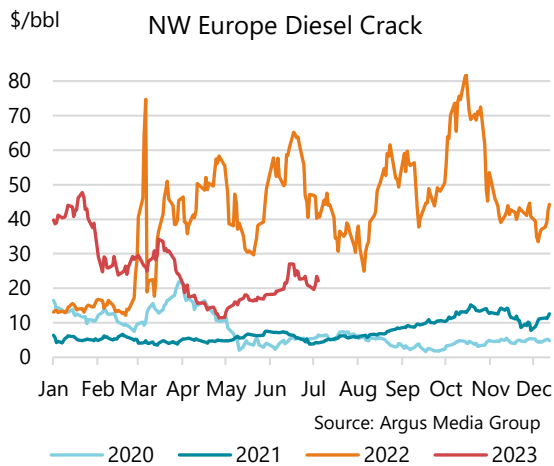
European gasoline stocks are also below the five-year range for this time of year. These tight market conditions contribute to higher gasoline cracks with both the US and European values being better

than 90% of the weekly averages in the last five years. Were it not for the exceptional levels of 2022, we might very well consider current gasoline cracks to be close to all-time highs. The ample availability of naphtha for gasoline blending and its heavy discount is also driving up the value of higher-octane blends and blending components.



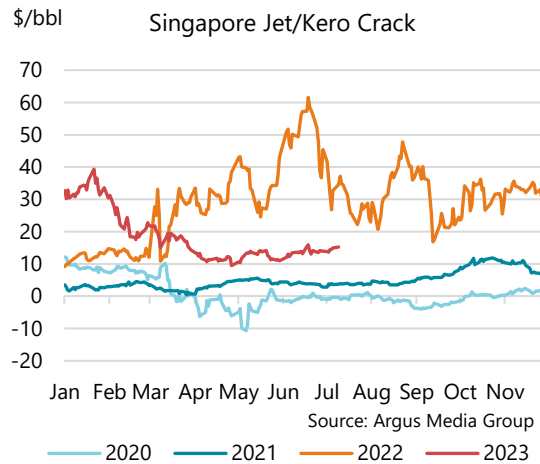
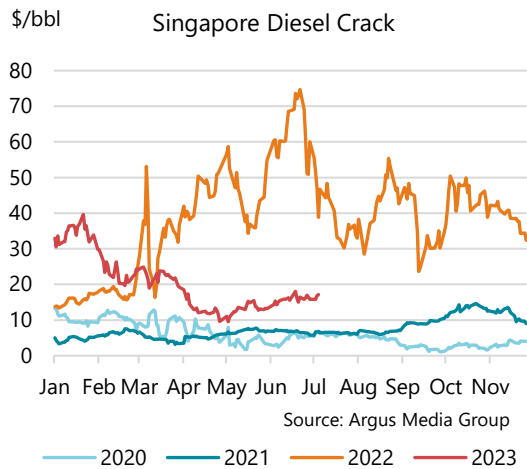
European middle distillate cracks rebounded in June with gasoil stocks in the Amsterdam-Rotterdam-Antwerp (ARA) trading hub reported to have fallen to the lowest level of the year. Unplanned refinery outages in Germany and Spain, and low Rhine river water levels, which are hampering deliveries to Germany and Switzerland, likely tightened distillate markets further in June. The loss of Russian products to EU countries has lengthened the supply chain for diesel imports, magnifying the impact of local disruptions.

Jet cracks rallied in tandem with diesel in the Atlantic Basin, to above \$20/bbl in both Europe and the US. The sustained demand recovery, albeit losing pace more recently, requires an ever-greater share of refinery output to be dedicated to meeting aviation demand and, consequently, jet fuel must be priced accordingly to secure sufficient yield.

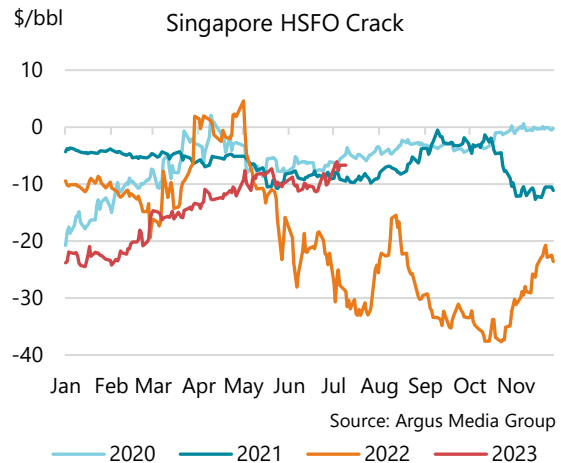
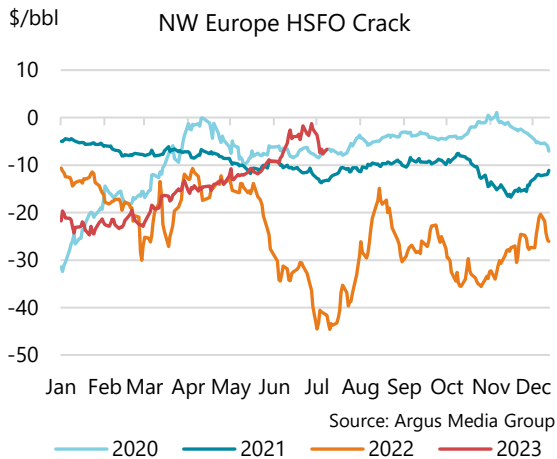


Singapore diesel cracks rallied during June as the pull from Europe for Middle Eastern and Indian exports leaves the region with fewer sources of supply. Against this, imports from China and Russia have reportedly increased. Jet fuel cracks in Asia were the laggard of the middle distillate pool. Reports indicate still healthy export volumes from Chinese refineries may be weighing on the market,

but so too, the pull of material from Europe should offer some support as it approaches its peak jet fuel demand season.



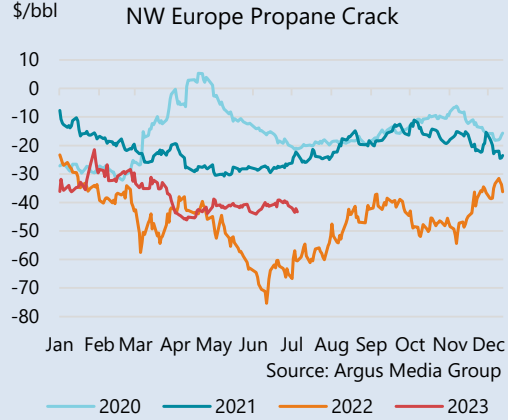
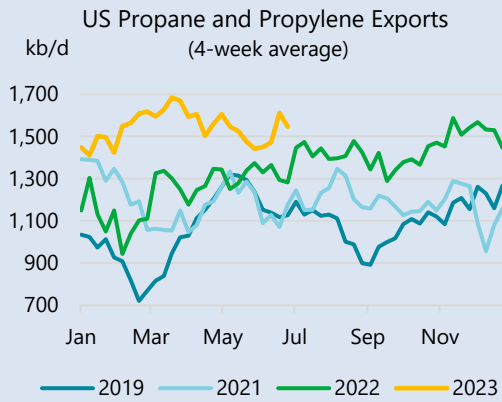
High sulphur fuel oil (HSFO) cracks posted the largest month-on-month increase in June in the Atlantic Basin, to an average -\$5.05/bbl in Europe and -\$6.30/bbl in the US, compared with nearly -\$25/bbl at the start of the year. By early July, HSFO cracks had narrowed further, closing to within a few dollars of parity with regional benchmark crudes such as Brent and WTI. The strength in HSFO cracks reflects the relative softness in regional light sweet crude markets and the loss of Russian HSFO and feedstock supplies, which has tightened the regional fuel oil market. Singapore HSFO cracks have strengthened, but not to the same extent, reflecting both the increased supply of Russian material to the region and a better supplied sour crude market, given the arrival of Russian Urals cargoes, and reports that regional refiners are receiving close to full allocations of Middle Eastern term grades.



LPG and naphtha markets caught between US NGL growth and the petrochemical industry cycle

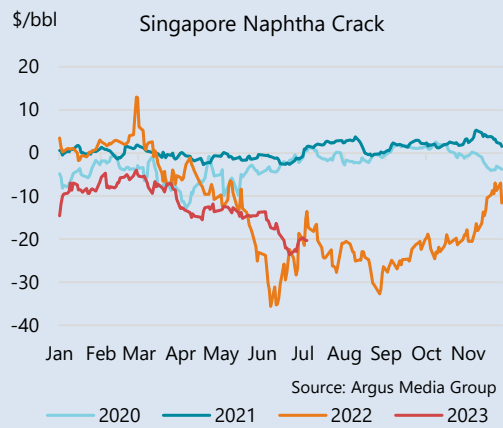
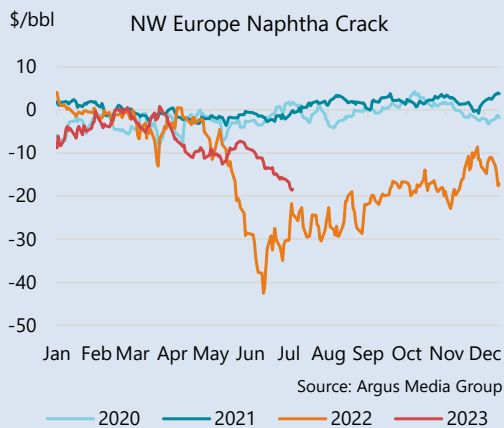
While all product prices have retreated from last year's highs, the true laggard across the oil products space is LPG. Propane prices in Europe are assessed at close to \$420/Mt in early July, equivalent to \$35/bbl. Refineries tend to only produce low, single digit yields of LPG and much of the output can be

converted into higher value products, such as gasoline blending components. However, surging US NGL production has driven propane pricing down to the point where it is competitive with the lower cost petrochemical feedstock ethane.



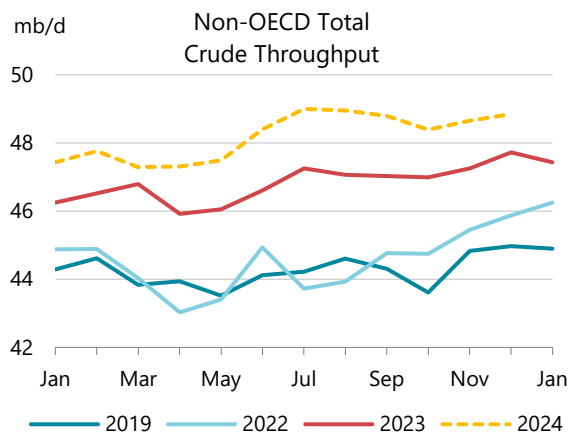
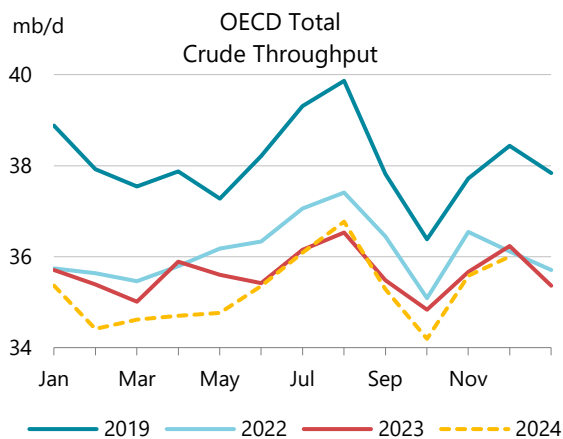
All-time high US propane/propylene exports in recent weeks and seasonally adjusted record stocks indicate that the collapse in LPG pricing is at least in part a supply-driven process. However, the dire state of petrochemical margins also highlights the impact of Chinese petrochemical industry expansion and its knock-on effect on naphtha and LPG pricing and demand (see Demand, *Petrochemical world map being redrawn as massive wave of Chinese plants ramp up*). Competition between petrochemical feedstocks is weighing heavily on naphtha cracks, which have slumped to around -\$20/bbl in Europe and Singapore. Only during the war-related dislocations to energy markets of last year have naphtha cracks been as weak.

Furthermore, the spread between naphtha and gasoline, which alternatively reflects the incentive to blend naphtha into the gasoline pool or for a refinery to increase processing of naphtha through a reformer, has ballooned to close to \$40/bbl. Here again, this scale of dislocation has not been seen since last summer and when viewed against the post-2010 time frame, it has only been stronger than current levels for 2% of the time.

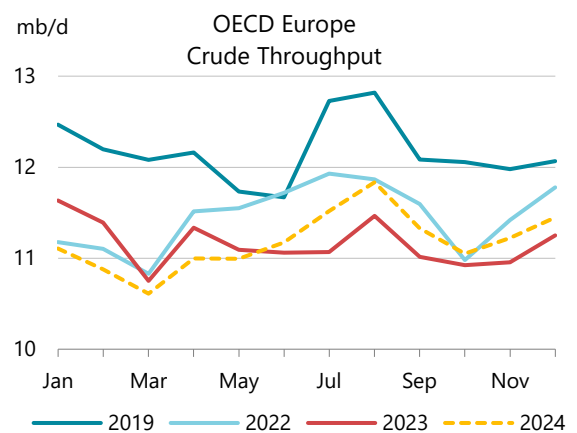
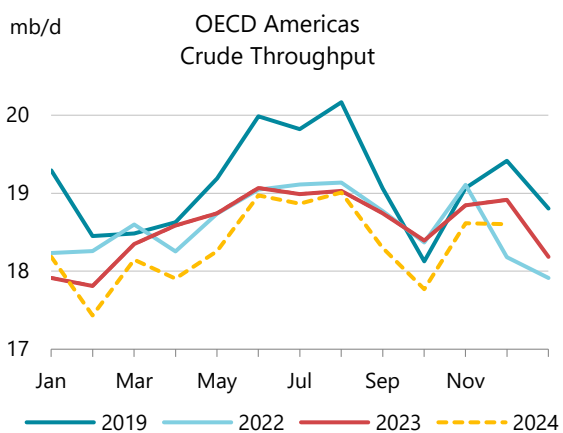


Regional refining developments

Global crude runs are forecast to average 82.5 mb/d this year and 83.5 mb/d in 2024. Annual growth is maintained at 1.8 mb/d in 2023 and 1 mb/d in 2024. The upward revision to 2023 runs of 130 kb/d from last month's *Report* stems from higher Russian crude throughput forecasts for 2H23. By contrast, 2Q23 runs are revised 250 kb/d lower this month to 81.8 mb/d following weaker-than-expected data for several Middle Eastern and Asian countries. June crude runs estimates are broadly unchanged at 82 mb/d for now, while 2H23 forecasts are increased by an average of 400 kb/d. OECD crude runs are projected to shrink next year by 400 kb/d, in line with OECD demand estimates, while non-OECD refinery throughput is forecast to increase by 1.4 mb/d.



OECD crude refinery runs averaged 35.6 mb/d in May, 360 kb/d ahead of forecast. Stronger-than-expected throughput rates in OECD Americas and Asia Oceania were partially offset by weaker European activity. US and Canadian output were both around 150 kb/d ahead of forecast, but gains were mitigated by weaker Mexican crude processing levels. US crude runs increased 360 kb/d m-o-m to 16.14 mb/d, the highest level since last November albeit flat on last May's throughput.



Mexican refineries had shown signs of improved reliability in recent months with processing rates from January to April up 14% on year-ago levels. However, crude runs in May slumped nearly 25%

m-o-m to 760 kb/d despite a lack of reported planned turnaround activity. Similarly, European crude runs were below expectations, with notable shortfalls in Germany, Spain, Sweden and the UK.

Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Change from		Utilisation rate	
							Apr 23	May 22	May 23	May 22
US ¹	15.32	15.03	15.07	15.46	15.79	16.14	0.36	0.01	90%	91%
Canada	1.85	1.84	1.73	1.75	1.61	1.68	0.06	0.02	92%	91%
Chile	0.18	0.19	0.19	0.19	0.21	0.16	-0.05	0.03	72%	59%
Mexico	0.83	0.86	0.81	0.95	0.97	0.76	-0.21	-0.06	47%	50%
OECD Americas¹	18.18	17.91	17.81	18.35	18.59	18.74	0.16	0.00	87%	88%
France	0.99	0.98	1.00	0.52	0.66	0.96	0.29	0.11	78%	69%
Germany	1.83	1.67	1.66	1.58	1.55	1.54	-0.01	-0.26	75%	88%
Italy	1.28	1.36	1.17	1.31	1.42	1.17	-0.26	-0.30	67%	84%
Netherlands	1.03	1.07	1.11	0.95	1.12	1.14	0.01	0.08	91%	85%
Spain	1.32	1.26	1.19	1.16	1.27	1.18	-0.09	-0.19	80%	93%
United Kingdom	1.04	1.04	1.02	1.03	1.04	1.05	0.01	-0.03	87%	90%
Other OECD Europe ²	4.29	4.26	4.24	4.20	4.26	4.07	-0.20	0.13	84%	82%
OECD Europe	11.78	11.64	11.39	10.75	11.34	11.09	-0.24	-0.46	81%	84%
Japan	2.85	2.88	2.79	2.65	2.62	2.33	-0.29	-0.32	73%	77%
Korea	2.83	2.80	2.90	2.80	2.88	2.98	0.10	0.22	83%	77%
Other Asia Oceania ³	0.48	0.48	0.50	0.46	0.47	0.45	-0.02	-0.03	87%	92%
OECD Asia Oceania	6.16	6.16	6.19	5.91	5.97	5.76	-0.21	-0.13	79%	78%
OECD Total	36.12	35.70	35.39	35.01	35.89	35.60	-0.29	-0.58	83%	85%

1 US includes US50, OECD Americas include Chile and US territories

2 Includes Lithuania

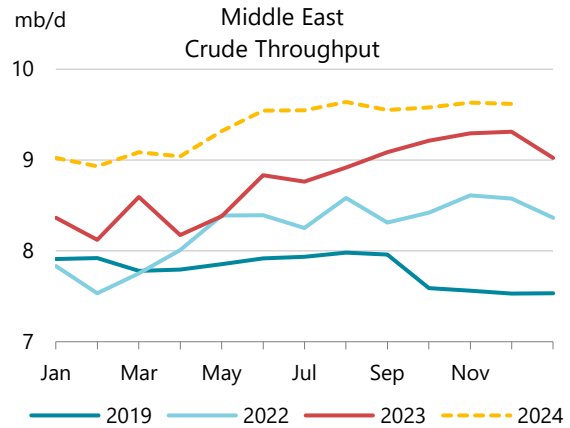
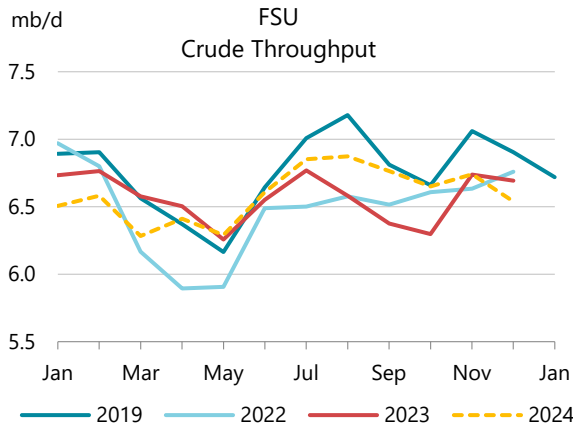
3 Includes Israel

While unreported maintenance is likely to blame, structural factors, such as lack of sufficient alternatives to Russian crude supplies, could also be contributing. In particular, German refinery throughput has consistently underperformed all year and as a result we have lowered 2H23 forecasts by 100 kb/d on average. European runs contracted by 460 kb/d y-o-y in May. Bucking the trend were French refineries, where throughputs increased by nearly 300 kb/d m-o-m and 110 kb/d y-o-y as the industry shook off the last of the strike impacts.

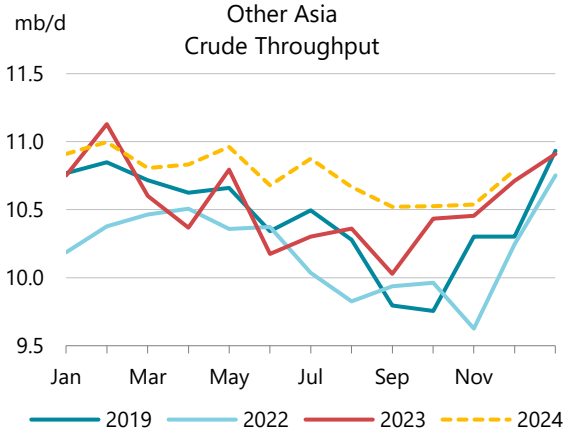
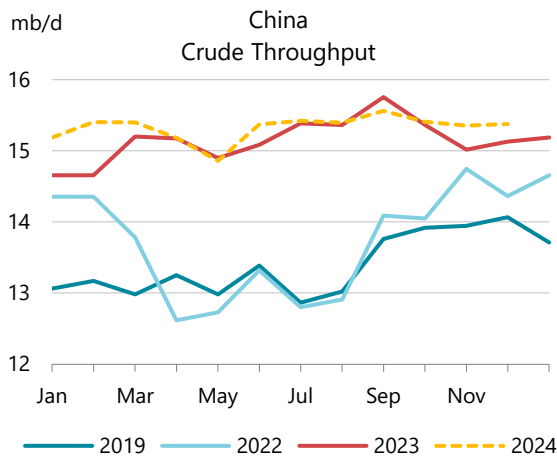
OECD Asia Oceania refinery throughputs averaged 5.8 mb/d in May, 600 kb/d above forecast, largely thanks to much better performance of South Korean refineries. Runs declined on both a monthly and annual basis, as Japanese refiners started seasonal maintenance, something we now expect Korean plants to do in June, which will temporarily depress throughput rates further.

Middle Eastern 2H23 crude runs forecasts were also raised this month, albeit by a more measured 75 kb/d, following reports that Oman's 230 kb/d Duqm refinery will likely start sooner than previously expected. Furthermore, despite reports of another fire at Kuwait's 615 kb/d Al Zour refinery, the site's third train is reportedly preparing to enter commercial operation. However, weaker than expected April activity levels for Iraq and Saudi Arabia lead us to lower forecasts for these two countries. On balance the change to Middle East forecasts in this *Report* is minimal.

Forecast refinery runs in the Former Soviet Union (FSU) have been raised this month by 370 kb/d for 2H23 to reflect an improved Russian outlook. Russian June runs are estimated to have increased by 340 kb/d to 5.5 mb/d, based on weekly diesel production data, and given the lull in seasonal maintenance in July and August throughputs could reach 5.8 mb/d. The higher Russian estimates are carried through 2024, resulting in an increase to FSU runs next year of 350 kb/d to 6.6 mb/d on average.



Chinese crude processing dipped by nearly 300 kb/d m-o-m in May to 14.9 mb/d largely thanks to higher planned maintenance. Annual growth was close to 16% and processing rates remain near March's record rate of 15.2 mb/d. June processing rates should have recovered slightly on a sequential basis but are also expected to be affected by seasonal maintenance before rebounding strongly in 3Q23, to an average of 15.5 mb/d. Annual growth during 2Q23 and 3Q23 averages 2.2 mb/d, in large part due to the weak baseline of last year. Nevertheless, annual growth in activity slows to 800 kb/d in 4Q23 and is forecast to average 200 kb/d in 2024, in line with slower demand growth in China.

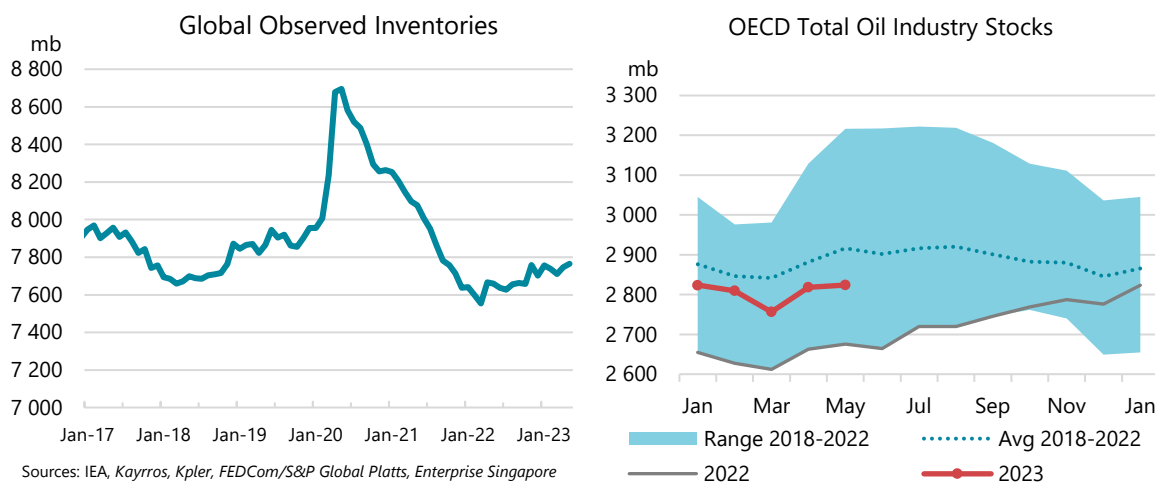


Elsewhere in Asia, Indian crude runs rebounded in May to 5.35 mb/d, up 130 kb/d m-o-m and 20 kb/d y-o-y. Maintenance picked up in June but runs will likely return to 5.3 mb/d in July and August before further planned work cuts processing in the autumn. Annual growth of 200 kb/d reflects the start of the new 180 kb/d crude unit at the Vizag refinery in March and strong capacity utilisation at Reliance's Jamnagar refinery. Crude throughput estimates for 2Q23 for several Asian countries, including Thailand, Chinese Taipei, Viet Nam and Indonesia, have been revised lower on the receipt of more complete data, which in part has been carried through the 2H23 forecast.

Stocks

Overview

A substantial 44.2 mb stock build in non-OECD countries led by a surge in China pushed global observed inventories up by 19.4 mb in May to the highest since September 2021. China posted the largest monthly increase in crude stocks in 12 months at a steep 1.1 mb/d, fuelled by a sharp rise in crude oil imports and despite near-record refinery throughput rates. By contrast, total OECD oil stocks drew by a marginal 1.8 mb. Oil on water declined by 23 mb as additional OPEC+ output cuts saw seaborne oil exports falling to their lowest since January. Preliminary data for June show global oil stocks fell by 9.2 mb as oil on water decreased, OECD stocks built and non-OECD inventories were largely unchanged.



In May, OECD industry stocks rose by 5.4 mb to 2 824 mb, 92.2 mb below the five-year average. In terms of forward demand, end-month inventories covered 60.4 days, 0.7 days less than the previous month but 2.9 days more than a year ago. The build was led by OECD Americas (+11.1 mb), which saw other product stocks increase faster than the seasonal norm (+23.6 mb). Crude oil, NGL and feedstock inventories fell by 7.2 mb while total product stocks rose by 12.6 mb. Gasoline inventories dropped by 9.2 mb to 355.1 mb, their lowest May level since 1988, when monthly data became available. Middle distillate and fuel oil stocks increased in all three regions by a combined 4.2 mb and 1.9 mb, respectively. Other products built by a total 15.6 mb, with a decline in Europe partially offsetting gains in the Americas and Asia unchanged for the month. OECD government stocks fell by 7.2 mb, as 9.8 mb of crude oil was released from the US Strategic Petroleum Reserves (SPR) as a part of the 26 mb planned sale.

Preliminary data for June show OECD oil inventories rose by 11.5 mb. Crude oil, NGL and feedstock inventories fell by 6.2 mb, led by the US (-10.8 mb). The decline was smaller than usual thanks to the US SPR release (-6.7 mb) and low refinery throughput in Japan. Oil product stocks built by 17.7 mb, due to the seasonal other product increases (+18.1 mb) mainly in the US. Gasoline stocks edged down by 0.6 mb, less than the seasonal trend as the US built counter-seasonally by 1 mb. Middle distillate inventories were up by 1.8 mb as increases in the US (+1.5 mb) and Japan (+1.2 mb) were partially offset by Europe (-1 mb). Fuel oil fell by 1.6 mb, exclusively in the US (-1.9 mb).

Preliminary OECD Industry Stock Change in May 2023 and First Quarter 2023												
	May 2023 (preliminary)				First Quarter 2023							
	(million barrels)				(million barrels per day)				(million barrels per day)			
	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total
Crude Oil	-5.8	3.3	-1.7	-4.3	-0.2	0.1	-0.1	-0.1	0.3	0.0	0.1	0.4
Gasoline	-4.6	-3.6	-1.0	-9.2	-0.1	-0.1	0.0	-0.3	0.0	0.0	0.0	0.1
Middle Distillates	1.2	2.5	0.5	4.2	0.0	0.1	0.0	0.1	0.0	0.0	-0.1	-0.2
Residual Fuel Oil	0.5	0.8	0.5	1.9	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Other Products	23.6	-7.9	0.0	15.6	0.8	-0.3	0.0	0.5	-0.3	-0.1	0.0	-0.3
Total Products	20.7	-8.2	0.0	12.6	0.7	-0.3	0.0	0.4	-0.3	-0.1	-0.1	-0.5
Other Oils ¹	-3.8	0.6	0.2	-2.9	-0.1	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.2
Total Oil	11.1	-4.3	-1.4	5.4	0.4	-0.1	0.0	0.2	0.0	-0.2	0.0	-0.2

¹ Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD commercial stock data for April were revised higher by a substantial 23.6 mb to 2 819 mb, following the receipt of more complete data. Inventories in OECD Europe were adjusted up by 19.3 mb, with a 11.5 mb revision for crude oil and 7.2 mb for products. Stocks in the OECD Americas were also raised, by 4.9 mb, led by middle distillates. OECD Asia Oceania inventories were largely unchanged. March numbers were revised down by 4.6 mb.

OECD Industry Stock Revisions versus June 2023 Oil Market Report								
	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Mar-23	Apr-23	Mar-23	Apr-23	Mar-23	Apr-23	Mar-23	Apr-23
Crude Oil	-2.8	0.0	1.4	11.5	0.0	-1.4	-1.4	10.1
Gasoline	-0.3	-1.3	0.9	0.0	0.0	0.0	0.7	-1.3
Middle Distillates	0.0	5.0	-1.4	6.0	0.0	-0.2	-1.3	10.9
Residual Fuel Oil	0.0	-0.5	-0.1	1.2	0.0	0.0	-0.1	0.7
Other Products	0.0	0.5	0.3	-0.1	0.0	1.0	0.3	1.4
Total Products	-0.3	3.7	-0.2	7.2	0.0	0.8	-0.5	11.6
Other Oils ¹	0.0	1.3	-2.6	0.7	0.0	0.0	-2.6	1.9
Total Oil	-3.1	4.9	-1.5	19.3	0.0	-0.6	-4.6	23.6

¹ Other oils includes NGLs, feedstocks and other hydrocarbons.

Implied balance

IEA Global oil balance (implied stock change) (mb/d)								
	2019	2020	2021	2022	1Q23	Apr-23	May-23	Jun-23
Global oil balance	-0.03	2.16	-2.16	0.11	1.20	0.97	-0.12	-0.68
Observed stock changes								
OECD industry stocks	0.05	0.41	-1.06	0.36	-0.21	2.06	0.17	0.38
OECD government stocks	-0.04	0.02	-0.16	-0.74	0.03	-0.23	-0.23	-0.22
Non-OECD crude stocks*	0.17	0.44	-0.47	0.26	0.20	0.09	1.40	0.08
Selected non-OECD product stocks**	-0.14	0.12	-0.03	-0.01	0.32	-0.30	0.03	-0.08
Oil on water	0.07	0.01	-0.04	0.29	0.07	-0.49	-0.74	
Total observed stock changes	0.10	1.00	-1.75	0.17	0.42	1.12	0.62	
Unaccounted for balance	-0.12	1.16	-0.41	-0.06	0.79	-0.15	-0.74	

*Crude stock change data from Kayros and estimated Saldanha Bay data from Kpler. Kayros data are available for selected countries and include only, and not all, above-ground storage.

**JODI data adjusted for monthly gaps in reporting, latest data for May 2023, plus Fujairah and Singapore inventories.

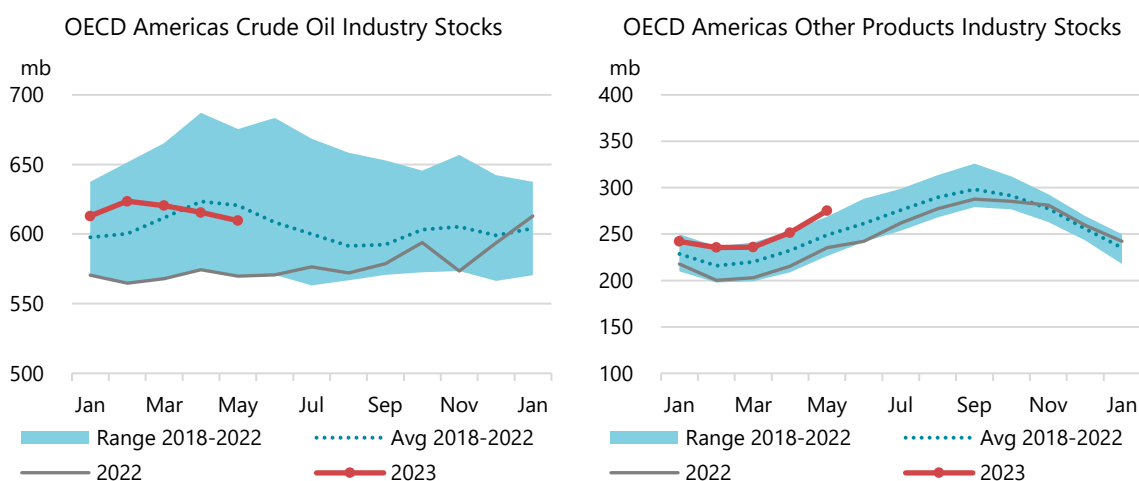
Sources: IEA, EIA, PAJ, Euroilstock, Kayros, JODI, Kpler, FEDCom/S&P Global Platts and Enterprise Singapore.

In May, OECD industry stocks increased by 170 kb/d, led by products, while government stocks fell by 230 kb/d. Non-OECD crude oil inventories surged by 1.4 mb/d due to a significant build in China. By contrast, oil on water declined for a second consecutive month, by 740 kb/d. The total observed stock change was 620 kb/d. However, our demand and supply estimate indicate a 120 kb/d reduction in inventories. The mismatch might come from incomplete OECD data or stock changes in non-OECD countries with poor coverage, especially for product inventories.

Recent OECD industry stock changes

OECD Americas

Commercial stocks in OECD Americas rose by 11.1 mb in May, as a seasonal build in the US (+19.3 mb) was partially offset by a large draw in Canada (-8.2 mb). At 1 513 mb, they remained 34.4 mb below the five-year average. Crude oil stocks fell for a third consecutive month, by 5.8 mb, despite US SPR releases (-9.8 mb). NGL and feedstock inventories declined by 3.8 mb compared with a normal build of 2.7 mb. In Canada, crude, NGL and feedstock stocks decreased counter-seasonally by 4.4 mb, as wildfires led to shut-ins of some upstream operations.



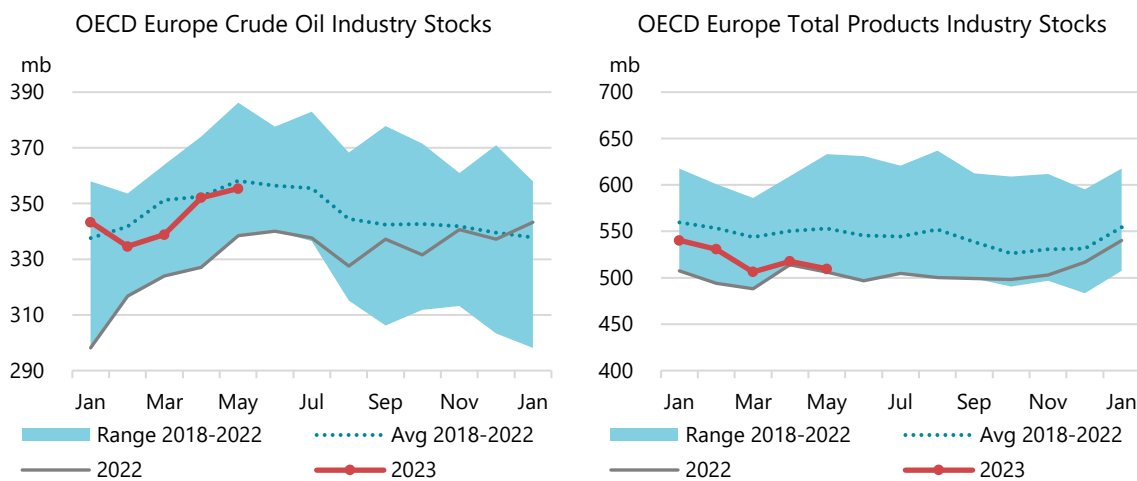
Oil product stocks increased by 20.7 mb. Other product inventories, mainly LPG, led the gains, rising 23.6 mb compared with a 16.6 mb normal build. Other product stocks reached a seasonal record high as soaring US NGL supply has coincided with lacklustre domestic LPG demand from the petrochemical sector. By contrast, gasoline inventories fell by 4.6 mb, more than twice the seasonal average, while middle distillates (+1.2 mb) and fuel oil (+0.5 mb) rose less than normal.

Weekly data from the US Energy Information Administration (EIA) show a 7.3 mb stock build in June. Crude oil inventories were down by 7.1 mb when they usually draw by 12.2 mb. The planned 26 mb SPR sale is almost completed, with an additional 6.7 mb released to the market in June. Other oils were also down, by 3.7 mb. Product stocks built by 18.1 mb, in line with the five-year average. Most of the increase came from other products (+17.4 mb). Middle distillate inventories rose by 1.5 mb, with a draw in jet/kerosene due to the higher demand (+140 kb/d y-o-y). Gasoline stocks rose counter-seasonally by 1 mb due to increased refinery runs. Fuel oil inventories fell by 1.9 mb.

OECD Europe

Industry stocks in OECD Europe fell counter-seasonally by 4.3 mb to 944.4 mb in May, with higher crude inventories more than offset by a decline in products. The deficit against the five-year average was 49.5 mb, the largest of the three OECD regions. Crude oil inventories increased by 3.3 mb to 355.3 mb, their highest since January 2021. NGL and feedstock stocks edged up by 0.6 mb.

Product inventories fell by 8.2 mb, compared with a 2.8 mb historical average increase. Most of the decline in stocks was in the other product category, which fell by 7.9 mb, to the lowest level in 13 months. Gasoline stocks were also down, by 3.6 mb, their third consecutive monthly decline. By contrast, middle distillate inventories rose by 2.5 mb, in line with the seasonal average. Fuel oil stocks also increased, by a marginal 0.8 mb. The overall net decline in oil products and higher crude, NGL and feedstock inventories largely reflects reduced regional refinery throughput rates (-240 kb/d m-o-m) rather than higher demand in May.

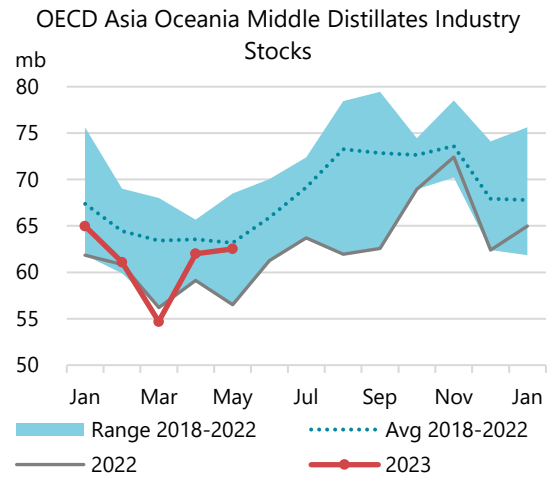
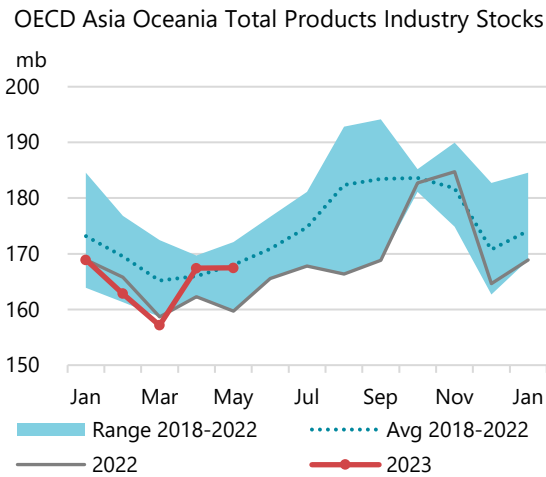


Preliminary June data from *Euroilstock* show overall inventories falling by 2 mb. Crude oil stocks were unchanged as builds, including in the Netherlands (+2.6 mb) and France (+1.5 mb), were offset by decreases led by UK (-1.8 mb). Gasoline and middle distillate inventories drew by 1 mb each, with notable changes in Germany for gasoline (-1.7 mb) and in Austria for middle distillates (-1.1 mb). Fuel oil and naphtha stocks were largely unchanged.

OECD Asia Oceania

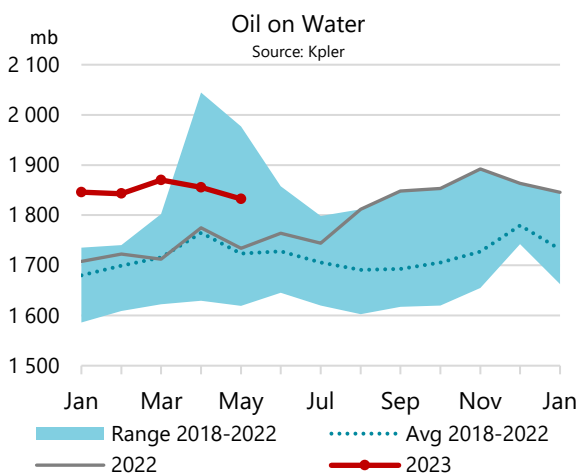
In May, industry stocks in the OECD Asia Oceania region fell by 1.4 mb. They stood at 366.3 mb, 8.3 mb below the five-year average. Crude oil stocks declined by 1.7 mb, with a drop of 6 mb in Korea partially offset by a 4.3 mb stock build in Japan. NGL and feedstock inventories were slightly higher by 0.2 mb.

Total product stocks were unchanged in the month. Gasoline inventories fell by 1 mb while middle distillate and fuel oil inventories each rose by 0.5 mb. Other product stocks held steady as a 2.4 mb decline in Japan was offset by a corresponding build of 2.4 mb in Korea.

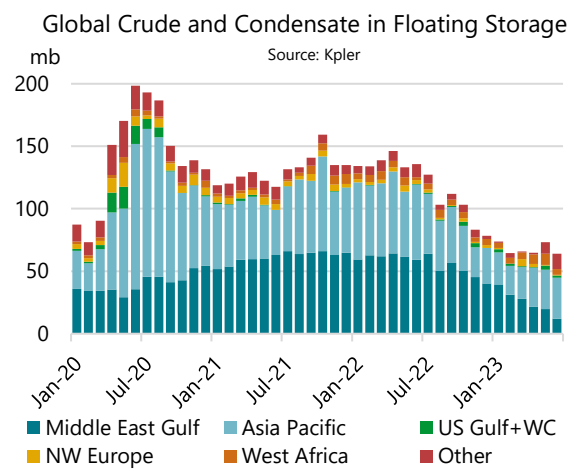


Preliminary June data from the *Petroleum Association of Japan* show a 6.2 mb stock build in Japan, when they usually fall by 3.3 mb. Crude oil inventories rose by 3.7 mb, due to lower refinery throughput (140 kb/d m-o-m). However, product stocks also rose counter-seasonally, by 1.5 mb, indicating both lower exports and demand. Fuel oil and naphtha built counter-seasonally by 0.2 mb and 0.7 mb, respectively. Gasoline inventories fell by 0.6 mb, in line with the five-year average. Middle distillates rose by 1.2 mb, mainly in kerosene. Other oils increased by 1 mb.

Other stock developments

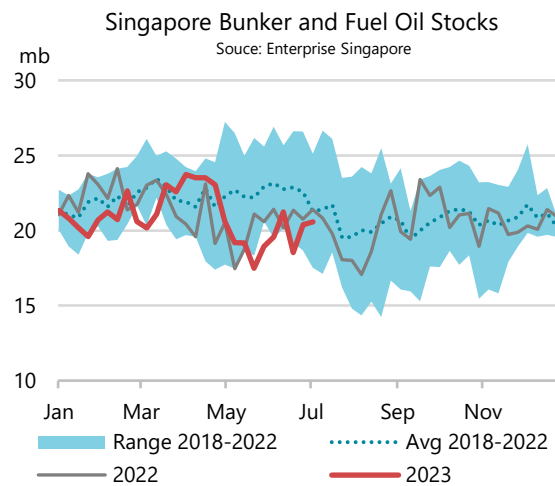
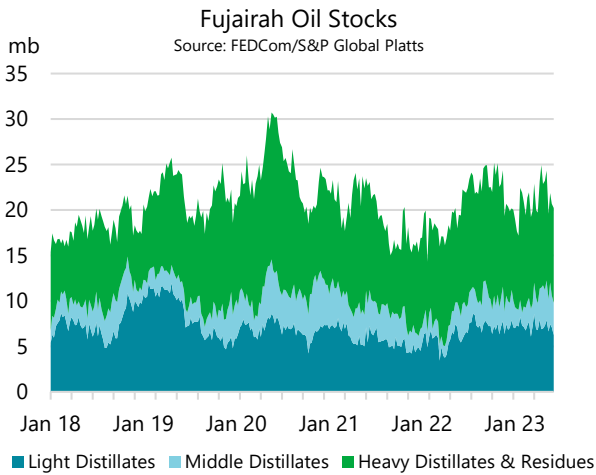


Note: Oil on water includes floating storage.



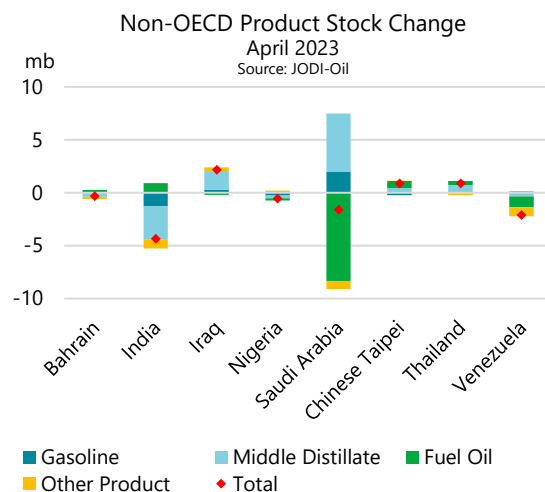
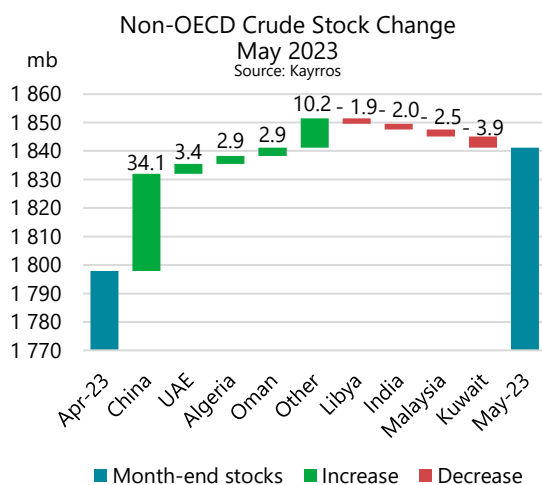
Volume of commodities on tankers that are idled offshore for 12 or more days.

Oil on water, including floating storage, plummeted by 23 mb in May as seaborne oil exports, including LPG, fell to their lowest level in four months, according to data from *Kpler*. Iran increased its oil exports by 400 kb/d to a record high since 2019. However, after hitting their highest level in three years in April, shipments from Saudi Arabia were reduced by 1 mb/d in May, on the back of voluntary production cuts. Other countries, such as Russia and Norway, also decreased their exports. The drop in oil on water was led by clean products, however, which were down by 17.2 mb m-o-m, mainly in naphtha (-8.9 mb), as exports fell to a three month-low. Crude oil also decreased, by 7.4 mb, while fuel oil rose by 1.6 mb. Crude oil held in short-term floating storage rose by 8.4 mb to 73.2 mb. North African floating storage increased by 6 mb while Saudi Arabia held three VLCCs at the mouth of the Suez Canal. Floating storage in the Middle East, consisting mostly of Iranian crude and condensates, fell by 2.2 mb, but built by a similar amount in Asia. Volumes held offshore North America rose by 2.7 mb. Offshore product stocks were largely unchanged.



In Fujairah, independent product stocks posted a significant gain of 3.8 mb in May, to 23.5 mb, the highest level since September, according to data from *FEDCom and S&P Global Platts*. Residual fuel oil inventories accounted for more than half of the increase, up by 2.1 mb. The rise in inventories was supported by the largest inflow to the region in eight months, notably from Iran, Iraq and Russia, while exports slumped to a three-month low, according to *Kpler*. Middle distillate stocks rose by 1 mb. Light distillate inventories were also higher, by 0.7 mb. By contrast, in June total product stocks fell by 3.1 mb, as residual fuels declined by 1.8 mb.

Independent product stocks in Singapore, the world's largest bunkering hub, fell by 2.9 mb to 42 mb in May, according to data from *Enterprise Singapore*. Residual fuel inventories dropped by 2.7 mb as bunkering demand rose for a third consecutive month to the highest level since January 2020, according to the Maritime and Port Authority of Singapore, and as dirty product imports fell to a one-year low according to *Kpler*. Middle distillate and light distillate stocks were largely unchanged. For June, Singapore refined product inventories edged up by 0.6 mb, as residual fuel levels rebounded by 1.5 mb.



Observed crude stocks in floating-roof storage tanks in non-OECD countries rose by a massive 43.3 mb in May, according to satellite data from *Kayrros*. Chinese observed crude stocks increased by an exceptionally steep 34.1 mb, reaching their highest level in two years, as crude imports surged by 1.8 mb/d m-o-m and 1.3 mb/d y-o-y. China has sharply ramped up its imports in part due to relatively heavy discounts for crude from Russia and Iran. Moreover, the current lower price levels are an incentive to build inventories ahead of higher demand in the second half of the year. In Oman,

stocks rose at the Oman Tank Terminal Company (OTTCO), which is connected to the Duqm refinery. Inventories in Malaysia declined by 2.5 mb to their lowest since 2019, as the country struggles to increase production. In June, *Kayrros* data show total non-OECD crude oil stocks built by 2.3 mb, on the back of further gains in China (+13.8 mb) while they were partially offset by other countries such as Iran (-6.4 mb) and Indonesia (-4.5 mb).

Oil product stocks in the 11 non-OECD economies reporting to the JODI-Oil database fell by 5.3 mb in April. Fuel oil stocks led the decrease (-7.6 mb), as the demand in Saudi Arabia was on par with April 2021, which was the highest for the month in the available data. Other product inventories also fell, by a combined 2.4 mb across the reporting countries. By contrast, middle distillate and gasoline stocks rose by 4.2 mb and 0.6 mb, respectively. Middle distillate inventories built mainly in Saudi Arabia (+5.5 mb) and Iraq (+1.7 mb) but were partially offset by India (-3.2 mb), where record-high demand for April coincided with a seasonal decline in refinery activity.

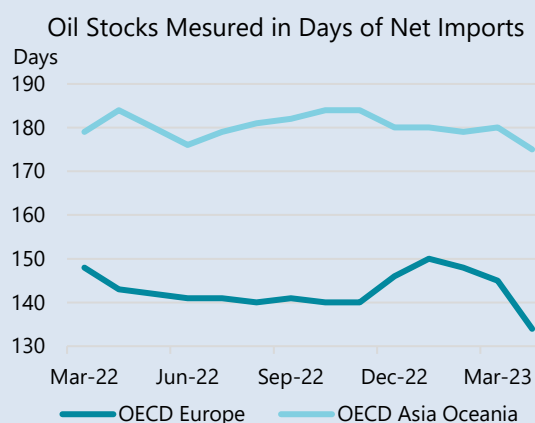
IEA collective stock release actions were concluded

On 22 June 2023, the IEA Governing Board agreed to conclude the two collective actions started in March and April of last year in response to Russia's invasion of Ukraine. The IEA's fourth and fifth collective actions, which released a total of 182.7 mb of crude and products to the markets, were the largest in history. Deliveries of oil from public reserves were completed by the end of 2022. Amid soaring oil prices and an unprecedented reallocation of global oil trade flows seen last year, these coordinated stock releases helped ease market tensions.

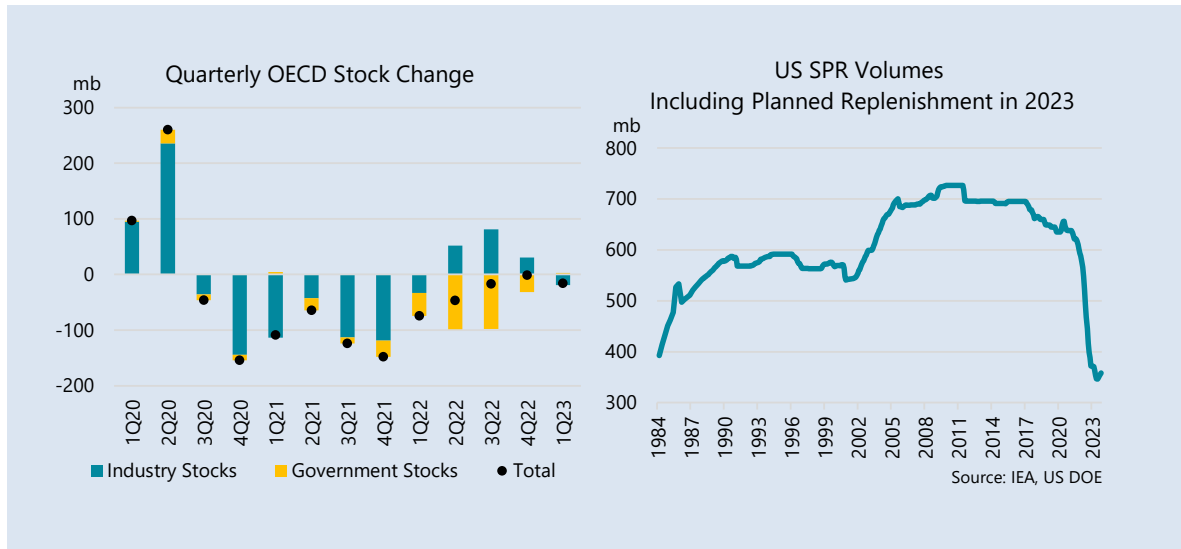
Following the termination of the collective actions, IEA member countries are now obligated to hold oil stocks equivalent to no less than 90 days of net imports by the end of the first quarter of 2024. However, as the majority of IEA member countries already hold ample inventories to cover their obligations, the conclusion of the collective actions will not require any material increase in oil stock levels and the impact on markets is expected to be marginal.

As of April 2023, OECD Europe and OECD Asia Oceania inventories equated to 134 and 175 days of net imports, respectively. The number of days decreased significantly from the previous month, but this is because 2022, when net imports increased, was used as the base year from April.

As all of the OECD Americas member countries are net exporters they do not have stock obligations. Nonetheless, the US has said it will replace some volumes sold last year as the SPR is at the lowest since the 1980s. The US Department of Energy (DOE) confirmed it will purchase 3.1 mb in August and 3.2 mb in September, and announced it will buy another 6 mb between October and November. The refill speed is far less than the 680 kb/d stock release between March and December in 2022 so the upward pressure on prices is expected to be minimal. The average purchase prices so far are well below the sale prices in the previous year, which averaged \$95/bbl, according to the US DOE.

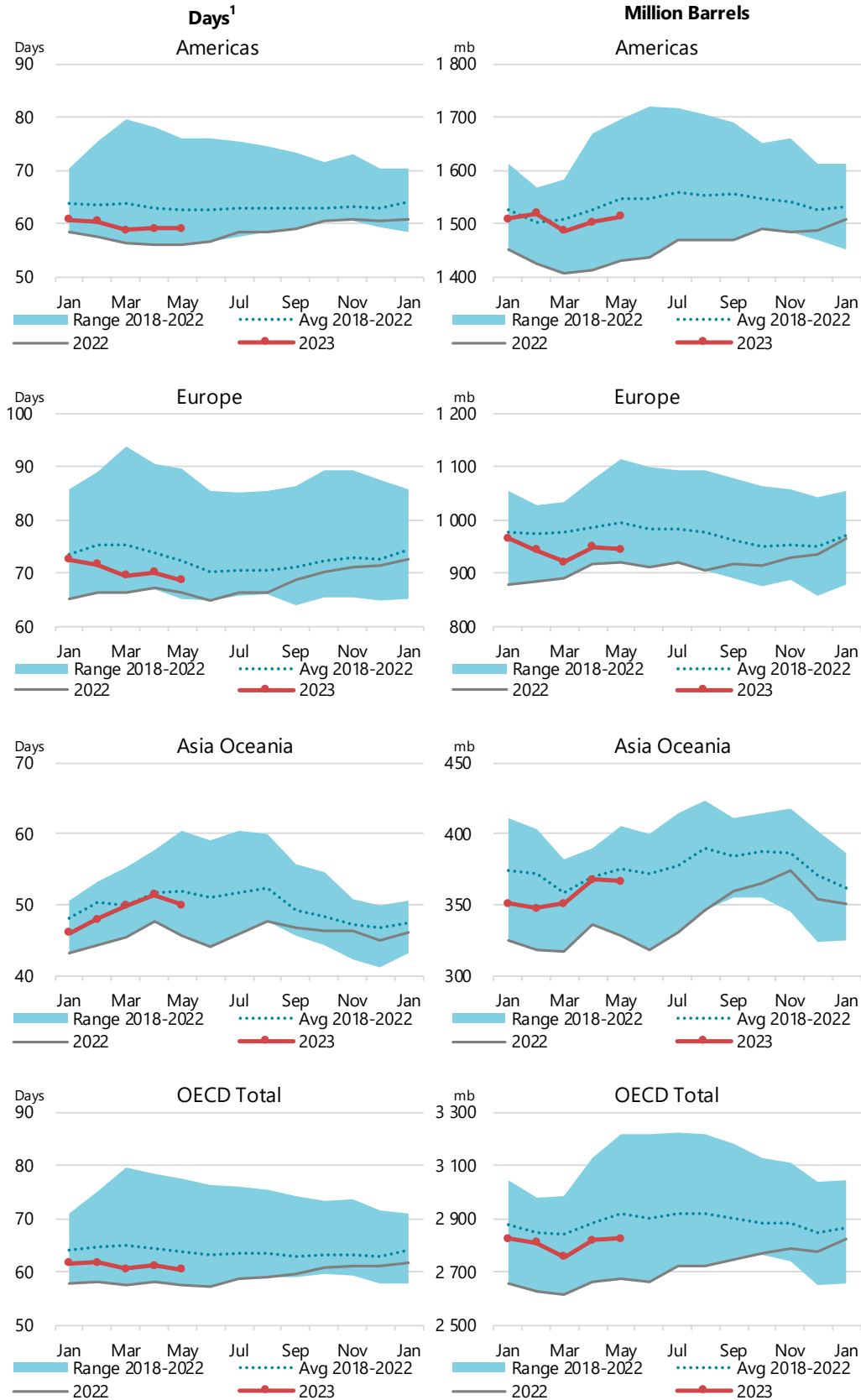


Note: Days of net imports for regional totals include IEA net importers only. The level of net imports is reset to the previous year's level in April of each year.



Regional OECD End-of-Month Industry Stocks

(in days of forward demand and million barrels of total oil)



¹ Days of forward demand are based on average OECD demand over the next three months.

Prices

Overview

Global crude oil prices were largely range bound in June despite the surprise announcement of additional voluntary supply cuts from some OPEC members. Front-month WTI and Brent futures fell by about \$1/bbl m-o-m, to \$70.27/bbl and \$74.94/bbl on average, respectively. Hawkish central bank rhetoric revived fears of a worsening global economic slowdown. These anxieties were compounded by a deepening manufacturing slump in some major markets, as well as by renewed concerns about the state of China's economy. Conversely, a weak greenback provided some support to prices, as the US Dollar Index hovered near one-year lows.

Comfortable balances in the Atlantic Basin weighed on sweet grades, including WTI and Brent. By contrast, the East of Suez sour crude market was buoyed as Saudi output cuts and rising Middle East refinery uptake reduced regional exports (excluding sanctioned Iranian crude) by around 800 kb/d in May and June despite firm buying interest from Asian refiners. The combination propelled the Asian sour benchmark Dubai to a rare premium to Brent. In a similar vein, Dubai's backwardated forward curve reflected a scarcity premium at variance with the front-month contango in WTI and Brent.

Crude Prices and Differentials (\$/bbl)							
	Month			Week of	Last	Change	Jun-23
	Apr 2023	May 2023	Jun 2023	26 Jun	30 Jun	m-o-m	y-o-y
Crude Futures (M1)							
NYMEX WTI	79.44	71.62	70.27	69.43	70.64	-1.35	-44.06
ICE Brent	83.37	75.63	74.94	73.98	74.90	-0.69	-42.56
Crude Marker Grades							
North Sea Dated	84.84	75.49	74.73	73.68	75.02	-0.76	-48.89
WTI (Cushing)	79.44	71.59	70.24	69.43	70.64	-1.36	-44.35
Dubai (London close)	83.44	74.51	75.02	75.30	76.55	0.51	-38.28
Differential to North Sea Dated							
WTI (Cushing)	-5.41	-3.90	-4.49	-4.25	-4.38	-0.60	4.53
Dubai (London close)	-1.41	-0.98	0.29	1.62	1.53	1.27	10.61
Differential to ICE Brent							
North Sea Dated	1.48	-0.14	-0.21	-0.31	0.12	-0.07	-6.33
NYMEX WTI	-3.93	-4.01	-4.67	-4.56	-4.26	-0.66	-1.51

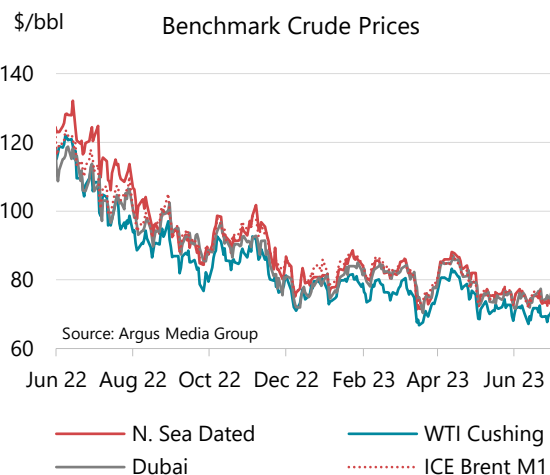
Sources: Argus Media Group, ICE, NYMEX (NYMEX WTI = NYMEX Light Sweet Crude).

Amid tight labour markets, brisk wage gains and stubbornly high core inflation, June saw a hawkish monetary policy tilt. The European Central Bank raised its policy rate by 25 basis points, while fellow central banks in the UK, Canada and Australia also hiked interest rates. Although the US Federal Reserve stood pat in June, Chairman Powell reaffirmed the Board's commitment to monetary tightening until inflation returns to its 2% target. Central bank chiefs in other countries also emphasised their willingness to maintain a restrictive monetary stance to ward off further inflationary momentum. Although headline inflation has been falling rapidly, core inflation remains above 5% in the US and in Europe. This has led to compensatory wage demands from workers, their hand strengthened by unemployment levels near record lows. Labour costs increasing in tandem with inflation are raising concerns about a wage-price spiral, as inflation expectations risk becoming entrenched. Treasury markets are pricing at least one more quarter-point hike this year.

The US economy continued to show considerable resilience in the face of the restrictive rates cycle. Employers added 209 000 jobs in June, while the unemployment rate fell by 0.1% m-o-m to 3.6% - near 50-year lows. Rising wages have buttressed consumer confidence, with household spending rising for a fifth straight month in May. The impact of higher interest rates has so far mainly fallen on the housing market, as US existing home prices fell by 3.2% y-o-y in May, their biggest monthly decline in more than 11 years.

Economic data in the eurozone were mostly bleak. Leading indicators pointed to a sharp deterioration in business sentiment in June, for both services (-2.7 to 52.4) and manufacturing (-1.4 to 43.4) PMIs. This was echoed in Germany's Ifo Business Climate Index - down three points to 88.5, a six-month low. The European Commission's Economic Sentiment Index also hit the lowest level since last November. Adding to the gloom, downward revisions to first-quarter GDP data for some countries pushed the eurozone into recession.

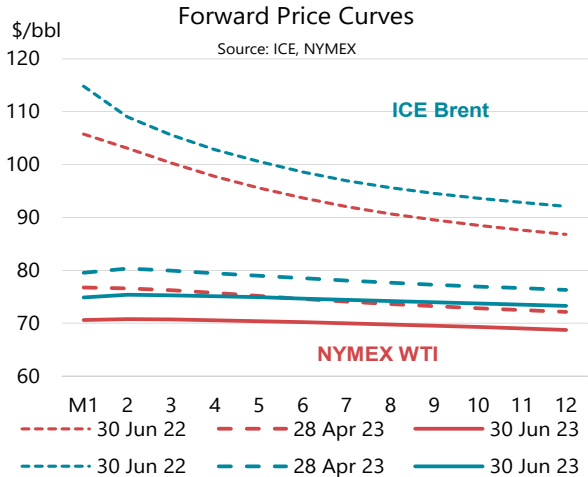
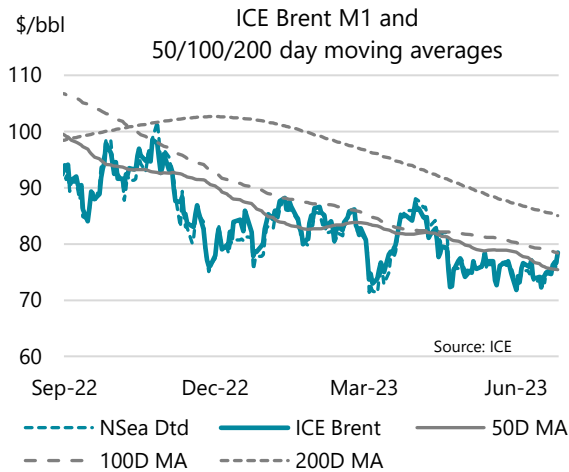
China's economic recovery continued to lose steam, as the widely anticipated reopening bounce failed to extend beyond travel and services. Record youth unemployment, contracting manufacturing activity and renewed weakness in the housing market have resulted in an overall loss of economic confidence, dampening consumers' propensity to spend. A newly announced range of fiscal and monetary stimulus measures denotes Beijing's readiness to act on the floundering economy. June saw the People's Bank of China's first rate cut in ten months. However, elevated debt at the local government level will constrain the capacity for additional borrowing and public spending.



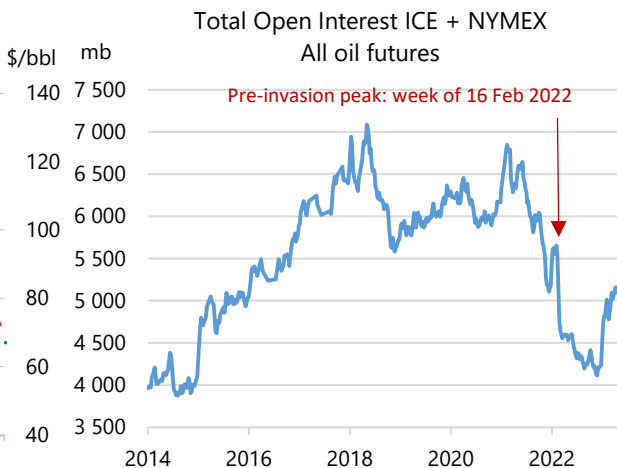
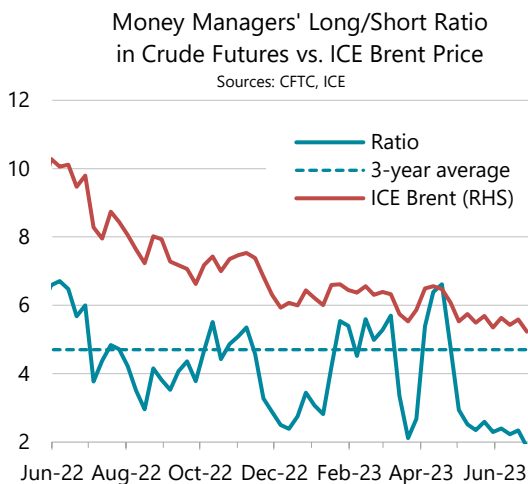
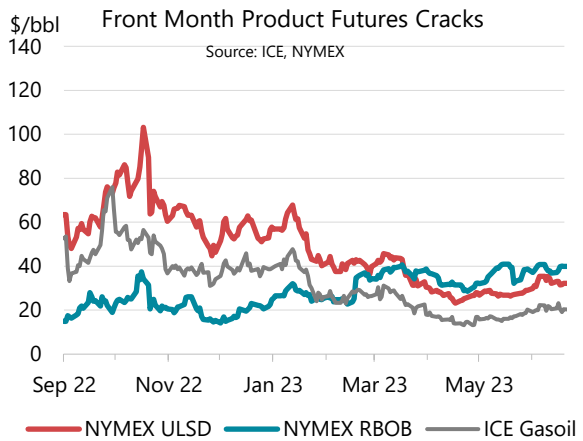
Futures markets

Front-month ICE Brent fell in June by \$0.69/bbl, weighed down by the latest bout of monetary tightening amid generally lacklustre industrial data. Two-year US Treasury yields soared by half a point to 5%, hitting their highest level since 2007 in early July. Oil prices traded in a relatively narrow \$72-77/bbl band, with Brent daily variation averaging \$1.25/bbl during June. This is more than one dollar below last year's post-invasion average – a testament to oil's more subdued price climate after 2022's extraordinary volatility. Meanwhile, crude's technical price picture remained unfavourable, with Brent ending June about \$1/bbl, \$4/bbl and \$11/bbl below its 50-, 100- and 200-day moving averages, respectively. Prices are about \$30/bbl below year-ago levels.

WTI futures lost \$0.66/bbl versus Brent, thereby reversing some of their strength of recent months. Cushing inventories built counter-seasonally in June by 4 mb m-o-m to 42.8 mb, according to weekly EIA data. This is their highest level since June 2021, amid planned and unplanned refinery outages and recovering inflows from Canada after wildfires subsided. Reflecting comfortable inventories, the WTI forward curve priced a carry until September before inverting, translating into a mild 1-12-month backwardation of about \$2/bbl. The Brent curve was similar, with Brent CFDs (contracts for differences) trading in contango throughout June. This stood in sharp contrast to much tighter East of Suez balances, where the Dubai 1-12-month swap curve ended the month \$4/bbl backwardated.



Product cracks rallied, as both RBOB and ULSD versus WTI front-month cracks climbed by about \$4/bbl m-o-m to their highest ever for this time of the year, with the exception of 2022. US gasoline and distillate inventories hovered near the low point of their seasonal five-year range. Gasoline stocks in the Central Atlantic “PADD 1B” district (which includes the New York Harbor NYMEX delivery point) fell to their lowest on record on a seasonal basis in early June. Unplanned refinery outages on the US Gulf Coast saw utilisation decline by two points to 91.1% in June, according to weekly EIA data, fuelling market anxiety about gasoline balances as peak summer demand approaches.



Investor sentiment towards oil remained highly bearish amid the increasingly pessimistic macroeconomic outlook. The ratio of long to short crude future holdings by money managers fell by half a point m-o-m to 1.9, the lowest level in more than three years and well below its 4.7 long-term average. Speculative positioning in refined products is more neutral, with net fund holdings in

NYMEX ULSD and ICE Gasoil positive again in June after having dipped into negative territory in May, reflecting physical market tensions.

Total open interest in the five main ICE and NYMEX futures contracts was little changed m-o-m at 5 285 mb.

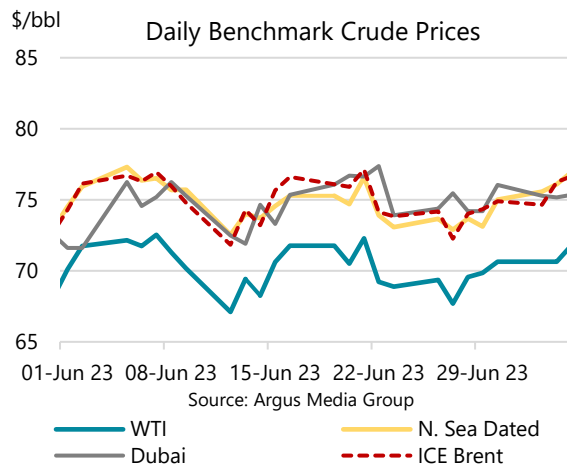
Prompt Month Oil Futures Prices												
(monthly and weekly averages, \$/bbl)												
	Jun 2023					Week Commencing:					Last:	
	Apr 2023	May 2023	Jun 2023	m-o-m Chg	y-o-y Chg	05 Jun	12 Jun	19 Jun	26 Jun	03 Jul	07 Jul	
NYMEX												
Light Sweet Crude Oil (WTI) 1st contract	79.44	71.62	70.27	- 1.35	- 44.06	71.58	69.44	70.43	69.43	71.81	73.86	
Light Sweet Crude Oil (WTI) 12th contract	75.54	69.63	69.45	- 0.17	- 26.91	68.42	67.69	69.09	68.71	70.68	70.10	
RBOB	114.02	106.08	108.00	1.92	- 59.47	108.66	108.51	108.16	108.44	107.12	108.75	
ULSD	108.16	98.51	101.37	2.86	- 79.36	99.94	101.58	104.08	101.71	105.45	107.48	
ULSD (\$/mmbtu)	19.48	17.75	18.26	0.51	- 14.30	18.00	18.30	18.75	18.32	19.00	19.36	
NYMEX Natural Gas (\$/mmbtu)	2.20	2.30	2.47	0.18	- 5.12	2.29	2.42	2.61	2.73	2.64	2.58	
ICE												
Brent 1st contract	83.37	75.63	74.94	- 0.69	- 42.56	76.14	74.32	75.42	73.98	76.51	78.47	
Brent 12th contract	79.44	73.51	73.64	0.13	- 26.43	72.62	71.96	73.25	73.09	74.82	74.47	
Gasoil	100.70	91.03	94.92	3.89	- 78.64	94.85	94.51	96.53	94.75	97.47	99.95	
Prompt Month Differentials												
NYMEX WTI - ICE Brent	- 3.93	- 4.01	- 4.67	- 0.66	- 1.51	- 4.56	- 4.88	- 5.00	- 4.56	- 4.70	- 4.61	
NYMEX WTI 1st vs. 12th	3.90	1.99	0.82	- 1.17	- 17.15	3.16	1.76	1.33	0.72	1.13	3.76	
ICE Brent 1st - 12th	3.93	2.13	1.30	- 0.82	- 16.13	3.52	2.36	2.17	0.89	1.69	4.00	
NYMEX ULSD - WTI	28.72	26.89	31.09	4.20	- 35.29	28.37	32.14	33.65	32.28	33.64	33.62	
NYMEX RBOB - WTI	34.58	34.46	37.73	3.26	- 15.41	37.08	39.06	37.73	39.01	35.31	34.89	
NYMEX 3-2-1 Crack (RBOB)	32.63	31.94	35.51	3.58	- 22.04	34.18	36.76	36.37	36.77	34.75	34.47	
NYMEX ULSD - Natural Gas (\$/mmbtu)	17.29	15.45	15.79	0.34	- 9.17	15.72	15.88	16.14	15.59	16.36	16.78	
ICE Gasoil - ICE Brent	17.33	15.40	19.97	4.57	- 36.08	18.71	20.19	21.11	20.77	20.97	21.48	

Source: ICE, NYMEX.

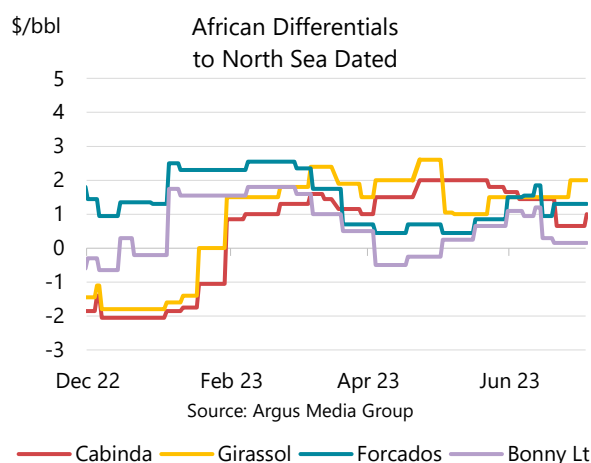
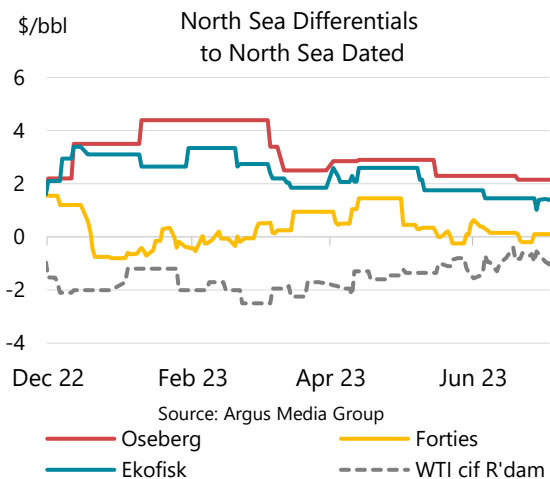
Spot crude oil prices

Physical crude oil prices were largely range bound in June, reflecting trends in futures. However, the physical discount for North Sea Dated versus futures widened, reflecting ample regional sweet crude supply. The oil market is also currently grappling with a mismatch among different crude grades. Substantial supply losses in medium and heavy sour grades have been offset by gains in the light sweet category, primarily driven by robust growth in the Western Hemisphere. Although price fluctuations remained subdued during the month, the tightness in the sour market is becoming increasingly apparent. The Atlantic Basin experienced minor changes, with North Sea Dated observing a slight decline of \$0.76/bbl to \$74.73/bbl m-o-m, while WTI recorded a larger decrease of \$1.36/bbl, settling at \$70.24/bbl. Conversely, sour crude benchmark Dubai posted a marginal increase of \$0.06/bbl, to \$74.88/bbl.

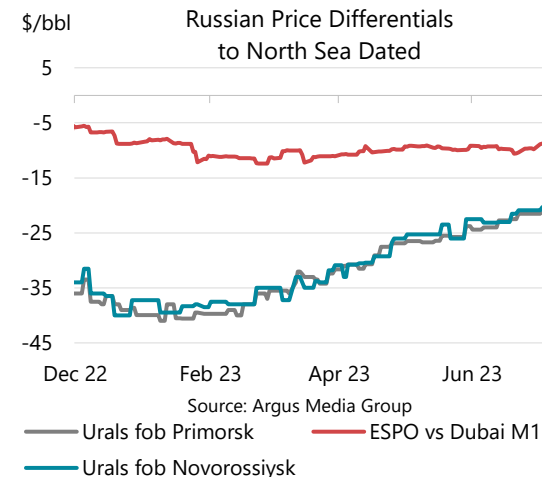
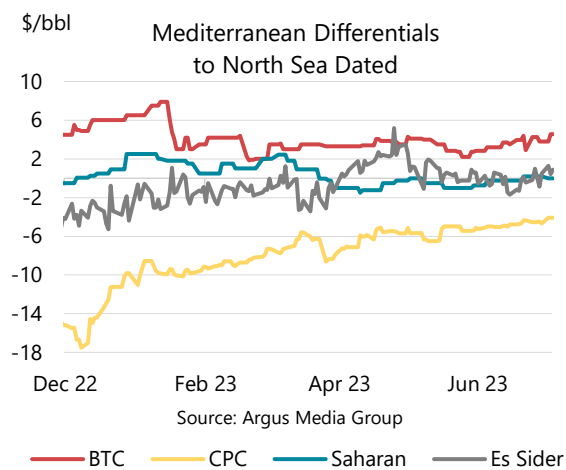
The strength in Dubai highlights the lack of availability in the sour market. The Brent to Dubai exchange of futures for swaps (EFS) narrowed to a near record-low, falling briefly to a discount at the end of June when the price of Brent dipped below Dubai for the first time since 4Q20, which opened the arbitrage for Brent-linked crudes to head east. Towards the end of the month, the Dubai M1 to M3 price curve steepened, on a technical correction in the paper market for Oman crude that pushed prompt prices higher.



In the North Sea, sour grades drew support from strong fuel cracks and expectations of a firmer market due to reduced OPEC+ production and exports. Norwegian Johan Sverdrup crude rose by \$0.14/bbl m-o-m against North Sea Dated. However, the lighter grades faced downward pressure driven by abundant sweet supplies in the region and very weak naphtha cracks. Forties, Ekofisk and Oseberg all saw weakening differentials versus North Sea Dated. Forties moved briefly to a discount before recovering, giving way to an overall decline of \$0.08/bbl m-o-m to \$0.15/bbl. Ekofisk and Oseberg fell by \$0.52/bbl and \$0.35/bbl, respectively, to \$1.48/bbl and \$2.25/bbl.

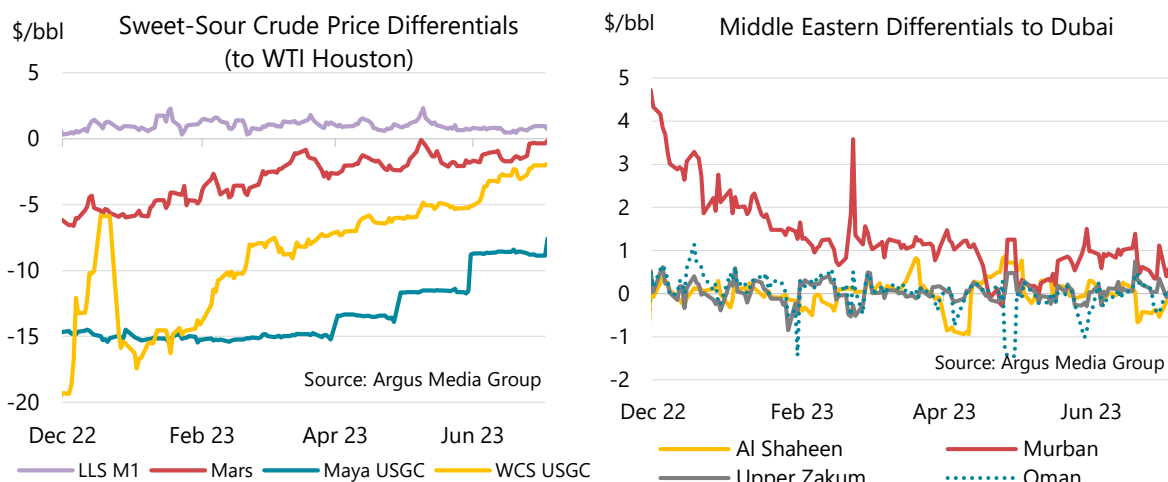


Despite the challenges posed by the surplus of sweet grades, West African crudes benefitted from robust demand in Asia as post-maintenance seasoning buying picked-up and as refiners sought optimal grades in response to strong middle distillate cracks and with an easing of freight rates. Forcados rose by \$0.75/bbl m-o-m to a \$1.41/bbl premium, while Qua Iboe increased by \$0.65/bbl to \$1.08/bbl. Both Brass River and Bonny Light witnessed marginal increases of approximately \$0.26/bbl m-o-m against North Sea Dated (reflecting higher naphtha content). Bonny Light reached a premium of \$0.64/bbl, while Brass River narrowed its discount to -\$0.33/bbl. Angolan Girassol premiums gained \$0.24/bbl to \$1.57/bbl while those for Cabinda softened by \$0.72/bbl to \$1.22/bbl.



The continued shutdown of Iraq's Kirkuk oil field has lent support to Mediterranean crudes such as CPC Blend, Azeri BTC and Algeria's Sahara Blend. In addition, the end of the refinery maintenance season in Asia along with an open arbitrage have allowed for more movement to the east. The discount of CPC Blend to North Sea Dated narrowed by \$0.81/bbl m-o-m to -\$4.81/bbl, while BTC rose by \$0.16/bbl to a \$3.57/bbl premium. Similarly, Saharan Blend firmed by \$0.45/bbl, shrinking

its discount to \$0.18/bbl. Conversely, Libya's Es Sider, often considered a good blending replacement for lost Russian Urals, fell by \$0.64/bbl in June to a \$0.05/bbl discount, depressed by weak naphtha cracks and supply uncertainties.



Russian Urals prices were supported by tighter sour crude availability. Discounts reported by Argus for FOB Primorsk and Novorossiysk Urals cargoes narrowed against North Sea Dated. Urals FOB Primorsk rose by \$3.09/bbl to -\$22.93/bbl, while FOB Novorossiysk increased by \$2.81/bbl to -\$22.37/bbl, both reaching price levels last seen just after Russia's invasion of Ukraine in February 2022. At the same time, ESPO Blend fell by \$0.39/bbl to -\$9.68/bbl against Dubai, reflecting the strength of the heavier sour barrels.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, \$/bbl)

	Apr 2023	May 2023	Jun 2023	Jun 2023		Week Commencing:					Last:
				m-o-m Chg	y-o-y Chg	05 Jun	12 Jun	19 Jun	26 Jun	03 Jul	
Crudes											
North Sea Dated	84.84	75.49	74.73	-0.76	-48.89	76.32	74.02	74.70	73.68	76.45	78.00
North Sea Mth 1	84.29	75.57	75.13	-0.44	-46.61	76.77	74.37	75.26	74.00	76.75	78.40
North Sea Mth 2	83.60	75.41	75.10	-0.32	-42.46	76.71	74.24	75.23	74.15	76.34	77.72
WTI (Cushing) Mth 1	79.44	71.59	70.24	-1.36	-44.35	71.58	69.44	70.22	69.43	72.48	73.86
WTI (Cushing) Mth 2	79.41	71.62	70.43	-1.19	-41.82	71.70	69.61	70.60	69.59	72.48	73.77
WTI (Houston) Mth 1	80.31	72.57	71.83	-0.74	-44.00	73.11	71.01	71.81	71.18	74.33	75.74
Urals FOB Primorsk	55.35	49.47	51.80	2.33	-34.90	52.16	50.77	52.35	52.18	55.35	57.00
Dubai (1st month)	83.40	74.94	74.88	-0.06	-38.01	75.51	73.54	76.14	75.03	76.00	77.20
Differentials to Futures											
North Sea Dated vs. ICE Brent	1.48	-0.14	-0.21	-0.07	-6.33	0.18	-0.30	-0.72	-0.31	-0.06	-0.47
WTI (Cushing) Mth1 vs. NYMEX	0.00	-0.03	-0.04	-0.01	-0.29	0.00	0.00	-0.20	0.00	0.67	0.00
Differentials to Physical Markers											
WTI (Houston) vs. North Sea Mth 2	-3.29	-2.84	-3.27	-0.42	-1.53	-3.60	-3.23	-3.42	-2.97	-2.01	-1.99
WTI (Houston) vs. WTI (Cushing)	0.87	0.98	1.60	0.62	0.36	1.54	1.57	1.59	1.75	1.84	1.88
Urals FOB Prim vs. North Sea Dated	-29.49	-26.02	-22.93	3.09	13.99	-24.16	-23.25	-22.35	-21.50	-21.10	-21.00
Dubai vs. ICE Brent	0.03	-0.69	-0.06	0.63	4.61	-0.63	-0.78	0.72	1.04	-0.51	-1.27
Dubai vs. WTI (Cushing) Mth 2	3.99	3.32	4.45	1.13	3.81	3.80	3.92	5.54	5.43	3.52	3.43
Prompt Month Differentials											
Forward North Sea Mth1-Mth2	0.69	0.15	0.03	-0.13	-4.15	0.06	0.13	0.03	-0.15	0.41	0.68
Forward WTI Cushing Mth1-Mth2	0.03	-0.03	-0.19	-0.16	-2.53	-0.13	-0.17	-0.38	-0.17	0.00	0.09
Forward Dubai Mth1-Mth2	0.73	0.59	0.52	-0.08	-3.33	0.35	0.27	0.71	0.88	0.47	0.45

Source: Argus Media Group, ICE, NYMEX

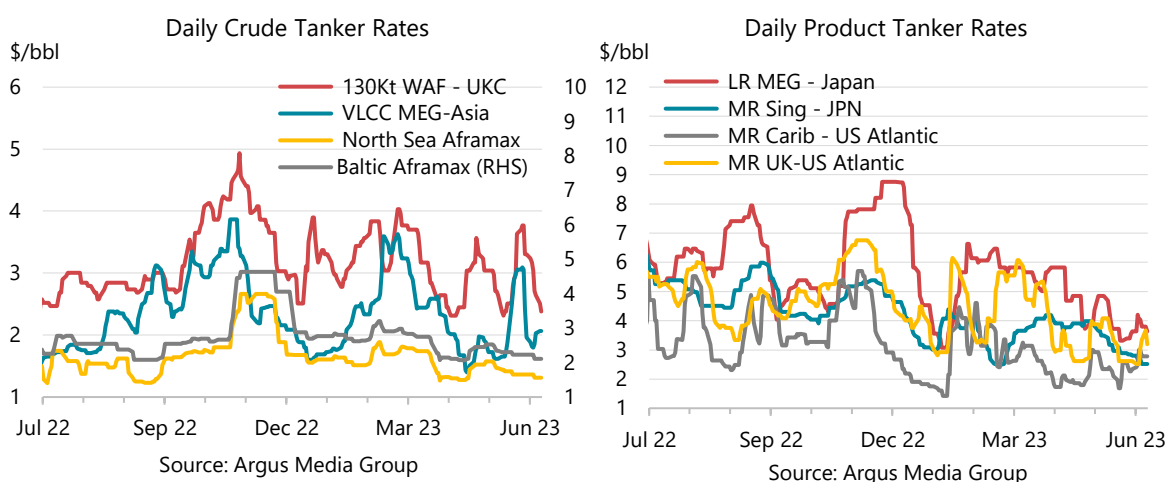
Middle Eastern crude oil prices remained supported by robust Chinese demand in anticipation of tighter supplies of medium sour crude and the end of the refinery maintenance season. Additionally, firm activity in the spot market contributed to elevated prices throughout the month. Differentials to Dubai were generally higher. Oman narrowed by \$0.15/bbl to a -0.01/bbl discount. Murban spreads gained \$0.34/bbl to \$0.84/bbl, while Upper Zakum rose by \$0.17/bbl to a \$0.14/bbl premium over Dubai.

The sour crude market in the US has experienced notable shifts in differentials as a result of widening crack spreads and a tighter global sour market. Western Canadian Select (WCS) delivered in Houston declined by \$1.60/bbl to a -\$4.75/bbl discount and the differential has narrowed by around \$30/bbl since the low in November last year, when the spread reached -\$34/bbl. At the same time, Maya discounts narrowed by \$2.91/bbl to -\$8.67/bbl and those for Mars by \$0.30/bbl to -\$1.19/bbl.

The premium for WTI at Houston versus Cushing increased from around \$1/bbl to \$1.60/bbl while that for WTI Midland rose by \$0.62/bbl. This was primarily due to higher exports from Canada to Cushing, which drove up inventories and pressured inland values.

Freight

Long range rates for VLCCs climbed by 29% m-o-m in June to \$2.22/bbl. The increase was driven by strong demand for shipments from the Middle East to China ahead of anticipated production cuts. Newly commissioned refining capacity and the completion of maintenance in Asia have contributed to the growing demand for crude on long-range carriers.



Conversely, smaller crude vessels failed to maintain the same momentum. Suezmax rates from West Africa to the UK-Continent struggled to gain ground despite a strong session of trading. Shipments out of the region faced challenges as the Nigerian government issued hefty tax bills to shipbrokers, leading to concerns among shippers about potential vessel seizures. Rates for Suezmax in the area surged mid-month to \$3.57/bbl before falling back to \$2.44/bbl by end-month. At the same time, Aframax hires were sluggish in June. Baltic rates fell \$0.09/bbl to \$2.25/bbl, while North Sea Aframax rates for crude cargoes dropped \$0.06/bbl to \$1.38/bbl on muted demand in the region.

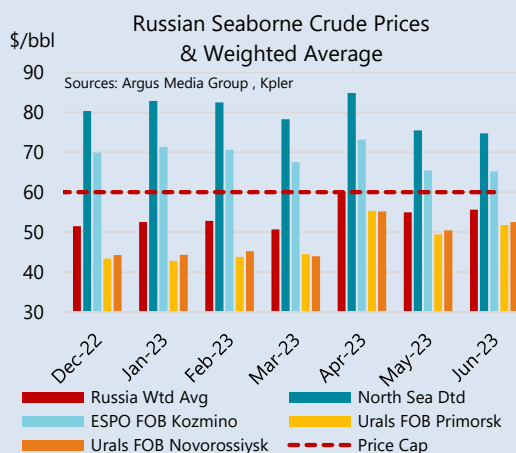
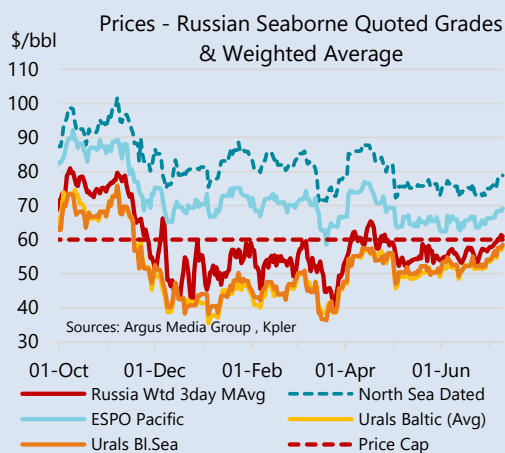
Rates for product tankers mostly softened, with the exception of Medium Range (MR) vessels moving from the Caribbean to the US. Rates rose by 8% to \$2.33/bbl, mainly due to a drought in the Panama Canal. Because of low water levels, MR tankers without reservations experienced prolonged wait times to pass. Northbound transits require an estimated wait of eight days, while southbound transits face a delay of around ten days. In other regions, shorter-haul journeys were pressured by an oversupply of vessels. MR hires for movement within Asia declined \$0.88/bbl to \$2.96/bbl, while MR rates in the Atlantic Basin fell 4% to \$3.06/bbl. At the same time, long range (LR) Panamax charters were sharply lower for Middle East to Asia, down \$0.83/bbl to \$3.79/bbl amid weak demand.

Freight Costs											
(monthly and weekly averages, \$/bbl)											
	Jun-23						Week Commencing				
	Jun 22	Apr 22	May 23	Jun 23	m-o-m chg	y-o-y chg	05-Jun	12-Jun	19-Jun	26-Jun	03-Jul
Crude Tankers											
VLCC MEG-Asia	1.38	1.49	1.72	2.22	0.50	0.84	1.71	2.81	2.72	1.88	2.05
130Kt WAF - UKC	2.31	3.06	2.96	2.94	-0.02	0.63	2.39	2.96	3.57	2.96	2.40
Baltic Aframax	1.97	6.32	2.33	2.25	-0.09	0.27	2.30	2.24	2.23	2.18	2.11
North Sea Aframax	1.32	1.39	1.44	1.38	-0.06	0.06	1.42	1.37	1.36	1.34	1.31
Product Tankers											
LR MEG - Japan	6.67	4.22	4.62	3.79	-0.83	-2.88	4.11	3.48	3.48	3.92	3.56
MR Sing - JPN	5.58	3.01	3.83	2.96	-0.88	-2.62	3.18	2.95	2.85	2.67	2.50
MR Carib - US Atlantic	3.82	3.83	2.15	2.33	0.18	-1.49	2.29	1.98	2.32	2.74	2.63
MR UK-US Atlantic	6.00	3.64	3.18	3.06	-0.12	-2.94	3.71	2.72	2.62	2.79	3.30

Source: Argus Media Group

G7 price caps review and Russian oil export revenues

Russian crude prices rebounded in June and exceeded the price cap in early July. The weighted average FOB price for seaborne Russian crude exports rose by \$0.70/bbl from May to \$55.62/bbl, still below the G7 price cap. Discounts narrowed versus a declining North Sea Dated price by some \$3/bbl for Urals in both the Baltic and Black Sea. Lighter grades saw smaller gains, with ESPO's discount narrowing by \$0.80/bbl m-o-m. The weighted average Russian crude price rose above the \$60/bbl price cap beginning 7 July due to the narrower price discounts combined with the rebound in North Sea Dated prices, reaching \$61/bbl on 9 and 10 July.



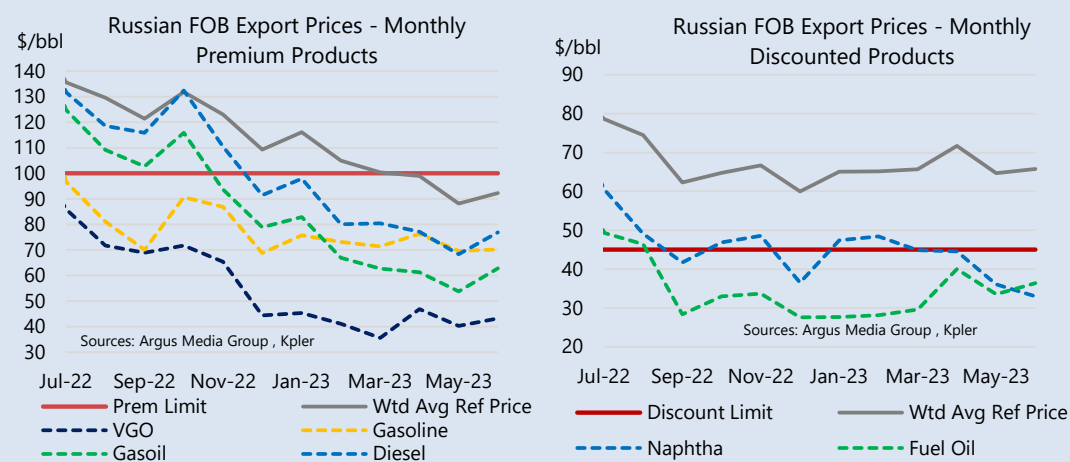
A dip of over 450 kb/d m-o-m in June seaborne Russian crude exports, dominated by medium sour Urals from Baltic ports (-300 kb/d m-o-m) helped support prices against the overall market trend. After a trough in May, Russian refinery runs began a sharp increase in June that should extend into July, reducing some of the surplus crude available for export. Tightening East of Suez sour crude markets that drove a narrowing of the North Sea Dated premium to Dubai also supported Urals prices as most cargoes move east. Finally, product cracks against Urals made strong gains in June for Russian middle distillates and high sulphur fuel oil (HSFO) while light-end cracks deteriorated over the month. This combination of factors supported Urals prices more than ESPO or other light sweet Russian grades.

In April, the Russian Duma adopted a change in the basis of the Mineral Extraction Tax (MET) and Profit Tax for oil producers to help restore state oil revenues impacted by the drop in Russian crude values on international markets. For this purpose, the law limits discounts on Urals versus North Sea

Dated to \$31/bbl in May, \$28/bbl in June and \$25/bbl starting July. The government is now considering reducing this to \$20/bbl starting September. However, companies can sell their crude at any price. International market discounts on Urals (the fiscal benchmark) remained above these new levels in June.

	Russian Crude FOB Weighted Average Export Prices (\$/bbl)					Discounts to N.Sea Dated		
	Apr-23	May-23	Jun-23	Apr - May	May - Jun	Apr-23	May-23	Jun-23
North Sea Dated	84.48	75.80	74.80	-8.68	-0.99			
Price Cap	60.00	60.00	60.00					
Russia Wtd Avg	60.06	54.97	55.62	-5.09	0.66	-24.42	-20.83	-19.18
Urals fob Primorsk	55.35	49.47	51.80	-5.88	2.33	-29.13	-26.33	-23.00
Urals fob Novorossiysk	55.17	50.50	52.56	-4.67	2.06	-29.31	-25.29	-22.24
ESPO fob Kozmino	73.18	65.44	65.20	-7.74	-0.24	-11.30	-10.35	-9.60

Sources: Argus Media, Kpler. Russia Weighted Average for Urals from Baltic and Black Sea, Siberian Light and Espo.



Russian product cracks rebounded sharply in June after their slump in May. While gasoil cracks outstripped their counterparts in Northwest Europe most other cracks fared less well, reflecting the continued strong performance of Urals versus North Sea Dated. The strength of Urals prices compressed Russian light-ends and fuel cracks more so than in Northwest Europe versus North Sea Dated. Russian diesel prices rose \$8.51/bbl to \$76.84/bbl while gasoline prices were almost flat (+0.65\$/bbl). The weighted average price for premium products (gasoil, diesel, gasoline and VGO) during June rose ~\$7.90/bbl to \$67/bbl, recovering losses in May but still below the \$100/bbl price cap. Discounted products (naphtha and 3.5% sulphur fuel oil) from Baltic and Black Sea ports remained below the \$45/bbl price cap throughout May as 3.5% fuel rebounded by only \$2.80/bbl to \$36.35/bbl while naphtha continued to slide, dropping \$3/bbl to \$33/bbl.

	Russian FOB Export Prices (\$/bbl)						Russian FOB Export Prices (\$/bbl)				
	Apr-23	May-23	Jun-23	Apr - May	May - Jun		Apr-23	May-23	Jun-23	Apr - May	May - Jun
Premium Products						Discounted Products					
Ref. Price	98.96	88.21	92.25	-10.75	4.04	Ref. Price	71.68	64.71	65.80	-6.97	1.10
Price Cap	100.00	100.00	100.00			Price Cap	45.00	45.00	45.00		
Avg Price	68.39	59.10	66.97	-9.28	7.87	Avg Price	41.75	34.35	35.58	-7.41	1.24
Gasoline	76.30	69.60	70.25	-6.70	0.65	Naphtha	44.52	36.07	33.01	-8.46	-3.06
Diesel	77.07	68.32	76.84	-8.74	8.51	Fuel Oil	40.01	33.55	36.35	-6.46	2.80
Gasoil	61.23	53.77	62.78	-7.46	9.01	Sources: Argus Media Group, Kpler					
VGO	46.83	40.27	43.18	-6.57	2.91	Note: Weighted avg prices from Baltic and Black Sea ports.					

Tables

Table 1
WORLD OIL SUPPLY AND DEMAND

(million barrels per day)

	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024
OECD DEMAND																	
Americas	22.4	24.3	24.8	25.0	25.3	25.0	25.0	24.6	25.3	25.5	25.2	25.2	24.4	24.9	25.4	25.0	24.9
Europe	12.4	13.1	13.2	13.4	14.0	13.3	13.5	13.1	13.2	13.9	13.4	13.4	12.9	13.2	13.9	13.3	13.3
Asia Oceania	7.2	7.4	7.9	7.0	7.2	7.7	7.4	7.9	7.0	7.4	7.9	7.6	7.8	7.1	7.5	7.9	7.6
Total OECD	42.0	44.8	45.8	45.4	46.6	46.0	45.9	45.5	45.6	46.9	46.4	46.1	45.1	45.3	46.8	46.1	45.8
NON-OECD DEMAND																	
FSU	4.6	4.9	4.8	4.8	5.1	5.1	4.9	4.9	4.8	5.0	5.0	4.9	4.9	4.8	5.0	5.0	4.9
Europe	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
China	14.3	15.1	15.1	14.0	14.5	15.0	14.7	15.6	16.4	16.2	16.6	16.2	16.4	16.9	16.6	17.3	16.8
Other Asia	13.0	13.5	14.2	14.2	13.6	14.3	14.1	14.4	14.4	14.0	14.8	14.4	14.7	14.8	14.5	15.2	14.8
Americas	5.4	6.0	6.0	6.2	6.4	6.3	6.2	6.2	6.3	6.5	6.4	6.3	6.2	6.4	6.5	6.5	6.4
Middle East	8.0	8.4	8.5	9.0	9.4	8.9	9.0	8.8	9.0	9.5	9.0	9.1	8.9	9.3	9.6	9.0	9.2
Africa	3.8	4.0	4.3	4.2	4.2	4.4	4.3	4.4	4.2	4.2	4.3	4.3	4.4	4.4	4.4	4.6	4.5
Total Non-OECD	49.8	52.8	53.6	53.2	54.1	54.7	53.9	55.0	55.9	56.2	56.9	56.0	56.3	57.4	57.5	58.4	57.4
Total Demand¹	91.8	97.6	99.4	98.6	100.6	100.7	99.9	100.5	101.4	103.1	103.3	102.1	101.4	102.6	104.3	104.5	103.2
OECD SUPPLY																	
Americas	23.9	24.3	24.9	25.3	26.1	26.3	25.6	26.7	26.8	27.1	27.3	27.0	27.2	27.4	27.6	27.7	27.5
Europe	3.6	3.4	3.3	3.0	3.1	3.2	3.2	3.3	3.2	3.1	3.3	3.2	3.3	3.2	3.2	3.3	3.2
Asia Oceania	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
Total OECD²	28.0	28.2	28.7	28.8	29.6	30.0	29.3	30.4	30.5	30.6	31.0	30.6	31.0	31.1	31.2	31.4	31.2
NON-OECD SUPPLY																	
FSU	13.5	13.8	14.4	13.4	13.7	14.1	13.9	14.1	13.7	13.5	13.6	13.7	13.7	13.7	13.7	13.8	13.7
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.0	4.1	4.2	4.2	4.1	4.1	4.2	4.3	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3	4.3
Other Asia	3.0	2.9	2.8	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.6	2.6	2.6	2.6	2.6
Americas	5.3	5.3	5.4	5.5	5.8	5.9	5.6	6.0	5.9	6.1	6.2	6.0	6.4	6.4	6.5	6.5	6.5
Middle East	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.1	3.1	3.1	3.1	3.1
Africa	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Total Non-OECD²	30.3	30.5	31.3	30.4	30.8	31.4	31.0	31.6	31.2	31.0	31.1	31.2	31.5	31.6	31.6	31.7	31.6
Processing gains ³	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.6	2.8	2.5	3.1	3.3	2.9	2.9	2.6	3.3	3.5	3.1	3.1	2.8	3.4	3.7	3.3	3.3
Total Non-OPEC Supply	63.1	63.7	64.9	64.6	66.0	66.6	65.5	66.9	67.2	67.5	67.6	67.3	67.8	68.5	68.9	68.8	68.5
OPEC⁴																	
Crude	25.7	26.4	28.5	28.7	29.6	29.4	29.1	29.3	28.8								
NGLs	5.2	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Total OPEC	30.9	31.7	33.9	34.1	35.0	34.7	34.4	34.8	34.2								
Total Supply	94.0	95.4	98.8	98.7	101.0	101.3	100.0	101.7	101.5								
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.4	-1.1	-0.4	0.6	0.9	0.3	0.4	-0.2									
Government	0.0	-0.2	-0.5	-1.1	-1.1	-0.3	-0.7	0.0									
Total	0.4	-1.2	-0.8	-0.5	-0.2	0.0	-0.4	-0.2									
Floating storage/Oil in transit	0.0	0.0	-0.5	0.6	0.9	0.2	0.3	0.1									
Miscellaneous to balance ⁵	1.7	-0.9	0.7	0.1	-0.4	0.4	0.2	1.3									
Total Stock Ch. & Misc	2.2	-2.2	-0.7	0.1	0.4	0.6	0.1	1.2									
Memo items:																	
Call on OPEC crude & stock changes ⁶	23.5	28.6	29.2	28.6	29.2	28.8	29.0	28.1	28.7	30.0	30.2	29.3	28.2	28.6	29.9	30.2	29.2

¹ Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply. Includes biofuels.

² Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.

³ Net volumetric gains and losses in the refining process and marine transportation losses.

⁴ OPEC include current members throughout the time series.

⁵ Includes changes in non-reported stocks in OECD and non-OECD.

⁶ Total demand minus total non-OPEC supply minus OPEC NGLs.

For the purpose of this and the following tables:

- OECD comprises of Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Republic of Türkiye, UK, US.

- OPEC comprises of Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Neutral zone, Nigeria, Saudi Arabia, UAE, Venezuela.

- OPEC+ comprises of OPEC members throughout time series plus Sudan, South Sudan, Russia, Oman, Mexico, Malaysia, Kazakhstan, Brunei, Bahrain, Azerbaijan.

Table 1a
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1
(million barrels per day)

	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024
OECD DEMAND																	
Americas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	-0.2	0.0	-0.3	0.0	0.0	-0.1
Asia Oceania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total OECD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.2	-0.1	0.0	-0.2	0.1	0.1	0.0
NON-OECD DEMAND																	
FSU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.4	0.2	0.1	0.2
Other Asia	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Americas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle East	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Africa	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Non-OECD	0.2	0.1	0.0	0.1	0.1	0.1	0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.3	0.2	0.0	0.1
Total Demand	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	-0.2	-0.3	-0.2	-0.2	0.0	0.1	0.3	0.1	0.1
OECD SUPPLY																	
Americas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1
Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Asia Oceania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total OECD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
NON-OECD SUPPLY																	
FSU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Asia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Americas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle East	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Africa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-OECD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Processing gains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Global Biofuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-OPEC Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2
OPEC																	
Crude	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1									
NGLs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total OPEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1									
Total Supply	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1									
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Government	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Floating storage/Oil in transit	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	0.0									
Miscellaneous to balance	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.2									
Total Stock Ch. & Misc	-0.1	0.0	0.1	0.0	-0.1	-0.1	0.0	0.1									
Memo items:																	
Call on OPEC crude & stock changes	0.1	0.0	-0.1	0.0	0.1	0.1	0.0	-0.1	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	0.0	-0.2	-0.2

Note: When submitting monthly oil statistics, OECD member countries may update data for prior periods. Similar updates to non-OECD data can also occur.

Table 1b
WORLD OIL SUPPLY AND DEMAND (Including OPEC+ based on current agreement¹)
(million barrels per day)

	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024
Total Demand	91.8	97.6	99.4	98.6	100.6	100.7	99.9	100.5	101.4	103.1	103.3	102.1	101.4	102.6	104.3	104.5	103.2
OECD SUPPLY																	
Americas ²	21.9	22.4	22.9	23.3	24.0	24.3	23.6	24.6	24.7	25.0	25.1	24.8	25.1	25.3	25.5	25.6	25.4
Europe	3.6	3.4	3.3	3.0	3.1	3.2	3.2	3.3	3.2	3.1	3.3	3.2	3.3	3.2	3.2	3.3	3.2
Asia Oceania	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
Total OECD (non-OPEC+)	26.0	26.3	26.7	26.8	27.6	27.9	27.3	28.3	28.3	28.5	28.9	28.5	28.9	29.0	29.1	29.4	29.1
NON-OECD SUPPLY																	
FSU ³	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	4.0	4.1	4.2	4.2	4.1	4.1	4.2	4.3	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3	4.3
Other Asia ⁴	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9
Latin America	5.3	5.3	5.4	5.5	5.8	5.9	5.6	6.0	5.9	6.1	6.2	6.0	6.4	6.4	6.5	6.5	6.5
Middle East ⁵	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Africa ⁶	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total Non-OECD (non-OPEC+)	15.1	15.0	15.2	15.2	15.3	15.5	15.3	15.7	15.7	15.7	15.8	15.7	16.1	16.1	16.2	16.1	16.1
Processing Gains	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.6	2.8	2.5	3.1	3.3	2.9	2.9	2.6	3.3	3.5	3.1	3.1	2.8	3.4	3.7	3.3	3.3
Total Non-OPEC+	45.9	46.3	46.7	47.4	48.5	48.6	47.8	48.9	49.6	50.1	50.2	49.7	50.2	50.9	51.4	51.2	50.9
OPEC+ CRUDE																	
Algeria	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Angola	1.3	1.1	1.2	1.2	1.1	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
Azerbaijan	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Bahrain	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Brunei	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Congo	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Equatorial Guinea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Gabon	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Iran	2.0	2.4	2.5	2.5	2.5	2.6	2.5	2.7	2.9	3.0	3.0	2.9	3.0	3.0	3.0	3.0	3.0
Iraq	4.0	4.0	4.3	4.4	4.5	4.5	4.4	4.4	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Kazakhstan	1.5	1.5	1.6	1.4	1.4	1.6	1.5	1.6	1.6	1.5	1.5	1.6	1.6	1.7	1.6	1.7	1.6
Kuwait	2.4	2.4	2.6	2.7	2.8	2.7	2.7	2.6	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.5
Libya	0.4	1.1	1.1	0.8	1.0	1.2	1.0	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Malaysia	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Mexico	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.7
Nigeria	1.5	1.3	1.3	1.2	1.0	1.1	1.1	1.3	1.1	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Oman	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Russia	9.4	9.6	10.0	9.4	9.8	9.8	9.8	9.7	9.5	9.4	9.4	9.5	9.4	9.4	9.4	9.4	9.4
Saudi Arabia	9.2	9.2	10.2	10.4	10.9	10.6	10.5	10.4	10.1	9.3	10.0	10.0	10.0	10.0	10.0	10.0	10.0
South Sudan	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sudan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
UAE	2.9	2.8	3.1	3.3	3.4	3.4	3.3	3.4	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.2
Venezuela	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
OPEC+ Crude	40.6	41.5	44.1	43.4	44.6	44.6	44.2	44.5	43.7	42.8	43.6	43.7	43.7	43.7	43.6	43.7	43.6
OPEC+ NGLs & Condensate	7.4	7.5	7.8	7.8	7.8	7.9	7.8	8.1	8.0	8.0	8.0	8.0	8.1	8.1	8.0	8.0	8.1
OPEC+ Nonconventionals	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total OPEC+	48.0	49.1	52.1	51.3	52.5	52.7	52.2	52.8	51.9	51.0	51.7	51.8	51.8	51.9	51.7	51.8	51.8
Total Supply Oil	94.0	95.4	98.8	98.7	101.0	101.3	100.0	101.7	101.5	101.1	101.9	101.5	102.0	102.8	103.2	103.0	102.8
Memo items:																	
Call on OPEC+ crude & stock changes	38.4	43.6	44.8	43.3	44.3	44.0	44.1	43.3	43.7	44.8	45.0	44.2	43.1	43.5	44.7	45.1	44.1

¹ From Jul 2023, OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2024.

² OECD Americas excludes Mexico.

³ FSU excludes Russia, Kazakhstan, Azerbaijan.

⁴ Other Asia excludes Brunei, Malaysia.

⁵ Middle East excludes Oman, Bahrain.

⁶ Africa excludes Sudan, South Sudan.

Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024	
Demand (mb/d)																	
Americas	24.32	24.77	24.98	25.33	24.95	25.01	24.61	25.27	25.54	25.19	25.16	24.36	24.93	25.41	24.96	24.92	
Europe	13.10	13.19	13.43	14.04	13.35	13.50	13.07	13.24	13.91	13.37	13.40	12.93	13.19	13.92	13.29	13.34	
Asia Oceania	7.38	7.85	6.98	7.22	7.68	7.43	7.86	7.04	7.42	7.88	7.55	7.83	7.15	7.47	7.87	7.58	
Total OECD	44.80	45.81	45.40	46.60	45.98	45.95	45.53	45.56	46.88	46.43	46.10	45.13	45.27	46.80	46.13	45.83	
Asia	28.63	29.31	28.22	28.11	29.27	28.73	29.98	30.77	30.23	31.42	30.60	31.08	31.71	31.14	32.47	31.60	
Middle East	8.43	8.51	9.04	9.43	8.90	8.97	8.79	9.03	9.53	8.98	9.08	8.94	9.27	9.63	9.04	9.22	
Americas	6.00	6.00	6.17	6.36	6.30	6.21	6.18	6.29	6.45	6.37	6.32	6.20	6.40	6.54	6.48	6.41	
FSU	4.88	4.77	4.76	5.13	5.10	4.94	4.87	4.83	5.02	4.99	4.93	4.86	4.80	5.01	5.01	4.92	
Africa	4.04	4.25	4.23	4.24	4.37	4.28	4.36	4.16	4.16	4.33	4.26	4.43	4.41	4.40	4.56	4.45	
Europe	0.77	0.78	0.77	0.79	0.80	0.78	0.78	0.77	0.78	0.80	0.78	0.79	0.79	0.81	0.82	0.80	
Total Non-OECD	52.76	53.62	53.20	54.05	54.73	53.90	54.96	55.85	56.18	56.89	55.98	56.31	57.37	57.52	58.38	57.40	
World	97.56	99.43	98.60	100.65	100.71	99.85	100.49	101.41	103.06	103.32	102.08	101.44	102.64	104.31	104.50	103.23	
of which:																	
United States ¹	19.89	20.22	20.27	20.47	20.16	20.28	20.00	20.56	20.65	20.39	20.40	19.76	20.23	20.53	20.20	20.18	
Europe 5 ²	7.28	7.42	7.61	7.84	7.42	7.57	7.33	7.41	7.76	7.42	7.48	7.23	7.36	7.73	7.34	7.41	
China	15.09	15.09	14.04	14.51	15.02	14.66	15.59	16.41	16.25	16.64	16.22	16.38	16.90	16.61	17.25	16.79	
Japan	3.41	3.70	3.03	3.19	3.56	3.37	3.72	3.07	3.26	3.62	3.42	3.71	3.12	3.30	3.61	3.43	
India	4.90	5.38	5.29	5.01	5.42	5.28	5.57	5.52	5.22	5.65	5.49	5.62	5.62	5.39	5.86	5.62	
Russia	3.68	3.68	3.63	3.96	3.87	3.79	3.75	3.68	3.85	3.76	3.76	3.70	3.61	3.80	3.73	3.71	
Brazil	3.03	2.98	3.02	3.19	3.17	3.09	3.10	3.14	3.26	3.24	3.18	3.11	3.21	3.30	3.30	3.23	
Saudi Arabia	3.51	3.35	3.84	3.98	3.74	3.73	3.56	3.80	4.02	3.78	3.79	3.59	3.90	4.06	3.77	3.83	
Canada	2.26	2.24	2.21	2.38	2.30	2.28	2.24	2.31	2.43	2.33	2.33	2.26	2.29	2.39	2.31	2.31	
Korea	2.58	2.73	2.49	2.54	2.57	2.58	2.61	2.45	2.62	2.67	2.59	2.61	2.50	2.62	2.66	2.60	
Mexico	1.65	1.76	1.99	1.96	1.95	1.92	1.87	1.86	1.91	1.92	1.89	1.83	1.87	1.94	1.91	1.89	
Iran	1.80	1.89	1.82	1.81	1.80	1.83	1.85	1.80	1.83	1.82	1.82	1.96	1.89	1.88	1.85	1.90	
Total	69.09	70.44	69.22	70.85	70.99	70.38	71.18	72.02	73.08	73.24	72.39	71.76	72.50	73.55	73.78	72.90	
% of World	70.8%	70.8%	70.2%	70.4%	70.5%	70.5%	70.8%	71.0%	70.9%	70.9%	70.9%	70.7%	70.6%	70.5%	70.6%	70.6%	
Annual Change (% per annum)																	
Americas	8.3	8.0	2.5	2.2	-0.7	2.9	-0.7	1.1	0.8	0.9	0.6	-1.0	-1.4	-0.5	-0.9	-0.9	
Europe	5.6	10.6	6.3	1.2	-4.3	3.0	-0.9	-1.4	-0.9	0.2	-0.8	-1.0	-0.4	0.1	-0.5	-0.5	
Asia Oceania	3.0	2.3	-0.2	2.1	-1.3	0.7	0.1	0.9	2.8	2.6	1.6	-0.3	1.5	0.6	-0.1	0.4	
Total OECD	6.6	7.7	3.1	1.9	-1.9	2.6	-0.6	0.4	0.6	1.0	0.3	-0.9	-0.6	-0.2	-0.7	-0.6	
Asia	5.0	2.8	-1.4	0.2	-0.2	0.4	2.3	9.1	7.5	7.3	6.5	3.7	3.0	3.0	3.3	3.3	
Middle East	4.8	4.8	7.8	6.7	6.1	6.4	3.4	-0.2	1.1	0.9	1.3	1.7	2.6	1.0	0.7	1.5	
Americas	11.0	3.5	5.3	2.7	2.2	3.4	3.0	2.0	1.4	1.1	1.9	0.4	1.7	1.3	1.8	1.3	
FSU	6.5	2.4	-0.2	2.2	0.4	1.2	1.9	1.3	-2.0	-2.2	-0.3	0.0	-0.7	-0.2	0.4	-0.1	
Africa	6.5	4.1	6.1	7.2	5.4	5.7	2.4	-1.7	-1.7	-0.9	-0.5	1.6	5.8	5.8	5.3	4.6	
Europe	6.6	2.7	1.9	1.5	1.2	1.8	0.3	0.0	-1.2	0.8	0.0	1.2	2.7	2.9	1.8	2.1	
Total Non-OECD	5.9	3.2	1.6	2.3	1.6	2.2	2.5	5.0	3.9	3.9	3.8	2.5	2.7	2.4	2.6	2.5	
World	6.2	5.2	2.3	2.1	-0.0	2.3	1.1	2.9	2.4	2.6	2.2	0.9	1.2	1.2	1.1	1.1	
Annual Change (mb/d)																	
Americas	1.87	1.83	0.60	0.55	-0.17	0.70	-0.16	0.29	0.21	0.24	0.14	-0.24	-0.34	-0.14	-0.23	-0.24	
Europe	0.69	1.27	0.79	0.16	-0.60	0.40	-0.12	-0.19	-0.13	0.02	-0.11	-0.14	-0.05	0.01	-0.07	-0.06	
Asia Oceania	0.22	0.17	-0.02	0.15	-0.10	0.05	0.01	0.06	0.20	0.20	0.12	-0.03	0.10	0.05	0.00	0.03	
Total OECD	2.77	3.27	1.38	0.86	-0.88	1.14	-0.27	0.16	0.28	0.45	0.16	-0.40	-0.29	-0.08	-0.31	-0.27	
Asia	1.37	0.79	-0.39	0.05	-0.04	0.10	0.67	2.56	2.12	2.15	1.88	1.10	0.94	0.91	1.05	1.00	
Middle East	0.39	0.39	0.66	0.59	0.51	0.54	0.29	-0.02	0.10	0.08	0.11	0.15	0.24	0.10	0.06	0.14	
Americas	0.60	0.20	0.31	0.17	0.14	0.20	0.18	0.12	0.09	0.07	0.12	0.03	0.11	0.09	0.11	0.08	
FSU	0.30	0.11	-0.01	0.11	0.02	0.06	0.09	0.06	-0.10	-0.11	-0.02	0.00	-0.03	-0.01	0.02	-0.01	
Africa	0.25	0.17	0.24	0.29	0.22	0.23	0.10	-0.07	-0.07	-0.04	-0.02	0.07	0.24	0.24	0.23	0.20	
Europe	0.05	0.02	0.01	0.01	0.01	0.01	0.00	0.00	-0.01	0.01	0.00	0.01	0.02	0.02	0.01	0.02	
Total Non-OECD	2.95	1.68	0.83	1.21	0.86	1.14	1.33	2.66	2.13	2.16	2.07	1.35	1.51	1.34	1.49	1.42	
World	5.72	4.96	2.20	2.07	-0.02	2.29	1.06	2.82	2.41	2.61	2.23	0.95	1.23	1.26	1.18	1.15	
Revisions to Oil Demand from Last Month's Report (mb/d)																	
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	-0.01	0.04	0.04	0.04	0.09	0.08	0.07	0.07	
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.23	-0.22	-0.17	-0.15	0.01	-0.26	-0.04	-0.03	-0.08	
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.03	-0.02	-0.03	-0.03	0.03	0.03	0.00	
Total OECD	-	-0.00	-0.00	-0.00	-	-0.00	0.04	-0.14	-0.26	-0.17	-0.13	0.02	-0.20	0.07	0.08	-0.01	
Asia	0.11	0.05	0.10	0.10	0.10	0.08	0.07	0.21	0.12	0.10	0.13	0.05	0.36	0.25	0.10	0.19	
Middle East	-0.05	-0.06	-0.08	-0.08	-0.08	-0.08	-0.15	-0.26	-0.14	-0.09	-0.16	-0.06	-0.09	-0.09	-0.10	-0.08	
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.00	0.02	-0.04	0.02	-0.02	-0.03	-0.02	
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	0.01	0.02	0.02	0.05	0.01	0.01	0.02	
Africa	0.00	0.00	0.03	0.07	0.06	0.04	-0.01	-0.09	-0.05	-0.02	-0.04	-0.02	-0.01	0.05	0.05	0.02	
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Non-OECD	0.07	-0.02	0.06	0.09	0.08	0.05	-0.08	-0.01	-0.06	-0.00	-0.04	-0.04	0.33	0.19	0.04	0.13	
World	0.07	-0.02	0.05	0.09	0.08	0.05	-0.04	-0.16	-0.31	-0.17	-0.17	-0.02	0.13	0.26	0.11	0.12	
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																	
World	-0.09	-0.10	-0.02	0.03	0.02	-0.02	-0.03	-0.21	-0.40	-0.25	-0.22	0.02	0.29	0.58	0.29	0.29	

¹ US figures exclude US territories.

² France, Germany, Italy, Spain and UK.

Table 2a
OECD REGIONAL OIL DEMAND¹
(million barrels per day)

	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23 ²	Latest month vs.	
										Mar 23	Apr 22
Americas											
LPG and ethane	3.69	3.84	3.62	3.78	3.79	3.93	3.96	3.79	3.80	0.01	0.13
Naphtha	0.25	0.21	0.21	0.20	0.20	0.20	0.17	0.22	0.22	0.00	0.00
Motor gasoline	10.34	10.44	10.70	10.59	10.42	10.23	10.32	10.58	10.59	0.01	0.17
Jet and kerosene	1.56	1.83	1.87	1.89	1.86	1.84	1.80	1.88	1.89	0.01	0.10
Gasoil/diesel oil	5.06	5.19	5.14	5.09	5.21	5.23	5.29	5.35	5.00	-0.35	-0.04
Residual fuel oil	0.55	0.56	0.54	0.61	0.52	0.51	0.61	0.44	0.39	-0.05	-0.14
Other products	2.85	2.94	2.91	3.17	2.94	2.66	2.51	2.78	3.05	0.27	0.15
Total	24.31	25.01	24.98	25.33	24.95	24.61	24.66	25.05	24.95	-0.11	0.39
Europe											
LPG and ethane	1.10	1.03	0.93	1.09	0.98	1.09	1.08	1.04	1.09	0.05	0.16
Naphtha	1.12	0.97	1.01	0.87	0.84	0.97	1.01	0.95	0.95	0.00	-0.05
Motor gasoline	1.93	2.04	2.08	2.16	2.03	1.99	2.07	2.03	2.09	0.05	0.08
Jet and kerosene	0.86	1.28	1.30	1.48	1.30	1.24	1.26	1.26	1.36	0.10	0.12
Gasoil/diesel oil	6.24	6.24	6.11	6.37	6.31	5.98	6.28	6.25	5.73	-0.52	-0.39
Residual fuel oil	0.76	0.83	0.84	0.85	0.81	0.80	0.82	0.77	0.76	-0.01	-0.04
Other products	1.10	1.13	1.16	1.22	1.07	1.01	1.06	1.01	1.02	0.01	-0.09
Total	13.10	13.50	13.43	14.04	13.35	13.07	13.58	13.32	13.00	-0.32	-0.21
Asia Oceania											
LPG and ethane	0.77	0.82	0.77	0.74	0.83	0.94	1.01	0.86	0.75	-0.11	-0.04
Naphtha	1.95	1.86	1.78	1.90	1.84	1.94	1.91	1.96	1.78	-0.18	-0.08
Motor gasoline	1.35	1.35	1.30	1.42	1.40	1.31	1.32	1.35	1.29	-0.05	0.05
Jet and kerosene	0.61	0.69	0.51	0.53	0.84	0.95	1.03	0.79	0.71	-0.08	0.18
Gasoil/diesel oil	1.89	1.92	1.85	1.90	2.00	1.95	1.98	2.03	1.82	-0.21	0.04
Residual fuel oil	0.45	0.48	0.45	0.47	0.50	0.53	0.54	0.49	0.44	-0.05	-0.02
Other products	0.36	0.30	0.31	0.25	0.27	0.25	0.28	0.26	0.26	0.00	0.01
Total	7.38	7.43	6.98	7.22	7.68	7.86	8.07	7.74	7.05	-0.69	0.13
OECD											
LPG and ethane	5.56	5.69	5.33	5.61	5.60	5.96	6.04	5.70	5.64	-0.05	0.26
Naphtha	3.33	3.04	3.00	2.97	2.88	3.12	3.10	3.13	2.95	-0.18	-0.13
Motor gasoline	13.62	13.83	14.08	14.17	13.85	13.52	13.71	13.96	13.98	0.01	0.30
Jet and kerosene	3.03	3.79	3.68	3.91	3.99	4.02	4.09	3.92	3.95	0.03	0.40
Gasoil/diesel oil	13.19	13.35	13.11	13.36	13.52	13.15	13.56	13.64	12.56	-1.09	-0.39
Residual fuel oil	1.76	1.87	1.83	1.93	1.83	1.83	1.97	1.70	1.59	-0.11	-0.20
Other products	4.32	4.37	4.38	4.64	4.29	3.92	3.85	4.05	4.33	0.27	0.08
Total	44.80	45.95	45.40	46.60	45.98	45.53	46.31	46.11	45.00	-1.11	0.31

¹ Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils. Americas comprises US 50 states, US territories, Mexico, Canada and Chile.

² Latest official OECD submissions (MOS).

Table 2b
OIL DEMAND IN SELECTED OECD COUNTRIES¹
(million barrels per day)

	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23 ²	Latest month vs.	
										Mar 23	Apr 22
United States³											
LPG and ethane	2.88	3.06	2.89	2.95	3.01	3.15	3.17	3.05	3.05	0.00	0.10
Naphtha	0.19	0.14	0.14	0.13	0.13	0.13	0.11	0.14	0.16	0.01	0.01
Motor gasoline	8.82	8.78	9.00	8.88	8.75	8.67	8.71	9.01	9.00	-0.01	0.24
Jet and kerosene	1.38	1.56	1.61	1.60	1.58	1.57	1.54	1.61	1.62	0.02	0.09
Gasoil/diesel oil	3.97	3.96	3.89	3.86	3.96	4.01	4.02	4.10	3.90	-0.20	0.09
Residual fuel oil	0.31	0.34	0.31	0.39	0.30	0.29	0.36	0.25	0.18	-0.07	-0.13
Other products	2.35	2.44	2.43	2.65	2.43	2.18	2.08	2.29	2.55	0.26	0.10
Total	19.89	20.28	20.27	20.47	20.16	20.00	20.00	20.45	20.45	-0.00	0.49
Japan											
LPG and ethane	0.40	0.43	0.40	0.37	0.45	0.56	0.60	0.52	0.41	-0.12	-0.02
Naphtha	0.70	0.62	0.56	0.62	0.65	0.65	0.62	0.65	0.64	-0.01	0.10
Motor gasoline	0.73	0.71	0.68	0.75	0.72	0.67	0.69	0.68	0.68	0.01	0.01
Jet and kerosene	0.37	0.38	0.25	0.24	0.47	0.58	0.66	0.44	0.36	-0.08	0.08
Diesel	0.42	0.43	0.41	0.43	0.44	0.41	0.44	0.42	0.40	-0.02	0.00
Other gasoil	0.32	0.33	0.30	0.30	0.34	0.36	0.39	0.35	0.31	-0.04	-0.01
Residual fuel oil	0.25	0.27	0.24	0.26	0.28	0.31	0.32	0.27	0.22	-0.05	-0.03
Other products	0.22	0.21	0.18	0.22	0.21	0.19	0.19	0.18	0.17	-0.01	0.06
Total	3.41	3.37	3.03	3.19	3.56	3.72	3.91	3.51	3.19	-0.32	0.18
Germany											
LPG and ethane	0.12	0.11	0.11	0.10	0.09	0.09	0.09	0.10	0.10	0.00	-0.03
Naphtha	0.32	0.30	0.33	0.25	0.25	0.28	0.29	0.28	0.29	0.00	-0.05
Motor gasoline	0.45	0.45	0.46	0.48	0.45	0.45	0.48	0.46	0.44	-0.02	0.00
Jet and kerosene	0.13	0.19	0.20	0.22	0.21	0.18	0.18	0.17	0.20	0.03	0.00
Diesel	0.71	0.71	0.68	0.74	0.72	0.66	0.68	0.72	0.64	-0.09	-0.04
Other gasoil	0.27	0.29	0.25	0.31	0.31	0.29	0.32	0.31	0.28	-0.03	0.04
Residual fuel oil	0.05	0.05	0.05	0.05	0.04	0.03	0.04	0.03	0.04	0.01	-0.01
Other products	0.07	0.07	0.07	0.10	0.06	0.04	0.05	0.02	0.03	0.01	-0.04
Total	2.13	2.17	2.15	2.26	2.13	2.03	2.14	2.09	2.02	-0.08	-0.13
Italy											
LPG and ethane	0.11	0.11	0.10	0.10	0.11	0.13	0.14	0.12	0.10	-0.01	0.00
Naphtha	0.09	0.08	0.07	0.06	0.07	0.08	0.07	0.08	0.08	0.00	-0.01
Motor gasoline	0.17	0.18	0.19	0.20	0.18	0.16	0.16	0.18	0.18	0.00	0.00
Jet and kerosene	0.06	0.09	0.10	0.11	0.08	0.08	0.08	0.08	0.10	0.02	0.01
Diesel	0.48	0.49	0.49	0.50	0.50	0.47	0.50	0.50	0.45	-0.05	-0.03
Other gasoil	0.07	0.05	0.05	0.06	0.06	0.04	0.04	0.05	0.03	-0.02	0.00
Residual fuel oil	0.09	0.10	0.10	0.11	0.10	0.10	0.10	0.09	0.09	0.00	-0.01
Other products	0.11	0.12	0.13	0.13	0.11	0.11	0.11	0.12	0.12	0.00	0.01
Total	1.18	1.22	1.23	1.28	1.21	1.16	1.20	1.21	1.16	-0.06	-0.05
France											
LPG and ethane	0.11	0.10	0.10	0.10	0.07	0.11	0.12	0.10	0.11	0.01	0.01
Naphtha	0.14	0.10	0.09	0.10	0.08	0.11	0.11	0.09	0.10	0.00	0.03
Motor gasoline	0.21	0.23	0.24	0.26	0.23	0.23	0.22	0.24	0.23	0.00	0.00
Jet and kerosene	0.09	0.12	0.11	0.15	0.13	0.14	0.14	0.13	0.14	0.01	0.03
Diesel	0.73	0.73	0.75	0.75	0.72	0.69	0.68	0.73	0.65	-0.09	-0.08
Other gasoil	0.13	0.11	0.07	0.11	0.12	0.14	0.16	0.13	0.10	-0.03	0.01
Residual fuel oil	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.03	0.02	-0.01
Other products	0.10	0.10	0.11	0.12	0.09	0.08	0.10	0.08	0.08	0.00	-0.02
Total	1.55	1.53	1.50	1.62	1.47	1.52	1.57	1.52	1.43	-0.08	-0.02
United Kingdom											
LPG and ethane	0.11	0.10	0.10	0.10	0.09	0.10	0.10	0.11	0.09	-0.02	-0.02
Naphtha	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor gasoline	0.25	0.27	0.28	0.27	0.27	0.28	0.32	0.25	0.30	0.05	0.03
Jet and kerosene	0.17	0.27	0.27	0.28	0.28	0.29	0.31	0.28	0.28	0.00	0.01
Diesel	0.46	0.46	0.48	0.45	0.46	0.46	0.51	0.43	0.49	0.06	-0.01
Other gasoil	0.13	0.12	0.14	0.14	0.11	0.11	0.15	0.10	0.08	-0.03	-0.09
Residual fuel oil	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.00	0.00
Other products	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.00	0.00
Total	1.24	1.36	1.40	1.38	1.34	1.37	1.53	1.30	1.35	0.05	-0.07
Canada											
LPG and ethane	0.45	0.41	0.39	0.45	0.38	0.41	0.42	0.37	0.40	0.03	0.01
Naphtha	0.04	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04	-0.01	0.00
Motor gasoline	0.76	0.78	0.78	0.81	0.80	0.73	0.77	0.74	0.78	0.04	0.02
Jet and kerosene	0.09	0.14	0.13	0.17	0.15	0.14	0.12	0.15	0.14	-0.01	0.02
Diesel	0.29	0.28	0.25	0.28	0.30	0.30	0.32	0.33	0.20	-0.13	-0.05
Other gasoil	0.28	0.28	0.27	0.26	0.27	0.29	0.30	0.29	0.27	-0.02	-0.01
Residual fuel oil	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.02	0.04	0.01	0.01
Other products	0.31	0.31	0.30	0.33	0.31	0.30	0.25	0.29	0.32	0.03	0.05
Total	2.26	2.28	2.21	2.38	2.30	2.24	2.28	2.23	2.19	-0.04	0.05

¹ Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils.

² Latest official OECD submissions (MOS).

³ US figures exclude US territories.

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2022	2023	2024	1Q23	2Q23	3Q23	4Q23	1Q24	Apr 23	May 23	Jun 23
OPEC											
Crude Oil											
Saudi Arabia	10.53			10.42	10.14				10.48	9.98	9.98
Iran	2.55			2.70	2.94				2.81	3.01	3.01
Iraq	4.45			4.39	4.13				4.10	4.12	4.17
UAE	3.32			3.42	3.26				3.29	3.26	3.24
Kuwait	2.70			2.68	2.60				2.68	2.57	2.55
Angola	1.14			1.05	1.10				1.06	1.11	1.12
Nigeria	1.15			1.27	1.15				1.02	1.18	1.24
Libya	0.99			1.15	1.13				1.13	1.15	1.12
Algeria	1.01			1.01	0.97				1.00	0.97	0.94
Congo	0.26			0.28	0.28				0.28	0.28	0.27
Gabon	0.19			0.20	0.21				0.20	0.21	0.21
Equatorial Guinea	0.08			0.05	0.06				0.05	0.06	0.07
Venezuela	0.70			0.71	0.79				0.78	0.80	0.78
Total Crude Oil	29.06			29.34	28.76				28.88	28.70	28.70
<i>of which Neutral Zone¹</i>	<i>0.28</i>			<i>0.29</i>	<i>0.31</i>				<i>0.30</i>	<i>0.32</i>	<i>0.31</i>
Total NGLs²	5.38	5.47	5.52	5.43	5.47	5.49	5.49	5.52	5.48	5.44	5.49
Total OPEC³	34.44			34.77	34.23				34.36	34.14	34.19
NON-OPEC⁴											
OECD											
Americas											
United States	17.86	19.02	19.45	18.70	19.17	19.10	19.12	19.20	19.10	19.19	19.23
Mexico	2.01	2.12	2.10	2.10	2.14	2.11	2.14	2.13	2.13	2.14	2.14
Canada	5.76	5.80	5.91	5.84	5.51	5.86	5.99	5.87	5.54	5.33	5.67
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.16	3.21	3.25	3.28	3.23	3.07	3.27	3.34	3.23	3.20	3.24
UK	0.83	0.77	0.76	0.84	0.78	0.70	0.78	0.78	0.77	0.78	0.78
Norway	1.90	2.00	2.05	2.00	2.01	1.94	2.04	2.12	2.03	1.99	2.02
Others	0.43	0.44	0.43	0.44	0.43	0.44	0.44	0.44	0.44	0.43	0.44
Asia Oceania	0.48	0.46	0.46	0.46	0.43	0.46	0.49	0.48	0.47	0.43	0.39
Australia	0.41	0.38	0.38	0.39	0.35	0.38	0.41	0.40	0.38	0.36	0.31
Others	0.07	0.07	0.06	0.07	0.07	0.07	0.06	0.06	0.07	0.07	0.07
Total OECD	29.27	30.63	31.19	30.40	30.48	30.61	31.02	31.03	30.49	30.29	30.69
NON-OECD											
Former USSR											
Russia	11.09	10.87	10.75	11.15	10.82	10.75	10.75	10.75	10.93	10.78	10.75
Azerbaijan	0.67	0.64	0.68	0.64	0.62	0.64	0.65	0.67	0.63	0.61	0.62
Kazakhstan	1.82	1.91	1.98	1.99	1.94	1.83	1.86	1.95	1.98	1.92	1.93
Others	0.32	0.31	0.31	0.32	0.31	0.31	0.31	0.31	0.32	0.31	0.31
Asia	6.88	6.95	6.91	7.01	7.00	6.94	6.86	6.95	6.98	7.01	7.00
China	4.18	4.30	4.33	4.34	4.33	4.29	4.23	4.34	4.30	4.35	4.34
Malaysia	0.56	0.56	0.55	0.58	0.56	0.56	0.56	0.55	0.55	0.57	0.57
India	0.70	0.69	0.69	0.68	0.69	0.69	0.70	0.70	0.69	0.68	0.69
Indonesia	0.63	0.62	0.60	0.62	0.63	0.62	0.61	0.61	0.66	0.62	0.62
Others	0.81	0.78	0.74	0.79	0.78	0.77	0.77	0.75	0.78	0.78	0.78
Europe	0.11	0.10	0.09	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.10
Americas	5.65	6.03	6.45	5.96	5.93	6.05	6.17	6.37	5.92	5.96	5.92
Brazil	3.12	3.33	3.56	3.30	3.24	3.35	3.43	3.55	3.23	3.29	3.22
Argentina	0.71	0.77	0.81	0.75	0.76	0.77	0.79	0.79	0.76	0.76	0.77
Colombia	0.76	0.79	0.76	0.78	0.79	0.79	0.78	0.78	0.80	0.79	0.79
Ecuador	0.47	0.45	0.46	0.44	0.45	0.46	0.46	0.47	0.45	0.46	0.45
Others	0.59	0.69	0.86	0.68	0.68	0.69	0.71	0.78	0.69	0.67	0.69
Middle East	3.17	3.15	3.14	3.16	3.17	3.14	3.14	3.15	3.18	3.16	3.15
Oman	1.07	1.05	1.03	1.07	1.05	1.03	1.03	1.03	1.08	1.05	1.03
Qatar	1.80	1.81	1.81	1.81	1.81	1.81	1.81	1.82	1.81	1.81	1.81
Others	0.29	0.29	0.29	0.27	0.30	0.30	0.30	0.30	0.29	0.30	0.31
Africa	1.29	1.26	1.31	1.23	1.26	1.26	1.27	1.29	1.25	1.25	1.29
Egypt	0.60	0.60	0.60	0.59	0.60	0.60	0.60	0.60	0.61	0.60	0.60
Others	0.70	0.66	0.71	0.64	0.66	0.66	0.67	0.69	0.64	0.65	0.68
Total Non-OECD	30.99	31.21	31.61	31.56	31.16	31.02	31.11	31.52	31.28	31.12	31.07
Processing gains ⁵	2.31	2.35	2.44	2.31	2.35	2.38	2.37	2.44	2.34	2.33	2.37
Global biofuels	2.95	3.14	3.28	2.65	3.25	3.53	3.14	2.77	2.89	3.40	3.45
TOTAL NON-OPEC	65.52	67.33	68.51	66.92	67.24	67.54	67.63	67.75	67.00	67.14	67.57
TOTAL SUPPLY	99.96			101.69	101.47				101.36	101.28	101.76

¹ Neutral Zone production is already included in Saudi Arabia and Kuwait production with their respective shares.

² Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. GTL in Nigeria and non-oil inputs to Saudi Arabian MTBE.

³ OPEC data based on today's membership throughout the time series.

⁴ Comprises crude oil, condensates, NGLs and oil from non-conventional sources.

⁵ Net volumetric gains and losses in refining and marine transportation losses.

Table 3a
OIL SUPPLY IN OECD COUNTRIES¹
(thousand of barrels per day)

	2022	2023	2024	1Q23	2Q23	3Q23	4Q23	1Q24	Apr 23	May 23	Jun 23
United States											
Alaska	437	432	429	443	426	418	441	443	434	427	416
California	343	312	301	312	315	311	308	305	317	313	314
Texas	5046	5387	5560	5347	5388	5387	5424	5470	5398	5395	5372
Federal Gulf of Mexico ²	1743	1870	1892	1869	1851	1860	1899	1970	1774	1856	1923
Other US Lower 48	4318	4716	4868	4637	4741	4738	4746	4772	4732	4740	4751
NGLs ³	5883	6222	6311	6010	6359	6301	6217	6155	6373	6361	6341
Other Hydrocarbons	86	86	86	82	93	88	80	82	75	94	111
Total	17856	19024	19448	18699	19172	19103	19115	19198	19103	19186	19228
Canada											
Alberta Light/Medium/Heavy	491	518	542	523	506	524	521	547	532	478	510
Alberta Bitumen	1995	2020	2042	1975	1834	2137	2131	1945	1805	1779	1921
Saskatchewan	455	455	444	459	457	453	449	450	456	458	457
Other Crude	433	392	434	402	399	415	351	397	408	391	399
NGLs	1035	1040	1067	1047	1016	1046	1052	1058	1041	979	1030
Other Upgraders	181	185	186	193	176	172	199	198	174	171	184
Synthetic Crudes	1167	1191	1199	1244	1123	1114	1283	1277	1122	1077	1173
Total	5757	5801	5914	5841	5511	5862	5986	5872	5538	5328	5672
Mexico											
Crude	1843	1957	1949	1933	1969	1943	1984	1970	1964	1969	1975
NGLs	158	162	151	166	163	161	158	155	164	163	163
Total	2006	2123	2104	2103	2136	2107	2145	2129	2132	2135	2142
UK											
Brent Fields	23	20	17	23	23	16	18	21	25	22	23
Forties Fields	210	186	149	205	186	165	187	181	194	194	169
Ninian Fields	20	26	22	27	27	26	25	24	27	27	26
Flotta Fields	40	31	27	36	28	31	30	29	29	23	31
Other Fields	474	450	488	491	451	398	463	465	431	453	470
NGLs	66	62	60	61	63	62	61	60	64	61	62
Total	833	774	763	842	777	696	784	780	770	781	781
Norway⁴											
Ekofisk-Ula Area	122	122	117	130	122	112	123	120	124	129	113
Oseberg-Troll Area	200	203	209	205	196	196	215	214	201	194	192
Statfjord-Gullfaks Area	250	216	193	236	214	210	205	200	207	222	212
Haltenbanken Area	237	238	249	226	236	239	251	255	244	230	234
Sleipner-Frigg Area	788	993	1034	930	985	1019	1035	1038	970	987	998
Other Fields	112	28	45	88	55	-40	9	86	81	20	67
NGLs	190	200	205	186	205	200	206	206	201	209	206
Total	1899	1999	2051	2002	2013	1937	2045	2119	2027	1991	2022
Other OECD Europe											
Denmark	65	63	72	61	60	63	68	73	60	58	60
Italy	83	87	77	80	90	89	88	78	95	87	89
Türkiye	69	81	87	75	78	82	87	87	78	78	80
Other	78	80	79	69	82	85	84	82	79	80	87
NGLs	7	6	6	7	6	6	6	6	6	7	7
Non-Conventional Oils	129	122	111	148	119	111	111	111	120	122	114
Total	430	439	432	440	435	438	444	436	438	431	436
Australia											
Gippsland Basin	8	9	9	9	9	9	9	9	9	9	9
Cooper-Eromanga Basin	18	18	17	18	18	18	17	17	18	18	18
Carnarvon Basin	108	85	92	76	67	100	98	96	68	67	67
Other Crude	177	178	178	188	162	165	195	192	191	170	126
NGLs	102	95	89	99	95	94	92	91	96	97	93
Total	413	385	384	391	352	385	411	404	382	361	313
Other OECD Asia Oceania											
New Zealand	16	16	14	17	16	15	15	14	18	15	15
Japan	3	3	3	3	3	3	3	3	3	3	3
NGLs	11	9	8	11	9	9	9	8	11	9	9
Non-Conventional Oils	38	39	39	38	39	39	39	39	39	38	39
Total	68	67	64	69	67	65	65	64	70	65	66
OECD											
Crude Oil	20206	21199	21654	21099	21006	21195	21490	21568	20987	20891	21144
NGLs	7460	7805	7906	7595	7926	7885	7809	7749	7964	7895	7920
Non-Conventional Oils ⁵	1606	1626	1625	1708	1552	1528	1717	1710	1534	1501	1622
Total	29272	30630	31185	30403	30484	30609	31016	31028	30486	30288	30686

¹ Subcategories refer to crude oil only unless otherwise noted.

² Only production from Federal waters is included.

³ To the extent possible, condensates from natural gas processing plants are included with NGLs, while field condensates are aggregated with crude oil.

⁴ North Sea production is grouped into crude streams that include all fields being processed through the named field complex, i.e. the name corresponds to the crude stream not just the field of that name.

⁵ Does not include biofuels.

Table 3b
WORLD OIL PRODUCTION (Including OPEC+ based on current agreement¹)
(million barrels per day)

	2021	2022	2023	1Q22	2Q22	3Q22	4Q22	1Q23	Apr 23	May 23	Jun 23
OPEC+											
Crude Oil											
Algeria	0.91	1.01	0.97	0.99	1.01	1.02	1.02	1.01	1.00	0.97	0.94
Angola	1.12	1.14	1.08	1.16	1.17	1.15	1.08	1.05	1.06	1.11	1.12
Azerbaijan	0.59	0.56	0.52	0.58	0.56	0.55	0.55	0.53	0.51	0.50	0.50
Bahrain	0.17	0.19	0.19	0.18	0.19	0.20	0.19	0.17	0.19	0.20	0.20
Brunei	0.08	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.08
Congo	0.27	0.26	0.28	0.27	0.26	0.26	0.26	0.28	0.28	0.28	0.27
Equatorial Guinea	0.10	0.08	0.06	0.09	0.09	0.09	0.06	0.05	0.05	0.06	0.07
Gabon	0.18	0.19	0.19	0.19	0.18	0.20	0.18	0.20	0.20	0.21	0.21
Iran	2.42	2.55	2.90	2.55	2.46	2.55	2.63	2.70	2.81	3.01	3.01
Iraq	4.03	4.45	4.24	4.29	4.45	4.54	4.50	4.39	4.10	4.12	4.17
Kazakhstan	1.52	1.50	1.57	1.63	1.43	1.35	1.60	1.64	1.65	1.60	1.60
Kuwait	2.42	2.70	2.59	2.61	2.67	2.80	2.71	2.68	2.68	2.57	2.55
Libya	1.15	0.99	1.16	1.08	0.77	0.96	1.17	1.15	1.13	1.15	1.12
Malaysia	0.42	0.40	0.38	0.41	0.39	0.38	0.40	0.39	0.38	0.39	0.38
Mexico	1.66	1.62	1.67	1.64	1.62	1.62	1.62	1.65	1.67	1.68	1.68
Nigeria	1.31	1.15	1.23	1.30	1.15	1.00	1.13	1.27	1.02	1.18	1.24
Oman	0.75	0.85	0.81	0.82	0.84	0.88	0.85	0.84	0.84	0.81	0.80
Russia	9.62	9.75	9.54	10.04	9.40	9.78	9.78	9.75	9.60	9.45	9.45
Saudi Arabia	9.15	10.53	9.96	10.17	10.44	10.92	10.57	10.42	10.48	9.98	9.98
South Sudan	0.15	0.14	0.13	0.14	0.14	0.15	0.14	0.12	0.12	0.14	0.16
Sudan	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05
UAE	2.76	3.32	3.29	3.13	3.33	3.45	3.37	3.42	3.29	3.26	3.24
Venezuela	0.61	0.70	0.79	0.72	0.74	0.66	0.68	0.71	0.78	0.80	0.78
Total Crude Oil	41.47	44.20	43.66	44.12	43.43	44.63	44.62	44.55	43.96	43.59	43.62
<i>of which Neutral Zone</i>	<i>0.25</i>	<i>0.19</i>		<i>0.27</i>	<i>0.28</i>	<i>0.31</i>	<i>0.27</i>	<i>0.29</i>	<i>0.30</i>	<i>0.32</i>	<i>0.31</i>
Total NGLs	7.62	7.95	8.16	7.94	7.92	7.89	8.05	8.21	8.17	8.11	8.13
TOTAL OPEC+	49.09	52.2	51.8	52.1	51.3	52.5	52.7	52.8	52.1	51.7	51.8
NON-OPEC+											
OECD											
Americas²	22.36	23.62	24.84	22.89	23.28	24.04	24.25	24.55	24.65	24.52	24.91
United States	16.76	17.86	19.02	17.17	17.70	18.24	18.30	18.70	19.10	19.19	19.23
Canada	5.59	5.76	5.80	5.71	5.57	5.79	5.95	5.84	5.54	5.33	5.67
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.39	3.16	3.21	3.33	3.03	3.09	3.21	3.28	3.23	3.20	3.24
UK	0.88	0.83	0.77	0.91	0.85	0.75	0.81	0.84	0.77	0.78	0.78
Norway	2.05	1.90	2.00	1.98	1.74	1.91	1.97	2.00	2.03	1.99	2.02
Others	0.46	0.43	0.44	0.43	0.44	0.43	0.43	0.44	0.44	0.43	0.44
Asia Oceania	0.51	0.48	0.46	0.49	0.51	0.43	0.48	0.46	0.47	0.43	0.39
Australia	0.44	0.41	0.38	0.42	0.45	0.37	0.42	0.39	0.38	0.36	0.31
Others	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.08	0.07	0.08
Total OECD (non-OPEC+)	26.26	27.27	28.51	26.71	26.83	27.56	27.94	28.30	28.35	28.15	28.54
Non-OECD											
FSU	0.35	0.32	0.31	0.34	0.30	0.31	0.31	0.32	0.32	0.31	0.31
Asia	6.24	6.23	6.29	6.32	6.29	6.14	6.16	6.34	6.33	6.35	6.33
China	4.06	4.18	4.30	4.23	4.23	4.12	4.13	4.34	4.30	4.35	4.34
India	0.73	0.70	0.69	0.72	0.71	0.70	0.69	0.68	0.69	0.68	0.69
Indonesia	0.68	0.63	0.62	0.65	0.63	0.62	0.63	0.62	0.66	0.62	0.62
Others	0.77	0.71	0.68	0.73	0.71	0.70	0.71	0.70	0.68	0.69	0.68
Europe	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
Americas	5.30	5.65	6.03	5.44	5.49	5.75	5.89	5.96	5.92	5.96	5.92
Brazil	3.00	3.12	3.33	3.08	3.00	3.16	3.23	3.30	3.23	3.29	3.22
Argentina	0.64	0.71	0.77	0.69	0.70	0.72	0.74	0.75	0.76	0.76	0.77
Colombia	0.74	0.76	0.79	0.75	0.76	0.76	0.78	0.78	0.80	0.79	0.79
Ecuador	0.48	0.47	0.45	0.47	0.45	0.47	0.46	0.44	0.45	0.46	0.45
Others	0.44	0.59	0.69	0.44	0.58	0.65	0.68	0.68	0.69	0.67	0.69
Middle East	1.90	1.90	1.91	1.87	1.91	1.90	1.90	1.91	1.91	1.91	1.91
Qatar	1.80	1.80	1.81	1.78	1.81	1.81	1.81	1.81	1.81	1.81	1.81
Others	0.10	0.10	0.09	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09
Africa	1.12	1.09	1.07	1.10	1.10	1.09	1.09	1.06	1.07	1.06	1.07
Egypt	0.59	0.60	0.60	0.59	0.61	0.60	0.60	0.59	0.61	0.60	0.60
Others	0.52	0.49	0.48	0.51	0.48	0.49	0.49	0.47	0.46	0.46	0.47
Total non-OECD (non-OPEC+)	15.02	15.28	15.71	15.18	15.19	15.31	15.46	15.68	15.65	15.69	15.64
Processing gains	2.24	2.31	2.35	2.29	2.30	2.33	2.32	2.31	2.34	2.33	2.37
Global biofuels	2.79	2.95	3.14	2.51	3.08	3.30	2.89	2.65	2.89	3.40	3.45
TOTAL NON-OPEC+	46.32	47.81	49.71	46.69	47.40	48.49	48.62	48.94	49.23	49.57	50.01
TOTAL SUPPLY	95.41	99.96	101.54	98.75	98.74	101.01	101.29	101.69	101.36	101.28	101.76

¹ From Jul 2023, OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2024.

² Excludes Mexico.

Table 4
OECD STOCKS AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS ²					PRIOR YEARS' STOCKS ²			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mbd			
	Jan2023	Feb2023	Mar2023	Apr2023	May2023 ³	May2020	May2021	May2022	2Q2022	3Q2022	4Q2022	1Q2023
OECD INDUSTRY-CONTROLLED STOCKS¹												
OECD Americas												
Crude	613.1	623.6	620.5	615.5	609.7	675.4	638.2	569.9	0.03	0.09	0.16	0.30
Motor Gasoline	268.2	271.6	254.2	251.4	246.8	287.5	267.9	245.3	-0.22	-0.11	0.17	0.03
Middle Distillate	190.2	192.5	181.0	185.0	186.3	248.6	212.6	177.8	0.01	-0.05	0.11	-0.03
Residual Fuel Oil	39.0	38.6	35.9	38.0	38.6	45.2	40.4	36.8	0.01	-0.01	0.04	-0.02
Total Products ⁴	739.5	738.3	707.1	726.0	746.8	844.3	772.2	695.3	0.23	0.32	0.01	-0.29
Total⁵	1508.8	1519.4	1485.9	1502.2	1513.3	1695.6	1572.7	1428.9	0.32	0.35	0.20	-0.01
OECD Europe												
Crude	343.3	334.6	338.8	352.1	355.3	386.1	341.0	338.5	0.18	-0.03	0.00	0.02
Motor Gasoline	91.8	93.0	89.3	86.2	82.5	101.3	97.1	90.4	-0.06	0.01	0.00	0.02
Middle Distillate	272.2	266.5	246.2	256.3	258.8	331.8	315.8	242.0	0.00	-0.03	0.17	-0.04
Residual Fuel Oil	67.4	67.2	67.8	69.3	70.2	74.8	68.4	66.1	0.02	0.02	0.04	-0.02
Total Products ⁴	540.3	530.8	506.4	517.8	509.6	633.2	587.2	506.0	0.09	0.03	0.19	-0.12
Total⁵	964.4	943.1	920.0	948.7	944.4	1114.9	1005.8	919.1	0.24	0.08	0.19	-0.17
OECD Asia Oceania												
Crude	121.1	127.4	139.7	142.2	140.5	169.9	129.5	107.3	-0.13	0.36	0.00	0.13
Motor Gasoline	26.2	26.9	24.5	26.7	25.7	26.7	29.0	25.5	0.00	-0.02	0.01	0.00
Middle Distillate	65.0	61.1	54.7	62.0	62.5	62.0	64.7	56.5	0.06	0.01	0.00	-0.09
Residual Fuel Oil	15.5	16.0	16.3	17.3	17.8	17.4	17.6	17.3	0.01	0.01	0.00	0.00
Total Products ⁴	168.9	162.9	157.2	167.4	167.5	171.2	170.4	159.7	0.08	0.04	-0.05	-0.08
Total⁵	350.5	347.2	350.9	367.7	366.3	405.3	360.5	327.9	0.01	0.45	-0.06	-0.03
Total OECD												
Crude	1077.4	1085.5	1099.0	1109.7	1105.4	1231.5	1108.8	1015.6	0.08	0.42	0.17	0.45
Motor Gasoline	386.2	391.5	368.0	364.3	355.1	415.5	394.0	361.2	-0.28	-0.12	0.18	0.05
Middle Distillate	527.4	520.1	481.9	503.3	507.5	642.5	593.1	476.2	0.06	-0.06	0.27	-0.16
Residual Fuel Oil	121.8	121.8	120.0	124.6	126.5	137.4	126.3	120.3	0.04	0.01	0.07	-0.05
Total Products ⁴	1448.7	1431.9	1370.7	1411.2	1423.8	1648.7	1529.7	1361.1	0.40	0.38	0.15	-0.48
Total⁵	2823.6	2809.6	2756.8	2818.6	2823.9	3215.8	2939.0	2675.9	0.57	0.88	0.33	-0.21
OECD GOVERNMENT-CONTROLLED STOCKS⁶												
OECD Americas												
Crude	371.6	371.6	371.2	363.7	353.9	648.3	627.6	523.1	-0.80	-0.84	-0.48	-0.01
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
OECD Europe												
Crude	190.8	190.6	187.7	185.0	185.1	208.1	206.2	196.0	-0.04	-0.01	-0.01	-0.06
Products	274.6	275.4	270.7	273.4	272.2	276.4	281.4	259.5	-0.14	-0.04	0.15	0.05
OECD Asia Oceania												
Crude	345.0	345.3	347.8	348.5	352.1	377.1	374.5	361.0	-0.11	-0.17	0.01	0.06
Products	35.3	35.2	35.4	35.5	35.7	39.0	38.8	37.9	-0.01	0.00	-0.02	0.00
Total OECD												
Crude	907.4	907.5	906.7	897.2	891.1	1233.6	1208.3	1080.1	-0.94	-1.02	-0.49	-0.01
Products	311.8	312.6	308.1	310.9	309.9	317.4	322.2	299.4	-0.14	-0.04	0.14	0.04
Total⁵	1221.6	1222.2	1216.7	1209.7	1202.6	1553.0	1532.5	1381.1	-1.08	-1.06	-0.34	0.03

¹ Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entropot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

² Closing stock levels.

³ Estimated.

⁴ Total products includes gasoline, middle distillates, fuel oil and other products.

⁵ Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

⁶ Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 4a
INDUSTRY STOCKS¹ ON LAND IN SELECTED COUNTRIES

(million barrels)

	December			January			February			March			April		
	2021	2022	%	2022	2023	%	2022	2023	%	2022	2023	%	2022	2023	%
United States²															
Crude	421.2	429.6	2.0	414.3	459.8	11.0	409.1	472.4	15.5	414.4	465.4	12.3	419.1	459.9	9.7
Motor Gasoline	232.2	224.3	-3.4	251.8	239.7	-4.8	250.4	242.3	-3.2	238.5	225.3	-5.5	230.1	223.6	-2.8
Middle Distillate	168.1	156.0	-7.2	165.3	160.3	-3.0	162.2	163.6	0.9	151.5	151.3	-0.1	145.3	154.3	6.2
Residual Fuel Oil	25.8	30.7	19.0	26.7	32.1	20.2	27.5	31.3	13.8	27.9	29.6	6.1	29.4	32.1	9.2
Other Products	222.3	238.0	7.1	195.4	221.2	13.2	178.0	212.5	19.4	179.8	213.4	18.7	191.5	228.8	19.5
Total Products	648.4	649.0	0.1	639.2	653.3	2.2	618.1	649.7	5.1	597.7	619.6	3.7	596.3	638.8	7.1
Other ³	129.1	143.0	10.8	136.4	141.4	3.7	138.2	144.7	4.7	141.5	145.7	3.0	138.1	146.9	6.4
Total	1198.7	1221.6	1.9	1189.9	1254.5	5.4	1165.4	1266.8	8.7	1153.6	1230.7	6.7	1153.5	1245.6	8.0
Japan															
Crude	72.9	81.0	11.1	69.2	75.5	9.1	70.7	76.1	7.6	76.0	76.7	0.9	80.3	83.2	3.6
Motor Gasoline	10.4	10.1	-2.9	11.3	11.1	-1.8	10.9	10.4	-4.6	9.8	9.9	1.0	10.3	10.4	1.0
Middle Distillate	33.0	31.4	-4.8	30.8	30.8	0.0	26.7	25.7	-3.7	23.3	23.7	1.7	24.7	26.3	6.5
Residual Fuel Oil	7.3	7.1	-2.7	7.0	6.3	-10.0	6.5	6.8	4.6	5.7	6.7	17.5	6.2	6.9	11.3
Other Products	33.0	36.3	10.0	34.6	34.2	-1.2	32.2	31.9	-0.9	32.0	34.5	7.8	33.1	37.1	12.1
Total Products	83.7	84.9	1.4	83.7	82.4	-1.6	76.3	74.8	-2.0	70.8	74.8	5.6	74.3	80.7	8.6
Other ³	51.1	49.8	-2.5	47.6	49.3	3.6	43.7	45.3	3.7	42.0	42.9	2.1	47.3	46.3	-2.1
Total	207.7	215.7	3.9	200.5	207.2	3.3	190.7	196.2	2.9	188.8	194.4	3.0	201.9	210.2	4.1
Germany															
Crude	46.3	49.4	6.7	46.1	51.9	12.6	47.3	49.7	5.1	48.2	49.5	2.7	48.9	51.3	4.9
Motor Gasoline	10.7	11.1	3.7	11.0	12.0	9.1	10.6	10.7	0.9	10.7	9.1	-15.0	11.6	8.8	-24.1
Middle Distillate	21.8	26.5	21.6	23.2	33.2	43.1	21.7	29.9	37.8	24.3	24.5	0.8	27.2	25.2	-7.4
Residual Fuel Oil	8.4	8.8	4.8	8.5	8.6	1.2	8.6	8.8	2.3	7.9	9.1	15.2	7.8	9.4	20.5
Other Products	10.6	9.8	-7.5	10.2	10.3	1.0	10.0	10.2	2.0	10.0	10.2	2.0	10.7	11.1	3.7
Total Products	51.5	56.2	9.1	52.9	64.1	21.2	50.9	59.6	17.1	52.9	52.9	0.0	57.3	54.5	-4.9
Other ³	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	97.8	105.6	8.0	99.0	116.0	17.2	98.2	109.3	11.3	101.1	102.4	1.3	106.2	105.8	-0.4
Italy															
Crude	33.0	37.1	12.4	29.9	35.7	19.4	30.4	36.2	19.1	32.7	39.8	21.7	34.1	39.3	15.2
Motor Gasoline	10.0	9.9	-1.0	12.7	11.7	-7.9	11.3	10.6	-6.2	11.3	10.5	-7.1	10.5	10.3	-1.9
Middle Distillate	23.7	23.8	0.4	26.4	26.9	1.9	23.8	24.4	2.5	23.1	23.8	3.0	22.6	23.1	2.2
Residual Fuel Oil	7.1	8.6	21.1	7.5	8.3	10.7	8.1	7.5	-7.4	7.9	7.1	-10.1	8.7	7.2	-17.2
Other Products	10.0	11.1	11.0	11.2	12.2	8.9	11.3	11.4	0.9	11.0	11.4	3.6	11.4	11.3	-0.9
Total Products	50.8	53.4	5.1	57.8	59.1	2.2	54.5	53.9	-1.1	53.3	52.8	-0.9	53.2	51.9	-2.4
Other ³	13.1	14.0	6.9	13.5	15.0	11.1	13.1	14.1	7.6	14.7	14.9	1.4	14.6	15.6	6.8
Total	96.9	104.5	7.8	101.2	109.8	8.5	98.0	104.2	6.3	100.7	107.5	6.8	101.9	106.8	4.8
France															
Crude	8.8	10.8	22.7	9.2	12.0	30.4	12.4	11.3	-8.9	12.1	7.5	-38.0	10.2	15.5	52.0
Motor Gasoline	4.5	4.1	-8.9	5.1	5.2	2.0	4.5	5.6	24.4	4.2	4.9	16.7	4.9	5.2	6.1
Middle Distillate	18.6	21.3	14.5	20.1	21.9	9.0	16.5	21.8	32.1	18.6	16.2	-12.9	19.3	20.9	8.3
Residual Fuel Oil	0.9	1.7	88.9	1.3	1.9	46.2	1.3	1.4	7.7	0.7	1.9	171.4	1.1	1.4	27.3
Other Products	3.4	4.0	17.6	3.4	4.0	17.6	3.5	3.9	11.4	3.6	3.6	0.0	3.8	3.2	-15.8
Total Products	27.4	31.1	13.5	29.9	33.0	10.4	25.8	32.7	26.7	27.1	26.6	-1.8	29.1	30.7	5.5
Other ³	6.9	7.4	7.2	7.2	7.4	2.8	7.1	7.6	7.0	7.1	6.1	-14.1	7.6	7.7	1.3
Total	43.1	49.3	14.4	46.3	52.4	13.2	45.3	51.6	13.9	46.3	40.2	-13.2	46.9	53.9	14.9
United Kingdom															
Crude	26.2	22.7	-13.4	22.7	25.4	11.9	26.4	25.8	-2.3	26.5	25.3	-4.5	25.2	27.3	8.3
Motor Gasoline	10.0	8.2	-18.0	10.5	8.9	-15.2	9.5	9.7	2.1	9.2	8.9	-3.3	9.9	8.3	-16.2
Middle Distillate	19.6	19.1	-2.6	18.9	20.4	7.9	18.3	21.0	14.8	16.8	20.4	21.4	18.4	23.3	26.6
Residual Fuel Oil	1.3	1.5	15.4	1.2	1.3	8.3	1.5	1.0	-33.3	1.4	1.2	-14.3	1.7	1.3	-23.5
Other Products	6.1	6.1	0.0	5.9	5.8	-1.7	6.1	6.2	1.6	5.6	5.8	3.6	6.8	6.7	-1.5
Total Products	37.0	34.9	-5.7	36.5	36.4	-0.3	35.4	37.9	7.1	33.0	36.3	10.0	36.8	39.6	7.6
Other ³	8.1	8.3	2.5	7.6	8.0	5.3	7.8	7.9	1.3	7.7	8.0	3.9	7.5	8.0	6.7
Total	71.3	65.9	-7.6	66.8	69.8	4.5	69.6	71.6	2.9	67.2	69.6	3.6	69.5	74.9	7.8
Canada⁴															
Crude	132.4	129.5	-2.2	121.7	118.1	-3.0	122.4	117.6	-3.9	119.4	118.6	-0.7	122.6	119.8	-2.3
Motor Gasoline	15.8	15.6	-1.3	17.3	17.2	-0.6	16.3	17.4	6.7	16.6	17.3	4.2	15.3	16.5	7.8
Middle Distillate	18.5	18.7	1.1	18.8	20.9	11.2	18.0	19.8	10.0	17.9	20.2	12.8	18.2	20.8	14.3
Residual Fuel Oil	2.0	2.7	35.0	1.7	2.4	41.2	2.2	2.4	9.1	2.3	2.6	13.0	1.9	2.2	15.8
Other Products	11.2	12.3	9.8	12.5	11.8	-5.6	13.2	13.2	0.0	13.6	13.6	0.0	13.9	13.6	-2.2
Total Products	47.5	49.3	3.8	50.3	52.3	4.0	49.7	52.8	6.2	50.4	53.7	6.5	49.3	53.1	7.7
Other ³	21.7	17.4	-19.8	19.4	14.7	-24.2	16.4	12.6	-23.2	15.9	12.5	-21.4	17.1	13.7	-19.9
Total	201.6	196.2	-2.7	191.4	185.1	-3.3	188.5	183.0	-2.9	185.7	184.8	-0.5	189.0	186.6	-1.3

¹ Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

² US figures exclude US territories.

³ Other includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

⁴ Canadian stock information for recent months is the administration's best estimate. Data are usually finalised three months after first publication.

Table 5
TOTAL STOCKS ON LAND IN OECD COUNTRIES¹
(millions of barrels¹ and 'days')

	End March 2022		End June 2022		End September 2022		End December 2022		End March 2023 ³	
	Stock Level	Days Fwd ² Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
OECD Americas										
Canada	185.7	84	187.9	79	184.3	80	196.3	88	184.8	-
Chile	10.3	27	9.9	26	10.6	28	10.6	28	10.8	-
Mexico	35.7	20	36.6	20	36.7	21	36.6	21	37.3	-
United States ⁴	1721.7	85	1675.0	82	1633.5	81	1595.7	80	1604.0	-
Total⁴	1975.5	80	1931.5	77	1887.2	76	1861.2	76	1859.1	74
OECD Asia Oceania										
Australia	40.8	38	38.6	36	35.8	32	38.7	35	39.8	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	500.5	165	502.8	158	522.4	147	513.9	138	492.5	-
Korea	174.6	70	165.9	65	174.5	68	173.8	67	196.0	-
New Zealand	6.3	43	6.0	40	6.1	33	5.5	34	5.8	-
Total	722.3	103	713.3	99	738.8	96	731.9	93	734.1	104
OECD Europe⁵										
Austria	24.1	98	20.0	80	17.4	72	21.3	90	22.6	-
Belgium	42.9	74	44.8	75	45.4	78	45.7	74	45.5	-
Czech Republic	22.2	100	22.3	101	22.6	105	23.1	115	23.6	-
Denmark	20.3	135	21.7	141	21.1	142	23.6	167	22.8	-
Estonia	2.6	77	2.3	75	2.3	81	3.4	123	3.2	-
Finland	38.4	209	41.0	205	40.4	218	38.0	222	35.9	-
France	148.8	99	144.6	89	142.3	97	151.3	100	138.7	-
Germany	269.0	125	267.8	119	266.5	125	272.1	134	266.5	-
Greece	29.2	104	29.8	88	30.4	99	31.9	122	32.1	-
Hungary	28.0	152	29.2	160	28.6	174	28.7	179	30.5	-
Ireland	10.6	72	10.3	69	10.3	66	11.0	71	10.3	-
Italy	116.3	94	119.3	94	123.3	102	120.0	104	122.9	-
Latvia	2.8	79	2.8	68	2.8	78	2.9	84	1.9	-
Lithuania	9.8	161	8.4	117	8.2	116	8.3	133	8.7	-
Luxembourg	0.5	11	0.7	14	0.6	14	0.5	11	0.5	-
Netherlands	123.9	139	127.1	144	125.2	138	139.8	152	130.1	-
Norway	26.3	171	25.5	106	26.0	148	27.2	141	27.8	-
Poland	82.8	113	82.4	112	82.1	113	83.8	125	88.5	-
Portugal	21.3	84	22.5	85	21.1	100	20.0	88	18.9	-
Slovak Republic	12.8	135	13.2	141	13.5	137	13.1	136	13.5	-
Slovenia	4.6	86	4.8	92	4.5	88	4.9	103	4.5	-
Spain	106.6	81	107.9	83	111.5	87	109.5	87	110.2	-
Sweden	28.2	104	30.2	94	32.7	109	34.6	115	35.4	-
Switzerland	30.2	173	29.9	150	28.2	140	27.4	145	28.4	-
Republic of Türkiye	87.6	86	87.8	80	86.6	83	88.6	92	87.9	-
United Kingdom	67.1	48	66.3	47	71.1	53	65.9	48	69.6	-
Total	1356.9	101	1362.8	98	1364.9	102	1396.6	107	1380.3	104
Total OECD	4054.7	90	4007.6	86	3990.8	87	3989.6	88	3973.5	87
DAYS OF IEA Net Imports⁶	156	-	242	-	240	-	240	-	241	-

¹ Total Stocks are industry and government-controlled stocks (see breakdown in the table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entropot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.

² Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.

³ End March 2023 forward demand figures are IEA Secretariat forecasts.

⁴ US figures exclude US territories. Total includes US territories.

⁵ Data not available for Iceland.

⁶ Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions (see www.iea.org/netimports.asp). Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government ¹ controlled		Industry	Total	Government ¹ controlled	
		Millions of Barrels				Days of Fwd. Demand ²	
1Q2020	4518	1537	2981	2981	121	41	80
2Q2020	4778	1561	3217	3217	113	37	76
3Q2020	4732	1551	3181	3181	110	36	74
4Q2020	4578	1541	3037	3037	108	36	72
1Q2021	4470	1546	2924	2924	102	35	67
2Q2021	4405	1524	2881	2881	97	33	63
3Q2021	4281	1513	2768	2768	92	32	59
4Q2021	4133	1484	2649	2649	90	32	58
1Q2022	4055	1442	2613	2613	90	32	58
2Q2022	4008	1343	2664	2664	86	29	57
3Q2022	3991	1245	2745	2745	87	27	60
4Q2022	3990	1214	2776	2776	88	27	61
1Q2023	3973	1217	2757	2757	87	27	61

¹ Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

² Days of forward demand calculated using actual demand except in 1Q2023 (where latest forecasts are used).

Table 6
IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS¹
(million barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier		
											Apr 22	change	
Saudi Light & Extra Light													
Americas	0.26	0.34	0.46	0.46	0.52	0.41	0.39	0.39	0.39	0.38	0.40	-0.03	
Europe	0.59	0.48	0.62	0.68	0.60	0.67	0.66	0.69	0.39	0.78	0.78	0.00	
Asia Oceania	1.39	1.30	1.51	1.36	1.53	1.58	1.58	1.64	1.52	1.47	1.59	-0.12	
Saudi Medium													
Americas	0.14	0.01	-	-	-	-	-	-	-	-	-	-	
Europe	0.02	0.01	0.02	0.04	0.03	0.01	0.01	-	0.02	-	-	-	
Asia Oceania	0.25	0.21	0.23	0.26	0.26	0.23	0.25	0.19	0.28	0.23	0.29	-0.06	
Canada Heavy													
Americas	2.39	2.59	2.61	2.54	2.58	2.63	2.70	2.74	2.62	2.63	2.60	0.03	
Europe	0.03	0.03	0.08	0.09	0.08	0.11	0.07	0.13	0.05	0.14	0.07	0.08	
Asia Oceania	0.00	0.02	0.01	0.01	0.01	-	-	-	-	-	0.02	-	
Iraqi Basrah Light²													
Americas	0.11	0.08	0.21	0.30	0.25	0.13	0.33	0.40	0.28	0.11	0.29	-0.19	
Europe	0.58	0.62	0.69	0.64	0.82	0.69	0.71	0.75	0.66	0.76	0.55	0.21	
Asia Oceania	0.22	0.17	0.23	0.20	0.26	0.26	0.27	0.28	0.28	0.23	0.19	0.04	
Kuwait Blend													
Americas	-	-	-	-	-	-	-	-	-	-	-	-	
Europe	0.04	-	-	-	-	-	-	-	-	-	-	-	
Asia Oceania	0.55	0.48	0.48	0.42	0.47	0.46	0.51	0.51	0.48	0.47	0.54	-0.07	
Iranian Light													
Americas	-	-	-	-	-	-	-	-	-	-	-	-	
Europe	-	-	-	-	-	-	-	-	-	-	-	-	
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	
Iranian Heavy³													
Americas	-	-	-	-	-	-	-	-	-	-	-	-	
Europe	-	-	-	-	-	-	-	-	-	-	-	-	
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	
BFOE													
Americas	-	0.00	-	-	-	-	-	-	-	-	-	-	
Europe	0.42	0.36	0.41	0.44	0.44	0.38	0.49	0.49	0.46	0.49	0.42	0.07	
Asia Oceania	0.03	0.05	0.03	0.06	0.02	-	-	-	-	-	0.07	-	
Kazakhstan													
Americas	-	0.01	-	-	-	-	-	-	-	-	-	-	
Europe	0.74	0.69	0.73	0.69	0.67	0.70	0.98	0.94	0.95	0.96	0.70	0.26	
Asia Oceania	0.07	0.09	0.13	0.16	0.09	0.14	0.15	0.15	0.18	0.16	0.18	-0.01	
Venezuelan 22 API and heavier													
Americas	-	-	-	-	-	-	-	-	-	0.09	-	-	
Europe	0.04	-	0.01	-	0.04	0.02	0.01	-	0.02	0.03	-	-	
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	
Mexican Maya													
Americas	0.48	0.40	0.40	0.47	0.40	0.36	0.43	0.46	0.39	0.28	0.39	-0.11	
Europe	0.16	0.14	0.10	0.07	0.09	0.12	0.09	0.07	0.09	0.12	0.07	0.06	
Asia Oceania	0.12	0.14	0.06	0.05	0.04	0.08	0.05	0.07	0.05	0.05	0.05	0.00	
Russian Urals													
Americas	-	-	-	-	-	-	-	-	-	-	-	-	
Europe	1.12	1.05	0.74	0.79	0.71	0.40	0.13	0.10	0.08	0.09	0.87	-0.78	
Asia Oceania	-	0.01	-	-	-	-	-	-	-	-	-	-	
Cabinda and Other Angola													
North America	0.01	-	0.00	-	0.00	-	-	-	-	-	-	-	
Europe	0.12	0.03	0.23	0.26	0.29	0.31	0.35	0.34	0.33	0.28	0.15	0.13	
Pacific	-	-	0.00	-	0.01	0.01	-	-	-	-	-	-	
Nigerian Light⁴													
Americas	-	0.02	0.00	-	0.01	-	-	-	-	-	-	-	
Europe	0.49	0.41	0.41	0.43	0.29	0.46	0.54	0.48	0.56	0.59	0.42	0.18	
Asia Oceania	0.02	0.01	0.01	-	0.02	0.02	0.00	-	0.01	0.01	-	-	
Libya Light and Medium													
Americas	-	0.02	-	-	-	-	-	-	-	-	-	-	
Europe	0.19	0.80	0.63	0.56	0.52	0.76	0.65	0.74	0.57	0.72	0.73	-0.02	
Asia Oceania	0.01	0.02	0.01	0.02	0.01	0.01	0.02	-	0.04	-	0.03	-	

¹ Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report. IEA Americas includes United States and Canada. IEA Europe includes all countries in OECD Europe except Estonia, Hungary, Slovenia and Latvia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.

² Iraqi Total minus Kirkuk.

³ Iranian Total minus Iranian Light.

⁴ 33° API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
REGIONAL OECD IMPORTS^{1,2}
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier	
											Apr 22	% change
Crude Oil												
Americas	1896	2077	2115	2075	2161	2128	2105	1976	2260	2216	2052	8%
Europe	8349	8521	9092	9207	9302	8985	8317	8518	7882	8590	9048	-5%
Asia Oceania	5579	5519	5839	5365	6196	5693	5894	6243	5892	5713	6055	-6%
Total OECD	15823	16118	17046	16647	17659	16807	16316	16738	16034	16519	17155	-4%
LPG												
Americas	28	21	25	21	24	18	31	28	30	35	24	49%
Europe	422	404	509	502	496	561	544	569	488	619	524	18%
Asia Oceania	559	563	580	569	533	539	677	603	744	499	569	-12%
Total OECD	1009	988	1114	1092	1053	1118	1253	1201	1262	1154	1117	3%
Naphtha												
Americas	7	8	7	6	7	8	5	4	6	15	12	29%
Europe	409	512	305	409	225	191	179	185	137	137	511	-73%
Asia Oceania	1003	1146	1047	971	1063	1074	1118	1224	1040	1019	972	5%
Total OECD	1419	1667	1358	1386	1295	1274	1301	1413	1182	1171	1496	-22%
Gasoline³												
Americas	576	805	675	890	733	590	548	571	542	946	723	31%
Europe	109	106	101	126	108	69	64	91	50	65	162	-60%
Asia Oceania	116	146	169	177	172	171	188	216	172	162	117	39%
Total OECD	801	1057	945	1193	1013	830	800	878	765	1174	1001	17%
Jet & Kerosene												
Americas	159	165	134	123	115	177	178	218	173	142	116	23%
Europe	337	329	453	431	535	536	383	448	344	497	467	6%
Asia Oceania	60	71	90	77	69	141	162	180	118	116	53	118%
Total OECD	556	565	677	631	719	855	724	846	636	755	636	19%
Gasoil/Diesel												
Americas	134	197	99	76	41	120	158	204	113	64	44	45%
Europe	1192	1188	1217	1149	1132	1483	1168	1204	973	1229	1274	-4%
Asia Oceania	328	352	322	345	314	327	347	387	351	344	264	30%
Total OECD	1654	1737	1637	1570	1487	1930	1673	1796	1437	1637	1582	3%
Heavy Fuel Oil												
Americas	143	102	122	135	82	132	105	95	94	54	122	-56%
Europe	295	374	260	253	244	241	154	135	200	185	255	-27%
Asia Oceania	88	119	89	97	68	75	109	130	93	79	91	-14%
Total OECD	526	594	470	485	393	448	368	359	387	318	469	-32%
Other Products												
Americas	591	580	497	534	502	457	472	510	447	546	665	-18%
Europe	574	605	629	582	643	605	584	536	601	595	623	-4%
Asia Oceania	207	233	206	183	219	203	191	210	166	198	184	8%
Total OECD	1372	1419	1332	1298	1363	1264	1247	1257	1214	1340	1471	-9%
Total Products												
Americas	1639	1878	1558	1786	1502	1502	1497	1630	1406	1803	1705	6%
Europe	3339	3517	3474	3452	3383	3687	3076	3167	2794	3328	3816	-13%
Asia Oceania	2360	2630	2501	2418	2437	2530	2792	2952	2683	2417	2251	7%
Total OECD	7338	8026	7534	7656	7322	7718	7365	7749	6883	7548	7772	-3%
Total Oil												
Americas	3534	3955	3674	3861	3663	3630	3603	3606	3666	4019	3757	7%
Europe	11688	12039	12566	12659	12685	12672	11393	11686	10676	11918	12864	-7%
Asia Oceania	7939	8150	8341	7783	8633	8223	8686	9195	8575	8130	8306	-2%
Total OECD	23161	24144	24580	24303	24981	24525	23682	24487	22917	24067	24927	-3%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels conversion factors available at <https://www.iea.org/articles/oil-market-report-glossary#>.

2 Excludes intra-regional trade.

3 Includes additives.

Table 7a
REGIONAL OECD IMPORTS FROM NON-OECD COUNTRIES^{1,2}
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier	
											Apr 22	% change
Crude Oil												
Americas	1835	1982	2049	2012	2093	2056	2053	1925	2249	2111	1995	6%
Europe	7115	7265	7526	7695	7612	7255	6513	6625	6134	6560	7700	-15%
Asia Oceania	5051	4910	5261	4852	5658	5052	5339	5644	5425	5185	5504	-6%
Total OECD	14002	14157	14836	14559	15364	14363	13906	14194	13808	13857	15199	-9%
LPG												
Americas	22	20	25	21	24	18	31	28	30	35	24	49%
Europe	252	243	256	249	236	283	264	287	274	321	290	11%
Asia Oceania	58	47	62	53	55	53	51	91	23	36	70	-48%
Total OECD	331	310	343	322	315	353	346	406	327	392	383	2%
Naphtha												
Americas	1	4	3	2	2	6	3	2	6	5	2	200%
Europe	390	425	271	332	224	190	165	170	130	111	395	-72%
Asia Oceania	832	975	945	929	953	959	1048	1132	1003	983	904	9%
Total OECD	1223	1404	1219	1263	1179	1155	1216	1303	1139	1099	1301	-16%
Gasoline³												
Americas	195	248	174	233	214	137	155	95	210	319	227	40%
Europe	104	100	84	103	90	58	49	81	30	46	133	-65%
Asia Oceania	98	141	169	177	172	171	188	216	172	162	117	39%
Total OECD	397	489	427	514	476	367	392	393	412	528	477	11%
Jet & Kerosene												
Americas	55	63	47	33	25	89	91	127	75	42	43	-3%
Europe	297	294	393	383	461	423	370	435	328	414	438	-6%
Asia Oceania	60	71	89	76	69	141	162	180	118	116	51	126%
Total OECD	413	428	530	492	555	653	624	742	521	572	533	7%
Gasoil/Diesel												
Americas	103	134	43	26	12	48	98	140	40	56	9	511%
Europe	1062	1107	1111	1064	1030	1312	1014	1029	886	1042	1127	-8%
Asia Oceania	323	352	322	345	314	327	346	387	351	344	264	30%
Total OECD	1488	1593	1476	1436	1356	1687	1458	1556	1277	1442	1400	3%
Heavy Fuel Oil												
Americas	110	86	90	101	56	96	86	66	80	42	91	-55%
Europe	279	347	239	239	215	220	137	118	188	159	249	-36%
Asia Oceania	88	119	89	97	68	75	109	130	93	79	91	-14%
Total OECD	477	552	418	437	339	390	332	314	361	280	431	-35%
Other Products												
Americas	514	530	420	471	397	359	385	466	358	497	611	-19%
Europe	352	427	443	404	453	415	338	326	363	332	464	-28%
Asia Oceania	130	155	134	114	142	131	124	148	108	120	124	-3%
Total OECD	996	1112	997	988	992	905	847	940	829	949	1199	-21%
Total Products												
Americas	1000	1085	803	887	730	753	848	923	799	996	1008	-1%
Europe	2735	2943	2797	2775	2710	2900	2337	2446	2199	2424	3095	-22%
Asia Oceania	1590	1860	1810	1790	1771	1856	2030	2285	1868	1840	1621	14%
Total OECD	5325	5888	5410	5452	5212	5510	5215	5654	4866	5261	5724	-8%
Total Oil												
Americas	2835	3067	2852	2900	2824	2810	2901	2849	3049	3108	3003	4%
Europe	9850	10208	10323	10470	10322	10155	8851	9071	8333	8985	10796	-17%
Asia Oceania	6641	6769	7071	6642	7429	6908	7369	7929	7293	7025	7125	-1%
Total OECD	19327	20045	20246	20012	20575	19873	19121	19848	18675	19118	20924	-9%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels

conversion factors available at <https://www.iea.org/articles/oil-market-report-glossary#a>.

2 Excludes intra-regional trade.

3 Includes additives.

Table 7b
INTER-REGIONAL OECD TRANSFERS^{1,2}
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier	
											Apr 22	% change
Crude Oil												
Americas	60	95	66	62	68	72	52	51	11	105	57	82%
Europe	1234	1257	1566	1512	1690	1730	1804	1893	1749	2029	1348	51%
Asia Oceania	527	610	578	514	538	641	554	599	466	528	551	-4%
Total OECD	1821	1961	2211	2088	2296	2443	2410	2544	2226	2662	1956	36%
LPG												
Americas	6	1	1	0	0	0	0	0	0	0	0	na
Europe	171	161	252	253	260	278	280	282	215	298	234	27%
Asia Oceania	501	516	517	517	478	486	626	512	721	463	500	-7%
Total OECD	678	678	770	770	738	764	906	794	936	762	734	4%
Naphtha												
Americas	6	4	3	4	4	2	2	2	0	10	10	0%
Europe	20	87	35	77	1	1	14	15	7	27	116	-77%
Asia Oceania	170	172	101	42	110	115	70	92	37	36	69	-48%
Total OECD	196	263	139	123	115	119	86	110	44	72	195	-63%
Gasoline³												
Americas	382	557	501	656	518	452	393	476	333	627	495	27%
Europe	5	6	17	22	18	11	15	9	20	19	29	-34%
Asia Oceania	18	5	0	0	0	0	0	0	0	0	0	-71%
Total OECD	404	567	518	679	537	464	408	485	353	646	524	23%
Jet & Kerosene												
Americas	103	102	87	90	90	88	87	91	98	100	72	39%
Europe	40	35	60	48	74	114	12	12	16	83	29	188%
Asia Oceania	0	0	0	1	0	0	0	0	0	0	2	-100%
Total OECD	144	137	147	139	164	202	100	103	115	183	103	78%
Gasoil/Diesel												
Americas	31	63	56	50	29	72	61	64	72	8	35	-77%
Europe	131	81	106	84	101	171	154	176	87	187	147	27%
Asia Oceania	4	0	0	0	0	0	0	0	0	0	0	na
Total OECD	166	144	162	135	131	243	215	240	160	194	182	7%
Heavy Fuel Oil												
Americas	33	16	31	34	25	35	20	29	14	13	31	-59%
Europe	16	26	21	14	28	22	16	17	12	26	6	305%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
Total OECD	49	42	52	48	53	57	36	45	26	39	37	3%
Other Products												
Americas	78	50	77	64	105	98	87	44	89	49	54	-8%
Europe	222	178	186	178	190	190	247	211	238	264	159	66%
Asia Oceania	77	78	73	69	77	71	66	62	58	78	60	30%
Total OECD	377	307	335	310	372	359	400	317	384	391	273	43%
Total Products												
Americas	639	793	755	899	772	748	649	706	606	807	697	16%
Europe	604	574	677	677	672	787	738	722	594	903	720	25%
Asia Oceania	770	771	692	628	666	673	763	666	816	577	630	-8%
Total OECD	2013	2138	2124	2204	2110	2209	2150	2094	2016	2287	2048	12%
Total Oil												
Americas	699	888	822	961	840	820	701	757	617	912	755	21%
Europe	1838	1830	2243	2189	2362	2517	2542	2615	2343	2933	2068	42%
Asia Oceania	1297	1381	1270	1141	1204	1314	1317	1266	1282	1105	1181	-6%
Total OECD	3834	4099	4334	4291	4406	4652	4561	4638	4242	4949	4003	24%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels conversion factors available at <https://www.iea.org/articles/oil-market-report-glossary#>.

2 Excludes intra-regional trade.

3 Includes additives.

Table 8
REGIONAL OECD CRUDE IMPORTS BY SOURCE¹
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier Apr 22	change
OECD Americas												
Venezuela	-	-	-	-	-	-	69	58	109	140	-	-
Other Central & South America	745	719	845	802	917	878	837	762	927	737	856	-119
North Sea	59	92	64	62	60	72	52	51	11	105	57	47
Other OECD Europe	1	3	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	91	229	43	27	25	19	23	37	-	49	47	2
Saudi Arabia	588	427	535	569	487	516	487	461	513	450	478	-28
Kuwait	21	21	27	25	14	42	14	18	12	12	26	-14
Iran	-	3	1	-	-	-	-	-	-	-	-	-
Iraq	177	152	244	229	277	245	257	298	223	193	218	-25
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	5	17	12	19	19	-	16	-	46	-	58	-
Other Middle East	-	-	-	-	-	-	-	-	-	-	-	-
West Africa ²	145	228	186	211	201	160	265	213	342	363	155	208
Other Africa	45	161	153	131	139	196	80	78	61	167	156	10
Asia	17	25	5	-	21	-	-	-	-	-	-	-
Other	3	-	-	-	-	-	6	-	17	-	-	-
Total	1896	2077	2115	2075	2161	2128	2105	1976	2260	2216	2052	164
of which Non-OECD	1835	1982	2049	2012	2093	2056	2053	1925	2249	2111	1995	117
OECD Europe												
Canada	95	83	129	139	124	172	131	183	116	279	71	208
Mexico + USA	1139	1174	1437	1372	1566	1558	1673	1710	1633	1751	1277	474
Venezuela	44	-	15	-	35	23	8	-	24	39	-	-
Other Central & South America	208	219	409	412	561	443	610	665	634	696	183	513
Non-OECD Europe	25	23	15	12	12	15	19	17	16	11	12	-1
Former Soviet Union	3504	3538	3179	3197	2951	2527	1750	1747	1557	1804	3511	-1707
Saudi Arabia	756	518	764	779	867	882	866	813	746	912	817	95
Kuwait	48	0	-	-	-	-	-	-	-	-	-	-
Iran	6	1	-	-	-	-	-	-	-	-	-	-
Iraq	814	912	989	1013	1121	940	873	934	729	908	850	58
Oman	-	-	-	-	-	-	11	34	0	-	-	-
United Arab Emirates	-	-	48	31	86	76	65	72	85	68	-	-
Other Middle East	8	9	7	6	11	10	22	34	33	-	-	-
West Africa ²	1074	822	1002	1171	970	1059	1090	980	1075	987	1056	-70
Other Africa	596	1198	1071	1041	979	1269	1022	1262	837	1123	1245	-122
Asia	0	0	1	-	-	-	-	-	-	-	-	-
Other	11	1	3	8	-	-	131	-	381	-	23	-
Total	8329	8498	9069	9181	9282	8975	8270	8452	7866	8576	9046	-470
of which Non-OECD	7115	7265	7526	7695	7612	7255	6513	6625	6134	6560	7700	-1140
OECD Asia Oceania												
Canada	1	16	6	6	10	-	-	-	-	-	17	-
Mexico + USA	477	496	538	452	486	633	554	599	466	504	465	39
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	91	110	120	102	140	109	95	88	92	62	100	-38
North Sea	49	98	34	56	42	8	-	-	-	24	69	-45
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	300	335	239	274	116	161	154	149	185	161	427	-266
Saudi Arabia	1867	1766	1991	1862	2040	2033	2128	2173	2092	2001	2151	-150
Kuwait	584	506	534	472	516	524	586	632	560	520	566	-46
Iran	-	-	-	-	-	-	-	-	-	-	-	-
Iraq	224	167	220	204	262	241	247	258	251	191	194	-3
Oman	22	32	40	39	68	26	28	54	-	50	68	-18
United Arab Emirates	1096	1083	1287	1200	1509	1288	1220	1330	1222	1436	1135	301
Other Middle East	387	362	370	326	424	289	371	435	390	420	361	59
West Africa ²	65	71	64	61	88	55	35	10	77	3	63	-60
Other Africa	42	56	40	37	33	43	44	64	20	41	43	-2
Non-OECD Asia	161	175	119	124	97	135	131	113	163	103	151	-48
Other	210	241	234	151	365	141	300	338	374	197	247	-49
Total	5577	5515	5836	5365	6196	5688	5894	6243	5892	5713	6055	-342
of which Non-OECD	5051	4910	5261	4852	5658	5052	5339	5644	5425	5185	5504	-320
Total OECD Trade	15801	16090	17020	16621	17639	16792	16269	16672	16018	16506	17153	-648
of which Non-OECD	14002	14157	14836	14559	15364	14363	13906	14194	13808	13857	15199	-1342

¹ Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes, and converted to barrels at 7.37 barrels per tonne. Data will differ from Table 6 which is based on submissions in barrels.

² West Africa includes Angola, Nigeria, Gabon, Equatorial Guinea, Congo and Democratic Republic of Congo.

Table 9
REGIONAL OECD GASOLINE IMPORTS BY SOURCE¹
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier		
											Apr 22	change	
OECD Americas													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	40	41	45	44	61	62	49	15	36	44	33	11	
ARA (Belgium Germany Netherlands)	149	194	170	255	199	100	97	118	89	199	168	31	
Other Europe	213	327	293	364	266	320	259	312	190	354	284	71	
FSU	56	83	8	3	0	-	-	-	-	-	9	-	
Saudi Arabia	6	24	27	62	19	20	8	-	24	19	59	-40	
Algeria	4	1	1	-	2	1	-	-	-	64	-	-	
Other Middle East & Africa	13	13	14	14	22	13	15	13	23	14	15	-1	
Singapore	1	4	2	-	4	2	10	-	27	17	-	-	
OECD Asia Oceania	21	37	38	39	54	32	38	48	53	83	44	40	
Non-OECD Asia (excl. Singapore)	72	81	76	108	107	38	71	66	100	152	112	40	
Other	-	0	0	0	-	0	-	-	-	-	1	-	
Total²	576	805	675	890	733	590	548	571	542	946	723	223	
of which Non-OECD	195	248	174	233	214	137	155	95	210	319	227	92	
OECD Europe													
OECD Americas	3	5	16	21	17	11	11	8	10	19	29	-10	
Venezuela	0	2	2	2	3	2	3	4	3	2	1	1	
Other Central & South America	4	7	10	4	14	6	7	15	4	9	2	8	
Non-OECD Europe	16	10	8	6	14	6	8	11	1	11	4	7	
FSU	31	8	9	24	3	2	7	21	1	1	33	-31	
Saudi Arabia	8	3	1	1	2	-	0	-	0	-	-	-	
Algeria	1	-	6	12	7	4	7	10	6	5	19	-14	
Other Middle East & Africa	3	5	8	9	6	5	4	5	4	4	13	-9	
Singapore	2	0	2	2	1	3	2	1	1	2	1	1	
OECD Asia Oceania	1	1	1	1	1	1	4	2	10	-	-	-	
Non-OECD Asia (excl. Singapore)	0	3	3	2	4	3	3	3	3	2	4	-2	
Other	37	63	36	41	37	26	9	11	7	8	56	-48	
Total²	107	106	101	126	108	69	64	91	50	65	162	-96	
of which Non-OECD	104	100	84	103	90	58	49	81	30	46	133	-87	
OECD Asia Oceania													
OECD Americas	4	1	0	0	0	0	0	0	0	0	0	0	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central & South America	-	-	-	-	-	-	-	-	-	-	-	-	
ARA (Belgium Germany Netherlands)	4	4	0	0	0	0	0	0	0	0	0	0	
Other Europe	10	0	0	0	0	0	0	0	0	0	0	0	
FSU	0	-	-	-	-	-	-	-	-	-	-	-	
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East & Africa	1	-	-	-	-	-	-	-	-	-	-	-	
Singapore	51	100	126	124	121	125	140	159	126	113	80	33	
Non-OECD Asia (excl. Singapore)	37	29	30	44	35	27	39	48	38	40	27	13	
Other	9	12	13	9	16	20	10	10	9	9	9	0	
Total²	116	146	169	177	172	171	188	216	172	162	117	46	
of which Non-OECD	98	141	169	177	172	171	188	216	172	162	117	46	
Total OECD Trade²	799	1057	945	1193	1013	830	800	878	765	1174	1001	172	
of which Non-OECD	397	489	427	514	476	367	392	393	412	528	477	51	

¹ Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

² Total figure excludes intra-regional trade.

Table 10
REGIONAL OECD GASOIL/DIESEL IMPORTS BY SOURCE¹
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier		
											Apr 22	change	
OECD Americas													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	34	28	6	6	12	3	15	23	13	18	9	9	
ARA (Belgium Germany Netherlands)	11	34	15	6	3	11	3	2	-	-	-	-	
Other Europe	4	5	2	3	0	3	0	-	-	-	-	-	
FSU	12	25	6	-	-	-	-	-	-	-	-	-	
Saudi Arabia	8	15	9	15	-	5	9	27	-	-	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	9	25	4	-	-	8	7	-	10	16	-	-	
Singapore	-	2	1	-	-	2	3	6	-	-	-	-	
OECD Asia Oceania	16	25	39	42	26	58	57	63	72	8	35	-27	
Non-OECD Asia (excl. Singapore)	34	27	5	2	-	17	52	72	18	21	-	-	
Other	6	12	11	3	-	13	12	12	-	-	-	-	
Total²	134	197	99	76	41	120	158	204	113	64	44	20	
of which Non-OECD	103	134	43	26	12	48	98	140	40	56	9	47	
OECD Europe													
OECD Americas	99	38	76	63	84	126	126	130	60	158	122	37	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	3	1	1	1	3	0	-	-	-	-	1	-	
Non-OECD Europe	30	35	43	46	43	45	22	33	20	40	42	-1	
FSU	627	612	530	473	506	538	299	210	264	260	498	-238	
Saudi Arabia	193	141	169	171	184	221	231	222	230	134	114	20	
Algeria	2	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	71	156	160	159	143	200	206	291	136	273	133	140	
Singapore	17	19	37	50	28	33	33	34	38	41	99	-58	
OECD Asia Oceania	32	42	30	22	18	45	28	46	27	28	25	3	
Non-OECD Asia (excl. Singapore)	101	123	152	145	105	269	204	221	161	291	225	66	
Other	15	21	18	20	19	6	18	17	37	0	16	-15	
Total²	1190	1188	1217	1149	1132	1483	1168	1204	973	1226	1274	-48	
of which Non-OECD	1062	1107	1111	1064	1030	1312	1014	1029	886	1042	1127	-85	
OECD Asia Oceania													
OECD Americas	4	0	0	-	0	0	0	-	-	0	-	-	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	0	-	-	-	-	-	-	-	-	-	-	-	
ARA (Belgium Germany Netherlands)	0	0	0	0	0	0	0	-	-	0	-	-	
Other Europe	-	0	0	-	0	-	0	0	-	0	-	-	
FSU	2	1	-	-	-	-	-	-	-	-	-	-	
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	13	4	6	11	14	-	-	-	-	-	17	-	
Singapore	91	109	112	118	112	97	124	151	132	107	88	18	
Non-OECD Asia (excl. Singapore)	208	229	191	209	176	209	218	232	214	229	155	74	
Other	9	8	12	7	11	22	5	5	5	8	4	4	
Total²	328	352	322	345	314	327	347	387	351	344	264	80	
of which Non-OECD	323	352	322	345	314	327	346	387	351	344	264	80	
Total OECD Trade²	1652	1737	1637	1570	1487	1930	1673	1796	1437	1634	1582	52	
of which Non-OECD	1488	1593	1476	1436	1356	1687	1458	1556	1277	1442	1400	42	

¹ Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

² Total figure excludes intra-regional trade.

Table 11
REGIONAL OECD JET AND KEROSENE IMPORTS BY SOURCE¹
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier	
											Apr 22	change
OECD Americas												
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	5	1	0	-	-	1	1	-	2	3	-	-
ARA (Belgium Germany Netherlands)	-	5	0	0	-	0	-	-	-	-	-	-
Other Europe	4	7	1	1	-	4	11	1	31	4	-	-
FSU	0	4	1	-	-	-	-	-	-	-	-	-
Saudi Arabia	6	6	1	-	-	1	3	5	5	14	-	-
Algeria	1	4	0	-	-	1	-	-	-	-	-	-
Other Middle East and Africa	11	18	16	10	6	38	33	50	22	14	6	8
Singapore	4	2	1	2	1	2	-	-	-	4	3	1
OECD Asia Oceania	100	91	85	90	90	85	80	90	77	96	72	24
Non-OECD Asia (excl. Singapore)	23	27	24	18	17	44	48	72	36	8	35	-27
Other	4	1	3	4	1	1	4	-	-	-	-	-
Total²	159	165	134	123	115	177	178	218	173	142	116	27
of which Non-OECD	55	63	47	33	25	89	91	127	75	42	43	-1
OECD Europe												
OECD Americas	13	3	6	4	6	11	6	4	8	6	4	2
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	0	0	0	1	1	-	3	-	8	-	-	-
Non-OECD Europe	0	0	3	4	4	5	1	-	-	-	4	-
FSU	21	27	16	12	16	14	15	12	15	13	21	-8
Saudi Arabia	40	27	57	66	62	61	45	39	27	42	79	-37
Algeria	9	5	4	8	5	-	-	-	-	-	-	-
Other Middle East and Africa	155	153	172	183	208	145	186	232	201	159	193	-34
Singapore	10	11	13	11	25	10	11	-	25	-	30	-
OECD Asia Oceania	27	32	54	44	68	102	6	8	8	77	24	53
Non-OECD Asia (excl. Singapore)	50	61	121	93	125	187	107	150	47	199	100	99
Other	10	9	5	2	14	0	2	1	2	-	1	-
Total²	336	328	452	427	535	536	381	446	341	496	456	39
of which Non-OECD	297	294	393	383	461	423	370	435	328	414	438	-25
OECD Asia Oceania												
OECD Americas	-	0	0	0	0	0	0	0	0	0	0	0
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	0	0	-	-	0	-	-	-	-	-	-
Other Europe	-	0	0	1	0	-	-	-	-	-	2	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	-	1	0	0	-	0	0	0	0	0	0	0
Singapore	14	16	34	29	41	39	44	57	45	38	18	20
Non-OECD Asia (excl. Singapore)	28	34	38	38	20	72	83	73	58	55	28	27
Other	18	21	18	9	7	29	36	51	15	23	5	18
Total²	60	71	90	77	69	141	162	180	118	116	53	63
of which Non-OECD	60	71	89	76	69	141	162	180	118	116	51	64
Total OECD Trade²	555	565	676	628	718	855	722	844	633	754	625	129
of which Non-OECD	413	428	530	492	555	653	624	742	521	572	533	39

¹ Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

² Total figure excludes intra-regional trade.

Table 12
REGIONAL OECD RESIDUAL FUEL OIL IMPORTS BY SOURCE¹
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Feb 23	Mar 23	Apr 23	Year Earlier		
											Apr 22	change	
OECD Americas													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	52	34	53	53	36	69	44	30	32	19	22	-4	
ARA (Belgium Germany Netherlands)	12	6	12	11	14	18	9	17	3	2	-	-	
Other Europe	21	10	19	23	11	18	11	12	11	1	31	-30	
FSU	43	34	21	24	4	9	1	-	2	5	59	-54	
Saudi Arabia	2	0	7	12	8	6	3	-	-	-	6	-	
Algeria	2	7	4	10	4	1	18	24	22	2	0	2	
Other Middle East and Africa	10	8	4	1	3	5	15	9	22	12	3	9	
Singapore	1	0	-	-	-	-	-	-	-	-	-	-	
OECD Asia Oceania	-	0	-	-	-	-	-	-	-	10	-	-	
Non-OECD Asia (excl. Singapore)	-	2	2	-	2	6	4	2	2	4	-	-	
Other	-	-	-	-	-	-	-	-	-	-	-	-	
Total²	143	102	122	135	82	132	105	95	94	54	122	-68	
of which Non-OECD	110	86	90	101	56	96	86	66	80	42	91	-50	
OECD Europe													
OECD Americas	12	24	13	6	21	11	5	6	5	11	5	5	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	6	4	5	3	6	10	4	4	5	7	0	7	
Non-OECD Europe	13	12	31	35	47	25	20	17	20	19	45	-26	
FSU	141	247	121	119	89	63	45	40	44	65	118	-53	
Saudi Arabia	2	-	-	-	-	-	10	-	29	0	-	-	
Algeria	2	2	5	13	4	2	5	8	0	6	30	-24	
Other Middle East and Africa	13	14	21	34	9	31	27	42	40	59	13	46	
Singapore	3	3	2	0	2	0	1	-	-	-	0	-	
OECD Asia Oceania	4	3	8	7	7	11	11	11	6	15	1	14	
Non-OECD Asia (excl. Singapore)	-	0	2	0	3	6	8	0	7	-	-	-	
Other	93	59	45	33	51	67	15	2	40	1	39	-38	
Total²	288	368	254	251	238	227	151	129	197	184	253	-69	
of which Non-OECD	279	347	239	239	215	220	137	118	188	159	249	-89	
OECD Asia Oceania													
OECD Americas	-	-	0	-	0	-	-	-	-	-	-	-	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	0	-	-	-	-	-	-	-	-	-	-	-	
ARA (Belgium Germany Netherlands)	-	0	0	0	0	0	-	-	-	-	-	-	
Other Europe	-	-	0	-	0	0	-	-	-	-	-	-	
FSU	5	0	-	-	-	-	-	-	-	-	-	-	
Saudi Arabia	1	13	16	29	15	7	7	-	10	10	20	-10	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	38	30	7	6	2	13	9	-	17	-	-	-	
Singapore	18	29	22	22	18	14	39	68	22	23	25	-2	
Non-OECD Asia (excl. Singapore)	26	47	44	39	32	41	54	62	44	46	47	-1	
Other	-	-	-	-	-	-	-	-	-	-	-	-	
Total²	88	119	89	97	68	75	109	130	93	79	91	-13	
of which Non-OECD	88	119	89	97	68	75	109	130	93	79	91	-13	
Total OECD Trade²	519	588	464	482	387	434	365	354	384	317	466	-149	
of which Non-OECD	477	552	418	437	339	390	332	314	361	280	431	-151	

¹ Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

² Total figure excludes intra-regional trade.

Table 13
AVERAGE IEA CIF CRUDE COST AND SPOT CRUDE AND PRODUCT PRICES
(\$/bbl)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23
CRUDE PRICES													
IEA CIF Average Import¹													
IEA Europe	42.91	70.67	100.22	111.08	102.36	89.42	82.21	82.67	82.83	81.05	84.16		
IEA Americas	37.31	64.78	90.77	106.20	92.16	77.18	67.91	68.36	68.51	66.85	72.32		
IEA Asia Oceania	46.28	70.41	102.56	113.01	111.62	96.43	86.14	86.82	86.84	84.82	83.91		
IEA Total	42.19	68.87	98.2	110.17	101.9	87.96	79.25	79.74	79.87	78.12	80.98		
SPOT PRICES²													
North Sea Dated	41.76	70.82	101.10	113.90	100.66	88.36	81.11	82.86	82.50	78.29	84.84	75.49	74.73
North Sea Dated M1	42.90	71.51	101.17	114.15	100.16	89.54	82.37	84.19	83.74	79.51	84.29	75.57	75.13
WTI (Cushing) M1	39.25	68.10	94.67	108.77	91.91	82.82	75.96	78.11	76.84	73.37	79.44	71.59	70.24
WTI (Houston) M1	40.71	69.01	96.27	109.96	94.04	84.33	77.74	79.59	79.28	74.86	80.31	72.57	71.83
Urals	41.21	69.00	76.58	79.11	75.41	62.46	46.77	45.83	46.78	47.60	58.00	52.00	54.26
Dubai M1	42.36	69.35	96.32	108.12	96.79	84.68	80.20	80.41	82.05	78.42	83.40	74.94	74.88
PRODUCT PRICES²													
Northwest Europe													
Gasoline	44.64	80.07	117.16	146.06	114.30	99.41	96.17	97.41	96.35	94.89	103.69	97.06	98.12
Diesel	49.34	78.41	142.39	160.84	145.21	139.55	113.71	124.73	109.89	106.98	100.97	91.52	96.34
Jet/Kero	45.80	77.31	139.96	165.15	142.09	130.90	114.74	128.40	112.29	104.39	100.50	91.73	94.64
Naphtha	40.18	71.58	86.64	97.26	77.03	72.63	77.95	77.51	80.77	75.90	76.17	65.87	61.81
HSFO	33.99	61.18	76.72	92.98	70.72	59.67	60.51	60.32	60.62	60.60	70.30	63.97	69.68
0.5% Fuel Oil	48.50	76.78	107.14	126.09	106.56	87.19	83.99	85.56	85.41	81.33	83.18	76.06	78.84
Mediterranean Europe													
Gasoline	45.57	80.50	119.90	147.99	117.35	103.89	100.36	100.32	99.83	100.85	104.65	94.33	98.01
Diesel	48.82	77.93	136.16	156.54	136.06	130.46	112.08	123.96	108.43	104.41	99.34	90.68	95.30
Jet/Kero	45.57	77.19	140.07	164.87	142.30	131.28	114.89	128.65	112.51	104.39	100.50	91.73	94.64
Naphtha	39.04	70.65	84.74	94.95	75.37	70.36	75.83	75.83	78.84	73.22	73.96	64.60	60.56
HSFO	34.17	60.05	73.58	89.63	65.84	56.73	56.97	55.53	56.03	59.10	68.44	63.34	64.21
US Gulf Coast													
Gasoline	47.30	86.49	123.12	153.69	119.07	103.04	105.58	106.15	103.64	106.68	109.52	101.24	101.70
Diesel	50.26	84.73	145.79	167.83	146.96	141.65	120.39	133.56	116.17	112.42	105.72	96.61	98.68
Jet/Kero	46.30	77.95	140.06	163.46	140.49	134.73	125.00	148.09	117.43	111.18	99.44	91.39	94.14
Naphtha	40.12	72.24	91.33	105.15	84.63	76.09	80.92	84.75	80.36	78.04	77.93	74.69	72.30
HSFO	34.71	59.90	77.10	93.04	76.51	55.48	57.10	55.23	57.56	58.34	66.85	60.29	65.53
0.5% Fuel Oil	49.88	79.69	113.04	133.17	112.20	92.69	90.54	91.63	93.47	87.17	88.34	78.88	80.06
Singapore													
Gasoline	45.28	78.49	110.99	137.95	106.08	89.89	95.15	95.49	95.86	94.25	96.26	85.69	87.43
Diesel	49.60	77.80	135.52	159.99	138.17	126.25	108.44	116.12	107.64	102.80	98.44	89.05	92.31
Jet/Kero	45.06	75.29	126.96	147.63	129.57	118.30	106.38	115.07	106.77	98.86	96.68	88.49	90.06
Naphtha	40.94	71.02	83.96	92.73	74.63	70.92	74.21	72.52	76.98	73.19	71.48	62.12	57.01
HSFO	38.33	63.20	77.81	98.18	69.96	58.60	62.36	58.90	62.14	65.41	72.77	66.96	66.28
0.5% Fuel Oil	52.85	80.81	116.91	139.05	116.26	97.77	90.95	92.84	94.11	86.64	89.84	84.10	87.25

¹ IEA CIF Average Import price for Apr is an estimate.

IEA Europe includes all countries in OECD Europe except Estonia, Hungary and Slovenia.

IEA Americas includes United States and Canada.

IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.

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Table 14
MONTHLY AVERAGE END-USER PRICES FOR PETROLEUM PRODUCTS

June 2023

	NATIONAL CURRENCY ¹						US DOLLARS					
	Total Price	% change from		Ex-Tax Price	% change from		Total Price	% change from		Ex-Tax Price	% change from	
		May-23	Jun-22		May-23	Jun-22		May-23	Jun-22		May-23	Jun-22
GASOLINE ² (per litre)												
France	1.873	0.1	-11.3	0.870	0.1	-28.6	2.031	-0.1	-9.0	0.943	-0.0	-26.8
Germany	1.853	0.3	-6.3	0.834	0.6	-27.8	2.009	0.2	-3.9	0.904	0.5	-25.9
Italy	1.836	0.6	-9.2	0.777	1.2	-34.2	1.990	0.5	-6.9	0.842	1.0	-32.4
Spain	1.595	0.2	-24.4	0.845	0.2	-39.4	1.729	0.0	-22.4	0.916	0.1	-37.8
United Kingdom	1.430	-1.0	-22.3	0.662	-1.8	-34.1	1.806	0.2	-20.3	0.836	-0.6	-32.4
Japan	168.8	0.5	-2.1	96.9	0.8	-3.3	1.194	-2.3	-7.3	0.686	-2.0	-8.4
Canada	1.653	2.5	-21.3	1.153	3.2	-26.0	1.244	4.3	-24.1	0.868	5.0	-28.6
United States	0.943	0.4	-27.6	0.811	0.5	-30.7	0.943	0.4	-27.6	0.811	0.5	-30.7
AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)												
France	1.681	0.4	-18.9	0.792	0.6	-37.6	1.822	0.2	-16.8	0.859	0.5	-36.0
Germany	1.595	-	-21.5	0.795	-	-39.2	1.729	-0.1	-19.5	0.862	-0.1	-37.6
Italy	1.674	0.2	-14.4	0.755	0.3	-38.9	1.815	0.0	-12.2	0.818	0.1	-37.3
Spain	1.428	0.1	-29.4	0.801	0.1	-43.5	1.548	-0.1	-27.6	0.868	-0.0	-42.0
United Kingdom	1.458	-5.7	-24.3	0.685	-9.6	-36.2	1.841	-4.5	-22.3	0.865	-8.5	-34.6
Japan	149.7	1.1	-1.7	104.1	1.4	-2.3	1.059	-1.7	-6.9	0.737	-1.4	-7.4
Canada	1.524	-1.2	-32.2	1.073	-1.6	-38.4	1.147	0.6	-34.7	0.808	0.2	-40.6
United States	1.004	-2.9	-33.9	0.850	-3.4	-37.9	1.004	-2.9	-33.9	0.850	-3.4	-37.9
DOMESTIC HEATING OIL (per litre)												
France	1.135	-0.7	-32.7	0.790	-0.9	-36.8	1.230	-0.9	-31.0	0.856	-1.0	-35.2
Germany	0.975	0.3	-35.9	0.678	0.3	-44.3	1.057	0.1	-34.2	0.735	0.2	-42.9
Italy	1.441	0.7	-26.7	0.778	1.1	-35.6	1.562	0.6	-24.8	0.843	1.0	-33.9
Spain	0.927	0.1	-39.6	0.669	0.2	-42.8	1.005	0.0	-38.0	0.726	0.0	-41.3
United Kingdom	0.650	-7.9	-44.7	0.517	-9.3	-49.2	0.821	-6.7	-43.3	0.653	-8.1	-47.9
Japan ³	111.8	0.8	-1.8	98.8	0.8	-1.8	0.791	-2.0	-7.0	0.699	-2.0	-7.0
Canada	1.411	0.8	-32.5	1.241	0.8	-33.4	1.061	2.5	-34.9	0.934	2.5	-35.8
United States	-	-	-	-	-	-	-	-	-	-	-	-
LOW SULPHUR FUEL OIL FOR INDUSTRY ⁴ (per kg)												
France	0.660	1.0	-23.4	0.521	1.3	-28.0	0.716	0.9	-21.4	0.564	1.2	-26.1
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.614	1.3	-26.4	0.582	1.4	-27.5	0.665	1.2	-24.5	0.631	1.2	-25.6
Spain	0.573	-1.1	-18.5	0.556	-1.1	-19.0	0.621	-1.2	-16.4	0.602	-1.2	-16.9
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

¹ Prices for France, Germany, Italy and Spain are in Euros; UK in British Pounds, Japan in Yen, Canada in Canadian Dollars

² Unleaded premium (95 RON) for France, Germany, Italy, Spain, UK; regular unleaded for Canada, Japan and the United States.

³ Kerosene for Japan.

⁴ VAT excluded from prices for low sulphur fuel oil when refunded to industry.

Table 15
IEA Global Indicator Refining Margins

\$/bbl	2020	2021	2022	3Q22	4Q22	1Q23	2Q23	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23
NW Europe													
Light sweet hydroskimming	1.11	2.54	10.02	8.94	10.81	8.41	4.42	11.21	7.28	6.84	2.15	4.06	6.61
Light sweet cracking	2.07	3.51	16.18	15.19	18.77	14.08	7.07	18.20	11.96	12.16	5.47	6.44	8.95
Light sweet cracking + Petchem	3.23	6.55	18.41	16.98	19.60	14.69	7.03	18.44	12.24	13.40	6.45	6.56	7.93
Medium sour cracking*	4.30	6.11	39.13	37.59	38.87	19.33	11.87	24.48	15.99	17.54	10.93	10.64	13.75
Mediumsour cracking + Petchem*	5.44	9.07	41.30	39.33	39.69	19.94	11.82	24.72	16.27	18.77	11.89	10.76	12.73
Mediterranean													
Light sweet hydroskimming	2.36	2.90	9.05	7.56	10.84	8.45	5.24	11.21	7.49	6.77	3.22	4.48	7.59
Light sweet cracking	3.34	4.97	16.79	15.85	19.14	15.80	9.42	20.05	13.91	13.56	8.19	8.10	11.63
Medium sour cracking	5.70	5.68	21.64	20.49	24.36	21.78	12.02	27.89	18.75	18.83	11.03	10.46	14.25
US Gulf Coast													
Light sweet cracking	4.28	11.04	26.64	26.72	25.10	25.53	18.83	29.74	21.25	25.41	18.65	18.13	19.72
Medium sour cracking	6.61	15.79	35.70	35.32	35.01	33.40	23.21	40.17	29.28	30.92	23.75	22.27	23.71
Heavy sour coking	9.73	19.98	45.91	46.40	49.73	44.90	28.64	54.39	40.69	40.14	30.31	28.05	27.74
US Midwest													
Light sweet cracking	3.74	12.33	29.85	34.23	30.81	25.23	22.00	27.06	22.25	26.10	20.25	23.01	22.53
Heavy sour coking	13.26	26.02	50.57	53.96	55.59	46.84	36.17	54.29	42.96	43.57	36.77	37.14	34.61
Singapore													
Light sweet cracking	0.20	3.10	11.48	10.93	8.75	9.94	3.19	13.13	9.43	7.75	2.82	2.54	4.16
Light sweet cracking + Petchem	2.03	4.82	12.94	12.83	10.05	10.83	4.45	13.84	10.15	8.93	4.00	3.94	5.37
Medium sour cracking	1.80	3.92	12.87	7.91	10.83	11.35	5.04	14.78	10.21	9.52	4.77	4.99	5.33
Medium sour cracking + Petchem	3.61	5.61	14.31	9.79	12.11	12.23	6.29	15.48	10.93	10.69	5.93	6.37	6.53

Source: IEA, Argus Media Ltd prices.

Methodology notes are available at <https://www.iea.org/topics/oil-market-report#methodology>

*From 1 December, the basis has changed from Urals NWE to Argus Brent Sour

Table 16
REFINED PRODUCT YIELDS BASED ON TOTAL INPUT (% VOLUME)¹

	Feb-23	Mar-23	Apr-23	Apr-22	Apr 23 vs Previous Month	Apr 23 vs Previous Year	Apr 23 vs 5 Year Average	5 Year Average
OECD Americas								
Naphtha	0.9	1.1	1.1	1.0	0.0	0.1	-0.2	1.3
Motor gasoline	46.1	44.1	44.0	43.3	-0.1	0.7	0.4	43.6
Jet/kerosene	8.8	9.3	9.5	9.4	0.2	0.1	1.5	8.0
Gasoil/diesel oil	28.0	27.6	27.5	28.0	-0.2	-0.5	-2.2	29.6
Residual fuel oil	3.6	3.5	3.7	2.9	0.2	0.8	0.6	3.1
Petroleum coke	4.2	4.1	4.2	4.3	0.1	-0.2	-0.3	4.5
Other products	11.8	12.8	13.4	13.4	0.6	0.0	-0.1	13.5
OECD Europe								
Naphtha	9.2	9.4	8.9	8.1	-0.5	0.8	0.4	8.5
Motor gasoline	21.4	20.7	21.0	21.2	0.2	-0.3	1.1	19.8
Jet/kerosene	8.3	8.4	8.4	7.6	0.0	0.7	1.1	7.2
Gasoil/diesel oil	40.3	38.7	39.0	40.2	0.3	-1.2	-1.7	40.8
Residual fuel oil	8.0	8.3	8.1	8.4	-0.2	-0.3	-1.1	9.1
Petroleum coke	1.6	1.7	1.6	1.3	-0.1	0.3	0.3	1.3
Other products	14.0	15.3	15.5	15.1	0.2	0.4	0.0	15.4
OECD Asia Oceania								
Naphtha	16.0	17.0	17.3	16.7	0.2	0.5	0.7	16.5
Motor gasoline	21.4	20.8	20.7	20.5	-0.1	0.2	-0.2	20.9
Jet/kerosene	14.5	14.1	14.2	12.4	0.1	1.8	1.3	12.9
Gasoil/diesel oil	30.3	30.3	29.5	29.4	-0.8	0.1	-0.6	30.1
Residual fuel oil	8.2	8.4	8.0	8.7	-0.4	-0.8	0.1	7.8
Petroleum coke	0.4	0.4	0.4	0.5	0.0	-0.1	0.0	0.4
Other products	10.9	11.2	11.7	12.3	0.5	-0.6	-0.9	12.6
OECD Total								
Naphtha	6.3	6.4	6.3	5.9	-0.2	0.3	-0.1	6.4
Motor gasoline	33.8	32.8	32.8	32.4	0.0	0.4	0.9	31.9
Jet/kerosene	9.7	9.9	9.9	9.3	0.1	0.6	1.3	8.6
Gasoil/diesel oil	32.3	31.5	31.5	32.2	-0.1	-0.7	-1.8	33.3
Residual fuel oil	5.8	5.9	5.8	5.7	0.0	0.2	-0.1	5.9
Petroleum coke	2.7	2.7	2.7	2.7	0.0	0.0	0.0	2.7
Other products	12.4	13.3	13.8	13.8	0.5	0.0	-0.2	14.0

¹ Due to processing gains and losses, yields in % will not always add up to 100%

Table 17
WORLD BIOFUELS PRODUCTION
(thousand barrels per day)

	2022	2023	2024	4Q22	1Q23	2Q23	Apr 23	May 23	Jun 23
ETHANOL									
OECD Americas	1031	1027	1017	1041	1035	1020	1009	1026	1026
United States	1002	992	982	1012	1000	986	975	992	992
Other ¹	29	34	35	29	34	34			
OECD Europe	107	107	110	97	101	109	109	109	109
France	20	20	22	11	22	19	19	19	19
Germany	13	13	13	13	23	10	10	10	10
Spain	10	10	10	10	5	12	12	12	12
United Kingdom	9	9	9	9	2	11	11	11	11
Other ¹	54	54	55	54	49	56			
OECD Asia Oceania	4	4	4	4	4	5	5	5	5
Australia	4	4	4	4	4	4	4	4	4
Other ¹	0	1	1	0	0	1			
Total OECD Ethanol	1142	1138	1131	1142	1139	1134	1123	1140	1140
Total Non-OECD Ethanol	763	846	872	707	399	941	593	1086	1138
Brazil	528	588	603	472	141	683	335	828	880
China ¹	81	136	146	86	136	136			
Argentina ¹	21	22	23	21	22	22			
Other	133	100	100	127	100	100	258	258	258
TOTAL ETHANOL	1904	1984	2004	1849	1538	2075	1716	2226	2277
BIODIESEL									
OECD Americas	209	255	308	222	247	257	257	257	257
United States	202	240	291	216	243	239	239	239	239
Other ¹	6	15	18	6	4	18			
OECD Europe	307	313	323	296	272	326	326	326	326
France	48	48	48	45	51	47	47	47	47
Germany	64	63	62	63	53	66	66	66	66
Italy ¹	25	25	25	23	23	26			
Spain	31	32	35	31	26	34	34	34	34
Other	139	145	153	135	119	153	153	153	153
OECD Asia Oceania	14	13	13	12	11	14	14	14	14
Australia	0	0	0	0	0	0	0	0	0
Other ¹	14	13	13	12	11	14			
Total OECD Biodiesel	530	581	644	530	530	598	598	598	598
Total Non-OECD Biodiesel	513	580	630	513	580	580	580	580	580
Brazil	108	123	156	108	100	128	121	133	131
Argentina ¹	42	40	40	42	40	40			
Other ¹	363	417	434	363	440	411			
TOTAL BIODIESEL	1043	1161	1275	1043	1110	1177	1177	1177	1177
GLOBAL BIOFUELS	2947	3144	3278	2892	2648	3252	2894	3403	3455

¹ monthly data not available.

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Next Issue: 11 August 2023

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