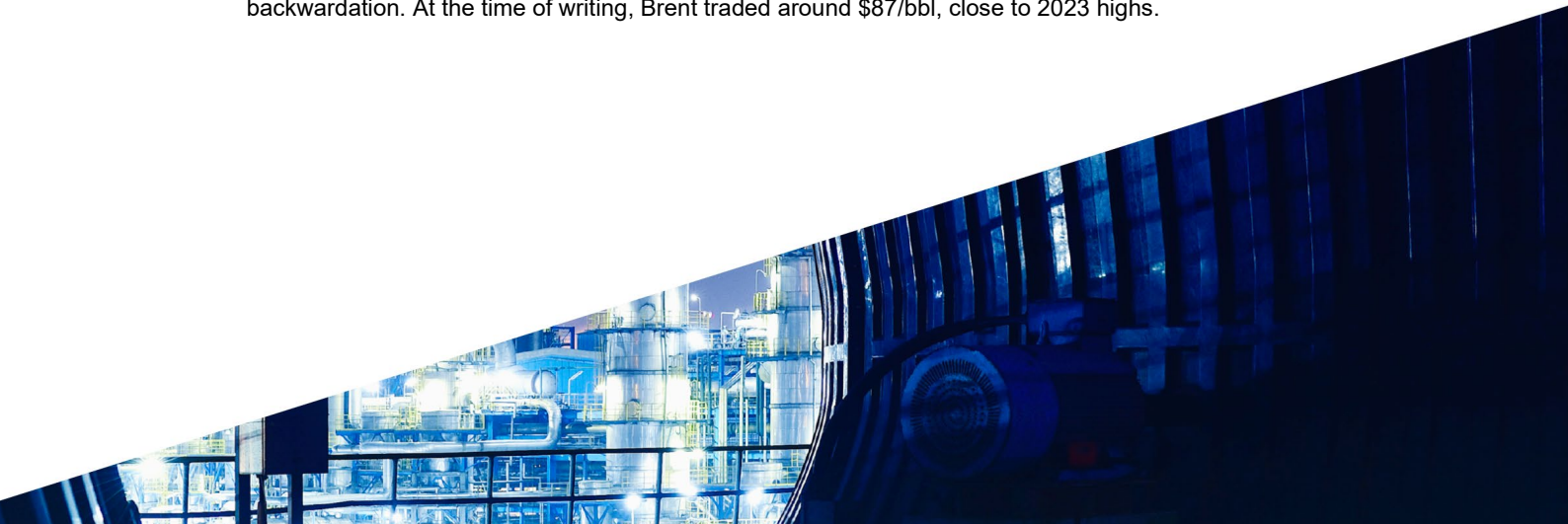


# Oil Market Report

11 August 2023

- World oil demand is scaling record highs, boosted by strong summer air travel, increased oil use in power generation and surging Chinese petrochemical activity. Global oil demand is set to expand by 2.2 mb/d to 102.2 mb/d in 2023, with China accounting for more than 70% of growth. With the post-pandemic rebound running out of steam, and as lacklustre economic conditions, tighter efficiency standards and new electric vehicles weigh on use, growth is forecast to slow to 1 mb/d in 2024.
- Global oil supply plunged by 910 kb/d to 100.9 mb/d in July. A sharp reduction in Saudi production in July saw output from the OPEC+ bloc fall 1.2 mb/d to 50.7 mb/d, while non-OPEC+ volumes rose 310 kb/d to 50.2 mb/d. Global oil output is projected to expand by 1.5 mb/d to a record 101.5 mb/d in 2023, with the US driving non-OPEC+ gains of 1.9 mb/d. Next year, non-OPEC+ supply is also set to dominate world supply growth, up 1.3 mb/d while OPEC+ could add just 160 kb/d.
- Refinery throughputs are set to reach a summer peak of 83.9 mb/d in August, up 2.4 mb/d since May and 2.6 mb/d higher than a year ago. The increase in refined product output has failed to ease product market tightness, pushing gasoline and middle distillate cracks to near record-highs. High sulphur fuel oil cracks provided further support to margins, which pushed above 2022 levels in July.
- Russian oil exports held steady at around 7.3 mb/d in July, as a 200 kb/d decline in crude oil loadings was offset by higher product flows. Crude exports to China and India eased m-o-m but accounted for 80% of Russian shipments. Higher oil prices, combined with narrowing discounts for Russian grades, pushed estimated export revenues up by \$2.5 bn to \$15.3 bn, \$4.1 bn below year-ago levels.
- Global observed oil inventories declined by 17.3 mb in June, led by the OECD. Non-OECD stocks and oil on water were largely unchanged. OECD industry stocks fell by 14.7 mb, in line with the seasonal trend, to 2 787 mb. Industry stocks were 115.4 mb below the five-year average, with product inventories particularly tight. Preliminary data suggest global inventories drew further in July and August.
- ICE Brent futures rallied by \$11/bbl to \$86/bbl in July as macroeconomic sentiment improved markedly with inflation easing. Tightening physical balances in the wake of Saudi output cuts and lower Russian loadings added additional momentum to the price rebound, pushing crude forward curves deeper into backwardation. At the time of writing, Brent traded around \$87/bbl, close to 2023 highs.



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# Tightening up

Global oil prices moved steadily higher during July and into early August, reflecting a market tightening long projected by this *Report*. Deepening OPEC+ supply cuts have collided with improved macroeconomic sentiment and all-time high world oil demand. North Sea Dated rose by \$10/bbl over the month to around \$85/bbl, its highest since April. With output cuts hitting the heavy sour crude market hard, Dubai crude is trading at a rare premium to Brent, while the price of Urals crude has breached the G7-led price cap now making all Russian oil exports ineligible for G7 and EU maritime services.

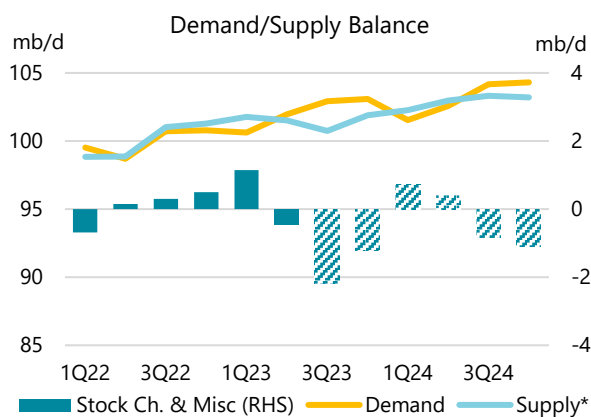
In July, oil supply from the OPEC+ alliance fell by 1.2 mb/d to a near two-year low as a voluntary reduction from Saudi Arabia came into effect. At 50.7 mb/d, the bloc's production was down more than 2 mb/d from the start of the year. Over the same period, producers outside the group ramped up output by 1.6 mb/d to 50.2 mb/d but limited non-OPEC+ gains are expected for the remainder of the year. The US,

Brazil and Guyana lead the expansion, with exports from the trio rising by roughly 15% y-o-y to more than 9 mb/d in July, boosting the availability of light sweet grades in the Atlantic Basin. The US accounts for nearly 80% of global 2023 supply growth, or 1.2 mb/d of the 1.5 mb/d total. Next year, that share is set to slip as activity slows in the shale patch.

World oil demand hit a record 103 mb/d in June and August could see yet another peak. After months of lacklustre readings, OECD demand was revised up for May and June, with overall consumption returning to growth in 2Q23 after two quarters of contraction. Chinese demand was also stronger than expected, reaching fresh highs despite persistent concerns over the health of the economy. For the year, global oil demand looks on track to expand by 2.2 mb/d to 102.2 mb/d, its highest ever annual level. With the post-pandemic recovery having largely run its course and as the energy transition gathers pace, growth will slow to 1 mb/d in 2024.

Refiners are struggling to keep up with demand growth, as the shift to new feedstocks, outages and high temperatures have forced many operators to run at reduced rates. Tight gasoline and diesel markets have pushed margins to six-month highs. While naphtha remains under pressure, due to competition from cheap LPG and weak petrochemical activity outside of China, high-sulphur fuel oil has tightened significantly as refiners replace lost OPEC+ crude with lighter and sweeter grades. High sulphur fuel oil in Rotterdam rose above North Sea Dated for the first time in 28 years.

As a result, crude and products inventories have drawn sharply. In July, observed oil stocks decreased for a third consecutive month, with OECD industry stocks more than 100 mb below the five-year average. Market balances are set to tighten further into the autumn as Saudi Arabia and Russia extend supply cuts at least through September. An ample OPEC+ spare capacity cushion of 5.7 mb/d means there is significant scope for the alliance to raise output later in the year. Additional supplies of heavy sour crude would allow refiners to boost activity and help ease product market tensions. But if the bloc's current targets are maintained, oil inventories could draw by 2.2 mb/d in 3Q23 and 1.2 mb/d in the fourth quarter, with a risk of driving prices still higher.

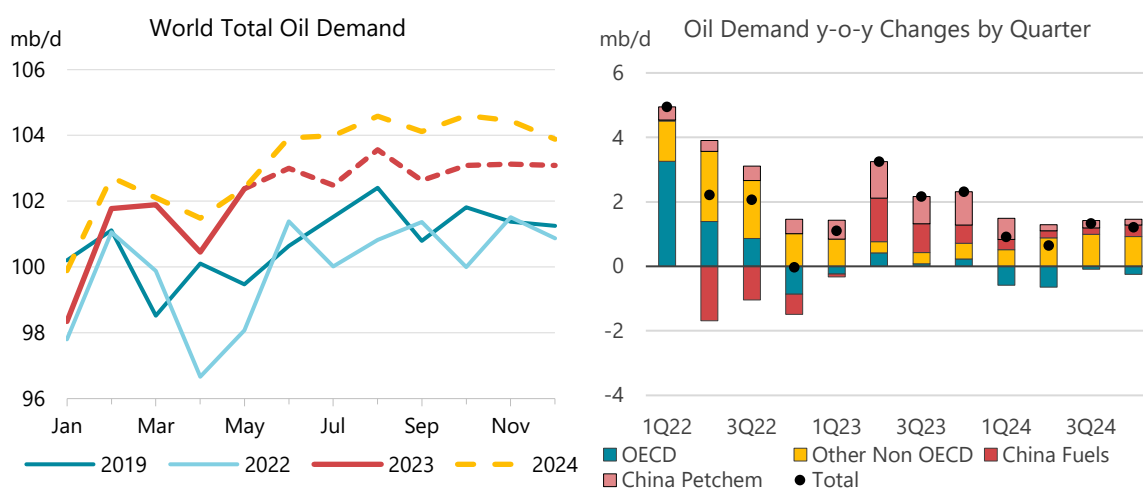


\* Assumes OPEC+ targets and voluntary cuts in place through 2024.

# Demand

## Overview

World oil demand rose to a record 103 mb/d in June, led by stronger than expected Chinese and OECD growth. Following two consecutive quarters in contraction, OECD demand was revised upwards for May and June with overall consumption returning to growth in 2Q23. Chinese demand also reached fresh highs despite concerns over the health of the economy. For 2023 as a whole, global oil demand is set to expand by 2.2 mb/d to 102.2 mb/d. With the post-pandemic rebound largely completed and as multiple headwinds challenge the OECD's outlook, oil consumption gains slow markedly to 1 mb/d in 2024, a downward revision of 150 kb/d from last month's *Report*.



OECD delivery data were mixed, showing a marked contrast between products and regions. European gasoil usage had a brief respite from its months-long slump in May, returning briefly to year-on-year (y-o-y) growth of 90 kb/d. However, in the US, preliminary June/July road fuels deliveries point to a mid-summer demand downturn, with gasoline about 70 kb/d below our forecast. Similarly, firm ethane 2Q23 usage data indicated that the US petrochemical slowdown is bottoming out - contrasting sharply with a fall in naphtha consumption in Europe and Asia Oceania to multidecade lows. Total OECD demand is on course to rise by 120 kb/d in 2023 – 30 kb/d below our estimate in last month's *Report* and likely recording its final year of growth. Subsequently, the bloc's oil consumption is set to decline by 390 kb/d in 2024. This is 120 kb/d below last month's estimate, largely due to July's oil price rally bringing additional demand destruction. Higher prices add to structural headwinds, as lacklustre economic conditions, tighter efficiency standards and growing electric vehicle numbers weigh on use.

The global economic outlook remains challenging in the face of soaring interest rates and tighter bank credit, squeezing businesses that are already having to cope with sluggish manufacturing and trade. The *HCOB Flash Eurozone Purchasing Managers' Index* (PMI) fell by one point month-on-month (m-o-m) to an eight-month low of 48.9 in July, indicating a deepening downturn. The index presented the now familiar disparity between expansionary services (51.1) and sharply contracting manufacturing (42.7, a 38-month low). The global slump is not improved by China's faltering post-pandemic recovery. Nonetheless, financial markets rallied across the board in July on the view that central bank policy is about to turn more dovish, as inflation readings are falling rapidly. US consumer prices rose by 3% y-o-y in June, their slowest pace in two years, having peaked at

9.1% in June 2022. Eurozone inflation slowed to 5.3% y-o-y in July, the lowest since the Ukraine invasion but remaining well above the Bank's 2% target. Although both the US Federal Reserve and the European Central Bank (ECB) raised their key rates to 22-year highs in July, investors now think that the hiking cycle has peaked, with the expectation of a soft landing becoming widespread. Regardless, economic consensus remains for subpar GDP growth into next year, as monetary policy is transmitted to the real economy with substantial lags. A case in point is that no Group of Seven (G7) country will see its 2024 GDP growth exceed 1%, according to consensus forecasts.

Global Demand by Region								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
Africa	4 079	4 311	4 307	4 482	- 4	174	-0.1	4.0
Americas	30 323	31 314	31 560	31 337	246	- 223	0.8	-0.7
Asia/Pacific	35 960	36 101	38 050	39 082	1 949	1 032	5.4	2.7
Europe	13 964	14 302	14 231	14 104	- 71	- 127	-0.5	-0.9
FSU	4 891	4 942	4 947	4 917	5	- 30	0.1	-0.6
Middle East	8 436	8 972	9 070	9 239	98	169	1.1	1.9
<b>World</b>	<b>97 655</b>	<b>99 943</b>	<b>102 166</b>	<b>103 160</b>	<b>2 223</b>	<b>994</b>	<b>2.2</b>	<b>1.0</b>
OECD	44 851	46 002	46 126	45 737	123	- 389	0.3	-0.8
Non-OECD	52 804	53 941	56 041	57 423	2 100	1 383	3.9	2.5

Chinese oil demand, released from 2022's wave of lockdowns and in the throes of a boom in petrochemical activity, reached a new record level of 16.6 mb/d in June. The world's second largest oil consumer continues to outstrip our projections and should account for more than 70% of global 2023 demand gains. Following a 420 kb/d decline in 2022, China reclaims its preeminent role in global growth. During 2018 and 2019, the country contributed more than 75% to the total increase in global demand and in 2020 it was able to buck the global collapse in consumption, posting a modest overall rise. This primacy is set to continue into 2024, with almost 60% of the worldwide advance taking place in China.

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	13 755	14 145	14 635	14 868	490	234	3.5	1.6
Naphtha	7 008	6 787	7 150	7 552	363	402	5.3	5.6
Motor Gasoline	25 741	26 251	26 754	26 717	503	- 37	1.9	-0.1
Jet Fuel & Kerosene	5 173	6 126	7 120	7 249	994	128	16.2	1.8
Gas/Diesel Oil	27 460	28 185	28 288	28 439	104	151	0.4	0.5
Residual Fuel Oil	6 236	6 508	6 544	6 601	35	57	0.5	0.9
Other Products	12 282	11 941	11 676	11 735	- 265	59	-2.2	0.5
<b>Total Products</b>	<b>97 655</b>	<b>99 943</b>	<b>102 166</b>	<b>103 160</b>	<b>2 223</b>	<b>994</b>	<b>2.2</b>	<b>1.0</b>

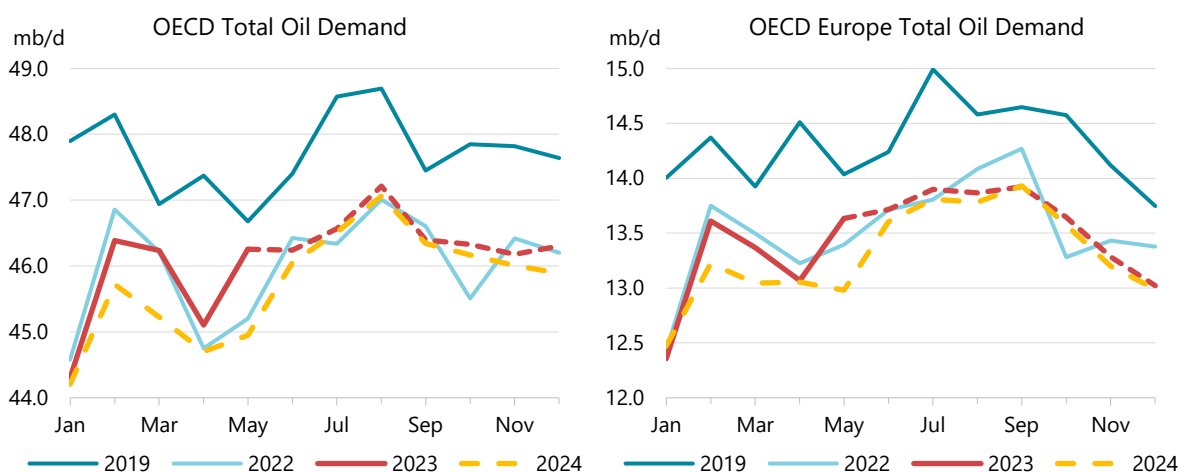
Beyond the immediate rebound from anti-Covid restrictions, Chinese demand growth is dominated by petrochemical feedstocks. Naphtha, LPG and ethane will together account for 57% of the national increase in 2023 (900 kb/d of the 1.6 mb/d total) and will continue to represent more than half of the 2024 rise. Indeed, demand increases for these feedstocks in China will outpace total oil demand growth for the rest of the world in 2023. This stands at the centre of a broader global trend. World oil demand will exceed 2019 levels by 1.4 mb/d in 2023, with LPG/ethane alone climbing by almost exactly this amount and naphtha up by a further 580 kb/d. The large share of LPG/ethane in total demand growth cushions the impact on benchmark crude oil pricing and refinery utilisation. Surging

NGL output means that LPG/ethane markets remain amply supplied and continue to build pressure on naphtha use.

This month, we have revised historical demand to align with updated annual data for 2021 from the IEA *World Energy Statistics 2023* publication and whole year figures from OECD countries for 2021 and 2022. Demand for 2021 and 2022 has been raised by 90 kb/d each. The split between OECD and non-OECD was roughly 50 kb/d and 40 kb/d, respectively.

## OECD

OECD oil deliveries returned to growth in 2Q23 after two consecutive quarters in contraction, rising by 420 kb/d y-o-y. Gains were largely driven by the US (+360 kb/d y-o-y), counterbalancing lacklustre oil use in Europe and Asia. For 2023 as a whole, we see OECD demand rising by 120 kb/d to 46.1 mb/d, marking the bloc's last year of growth. In 2024, consumption is set to decline by 390 kb/d, as tepid economic activity, rising fuel efficiencies and a rapidly expanding electric vehicle fleet weigh on road fuels.

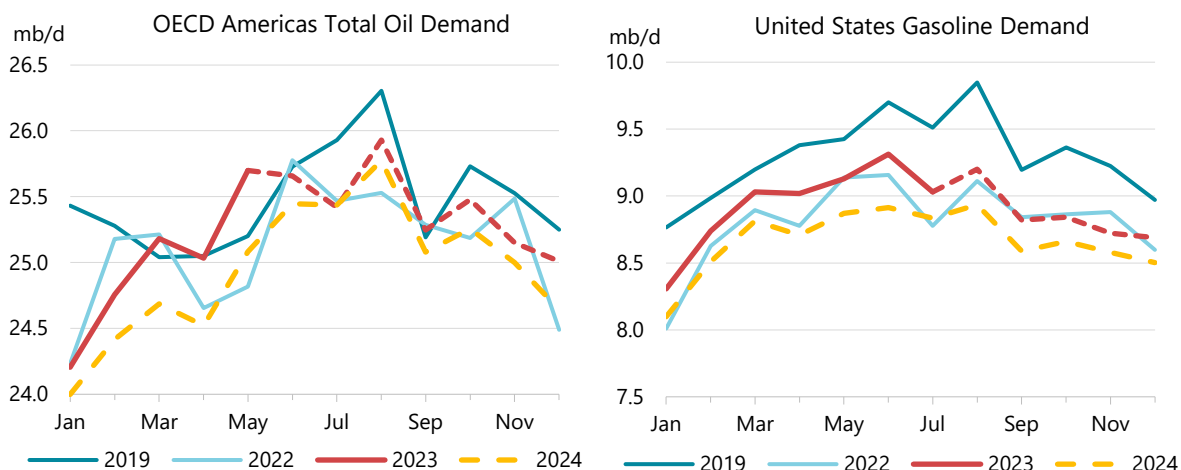


**OECD Europe's** oil demand increased marginally in 2Q23, at 30 kb/d y-o-y. Firm growth in jet/kerosene of 130 kb/d y-o-y saw deliveries recover to 90% of pre-pandemic levels, but these gains were largely offset by gasoil's ongoing slump, down 100 kb/d y-o-y. Among petrochemical feedstocks, LPG/ethane usage rose 160 kb/d y-o-y thanks to the product's cost advantage to naphtha. Naphtha deliveries fell 140 kb/d to a multi-decade monthly low of 790 kb/d in May.

We expect European demand growth to descend back into negative territory in 2H23, resulting in an average 2023 decrease of 70 kb/d y-o-y, to 13.4 mb/d. Gasoil (-190 kb/d y-o-y) leads this decline, as Europe's industrial outlook remains unrelentingly gloomy, with manufacturers squeezed by rising wage bills, restricted access to bank credit and tepid end-user demand for their products. A deepening credit crunch also augurs badly for the region's businesses, with the ECB reporting that demand for business loans in the eurozone fell to record lows in 2Q23.

The eurozone's GDP grew by 0.3% quarter-on-quarter (q-o-q) in 2Q23 and exhibited considerable variation between countries. While the French economy expanded by a better-than-expected 0.5%, German growth was flat. Germany has emerged as the principal drag on the eurozone economy. The International Monetary Fund (IMF) sees German GDP shrinking by 0.3% y-o-y in 2023, the only contraction among G7 members. Accordingly, Germany's 2023 oil consumption decline of 70 kb/d y-o-y is also the largest among OECD member countries. Early-year optimism in the wake of

collapsing natural gas prices and China's reopening has now completely evaporated as Germany's widely anticipated economic upswing has failed to materialise. The country's reliance on manufacturing and trade exposes its cyclical vulnerability amid a slump in global demand for its goods, while the expensive euro acts as a further impediment for the nation's exporters. Echoing the gloom, the *Ifo Business Climate Index* reported business morale falling by about a point in July to an eight-month low. Oil demand is set to fall in 2024 too, by 40 kb/d y-o-y.



Demand in the **OECD Americas** climbed by 390 kb/d y-o-y in 2Q23. Gains were concentrated in the US (360 kb/d y-o-y) and mainly in gasoline and LPG/ethane. These two products were also the key growth drivers in **Canada** (150 kb/d y-o-y in total), counterbalancing shrinking **Mexican** usage (-140 kb/d y-o-y).

LPG/ethane (+140 kb/d y-o-y) led **US** product demand growth in 2Q23, highlighting the resilience of the country's petrochemical industry amid an unprecedented global slump. Further underscoring the sector's competitiveness, the US was the only supplier to significantly increase its exports of major olefin derivatives to China between 1H21 and 1H23, according to data from *Global Trade Tracker (GTT)*.

While gasoline demand rose by 130 kb/d y-o-y in 2Q23, this compares to a weak baseline as last year's driving season was particularly tepid. Moreover, preliminary delivery data point to a m-o-m fall in July that is well in excess of its seasonal norm. Higher pump prices – up 15% year-to-date according to data from *GlobalPetrolPrices.com (GPP)* – probably contributed to this slump, with working from home and increasing fuel efficiencies also hindering consumption. Our forecast sees the June-August driving season averaging 9.2 mb/d. This compares to 9 mb/d last year and 9.3 mb/d in 2021.

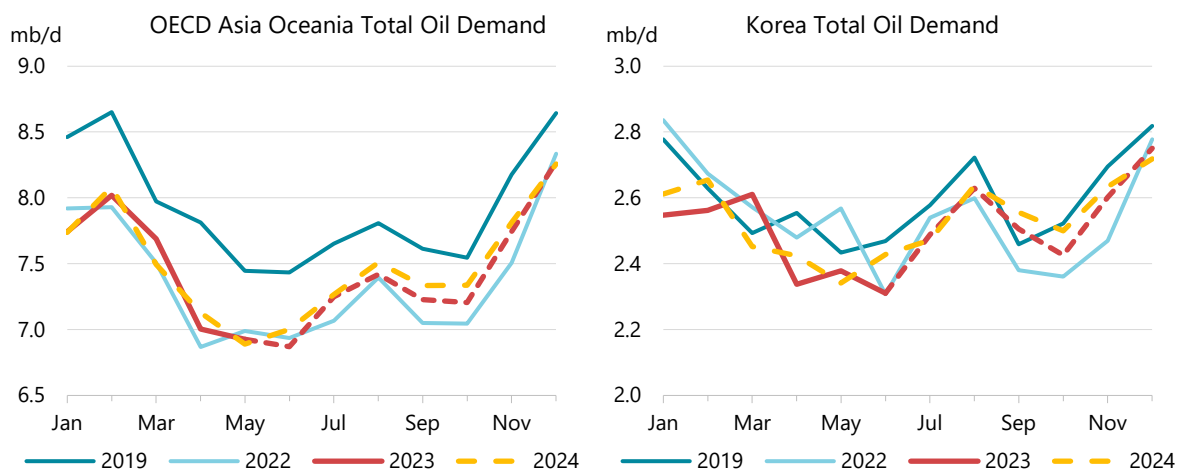
Gasoil demand fell by 40 kb/d y-o-y in 2Q23 and preliminary delivery data for July indicate a weakness beyond the fuel's typical summer nadir. This is corroborated by slowing industrial activity, as the *S&P Global US Manufacturing PMI* recorded its third straight contractionary month in July. At the same time, trucking indices point to a modest recovering in road fuel demand for June. The American Trucking Associations' seasonally adjusted *For-Hire Truck Tonnage Index* rose 2.1% m-o-m in June but this was still down 0.8% y-o-y, its fourth consecutive y-o-y decline. In a similar vein, the *Cass Shipments Index* dropped 4.7% y-o-y in June. Recent price strength is a further drag on growth, as diesel prices, having fallen below gasoline in June, returned to their usual premium at the end of July, according to data from *GPP*.

US economic indicators remain mostly benign, culminating in solid GDP growth of 2.4% in 2Q23. Bolstered by a historically tight labour market, consumer confidence climbed to its highest level in 17 months in June. While a soft landing beckons, this is certainly not a given. A significant number of economists still see a recession on the cards in 4Q23/1Q24. Wage growth, while slowing, may not ease as fast as expected, keeping the Fed in a hawkish mode for longer. Regardless, elevated interest rates and tighter bank lending will eventually take their toll on economic growth, with analyst consensus seeing a significant slowdown in GDP growth in 2024, to about 0.5%. We have marginally reduced our forecasts for US oil demand growth for 2023 by 20 kb/d to 90 kb/d y-o-y, largely due to downgrades for gasoline (-30 kb/d y-o-y) and gasoil (-20 kb/d y-o-y). For 2024 we anticipate a decline of 250 kb/d y-o-y, as higher oil prices and increased efficiency standards, in addition to insipid economic activity, weigh on consumption.

Growth in **OECD Asia Oceania** was flat y-o-y in 2Q23, as gains in **Australia** and **Japan** were offset by a decline in **Korea**. We see demand growth turn positive again in 2H23, averaging 70 kb/d and 40 kb/d in 2023 and 2024, respectively.

**Australian** consumption increased by 70 kb/d y-o-y in 2Q23 due to strength in gasoil and jet/kerosene (+30 kb/d each).

**Korean** demand fell 110 kb/d y-o-y in 2Q23, weighed down by declines in LPG (-30 kb/d) and naphtha (-80 kb/d). While Korean naphtha demand remains the highest of any OECD country, deliveries of 1.1 mb/d in June were the lowest since 2014 on a seasonal basis. The country is seeing its petrochemical exports displaced by soaring domestic Chinese production, while steam cracker maintenance acted as an additional weight on usage. Amid muted GDP growth (our models assume about one percent for 2023) we have lowered our 2023 demand growth estimate by 40 kb/d y-o-y and now see annual consumption decline by 30 kb/d.



While **Japan's** oil demand rose by 30 kb/d y-o-y in 2Q23, deliveries were 120 kb/d lower y-o-y in June according to preliminary data. Similar to Korea, naphtha (-100 kb/d y-o-y in June) was the main drag on growth. Japan's economic outlook is as subdued as Korea's, with consensus GDP growth projections of around one percent for 2023 and 2024. Consumer prices rose 3.3% y-o-y in June (exceeding US levels for the first time in eight years) and have now been above the Bank of Japan's (BOJ) 2% target for more than 15 months. The BOJ is not yet prepared to declare victory over the ghoulish spectre of deflation that has haunted Japan's economy for decades. For now, the BOJ perseveres in its global outlier status, sticking to its ultra-loose monetary policy of negative interest rates. However, a surprise easing of its yield curve control policy at month-end sent the yen soaring,



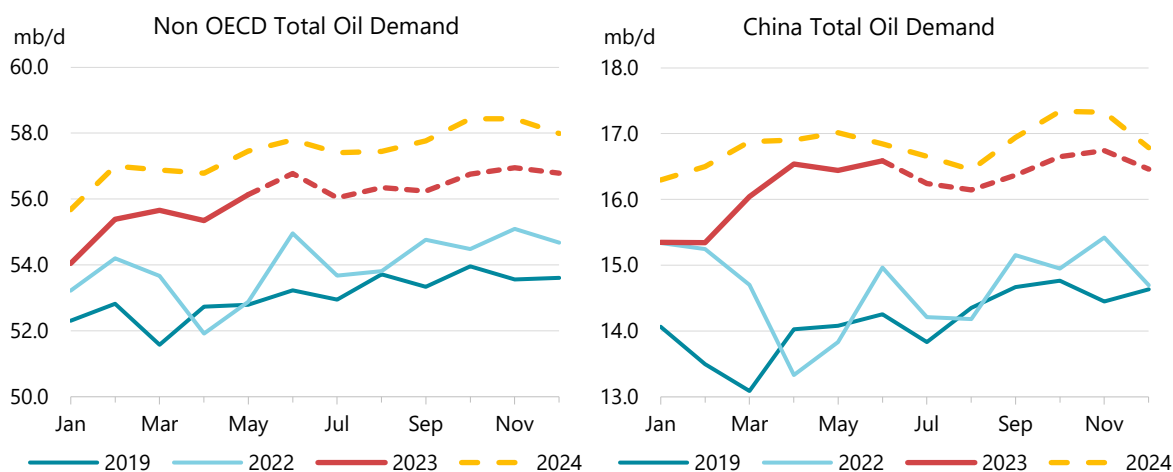
as financial markets anticipate a more substantial BOJ policy shift later this year. We see average demand growth of 30 kb/d y-o-y in 2023 and 20 kb/d in 2024, roughly similar to last month's *Report*.

OECD Demand based on Adjusted Preliminary Submissions - June 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
<b>OECD Americas</b>	<b>10.99</b>	<b>1.1</b>	<b>2.03</b>	<b>0.8</b>	<b>3.14</b>	<b>-8.8</b>	<b>1.74</b>	<b>-4.3</b>	<b>3.78</b>	<b>3.1</b>	<b>0.51</b>	<b>-2.8</b>	<b>3.47</b>	<b>0.9</b>	<b>25.66</b>	<b>-0.5</b>
US*	9.31	1.7	1.77	2.4	2.36	-7.1	1.41	-5.1	3.00	2.6	0.32	-1.0	2.68	-3.0	20.85	-0.3
Canada	0.85	2.5	0.16	-1.7	0.23	-18.9	0.26	-2.0	0.41	4.3	0.02	-59.4	0.59	21.4	2.51	2.4
Mexico	0.75	-7.5	0.06	-34.2	0.37	-16.6	0.07	4.4	0.32	7.3	0.17	3.7	0.17	0.0	1.91	-6.6
<b>OECD Europe</b>	<b>2.15</b>	<b>-1.1</b>	<b>1.52</b>	<b>9.4</b>	<b>4.94</b>	<b>-3.3</b>	<b>1.18</b>	<b>11.7</b>	<b>1.05</b>	<b>5.7</b>	<b>0.80</b>	<b>0.3</b>	<b>2.07</b>	<b>-5.5</b>	<b>13.71</b>	<b>0.0</b>
Germany	0.46	-9.2	0.21	3.6	0.69	-6.8	0.31	46.3	0.09	-16.6	0.06	11.3	0.34	-6.4	2.16	-1.3
United Kingdom	0.30	-0.2	0.30	11.9	0.46	-7.4	0.14	5.1	0.08	-11.7	0.03	16.4	0.12	10.3	1.42	0.4
France	0.27	8.3	0.15	13.4	0.77	-0.6	0.07	43.0	0.11	8.8	0.03	-17.4	0.23	-7.4	1.64	2.5
Italy	0.20	4.5	0.11	13.2	0.51	0.2	0.06	4.4	0.10	3.6	0.06	-8.0	0.23	1.8	1.26	2.2
Spain	0.14	-1.0	0.16	13.6	0.47	-4.2	0.18	3.6	0.06	12.3	0.14	-6.2	0.17	-9.3	1.32	-1.2
<b>OECD Asia &amp; Oceania</b>	<b>1.46</b>	<b>3.9</b>	<b>0.58</b>	<b>19.8</b>	<b>1.47</b>	<b>4.0</b>	<b>0.43</b>	<b>5.1</b>	<b>0.65</b>	<b>-7.0</b>	<b>0.45</b>	<b>-4.8</b>	<b>1.84</b>	<b>-10.8</b>	<b>6.87</b>	<b>-0.9</b>
Japan	0.81	1.8	0.24	10.5	0.43	0.5	0.29	3.1	0.31	-8.6	0.24	-3.5	0.70	-15.2	3.02	-3.7
Korea	0.25	23.1	0.15	23.3	0.43	14.7	0.07	24.3	0.27	-8.0	0.17	-6.0	0.97	-10.0	2.31	0.1
Australia	0.27	-2.7	0.14	32.8	0.55	-0.3	-	-	0.05	-1.9	0.02	-22.6	0.11	2.8	1.15	2.4
<b>OECD Total</b>	<b>14.60</b>	<b>1.0</b>	<b>4.13</b>	<b>6.3</b>	<b>9.55</b>	<b>-4.2</b>	<b>3.35</b>	<b>2.0</b>	<b>5.47</b>	<b>2.3</b>	<b>1.76</b>	<b>-1.9</b>	<b>7.38</b>	<b>-4.0</b>	<b>46.24</b>	<b>-0.4</b>

\* Including US territories

## Non-OECD

Total non-OECD oil demand rose by 1.1 mb/d q-o-q in 2Q23, to 56.1 mb/d (+2.8 mb/d y-o-y). This was powered by resurgent post-lockdown mobility and the rapid expansion of petrochemical activity in China (+940 kb/d q-o-q, +2.5 mb/d y-o-y). China will account for 75% of total non-OECD gains in 2023, at 2.1 mb/d. Non-OECD countries are set to remain the major engines of oil demand growth in 2024, rising 1.4 mb/d.



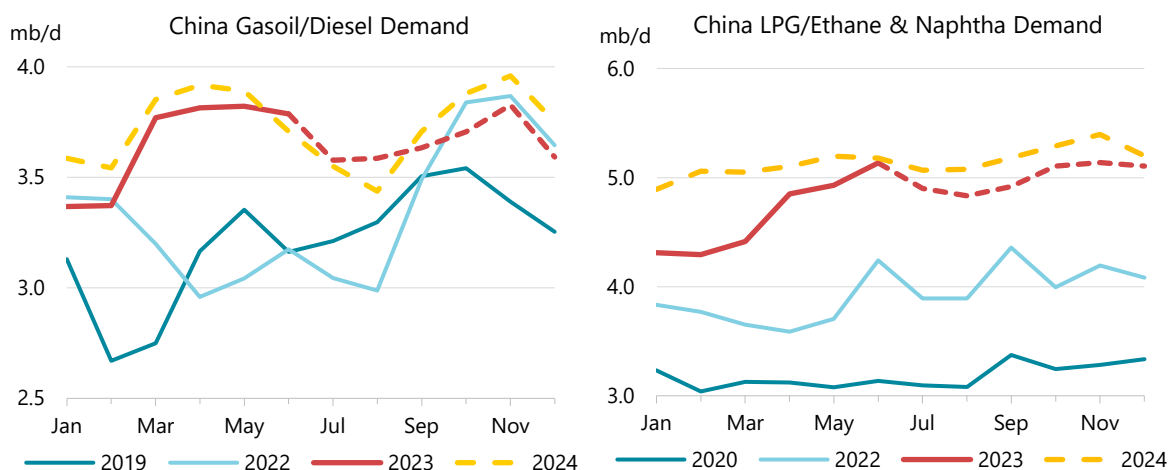
**Chinese** apparent oil demand remained resilient in June, rising to yet another all-time monthly high of 16.6 mb/d (+1.6 mb/d y-o-y), despite economic challenges. This level was 270 kb/d ahead of the forecast in last month's *Report* and we have slightly increased our expectations for average 2023 growth, to 1.6 mb/d. Growth will slow to 580 kb/d in 2024, in large part reflecting the completion of the post-pandemic recovery, but China will nevertheless account for more than half of the global increase.

Record oil demand comes despite the cooling of economic optimism following the initial post-lockdown recovery. This rebound in activity looks set to be complete according to

high-frequency mobility indicators. Meanwhile, PMI readings remain subdued. The *Caixin China General Manufacturing PMI* dropped from 50.5 in June to 49.2 in July and the *Services PMI* edged up from 53.9 to 54.1. In this context, Beijing has signalled new measures to support economic growth and ward off deflation. Nevertheless, our expectations for higher 2023 oil consumption are founded on the return to full mobility so far this year and the accelerating surge in import-substituting petrochemical activity, following several years of strategic investments.

Demand for the major transport fuels was largely stable m-o-m (gasoline +80 kb/d, gasoil -30 kb/d and jet/kerosene +40 kb/d) in June. Usage is currently close to peak-2021 levels for these products and further gains will likely be restricted to jet/kerosene. Indeed, we project modest declines in gasoil (-150 kb/d) and gasoline (-50 kb/d) use in 2H23 compared with 2Q23 levels. The lukewarm performance of the wider economy and reports of rising inventories suggest that much of the spike in refinery diesel and gasoline output went into domestic product stocks. Indeed, in the absence of these assumed inventory builds, overall June demand would have been about 400 kb/d higher, at close to 17 mb/d.

The narrow increase in jet/kerosene consumption reflects the fact that following a spike in the early-May holiday period, flight numbers were largely steady through the remainder of the month and June. However, a resumption of the upward domestic trend and an acceleration in international traffic from late June onwards will support continued demand gains through the summer. Jet/kerosene is projected to contribute 320 kb/d to China's growth this year, eclipsed only by petrochemicals, and will exceed 2019 levels by 4Q23.



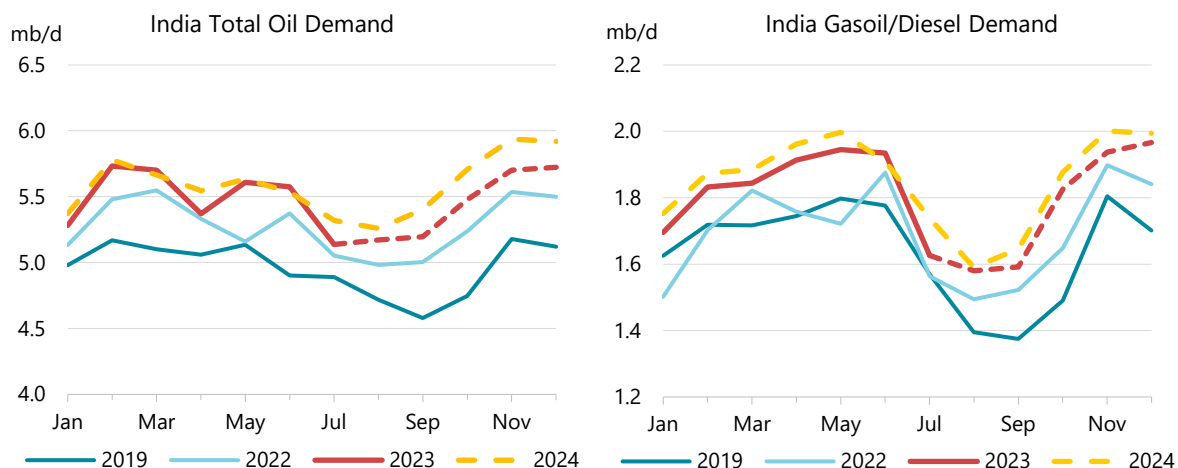
The recent upswing in Chinese petrochemical feedstock uptake continued in June, with naphtha surging by 230 kb/d m-o-m and LPG/ethane volumes dipping by 20 kb/d following the remarkable gains of April and May (+560 kb/d across the two months). Naphtha demand growth has been largely sourced from sharply higher local output, whereas incremental LPG and ethane use have overwhelmingly come from overseas.

*Kpler* ship tracking data show that incremental import volumes are largely arriving at ports associated with petrochemical facilities. Most of these extra flows appear to be to supporting new operations or better utilisation of existing units in the wake of more favourable LPG cracking and propane dehydrogenation margins. There is also evidence of some tertiary stock building, including a handful of cases where plants that are expected to start-up in the near future have received substantial deliveries. Since the demand contributed by these consumer stock builds is less sustainable than regular use, we project a modest decline in total feedstock use in July and August before the rising trend resumes as additional plants come online.

Overall annual growth for Chinese LPG/ethane and naphtha demand is expected at 900 kb/d this year (+490 kb/d naphtha and +410 kb/d LPG/ethane). Much of this new production is replacing imported polymer volumes (see *OMR 13 July 2023, Petrochemical world map being redrawn as massive wave of Chinese plants ramp up*). This effectively relocates oil use to China from elsewhere. The current anaemic feedstock consumption in the rest of the world is a consequence of this dramatic shift. Naphtha demand outside of China is expected to decline by 130 kb/d this year, after a fall of 460 kb/d in 2022, and a meagre rise of 80 kb/d in non-Chinese LPG/ethane use in 2023 will be heavily concentrated in North America.

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	8 208	8 486	8 887	9 151	401	264	4.7%	3.0%
Naphtha	3 619	3 752	4 193	4 527	441	333	11.8%	7.9%
Motor Gasoline	12 084	12 346	12 726	12 970	380	244	3.1%	1.9%
Jet Fuel & Kerosene	2 148	2 317	2 976	3 077	659	101	28.4%	3.4%
Gas/Diesel Oil	14 276	14 881	15 260	15 595	379	335	2.5%	2.2%
Residual Fuel Oil	4 509	4 673	4 757	4 810	84	52	1.8%	1.1%
Other Products	7 959	7 486	7 241	7 295	- 244	53	-3.3%	0.7%
<b>Total Products</b>	<b>52 804</b>	<b>53 941</b>	<b>56 041</b>	<b>57 423</b>	<b>2 100</b>	<b>1 383</b>	<b>3.9%</b>	<b>2.5%</b>

Amid heavier-than-usual monsoon rains, **Indian** oil use declined by 440 kb/d m-o-m in July. Despite this, deliveries rose by 80 kb/d compared with 2022. Demand for gasoil was most impacted (-310 kb/d m-o-m, +60 kb/d y-o-y). Inclement weather and flooding disrupted freight operations and commercial activity while agricultural demand, especially for diesel-fuelled irrigation pumps, suffered.

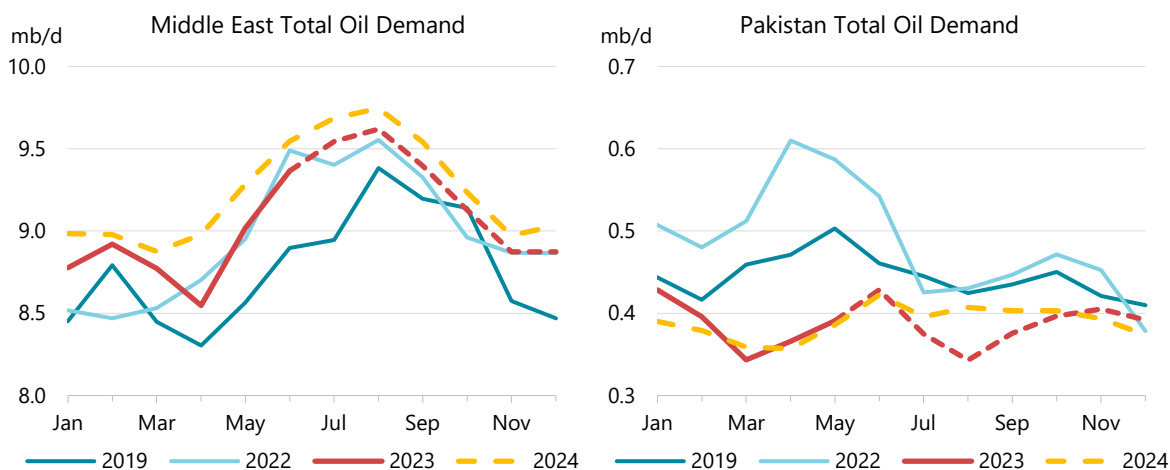


Nonetheless, we expect India's strong growth trajectory to resume as weather conditions improve, with average gains of 150 kb/d forecast for 3Q23 and steady growth through the end of the year supporting an average annual increase of 190 kb/d. The country's economic sentiment is uniquely strong amongst major economies, with the *S&P Global India Manufacturing PMI* at 57.7 in July, virtually unchanged from the 57.8 recorded in June. The *Services PMI* continues to go from strength-to-strength, leaping to a 13-year high at 62.3 in July, up from 58.5 a month earlier. As such, we expect gasoil (+110 kb/d) and gasoline (+50 kb/d) to dominate annual gains, in contrast to the global trend of comparatively limited growth for these products.

India: Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2021	2022	2023	2024	2023	2024	2023	2024
LPG & Ethane	900	924	936	969	12	33	1.3	3.6
Naphtha	324	283	290	304	7	14	2.5	4.9
Motor Gasoline	790	871	923	927	52	5	6.0	0.5
Jet Fuel & Kerosene	140	164	183	183	19	0	11.6	-0.1
Gas/Diesel Oil	1 535	1 695	1 807	1 851	112	44	6.6	2.5
Residual Fuel Oil	181	194	195	208	2	13	0.9	6.5
Other Products	1 026	1 146	1 137	1 145	- 9	8	-0.8	0.7
<b>Total Products</b>	<b>4 896</b>	<b>5 276</b>	<b>5 471</b>	<b>5 588</b>	<b>195</b>	<b>117</b>	<b>3.7</b>	<b>2.1</b>

**Middle East** oil demand surged by 470 kb/d in May to just over 9 mb/d (+70 kb/d y-o-y) as the summer upswing for power generation began earlier than usual amid soaring temperatures. Oil use in electricity plants typically spikes from June to August as temperatures rise and cooling demand surges.

The seasonal demand period normally affects fuel oil, direct use of crude oil and, to a lesser extent, gasoil. May fuel oil demand went up by 80 kb/d m-o-m and 150 kb/d y-o-y across the Middle East, and is expected to increase further in June, in line with rising imports from Russia. Direct use of crude oil rose m-o-m in both **Iraq** (100 kb/d) and **Saudi Arabia** (90 kb/d). However, crude burn dropped by 100 kb/d y-o-y in the Kingdom. This reflected competitively priced alternatives (fuel oil +80 kb/d and gasoil +90 kb/d) and somewhat less severe temperatures resulting in a modest fall in cooling degree days compared with May 2022. Rising temperatures likely pushed demand for oil in power generation higher in June and July. Iraqi electricity supply, already struggling to meet local demand, has been hit by a disruption to natural gas imports from Iran amid a payment dispute. While efforts to find a solution are ongoing, this deepens Iraq's dependence on oil-powered facilities.



Trade data from *GTT* shows that petrochemical shipments from Middle Eastern exporters to China recovered slightly in June, although they remain well below historical levels. This, combined with declining Saudi and Iranian LPG exports in June and July, suggests improving operating rates for the region's low-cost producers and we assume a steady recovery in local LPG demand during 3Q23. Total oil demand is set to rise by 100 kb/d in 2023 and 170 kb/d in 2024, with rebounding feedstock use as the major factor in next year's growth.

**Pakistan**, beset by economic crises including a collapse in the value of the rupee, will see demand fall more than in any other country in 2023 (-100 kb/d). While the rate of decline slowed to 110 kb/d

y-o-y June (from -200 kb/d in May), a combination of adverse monsoon weather and an 8% hike in consumer prices (according to *GPP*) for gasoline and diesel in late July is expected to see consumption continue to fall in 3Q23. The drop in 2023 demand will be led by fuel oil (-40 kb/d), which historically was imported for power generation but is now being exported by Pakistani refiners instead. Gasoil (-35 kb/d) and gasoline demand (-25 kb/d) will also drop substantially.

**Egyptian** oil use also slowed in 2Q23 (-50 kb/d y-o-y) amid wider macroeconomic difficulties. However, the drop was primarily the result of a reduction in fuel oil use for power generation (-40 kb/d). In 2022, the Egyptian government imported large quantities of fuel oil to enable increased LNG exports. In recent months domestic and Israeli-exported natural gas have been principally used for power generation. The government resumed fuel oil imports in July amid electricity shortages driven by cooling needs. This will add 40 kb/d to demand in August and for as long as the trade continues. Nevertheless, average 2023 consumption is set to drop by 50 kb/d.

**Brazil** continued to post substantial y-o-y gains in oil consumption during 2Q23 (+140 kb/d) as supportive economic conditions continued to lift demand for major fuels (gasoline +90 kb/d, gasoil +40 kb/d). This period of expansion seems set to cool during 2H23, with falling consumer demand keeping the July *S&P Global Brazil Manufacturing PMI* in contractionary territory (47.8) for the ninth month running and the *Services PMI* slowing sharply (from 53.3 in June to 50.2 in July). Nevertheless, comparatively robust macroeconomic activity and falling interest rates will underpin Brazil's status as the world's third largest source of 2023 oil demand growth (+100 kb/d), with both the rate (+3.2%) and composition (gasoline +50 kb/d, gasoil +30 kb/d) comparable to India.

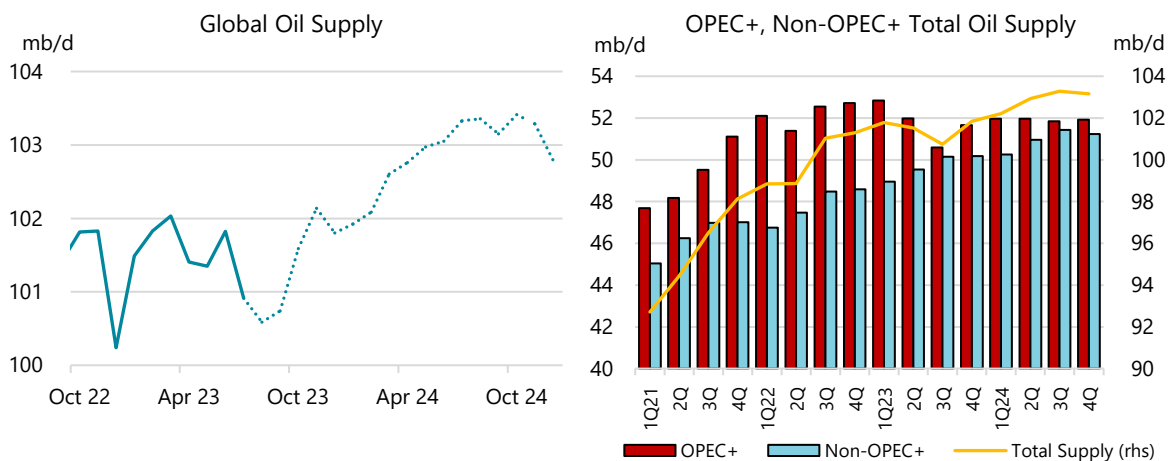
The recent pattern of narrow annual declines continued in **Argentina** during June, with deliveries falling by 10 kb/d. The nation's economy is struggling amid austerity measures as part of a 2022 International Monetary Fund (IMF) bailout package, the dwindling value of the peso and runaway inflation (116% in July). In this context usage is strikingly robust, with overall 2023 demand expected to fall by less than 10 kb/d.

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	4 079	4 311	4 307	4 482	- 4	174	-0.1	4.0
Asia	28 624	28 723	30 605	31 596	1 882	991	6.6	3.2
FSU	4 891	4 942	4 947	4 917	5	- 30	0.1	-0.6
Latin America	6 003	6 208	6 327	6 390	119	63	1.9	1.0
Middle East	8 436	8 972	9 070	9 239	98	169	1.1	1.9
Non-OECD Europe	770	784	784	800	0	16	0.0	2.1
<b>Total Products</b>	<b>52 804</b>	<b>53 941</b>	<b>56 041</b>	<b>57 423</b>	<b>2 100</b>	<b>1 383</b>	<b>3.9</b>	<b>2.5</b>

# Supply

## Overview

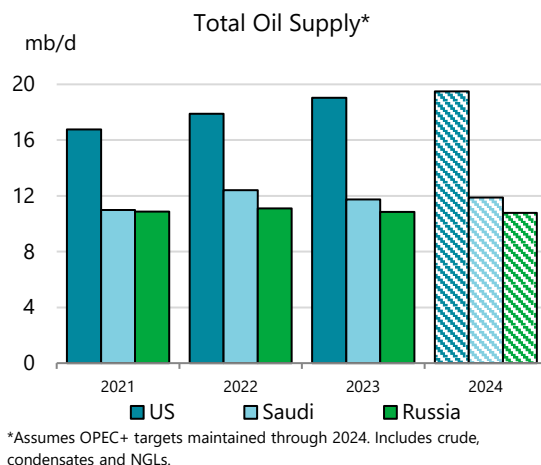
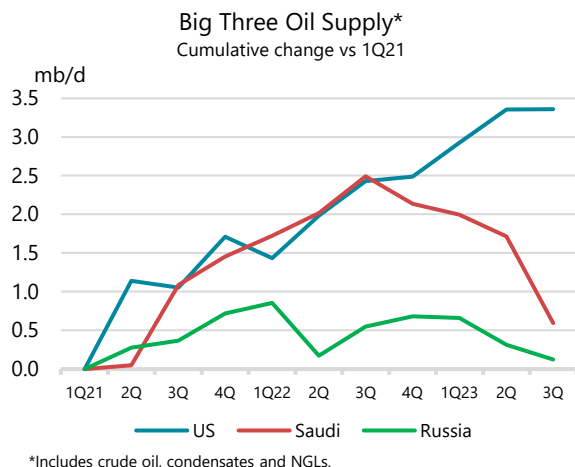
World oil production plunged 910 kb/d to 100.9 mb/d in July as Saudi Arabia nearly delivered in full on its promise to slash output. A strong rebound in Canadian supply helped mitigate the loss. Output from the OPEC+ bloc fell 1.2 mb/d in July to 50.7 mb/d, the lowest since October 2021, while non-OPEC+ volumes rose 310 kb/d to an unprecedented 50.2 mb/d. And the market is set to tighten further in the third quarter after OPEC+ leaders Saudi Arabia and Russia announced on 3 August that they are extending extra voluntary supply cuts through September. Shouldered by Riyadh, the reductions will sink flows from the OPEC+ alliance to a two-year low of 50.6 mb/d in 3Q23, but record-breaking non-OPEC+ supply will temper the overall decline.



Looking ahead to the fourth quarter, OPEC+ output may rise if and when Saudi Arabia and Russia – the world's top two producers after the US – start unwinding their additional curbs. But, for now, it remains to be seen how their market management strategy will evolve. Riyadh says it's prepared to extend or deepen its 1 mb/d production cut, while Moscow says it will reduce exports by 500 kb/d this month and 300 kb/d in September. There is significant scope for OPEC+ to produce far more in 2H23, but if the bloc's production targets are kept in place through the end of the year, OPEC+ will pump 2.2 mb/d below the requirement for its crude in 3Q23 and 1.2 mb/d below in the fourth quarter based on our current forecasts for demand growth and non-OPEC+ output.

What is clear is that non-OPEC+ oil supply, now at its highest level ever, nearly matches the OPEC+ alliance barrel-for-barrel and looks set to do so through next year. That's a dramatic change from 2017, when OPEC+ was first established and producers outside the bloc accounted for 43% of the world's oil production (based on the current composition of OPEC+).

This year global oil output is projected to expand by 1.5 mb/d to a record 101.5 mb/d, with the US, along with Brazil, China and Guyana, driving non-OPEC+ gains of 1.9 mb/d. Consequently, in 2023, producers outside the OPEC+ alliance will account for 49% of global supply. Next year, non-OPEC+ is also set to dominate world supply growth, adding 1.3 mb/d – raising its share of total oil output to 49.6%. OPEC+ production could edge up by 160 kb/d.



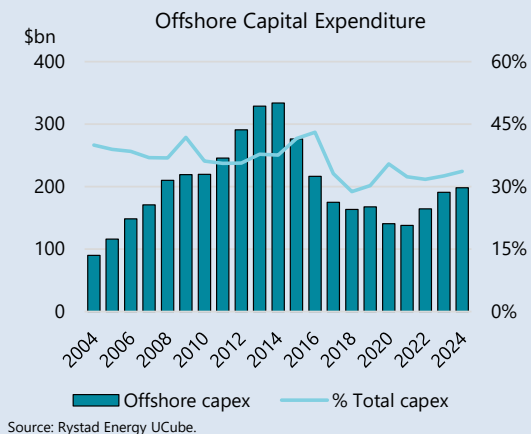
Looking at the big three producers, the US is powering the non-OPEC+ expansion and, on a cumulative basis versus 1Q21, it's poised to pump 3.4 mb/d more in 3Q23. Average output in 2023 is set to top 19 mb/d, a new annual record high, and still more growth is expected next year. As for Saudi Arabia, after cumulative growth kept pace with the United States through the third quarter of last year, supply by 3Q23 will only be 590 kb/d above 1Q21 as Riyadh turns down the taps. Russia is set to produce 120 kb/d more in 3Q23 than it did in the first quarter of 2021.

### The offshore rig market enters a new growth cycle

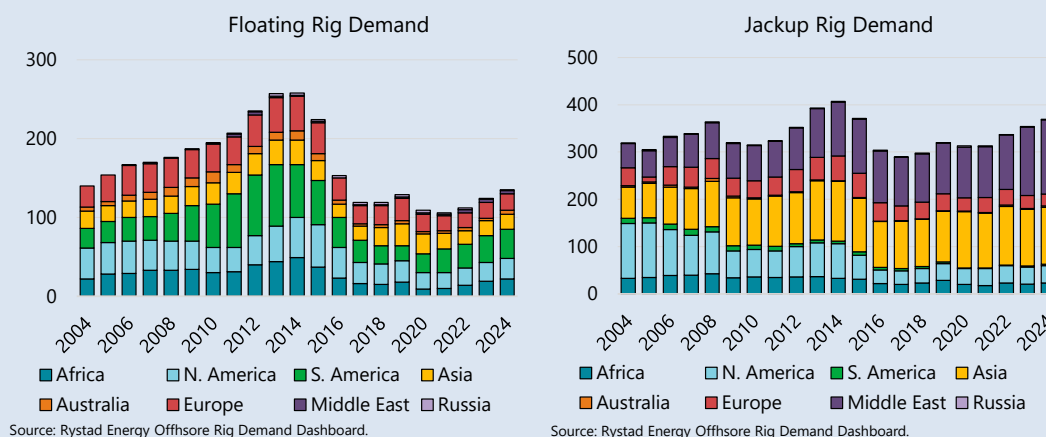
The offshore rig market is having a growth spurt thanks to significant developments in Guyana, Brazil and the Middle East, infill drilling in West Africa and renewed exploration in Namibia, India and the Eastern Mediterranean. The last offshore activity cycle peaked in 2014 and declined through 2021. But after working through the disruptive effects of Covid-19, the offshore rig market – split between floating and jackup rigs – is back on an upward trajectory.

More than 65 licensing rounds and over \$200 billion in deepwater project final investment decisions have been scheduled from 2022-25, with 85% having a breakeven price of less than \$50/bbl, consultants Wood Mackenzie recently noted. This, combined with barrels that tend to be low cost and low carbon intensity with technology-led efficiencies, is bolstering the offshore sector.

Global offshore spending dropped from over \$330 billion in 2014 to around \$140 billion in 2021. At the same time, rig utilisation rates fell from approximately 100% to 70%. But investment is now approaching \$200 billion thanks mostly to a strong recovery in floating rigs, including semisubmersibles and drillships that can drill in depths of up to 3 050 m (10 000 ft) and 3 660 m (12 000 ft), respectively. Since the 2014 peak, the offshore fleet has been rationalised and consolidated from 270 floating rigs to 146, with 124 floaters now active. Utilisation has recovered to 87% with 22 rigs idled, of which 20 may enter service in the coming years. Demand for floating rigs dropped from 257 in 2014 to 107 in 2021 while day rates for the non-harsh ultra-deepwater segment declined from peaks of over \$500 000 per day to less than \$200 000 per day. Current new contract day rates are around \$450 000 per day, having increased roughly 30% y-o-y, with high-spec ultra-deepwater and harsh environment rigs fully booked for the first time since 2014.



Petrobras, Shell and ExxonMobil are the top three customers in the floating rig market, accounting for one-third among them.



Commercial interest for shallow water jackup rigs, that are supported by the ocean floor, has been lagging the floating rig market, but a rebound is underway with utilisation rates currently at 92%. Differing from floating rigs, the harsh and ultra-harsh jackup rig demand is looser than the total market, with respective utilisation rates of 89% and 81%. Saudi Arabia, China, the UAE and India drive the segment's demand this year and next, with combined market share of 55%. Saudi Arabia and the UAE are seeking rigs mainly for development wells. India's needs are for exploration and appraisal (E&A) and development work while China is primarily focused on E&A wells.

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	7.2	7.2	7.3	7.2	7.2	7.2	7.2	7.2	7.2
Latin America	6.4	6.7	6.9	7.0	7.1	6.9	7.4	7.4	7.5	7.5	7.4
North America	25.7	26.7	26.7	27.1	27.3	27.0	27.3	27.5	27.6	27.8	27.5
China	4.2	4.3	4.3	4.3	4.2	4.3	4.4	4.3	4.4	4.3	4.3
Other Asia	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1
Europe	3.3	3.4	3.3	3.1	3.3	3.3	3.4	3.3	3.2	3.3	3.3
FSU	13.9	14.1	13.7	13.4	13.6	13.7	13.7	13.7	13.7	13.8	13.7
Middle East	31.1	31.2	30.7	29.6	30.4	30.5	30.6	30.6	30.6	30.6	30.6
<b>Total Oil Production</b>	<b>94.8</b>	<b>96.8</b>	<b>95.9</b>	<b>94.8</b>	<b>96.4</b>	<b>96.0</b>	<b>97.1</b>	<b>97.2</b>	<b>97.2</b>	<b>97.5</b>	<b>97.2</b>
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
<b>Total Supply</b>	<b>100.0</b>	<b>101.8</b>	<b>101.5</b>	<b>100.8</b>	<b>101.9</b>	<b>101.5</b>	<b>102.3</b>	<b>103.0</b>	<b>103.3</b>	<b>103.2</b>	<b>103.0</b>
OPEC Crude	29.1	29.4	28.8	27.8	28.6	28.6	28.8	28.8	28.7	28.7	28.8
OPEC NGLs*	5.4	5.4	5.5	5.5	5.5	5.5	5.6	5.6	5.5	5.5	5.5
Non-OPEC OPEC+	17.7	18.0	17.6	17.3	17.5	17.6	17.6	17.7	17.6	17.7	17.6
<b>Total OPEC+</b>	<b>52.2</b>	<b>52.8</b>	<b>52.0</b>	<b>50.6</b>	<b>51.7</b>	<b>51.8</b>	<b>52.0</b>	<b>52.0</b>	<b>51.8</b>	<b>51.9</b>	<b>51.9</b>

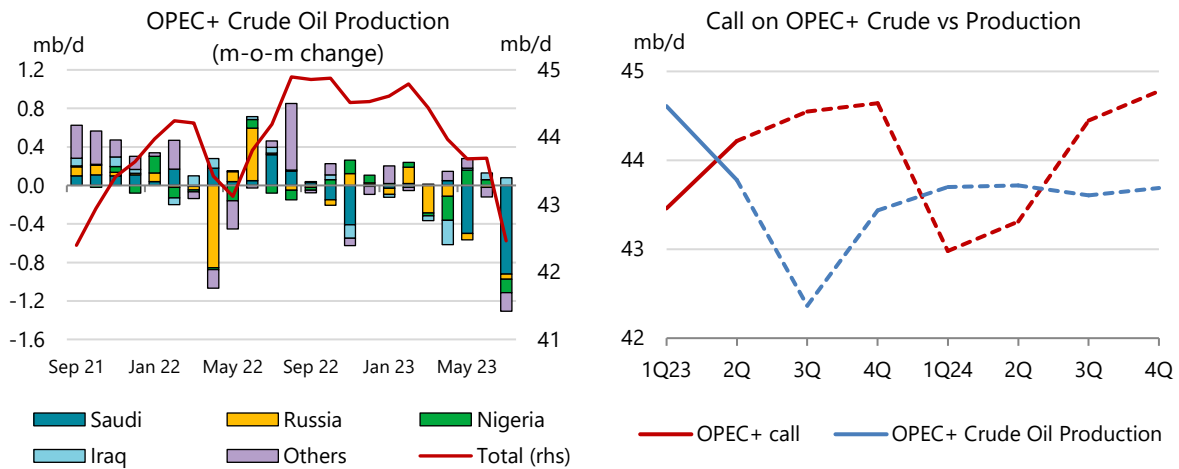
\* Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. GTL in Nigeria and non-oil inputs to Saudi Arabian MTBE

## OPEC+ crude supply

OPEC+ crude oil production from all 23 member countries plummeted 1.23 mb/d to 42.46 mb/d in July, the lowest level since September 2021, after Riyadh largely made good on its promise of a sharp voluntary cutback. For the first time since early 2022, Saudi crude oil supply is trailing behind



Russia. Nigeria, Kazakhstan, Bahrain and Mexico also saw notable declines. Conversely, Iraq posted a substantial increase. Iran's crude oil production, exempt from OPEC+ cuts, held near five-year highs.



Supply from the 13 OPEC countries in July tumbled 950 kb/d to 27.86 mb/d, while output from non-OPEC nations in the OPEC+ group fell 280 kb/d to 14.6 mb/d. Overall production from the 19 members subject to quotas was 1.14 mb/d lower at 35.9 mb/d. That left the bloc's effective spare capacity, excluding Russia and volumes of crude oil shut in by sanctions on Iran, at 5.7 mb/d, with Saudi Arabia holding 56% of the surplus.

OPEC+ Crude Oil Production <sup>1</sup>						
	(million barrels per day)					
	Jun 2023	Jul 2023	Jul Prod vs	Jul 2023	Sustainable	Eff Spare Cap
	Supply	Supply	Target	Target	Capacity <sup>2</sup>	vs Jul <sup>3</sup>
Algeria	0.95	0.96	-0.05	1.01	1.0	0.0
Angola	1.12	1.15	-0.31	1.46	1.1	0.0
Congo	0.28	0.28	-0.03	0.31	0.3	0.0
Equatorial Guinea	0.07	0.07	-0.05	0.12	0.1	0.0
Gabon	0.21	0.21	0.03	0.18	0.2	0.0
Iraq	4.19	4.27	-0.16	4.43	4.7	0.5
Kuwait	2.55	2.55	-0.13	2.68	2.8	0.3
Nigeria	1.24	1.10	-0.64	1.74	1.3	0.2
Saudi Arabia	9.98	9.06	-1.42	10.48	12.2	3.2
UAE	3.24	3.24	0.22	3.02	4.2	1.0
<b>Total OPEC-10</b>	<b>23.83</b>	<b>22.89</b>	<b>-2.53</b>	<b>25.42</b>	<b>28.0</b>	<b>5.2</b>
Iran <sup>4</sup>	3.04	3.04			3.8	
Libya <sup>4</sup>	1.15	1.12			1.2	0.1
Venezuela <sup>4</sup>	0.79	0.81			0.8	0.0
<b>Total OPEC</b>	<b>28.81</b>	<b>27.86</b>			<b>33.8</b>	<b>5.3</b>
Azerbaijan	0.50	0.50	-0.19	0.68	0.5	0.0
Kazakhstan	1.60	1.51	-0.12	1.63	1.7	0.2
Mexico <sup>5</sup>	1.67	1.59		1.75	1.7	0.1
Oman	0.80	0.80	-0.04	0.84	0.9	0.0
Russia	9.45	9.40	-0.55	9.95	10.0	
Others <sup>6</sup>	0.85	0.81	-0.25	1.06	0.9	0.1
<b>Total Non-OPEC</b>	<b>14.88</b>	<b>14.60</b>	<b>-1.14</b>	<b>15.91</b>	<b>15.6</b>	<b>0.4</b>
<b>OPEC+ 19 in cut deal<sup>4</sup></b>	<b>37.04</b>	<b>35.90</b>	<b>-3.67</b>	<b>39.57</b>	<b>41.9</b>	<b>5.5</b>
<b>Total OPEC+</b>	<b>43.69</b>	<b>42.46</b>			<b>49.4</b>	<b>5.7</b>

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.

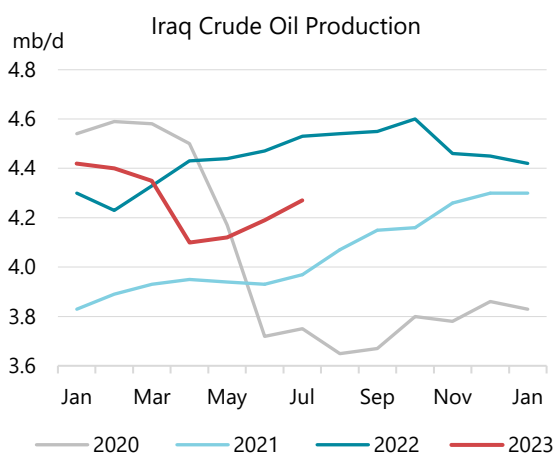
Saudi Arabia has vowed to restrict its crude production to around 9 mb/d at least through the third quarter by maintaining a voluntary cut of 1 mb/d on top of coordinated OPEC+ cuts. Russia says it will cut exports this month by 500 kb/d and by 300 kb/d in September. The Saudi-Russian adjustments are in addition to curbs of 3.7 mb/d agreed by OPEC+, including a 2 mb/d reduction to its production ceiling in November 2022 and 1.7 mb/d of additional cuts from some members starting in May.

**Saudi Arabia** throttled back by 920 kb/d to 9.06 mb/d in July. With the exception of the 2020-21 Covid-19 period, Saudi crude supply has not been this low since 2011. The Kingdom has pledged to continue with its extra cut of 1 mb/d at least through the third quarter.

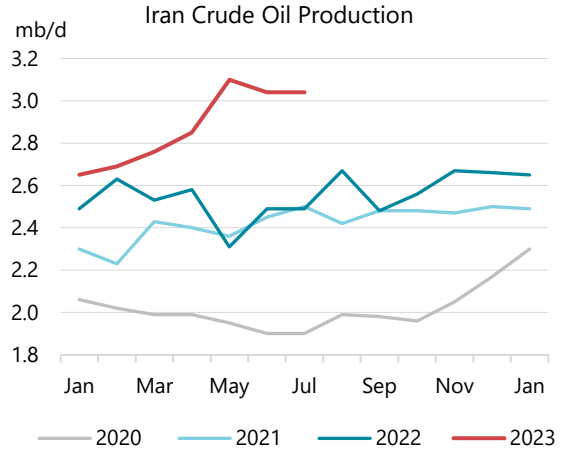
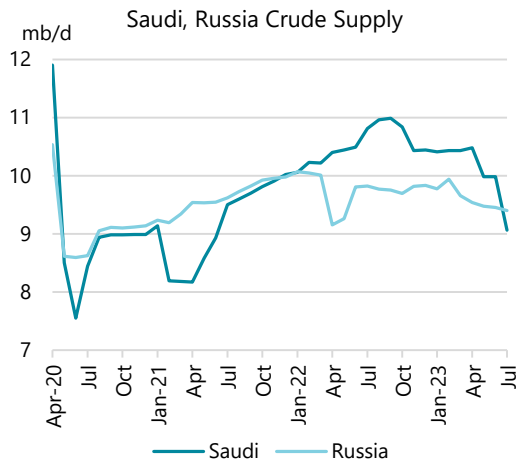
Saudi Aramco meanwhile is sticking with its capital expenditure guidance of a record \$45 billion to \$55 billion for 2023 even as softer oil prices dented its 2Q23 earnings. Aramco said it remains on track to expand its production capacity to 13 mb/d (excluding the Neutral Zone) by 2027. We estimate current capacity, including the Neutral Zone, at 12.2 mb/d. Aramco said engineering, construction and procurement activities continued during the second quarter for major offshore projects at Marjan and Berri, with start-up of combined capacity of 550 kb/d by 2025 while Zuluf will add 600 kb/d by 2026.

In neighbouring **Bahrain** crude oil supply fell 80 kb/d to 120 kb/d due to sharply lower output at the Abu Safah field. Output in the **UAE** was unchanged at 3.24 mb/d, 220 kb/d above its OPEC+ target. **Kuwaiti** production was unchanged m-o-m at 2.55 mb/d while production in **Oman** held steady at 800 kb/d.

**Iraqi** production rose 80 kb/d to 4.27 mb/d in July after exports and production ramped up further from southern oil fields and output from the northern Kurdish region edged higher. Flows from the Kurdistan Regional Government remain largely shut in due to a more than four-month halt to the Iraq-Türkiye export pipeline that had been delivering about 450 kb/d. However, since mid-June, the semiautonomous Kurdistan region has reportedly been providing roughly 50 kb/d to refineries in the north as part of its commitment to Baghdad to comply with a new budget law.



In **Iran**, crude oil supply held steady in July at 3.04 mb/d, close to a five-year high. To support export flows that have risen nearly 500 kb/d from just over 1 mb/d at the start of 2023, Iran has reportedly boosted operational capacity at the Kharg Island export terminal by 1 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 paused since September 2022.



**Russian** crude output eased by 50 kb/d in July to 9.4 mb/d as exports declined along with higher domestic refinery runs. This means Moscow has more than fulfilled its voluntary cut of 500 kb/d. On top of that, Russia has vowed to cut oil exports in August (-500 kb/d) and September (-300 kb/d). Russian Deputy Prime Minister Alexander Novak has said that Russia's objective was to reduce supplies to world markets and that individual companies would choose whether to lower production or exports. We have reduced our August production forecast by just under 200 kb/d and increased levels slightly for the next month. Total output of crude oil, condensates and NGLs in July was 10.74 mb/d – 660 kb/d lower than February 2022 when Russia invaded Ukraine. We expect average oil production of 10.86 mb/d in 2023, down 230 kb/d y-o-y.

**Russian oil export revenues surge higher in July despite unchanged volumes**

Russian oil export revenues reached their highest level since November 2022 despite flat overall volumes. The rebound reflects rising international oil prices combined with narrowing discounts for Russian crude and products versus international benchmarks.

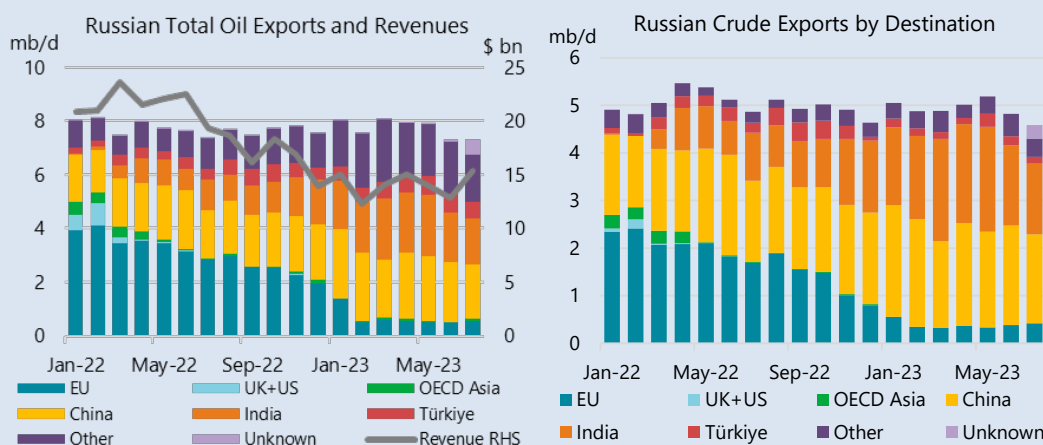
	Russian Oil Exports (mb/d)											Export Revenue		
	EU	UK+US	Türkiye	China	India	OECD Asia	Middle East	Africa	Other	Unknown	Total	Crude	Products	\$bn
2021 avg	3.4	0.7	0.2	1.6	0.1	0.5	0.1	0.1	0.9	0.0	<b>7.5</b>	4.6	2.9	<b>15.7</b>
2022 avg	3.1	0.2	0.4	1.9	0.9	0.2	0.2	0.1	0.7	0.0	<b>7.7</b>	5.0	2.7	<b>19.6</b>
Jul 2022	2.8	0.0	0.4	1.8	1.1	0.1	0.3	0.2	0.7	0.0	<b>7.4</b>	4.9	2.5	<b>19.4</b>
Aug 2022	3.0	0.0	0.6	2.0	1.0	0.1	0.3	0.2	0.7	0.0	<b>7.7</b>	5.1	2.6	<b>18.7</b>
Sep 2022	2.6	0.0	0.6	1.9	1.1	0.0	0.2	0.1	0.9	0.0	<b>7.5</b>	4.9	2.5	<b>16.2</b>
Oct 2022	2.5	0.0	0.6	2.0	1.2	0.1	0.2	0.2	0.9	0.0	<b>7.8</b>	5.0	2.7	<b>18.3</b>
Nov 2022	2.3	0.0	0.5	2.0	1.5	0.1	0.3	0.2	0.9	0.0	<b>7.8</b>	4.9	2.9	<b>16.9</b>
Dec 2022	2.0	0.0	0.4	2.1	1.7	0.1	0.2	0.3	0.8	0.0	<b>7.6</b>	4.6	2.9	<b>13.9</b>
Jan 2023	1.4	0.0	0.5	2.6	1.8	0.0	0.3	0.3	1.0	0.0	<b>8.1</b>	5.1	3.0	<b>15.0</b>
Feb 2023	0.5	0.0	0.5	2.5	1.9	0.0	0.4	0.5	1.1	0.0	<b>7.6</b>	4.9	2.7	<b>12.3</b>
Mar 2023	0.6	0.0	0.6	2.2	2.3	0.1	0.5	0.5	1.3	0.0	<b>8.1</b>	4.9	3.2	<b>14.0</b>
Apr 2023	0.5	0.0	0.6	2.5	2.2	0.1	0.5	0.3	1.1	0.0	<b>8.0</b>	5.0	3.0	<b>15.1</b>
May 2023	0.5	0.0	0.7	2.4	2.3	0.0	0.4	0.3	1.2	0.1	<b>7.9</b>	5.2	2.7	<b>14.0</b>
Jun 2023	0.5	0.0	0.7	2.2	1.8	0.0	0.5	0.4	1.1	0.1	<b>7.3</b>	4.8	2.5	<b>12.8</b>
Jul 2023	0.6	0.0	0.6	2.0	1.7	0.1	0.3	0.4	1.1	0.6	<b>7.3</b>	4.6	2.7	<b>15.3</b>
M-o-M chg	0.1	0.0	-0.1	-0.2	-0.1	0.1	-0.2	0.1	-0.1	0.5	<b>0.0</b>	-0.2	0.2	<b>2.5</b>
Y-o-Y chg	-2.3	0.0	0.2	0.2	0.6	0.0	0.0	0.3	0.4	0.5	<b>0.0</b>	-0.3	0.3	<b>-4.1</b>

Sources: IEA, Argus Media Group, Kpler.

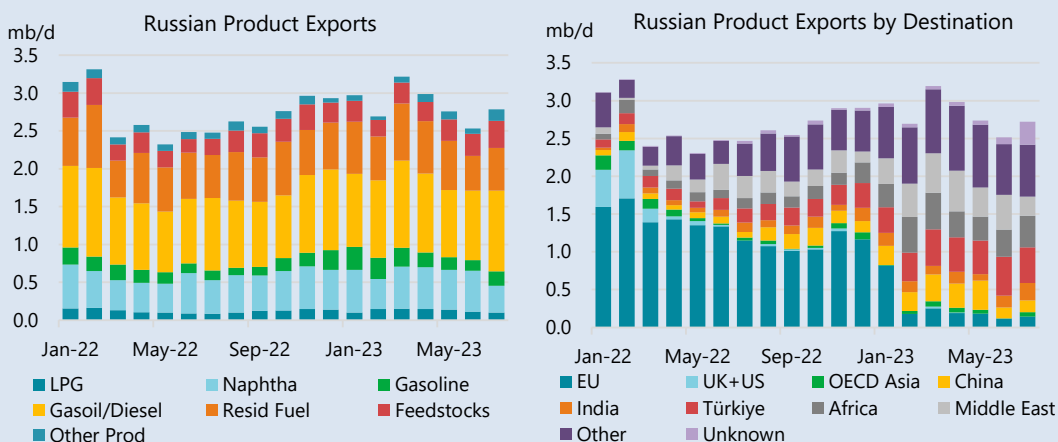
Note: Data in this table were derived by granular analysis and estimates of country of origin data in cases where shipments transit via third countries. They may differ from customs information due to calculation methodology and estimates updates.

Russian oil exports held largely steady in July at 7.3 mb/d for crude and products combined. Outbound product trade rose 200 kb/d m-o-m to 2.7 mb/d as refinery runs saw a post-maintenance surge that cut crude exports by 200 kb/d to 4.6 mb/d. However, estimated revenues from crude and products exports

rose by \$2.5 bn m-o-m to \$15.3 bn (-\$4.1 bn y-o-y). Product revenues rose faster than crude (\$1.6 bn vs \$0.9 bn m-o-m).



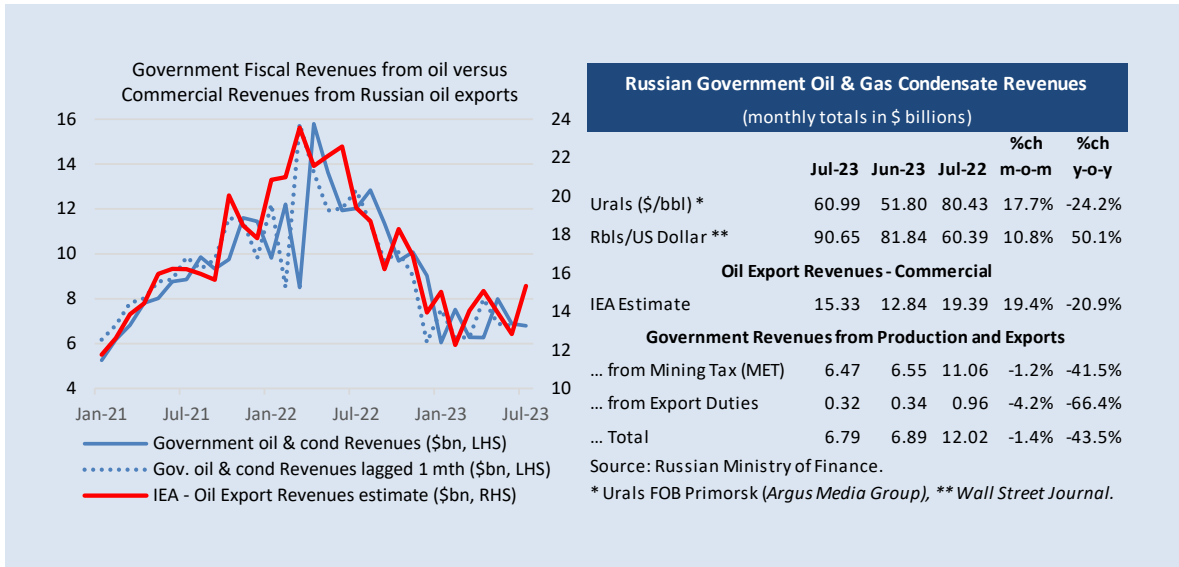
Russian crude exports have fallen under the impact of production cuts and rising domestic refinery runs. They peaked in May at 5.2 mb/d and subsequently declined to 4.8 mb/d in June and to 4.6 mb/d in July, an overall cut of 300 kb/d compared with pre-war levels and the lowest since December 2022. While the destination of all cargoes are not yet known, data available so far show exports eased 200 kb/d m-o-m for both China and India. Even so, the two countries accounted for nearly 80% of total Russian crude exports in July. Shipments into East Europe rose by 40 kb/d to 420 kb/d but fell 45 kb/d over the month for Türkiye to 150 kb/d.



Russian refiners lifted runs in July, boosting product exports by 200 kb/d m-o-m to 2.7 mb/d. Increases for fuel oil (+100 kb/d to 560 kb/d), gasoil (+160 kbd to 1.1 mb/d), gasoline (+50 kb/d to 190 kb/d) and VGO (+70 kb/d to 360 kb/d) were partially offset by a sharp drop for naphtha (-180 kb/d to 350 kb/d).

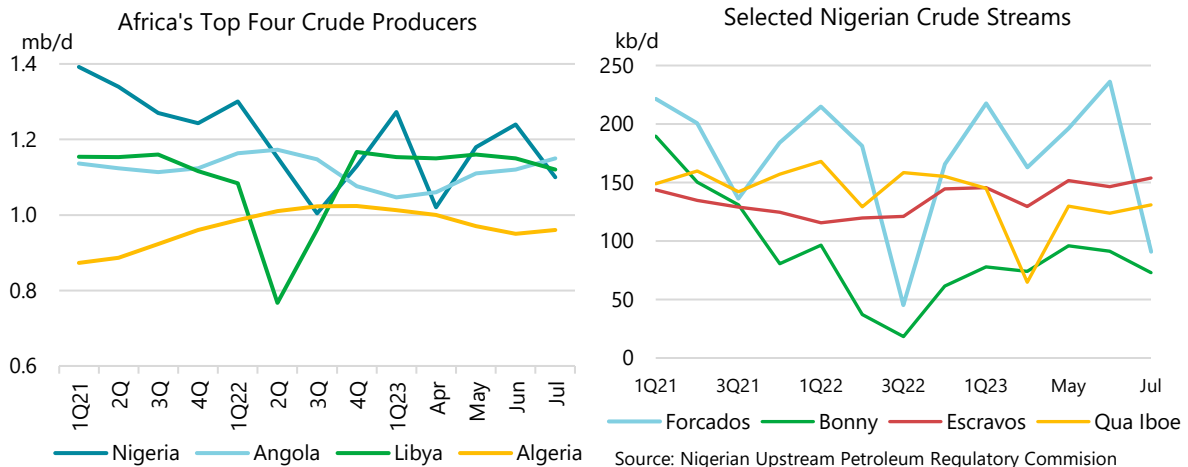
Product exports to the Middle East fell sharply (-200 kb/d to 260 kb/d) and eased to Türkiye (-40 kb/d to 480 kb/d) but they rose to India (+80 kb/d to 230 kb/d), Africa (+55 kb/d to 410 kb/d) and OECD Asia Oceania (+50 kb/d to 60 kb/d). A large volume of exports with as yet unknown destinations (300 kb/d) may lead to changes in these volumes when the cargoes arrive. China, India, Türkiye and the Middle East take a third of Russian exports despite being large exporters themselves. In many cases, these volumes (delivered at a discount to international market prices) serve to displace domestically produced equivalents for more expensive exports.

Russian government revenues from oil fell 1.4% m-o-m in July to 44% below levels of July 2022. Fiscal revenues reflect those for exports with a one month lag, suggesting they could rise in August.



**Azeri** crude oil supply in July was steady m-o-m at 500 kb/d. **Kazakh** production fell 90 kb/d to 1.51 mb/d in July after a major power outage disrupted oil field operations. Scheduled maintenance at the Tengiz field, the country’s largest producer with capacity of nearly 700 kb/d, is expected to run from the start of August through mid-September. In October, the 400 kb/d Kashagan field is due for scheduled maintenance.

Combined output from African members of OPEC+ fell 110 kb/d in July as Nigeria, once again, slipped from its rank as Africa’s top crude producer. Output in **Nigeria** decreased by 140 kb/d to 1.1 mb/d after Shell suspended loadings of Forcados crude due to a potential leak at the export terminal. Production of the key export stream fell to 90 kb/d, having pushed above 200 kb/d in June.

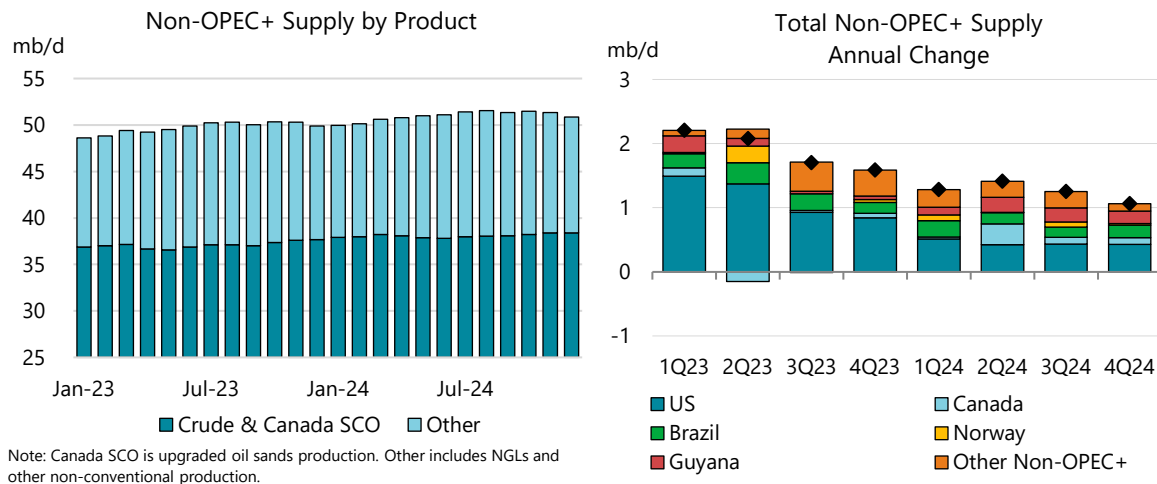


The Forcados terminal was offline for several months in 2022 following sabotage attacks and the loading facility only restarted in October after repairs. Crude supply in **Angola** rose 30 kb/d to 1.15 mb/d, allowing it to take on Africa’s top crude slot. **Algerian** supply crept up to 960 kb/d. **Libyan** crude oil production declined by 30 kb/d in July to 1.12 mb/d after a protest briefly suspended operations at Sharara, its biggest oil field. Output from the North African producer has been relatively stable owing to the Tripoli-Benghazi pact of last July that ended an oil blockade.

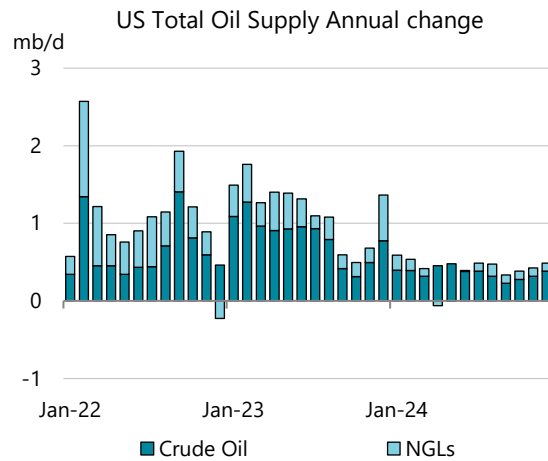
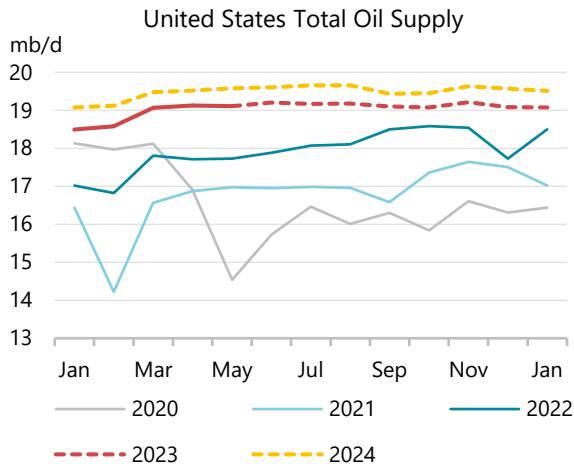
**Mexico's** crude oil production fell 80 kb/d to 1.59 mb/d in July following a platform fire. Nonetheless, output was up by 50 kb/d from last July and is forecast to rise by 120 kb/d on the year to 2.1 mb/d with more than half the gains driven by increased condensate production from Quesqui. Supply in **Venezuela** rose 20 kb/d to 810 kb/d.

## Non-OPEC +

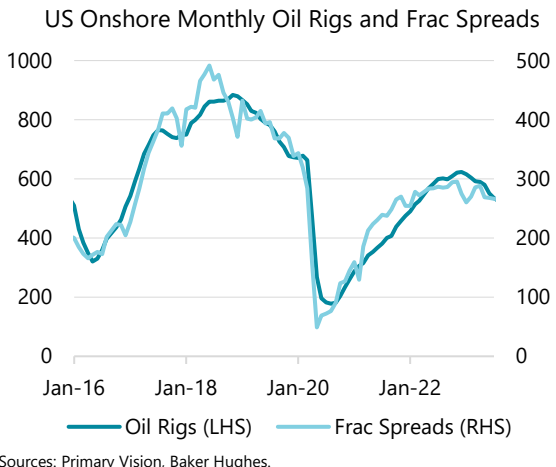
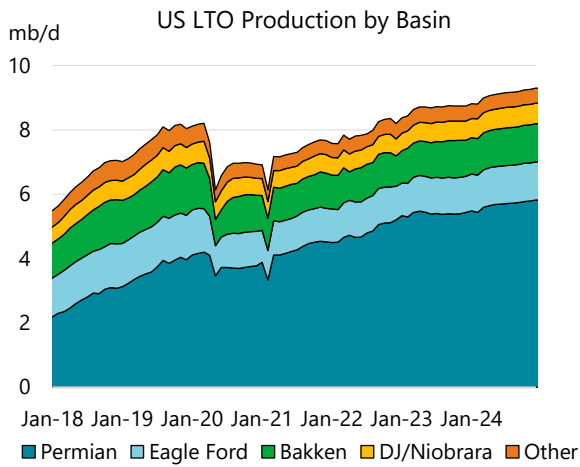
Increased supply from Canada, along with seasonally higher biofuel output, offset declines from the US, Norway and China and pushed non-OPEC+ supply up by 310 kb/d in July to a record high 50.2 mb/d, surpassing the 50 mb/d mark for the first time. Production has increased 1.6 mb/d year-to-date, yet the bulk of the gains have come from non-crude sources, with biofuels up seasonally by 1 mb/d and US natural gas liquids (NGLs) 400 kb/d higher since January. Through the end of the year, the story switches as crude oil supplies, including synthetic crude from Canadian upgraders, add 540 kb/d, partially offsetting 200 kb/d of NGL losses and seasonal declines in biofuels of 670 kb/d. Total production averages 50.2 mb/d through the end of the year as most of the non-crude losses occur in December. For 2023, non-OPEC+ supply is forecast to rise by 1.9 mb/d to 49.7 mb/d while next year growth eases to 1.3 mb/d as US light tight oil (LTO) production slackens.



**US** supply fell by 40 kb/d in July, hovering around 19.2 mb/d, as NGL output waned. Production rose 1.1 mb/d compared with a year ago and 670 kb/d year-to-date. From July through the end of the year, US total liquids are expected to fall by 80 kb/d as NGLs see seasonal losses of 210 kb/d. Annual gains will decelerate from 1.2 mb/d in 2023 to 450 kb/d next year as LTO growth slows to just 440 kb/d and NGLs to 90 kb/d. US conventional crude is set to fall by 80 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.



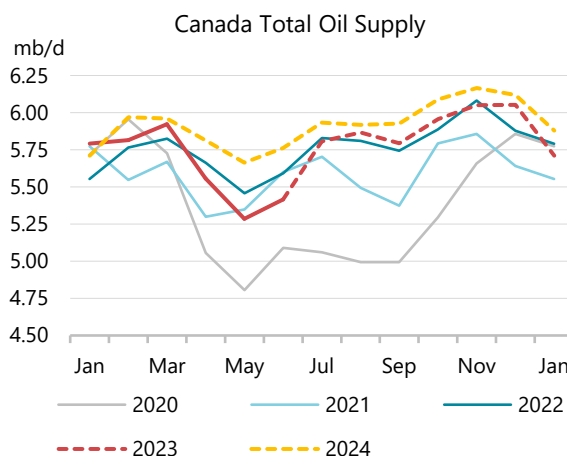
US LTO accounts for 720 kb/d of the gains this year, amounting to 88% of growth in crude. In late July and early August, many publicly listed oilfield service companies, as well oil and gas producers, reported their second quarter earnings. The overarching message, corroborated by the latest Dallas Fed Energy Survey, indicated that larger producers will be better positioned in the second half of the year to benefit from any deflation in oilfield service costs. Additionally, rig operators expect activity levels to remain flat after a 12% reduction in drilling rigs on the year and 16% from the peak seen in late November 2022. From July through the end of the year, we expect LTO to grow marginally, ending the year at 8.7 mb/d, 550 kb/d higher than a year prior.



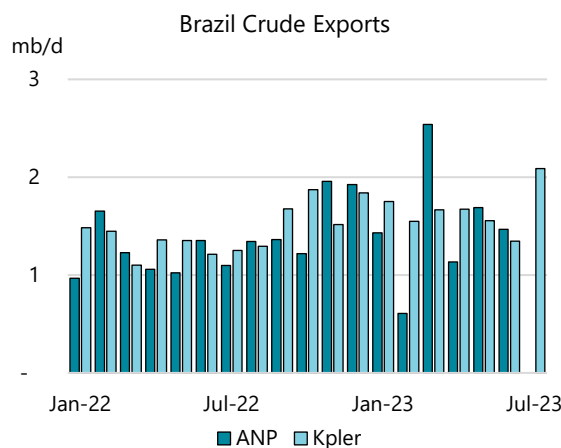
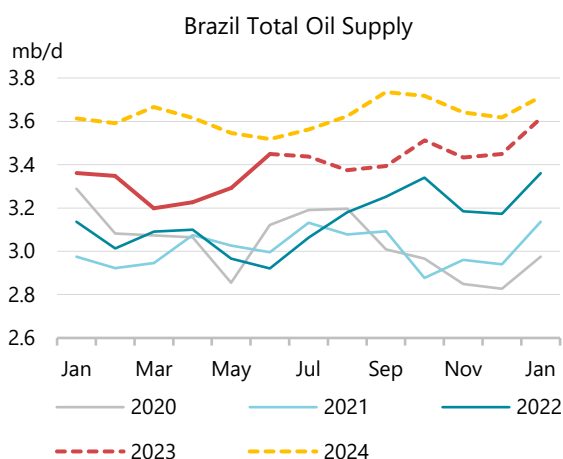
Sources: Primary Vision, Baker Hughes.

In May, the last month for which official data from the Energy Information Administration (EIA) is available, total oil supply dropped by 20 kb/d m-o-m to 19.1 mb/d as a marginal increase in onshore production was offset by a 30 kb/d decline in the Gulf of Mexico (GoM). The GoM has, thus far, been spared from tropical storms or hurricanes, though both the National Oceanic and Atmospheric Administration (NOAA) and Colorado State University (CSU) have forecast this year as another high-risk year for Atlantic hurricane activity. CSU's latest forecast shows a 45% probability of a hurricane hitting the Texas/Louisiana coastal area, with just under a 20% probability of a major storm. We continue to have 17 mb of output risked for the remainder of the hurricane season.

**Canadian** supply rose by 130 kb/d to 5.4 mb/d in June, based on data from the Alberta Energy Regulator and StatCan, primarily from returning production after wildfires shut in close to 200 kb/d in May. Continued oil sands maintenance has kept volumes offline, and a cyberattack in late June on Suncor interrupted its data submission to Canadian regulators. As such, this *Report* has kept Suncor volumes flat on the month in June. Production is estimated to have rebounded by 390 kb/d in July as maintenance concluded and the remainder of wildfire impacted production returned. Through the end of the year, output is forecast to rise by another 240 kb/d, reaching an annual average of 5.8 mb/d. Next year, supply is expected to grow by a further 140 kb/d to 5.9 mb/d.



**Brazilian** output slipped by 10 kb/d to 3.4 mb/d in July, based on provisional daily data from the Agencia Nacional do Petroleo (ANP). This came after official data showed a surge of 160 kb/d m-o-m in June, to a record 3.5 mb/d, up 530 kb/d from a year ago. Monthly gains were driven by returning production at Marlim Sul and recently installed floating production storage and offloading (FPSO) vessels in the Marlim complex, the Anna Nery, and at the Búzios field, the Almirante Barroso. First oil was seen in May and June respectively from those two FPSOs, joining three other FPSOs – Mero 1 (Guanabara), Itapu (P-71) and Peregrino (Peregrino C) – that have been commissioned over the last 12 months. Total annual Brazilian volumes are projected to increase by 250 kb/d this year to 3.4 mb/d and by 240 kb/d in 2024 to reach 3.6 mb/d as four more FPSOs are scheduled to come online over the next 18 months.

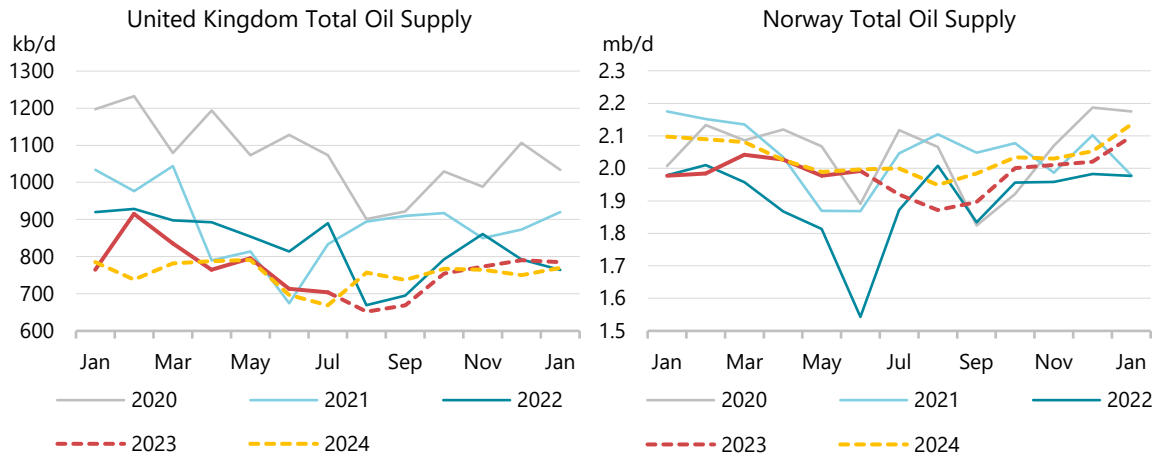


Sources: ANP, Kpler Terminal.

In addition to the record setting output in Brazil, official ANP data shows oil exports have risen correspondingly by 24% y-o-y through June to average 1.5 mb/d, despite increased domestic refinery utilization and a 9.2% tariff on oil exports in place from March through June 2023. *Kpler* data indicates that a surge in cargoes to China account for almost all the increase. Its data also suggests that July shipments hit record levels as the oil export tariff expired. It is unclear if oil exports will continue to increase through the remainder of the year as Petrobras ended its import-parity pricing to focus on supplying the domestic market.



**UK** supply edged down 10 kb/d in July to 700 kb/d. At the same time, the government pledged to issue “hundreds” of new oil and gas licenses in the North Sea after recent North Sea Transition Authority (NSTA) research noted that Scope 1 and 2 emissions for indigenous gas production were one-quarter that of LNG imports. Oil supply is forecast to fall 70 kb/d this year before holding relatively steady in 2024 as new projects help offset declines at mature fields.



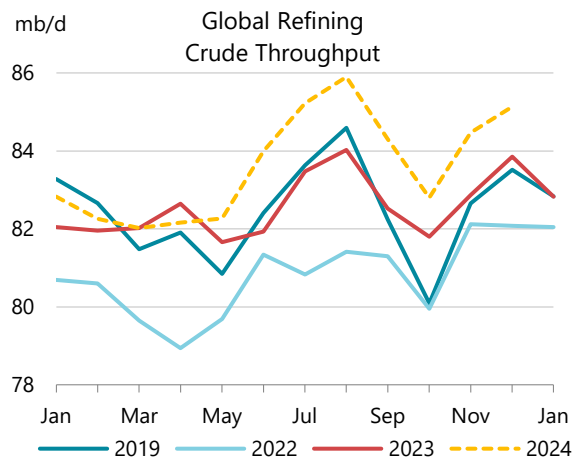
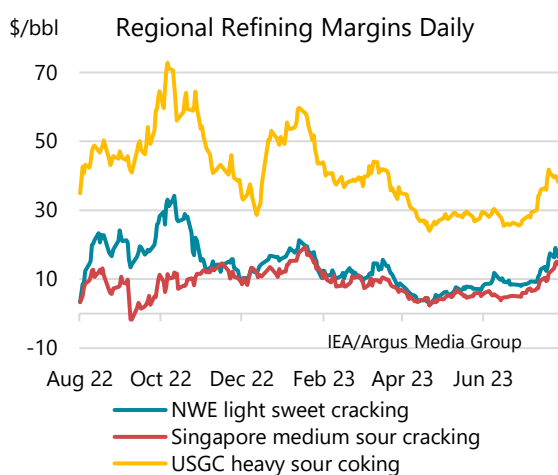
Data from the **Norwegian** Petroleum Directorate show that production rose by 20 kb/d in June to 2 mb/d, as gains in crude offset a small drop in NGLs. July volumes fell by 70 kb/d as seasonal maintenance was partially offset by increasing Johan Sverdrup output. Supply is expected to rebound and remain relatively flat through the end of the year at 2 mb/d. For 2023, average annual output is expected to rise by 80 kb/d y-o-y to 2 mb/d. Next year sees additional gains of 50 kb/d.

In Africa, **Ghanese** output rose by 10 kb/d in July to 180 kb/d as the Tullow operated Jubilee South East project started up. The project is expected to add 10-20 kb/d of capacity to the field, bringing total production over 100 kb/d, where it is likely to stay for a few years. Meanwhile in **Senegal**, the Woodside operated 100 kb/d Sangomar project has been delayed to mid-2024 from late 4Q23 due to unexpected FPSO works. Sangomar’s commissioning will mark first oil for the country after a string of delays triggered by the impact of Covid-19 and low oil prices.

# Refining

## Overview

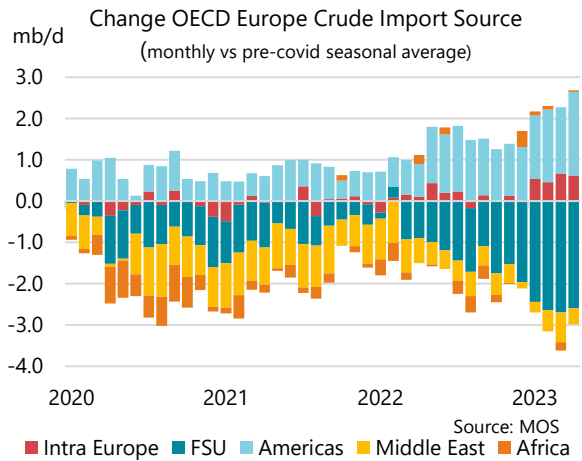
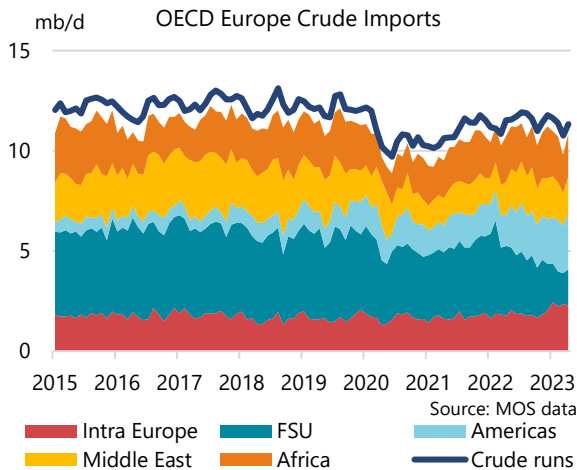
The global refining industry is basking in near-record profits as continued tightness in product markets has propelled light and middle distillate cracks back to last year's extreme levels. Against the backdrop of relatively easy crude market conditions in the first half of the year, and despite the moves by OPEC+ to cut production, refiners have benefitted financially from this mismatch. Weekly margin assessments for the US Gulf Coast, Northwest Europe and Singapore stand at their 95<sup>th</sup>, 96<sup>th</sup> and 97<sup>th</sup> percentile respectively for the post-2010 period. As we head into 2H23, crude markets seem to be catching up and overall market deficits will reduce crude and product market inventories further. Yet the refining industry appears to be struggling to respond to these product market signals evident in the OECD and elsewhere and the substantial profit opportunity the offer. Arguably, the combined impact of G7 sanctions on crude and feedstock availability and, more recently, extreme temperatures across the US, Europe and China, have limited refineries' operational flexibility to respond by raising runs.



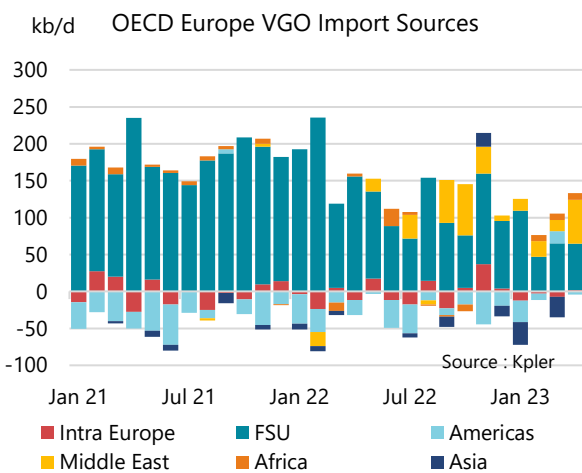
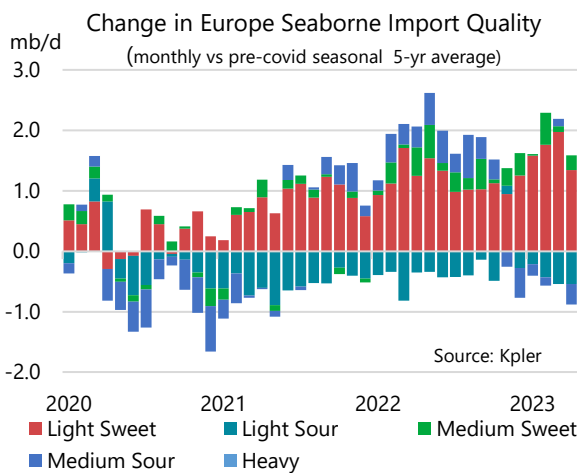
The epicentre of the operational underperformance appears, perhaps understandably, to be Europe. Throughputs in OECD Europe were 11.2 mb/d in June, 530 kb/d lower y-o-y, with average refinery utilisation counter-seasonally weak at 81%. This shortfall comes despite the extraordinary margins in Northwest Europe and the Mediterranean.

An obvious factor contributing to this weak activity level is the loss of access to Russian medium sour crude supplies for European refiners. Beyond the logistical constraints that have limited several regional refineries from running at full capacity, the shift to alternative, suboptimal crude grades have pushed refineries to processing limits for the lighter end of the barrel. European imports have not only declined post-Covid-19 with the closure of capacity within the region but lost Russian crude imports have predominantly been replaced by lighter and sweeter US supplies.

Against a pre-Covid baseline, lower Middle Eastern (mainly Iranian and Iraqi) exports to Europe compound the loss of Russian supplies. The replacement barrels are of lighter quality which may present a problem for delivering sufficient feedstock to upgrading units, a critical source of light and middle distillate output. Increased European crude processed locally, including nearly all of Johan Sverdrup's 750 kb/d, has been an alternative to imported medium sour grades.



The enforced lighter crude slate leaves operators more dependent on securing additional feedstocks to maximise upgrading units. However, the loss of Russian residue and vacuum gasoil (VGO) supplies to EU and American refineries has complicated sourcing arrangements. As a result, VGO premiums have increased as competition for scarce availabilities intensified. In addition, the establishment of new supply and trade patterns entails longer supply chains as a greater share of feedstock supplies from the Middle East and Asia must be attracted into the Atlantic Basin.



The prospects for 3Q23 European refinery runs look challenging. We expect OECD European crude processing to average 11.2 mb/d, an annual decline of 600 kb/d for the quarter, with a consequential impact on regional product supply. OECD Asia Oceania refinery throughputs are similarly expected to be nearly 250 kb/d lower than a year ago. Conversely, OECD Americas crude runs are forecast to hold steady from a year ago during 3Q23).

In addition to these structural factors, extreme hot weather is also reported to have limited crude processing in recent weeks at some refineries. Heat waves have been seen across much of southern Europe, the US Southwest, parts of southern China and Korea. Given the high heat levels and pressure involved in many refinery processes, it is unlikely that all refineries and units were affected equally.

Refineries in the Middle East have had to cope with ambient temperatures above 40 degrees Celsius in the summer months on a regular basis. Crucially, the impact of recent extreme ambient air, and potentially water temperatures, depends on the assumed environmental limits when process units

were designed. Operators utilise multiple heat exchangers, waste heat recovery systems and air/water coolers to improve their overall efficiency. Heat transfer is an integral part of an efficient refinery operation. Nevertheless, if a unit typically relies on an air/water cooler that is operating above its design specification this could impact processing rates. Crude processing limitations are reported to be linked to the recovery of saturated gas and light distillate streams at the top of the crude tower, which can constrain the rate of crude intake. Other areas of refinery operations, e.g., product blending, might be constrained if product temperatures are above the upper limit specified. For example, fuel oil blending may be constrained in a situation where the ambient temperature slows cooling of the product in time for loading on a vessel. This in turn slows or delays tank turnovers, and consequently leads to a reduction in crude processing, or FCC intake. Overall, we have lowered crude runs estimates by a couple of percentage points for a number of Mediterranean countries and await confirmation of the scale of the problem.

Globally, August crude runs are approaching their summer 2019 levels, even as demand breaks its pre-Covid record. The August global peak in runs, estimated at 83.9 mb/d, is 2.4 mb/d higher than the spring low-point of May, following completion of seasonal maintenance in the Atlantic Basin and Asia. Yet the increase in crude runs has failed to improve the low refined product market inventory levels.

Global Refinery Crude Throughput <sup>1</sup>														
(million barrels per day)														
	2019	2020	2021	2022	1Q23	2Q23	Jul-23	Aug-23	Sep-23	Oct-23	3Q23	4Q23	2023	2024
Americas	19.1	16.6	17.7	18.7	18.0	18.8	19.1	19.2	18.7	18.4	19.0	18.7	18.6	18.4
Europe	12.2	10.7	11.0	11.5	11.3	11.2	11.2	11.4	11.0	10.9	11.2	11.0	11.2	11.1
Asia Oceania	6.8	5.9	5.8	6.1	6.1	5.6	5.9	6.2	5.9	5.6	6.0	5.9	5.9	5.8
<b>Total OECD</b>	<b>38.1</b>	<b>33.1</b>	<b>34.5</b>	<b>36.2</b>	<b>35.4</b>	<b>35.6</b>	<b>36.2</b>	<b>36.7</b>	<b>35.7</b>	<b>35.0</b>	<b>36.2</b>	<b>35.7</b>	<b>35.7</b>	<b>35.4</b>
FSU	6.8	6.4	6.8	6.5	6.7	6.4	6.8	6.6	6.4	6.3	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	13.6	14.8	15.0	15.4	15.5	15.5	15.4	15.5	15.2	15.1	15.3
Other Asia	10.4	9.4	9.7	10.2	10.8	10.7	10.4	10.5	10.1	10.5	10.4	10.6	10.6	10.8
Latin America	3.2	3.0	3.3	3.5	3.6	3.8	3.7	3.8	3.7	3.5	3.7	3.6	3.7	3.6
Middle East	7.8	7.1	7.7	8.2	8.4	8.4	8.7	8.7	8.8	8.9	8.7	9.0	8.6	9.3
Africa	2.2	1.9	2.0	1.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.1
<b>Total Non-OECD</b>	<b>44.2</b>	<b>41.9</b>	<b>44.2</b>	<b>44.4</b>	<b>46.5</b>	<b>46.3</b>	<b>47.2</b>	<b>47.2</b>	<b>46.8</b>	<b>46.7</b>	<b>47.1</b>	<b>47.0</b>	<b>46.7</b>	<b>48.1</b>
<b>Total</b>	<b>82.3</b>	<b>75.1</b>	<b>78.7</b>	<b>80.6</b>	<b>81.9</b>	<b>82.0</b>	<b>83.4</b>	<b>83.9</b>	<b>82.4</b>	<b>81.7</b>	<b>83.3</b>	<b>82.7</b>	<b>82.5</b>	<b>83.5</b>
<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>2.1</i>	<i>2.7</i>	<i>2.6</i>	<i>1.2</i>	<i>1.9</i>	<i>2.2</i>	<i>1.5</i>	<i>1.9</i>	<i>1.0</i>

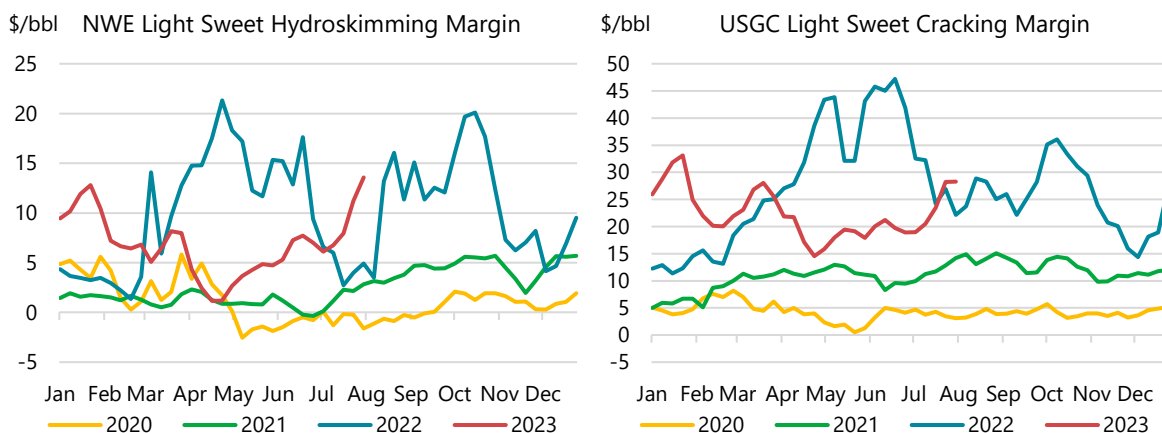
<sup>1</sup> Preliminary and estimated runs based on capacity, known outages, economic runcuts and global demand forecast.

While the decline in OECD runs has been offset by growth in Middle East and Chinese refining activity, there are meaningful discrepancies between refinery yields in the different regions. This year's annual growth of 400 kb/d in Middle Eastern runs has in large part been driven by the full commissioning of all three trains of the 615 kb/d Al Zour refinery in Kuwait. The refinery produces naphtha, jet/kerosene, ULSD and VLSFO. Whereas US refineries typically produce close to 50% gasoline, higher Middle Eastern runs this year will result in only a limited increase in gasoline supplies. The start of commercial operations at the Duqm refinery in Oman will contribute more gasoline and diesel, but the impact will not be evident until next year. Similarly, the start of the second hydrocracker at Saudi Aramco's 400 kb/d Jizan plant will boost middle distillate supplies but will simultaneously remove a key source of VGO exports that had been supplying European refineries.

## Product cracks and refinery margins

Refining margins have broken above 2022 levels, following a late-July spike in gasoline and diesel cracks. High sulphur fuel oil cracks turned positive in early August when measured against light

sweet crude in Europe and medium sour Dubai in Singapore, an exceptional turnaround from the \$24/bbl discount seen at times in 1Q23.



The lack of product inventories across much of the OECD has left cracks vulnerable to unplanned outages and the threat of supply curtailment from other factors, such as the recent extreme heat events. Consequently, early August currently sees refineries benefitting from a margin environment that eclipses almost any other period except 2022 and is reminiscent of 2005-07 when strong middle distillate demand growth combined with a lack of upgrading capacity underpinned exceptional margins for complex refineries.

IEA Global Indicator Refining Margins										
\$/bbl	Monthly Average				Change	Average for week starting:				
	Apr 23	May 23	Jun 23	Jul 23	Jun - Jul	03 Jul	10 Jul	17 Jul	24 Jul	31 Jul
<b>NW Europe</b>										
Light sweet hydroskimming	2.15	4.06	6.61	8.24	1.63	6.10	6.75	7.94	11.23	13.58
Light sweet cracking	5.47	6.44	8.95	10.82	1.86	7.97	8.96	10.70	14.53	17.09
Light sweet cracking + Petchem	6.45	6.56	7.93	9.99	2.06	7.43	8.03	9.92	13.53	16.27
Medium sour cracking*	10.93	10.64	13.75	16.00	2.25	12.54	13.89	15.89	20.37	23.75
<b>US Gulf Coast</b>										
Light sweet cracking	18.65	18.13	19.72	23.51	3.78	18.98	20.49	23.45	28.20	28.27
Medium sour cracking	23.75	22.27	23.71	26.58	2.87	22.07	23.37	26.12	31.59	32.93
Heavy sour coking	30.31	28.05	27.74	32.59	4.86	26.20	28.35	32.94	38.95	39.18
<b>Singapore</b>										
Light sweet cracking	2.82	2.54	4.16	5.99	1.83	3.76	4.59	6.30	8.46	10.90
Light sweet cracking + Petchem	4.00	3.94	5.37	6.73	1.36	4.87	5.26	7.06	8.99	11.08
Medium sour cracking	4.77	4.99	5.33	7.91	2.57	5.13	6.78	8.01	10.66	14.32
Medium sour cracking + Petchem	5.93	6.37	6.53	8.63	2.11	6.22	7.45	8.76	11.19	14.50

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

July margins rose across the board versus June, with monthly average increases of between \$1/bbl and \$5/bbl. Heavy sour coking margins led the improvement, rising \$4.86/bbl on the US Gulf Coast, reflecting the softer heavy-sour crude differentials for Canadian WCS crude. These gains reversed some of recent underperformance seen in previous months. Even so, WCS coking margins still lag the five-year average spread to sour cracking margins of \$11/bbl, as sour crude markets struggle to attract sufficient supplies in the Atlantic basin. The line fill for the Trans Mountain pipeline expansion (TMX) is expected to require approximately 50 kb/d over the fourth quarter, adding to

North American heavy sour crude demand. Following TMX's commercial start-up next year, US Gulf Coast (USGC) crude markets could be deprived of an additional 500 kb/d of Canadian sour crude, as West Coast Canadian exports to Asia increase. However, commercial negotiations around the transportation tariffs are still to be finalised and a high TMX tariff would improve the netback values of moving crude to the USGC.

Hydroskimming profitability arguably remains the most revealing aspect of the overall margin picture. In Europe, processing light sweet crude through a simple refinery earned over \$8/bbl on average in July. With the exception of the post-Russia Ukraine invasion period, these are unprecedented levels of profitability and early August saw margins increase above \$13/bbl. The absence of the usual drag of negative fuel oil cracks on refining margins explains to a large extent this phenomenon. So too, the compression of the light sweet versus heavy sour crude differentials contributes to the swing in margins.

Higher hydroskimming margins highlight the fact that the global refining sector faces constraints in meeting rising demand. The compression of the spread between hydroskimming and cracking margins suggests that crude market fundamentals have improved, as the OPEC+ production cuts start to bear fruit. If so, then the coming months could see sustained elevated margins as refineries operate in a deficit market environment of 2 mb/d this quarter and 1.3 mb/d next quarter.

Product Prices and Differentials (\$/bbl)													
	Prices			Differentials				Week Starting					
	May	Jun	Jul	May	Jun	Jul	Jun-Jul chg	03-Jul	10-Jul	17-Jul	24-Jul	31-Jul	
<b>Northwest Europe</b>				to North Sea Dated									
Gasoline	97.06	98.12	105.34	21.57	23.39	25.25	1.86	21.15	22.22	26.25	30.23	29.02	
Diesel	91.52	96.34	105.24	16.03	21.61	25.15	3.55	21.77	22.58	24.33	30.30	35.26	
Jet/Kero	91.73	94.64	106.12	16.24	19.91	26.03	6.12	22.83	24.28	25.27	30.41	35.49	
Naphtha	65.87	61.81	64.42	-9.61	-12.92	-15.67	-2.75	-17.88	-15.46	-15.02	-14.53	-14.69	
HSFO	63.97	69.68	73.63	-11.52	-5.05	-6.46	-1.41	-6.14	-7.41	-7.17	-5.66	-0.16	
0.5% Fuel Oil	76.06	78.84	81.92	0.57	4.11	1.83	-2.28	2.56	0.85	1.24	2.11	5.98	
<b>US Gulf Coast</b>				to WTI Houston									
Gasoline	101.24	101.70	112.06	28.67	29.87	34.15	4.28	28.02	30.58	34.51	40.09	36.15	
Diesel	96.61	98.68	109.56	24.04	26.85	31.65	4.80	28.33	28.74	30.75	35.87	41.84	
Jet/Kero	91.39	94.14	105.09	18.82	22.31	27.18	4.87	23.55	23.79	26.05	31.98	38.25	
Naphtha	74.69	72.30	69.63	2.12	0.47	-8.29	-8.75	-8.90	-7.15	-8.79	-8.54	-10.80	
HSFO	60.29	65.53	72.69	-12.29	-6.30	-5.22	1.08	-2.21	-6.92	-5.81	-5.22	-1.85	
0.5% Fuel Oil	78.88	80.06	84.63	6.31	8.23	6.71	-1.52	7.16	6.33	6.10	7.21	8.90	
<b>Singapore</b>				to Dubai									
Gasoline	85.69	87.43	93.13	9.70	11.02	11.51	0.48	7.93	9.78	13.21	14.50	12.33	
Diesel	89.05	92.31	101.79	13.06	15.91	20.17	4.26	16.66	18.53	19.46	24.36	31.32	
Jet/Kero	88.49	90.06	98.85	12.50	13.65	17.22	3.57	14.24	15.60	16.83	20.95	25.52	
Naphtha	62.12	57.01	62.43	-13.87	-19.39	-19.20	0.19	-20.00	-18.74	-19.36	-19.24	-16.95	
HSFO	66.96	66.28	74.54	-9.03	-10.13	-7.08	3.05	-6.83	-6.94	-7.73	-7.06	-2.36	
0.5% Fuel Oil	84.10	87.25	86.94	8.11	10.84	5.31	-5.53	8.84	5.06	2.78	4.55	7.71	

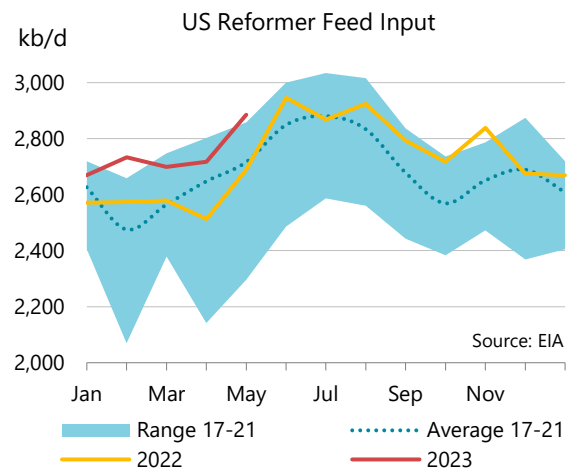
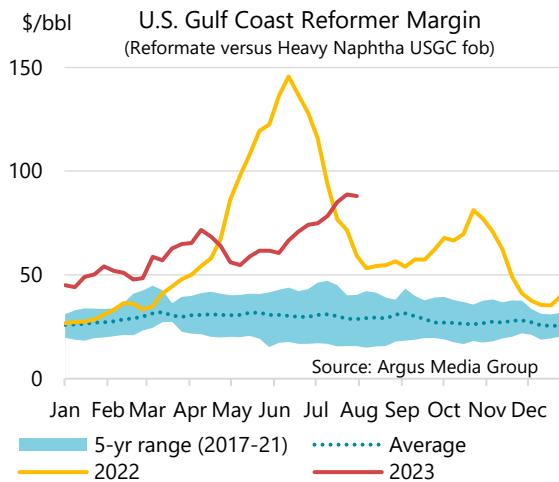
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Gasoline maintained its position as the strongest crack on average for the Atlantic Basin in July. However, a late-month diesel crack rally pushed them ahead of gasoline across all three regions that we track. Jet fuel remained on parity with diesel, on a tonne basis, although cracks on a per barrel basis lagged slightly. While high sulphur fuel oil cracks continue to improve, VLSFO cracks posted a month-on-month decline, before rebounding in early August back to above June average values in the Atlantic Basin against sweet crude benchmarks and near parity to June versus Dubai in Singapore.

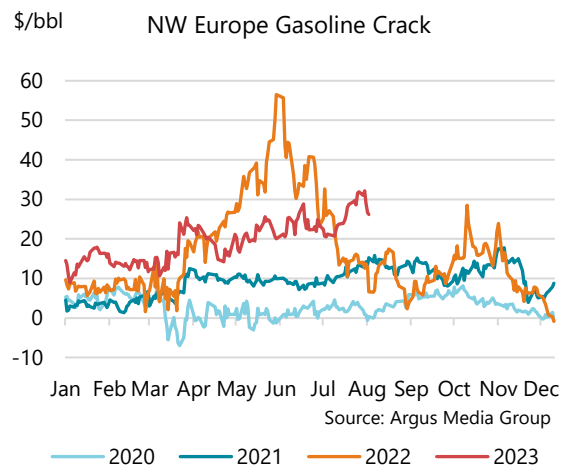
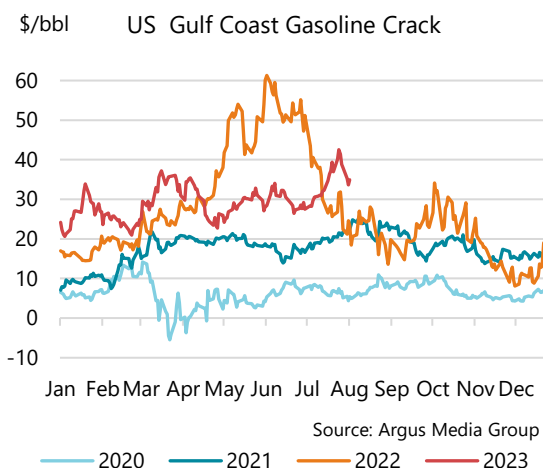
Naphtha remains the laggard among light and middle distillates. Cracks posted further declines in Europe and the US, while holding broadly steady in Asia m-o-m. Naphtha demand as a petrochemical feedstock has come under pressure from low LPG prices. In this regard, propane prices weakened further in Europe to 80% of naphtha on a tonne basis at the time of writing. This

suggests further naphtha price weakness is possible, even as the incentive to blend it into the gasoline pool is now close to \$45/bbl in Europe and the United States.

The incentive to process heavy naphtha (i.e., aromatic rather than paraffinic) by reforming it into a high-octane gasoline blending component is even greater. Year to date, the spread on the USGC has averaged \$62/bbl, and currently stands at \$88/bbl. This likely contributes to US reformer feed rates increasing by 6% y-o-y through to May, while US crude runs were flat y-o-y over the same period. The US accounts for 60% of total OECD gasoline production, roughly three times OECD Europe's output and thus improvements to US output will potentially have a greater impact on restoring balance to the gasoline market in the coming weeks.

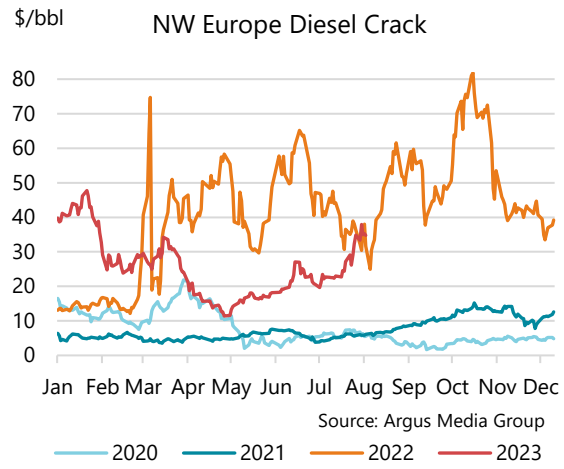
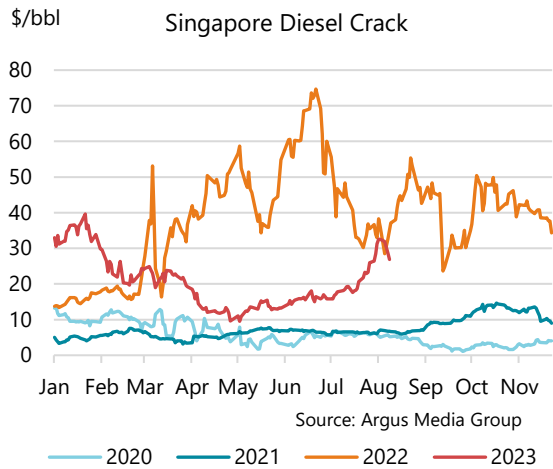


Despite the price signals to boost gasoline output, on a seasonally adjusted basis OECD gasoline stocks in June fell to a near 40-year low of 354 mb. Recent weakness in United States weekly product supplied data points to inventory cover improving to within the five-year range. Nevertheless, stocks in OECD Europe and Asia Oceania are at well below the 2017-21 range, as they have been all year. Lastly, with the recovery in European gasoline demand following the shift away from diesel in ICE vehicles, European gasoline cover is at its lowest since 2007.

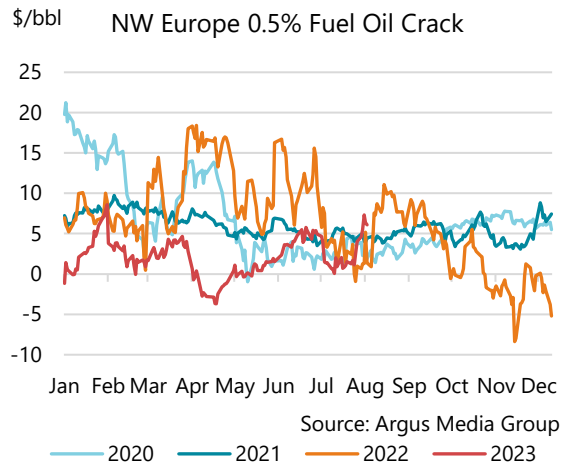
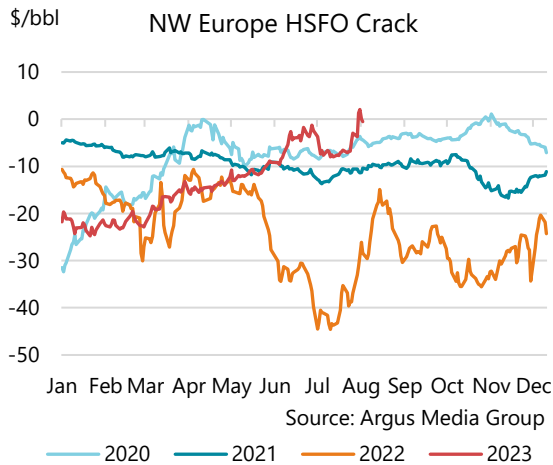


Across the three major regional refining markets diesel cracks have returned to 2022 levels, albeit only just. In the absence of the cost pressures that marked last year's diesel market when European natural gas prices were 5-10 times higher than they are currently, the rally in prices reflects the concern of market participants to secure volumes. In particular, lower Chinese exports have

reportedly contributed to increased competition for Middle Eastern supplies that had been heading into Europe.



High sulphur fuel oil cracks continued to strengthen, with European and Singaporean high sulphur cracks turning positive in early August. The tighter market, in combination with the loss of Russian supplies in the Atlantic Basin is reflected in strong sour crude pricing. This is evident in premiums commanded by grades such as Johan Sverdrup in Europe, and Maya and WCS on the US Gulf Coast. Additional use of fuel oil by Middle Eastern power utilities in lieu of burning crude, (given the price incentive that G7-sanctions have offered the region's producers), has boosted fuel oil demand, with July imports up 400 kb/d y-o-y to 675 kb/d. Furthermore, Chinese fuel oil imports by independent refineries have rebounded by approximately 300 kb/d y-o-y. These conditions justify higher refinery runs of sour crude to rectify the residue shortfall, but this would require an increase in Middle Eastern crude supply.

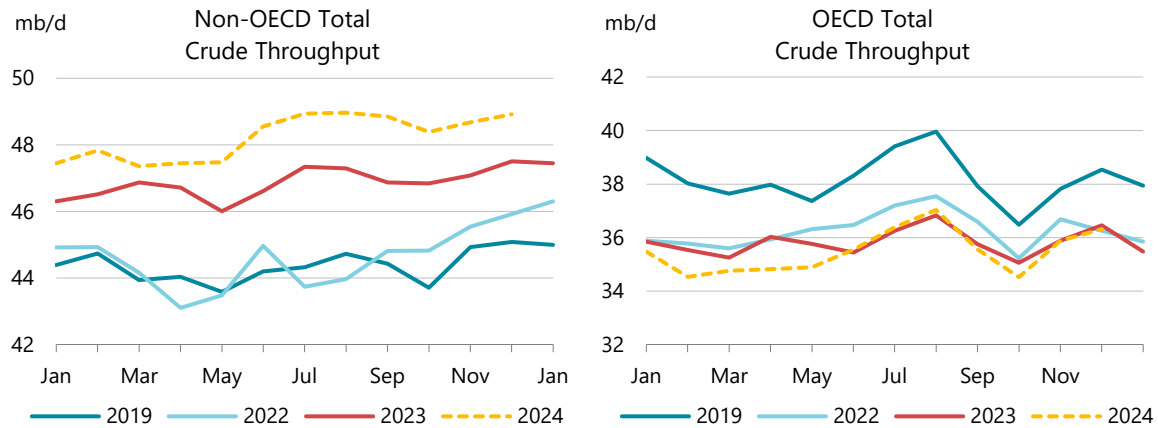


## Regional refining developments

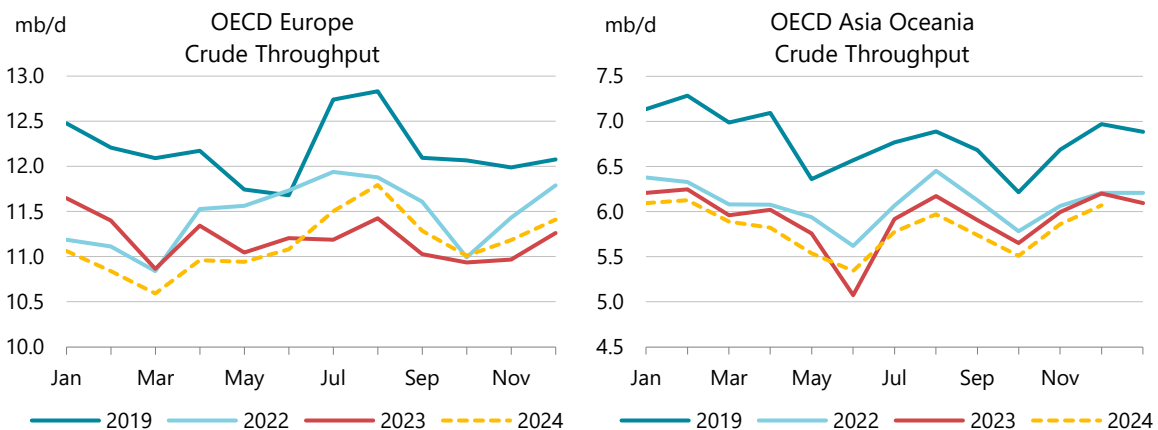
Global refinery throughput is forecast to average 82.5 mb/d in 2023 and 83.5 mb/d in 2024. Annual growth in crude runs is nudged higher by around 20 kb/d for both years, to 1.9 mb/d and 1 mb/d, respectively. Growth is driven by the recovery in throughputs East of Suez, with China (+1.5 mb/d), Other Asia (+450 kb/d) and the Middle East (+400 kb/d) more than offsetting the y-o-y declines in OECD Asia Oceania (-170 kb/d), OECD Europe (-280 kb/d) and Africa (-170 kb/d). Crude processing



in South America is expected to increase by 130 kb/d y-o-y, while OECD Americas is essentially flat y-o-y. Overall, OECD throughputs are expected to post an annual decline of 450 kb/d, led by weaker runs in Europe and Asia Oceania.



OECD crude throughput declined in June as higher maintenance in Japan and Korea outpaced improvements in the Atlantic Basin. At 35.3 mb/d, OECD June crude runs have not been lower on a seasonally adjusted basis since at least 1999. An exceptionally heavy maintenance programme in Korea and seasonal Japanese turnaround work lowered regional utilisation to 69%. European utilisation also remained lacklustre at 81%, with both regions about 5% lower y-o-y. This compounds the impact of structural capacity closures in recent years.



OECD Americas remain a bright spot, with crude throughputs moving 200 kb/d higher m-o-m and in line with last year's level. OECD June crude runs at 35.3 mb/d were 80 kb/d below estimates, as weaker-than-expected runs in Japan and Korea more than offset better performances from European refineries. Germany reported its highest level of crude throughputs so far this year at 1.7 mb/d, although the y-o-y contraction of 240 kb/d was greater than the year-to-date average of -200 kb/d, indicating that the loss of Russian crude continues to weigh on operating rates. Similarly, Italian runs dropped by 240 kb/d y-o-y. Arguably, this year's poor performance in Europe is partially a reflection of the exceptional margins and higher crude runs seen a year ago. In aggregate, we expect OECD runs to recover in July as OECD Asia Oceania rebounds from maintenance and with higher weekly data for the US underpinning an 800 kb/d increase for the month.

### Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Change from		Utilisation rate	
							May 23	Jun 22	Jun 23	Jun 22
US <sup>1</sup>	15.03	15.07	15.46	15.79	16.16	16.36	0.20	-0.16	91%	93%
Canada	1.84	1.73	1.75	1.61	1.68	1.74	0.06	0.02	96%	94%
Chile	0.19	0.19	0.19	0.21	0.19	0.17	-0.02	0.07	76%	46%
Mexico	0.86	0.81	0.95	0.97	0.85	0.81	-0.04	0.10	50%	44%
<b>OECD Americas<sup>1</sup></b>	<b>17.91</b>	<b>17.81</b>	<b>18.35</b>	<b>18.59</b>	<b>18.88</b>	<b>19.08</b>	<b>0.20</b>	<b>0.03</b>	<b>88%</b>	<b>89%</b>
France	0.98	1.00	0.52	0.66	0.96	0.99	0.03	0.14	81%	69%
Germany	1.67	1.66	1.58	1.55	1.54	1.68	0.13	-0.24	82%	93%
Italy	1.36	1.17	1.31	1.42	1.17	1.21	0.04	-0.24	70%	84%
Netherlands	1.07	1.11	0.95	1.12	1.05	1.02	-0.03	-0.09	81%	89%
Spain	1.26	1.19	1.16	1.27	1.18	1.17	0.00	-0.18	80%	92%
United Kingdom	1.04	1.02	1.03	1.04	1.05	0.95	-0.10	-0.05	79%	83%
Other OECD Europe <sup>2</sup>	4.26	4.24	4.30	4.26	4.10	4.19	0.09	0.13	87%	84%
<b>OECD Europe</b>	<b>11.64</b>	<b>11.39</b>	<b>10.85</b>	<b>11.33</b>	<b>11.04</b>	<b>11.20</b>	<b>0.16</b>	<b>-0.53</b>	<b>81%</b>	<b>85%</b>
Japan	2.88	2.79	2.65	2.62	2.33	2.18	-0.15	-0.24	68%	70%
Korea	2.80	2.90	2.80	2.88	2.97	2.43	-0.54	-0.22	68%	74%
Other Asia Oceania <sup>3</sup>	0.52	0.54	0.50	0.51	0.44	0.45	0.01	-0.08	86%	102%
<b>OECD Asia Oceania</b>	<b>6.20</b>	<b>6.23</b>	<b>5.95</b>	<b>6.01</b>	<b>5.75</b>	<b>5.06</b>	<b>-0.69</b>	<b>-0.54</b>	<b>69%</b>	<b>74%</b>
<b>OECD Total</b>	<b>35.74</b>	<b>35.44</b>	<b>35.15</b>	<b>35.93</b>	<b>35.66</b>	<b>35.34</b>	<b>-0.33</b>	<b>-1.04</b>	<b>83%</b>	<b>85%</b>

<sup>1</sup> US includes US50, OECD Americas include Chile and US territories

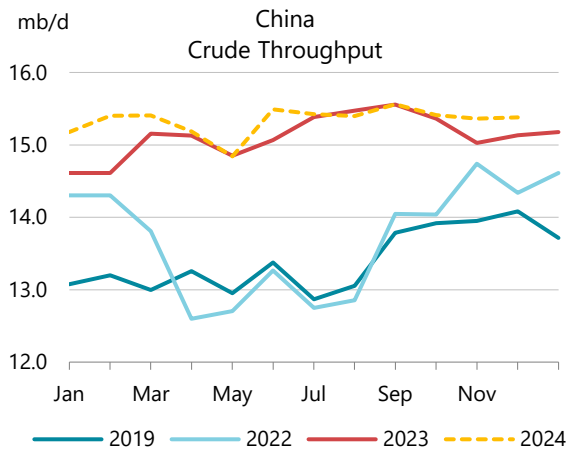
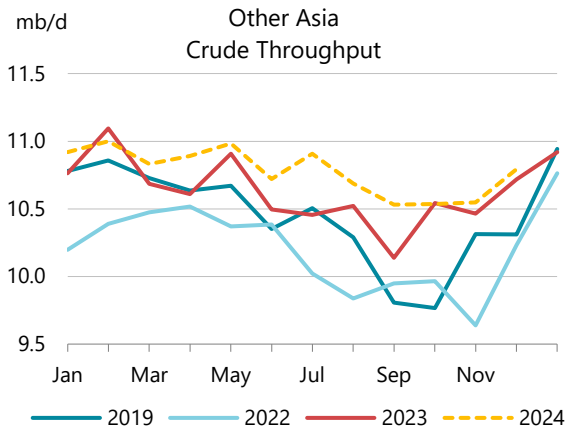
<sup>2</sup> Includes Lithuania

<sup>3</sup> Includes Israel

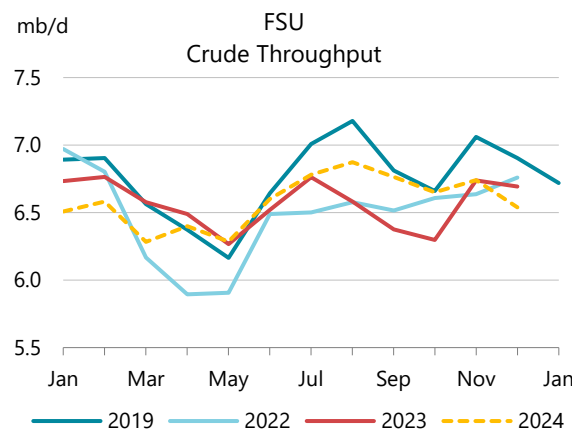
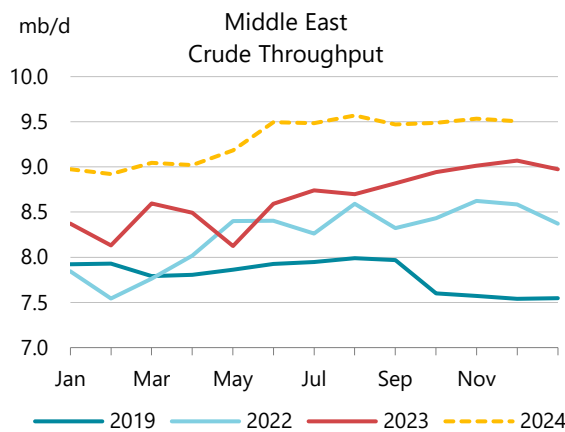
Chinese crude runs increased in June to 15.1 mb/d, in line with expectations. Annual growth remains robust at 1.8 mb/d although the 2022 baseline flatters the current, undoubtedly strong, activity levels. July crude runs are estimated to have increased by 300 kb/d m-o-m, to 15.4 mb/d as maintenance declines in line with seasonal trends. At the same time, Chinese crude imports slumped by nearly 20% m-o-m to 10.25 mb/d, implying substantial crude draws not captured by satellite tracking. Y-o-y growth in the third quarter will rise to 2.3 mb/d, with crude runs forecast to reach new record highs and average 15.5 mb/d.

Autumn refinery maintenance plans will slow crude processing again, with fourth quarter activity expected to average 15.2 mb/d. Growth in 2024 is forecast to ease to 200 kb/d, although recent reports indicate that construction of the 300 kb/d Yulong refinery is ahead of schedule and could be mechanically complete before year-end. However, the reported planned closure of some 400 kb/d of other refining capacity may mean the impact on runs next year is minimal.

Elsewhere in Asia, crude runs were, on balance, ahead of estimates for the second quarter, as maintenance appeared lighter than assumed. Reported crude runs for Indonesia, Chinese Taipei and Thailand for May were broadly in line with estimates. India's June refinery runs dipped by just over 100 kb/d on the month to 5.2 mb/d. Reported maintenance at several refineries did not reduce crude runs as expected in the monthly data from India's Petroleum Planning and Analysis Cell. Indian refinery throughput should recover to 5.3 mb/d in July and August, before heavier maintenance towards the end of the third quarter again reduces throughputs. Growth in Indian crude runs is expected to average close to 400 kb/d during 2H23



The shrinking discount on Russian Urals crude will weigh on Indian refiners' appetite for the grade, with competing fuel oil-rich Middle East sour grades reported to offer better value currently. This potentially presents a downside risk to our forecast for Indian crude runs in the coming months if the surge in Urals prices complicates shipping arrangements under the G7 sanctions regime.

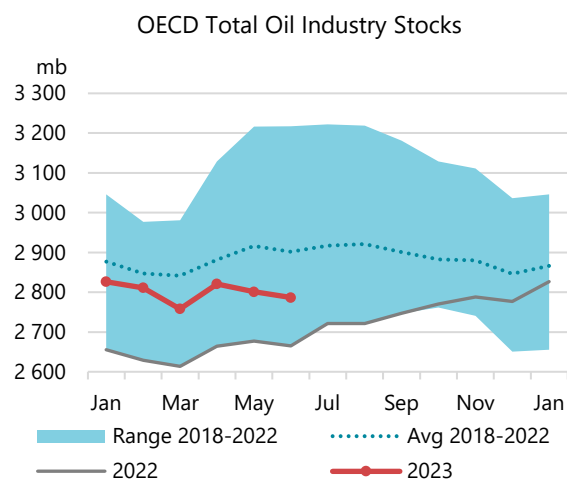
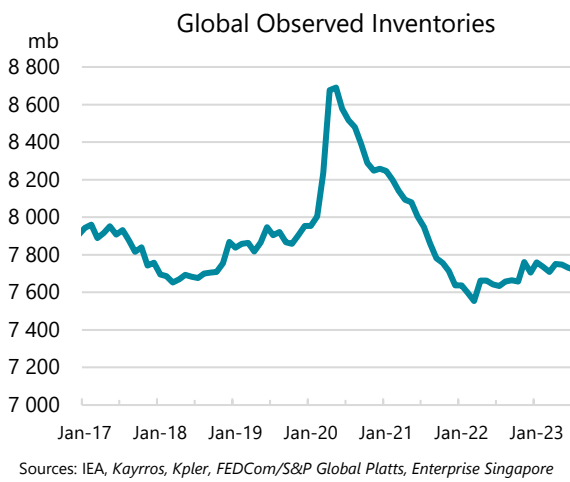


Russian refineries are estimated to have raised processing rates in July to 5.7 mb/d, as a heavy seasonal maintenance schedule ended. Higher Russian crude runs underpin the rebound in the FSU throughputs to 6.8 mb/d in July. Reports of further scheduled maintenance in August tempers expectations for the balance of 3Q23 but runs should edge higher again towards year-end. Middle East estimates contain a number of revisions this month, reducing the 2023 average by 160 kb/d. Lower Iraqi estimates reflect reports of operational problems at the recently commissioned Karbala refinery, while downward revisions to Saudi Arabia due to recent underperformance versus previous expectations. Lastly, we have slowed the assumption of when Oman's Duqm refinery will reach full operating rates, now expected in 4Q23. Offsetting these revisions is the further improvement in the outlook for Kuwait, as reports indicate the third train of the Al-Zour refinery is running and the recovery from outages in 2Q23 has been quicker than previously assumed.

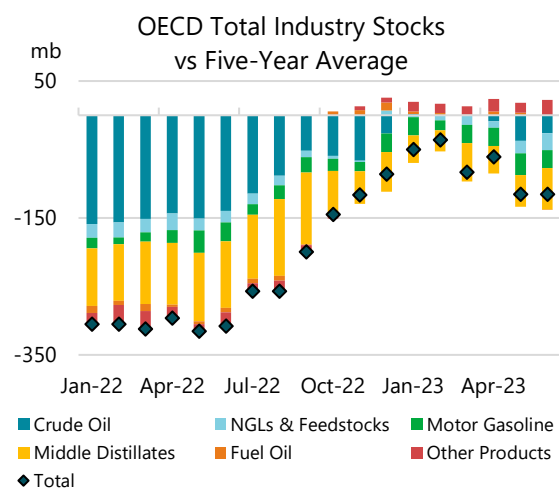
# Stocks

## Overview

Global observed inventories declined by 17.3 mb in June, with the OECD leading the drawdown at 17.5 mb. After posting a substantial increase in May, non-OECD stocks were down a modest 0.3 mb in June. Oil on water rose by 0.5 mb, with crude builds partially offset by a drop in products. Through the first half of this year, global stocks increased by 24 mb but lower availabilities in the wake of OPEC+ production cuts and stronger demand are expected to result in a large supply shortfall in the second half of the year. OECD inventories accounted for only 1.7 mb of the build over the last six months, while non-OECD oil stocks surged by 55.9 mb, of which 47.8 mb were in China. Oil on water plunged by 33.6 mb, partially offsetting the volumes that built up during 2022. In July, preliminary data suggest a draw as oil on water declined further, outweighing a resumption in stock building in both the OECD and non-OECD, led by China reaching an all-time high.



In June, OECD total industry stocks fell by 14.7 mb, in line with the seasonal trend. They stood at 2 787 mb by end-month, 115.4 mb below the five-year average. In terms of forward demand, commercial OECD inventories covered 59.6 days, down by 0.4 days from the previous month but 2.5 days higher than a year ago. Days of cover are at the lowest level since September 2022, partly reflecting strong seasonal demand. Crude oil, NGL and feedstock inventories declined by 16 mb, which is a smaller decrease than the seasonal norm. Product stocks rose by 1.4 mb, compared with the 6.4 mb five-year average build. Total OECD refinery intake was 1 mb/d lower y-o-y, and partly explains the difference in stock changes versus the historical trend. Government stocks fell by 2.9 mb as a 6.7 mb US crude oil release was partially offset by a 3.9 mb stock build in France.



Preliminary data from the United States, Europe and Japan for July showed OECD industry oil inventories built by 4.9 mb. They rose in the US (+6.5 mb) and Japan (+4.4 mb) but drew in Europe (-6 mb). Crude, NGL and feedstock inventories decreased by 2.9 mb, led by a draw in the US (-9.1 mb), while they were partially offset by Europe (+1 mb) and Japan (+5.2 mb). Oil product inventories rose by 7.9 mb, led by other products (+18.1 mb) due to a seasonal build in the US. Gasoline stocks fell in all regions in line with the five-year average, by a total of 4.1 mb. Fuel oil inventories also drew, by 6.3 mb. Middle distillate inventories were largely unchanged.

Preliminary OECD Industry Stock Change in June 2023 and Second Quarter 2023												
	June 2023 (preliminary)				June 2023 (preliminary)				Second 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
<b>Crude Oil</b>	<b>-9.0</b>	<b>0.9</b>	<b>-0.7</b>	<b>-8.8</b>	<b>-0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.3</b>	<b>0.2</b>	<b>-0.1</b>	<b>-0.2</b>
Gasoline	0.9	-2.0	-0.7	-1.8	0.0	-0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.2
Middle Distillates	1.9	-11.1	-1.9	-11.1	0.1	-0.4	-0.1	-0.4	0.1	0.0	0.1	0.1
Residual Fuel Oil	-2.0	-4.6	-0.5	-7.1	-0.1	-0.2	0.0	-0.2	0.0	0.0	0.0	0.0
Other Products	17.5	1.0	2.8	21.4	0.6	0.0	0.1	0.7	0.5	0.0	0.0	0.6
<b>Total Products</b>	<b>18.2</b>	<b>-16.6</b>	<b>-0.2</b>	<b>1.4</b>	<b>0.6</b>	<b>-0.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.6</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.6</b>
Other Oils <sup>1</sup>	-3.7	-3.2	-0.4	-7.3	-0.1	-0.1	0.0	-0.2	-0.1	0.0	0.0	0.0
<b>Total Oil</b>	<b>5.6</b>	<b>-18.9</b>	<b>-1.3</b>	<b>-14.7</b>	<b>0.2</b>	<b>-0.6</b>	<b>0.0</b>	<b>-0.5</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>

<sup>1</sup> Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD industry inventories for May were revised down by 22.6 mb to 2 801 mb following the submission of more complete data. Most of the corrections came from crude oil stocks (-19.2 mb), notably in Japan (-10.4 mb) and Canada (-9.6 mb). Product volumes were adjusted lower by 0.9 mb, as data for OECD Americas and OECD Asia Oceania was reduced by 6.2 mb and 0.6 mb, respectively, while OECD Europe was up by 5.8 mb. April data was revised up by 2.4 mb, mainly for middle distillates and fuel oil.

OECD Industry Stock Revisions versus July 2023 Oil Market Report									
	(million barrels)								
	Americas		Europe		Asia Oceania		OECD		
	Apr-23	May-23	Apr-23	May-23	Apr-23	May-23	Apr-23	May-23	
<b>Crude Oil</b>	<b>-0.2</b>	<b>-6.9</b>	<b>0.4</b>	<b>-1.9</b>	<b>0.0</b>	<b>-10.5</b>	<b>0.3</b>	<b>-19.2</b>	
Gasoline	-0.1	1.5	0.0	0.1	0.0	-1.0	-0.1	0.7	
Middle Distillates	0.0	-1.7	1.7	-0.3	-0.9	0.0	0.8	-2.1	
Residual Fuel Oil	1.5	0.9	0.0	-0.1	0.0	-0.1	1.5	0.6	
Other Products	-0.1	-6.9	0.0	6.1	0.0	0.5	-0.1	-0.2	
<b>Total Products</b>	<b>1.3</b>	<b>-6.2</b>	<b>1.7</b>	<b>5.8</b>	<b>-0.9</b>	<b>-0.6</b>	<b>2.1</b>	<b>-0.9</b>	
Other Oils <sup>1</sup>	0.0	-1.1	0.0	-1.6	0.0	0.3	0.0	-2.4	
<b>Total Oil</b>	<b>1.1</b>	<b>-14.2</b>	<b>2.1</b>	<b>2.3</b>	<b>-0.8</b>	<b>-10.7</b>	<b>2.4</b>	<b>-22.6</b>	

<sup>1</sup> Other oils includes NGLs, feedstocks and other hydrocarbons.

## Implied balance

Global observed inventories fell by 580 kb/d in June. Products stocks led the decline, falling 390 kb/d, boosting spot prices and refinery margins. OECD industry crude stocks, including NGLs and feedstocks, declined by 530 kb/d, while product inventories edged up by 50 kb/d. OECD government stocks were down by 100 kb/d. Non-OECD crude oil stocks inched up by 70 kb/d, but were offset by an 80 kb/d draw in product inventories in Fujairah and Singapore. Oil on water was largely unchanged as crude oil increased by 410 kb/d and products fell by 390 kb/d.

In the second quarter of 2023, observed known stocks built by 160 kb/d, while the global supply and demand balance indicates a 440 kb/d draw. OECD total oil inventories rose by 190 kb/d, with

120 kb/d released from government stockpiles. Non-OECD crude stocks built by 520 kb/d, led by China at 570 kb/d, while product inventories declined by 160 kb/d. Oil on water fell by 390 kb/d.

IEA Global oil balance (implied stock change) (mb/d)										
	2019	2020	2021	2022	1Q23	Apr-23	May-23	Jun-23	2Q23	Jul-23
Global oil balance	-0.04	2.23	-2.19	0.07	1.15	0.95	-1.05	-1.20	-0.44	-1.69
Observed stock changes										
OECD industry stocks	0.05	0.41	-1.06	0.36	-0.21	2.09	-0.63	-0.49	0.31	0.16
OECD government stocks	-0.04	0.02	-0.16	-0.74	0.03	-0.22	-0.03	-0.10	-0.12	0.01
Non-OECD crude stocks*	0.17	0.43	-0.46	0.26	0.20	0.06	1.40	0.07	0.52	0.53
Selected non-OECD product stocks**	-0.14	0.12	-0.03	-0.01	0.33	-0.28	-0.13	-0.08	-0.16	-0.01
Oil on water	0.07	0.01	-0.04	0.30	0.02	-0.25	-0.92	0.02	-0.39	
Total observed stock changes	0.11	0.99	-1.74	0.18	0.37	1.39	-0.31	-0.58	0.16	
Unaccounted for balance	-0.15	1.24	-0.46	-0.11	0.78	-0.44	-0.74	-0.62	-0.60	

\*Crude stock change data from *Kayrros* and estimated Saldanha Bay data from *Kpler*.

*Kayrros* 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, Kayrros, JODI, Kpler, FEDCom/S&P Global Platts and Enterprise Singapore.

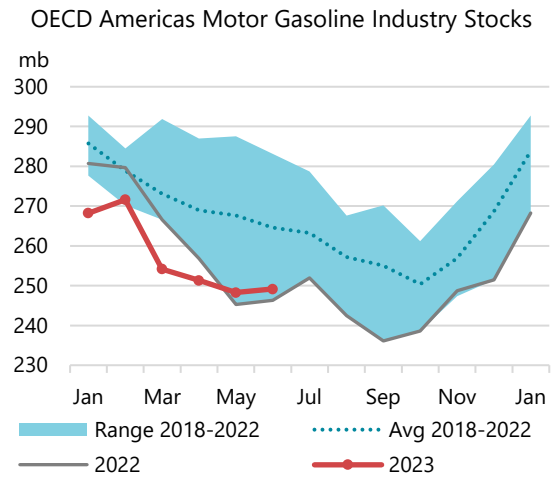
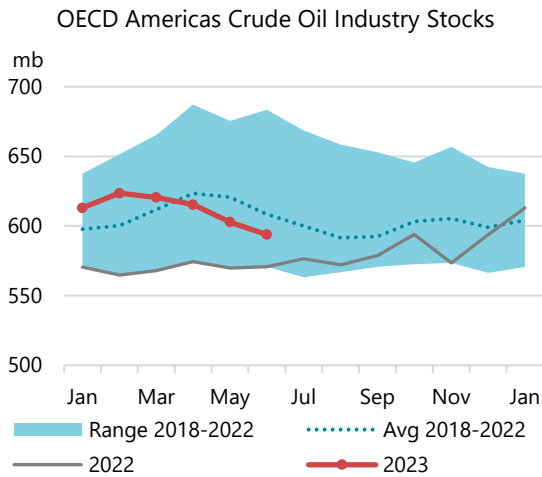
## Recent OECD industry stock changes

### OECD Americas

Industry inventories in OECD Americas increased by 5.6 mb in June, with stock builds in the US (+10 mb) and draws for a second consecutive month in Canada (-4.4 mb). Canadian oil stocks fell to 164.6 mb, the lowest level since 2010, as oil production was impacted by wildfires. Regional stocks stood at 1 505 mb, the highest in four months, but remained 43.2 mb below the five-year average. Crude oil stocks fell for the fourth consecutive month, by 9 mb, despite the release of 6.7 mb from the US Strategic Petroleum Reserve (SPR). NGL and feedstock inventories declined counter-seasonally by 3.7 mb, hitting the lowest level since the end of 2021.

Oil product stocks surged by 18.2 mb, compared with the normal increase of 11 mb for the month. The gains were led by larger than usual stock builds in other products (+18.2 mb), exclusively in the US (+19.9 mb). Gasoline inventories inched 0.9 mb higher when they usually fall by 3 mb. Middle distillate stocks were also up, by 1.9 mb, in line with the seasonal trend. Fuel oil inventories drew by 2 mb. Refinery intake in the OECD Americas was 200 kb/d higher m-o-m, and partially explains the stock movements.

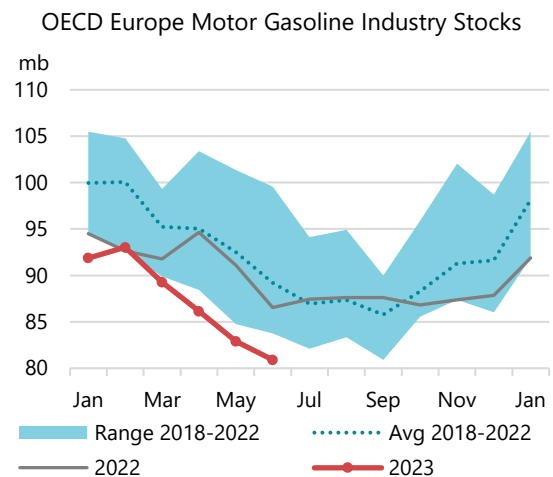
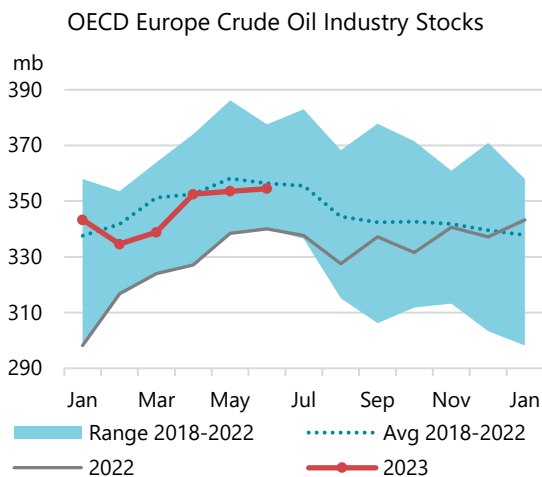
US EIA Weekly data show commercial stocks rose by 6.5 mb in July. Crude oil inventories dropped by 9.9 mb, in line with the five-year average. The SPR built by a marginal 0.2 mb as 0.4 mb of crude oil was made available, with the mandatory 26 mb SPR release now completed, while they started to refill as a result of a bid announced in February. Other oil stocks edged up by 0.8 mb. Total oil product inventories rose by 15.7 mb, mainly led by seasonal other product stock builds (+18.3 mb). Gasoline inventories drew by 1.9 mb and middle distillate stocks rose by 1.9 mb, in line with seasonal norms. Fuel oil inventories declined by 2.6 mb. Refinery crude intake was the highest since December 2019 but record product exports hampered more than typical inventory builds, with the exception of other products.



## OECD Europe

OECD Europe industry stocks plunged by 18.9 mb in June, compared with an 11.3 mb seasonal draw. Stocks were 927.8 mb at end-month, 55.3 mb below the 2018-2022 average. Crude oil stocks edged up counter-seasonally by 0.9 mb to 354.3 mb, the highest since January 2021. NGL and feedstock inventories fell by 3.2 mb, in line with the typical trend.

Oil product stocks declined by 16.6 mb, larger than the five-year average (-7.5 mb). The biggest draw occurred in middle distillates (-11.1 mb), which normally decline by 1.9 mb. The draws were led by France (-2.4 mb), Italy (-2 mb), Belgium (-1.7 mb) and Spain (-1.6 mb). Gasoline inventories fell by 2 mb to 80.7 mb, the lowest level since at least 1980 when our time series start. Fuel oil inventories also declined, by a larger-than-usual 4.6 mb, but the stock levels were still 1.3 mb above the five-year average. By contrast, other product stocks rose counter-seasonally by 1 mb.

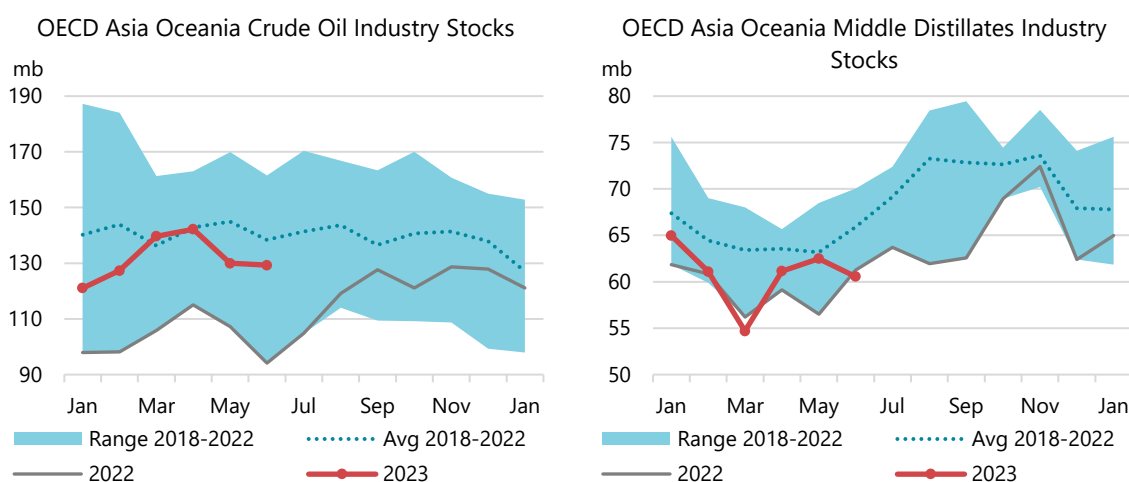


Preliminary July data from *Euroilstock* showed total industry inventories dropped by 6 mb. The decline came mainly from France (-4.4 mb) and the Netherlands (-3.7 mb) while stocks increased in Italy (+2.3 mb) and Spain (+1.7 mb). Crude oil stocks rose by 1 mb led by Germany (+2.2 mb). Oil product inventories declined by 7 mb. Middle distillate stocks and fuel oil stocks decreased by 3 mb each, notably in France for middle distillates (-3.8 mb) and the Netherlands for fuel oil (-1.3 mb). Gasoline inventories were down for a fifth consecutive month, by 1 mb. Naphtha stocks were unchanged.

## OECD Asia Oceania

Industry stocks in OECD Asia Oceania decreased by 1.3 mb to 354.2 mb in June, remaining 17 mb below the five-year average. Crude oil stocks fell by a marginal 0.7 mb when they usually decline by 6.6 mb. Japanese inventories built counter-seasonally by 3.5 mb while Korean stocks fell by 3.6 mb in line with the seasonal pattern, despite reporting their lowest crude imports since August 2016, according to *Kpler*. NGLs and feedstocks slightly drew by 0.4 mb.

Oil product inventories inched down by 0.2 mb compared with a normal build of 3 mb. Gasoline and fuel oil stocks fell by 0.7 mb and 0.5 mb, respectively, in line with the seasonal trends. Middle distillate inventories declined counter-seasonally by 1.9 mb, as they decreased by 2 mb in Korea when they normally build by 2 mb. Other product stocks rose by 2.8 mb, compared with a normal 1.5 mb seasonal increase. Weak regional refinery intake (-550 kb/d y-o-y) contributed to the crude and product inventory movements.

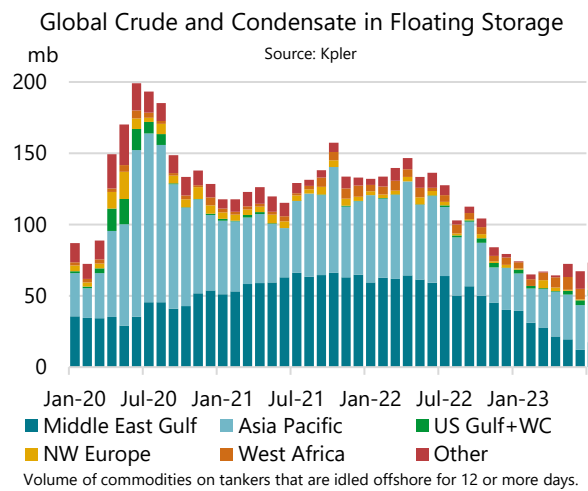
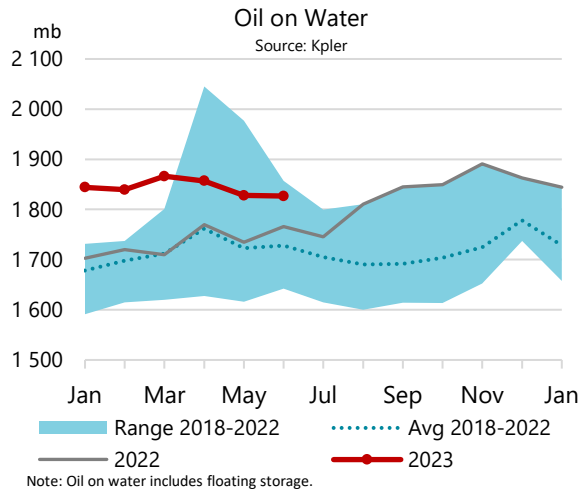


Preliminary data from the *Petroleum Association of Japan* show their commercial inventories built by 4.4 mb in July. Crude oil stocks rose counter-seasonally by 4.3 mb as refinery intake was still 160 kb/d lower than a year ago despite rising 210 kb/d m-o-m. Other oils also built, by 0.9 mb. Oil product inventories fell by 0.8 mb. Gasoline and fuel oil stocks drew by 1.2 mb and 0.7 mb, respectively, in line with seasonal norms. Middle distillate inventories increased by 1.3 mb when they typically rise by 1.8 mb, as gasoil posted a counter-seasonal decline of 1.2 mb. Naphtha stocks were down by a marginal 0.2 mb.

## Other stock developments

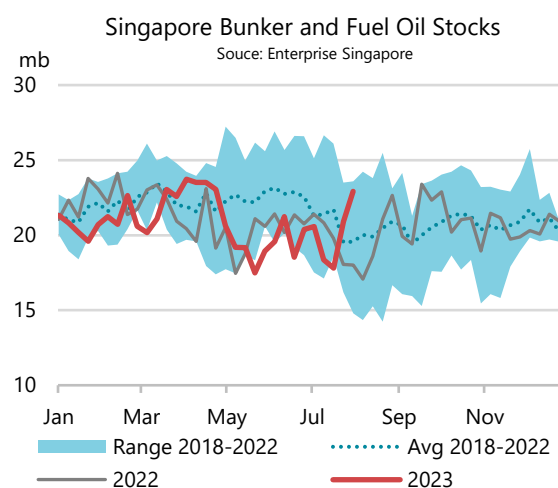
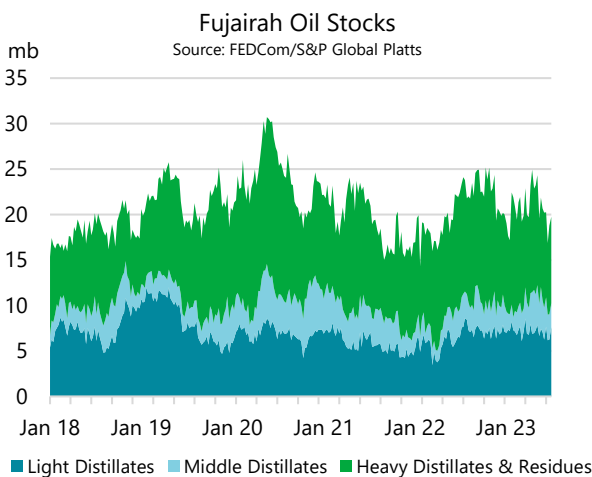
Oil on water, including floating storage, edged up by 0.5 mb in June, according to data from *Kpler*. Crude oil rose by 12.2 mb while products declined by 11.7 mb. Russian oil on water sharply decreased, to its lowest level since February, on reduced exports. The declines were offset by increased shipments from Angola, Iran, Iraq and Qatar while Saudi Arabia cut its exports. Crude oil held in short-term floating storage fell by 4.4 mb. A decline of 6.5 mb in the Middle East, led by Iran, offset an additional 2.8 mb of Saudi Arabian crude in offshore storage near Ain Sokhna in Egypt. Product floating storage also declined, by 5 mb, primarily of fuel oil. Most of those volumes were transferred to other tankers through ship-to-ship operations offshore Iraq and in the Black Sea.





In Fujairah, independent product stocks declined by a notable 3.1 mb to 20.4 mb in June, after increasing by 3.8 mb in the previous month, according to data from *FEDCom and S&P Global Platts*. *Kpler* data show the highest exports in 10 months and the lowest imports in three months at Fujairah. The largest decrease came from residual fuel inventories at -1.8 mb. Light distillate stocks fell by 0.9 mb, hitting a seven-month low. Middle distillate inventories were down by 0.5 mb. In July, total stocks fell by a further 0.7 mb led by middle distillates, to the lowest level since January.

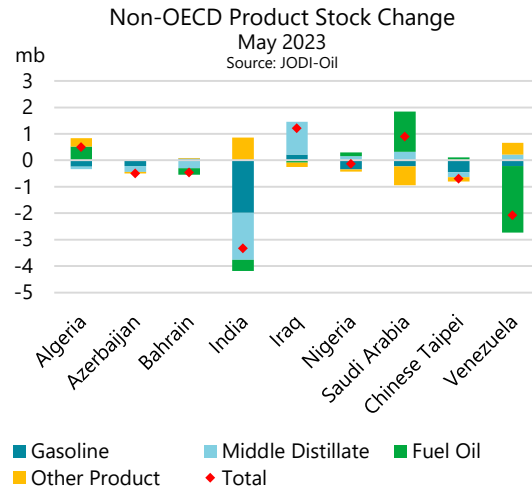
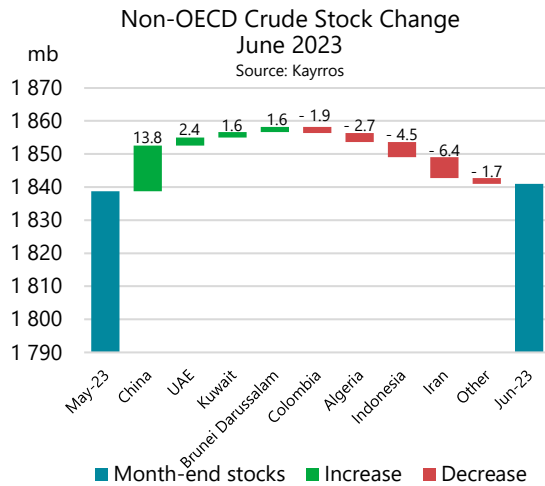
Independent product stocks in Singapore, the world's largest bunkering hub, rose by 0.6 mb to 42.7 mb in June, according to *Enterprise Singapore*. Residual fuel oil inventories exclusively contributed to the stock build, rising by 1.5 mb. Light and middle distillate inventories fell by 0.8 mb and 0.1 mb, respectively. Total stocks inched up by 0.5 mb in July, but middle distillate inventories fell below their five-year range, implying tight markets. Fuel oil stocks meanwhile rose sharply at end-month.



Non-OECD observed crude stocks in floating-roof storage tanks rose by 2.2 mb in June, according to satellite data from *Kayrros*. The pace of Chinese stock builds slowed to 13.8 mb from 34.1 mb in the previous month. However, Chinese crude imports hit their highest level in three years and imports plus domestic crude production reached a record peak. By contrast, stocks in Iran declined by 6.4 mb, mainly at the Kharg Island terminal, suggesting high crude exports. Indonesian inventories also fell, by 4.5 mb, to the lowest level in 12 months. *Kayrros* data show total non-OECD crude oil stocks built by 16.3 mb in July. Chinese stocks surged by 31.5 mb to an all-time high, while inventories drew in some countries such as Saudi Arabia (-4.8 mb) and Chinese Taipei (-3.9 mb).

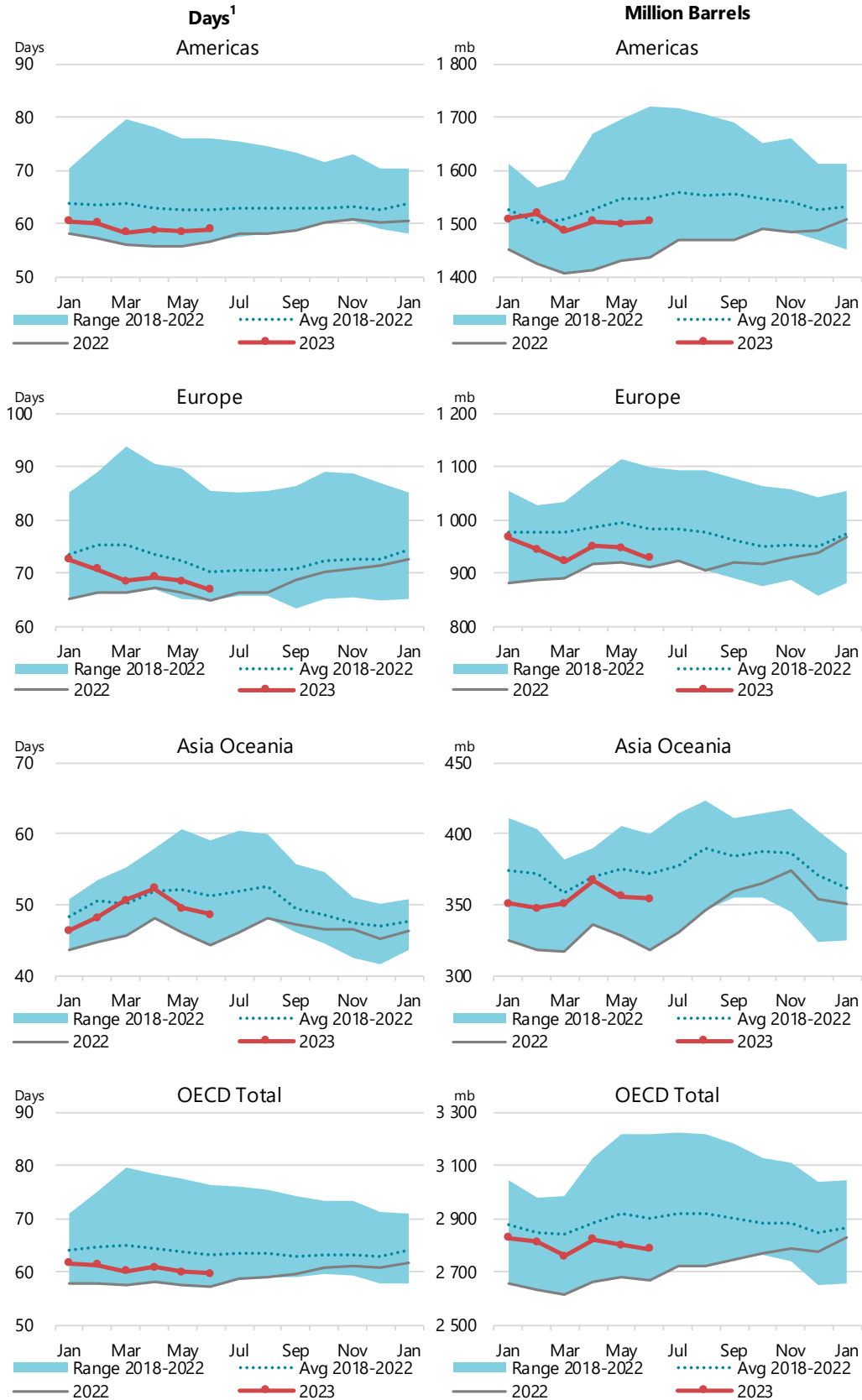
However, early August data at the time of writing indicate a significant stock draw which is more than offsetting the rise in the previous month, mainly in China.

Oil product stocks in the 12 non-OECD economies reporting to the *JODI-Oil World Database* declined by 4.8 mb in May. The largest decrease came from India (-3.3 mb), followed by Venezuela (-2.1 mb). In India, higher seasonal demand, mainly in transport fuels, led the draw, despite record high refinery outputs. Venezuelan fuel oil inventories fell by 2.5 mb, due to both high exports and domestic demand. By contrast, product stocks in Iraq rose by 1.2 mb, primarily in middle distillates thanks to robust refinery output. Saudi Arabian product inventories rose by 0.9 mb as fuel oil stocks increased by 1.5 mb.



### Regional OECD End-of-Month Industry Stocks

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



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

# Prices

## Overview

North Sea Dated prices went from strength to strength over the course of July, rallying some \$11/bbl by end-month to \$85.73/bbl, their highest level since mid-April. This was only the fourth monthly increase in the past 13 months.

Oil was supported by a wave of investor euphoria that boosted all risk assets. Propelled by the view that central bank rate hike campaigns are effectively over, equities, commodities and emerging market currencies rose in unison. In addition to expectations of an end to rate increases and tightening physical balances in the wake of Saudi output cuts and lower Russian loadings, a persistently weak greenback buttressed oil prices. The US Dollar Index fell to its lowest level in more than one year. Short covering also contributed to the recovery, after speculative positioning in crude had turned extremely bearish in recent months. More than 100 mb of end-of-June investor short positions were bought back in July.

Physical price differentials were relatively stable. WTI gained \$0.80/bbl against Dated as Cushing inventories declined throughout July, well in excess of their seasonal norm. Crude forward curves strengthened, reflecting traders projections of a deepening 2H23 physical supply deficit. Tighter balances were also in evidence within the North Sea complex. Dated traded around parity to Brent ICE futures for most of July, ending the month at a \$0.17/bbl premium. Brent contracts for differences (CFDs) correspondingly flipped into backwardation. Product cracks built on their recent firmness, with front month RBOB gasoline versus WTI trading at all-time seasonal highs in mid-July, before easing slightly.

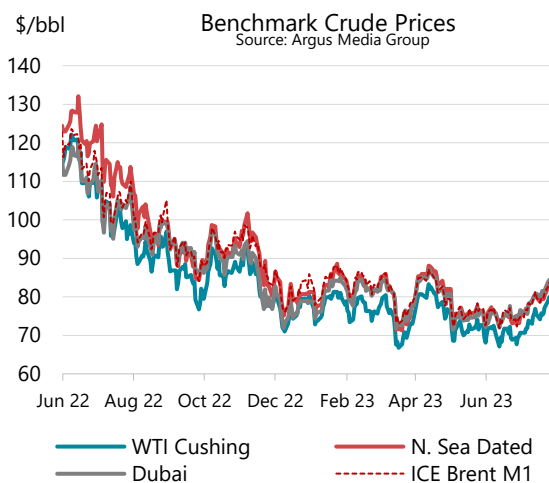
Crude Prices and Differentials (\$/bbl)							
	Month		Week of		Last	Change	Jul-23
	May 2023	Jun 2023	Jul 2023	31 Jul	08 Aug	m-o-m	y-o-y
<b>Crude Futures (M1)</b>							
NYMEX WTI	71.62	70.27	76.03	81.41	82.92	5.76	-23.35
ICE Brent	75.63	74.94	80.16	85.01	86.17	5.22	-24.96
<b>Crude Marker Grades</b>							
North Sea Dated	75.49	74.73	80.09	85.64	86.62	5.36	-32.54
WTI (Cushing)	71.59	70.24	76.39	81.41	82.92	6.16	-23.44
Dubai (London close)	74.51	75.02	80.77	85.92	86.95	5.75	-22.10
<b>Differential to North Sea Dated</b>							
WTI (Cushing)	-3.90	-4.49	-3.70	-4.23	-3.70	0.80	9.09
Dubai (London close)	-0.98	0.29	0.68	0.28	0.33	0.39	10.44
<b>Differential to ICE Brent</b>							
North Sea Dated	-0.14	-0.21	-0.07	0.63	0.45	0.14	-7.57
NYMEX WTI	-4.01	-4.67	-4.13	-3.60	-3.25	0.54	1.61

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

The US Federal Reserve raised its key policy rate by a quarter point in July, to the highest level in 22 years. This is widely believed to be the central bank's last hike, as data readings point to fast-subsiding price pressures. US headline inflation cooled to 3% y-o-y in June, contrasting sharply with its 9.1% peak in June 2022. So far, the real economy has remained broadly resilient in the face of soaring interest rates, aided by robust consumer spending and an ultra-tight labour market. This was echoed in US GDP growth accelerating to 2.4% in 2Q23, compared to 2% in the first quarter.

Investors reacted ecstatically to the combination of lower inflation and robust activity readings, sending stock markets to near-record highs, effectively pricing an end to the Fed's hiking campaign. Most analysts and economists now anticipate a soft landing, with inflation approaching the Fed's 2% target while a recession is averted.

The European Central Bank (ECB) also raised its benchmark rate by a quarter point to 3.75% in July but introduced a dovish tilt in its forward guidance. By and large, economic data in the eurozone have been desultory, with Germany's moribund economy – consensus forecast is for a 2023 contraction of 0.3% - acting as a key drag. The eurozone's GDP is forecast to grow by 0.4% overall in 2023, having returned to anaemic growth in 2Q23 of 0.3% q-o-q after contractions in the previous two quarters. While inflation fell faster than expected, to 5.3% y-o-y in July, it remains well above the ECB's 2% target, fuelling stagflation fears.



China's reopening rebound continued to sputter, with downbeat readings for consumer- and business confidence epitomising the overall malaise. GDP grew only 0.8% q-o-q in 2Q23, compared to 2.2% in 1Q23, as sluggish manufacturing and trade met with listless consumer spending. Retail sales rose only 0.2% m-o-m in May as households remained cautious in their outlays. In a further testament to lacklustre aggregate demand, consumer prices fell 0.3% y-o-y in July, with a deflationary spiral now a distinct possibility. In response, the Chinese Communist Party's Politburo struck a pro-growth stance at its July meeting. While refraining from large-scale stimulus, it signalled the continued easing of policy interest rates and unveiled new measures targeting the property sector slump.

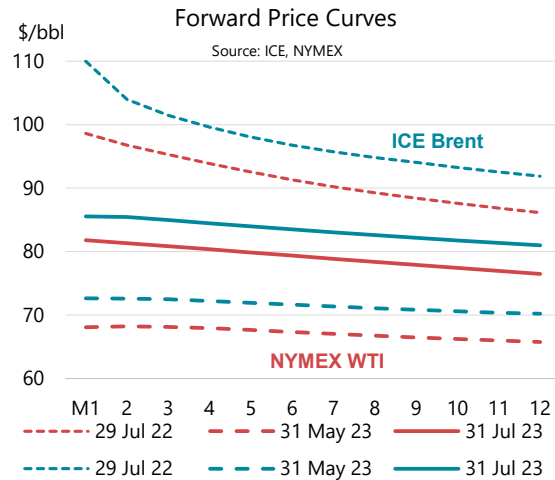
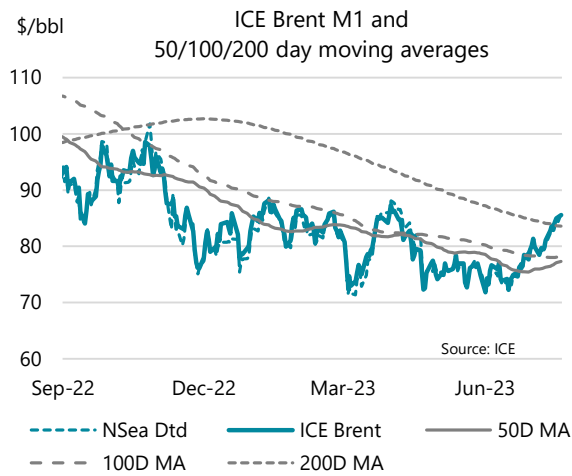
## Futures markets

Front-month ICE Brent rose by about \$5/bbl m-o-m in July amid an overall surge in risk assets. ICE Brent's 20-day running correlation with the S&P 500 Index ended the month at around 80%, while correlations with other high-beta assets (e.g., copper, and commodity currencies such as the Brazilian real and the South African rand) reached similar levels. Additional tailwinds arose from fundamentals, as recently apparent East of Suez tightness spread to the Atlantic Basin, and from covering of short positions. Robust product futures helped pull crude futures higher in their wake. Oil's technical price picture became emphatically more upbeat, as Brent took out its 50- and 100-day moving averages mid-month before conquering its 200-day resistance level at month end. Oil is now trading about \$20/bbl below year-ago levels.

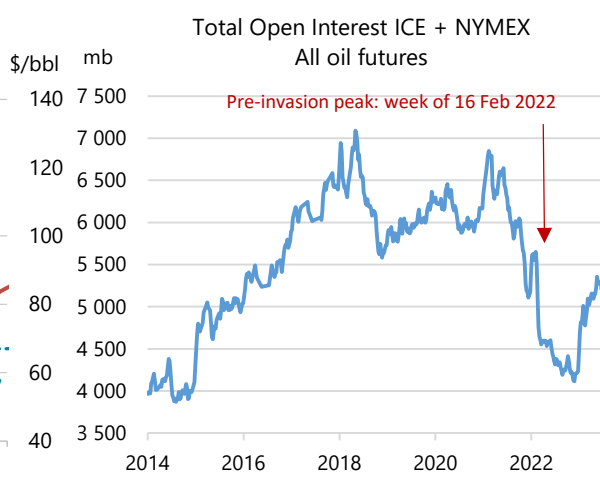
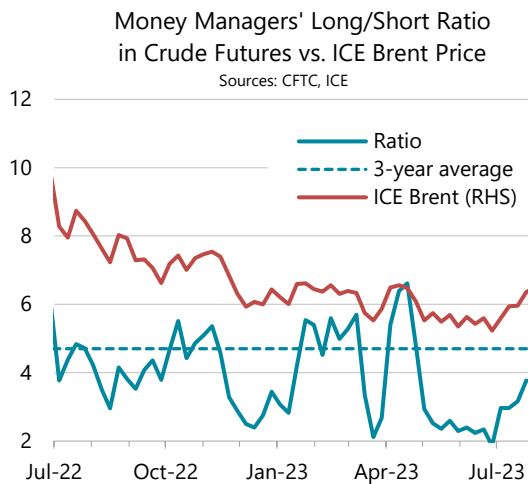
Forward curves strengthened in tandem with the rally in outright prices, with 1-12-month backwardations in WTI and Brent more than doubling to about \$5/bbl. While the front-month WTI August-September spread traded intermittently in contango in July, WTI's curve stayed consistently backwardated after its expiry, as did Brent and Dubai.

ULSD versus WTI front-month cracks soared by \$5.50/bbl m-o-m, while RBOB gasoline cracks rose \$1/bbl, briefly trading at all-time seasonal highs of about \$40/bbl in mid-July. While US crude inventories, both overall and in Cushing, are roughly in line with their five-year averages, product

stocks stand at significant deficits to their long-term mean. Saudi output cuts have sharply tightened the medium sour crude market, challenging European and US refiners - already deprived of distillate-rich Urals - to maximise middle distillate yields.



Speculative positioning improved along with the price rally, albeit at a cautious pace. The ratio of long to short crude future holdings by money managers rose by two points m-o-m to 3.8. This compares to a long-term average of 4.7, indicating that investor sentiment remains moderate from a historical perspective. The rebound was concentrated in WTI, after net speculative holdings had fallen to their lowest level in more than seven years in June. Money managers added 130 mb in WTI contracts in July, taking their net long to 178 mb. Total monthly short covering in crude amounted to more than 100 mb, of which WTI accounted for 86 mb. Sentiment towards refined products also improved, as money managers added 60 mb, with the distillates (ICE Gasoil, NYMEX ULSD) contributing the bulk of the increase.



Open interest in the five main ICE and NYMEX futures contracts was practically unchanged m-o-m at 5 260 mb. This makes for an increase of about 1 000 mb year-to-date, now that declines in exchange margins and volatility have lured back some of the traders who fled during 2022's exodus. Open interest in the CME's WTI Houston and Midland versus Cushing futures stabilised at 230 mb and 202 mb, respectively, retreating somewhat from June's record highs.

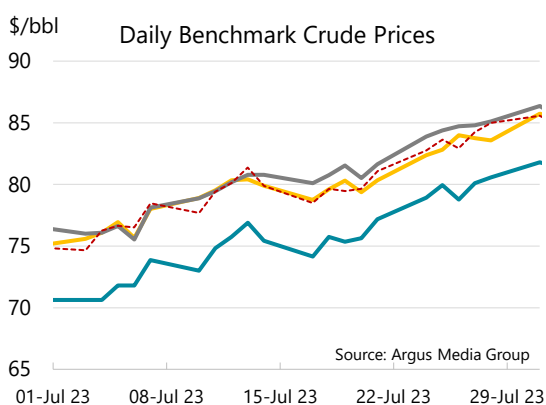
Prompt Month Oil Futures Prices											
(monthly and weekly averages, \$/bbl)											
	Jul 2023			Week Commencing:		Last:					
	May 2023	Jun 2023	Jul 2023	m-o-m Chg	y-o-y Chg	03 Jul	10 Jul	17 Jul	24 Jul	31 Jul	08 Aug
<b>NYMEX</b>											
Light Sweet Crude Oil (WTI) 1st contract	71.62	70.27	76.03	5.76	- 23.35	71.81	75.18	75.59	79.56	81.41	82.92
Light Sweet Crude Oil (WTI) 12th contract	69.28	69.17	74.45	5.28	- 10.06	69.46	71.95	73.04	76.26	78.08	77.58
RBOB	106.08	108.00	114.76	6.76	- 25.56	107.12	110.73	114.17	122.32	118.66	119.49
ULSD	98.51	101.37	112.63	11.26	- 40.26	105.45	108.74	111.01	119.84	127.31	129.60
ULSD (\$/mmbtu)	17.75	18.26	20.29	2.03	- 7.25	19.00	19.59	20.00	21.59	22.93	23.35
NYMEX Natural Gas (\$/mmbtu)	2.30	2.47	2.64	0.16	- 4.55	2.64	2.62	2.64	2.64	2.56	2.78
<b>ICE</b>											
Brent 1st contract	75.63	74.94	80.16	5.22	- 24.96	76.51	79.69	79.66	83.71	85.01	86.17
Brent 12th; contract	73.24	73.36	78.42	5.06	- 10.78	73.78	76.10	77.02	80.31	81.99	81.58
Gasoil	91.03	94.92	104.42	9.50	- 44.59	97.47	101.64	103.29	112.59	120.27	119.40
<b>Prompt Month Differentials</b>											
NYMEX WTI - ICE Brent	- 4.01	- 4.67	- 4.13	0.54	1.61	- 4.70	- 4.51	- 4.07	- 4.14	- 3.60	- 3.25
NYMEX WTI 1st vs. 12th	2.34	1.10	1.58	0.48	- 13.29	2.35	3.23	2.55	3.30	3.33	5.34
ICE Brent 1st - 12th	2.39	1.58	1.74	0.16	- 14.18	2.72	3.59	2.64	3.40	3.02	4.59
NYMEX ULSD - WTI	26.89	31.09	36.59	5.50	- 16.91	33.64	33.56	35.42	40.27	45.90	46.68
NYMEX RBOB - WTI	34.46	37.73	38.73	1.00	- 2.21	35.31	35.55	38.58	42.76	37.25	36.57
NYMEX 3-2-1 Crack (RBOB)	31.94	35.51	38.01	2.50	- 7.11	34.75	34.89	37.53	41.93	40.13	39.94
NYMEX ULSD - Natural Gas (\$/mmbtu)	15.45	15.79	17.65	1.87	- 2.70	16.36	16.97	17.36	18.95	20.37	20.57
ICE Gasoil - ICE Brent	15.40	19.97	24.26	4.29	- 19.63	20.97	21.95	23.63	28.89	35.26	33.23

Source: ICE, NYMEX.

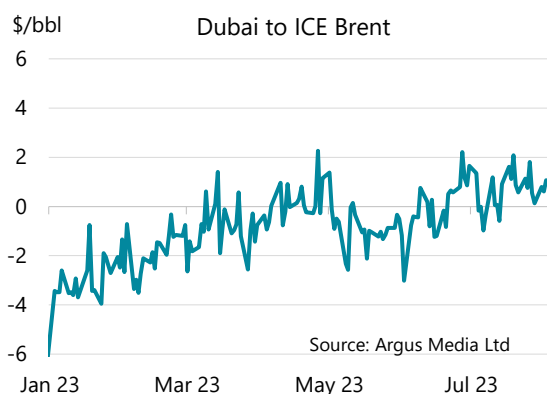
## Spot crude oil prices

Spot prices for physical barrels strengthened faster than futures during July and into August, in a marked shift from downward price pressures of recent months. Physical differentials to futures improved and the North Sea Dated discount to ICE Brent flipped to a premium by end-July. The increase was driven by extended OPEC+ production cuts and robust demand East of Suez. Stronger gasoline and distillate cracks as well as declining inventories also supported higher prices.

In July, North Sea Dated rose by \$5.36/bbl m-o-m to an average \$80.09/bbl while WTI increased by \$6.16/bbl, to \$76.39/bbl. Middle East benchmark Dubai was up by \$5.45/bbl to an average \$80.33/bbl.



WTI Cushing, Dubai, N. Sea Dated, ICE Brent M1

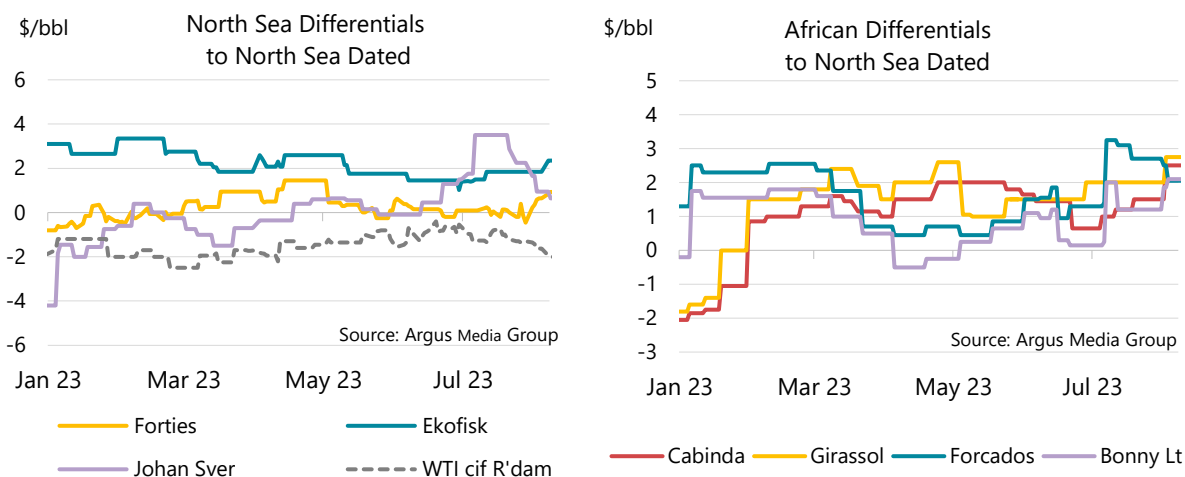


Dubai London Close to ICE Brent

Under the evolving OPEC+ market strategy, deepening voluntary supply cuts by Russia and Saudi Arabia have accentuated diverging trends between sweet and sour crude balances. Incremental supply to the world oil market has come primarily from light sweet crude, dominated by US exports as well as rising production from Brazil and Guyana. At the same time, complex upgrading configurations have dominated refinery capacity growth that has come predominantly in Asia, boosting the call on heavy sour barrels East of Suez. G7 and EU sanctions on Russia have

aggravated limits on access to sour barrels for European buyers. The combination has exacerbated sour market tensions overall, lifting sour versus sweet crude prices.

The Dubai to ICE Brent spread shrank by \$0.23/bbl m-o-m, its premium of \$0.17/bbl strengthening even further to \$0.85/bbl in early August. The tighter sour complex is also apparent in the steeper backwardation of the Dubai curve, with the widening gap between the September and November contracts, which rose by \$0.42/bbl to \$1.43/bbl, its widest since April. The ICE Brent premium to the front month Dubai Exchange of Futures for Swaps (EFS) contracted by \$0.32/bbl to \$0.77/bbl, narrowing the already tight arbitrage for Atlantic Basin refiners to access heavy sour Middle East crudes.



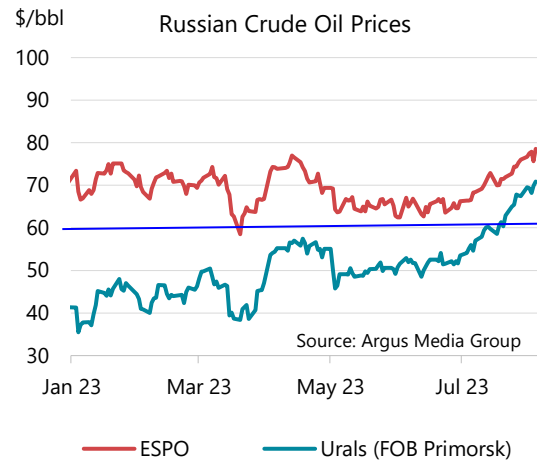
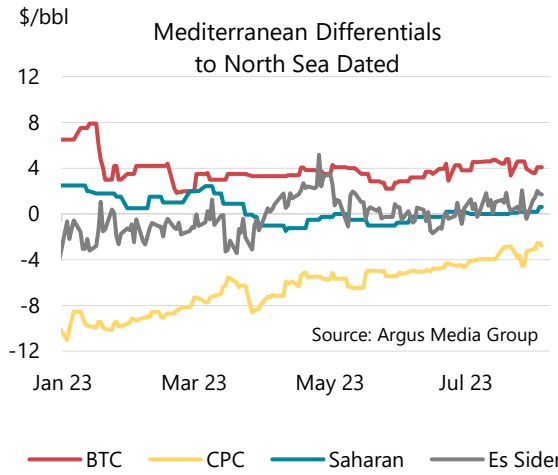
Price differentials in Northern Europe mostly weakened as increased US supplies continued to exert downward pressure on regional prices. While refinery maintenance in Europe has mostly been completed, regional operators have been running at lower utilisation rates due to a lack of heavy crude availabilities and feedstocks. In addition, heat waves forced some refineries to scale back throughputs. The decline in naphtha cracks has also undermined pricing of sweet grades. Seasonal North Sea field maintenance that slightly slowed supply somewhat offset these bearish factors. Forties crude narrowed by \$0.11/bbl m-o-m to \$0.04/bbl above North Sea Dated, while Oseberg differentials shrank by \$0.10/bbl m-o-m to \$2.15/bbl. By contrast, Ekofisk increased by \$0.26/bbl to a \$1.74/bbl premium. Conversely, sour Johan Sverdrup crude rose m-o-m to an exceptional \$2.30/bbl premium over North Sea Dated during the month, reaching a high of \$3.50/bbl in mid-July. WTI CIF Rotterdam's premium to North Sea Dated widened by \$0.23/bbl to \$1.15/bbl on average in July and to \$1.35/bbl by end-month.

West African crude prices strengthened in July, with most differentials firming versus North Sea Dated. Regional supply losses buoyed bullish sentiment, with unplanned outages at the Forcados oil terminal in Nigeria. The differential for Forcados jumped by \$1.19/bbl to \$2.59/bbl, hitting a high of \$3.25/bbl mid-month before falling back to \$2.70/bbl. Similarly, Qua Iboe rose by \$0.87/bbl m-o-m to \$1.97/bbl, Brass River increased by \$0.94/bbl to a premium of \$0.62/bbl, and Bonny Light saw a gain of \$0.48/bbl m-o-m to \$1.12/bbl. The narrow Brent to Dubai spread and strong values for the bottom of the barrel boosted Asian demand for heavy sweet Angolan crudes. Girassol differentials versus North Sea Dated rose \$0.43/bbl to \$2/bbl, while Cabinda inched up by \$0.02/bbl m-o-m to \$1.24/bbl.

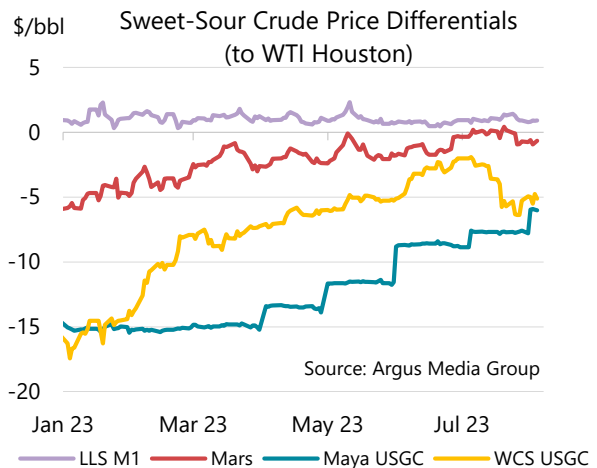
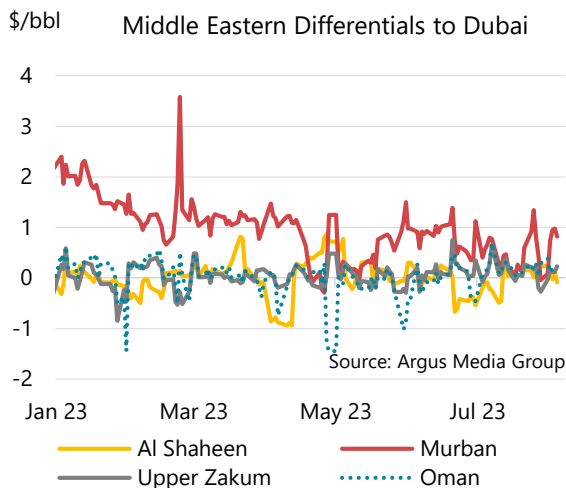
In the Mediterranean region, differentials to North Sea Dated all moved higher, driven by stronger light product cracks and the seasonal increase in demand for transport fuels. In addition, lost exports of Iraqi Kirkuk, electrical outages at the Tengiz field in Kazakhstan and a brief halt in Libyan EI



Sharara operations provided support to regional grades. The CPC discount to North Sea Dated narrowed by \$1.12/bbl m-o-m to -\$3.68/bbl, while the Azeri/BTC premium moved up \$0.85/bbl to \$4.43/bbl. Algerian Saharan Blend rose \$0.23/bbl to a \$0.06/bbl premium. Prices for Es Sider increased by \$0.91/bbl to a \$0.85/bbl premium against the North Sea marker.



Russian Urals crude prices continued to climb, surpassing the \$60/bbl G7 price cap (see “*Russian crude and product prices rise above G7 price cap*”). Their differentials versus North Sea Dated narrowed by a sharp \$3.83/bbl to -\$19.10/bbl for FOB Primorsk and by \$3.48/bbl to -\$18.89/bbl for FOB Novorossiysk, tracking tighter sour crude markets and boosted by curtailed Russian exports. ESPO crude prices versus Dubai strengthened by \$5.80/bbl to -\$9.09/bbl on renewed interest from Indian refiners. Exports of ESPO from Kozmino, on Russia’s Pacific coast, rose roughly 10% m-o-m according to *Kpler* data.



In the Middle East, spot market prices were mixed as a result of higher prompt Dubai pricing. Stronger HSFO cracks as well as a tight supply and demand balance supported medium to heavy sour grades. OPEC production cuts typically impact these grades first. The premium for the light Murban crude weakened by \$0.38/bbl to \$0.45/bbl and fell to \$0.25/bbl, before recovering to \$0.71/bbl by the end of July. Light sour Upper Zakum spreads were largely unchanged at around \$0.12/bbl. Medium sour grade Oman gained \$0.22/bbl to a \$0.21/bbl premium over the Dubai benchmark, while Qatar Al-Shaheen inched up \$0.17/bbl to \$0.03/bbl.

US Midcontinent crude prices firmed in July, owing to a sharp decline in inventories at Cushing over the month and the call on supplies pushed inland prices higher. The Cushing Houston arbitrage, which normally drives crude movements to the US Gulf, narrowed in July. The WTI Houston premium to Cushing fell by \$0.08/bbl to \$1.52/bbl while Midland dropped \$0.02/bbl to \$1.36/bbl. At the same time, the WTI-Brent spread narrowed over the month by roughly \$1/bbl, closing the transatlantic arbitrage, however lower long-haul freight rates have helped keep exports healthy.

By contrast, sour crude supply in Western Canada and along the USGC appeared to outstrip demand, pressuring prices lower. The Western Canadian Select (WCS) discount to WTI at Houston widened by \$0.94/bbl to a -\$5.70/bbl in July. Rising production in Western Canada after wildfires dissipated eased tensions in the WCS market, depressing differentials versus WTI at Hardisty and Houston. Conversely, sour Mars discounts to WTI Houston jumped \$1.01/bbl to just -\$0.17/bbl in July, supported by local demand and tighter global sour crude balances that drove buying of the grade from as far afield as China, which lifted barrels from the Louisiana Offshore Oil Port (LOOP).

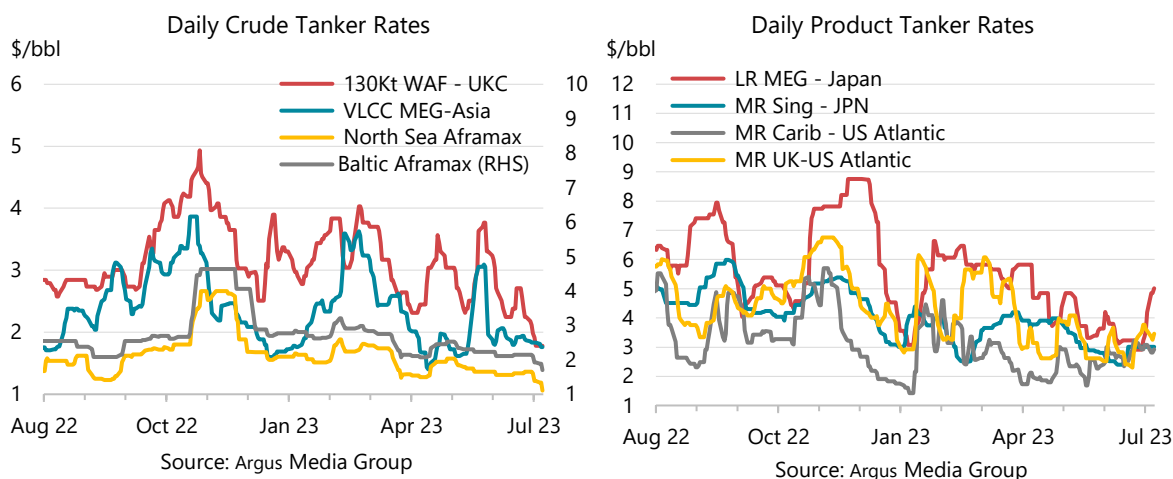
Spot Crude Oil Prices and Differentials (monthly and weekly averages, \$/bbl)											
	Jul 2023					Week Commencing:				Last:	
	May 2023	Jun 2023	Jul 2023	m-o-m Chg	y-o-y Chg	03 Jul	10 Jul	17 Jul	24 Jul	31 Jul	08 Aug
<b>Crudes</b>											
North Sea Dated	75.49	74.73	80.09	5.36	-32.54	76.45	79.81	79.67	83.30	85.64	86.62
North Sea Mth 1	75.57	75.13	80.50	5.37	-29.35	76.75	80.13	80.06	84.02	85.47	85.93
North Sea Mth 2	75.41	75.10	80.13	5.03	-24.99	76.34	79.73	79.85	83.54	84.93	85.27
WTI (Cushing) Mth 1	71.59	70.24	76.39	6.16	-23.44	72.48	75.18	75.61	79.66	81.41	82.92
WTI (Cushing) Mth 2	71.62	70.43	76.23	5.80	-20.81	72.48	75.06	75.55	79.32	80.94	82.36
WTI (Houston) Mth 1	72.57	71.83	77.91	6.08	-23.94	74.33	76.92	76.99	80.94	82.75	84.30
Urals FOB Primorsk	49.47	51.80	60.99	9.19	-19.43	55.35	59.49	60.76	66.65	69.57	70.57
Dubai (1st month)	74.94	74.88	80.33	5.45	-22.53	76.00	79.81	80.50	83.94	85.64	87.02
<b>Differentials to Futures</b>											
North Sea Dated vs. ICE Brent	-0.14	-0.21	-0.07	0.14	-7.57	-0.06	0.13	0.01	-0.41	0.63	0.45
WTI (Cushing) Mth1 vs. NYMEX	-0.03	-0.04	0.36	0.40	-0.09	0.67	0.00	0.02	0.10	0.00	0.00
<b>Differentials to Physical Markers</b>											
WTI (Houston) vs. North Sea Mth 2	-2.84	-3.27	-2.21	1.05	1.05	-2.01	-2.81	-2.86	-2.61	-2.18	-0.98
WTI (Houston) vs. WTI (Cushing)	0.98	1.60	1.52	-0.08	-0.49	1.84	1.74	1.38	1.28	1.35	1.37
Urals FOB Prim vs. North Sea Dated	-26.02	-22.93	-19.10	3.83	13.10	-21.10	-20.32	-18.91	-16.65	-16.07	-16.05
Dubai vs. ICE Brent	-0.69	-0.06	0.17	0.23	2.43	-0.51	0.12	0.84	0.24	0.63	0.85
Dubai vs. WTI (Cushing) Mth 2	3.32	4.45	4.10	-0.35	-1.72	3.52	4.75	4.95	4.63	4.70	4.66
<b>Prompt Month Differentials</b>											
Forward North Sea Mth1-Mth2	0.15	0.03	0.37	0.35	-4.37	0.41	0.40	0.20	0.48	0.54	0.66
Forward WTI Cushing Mth1-Mth2	-0.03	-0.19	0.16	0.36	-2.64	0.00	0.12	0.06	0.34	0.46	0.56
Forward Dubai Mth1-Mth2	0.59	0.52	0.69	0.18	-4.57	0.47	0.69	0.79	0.81	0.96	1.20

Source: Argus Media group, ICE, NYMEX

## Freight

Global tanker rates moved marginally lower in July, despite higher global exports. Tonnage lists continued to expand as shipbrokers shifted their focus away from Russian cargoes due to rising prices, resulting in an overhang of tankers in the market. Throughout July, dirty tanker rates weakened across multiple routes. VLCC rates to Asia decreased by \$0.32/bbl, to average \$1.89/bbl m-o-m, as Middle East exports declined during the month. Suezmax rates out of West Africa dropped by \$0.67/bbl to \$2.27/bbl due to competition from new vessels and the Forcados terminal remaining offline. Aframax rates fell by \$0.14/bbl for Baltic movements, reaching \$2.10/bbl, and by \$0.07/bbl for North Sea shipments on sluggish demand and a well-supplied Atlantic Basin as mainstream tanker operates began to move ships out of activity in Russian grades.

Clean tanker rates mostly declined, with the exception of Medium Range (MR) rates for vessels heading to the US from the Caribbean, which climbed \$0.52/bbl m-o-m to \$2.85/bbl as a result of continued delays in the Panama Canal from low water levels. MR rates in Asia dropped by 6% to \$2.78/bbl. Long Range (LR) rates for shipments to Asia fell by 11% to \$3.37/bbl.



### Freight Costs

(monthly and weekly averages, \$/bbl)

	Jul-23					Week Commencing				
	May 22	Jun 23	Jul 23	m-o-m chg	y-o-y chg	05-Jun	12-Jun	19-Jun	26-Jun	03-Jul
<b>Crude Tankers</b>										
VLCC MEG-Asia	1.25	2.22	1.89	-0.32	0.15	1.71	2.81	2.72	1.88	2.00
130Kt WAF - UKC	1.88	2.94	2.27	-0.67	-0.50	2.39	2.96	3.57	2.96	2.34
Baltic Aframax	2.30	2.25	2.10	-0.14	-0.47	2.30	2.24	2.23	2.18	2.11
North Sea Aframax	1.21	1.38	1.32	-0.07	-0.24	1.42	1.37	1.36	1.34	1.31
<b>Product Tankers</b>										
LR MEG - Japan	7.22	3.79	3.37	-0.42	-2.45	4.11	3.48	3.48	3.92	3.41
MR Sing - JPN	4.52	2.96	2.78	-0.17	-2.55	3.18	2.95	2.85	2.67	2.46
MR Carib - US Atlantic	3.49	2.33	2.85	0.52	-0.62	2.29	1.98	2.32	2.74	2.68
MR UK-US Atlantic	5.52	3.06	3.08	0.02	-2.07	3.71	2.72	2.62	2.79	3.13

Source: Argus Media Group

### Russian crude and product prices rise above G7 price cap

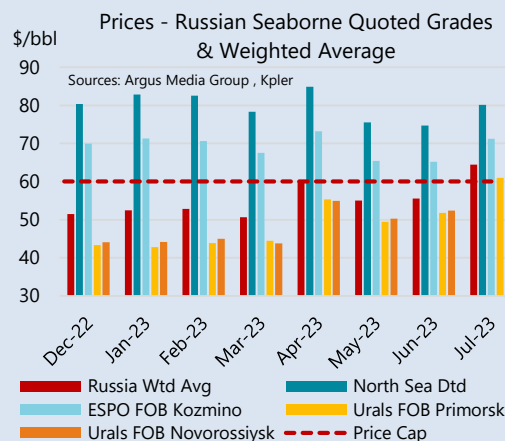
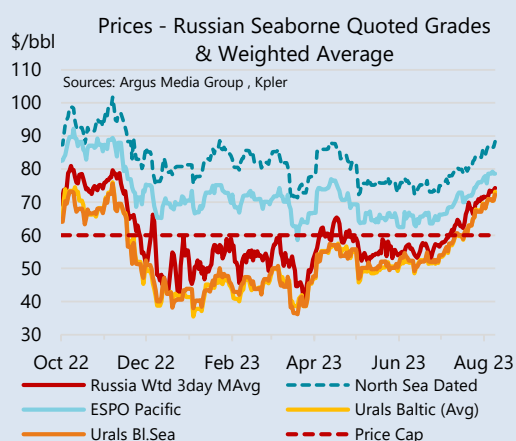
Russian crude oil prices have progressed rapidly since end-June, smashing the G7 price cap on 12 July for Urals and 7 July for Siberian Light. July's weighted average FOB price for seaborne Russian crude exports rose \$8.84/bbl to \$64.41/bbl. According to *Argus* assessments, all Russian seaborne export grades sold at \$70/bbl or higher by early August. Despite North Sea Dated prices rising \$5/bbl m-o-m, price discounts versus the marker for Russian crudes narrowed by around \$4/bbl for Urals in both the Baltic and Black Sea to around -\$18.75/bbl in July and just -\$16/bbl at the start of August. The discount for lighter grades narrowed by \$1/bbl. Urals price strength versus the light sweet European marker reflects heightening sour grade supply tensions following OPEC+ supply cuts and a post-maintenance rise in refinery demand. Russian plans to extend export cuts in August and September have contributed to lift prices. Falling freight rates also supported FOB prices versus the delivered terms.

In June and July, Russian exports of crude and refined products remained around 680 kb/d below their March-May average. With the end of Russian refinery maintenance, cuts to crude exports widened from 220 kb/d to 430 kb/d in July while the 450 kb/d fall in product exports narrowed to 250kb/d in July.

Prices for Urals delivered to West Coast India rose \$8.64/bbl m-o-m in July to \$72.73/bbl (-\$8.04/bbl versus Dubai) and \$80.01/bbl in the first days of August (-\$5.80/bbl versus Dubai). Indian buyers now

only get a discount versus Dubai of just one-third of the 1Q23 level (around -\$16/bbl). Dubai has a similar density to Urals but a higher sulphur content. *Argus* freight data indicate shipping costs for Russian Urals from Baltic ports to the West Coast of India fell by around \$1.25/bbl m-o-m in July. On the other hand, the Dubai premium to spot North Sea Dated widened by \$0.40/bbl. These factors lifted the netback FOB price increase for Urals at Primorsk to about \$9.20/bbl, above that for delivered prices.

Tankers, shipping services and maritime insurance provided for Russian crude by commercial operators in G7 countries are prohibited at prices above \$60/bbl. Around 70% of Russian crude exports in recent months have reportedly been lifted by using G7 tankers and/or insurance. The relevant transaction price for determining whether sanctions affect shippers reflects a negotiated differential applied to the average of North Sea Dated prices on five days around the loading date whereas the *Argus* prices reflect the current Dated assessments. With latter FOB prices now above the G7 threshold, service providers can't be sure to respect the G7 cap at the time of loading.



On August 4 and 5, Ukraine maritime drones struck a Russian troop carrier in the port of Novorossiysk and a tanker transporting fuel for Russian forces near Crimea. The attacks briefly halted tanker movements at Novorossiysk - a key export hub for Russian and Kazakh crude. Subsequently, Ukraine pronounced the waters around six Russian Black Sea ports a "war risk area" from 23 August "until further notice". This includes Novorossiysk, Taman and Tuapse that together accounted for 18% of Russian seaborne crude exports in 2Q23 (680 kb/d) and 30% of product exports (830 kb/d), but also 1.4 mb/d of Kazakh crude exports. Ukraine said it will target ships bound for Russian Black Sea ports. Exports have continued normally, and freight rates remain unmoved due to the absence of damage to commercial vessels thus far. If that persists, Russian Black Sea ports will likely continue to be considered 'safe', despite the risks. For insurance purposes, all Russian waters are designated a War Risk Area, incurring additional premiums. Attacks on commercial vessels could push up these premiums in the Black Sea, discouraging loading just as rising prices push G7 and EU tankers to abandon Russian trade.

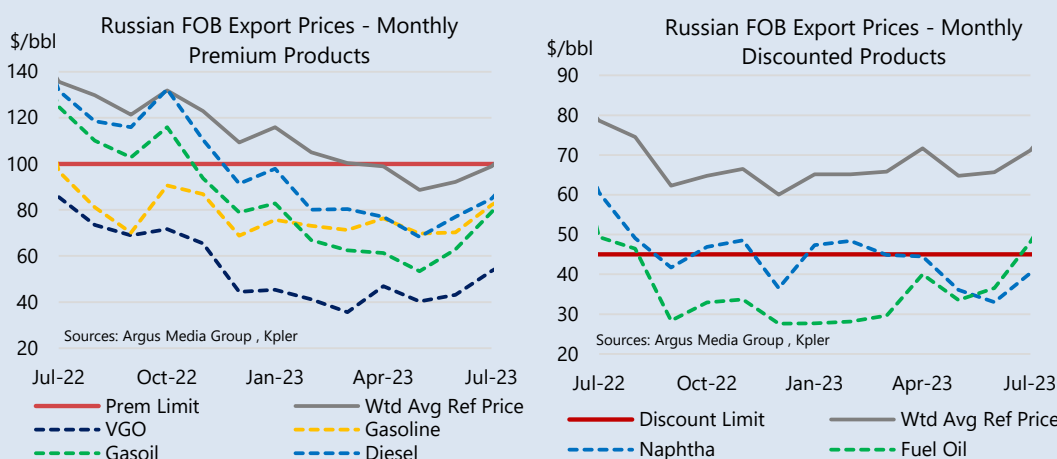
	Russian Crude FOB Weighted Average Export Prices (\$/bbl)					Discounts to N.Sea Dated		
	May-23	Jun-23	Jul-23	May - Jun	Jun - Jul	May-23	Jun-23	Jul-23
<b>North Sea Dated</b>	<b>75.80</b>	<b>74.80</b>	<b>79.86</b>	<b>-0.99</b>	<b>5.06</b>			
Price Cap	60.00	60.00	60.00					
<b>Russia Wtd Avg</b>	<b>54.99</b>	<b>55.57</b>	<b>64.41</b>	<b>0.58</b>	<b>8.84</b>	<b>-20.81</b>	<b>-19.23</b>	<b>-15.44</b>
Urals FOB Primorsk	49.47	51.80	60.99	2.33	9.19	-26.33	-23.00	-18.86
Urals FOB Novorossiysk	50.30	52.36	61.20	2.06	8.84	-25.49	-22.44	-18.66
ESPO FOB Kozmino	65.44	65.20	71.24	-0.24	6.04	-10.35	-9.60	-8.61

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

The Russian State Duma approved the Ministry of Finance's proposal to cut the limit on the Urals discount versus North Sea Dated for taxation purposes to \$20/bbl from September 2023. Passage of

the bill into law still requires approval in the upper house of parliament and by the president. Much narrower current discounts will preclude its use.

Russian product cracks stabilized in July after rising in June. The weighted average price for premium products (gasoil, diesel, gasoline and VGO) rose \$8.54/bbl m-o-m to \$75.97/bbl, still below the \$100/bbl price cap. However, by early August, gasoline prices exceeded \$95/bbl while gasoil and diesel prices topped the \$100/bbl price cap between 5 and 10 August. Tight product markets boosted demand for Russian supply. Cracks versus Urals rose in July by \$7/bbl for gasoil and diesel was unchanged while those in Northwest Europe versus Dated rose by \$3.40/bbl. On the other hand, differentials strengthened for Russian light-ends and fuel for which export volumes barely increased. Russian diesel prices rose by \$7.95/bbl to \$84.92/bbl, gasoil by \$16.20/bbl to \$78.99/bbl and gasoline by \$12.30/bbl to \$82.21/bbl.



Discounted products (naphtha and 3.5% sulphur fuel oil) from Baltic and Black Sea ports exceeded the \$45/bbl price cap throughout July. An \$11.54/bbl jump lifted 3.5% fuel oil prices to \$48.08/bbl while naphtha rose \$7.34/bbl to \$40.32/bbl. Naphtha cracks kept pace with international product markets but those for fuel oil lagged by \$2.80/bbl. By 8 August, Baltic fuel prices exceeded \$69/bbl while those in the Black Sea stood above \$62/bbl. Naphtha prices reached almost \$50/bbl in the Baltic and were over \$51/bbl in the Black Sea.

Russian FOB Export Prices (\$/bbl)											
	May-23	Jun-23	Jul-23	May-Jun	Jun-Jul		May-23	Jun-23	Jul-23	May-Jun	Jun-Jul
<b>Premium Products</b>						<b>Discounted Products</b>					
Ref. Price	88.74	92.22	99.14	3.48	6.92	Ref. Price	64.73	65.70	70.83	0.97	5.13
Price Cap	100.00	100.00	100.00			Price Cap	45.00	45.00	45.00		
Avg Price	59.67	67.43	75.97	7.76	8.54	Avg Price	34.36	35.50	45.61	1.15	10.11
Gasoline	69.80	70.18	82.21	0.38	12.03	Naphtha	36.07	32.97	40.32	-3.09	7.34
Diesel	68.34	76.97	84.92	8.63	7.95	Fuel Oil	33.55	36.53	48.08	2.98	11.54
Gasoil	53.43	62.79	78.99	9.36	16.20	Sources: Argus Media Group, Kpler.					
VGO	40.22	43.18	53.47	2.95	10.29	Note: Weighted avg prices from Baltic and Black Sea ports.					

Note: The European Union’s (EU) eighth sanctions package on Russia (6 October 2022) introduced price caps on Russian crude and product below which deals must sit for EU operators to now provide maritime services. It aims to limit Russia’s oil revenues while maintaining its oil flow to global markets. It completes the EU’s sixth sanctions package that banned use of EU maritime services to transport Russian oil. The EU agreed price caps of \$60/bbl for crude beginning 3 December and to \$100/bbl for “premium” products (priced above crude) and \$45/bbl for “discounted” products (priced at a discount to crude) beginning 3 February.

*Argus Media Group* publishes assessments of free-on-board prices (FOB, excluding freight and insurance costs) for Russian crudes amounting to ~86% of seaborne exports: Urals from Baltic ports (41%), Black Sea Urals (11%), ESPO (26%), Siberian Light (2%), Sakhalin Blend (2%) and Sokol (4%). They also publish discounts to European product prices for Russian product sold FOB Black Sea or Baltic.

The IEA calculates a weighted average Russian seaborne crude oil export price based on *Argus'* assessments and *Kpler's* seaborne export volumes by grade (pipeline flows are exempt from sanctions). This weighted average is considered by the coalition in their bi-monthly review of their price cap's effectiveness.

The weighted average reference prices in the above product price tables and charts represent the average of the European product prices to which *Argus'* discounts are applied for Russian cargoes on a product-by-product basis. It is provided to allow a measure of the current discounts on Russian product prices.

# 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
<b>OECD DEMAND</b>																	
Americas	22.5	24.3	24.9	25.1	25.4	25.0	25.1	24.7	25.5	25.5	25.2	25.2	24.4	25.0	25.4	25.0	24.9
Europe	12.4	13.2	13.2	13.4	14.1	13.4	13.5	13.1	13.5	13.9	13.3	13.4	12.9	13.2	13.8	13.3	13.3
Asia Oceania	7.2	7.3	7.8	6.9	7.2	7.6	7.4	7.8	6.9	7.3	7.7	7.4	7.8	7.0	7.4	7.8	7.5
<b>Total OECD</b>	<b>42.0</b>	<b>44.9</b>	<b>45.9</b>	<b>45.5</b>	<b>46.7</b>	<b>46.0</b>	<b>46.0</b>	<b>45.6</b>	<b>45.9</b>	<b>46.7</b>	<b>46.3</b>	<b>46.1</b>	<b>45.0</b>	<b>45.2</b>	<b>46.6</b>	<b>46.0</b>	<b>45.7</b>
<b>NON-OECD DEMAND</b>																	
FSU	4.6	4.9	4.8	4.8	5.1	5.1	4.9	4.9	4.9	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	16.5	16.3	16.6	16.2	16.6	16.9	16.7	17.1	16.8
Other Asia	13.0	13.5	14.2	14.2	13.6	14.3	14.1	14.4	14.4	13.9	14.7	14.4	14.7	14.7	14.4	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	6.3	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	9.7	9.1	9.2
Africa	3.8	4.1	4.3	4.3	4.3	4.4	4.3	4.4	4.2	4.2	4.4	4.3	4.5	4.4	4.4	4.6	4.5
<b>Total Non-OECD</b>	<b>49.8</b>	<b>52.8</b>	<b>53.7</b>	<b>53.2</b>	<b>54.1</b>	<b>54.7</b>	<b>53.9</b>	<b>55.0</b>	<b>56.1</b>	<b>56.2</b>	<b>56.8</b>	<b>56.0</b>	<b>56.5</b>	<b>57.4</b>	<b>57.5</b>	<b>58.3</b>	<b>57.4</b>
<b>Total Demand<sup>1</sup></b>	<b>91.8</b>	<b>97.7</b>	<b>99.5</b>	<b>98.7</b>	<b>100.7</b>	<b>100.8</b>	<b>99.9</b>	<b>100.6</b>	<b>102.0</b>	<b>102.9</b>	<b>103.1</b>	<b>102.2</b>	<b>101.5</b>	<b>102.6</b>	<b>104.2</b>	<b>104.3</b>	<b>103.2</b>
<b>OECD SUPPLY</b>																	
Americas	23.9	24.3	24.9	25.3	26.0	26.3	25.7	26.7	26.7	27.1	27.3	27.0	27.3	27.5	27.6	27.8	27.5
Europe	3.6	3.4	3.3	3.0	3.1	3.2	3.2	3.3	3.2	3.0	3.2	3.2	3.3	3.2	3.1	3.2	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	0.5	0.5
<b>Total OECD<sup>2</sup></b>	<b>28.0</b>	<b>28.2</b>	<b>28.8</b>	<b>28.9</b>	<b>29.6</b>	<b>29.9</b>	<b>29.3</b>	<b>30.4</b>	<b>30.4</b>	<b>30.6</b>	<b>31.0</b>	<b>30.6</b>	<b>31.1</b>	<b>31.1</b>	<b>31.2</b>	<b>31.5</b>	<b>31.2</b>
<b>NON-OECD SUPPLY</b>																	
FSU	13.5	13.8	14.4	13.4	13.7	14.1	13.9	14.1	13.7	13.4	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	4.4	4.3	4.4	4.3	4.3
Other Asia	3.0	2.9	2.8	2.7	2.6	2.7	2.7	2.7	2.6	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	6.0	6.1	6.2	6.1	6.4	6.5	6.5	6.6	6.5
Middle East	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	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
<b>Total Non-OECD<sup>2</sup></b>	<b>30.3</b>	<b>30.5</b>	<b>31.3</b>	<b>30.4</b>	<b>30.8</b>	<b>31.4</b>	<b>31.0</b>	<b>31.6</b>	<b>31.2</b>	<b>31.0</b>	<b>31.2</b>	<b>31.3</b>	<b>31.7</b>	<b>31.7</b>	<b>31.7</b>	<b>31.8</b>	<b>31.7</b>
Processing gains <sup>3</sup>	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
<b>Total Non-OPEC Supply</b>	<b>63.1</b>	<b>63.8</b>	<b>64.9</b>	<b>64.7</b>	<b>66.0</b>	<b>66.5</b>	<b>65.5</b>	<b>67.0</b>	<b>67.2</b>	<b>67.5</b>	<b>67.8</b>	<b>67.3</b>	<b>67.9</b>	<b>68.7</b>	<b>69.1</b>	<b>69.0</b>	<b>68.7</b>
<b>OPEC<sup>4</sup></b>																	
Crude	25.7	26.5	28.6	28.7	29.6	29.4	29.1	29.4	28.8								
NGLs	5.2	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.5	5.5	5.6	5.6	5.5	5.5	5.5
<b>Total OPEC</b>	<b>31.0</b>	<b>31.7</b>	<b>33.9</b>	<b>34.2</b>	<b>35.0</b>	<b>34.8</b>	<b>34.5</b>	<b>34.8</b>	<b>34.3</b>								
<b>Total Supply</b>	<b>94.1</b>	<b>95.5</b>	<b>98.8</b>	<b>98.9</b>	<b>101.0</b>	<b>101.3</b>	<b>100.0</b>	<b>101.8</b>	<b>101.5</b>								
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>Reported OECD</b>																	
Industry	0.4	-1.1	-0.4	0.6	0.9	0.3	0.4	-0.2	0.3								
Government	0.0	-0.2	-0.5	-1.1	-1.1	-0.3	-0.7	0.0	-0.1								
<b>Total</b>	<b>0.4</b>	<b>-1.2</b>	<b>-0.8</b>	<b>-0.5</b>	<b>-0.2</b>	<b>0.0</b>	<b>-0.4</b>	<b>-0.2</b>	<b>0.2</b>								
Floating storage/Oil in transit	0.0	0.0	-0.5	0.6	0.9	0.2	0.3	0.0	-0.4								
Miscellaneous to balance <sup>5</sup>	1.8	-0.9	0.6	0.0	-0.4	0.3	0.2	1.3	-0.2								
<b>Total Stock Ch. &amp; Misc</b>	<b>2.2</b>	<b>-2.2</b>	<b>-0.7</b>	<b>0.2</b>	<b>0.3</b>	<b>0.5</b>	<b>0.1</b>	<b>1.1</b>	<b>-0.4</b>								
<b>Memo items:</b>																	
Call on OPEC crude & stock changes <sup>6</sup>	23.5	28.6	29.3	28.6	29.3	28.9	29.0	28.2	29.3	30.0	29.8	29.3	28.1	28.4	29.6	29.8	29.0

<sup>1</sup> 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.

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

<sup>3</sup> Net volumetric gains and losses in the refining process and marine transportation losses.

<sup>4</sup> OPEC include current members throughout the time series.

<sup>5</sup> Includes changes in non-reported stocks in OECD and non-OECD.

<sup>6</sup> 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
<b>OECD DEMAND</b>																	
Americas	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Europe	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Asia Oceania	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>Total OECD</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.3</b>	<b>-0.1</b>	<b>-0.2</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>
<b>NON-OECD DEMAND</b>																	
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	0.0	0.0	0.0	0.2	0.0	0.1	-0.1	0.0
Other Asia	0.0	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	0.0	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	-0.1	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	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
<b>Total Non-OECD</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.0</b>
<b>Total Demand</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.5</b>	<b>-0.1</b>	<b>-0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.1</b>
<b>OECD SUPPLY</b>																	
Americas	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.1	0.0	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	-0.1	0.0	0.0	0.0	0.0	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
<b>Total OECD</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>
<b>NON-OECD SUPPLY</b>																	
FSU	0.0	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
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	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1
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
<b>Total Non-OECD</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
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
<b>Total Non-OPEC Supply</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>
<b>OPEC</b>																	
Crude	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total OPEC</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>								
<b>Total Supply</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>								
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
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									
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>									
Floating storage/Oil in transit	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	-0.1									
Miscellaneous to balance	0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0									
<b>Total Stock Ch. &amp; Misc</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.0</b>	<b>-0.1</b>									
<b>Memo items:</b>																	
Call on OPEC crude & stock changes	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.6	-0.1	-0.4	0.0	-0.1	-0.2	-0.3	-0.4	-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 agreement<sup>1</sup>)**  
(million barrels per day)

	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024
<b>Total Demand</b>	<b>91.8</b>	<b>97.7</b>	<b>99.5</b>	<b>98.7</b>	<b>100.7</b>	<b>100.8</b>	<b>99.9</b>	<b>100.6</b>	<b>102.0</b>	<b>102.9</b>	<b>103.1</b>	<b>102.2</b>	<b>101.5</b>	<b>102.6</b>	<b>104.2</b>	<b>104.3</b>	<b>103.2</b>
<b>OECD SUPPLY</b>																	
Americas <sup>2</sup>	21.9	22.4	22.9	23.4	24.0	24.2	23.6	24.6	24.6	25.0	25.2	24.8	25.1	25.3	25.5	25.7	25.4
Europe	3.6	3.4	3.3	3.0	3.1	3.2	3.2	3.3	3.2	3.0	3.2	3.2	3.3	3.2	3.1	3.2	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	0.5	0.5
<b>Total OECD (non-OPEC+)</b>	<b>26.0</b>	<b>26.3</b>	<b>26.8</b>	<b>26.9</b>	<b>27.5</b>	<b>27.9</b>	<b>27.3</b>	<b>28.3</b>	<b>28.2</b>	<b>28.5</b>	<b>28.9</b>	<b>28.5</b>	<b>28.9</b>	<b>29.0</b>	<b>29.1</b>	<b>29.4</b>	<b>29.1</b>
<b>NON-OECD SUPPLY</b>																	
FSU <sup>3</sup>	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	4.4	4.3	4.4	4.3	4.3
Other Asia <sup>4</sup>	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	2.0	1.9	1.9	1.9
Latin America	5.3	5.3	5.4	5.5	5.8	5.9	5.6	6.0	6.0	6.1	6.2	6.1	6.4	6.5	6.5	6.6	6.5
Middle East <sup>5</sup>	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 <sup>6</sup>	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
<b>Total Non-OECD (non-OPEC+)</b>	<b>15.1</b>	<b>15.0</b>	<b>15.2</b>	<b>15.2</b>	<b>15.3</b>	<b>15.4</b>	<b>15.3</b>	<b>15.7</b>	<b>15.7</b>	<b>15.8</b>	<b>15.8</b>	<b>15.8</b>	<b>16.2</b>	<b>16.2</b>	<b>16.2</b>	<b>16.2</b>	<b>16.2</b>
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
<b>Total Non-OPEC+</b>	<b>45.9</b>	<b>46.3</b>	<b>46.7</b>	<b>47.5</b>	<b>48.5</b>	<b>48.6</b>	<b>47.8</b>	<b>48.9</b>	<b>49.5</b>	<b>50.2</b>	<b>50.2</b>	<b>49.7</b>	<b>50.3</b>	<b>51.0</b>	<b>51.5</b>	<b>51.3</b>	<b>51.0</b>
<b>OPEC+ CRUDE</b>																	
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	3.0	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	4.3	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	1.6	1.6	1.7	1.6
Kuwait	2.4	2.4	2.6	2.7	2.8	2.7	2.7	2.7	2.6	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	1.1	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	1.7	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	1.1	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	9.8	9.5	9.3	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	9.0	9.8	9.8	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	0.2	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	0.0	0.0	0.1
UAE	2.9	2.8	3.1	3.3	3.5	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
<b>OPEC+ Crude</b>	<b>40.6</b>	<b>41.5</b>	<b>44.1</b>	<b>43.4</b>	<b>44.6</b>	<b>44.6</b>	<b>44.2</b>	<b>44.6</b>	<b>43.8</b>	<b>42.4</b>	<b>43.4</b>	<b>43.5</b>	<b>43.7</b>	<b>43.7</b>	<b>43.6</b>	<b>43.7</b>	<b>43.7</b>
OPEC+ NGLs & Condensate	7.4	7.5	7.8	7.8	7.8	8.0	7.9	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	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
<b>Total OPEC+</b>	<b>48.1</b>	<b>49.1</b>	<b>52.1</b>	<b>51.4</b>	<b>52.6</b>	<b>52.7</b>	<b>52.2</b>	<b>52.8</b>	<b>52.0</b>	<b>50.6</b>	<b>51.7</b>	<b>51.8</b>	<b>52.0</b>	<b>52.0</b>	<b>51.8</b>	<b>51.9</b>	<b>51.9</b>
<b>Total Supply Oil</b>	<b>94.1</b>	<b>95.5</b>	<b>98.8</b>	<b>98.9</b>	<b>101.0</b>	<b>101.3</b>	<b>100.0</b>	<b>101.8</b>	<b>101.5</b>	<b>100.8</b>	<b>101.9</b>	<b>101.5</b>	<b>102.3</b>	<b>103.0</b>	<b>103.3</b>	<b>103.2</b>	<b>103.0</b>
<b>Memo items:</b>																	
Call on OPEC+ crude & stock changes	38.4	43.7	44.8	43.3	44.3	44.1	44.1	43.5	44.2	44.5	44.6	44.2	43.0	43.3	44.4	44.8	43.9

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

<sup>2</sup> OECD Americas excludes Mexico.

<sup>3</sup> FSU excludes Russia, Kazakhstan, Azerbaijan.

<sup>4</sup> Other Asia excludes Brunei, Malaysia.

<sup>5</sup> Middle East excludes Oman, Bahrain.

<sup>6</sup> 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
<b>Demand (mb/d)</b>																
Americas	24.32	24.86	25.08	25.43	25.05	25.11	24.71	25.47	25.53	25.21	25.23	24.37	25.02	25.43	24.97	24.95
Europe	13.19	13.21	13.44	14.05	13.36	13.52	13.09	13.47	13.90	13.32	13.45	12.91	13.21	13.84	13.25	13.30
Asia Oceania	7.34	7.78	6.93	7.17	7.63	7.38	7.81	6.93	7.30	7.74	7.45	7.76	7.01	7.37	7.80	7.49
<b>Total OECD</b>	<b>44.85</b>	<b>45.85</b>	<b>45.45</b>	<b>46.65</b>	<b>46.04</b>	<b>46.00</b>	<b>45.62</b>	<b>45.87</b>	<b>46.73</b>	<b>46.27</b>	<b>46.13</b>	<b>45.04</b>	<b>45.23</b>	<b>46.64</b>	<b>46.02</b>	<b>45.74</b>
Asia	28.62	29.31	28.21	28.11	29.27	28.72	29.98	30.90	30.17	31.36	30.61	31.27	31.66	31.11	32.34	31.60
Middle East	8.44	8.51	9.05	9.43	8.90	8.97	8.82	8.98	9.52	8.96	9.07	8.94	9.27	9.66	9.08	9.24
Americas	6.00	6.00	6.17	6.36	6.30	6.21	6.18	6.32	6.46	6.35	6.33	6.19	6.38	6.52	6.47	6.39
FSU	4.89	4.79	4.78	5.12	5.07	4.94	4.86	4.89	5.05	4.99	4.95	4.86	4.82	5.00	4.98	4.92
Africa	4.08	4.29	4.27	4.27	4.41	4.31	4.40	4.24	4.22	4.37	4.31	4.46	4.43	4.44	4.60	4.48
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
<b>Total Non-OECD</b>	<b>52.80</b>	<b>53.68</b>	<b>53.25</b>	<b>54.08</b>	<b>54.75</b>	<b>53.94</b>	<b>55.02</b>	<b>56.09</b>	<b>56.21</b>	<b>56.83</b>	<b>56.04</b>	<b>56.51</b>	<b>57.35</b>	<b>57.54</b>	<b>58.29</b>	<b>57.42</b>
<b>World</b>	<b>97.65</b>	<b>99.53</b>	<b>98.70</b>	<b>100.73</b>	<b>100.79</b>	<b>99.94</b>	<b>100.63</b>	<b>101.96</b>	<b>102.94</b>	<b>103.10</b>	<b>102.17</b>	<b>101.55</b>	<b>102.58</b>	<b>104.18</b>	<b>104.31</b>	<b>103.16</b>
of which:																
United States <sup>1</sup>	19.89	20.22	20.27	20.47	20.16	20.28	20.00	20.64	20.55	20.34	20.39	19.67	20.25	20.49	20.13	20.14
Europe <sup>5</sup>	7.38	7.44	7.63	7.87	7.44	7.60	7.36	7.53	7.75	7.39	7.51	7.22	7.33	7.69	7.32	7.39
China	15.09	15.09	14.04	14.51	15.02	14.66	15.59	16.52	16.25	16.62	16.25	16.56	16.92	16.68	17.15	16.83
Japan	3.41	3.70	3.04	3.20	3.57	3.38	3.73	3.07	3.24	3.59	3.41	3.71	3.09	3.29	3.61	3.43
India	4.90	5.38	5.29	5.01	5.42	5.28	5.57	5.52	5.17	5.63	5.47	5.60	5.57	5.33	5.85	5.59
Russia	3.68	3.69	3.64	3.95	3.84	3.78	3.74	3.74	3.88	3.75	3.78	3.70	3.62	3.79	3.70	3.70
Brazil	3.03	2.98	3.02	3.19	3.17	3.09	3.10	3.16	3.27	3.22	3.19	3.09	3.19	3.29	3.29	3.22
Saudi Arabia	3.51	3.35	3.84	3.98	3.74	3.73	3.59	3.72	4.00	3.76	3.77	3.59	3.88	4.09	3.80	3.84
Canada	2.26	2.34	2.30	2.47	2.40	2.38	2.34	2.45	2.52	2.42	2.43	2.35	2.42	2.48	2.39	2.41
Korea	2.56	2.69	2.45	2.51	2.54	2.55	2.57	2.34	2.54	2.59	2.51	2.57	2.40	2.55	2.62	2.54
Mexico	1.67	1.77	2.00	1.97	1.97	1.93	1.89	1.86	1.93	1.93	1.90	1.84	1.84	1.94	1.92	1.89
Iran	1.80	1.89	1.82	1.81	1.80	1.83	1.85	1.80	1.83	1.81	1.82	1.96	1.90	1.88	1.86	1.90
<b>Total</b>	<b>69.17</b>	<b>70.54</b>	<b>69.34</b>	<b>70.95</b>	<b>71.07</b>	<b>70.48</b>	<b>71.31</b>	<b>72.35</b>	<b>72.95</b>	<b>73.07</b>	<b>72.43</b>	<b>71.87</b>	<b>72.42</b>	<b>73.50</b>	<b>73.63</b>	<b>72.86</b>
% of World	70.8%	70.9%	70.2%	70.4%	70.5%	70.5%	70.9%	71.0%	70.9%	70.9%	70.9%	70.8%	70.6%	70.6%	70.6%	70.6%
<b>Annual Change (% per annum)</b>																
Americas	8.3	8.4	2.8	2.6	-0.3	3.2	-0.6	1.5	0.4	0.7	0.5	-1.4	-1.8	-0.4	-1.0	-1.1
Europe	6.3	10.0	5.6	0.6	-4.8	2.5	-0.9	0.2	-1.1	-0.3	-0.5	-1.4	-2.0	-0.4	-0.5	-1.1
Asia Oceania	2.5	1.8	-0.2	2.1	-1.3	0.6	0.4	0.0	1.8	1.4	0.9	-0.6	1.0	1.0	0.8	0.6
<b>Total OECD</b>	<b>6.7</b>	<b>7.7</b>	<b>3.1</b>	<b>1.9</b>	<b>-1.8</b>	<b>2.6</b>	<b>-0.5</b>	<b>0.9</b>	<b>0.2</b>	<b>0.5</b>	<b>0.3</b>	<b>-1.3</b>	<b>-1.4</b>	<b>-0.2</b>	<b>-0.5</b>	<b>-0.8</b>
Asia	5.0	2.8	-1.4	0.2	-0.2	0.3	2.3	9.5	7.4	7.1	6.6	4.3	2.5	3.1	3.1	3.2
Middle East	4.8	4.8	7.8	6.7	6.1	6.4	3.7	-0.8	1.0	0.7	1.1	1.4	3.3	1.4	1.4	1.9
Americas	11.0	3.5	5.3	2.7	2.2	3.4	3.0	2.4	1.6	0.8	1.9	0.1	1.0	1.0	1.9	1.0
FSU	6.6	2.6	-0.2	2.0	-0.2	1.0	1.4	2.3	-1.3	-1.7	0.1	0.0	-1.5	-0.9	-0.1	-0.6
Africa	7.7	4.1	6.1	7.2	5.4	5.7	2.5	-0.7	-1.2	-0.9	-0.1	1.4	4.5	5.1	5.2	4.0
Europe	6.6	2.7	1.9	1.5	1.2	1.8	0.3	0.1	-1.2	0.7	0.0	1.1	2.6	2.9	1.8	2.1
<b>Total Non-OECD</b>	<b>6.0</b>	<b>3.3</b>	<b>1.6</b>	<b>2.3</b>	<b>1.5</b>	<b>2.2</b>	<b>2.5</b>	<b>5.3</b>	<b>3.9</b>	<b>3.8</b>	<b>3.9</b>	<b>2.7</b>	<b>2.2</b>	<b>2.4</b>	<b>2.6</b>	<b>2.5</b>
<b>World</b>	<b>6.3</b>	<b>5.2</b>	<b>2.3</b>	<b>2.1</b>	<b>-0.0</b>	<b>2.3</b>	<b>1.1</b>	<b>3.3</b>	<b>2.2</b>	<b>2.3</b>	<b>2.2</b>	<b>0.9</b>	<b>0.6</b>	<b>1.2</b>	<b>1.2</b>	<b>1.0</b>
<b>Annual Change (mb/d)</b>																
Americas	1.87	1.92	0.69	0.64	-0.08	0.79	-0.15	0.39	0.10	0.16	0.13	-0.35	-0.45	-0.10	-0.25	-0.29
Europe	0.78	1.20	0.72	0.08	-0.68	0.32	-0.11	0.03	-0.15	-0.04	-0.07	-0.19	-0.26	-0.06	-0.06	-0.14
Asia Oceania	0.18	0.14	-0.02	0.15	-0.10	0.04	0.03	0.00	0.13	0.11	0.07	-0.04	0.07	0.07	0.06	0.04
<b>Total OECD</b>	<b>2.82</b>	<b>3.26</b>	<b>1.39</b>	<b>0.87</b>	<b>-0.86</b>	<b>1.15</b>	<b>-0.24</b>	<b>0.42</b>	<b>0.08</b>	<b>0.23</b>	<b>0.12</b>	<b>-0.58</b>	<b>-0.64</b>	<b>-0.09</b>	<b>-0.25</b>	<b>-0.39</b>
Asia	1.37	0.79	-0.39	0.05	-0.04	0.10	0.67	2.68	2.07	2.09	1.88	1.29	0.77	0.94	0.98	0.99
Middle East	0.39	0.39	0.66	0.59	0.51	0.54	0.31	-0.07	0.09	0.06	0.10	0.13	0.29	0.14	0.12	0.17
Americas	0.60	0.20	0.31	0.17	0.14	0.20	0.18	0.15	0.10	0.05	0.12	0.01	0.06	0.06	0.12	0.06
FSU	0.30	0.12	-0.01	0.10	-0.01	0.05	0.07	0.11	-0.07	-0.09	0.01	0.00	-0.07	-0.04	0.00	-0.03
Africa	0.29	0.17	0.24	0.29	0.23	0.23	0.11	-0.03	-0.05	-0.04	0.00	0.06	0.19	0.21	0.23	0.17
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
<b>Total Non-OECD</b>	<b>2.99</b>	<b>1.69</b>	<b>0.83</b>	<b>1.20</b>	<b>0.83</b>	<b>1.14</b>	<b>1.34</b>	<b>2.84</b>	<b>2.13</b>	<b>2.08</b>	<b>2.10</b>	<b>1.49</b>	<b>1.26</b>	<b>1.33</b>	<b>1.46</b>	<b>1.38</b>
<b>World</b>	<b>5.81</b>	<b>4.95</b>	<b>2.22</b>	<b>2.07</b>	<b>-0.03</b>	<b>2.29</b>	<b>1.10</b>	<b>3.26</b>	<b>2.21</b>	<b>2.31</b>	<b>2.22</b>	<b>0.91</b>	<b>0.62</b>	<b>1.24</b>	<b>1.21</b>	<b>0.99</b>
<b>Revisions to Oil Demand from Last Month's Report (mb/d)</b>																
Americas	0.01	0.10	0.10	0.09	0.09	0.10	0.11	0.19	-0.01	0.02	0.08	0.00	0.09	0.02	0.01	0.03
Europe	0.09	0.02	0.01	0.01	0.02	0.01	0.03	0.23	-0.02	-0.05	0.05	-0.02	0.02	-0.08	-0.04	-0.03
Asia Oceania	-0.05	-0.07	-0.05	-0.05	-0.05	-0.05	-0.05	-0.11	-0.12	-0.14	-0.11	-0.07	-0.14	-0.10	-0.07	-0.10
<b>Total OECD</b>	<b>0.05</b>	<b>0.05</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.06</b>	<b>0.09</b>	<b>0.32</b>	<b>-0.15</b>	<b>-0.16</b>	<b>0.02</b>	<b>-0.09</b>	<b>-0.04</b>	<b>-0.15</b>	<b>-0.10</b>	<b>-0.10</b>
Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	-0.06	-0.06	0.00	0.19	-0.05	-0.03	-0.13	0.00
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.05	-0.01	-0.02	-0.01	0.00	0.00	0.03	0.04	0.02
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	-0.02	0.00	-0.02	-0.02	-0.01	-0.01	-0.02
FSU	0.01	0.02	0.01	-0.01	-0.03	0.00	0.00	0.06	0.03	0.00	0.02	0.00	0.02	0.00	-0.02	0.00
Africa	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.08	0.06	0.04	0.05	0.03	0.03	0.03	0.03	0.03
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Non-OECD</b>	<b>0.04</b>	<b>0.06</b>	<b>0.05</b>	<b>0.03</b>	<b>0.01</b>	<b>0.04</b>	<b>0.06</b>	<b>0.23</b>	<b>0.03</b>	<b>-0.06</b>	<b>0.06</b>	<b>0.20</b>	<b>-0.02</b>	<b>0.02</b>	<b>-0.09</b>	<b>0.03</b>
<b>World</b>	<b>0.09</b>	<b>0.10</b>	<b>0.11</b>	<b>0.08</b>	<b>0.07</b>	<b>0.09</b>	<b>0.15</b>	<b>0.55</b>	<b>-0.12</b>	<b>-0.22</b>	<b>0.09</b>	<b>0.11</b>	<b>-0.06</b>	<b>-0.13</b>	<b>-0.19</b>	<b>-0.07</b>
<b>Revisions to Oil Demand Growth from Last Month's Report (mb/d)</b>																
World	0.09	0.00	0.01	0.00	-0.01	0.00	0.04	0.44	-0.20	-0.30	-0.01	-0.03	-0.60	-0.01	0.03	-0.15

**Table 2a**  
**OECD REGIONAL OIL DEMAND<sup>1</sup>**  
(million barrels per day)

	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23 <sup>2</sup>	Latest month vs.	
										Apr 23	May 22
<b>Americas</b>											
LPG and ethane	3.70	3.83	3.61	3.77	3.77	3.92	3.78	3.79	3.84	0.05	0.33
Naphtha	0.26	0.23	0.22	0.22	0.22	0.22	0.23	0.24	0.25	0.01	0.02
Motor gasoline	10.34	10.43	10.69	10.58	10.42	10.23	10.59	10.58	10.78	0.20	0.00
Jet and kerosene	1.57	1.84	1.88	1.90	1.87	1.85	1.89	1.89	1.96	0.07	0.13
Gasoil/diesel oil	5.04	5.18	5.13	5.08	5.20	5.22	5.36	4.99	5.15	0.15	0.05
Residual fuel oil	0.56	0.56	0.54	0.61	0.52	0.51	0.44	0.39	0.43	0.04	-0.13
Other products	2.86	3.04	3.01	3.28	3.05	2.77	2.89	3.14	3.30	0.15	0.48
<b>Total</b>	<b>24.32</b>	<b>25.11</b>	<b>25.08</b>	<b>25.43</b>	<b>25.05</b>	<b>24.71</b>	<b>25.18</b>	<b>25.03</b>	<b>25.70</b>	<b>0.67</b>	<b>0.88</b>
<b>Europe</b>											
LPG and ethane	1.09	1.04	0.94	1.10	0.99	1.10	1.06	1.10	1.15	0.04	0.25
Naphtha	1.16	0.96	1.00	0.86	0.83	0.96	0.94	0.94	0.79	-0.15	-0.24
Motor gasoline	1.93	2.04	2.08	2.15	2.03	1.99	2.04	2.09	2.21	0.11	0.16
Jet and kerosene	0.86	1.29	1.31	1.50	1.31	1.25	1.27	1.37	1.44	0.06	0.14
Gasoil/diesel oil	6.29	6.25	6.12	6.38	6.32	5.98	6.26	5.77	6.16	0.39	0.09
Residual fuel oil	0.72	0.78	0.79	0.80	0.77	0.76	0.74	0.72	0.76	0.04	-0.06
Other products	1.16	1.17	1.20	1.26	1.11	1.05	1.06	1.07	1.13	0.06	-0.10
<b>Total</b>	<b>13.19</b>	<b>13.52</b>	<b>13.44</b>	<b>14.05</b>	<b>13.36</b>	<b>13.09</b>	<b>13.37</b>	<b>13.07</b>	<b>13.63</b>	<b>0.56</b>	<b>0.24</b>
<b>Asia Oceania</b>											
LPG and ethane	0.76	0.79	0.74	0.71	0.80	0.90	0.83	0.72	0.69	-0.03	-0.06
Naphtha	1.97	1.85	1.77	1.89	1.84	1.94	1.95	1.77	1.72	-0.05	0.00
Motor gasoline	1.39	1.44	1.40	1.52	1.50	1.41	1.45	1.40	1.45	0.06	0.00
Jet and kerosene	0.60	0.68	0.50	0.53	0.83	0.94	0.78	0.70	0.64	-0.06	0.14
Gasoil/diesel oil	1.86	1.87	1.80	1.85	1.94	1.89	1.98	1.77	1.86	0.09	0.01
Residual fuel oil	0.45	0.50	0.46	0.48	0.51	0.54	0.50	0.45	0.39	-0.05	-0.04
Other products	0.30	0.24	0.26	0.20	0.22	0.19	0.20	0.20	0.16	-0.04	-0.11
<b>Total</b>	<b>7.34</b>	<b>7.38</b>	<b>6.93</b>	<b>7.17</b>	<b>7.63</b>	<b>7.81</b>	<b>7.69</b>	<b>7.00</b>	<b>6.93</b>	<b>-0.08</b>	<b>-0.06</b>
<b>OECD</b>											
LPG and ethane	5.55	5.66	5.28	5.57	5.56	5.92	5.67	5.61	5.68	0.07	0.52
Naphtha	3.39	3.03	2.99	2.97	2.88	3.12	3.13	2.95	2.75	-0.20	-0.22
Motor gasoline	13.66	13.91	14.17	14.25	13.94	13.62	14.07	14.07	14.44	0.37	0.15
Jet and kerosene	3.02	3.81	3.69	3.92	4.01	4.04	3.94	3.97	4.04	0.07	0.41
Gasoil/diesel oil	13.18	13.30	13.05	13.31	13.46	13.10	13.61	12.53	13.17	0.64	0.15
Residual fuel oil	1.73	1.84	1.79	1.88	1.80	1.81	1.67	1.56	1.59	0.03	-0.22
Other products	4.32	4.46	4.47	4.73	4.38	4.02	4.15	4.41	4.59	0.17	0.27
<b>Total</b>	<b>44.85</b>	<b>46.00</b>	<b>45.45</b>	<b>46.65</b>	<b>46.04</b>	<b>45.62</b>	<b>46.24</b>	<b>45.11</b>	<b>46.26</b>	<b>1.15</b>	<b>1.06</b>

<sup>1</sup> 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.

<sup>2</sup> Latest official OECD submissions (MOS).

**Table 2b**  
**OIL DEMAND IN SELECTED OECD COUNTRIES<sup>1</sup>**  
(million barrels per day)

	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23 <sup>2</sup>	Latest month vs.	
										Apr 23	May 22
<b>United States<sup>3</sup></b>											
LPG and ethane	2.88	3.06	2.89	2.95	3.01	3.15	3.05	3.05	3.05	0.01	0.24
Naphtha	0.19	0.14	0.14	0.13	0.13	0.13	0.14	0.16	0.16	0.00	0.02
Motor gasoline	8.82	8.78	9.00	8.88	8.75	8.67	9.01	9.00	9.10	0.11	0.00
Jet and kerosene	1.38	1.56	1.61	1.60	1.58	1.57	1.61	1.62	1.69	0.06	0.11
Gasoil/diesel oil	3.97	3.96	3.89	3.86	3.96	4.01	4.10	3.90	3.93	0.03	0.06
Residual fuel oil	0.31	0.34	0.31	0.39	0.30	0.29	0.25	0.18	0.22	0.05	-0.12
Other products	2.35	2.44	2.43	2.65	2.43	2.18	2.29	2.55	2.62	0.07	0.40
<b>Total</b>	<b>19.89</b>	<b>20.28</b>	<b>20.27</b>	<b>20.47</b>	<b>20.16</b>	<b>20.00</b>	<b>20.45</b>	<b>20.45</b>	<b>20.78</b>	<b>0.33</b>	<b>0.70</b>
<b>Japan</b>											
LPG and ethane	0.40	0.39	0.36	0.32	0.41	0.51	0.48	0.36	0.34	-0.02	-0.02
Naphtha	0.69	0.61	0.56	0.62	0.64	0.64	0.65	0.63	0.56	-0.07	0.02
Motor gasoline	0.77	0.80	0.78	0.85	0.82	0.77	0.77	0.79	0.78	0.00	0.01
Jet and kerosene	0.37	0.38	0.24	0.23	0.47	0.57	0.44	0.36	0.30	-0.06	0.06
Diesel	0.42	0.42	0.41	0.43	0.43	0.41	0.42	0.40	0.39	-0.01	0.00
Other gasoil	0.31	0.31	0.28	0.28	0.32	0.34	0.33	0.28	0.27	-0.02	0.00
Residual fuel oil	0.25	0.26	0.24	0.25	0.27	0.30	0.26	0.22	0.19	-0.03	-0.03
Other products	0.21	0.20	0.17	0.21	0.20	0.18	0.17	0.16	0.17	0.01	0.00
<b>Total</b>	<b>3.41</b>	<b>3.38</b>	<b>3.04</b>	<b>3.20</b>	<b>3.57</b>	<b>3.73</b>	<b>3.52</b>	<b>3.20</b>	<b>3.01</b>	<b>-0.19</b>	<b>0.04</b>
<b>Germany</b>											
LPG and ethane	0.11	0.11	0.11	0.10	0.09	0.09	0.11	0.10	0.11	0.01	0.00
Naphtha	0.37	0.31	0.35	0.27	0.26	0.29	0.29	0.30	0.26	-0.04	-0.09
Motor gasoline	0.46	0.45	0.45	0.47	0.45	0.45	0.46	0.44	0.47	0.03	0.05
Jet and kerosene	0.13	0.19	0.20	0.22	0.21	0.18	0.17	0.20	0.20	0.00	0.01
Diesel	0.73	0.71	0.69	0.74	0.73	0.67	0.73	0.64	0.71	0.07	0.07
Other gasoil	0.30	0.28	0.24	0.31	0.30	0.29	0.30	0.27	0.30	0.02	0.03
Residual fuel oil	0.05	0.06	0.06	0.06	0.05	0.04	0.04	0.05	0.05	0.00	-0.01
Other products	0.08	0.07	0.07	0.10	0.06	0.04	0.02	0.03	0.03	0.00	-0.07
<b>Total</b>	<b>2.23</b>	<b>2.19</b>	<b>2.17</b>	<b>2.27</b>	<b>2.14</b>	<b>2.05</b>	<b>2.13</b>	<b>2.04</b>	<b>2.14</b>	<b>0.09</b>	<b>-0.02</b>
<b>Italy</b>											
LPG and ethane	0.10	0.11	0.09	0.10	0.11	0.12	0.11	0.10	0.09	-0.01	0.00
Naphtha	0.08	0.06	0.06	0.04	0.05	0.06	0.06	0.06	0.06	-0.01	0.00
Motor gasoline	0.17	0.18	0.19	0.20	0.18	0.16	0.18	0.18	0.19	0.02	0.01
Jet and kerosene	0.05	0.09	0.09	0.11	0.08	0.07	0.08	0.10	0.09	0.00	0.01
Diesel	0.48	0.49	0.49	0.51	0.50	0.47	0.50	0.45	0.50	0.04	0.01
Other gasoil	0.07	0.05	0.04	0.06	0.05	0.03	0.04	0.03	0.04	0.01	0.00
Residual fuel oil	0.06	0.06	0.06	0.07	0.06	0.05	0.05	0.05	0.05	0.00	-0.02
Other products	0.15	0.16	0.18	0.17	0.16	0.15	0.16	0.16	0.16	0.00	-0.02
<b>Total</b>	<b>1.16</b>	<b>1.19</b>	<b>1.21</b>	<b>1.25</b>	<b>1.18</b>	<b>1.13</b>	<b>1.19</b>	<b>1.13</b>	<b>1.18</b>	<b>0.05</b>	<b>-0.02</b>
<b>France</b>											
LPG and ethane	0.11	0.10	0.10	0.10	0.07	0.11	0.10	0.11	0.11	0.00	0.02
Naphtha	0.14	0.10	0.09	0.10	0.08	0.11	0.10	0.10	0.12	0.02	0.04
Motor gasoline	0.21	0.23	0.24	0.26	0.23	0.22	0.23	0.23	0.25	0.02	0.01
Jet and kerosene	0.09	0.14	0.13	0.17	0.14	0.15	0.15	0.15	0.17	0.02	0.04
Diesel	0.72	0.73	0.75	0.75	0.72	0.69	0.74	0.65	0.69	0.04	-0.05
Other gasoil	0.14	0.11	0.06	0.10	0.11	0.14	0.13	0.09	0.08	-0.02	0.02
Residual fuel oil	0.04	0.03	0.03	0.03	0.03	0.03	0.01	0.03	0.03	0.00	0.00
Other products	0.09	0.09	0.10	0.11	0.08	0.07	0.07	0.07	0.10	0.03	0.00
<b>Total</b>	<b>1.54</b>	<b>1.54</b>	<b>1.51</b>	<b>1.63</b>	<b>1.47</b>	<b>1.53</b>	<b>1.52</b>	<b>1.44</b>	<b>1.55</b>	<b>0.11</b>	<b>0.08</b>
<b>United Kingdom</b>											
LPG and ethane	0.11	0.10	0.09	0.09	0.08	0.10	0.10	0.08	0.08	0.00	-0.01
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	0.28	0.29	0.28	0.27	0.28	0.25	0.30	0.30	0.00	0.01
Jet and kerosene	0.17	0.27	0.27	0.28	0.28	0.29	0.28	0.28	0.30	0.02	0.02
Diesel	0.47	0.47	0.49	0.47	0.47	0.47	0.44	0.50	0.55	0.05	0.07
Other gasoil	0.13	0.13	0.15	0.15	0.12	0.12	0.11	0.09	0.07	-0.02	-0.06
Residual fuel oil	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.00	-0.01
Other products	0.10	0.11	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.00	-0.01
<b>Total</b>	<b>1.25</b>	<b>1.38</b>	<b>1.43</b>	<b>1.41</b>	<b>1.36</b>	<b>1.40</b>	<b>1.33</b>	<b>1.38</b>	<b>1.43</b>	<b>0.05</b>	<b>0.02</b>
<b>Canada</b>											
LPG and ethane	0.46	0.40	0.37	0.43	0.37	0.39	0.35	0.39	0.43	0.04	0.08
Naphtha	0.05	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.01	0.01
Motor gasoline	0.76	0.78	0.78	0.81	0.80	0.73	0.74	0.78	0.84	0.07	0.08
Jet and kerosene	0.09	0.14	0.14	0.17	0.15	0.14	0.15	0.14	0.15	0.01	0.03
Diesel	0.29	0.29	0.26	0.28	0.31	0.30	0.34	0.22	0.35	0.13	0.11
Other gasoil	0.27	0.27	0.26	0.26	0.27	0.28	0.28	0.26	0.26	0.00	0.00
Residual fuel oil	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.04	0.00	-0.04	-0.03
Other products	0.31	0.40	0.40	0.42	0.40	0.39	0.38	0.40	0.46	0.06	0.06
<b>Total</b>	<b>2.26</b>	<b>2.38</b>	<b>2.30</b>	<b>2.47</b>	<b>2.40</b>	<b>2.34</b>	<b>2.33</b>	<b>2.29</b>	<b>2.55</b>	<b>0.26</b>	<b>0.33</b>

<sup>1</sup> 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.

<sup>2</sup> Latest official OECD submissions (MOS).

<sup>3</sup> US figures exclude US territories.

**Table 3**  
**WORLD OIL PRODUCTION**  
(million barrels per day)

	2022	2023	2024	1Q23	2Q23	3Q23	4Q23	1Q24	May 23	Jun 23	Jul 23
<b>OPEC</b>											
<b>Crude Oil</b>											
Saudi Arabia	10.53			10.42	10.14				9.98	9.98	9.06
Iran	2.55			2.70	3.00				3.10	3.04	3.04
Iraq	4.45			4.39	4.14				4.12	4.19	4.27
UAE	3.34			3.44	3.26				3.26	3.24	3.24
Kuwait	2.70			2.68	2.60				2.57	2.55	2.55
Angola	1.14			1.05	1.10				1.11	1.12	1.15
Nigeria	1.15			1.27	1.15				1.18	1.24	1.10
Libya	0.99			1.15	1.15				1.16	1.15	1.12
Algeria	1.01			1.01	0.97				0.97	0.95	0.96
Congo	0.26			0.28	0.28				0.28	0.28	0.28
Gabon	0.19			0.20	0.21				0.21	0.21	0.21
Equatorial Guinea	0.08			0.05	0.06				0.06	0.07	0.07
Venezuela	0.70			0.71	0.79				0.80	0.79	0.81
<b>Total Crude Oil</b>	<b>29.08</b>			<b>29.36</b>	<b>28.85</b>				<b>28.80</b>	<b>28.81</b>	<b>27.86</b>
<i>of which Neutral Zone<sup>1</sup></i>	<i>0.28</i>			<i>0.29</i>	<i>0.31</i>				<i>0.32</i>	<i>0.31</i>	<i>0.26</i>
<b>Total NGLs<sup>2</sup></b>	<b>5.40</b>	<b>5.50</b>	<b>5.55</b>	<b>5.45</b>	<b>5.49</b>	<b>5.52</b>	<b>5.52</b>	<b>5.55</b>	<b>5.46</b>	<b>5.52</b>	<b>5.52</b>
<b>Total OPEC<sup>3</sup></b>	<b>34.48</b>			<b>34.81</b>	<b>34.34</b>				<b>34.26</b>	<b>34.33</b>	<b>33.38</b>
<b>NON-OPEC<sup>4</sup></b>											
<b>OECD</b>											
<b>Americas</b>	25.65	26.95	27.53	26.68	26.71	27.10	27.31	27.26	26.54	26.77	27.04
United States	17.88	19.04	19.48	18.72	19.15	19.15	19.12	19.23	19.11	19.21	19.17
Mexico	2.01	2.13	2.12	2.10	2.14	2.12	2.16	2.14	2.14	2.13	2.06
Canada	5.76	5.78	5.92	5.84	5.42	5.82	6.02	5.88	5.28	5.42	5.81
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Europe</b>	3.16	3.18	3.22	3.28	3.19	3.01	3.23	3.30	3.21	3.14	3.06
UK	0.83	0.76	0.75	0.84	0.76	0.68	0.77	0.77	0.80	0.71	0.70
Norway	1.90	1.98	2.03	2.00	2.00	1.90	2.01	2.09	1.98	1.99	1.92
Others	0.43	0.44	0.44	0.44	0.44	0.44	0.45	0.44	0.44	0.44	0.44
<b>Asia Oceania</b>	0.48	0.47	0.47	0.46	0.45	0.46	0.49	0.49	0.47	0.43	0.43
Australia	0.41	0.39	0.39	0.39	0.37	0.39	0.42	0.41	0.40	0.35	0.36
Others	0.07	0.07	0.06	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.06
<b>Total OECD</b>	<b>29.30</b>	<b>30.60</b>	<b>31.22</b>	<b>30.42</b>	<b>30.35</b>	<b>30.57</b>	<b>31.03</b>	<b>31.06</b>	<b>30.22</b>	<b>30.34</b>	<b>30.54</b>
<b>NON-OECD</b>											
<b>Former USSR</b>	13.90	13.71	13.73	14.14	13.72	13.41	13.59	13.70	13.66	13.66	13.51
Russia	11.09	10.86	10.77	11.19	10.84	10.65	10.76	10.77	10.81	10.79	10.74
Azerbaijan	0.67	0.63	0.67	0.64	0.62	0.62	0.64	0.67	0.61	0.61	0.61
Kazakhstan	1.82	1.91	1.98	1.99	1.95	1.83	1.87	1.96	1.92	1.94	1.84
Others	0.32	0.31	0.31	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31
<b>Asia</b>	6.88	6.97	6.94	7.03	6.99	6.96	6.89	6.98	7.01	6.99	6.94
China	4.18	4.31	4.35	4.34	4.34	4.31	4.25	4.36	4.35	4.36	4.28
Malaysia	0.56	0.56	0.55	0.58	0.55	0.56	0.55	0.55	0.54	0.54	0.55
India	0.70	0.69	0.70	0.68	0.69	0.70	0.70	0.71	0.70	0.69	0.70
Indonesia	0.63	0.63	0.61	0.64	0.64	0.63	0.62	0.62	0.64	0.63	0.63
Others	0.81	0.78	0.74	0.79	0.77	0.77	0.77	0.75	0.78	0.76	0.78
<b>Europe</b>	0.11	0.10	0.09	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.10
<b>Americas</b>	5.65	6.07	6.51	5.96	6.00	6.10	6.21	6.44	5.96	6.14	6.14
Brazil	3.12	3.37	3.62	3.30	3.32	3.40	3.47	3.62	3.29	3.45	3.44
Argentina	0.71	0.76	0.80	0.75	0.76	0.76	0.78	0.79	0.76	0.75	0.76
Colombia	0.76	0.79	0.76	0.78	0.79	0.79	0.78	0.78	0.79	0.79	0.79
Ecuador	0.47	0.45	0.46	0.44	0.45	0.46	0.46	0.47	0.46	0.45	0.46
Others	0.59	0.69	0.87	0.68	0.68	0.69	0.72	0.79	0.66	0.70	0.69
<b>Middle East</b>	3.16	3.13	3.14	3.13	3.15	3.10	3.14	3.15	3.14	3.14	3.05
Oman	1.07	1.05	1.04	1.07	1.06	1.04	1.04	1.04	1.05	1.05	1.04
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	0.27	0.29	0.25	0.28	0.25	0.29	0.29	0.28	0.29	0.20
<b>Africa</b>	1.29	1.28	1.31	1.23	1.27	1.31	1.30	1.30	1.26	1.30	1.33
Egypt	0.60	0.60	0.60	0.59	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Others	0.70	0.68	0.71	0.64	0.67	0.70	0.70	0.70	0.66	0.70	0.72
<b>Total Non-OECD</b>	<b>30.99</b>	<b>31.26</b>	<b>31.72</b>	<b>31.60</b>	<b>31.23</b>	<b>30.98</b>	<b>31.23</b>	<b>31.67</b>	<b>31.13</b>	<b>31.33</b>	<b>31.06</b>
Processing gains <sup>5</sup>	2.31	2.35	2.44	2.31	2.35	2.38	2.37	2.44	2.33	2.37	2.40
Global biofuels	2.95	3.14	3.28	2.65	3.25	3.53	3.14	2.77	3.40	3.45	3.53
<b>TOTAL NON-OPEC</b>	<b>65.54</b>	<b>67.35</b>	<b>68.65</b>	<b>66.97</b>	<b>67.18</b>	<b>67.46</b>	<b>67.77</b>	<b>67.93</b>	<b>67.09</b>	<b>67.49</b>	<b>67.53</b>
<b>TOTAL SUPPLY</b>	<b>100.02</b>			<b>101.78</b>	<b>101.52</b>				<b>101.35</b>	<b>101.82</b>	<b>100.91</b>

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

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

<sup>3</sup> OPEC data based on today's membership throughout the time series.

<sup>4</sup> Comprises crude oil, condensates, NGLs and oil from non-conventional sources.

<sup>5</sup> Net volumetric gains and losses in refining and marine transportation losses.

**Table 3a**  
**OIL SUPPLY IN OECD COUNTRIES<sup>1</sup>**  
(thousand of barrels per day)

	2022	2023	2024	1Q23	2Q23	3Q23	4Q23	1Q24	May 23	Jun 23	Jul 23
<b>United States</b>											
Alaska	437	429	424	443	427	407	437	440	430	417	385
California	349	313	303	312	316	313	310	307	317	315	314
Texas	5060	5459	5639	5361	5467	5515	5493	5548	5494	5461	5506
New Mexico	1589	1774	1877	1816	1814	1727	1739	1794	1803	1780	1747
Federal Gulf of Mexico <sup>2</sup>	1730	1848	1899	1870	1766	1854	1903	1973	1705	1862	1876
Other US Lower 48	2746	2905	2946	2824	2906	2945	2943	2930	2914	2920	2940
NGLs <sup>3</sup>	5883	6223	6313	6010	6363	6301	6217	6155	6375	6341	6309
Other Hydrocarbons	86	84	83	82	86	88	80	80	72	111	92
<b>Total</b>	<b>17880</b>	<b>19035</b>	<b>19483</b>	<b>18717</b>	<b>19147</b>	<b>19150</b>	<b>19122</b>	<b>19228</b>	<b>19110</b>	<b>19206</b>	<b>19168</b>
<b>Canada</b>											
Alberta Light/Medium/Heavy	491	511	530	523	498	513	509	535	477	486	516
Alberta Bitumen	1995	2022	2049	1975	1843	2137	2131	1945	1804	1921	2084
Saskatchewan	455	452	442	457	454	451	447	448	451	455	453
Other Crude	433	388	444	403	396	373	381	400	399	376	359
NGLs	1035	1044	1085	1051	995	1062	1069	1075	910	1025	1052
Other Upgraders	181	184	185	193	172	172	199	198	171	170	181
Synthetic Crudes	1167	1177	1185	1244	1066	1114	1283	1277	1077	998	1164
<b>Total</b>	<b>5757</b>	<b>5777</b>	<b>5919</b>	<b>5845</b>	<b>5418</b>	<b>5823</b>	<b>6020</b>	<b>5878</b>	<b>5284</b>	<b>5416</b>	<b>5808</b>
<b>Mexico</b>											
Crude	1843	1960	1960	1933	1965	1949	1993	1980	1969	1962	1885
NGLs	158	167	157	166	171	167	164	161	167	168	169
<b>Total</b>	<b>2006</b>	<b>2130</b>	<b>2120</b>	<b>2103</b>	<b>2139</b>	<b>2119</b>	<b>2160</b>	<b>2145</b>	<b>2139</b>	<b>2133</b>	<b>2057</b>
<b>UK</b>											
Brent Fields	23	20	17	23	23	16	18	21	22	23	23
Forties Fields	210	186	149	205	186	165	187	181	194	169	170
Ninian Fields	20	26	22	27	27	26	25	24	27	26	26
Flotta Fields	40	31	27	36	28	31	30	29	23	31	30
Other Fields	474	443	487	489	437	388	462	464	471	411	407
NGLs	66	54	50	57	58	51	51	50	59	54	48
<b>Total</b>	<b>833</b>	<b>760</b>	<b>752</b>	<b>836</b>	<b>758</b>	<b>675</b>	<b>773</b>	<b>769</b>	<b>796</b>	<b>714</b>	<b>704</b>
<b>Norway<sup>4</sup></b>											
Ekofisk-Ula Area	122	119	113	130	117	109	119	117	117	110	98
Oseberg-Troll Area	200	199	203	205	191	190	209	208	186	185	188
Statfjord-Gullfaks Area	250	203	175	236	197	191	187	182	185	199	194
Haltenbanken Area	237	238	248	226	235	238	250	254	228	234	238
Sleipner-Frigg Area	784	983	1031	923	968	1008	1032	1035	943	991	980
Other Fields	116	49	69	94	104	-25	23	104	131	100	25
NGLs	190	187	188	186	187	185	190	190	187	173	197
<b>Total</b>	<b>1899</b>	<b>1976</b>	<b>2027</b>	<b>2002</b>	<b>1999</b>	<b>1896</b>	<b>2010</b>	<b>2089</b>	<b>1977</b>	<b>1992</b>	<b>1919</b>
<b>Other OECD Europe</b>											
Denmark	65	63	72	61	60	63	68	73	58	60	62
Italy	83	87	78	80	91	90	89	79	89	89	91
Türkiye	69	79	90	72	76	80	86	90	76	77	79
Other	78	79	79	69	79	85	83	82	71	87	86
NGLs	7	6	6	7	6	6	6	6	6	6	6
Non-Conventional Oils	129	126	115	148	126	115	115	115	138	117	117
<b>Total</b>	<b>430</b>	<b>441</b>	<b>440</b>	<b>438</b>	<b>437</b>	<b>440</b>	<b>448</b>	<b>444</b>	<b>438</b>	<b>437</b>	<b>440</b>
<b>Australia</b>											
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	74	67	100	98	96	67	67	99
Other Crude	177	177	178	190	169	158	191	192	186	153	135
NGLs	102	103	99	99	105	104	103	101	118	100	104
<b>Total</b>	<b>413</b>	<b>391</b>	<b>395</b>	<b>391</b>	<b>368</b>	<b>388</b>	<b>418</b>	<b>415</b>	<b>398</b>	<b>347</b>	<b>364</b>
<b>Other OECD Asia Oceania</b>											
New Zealand	16	16	14	17	18	15	15	14	18	18	15
Japan	3	3	3	3	3	3	3	3	3	3	3
NGLs	11	10	8	11	10	9	8	8	10	10	9
Non-Conventional Oils	38	38	38	38	38	38	38	38	37	38	38
<b>Total</b>	<b>68</b>	<b>66</b>	<b>62</b>	<b>69</b>	<b>69</b>	<b>64</b>	<b>64</b>	<b>63</b>	<b>68</b>	<b>69</b>	<b>64</b>
<b>OECD</b>											
Crude Oil	20230	21183	21702	21112	20967	21148	21499	21590	20886	21031	21041
NGLs	7459	7803	7914	7596	7903	7892	7816	7756	7840	7887	7901
Non-Conventional Oils <sup>5</sup>	1606	1611	1608	1708	1484	1531	1719	1711	1495	1422	1595
<b>Total</b>	<b>29295</b>	<b>30596</b>	<b>31224</b>	<b>30416</b>	<b>30355</b>	<b>30571</b>	<b>31035</b>	<b>31057</b>	<b>30222</b>	<b>30340</b>	<b>30537</b>

<sup>1</sup> Subcategories refer to crude oil only unless otherwise noted.

<sup>2</sup> Only production from Federal waters is included.

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

<sup>4</sup> 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.

<sup>5</sup> Does not include biofuels.

**Table 3b**  
**WORLD OIL PRODUCTION (Including OPEC+ based on current agreement<sup>1</sup>)**  
(million barrels per day)

	2021	2022	2023	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	May 23	Jun 23	Jul 23
<b>OPEC+</b>												
<b>Crude Oil</b>												
Algeria	0.91	1.01	0.97	0.99	1.01	1.02	1.02	1.01	0.97	0.97	0.95	0.96
Angola	1.12	1.14	1.09	1.16	1.17	1.15	1.08	1.05	1.10	1.11	1.12	1.15
Azerbaijan	0.59	0.56	0.52	0.58	0.56	0.55	0.55	0.53	0.50	0.50	0.50	0.50
Bahrain	0.17	0.19	0.18	0.18	0.19	0.20	0.19	0.17	0.20	0.20	0.20	0.12
Brunei	0.08	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.08
Congo	0.27	0.26	0.28	0.27	0.26	0.26	0.26	0.28	0.28	0.28	0.28	0.28
Equatorial Guinea	0.10	0.08	0.06	0.09	0.09	0.09	0.06	0.05	0.06	0.06	0.07	0.07
Gabon	0.18	0.19	0.19	0.19	0.18	0.20	0.18	0.20	0.21	0.21	0.21	0.21
Iran	2.42	2.55	2.92	2.55	2.46	2.55	2.63	2.70	3.00	3.10	3.04	3.04
Iraq	4.03	4.45	4.25	4.29	4.45	4.54	4.50	4.39	4.14	4.12	4.19	4.27
Kazakhstan	1.52	1.50	1.57	1.63	1.43	1.35	1.60	1.64	1.62	1.60	1.60	1.51
Kuwait	2.42	2.70	2.59	2.61	2.67	2.80	2.71	2.68	2.60	2.57	2.55	2.55
Libya	1.15	0.99	1.16	1.08	0.77	0.96	1.17	1.15	1.15	1.16	1.15	1.12
Malaysia	0.42	0.40	0.38	0.41	0.39	0.38	0.40	0.39	0.36	0.34	0.37	0.37
Mexico	1.66	1.62	1.67	1.64	1.62	1.62	1.62	1.65	1.67	1.68	1.67	1.59
Nigeria	1.31	1.15	1.20	1.30	1.15	1.00	1.13	1.27	1.15	1.18	1.24	1.10
Oman	0.75	0.85	0.81	0.82	0.84	0.88	0.85	0.84	0.82	0.81	0.80	0.80
Russia	9.62	9.75	9.50	10.04	9.40	9.78	9.78	9.78	9.49	9.47	9.45	9.40
Saudi Arabia	9.15	10.53	9.84	10.17	10.44	10.92	10.57	10.42	10.14	9.98	9.98	9.06
South Sudan	0.15	0.14	0.14	0.14	0.14	0.15	0.14	0.12	0.15	0.15	0.17	0.19
Sudan	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05
UAE	2.78	3.34	3.30	3.15	3.35	3.47	3.39	3.44	3.26	3.26	3.24	3.24
Venezuela	0.61	0.70	0.79	0.72	0.74	0.66	0.68	0.71	0.79	0.80	0.79	0.81
<b>Total Crude Oil</b>	<b>41.49</b>	<b>44.22</b>	<b>43.54</b>	<b>44.14</b>	<b>43.45</b>	<b>44.65</b>	<b>44.64</b>	<b>44.61</b>	<b>43.78</b>	<b>43.68</b>	<b>43.69</b>	<b>42.46</b>
<i>of which Neutral Zone</i>	<i>0.25</i>	<i>0.28</i>		<i>0.27</i>	<i>0.28</i>	<i>0.31</i>	<i>0.27</i>	<i>0.29</i>	<i>0.31</i>	<i>0.32</i>	<i>0.31</i>	<i>0.26</i>
<b>Total NGLs</b>	<b>7.64</b>	<b>7.97</b>	<b>8.22</b>	<b>7.96</b>	<b>7.94</b>	<b>7.91</b>	<b>8.07</b>	<b>8.23</b>	<b>8.21</b>	<b>8.16</b>	<b>8.22</b>	<b>8.23</b>
<b>TOTAL OPEC+</b>	<b>49.13</b>	<b>52.2</b>	<b>51.8</b>	<b>52.1</b>	<b>51.4</b>	<b>52.6</b>	<b>52.7</b>	<b>52.8</b>	<b>52.0</b>	<b>51.8</b>	<b>51.9</b>	<b>50.7</b>
<b>NON-OPEC+</b>												
<b>OECD</b>												
<b>Americas<sup>2</sup></b>	22.37	23.65	24.82	22.95	23.36	24.03	24.23	24.57	24.58	24.41	24.63	24.99
United States	16.77	17.88	19.04	17.23	17.77	18.22	18.28	18.72	19.15	19.11	19.21	19.17
Canada	5.59	5.76	5.78	5.71	5.57	5.79	5.95	5.84	5.42	5.28	5.42	5.81
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Europe</b>	3.39	3.16	3.18	3.33	3.03	3.09	3.21	3.28	3.19	3.21	3.14	3.06
UK	0.88	0.83	0.76	0.91	0.85	0.75	0.81	0.84	0.76	0.80	0.71	0.70
Norway	2.05	1.90	1.98	1.98	1.74	1.91	1.97	2.00	2.00	1.98	1.99	1.92
Others	0.46	0.43	0.44	0.43	0.44	0.43	0.43	0.44	0.44	0.44	0.44	0.44
<b>Asia Oceania</b>	0.51	0.48	0.47	0.49	0.51	0.43	0.48	0.46	0.45	0.47	0.43	0.43
Australia	0.44	0.41	0.39	0.42	0.45	0.37	0.42	0.39	0.37	0.40	0.35	0.36
Others	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.08	0.07	0.08	0.06
<b>Total OECD (non-OPEC+)</b>	<b>26.28</b>	<b>27.29</b>	<b>28.47</b>	<b>26.77</b>	<b>26.90</b>	<b>27.55</b>	<b>27.92</b>	<b>28.31</b>	<b>28.22</b>	<b>28.08</b>	<b>28.21</b>	<b>28.48</b>
<b>Non-OECD</b>												
<b>FSU</b>	0.35	0.32	0.31	0.34	0.30	0.31	0.31	0.32	0.31	0.31	0.31	0.31
<b>Asia</b>	6.24	6.23	6.31	6.32	6.29	6.14	6.16	6.36	6.35	6.37	6.37	6.29
China	4.06	4.18	4.31	4.23	4.23	4.12	4.13	4.34	4.34	4.35	4.36	4.28
India	0.73	0.70	0.69	0.72	0.71	0.70	0.69	0.68	0.69	0.70	0.69	0.70
Indonesia	0.68	0.63	0.63	0.65	0.63	0.62	0.63	0.64	0.64	0.64	0.63	0.63
Others	0.77	0.71	0.68	0.73	0.71	0.70	0.71	0.70	0.68	0.69	0.68	0.68
<b>Europe</b>	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
<b>Americas</b>	5.30	5.65	6.05	5.44	5.49	5.75	5.89	5.96	6.00	5.96	6.14	6.14
Brazil	3.00	3.12	3.36	3.08	3.00	3.16	3.23	3.30	3.32	3.29	3.45	3.44
Argentina	0.64	0.71	0.76	0.69	0.70	0.72	0.74	0.75	0.76	0.76	0.75	0.76
Colombia	0.74	0.76	0.79	0.75	0.76	0.76	0.78	0.78	0.79	0.79	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	0.46
Others	0.44	0.59	0.69	0.44	0.58	0.65	0.68	0.68	0.68	0.66	0.70	0.69
<b>Middle East</b>	1.90	1.89	1.89	1.87	1.91	1.90	1.88	1.89	1.89	1.89	1.88	1.88
Qatar	1.80	1.80	1.81	1.78	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81
Others	0.10	0.09	0.08	0.10	0.10	0.10	0.08	0.07	0.07	0.07	0.07	0.07
<b>Africa</b>	1.12	1.09	1.08	1.10	1.10	1.09	1.09	1.06	1.07	1.06	1.07	1.09
Egypt	0.59	0.60	0.60	0.59	0.61	0.60	0.60	0.59	0.60	0.60	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	0.48
<b>Total non-OECD (non-OPEC+)</b>	<b>15.02</b>	<b>15.28</b>	<b>15.75</b>	<b>15.18</b>	<b>15.19</b>	<b>15.31</b>	<b>15.44</b>	<b>15.68</b>	<b>15.72</b>	<b>15.69</b>	<b>15.88</b>	<b>15.81</b>
Processing gains	2.24	2.31	2.35	2.29	2.30	2.33	2.32	2.31	2.35	2.33	2.37	2.40
Global biofuels	2.79	2.95	3.14	2.51	3.08	3.30	2.89	2.65	3.25	3.40	3.45	3.53
<b>TOTAL NON-OPEC+</b>	<b>46.33</b>	<b>47.82</b>	<b>49.71</b>	<b>46.74</b>	<b>47.47</b>	<b>48.48</b>	<b>48.58</b>	<b>48.95</b>	<b>49.54</b>	<b>49.51</b>	<b>49.91</b>	<b>50.22</b>
<b>TOTAL SUPPLY</b>	<b>95.46</b>	<b>100.02</b>	<b>101.47</b>	<b>98.85</b>	<b>98.86</b>	<b>101.03</b>	<b>101.29</b>	<b>101.78</b>	<b>101.52</b>	<b>101.35</b>	<b>101.82</b>	<b>100.91</b>

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

**Table 4**  
**OECD STOCKS AND QUARTERLY STOCK CHANGES**

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Feb2023	Mar2023	Apr2023	May2023	Jun2023 <sup>3</sup>	Jun2020	Jun2021	Jun2022	3Q2022	4Q2022	1Q2023	2Q2023
<b>OECD INDUSTRY-CONTROLLED STOCKS<sup>1</sup></b>												
<b>OECD Americas</b>												
Crude	623.6	620.5	615.3	602.8	593.8	683.4	611.9	570.8	0.09	0.16	0.30	-0.29
Motor Gasoline	271.6	254.2	251.3	248.3	249.2	283.1	264.7	246.4	-0.11	0.17	0.03	-0.06
Middle Distillate	192.5	181.0	185.0	184.5	186.4	248.7	214.9	178.7	-0.05	0.11	-0.03	0.06
Residual Fuel Oil	38.6	35.9	39.5	39.4	37.4	46.5	38.7	35.7	-0.01	0.04	-0.02	0.02
Total Products <sup>4</sup>	738.3	707.1	727.4	740.5	758.7	856.5	775.2	703.1	0.32	0.01	-0.29	0.57
<b>Total<sup>5</sup></b>	<b>1519.4</b>	<b>1485.9</b>	<b>1503.3</b>	<b>1499.1</b>	<b>1504.7</b>	<b>1718.7</b>	<b>1553.1</b>	<b>1436.2</b>	<b>0.35</b>	<b>0.20</b>	<b>-0.01</b>	<b>0.21</b>
<b>OECD Europe</b>												
Crude	334.6	338.8	352.5	353.4	354.3	377.5	341.8	340.0	-0.03	0.00	0.02	0.17
Motor Gasoline	93.0	89.3	86.2	82.7	80.7	99.6	86.4	86.6	0.01	0.00	0.02	-0.09
Middle Distillate	268.0	247.8	258.0	258.5	247.4	339.1	304.1	239.1	-0.03	0.16	-0.04	0.00
Residual Fuel Oil	67.2	67.8	69.3	70.0	65.4	74.2	64.3	64.6	0.02	0.04	-0.03	-0.03
Total Products <sup>4</sup>	532.3	508.0	519.4	515.4	498.8	630.9	552.3	498.6	0.04	0.18	-0.12	-0.10
<b>Total<sup>5</sup></b>	<b>944.6</b>	<b>921.6</b>	<b>950.8</b>	<b>946.7</b>	<b>927.8</b>	<b>1098.1</b>	<b>971.3</b>	<b>911.6</b>	<b>0.08</b>	<b>0.19</b>	<b>-0.17</b>	<b>0.07</b>
<b>OECD Asia Oceania</b>												
Crude	127.4	139.7	142.2	130.0	129.3	158.8	125.0	94.2	0.36	0.00	0.13	-0.11
Motor Gasoline	26.9	24.5	26.7	24.8	24.1	25.2	29.4	25.5	-0.02	0.01	0.00	0.00
Middle Distillate	61.1	54.7	61.2	62.5	60.6	67.0	65.3	61.3	0.01	0.00	-0.09	0.06
Residual Fuel Oil	16.0	16.3	17.3	17.7	17.2	17.4	16.8	16.1	0.01	0.00	0.00	0.01
Total Products <sup>4</sup>	162.9	157.2	166.6	166.9	166.7	176.7	170.2	165.6	0.04	-0.05	-0.08	0.10
<b>Total<sup>5</sup></b>	<b>347.2</b>	<b>350.9</b>	<b>366.9</b>	<b>355.6</b>	<b>354.2</b>	<b>400.0</b>	<b>357.4</b>	<b>317.9</b>	<b>0.45</b>	<b>-0.06</b>	<b>-0.03</b>	<b>0.04</b>
<b>Total OECD</b>												
Crude	1085.5	1099.0	1110.0	1086.2	1077.4	1219.7	1078.7	1005.0	0.42	0.17	0.45	-0.24
Motor Gasoline	391.5	368.0	364.2	355.8	354.0	407.9	380.5	358.4	-0.12	0.18	0.05	-0.15
Middle Distillate	521.6	483.5	504.1	505.5	494.4	654.8	584.3	479.0	-0.06	0.27	-0.16	0.12
Residual Fuel Oil	121.8	120.0	126.1	127.1	120.0	138.1	119.7	116.5	0.01	0.08	-0.05	0.00
Total Products <sup>4</sup>	1433.5	1372.3	1413.3	1422.8	1424.2	1664.1	1497.7	1367.3	0.39	0.14	-0.49	0.57
<b>Total<sup>5</sup></b>	<b>2811.1</b>	<b>2758.4</b>	<b>2820.9</b>	<b>2801.3</b>	<b>2786.7</b>	<b>3216.7</b>	<b>2881.8</b>	<b>2665.7</b>	<b>0.89</b>	<b>0.33</b>	<b>-0.21</b>	<b>0.31</b>
<b>OECD GOVERNMENT-CONTROLLED STOCKS<sup>6</sup></b>												
<b>OECD Americas</b>												
Crude	371.6	371.2	363.7	354.4	347.7	656.0	621.3	493.3	-0.84	-0.48	-0.01	-0.26
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
<b>OECD Europe</b>												
Crude	190.6	187.7	185.0	186.8	189.5	208.8	205.8	195.0	-0.01	-0.01	-0.06	0.02
Products	275.4	270.7	273.7	276.4	277.5	276.4	278.8	255.8	-0.04	0.15	0.05	0.07
<b>OECD Asia Oceania</b>												
Crude	345.3	347.8	348.5	352.1	352.1	377.3	374.5	358.1	-0.17	0.01	0.06	0.05
Products	35.2	35.4	35.5	35.7	35.7	39.0	38.8	37.3	0.00	-0.02	0.00	0.00
<b>Total OECD</b>												
Crude	907.5	906.7	897.2	893.2	889.3	1242.1	1201.6	1046.4	-1.02	-0.49	-0.01	-0.19
Products	312.6	308.1	311.2	314.1	315.2	317.4	319.6	295.1	-0.04	0.14	0.04	0.08
<b>Total<sup>5</sup></b>	<b>1222.2</b>	<b>1216.7</b>	<b>1210.0</b>	<b>1208.9</b>	<b>1206.1</b>	<b>1561.3</b>	<b>1523.5</b>	<b>1343.1</b>	<b>-1.06</b>	<b>-0.34</b>	<b>0.03</b>	<b>-0.12</b>

<sup>1</sup> 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.

<sup>2</sup> Closing stock levels.

<sup>3</sup> Estimated.

<sup>4</sup> Total products includes gasoline, middle distillates, fuel oil and other products.

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

<sup>6</sup> Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.



**Table 4a**  
**INDUSTRY STOCKS<sup>1</sup> ON LAND IN SELECTED COUNTRIES**

(million barrels)

	January			February			March			April			May		
	2022	2023	%	2022	2023	%	2022	2023	%	2022	2023	%	2022	2023	%
<b>United States<sup>2</sup></b>															
Crude	414.3	459.8	11.0	409.1	472.4	15.5	414.4	465.4	12.3	419.1	459.9	9.7	414.3	460.8	11.2
Motor Gasoline	251.8	239.7	-4.8	250.4	242.3	-3.2	238.5	225.3	-5.5	230.1	223.6	-2.8	220.7	222.1	0.6
Middle Distillate	165.3	160.3	-3.0	162.2	163.6	0.9	151.5	151.3	-0.1	145.3	154.3	6.2	152.0	156.8	3.2
Residual Fuel Oil	26.7	32.1	20.2	27.5	31.3	13.8	27.9	29.6	6.1	29.4	32.1	9.2	29.2	32.8	12.3
Other Products	195.4	221.2	13.2	178.0	212.5	19.4	179.8	213.4	18.7	191.5	228.8	19.5	212.5	245.7	15.6
Total Products	639.2	653.3	2.2	618.1	649.7	5.1	597.7	619.6	3.7	596.3	638.8	7.1	614.4	657.4	7.0
Other <sup>3</sup>	136.4	141.4	3.7	138.2	144.7	4.7	141.5	145.7	3.0	138.1	146.9	6.4	143.8	141.7	-1.5
<b>Total</b>	<b>1189.9</b>	<b>1254.5</b>	<b>5.4</b>	<b>1165.4</b>	<b>1266.8</b>	<b>8.7</b>	<b>1153.6</b>	<b>1230.7</b>	<b>6.7</b>	<b>1153.5</b>	<b>1245.6</b>	<b>8.0</b>	<b>1172.5</b>	<b>1259.9</b>	<b>7.5</b>
<b>Japan</b>															
Crude	69.2	75.5	9.1	70.7	76.1	7.6	76.0	76.7	0.9	80.3	83.2	3.6	74.9	77.1	2.9
Motor Gasoline	11.3	11.1	-1.8	10.9	10.4	-4.6	9.8	9.9	1.0	10.3	10.4	1.0	10.3	10.6	2.9
Middle Distillate	30.8	30.8	0.0	26.7	25.7	-3.7	23.3	23.7	1.7	24.7	26.3	6.5	26.6	27.4	3.0
Residual Fuel Oil	7.0	6.3	-10.0	6.5	6.8	4.6	5.7	6.7	17.5	6.2	6.9	11.3	6.8	7.4	8.8
Other Products	34.6	34.2	-1.2	32.2	31.9	-0.9	32.0	34.5	7.8	33.1	37.1	12.1	34.8	34.9	0.3
Total Products	83.7	82.4	-1.6	76.3	74.8	-2.0	70.8	74.8	5.6	74.3	80.7	8.6	78.5	80.3	2.3
Other <sup>3</sup>	47.6	49.3	3.6	43.7	45.3	3.7	42.0	42.9	2.1	47.3	46.3	-2.1	49.9	47.1	-5.6
<b>Total</b>	<b>200.5</b>	<b>207.2</b>	<b>3.3</b>	<b>190.7</b>	<b>196.2</b>	<b>2.9</b>	<b>188.8</b>	<b>194.4</b>	<b>3.0</b>	<b>201.9</b>	<b>210.2</b>	<b>4.1</b>	<b>203.3</b>	<b>204.5</b>	<b>0.6</b>
<b>Germany</b>															
Crude	46.1	51.9	12.6	47.3	49.7	5.1	48.2	49.5	2.7	48.9	51.7	5.7	50.8	53.7	5.7
Motor Gasoline	11.0	12.0	9.1	10.6	10.7	0.9	10.7	9.1	-15.0	11.6	8.8	-24.1	11.8	8.7	-26.3
Middle Distillate	23.2	33.3	43.5	21.7	30.0	38.2	24.3	30.5	0.8	27.2	25.2	-7.4	26.1	25.2	-3.4
Residual Fuel Oil	8.5	8.6	1.2	8.6	8.8	2.3	7.9	9.1	15.2	7.8	9.4	20.5	8.0	8.7	8.7
Other Products	10.2	10.3	1.0	10.0	10.2	2.0	10.0	10.2	2.0	10.7	11.1	3.7	10.0	9.2	-8.0
Total Products	52.9	64.2	21.4	50.9	59.7	17.3	52.9	52.9	0.0	57.3	54.5	-4.9	55.9	51.8	-7.3
Other <sup>3</sup>	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
<b>Total</b>	<b>99.0</b>	<b>116.1</b>	<b>17.3</b>	<b>98.2</b>	<b>109.4</b>	<b>11.4</b>	<b>101.1</b>	<b>102.4</b>	<b>1.3</b>	<b>106.2</b>	<b>106.2</b>	<b>0.0</b>	<b>106.7</b>	<b>105.5</b>	<b>-1.1</b>
<b>Italy</b>															
Crude	29.9	35.7	19.4	30.4	36.2	19.1	32.7	39.8	21.7	34.1	39.3	15.2	36.4	39.0	7.1
Motor Gasoline	12.7	11.7	-7.9	11.3	10.6	-6.2	11.3	10.5	-7.1	10.5	10.3	-1.9	11.6	10.0	-13.8
Middle Distillate	26.4	26.9	1.9	23.8	24.4	2.5	23.1	23.8	3.0	22.6	23.1	2.2	22.5	25.0	11.1
Residual Fuel Oil	7.5	8.3	10.7	8.1	7.5	-7.4	7.9	7.1	-10.1	8.7	7.2	-17.2	8.3	7.2	-13.3
Other Products	11.2	12.2	8.9	11.3	11.4	0.9	11.0	11.4	3.6	11.4	11.3	-0.9	11.8	11.7	-0.8
Total Products	57.8	59.1	2.2	54.5	53.9	-1.1	53.3	52.8	-0.9	53.2	51.9	-2.4	54.2	53.9	-0.6
Other <sup>3</sup>	13.5	15.0	11.1	13.1	14.1	7.6	14.7	14.9	1.4	14.6	15.6	6.8	13.8	15.1	9.4
<b>Total</b>	<b>101.2</b>	<b>109.8</b>	<b>8.5</b>	<b>98.0</b>	<b>104.2</b>	<b>6.3</b>	<b>100.7</b>	<b>107.5</b>	<b>6.8</b>	<b>101.9</b>	<b>106.8</b>	<b>4.8</b>	<b>104.4</b>	<b>108.0</b>	<b>3.4</b>
<b>France</b>															
Crude	9.2	12.0	30.4	12.4	11.3	-8.9	12.1	7.5	-38.0	10.2	15.5	52.0	11.9	13.6	14.3
Motor Gasoline	5.1	5.2	2.0	4.5	5.6	24.4	4.2	4.9	16.7	4.9	5.2	6.1	4.5	5.4	20.0
Middle Distillate	20.1	21.9	9.0	16.5	21.8	32.1	18.6	16.2	-12.9	19.3	20.9	8.3	19.7	20.2	2.5
Residual Fuel Oil	1.3	1.9	46.2	1.3	1.4	7.7	0.7	1.9	171.4	1.1	1.4	27.3	1.5	1.3	-13.3
Other Products	3.4	4.0	17.6	3.5	3.9	11.4	3.6	3.6	0.0	3.8	3.2	-15.8	3.5	3.5	0.0
Total Products	29.9	33.0	10.4	25.8	32.7	26.7	27.1	26.6	-1.8	29.1	30.7	5.5	29.2	30.4	4.1
Other <sup>3</sup>	7.2	7.4	2.8	7.1	7.6	7.0	7.1	6.1	-14.1	7.6	7.7	1.3	8.2	7.1	-13.4
<b>Total</b>	<b>46.3</b>	<b>52.4</b>	<b>13.2</b>	<b>45.3</b>	<b>51.6</b>	<b>13.9</b>	<b>46.3</b>	<b>40.2</b>	<b>-13.2</b>	<b>46.9</b>	<b>53.9</b>	<b>14.9</b>	<b>49.3</b>	<b>51.1</b>	<b>3.7</b>
<b>United Kingdom</b>															
Crude	22.7	25.4	11.9	26.4	25.8	-2.3	26.5	25.3	-4.5	25.2	27.3	8.3	24.1	28.4	17.8
Motor Gasoline	10.5	8.9	-15.2	9.5	9.7	2.1	9.2	8.9	-3.3	9.9	8.3	-16.2	9.7	8.3	-14.4
Middle Distillate	18.9	20.4	7.9	18.3	21.0	14.8	16.8	20.4	21.4	18.4	23.3	26.6	18.1	21.9	21.0
Residual Fuel Oil	1.2	1.3	8.3	1.5	1.0	-33.3	1.4	1.2	-14.3	1.7	1.3	-23.5	1.7	1.0	-41.2
Other Products	5.9	5.8	-1.7	6.1	6.2	1.6	5.6	5.8	3.6	6.8	6.7	-1.5	6.8	6.6	-2.9
Total Products	36.5	36.4	-0.3	35.4	37.9	7.1	33.0	36.3	10.0	36.8	39.6	7.6	36.3	37.8	4.1
Other <sup>3</sup>	7.6	8.0	5.3	7.8	7.9	1.3	7.7	8.0	3.9	7.5	8.0	6.7	6.8	7.6	11.8
<b>Total</b>	<b>66.8</b>	<b>69.8</b>	<b>4.5</b>	<b>69.6</b>	<b>71.6</b>	<b>2.9</b>	<b>67.2</b>	<b>69.6</b>	<b>3.6</b>	<b>69.5</b>	<b>74.9</b>	<b>7.8</b>	<b>67.2</b>	<b>73.8</b>	<b>9.8</b>
<b>Canada<sup>4</sup></b>															
Crude	121.7	118.1	-3.0	122.4	117.6	-3.9	119.4	118.6	-0.7	122.6	119.9	-2.2	121.3	106.0	-12.6
Motor Gasoline	17.3	17.2	-0.6	16.3	17.4	6.7	16.6	17.3	4.2	15.3	16.4	7.2	13.4	14.8	10.4
Middle Distillate	18.8	20.9	11.2	18.0	19.8	10.0	17.9	20.2	12.8	18.2	20.8	14.3	17.3	18.2	5.2
Residual Fuel Oil	1.7	2.4	41.2	2.2	2.4	9.1	2.3	2.6	13.0	1.9	2.2	15.8	2.7	2.6	-3.7
Other Products	12.5	11.8	-5.6	13.2	13.2	0.0	13.6	13.6	0.0	13.9	13.6	-2.2	13.8	13.4	-2.9
Total Products	50.3	52.3	4.0	49.7	52.8	6.2	50.4	53.7	6.5	49.3	53.0	7.5	47.2	49.0	3.8
Other <sup>3</sup>	19.4	14.7	-24.2	16.4	12.6	-23.2	15.9	12.5	-21.4	17.1	13.7	-19.9	19.6	13.9	-29.1
<b>Total</b>	<b>191.4</b>	<b>185.1</b>	<b>-3.3</b>	<b>188.5</b>	<b>183.0</b>	<b>-2.9</b>	<b>185.7</b>	<b>184.8</b>	<b>-0.5</b>	<b>189.0</b>	<b>186.6</b>	<b>-1.3</b>	<b>188.1</b>	<b>168.9</b>	<b>-10.2</b>

<sup>1</sup> Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrap 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.

<sup>2</sup> US figures exclude US territories.

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

<sup>4</sup> 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 COUNTRIES<sup>1</sup>**  
(millions of barrels<sup>1</sup> and 'days'<sup>2</sup>)

	End June 2022		End September 2022		End December 2022		End March 2023		End June 2023 <sup>3</sup>	
	Stock Level	Days Fwd <sup>2</sup> Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
<b>OECD Americas</b>										
Canada	187.9	76	184.3	77	196.3	84	184.8	-	-	-
Chile	9.9	27	10.6	29	10.6	28	10.8	-	-	-
Mexico	36.6	19	36.7	20	36.6	20	37.3	-	-	-
United States <sup>4</sup>	1675.0	82	1633.5	81	1595.7	80	1604.0	-	-	-
<b>Total<sup>4</sup></b>	<b>1931.5</b>	<b>76</b>	<b>1887.2</b>	<b>76</b>	<b>1861.2</b>	<b>75</b>	<b>1859.1</b>	<b>73</b>	<b>1854.3</b>	<b>73</b>
<b>OECD Asia Oceania</b>										
Australia	38.6	36	35.8	32	38.7	35	39.8	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	502.8	157	522.4	146	513.9	138	492.5	-	-	-
Korea	165.9	66	174.5	69	173.8	68	196.0	-	-	-
New Zealand	6.0	42	6.1	35	5.5	36	5.8	-	-	-
<b>Total</b>	<b>713.3</b>	<b>99</b>	<b>738.8</b>	<b>97</b>	<b>731.9</b>	<b>94</b>	<b>734.1</b>	<b>106</b>	<b>742.0</b>	<b>102</b>
<b>OECD Europe<sup>5</sup></b>										
Austria	20.0	81	17.4	72	21.3	91	22.6	-	-	-
Belgium	44.8	74	45.4	77	45.7	73	45.5	-	-	-
Czech Republic	22.3	102	22.6	105	23.1	116	23.6	-	-	-
Denmark	21.7	141	21.1	142	23.6	167	22.8	-	-	-
Estonia	2.3	74	2.3	80	3.4	120	3.2	-	-	-
Finland	41.0	205	40.4	219	38.0	222	35.9	-	-	-
France	144.6	89	142.3	97	151.3	99	138.7	-	-	-
Germany	267.8	118	266.5	124	272.1	133	266.6	-	-	-
Greece	29.8	87	30.4	97	31.9	118	32.1	-	-	-
Hungary	29.2	159	28.6	172	28.7	177	30.5	-	-	-
Ireland	10.3	68	10.3	65	11.0	70	10.3	-	-	-
Italy	119.3	96	123.3	104	120.0	106	122.9	-	-	-
Latvia	2.8	70	2.8	82	2.9	89	1.9	-	-	-
Lithuania	8.4	116	8.2	115	8.3	133	8.7	-	-	-
Luxembourg	0.7	14	0.6	14	0.5	11	0.5	-	-	-
Netherlands	127.1	148	125.2	141	139.8	155	130.1	-	-	-
Norway	25.5	95	26.0	128	27.2	123	27.8	-	-	-
Poland	82.4	114	82.1	116	83.8	128	88.5	-	-	-
Portugal	22.5	88	21.1	103	20.0	91	18.9	-	-	-
Slovak Republic	13.2	146	13.5	141	13.1	141	13.5	-	-	-
Slovenia	4.8	89	4.5	85	4.9	100	4.5	-	-	-
Spain	107.9	82	111.5	87	109.5	87	110.2	-	-	-
Sweden	31.4	103	34.5	118	36.0	121	36.9	-	-	-
Switzerland	29.9	150	28.2	140	27.4	145	28.4	-	-	-
Republic of Türkiye	87.8	80	86.6	83	88.6	92	87.9	-	-	-
United Kingdom	66.3	47	71.1	52	65.9	47	69.6	-	-	-
<b>Total</b>	<b>1364.0</b>	<b>97</b>	<b>1366.7</b>	<b>102</b>	<b>1397.9</b>	<b>107</b>	<b>1381.9</b>	<b>103</b>	<b>1396.4</b>	<b>100</b>
<b>Total OECD</b>	<b>4008.8</b>	<b>86</b>	<b>3992.7</b>	<b>87</b>	<b>3991.0</b>	<b>88</b>	<b>3975.1</b>	<b>87</b>	<b>3992.7</b>	<b>85</b>
<b>DAYS OF IEA Net Imports<sup>6</sup> -</b>	<b>244</b>	<b>-</b>	<b>242</b>	<b>-</b>	<b>242</b>	<b>-</b>	<b>242</b>	<b>-</b>	<b>242</b>	<b>-</b>

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> End June 2023 forward demand figures are IEA Secretariat forecasts.

<sup>4</sup> US figures exclude US territories. Total includes US territories.

<sup>5</sup> Data not available for Iceland.

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

### TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government <sup>1</sup> controlled		Industry	Total	Government <sup>1</sup> controlled	
		Millions of Barrels	Days of Fwd. Demand <sup>2</sup>			Days of Fwd. Demand <sup>2</sup>	Days of Fwd. Demand <sup>2</sup>
2Q2020	4778	1561	3217	113	37	76	
3Q2020	4732	1551	3181	110	36	74	
4Q2020	4578	1541	3037	108	36	71	
1Q2021	4470	1546	2924	102	35	66	
2Q2021	4405	1524	2882	96	33	63	
3Q2021	4281	1513	2768	91	32	59	
4Q2021	4135	1484	2651	90	32	58	
1Q2022	4056	1442	2614	89	32	58	
2Q2022	4009	1343	2666	86	29	57	
3Q2022	3993	1245	2747	87	27	60	
4Q2022	3991	1214	2777	88	27	61	
1Q2023	3975	1217	2758	87	27	60	
2Q2023	3993	1206	2787	85	26	60	

<sup>1</sup> Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

<sup>2</sup> Days of forward demand calculated using actual demand except in 2Q2023 (where latest forecasts are used).

**Table 6**  
**IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS<sup>1</sup>**  
(million barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier	
											May 22	change
<b>Saudi Light &amp; Extra Light</b>												
Americas	0.26	0.34	0.46	0.46	0.52	0.41	0.39	0.39	0.38	0.40	0.47	-0.07
Europe	0.59	0.48	0.62	0.68	0.60	0.67	0.66	0.39	0.78	0.62	0.60	0.02
Asia Oceania	1.39	1.30	1.51	1.36	1.53	1.58	1.58	1.52	1.47	1.39	1.33	0.06
<b>Saudi Medium</b>												
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	0.28	0.23	0.17	0.22	-0.05
<b>Canada Heavy</b>												
Americas	2.39	2.59	2.61	2.54	2.58	2.63	2.70	2.62	2.62	2.44	2.54	-0.10
Europe	0.03	0.03	0.08	0.09	0.08	0.11	0.07	0.05	0.14	0.15	0.12	0.03
Asia Oceania	0.00	0.02	0.01	0.01	0.01	-	-	-	-	-	-	-
<b>Iraqi Basrah Light<sup>2</sup></b>												
Americas	0.11	0.08	0.21	0.30	0.25	0.13	0.33	0.28	0.11	0.23	0.29	-0.06
Europe	0.58	0.62	0.69	0.64	0.82	0.69	0.71	0.66	0.76	0.66	0.77	-0.10
Asia Oceania	0.22	0.17	0.23	0.20	0.26	0.26	0.27	0.28	0.23	0.26	0.19	0.07
<b>Kuwait Blend</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.04	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.55	0.48	0.48	0.42	0.47	0.46	0.51	0.48	0.47	0.45	0.35	0.10
<b>Iranian Light</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>Iranian Heavy<sup>3</sup></b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>BFOE</b>												
Americas	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.42	0.36	0.41	0.44	0.44	0.38	0.49	0.46	0.49	0.63	0.55	0.07
Asia Oceania	0.03	0.05	0.03	0.06	0.02	-	-	-	-	-	0.06	-
<b>Kazakhstan</b>												
Americas	-	0.01	-	-	-	-	-	-	-	-	-	-
Europe	0.74	0.69	0.73	0.69	0.67	0.70	0.98	0.95	0.96	0.92	0.69	0.23
Asia Oceania	0.07	0.09	0.13	0.16	0.09	0.14	0.15	0.18	0.16	0.20	0.10	0.10
<b>Venezuelan 22 API and heavier</b>												
Americas	-	-	-	-	-	-	-	-	0.09	-	-	-
Europe	0.04	-	0.01	-	0.04	0.02	0.01	0.02	0.03	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>Mexican Maya</b>												
Americas	0.48	0.40	0.40	0.47	0.40	0.36	0.43	0.39	0.28	0.39	0.56	-0.17
Europe	0.16	0.14	0.10	0.07	0.09	0.12	0.09	0.09	0.12	0.08	0.06	0.01
Asia Oceania	0.12	0.14	0.06	0.05	0.04	0.08	0.05	0.05	0.05	0.05	0.03	0.02
<b>Russian Urals</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	1.12	1.05	0.74	0.79	0.71	0.40	0.13	0.08	0.09	0.10	0.71	-0.61
Asia Oceania	-	0.01	-	-	-	-	-	-	-	-	-	-
<b>Cabinda and Other Angola</b>												
North America	0.01	-	0.00	-	0.00	-	-	-	-	-	-	-
Europe	0.12	0.03	0.23	0.26	0.29	0.31	0.35	0.33	0.28	0.20	0.21	-0.01
Pacific	-	-	0.00	-	0.01	0.01	-	-	-	-	-	-
<b>Nigerian Light<sup>4</sup></b>												
Americas	-	0.02	0.00	-	0.01	-	-	-	-	-	-	-
Europe	0.49	0.41	0.41	0.43	0.29	0.46	0.53	0.56	0.59	0.23	0.42	-0.19
Asia Oceania	0.02	0.01	0.01	-	0.02	0.02	0.00	0.01	0.01	-	-	-
<b>Libya Light and Medium</b>												
Americas	-	0.02	-	-	-	-	-	-	-	-	-	-
Europe	0.19	0.80	0.63	0.56	0.52	0.76	0.65	0.57	0.72	0.81	0.55	0.26
Asia Oceania	0.01	0.02	0.01	0.02	0.01	0.01	0.02	0.04	-	0.01	0.02	-0.01

<sup>1</sup> 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.

<sup>2</sup> Iraqi Total minus Kirkuk.

<sup>3</sup> Iranian Total minus Iranian Light.

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

**Table 7**  
**REGIONAL OECD IMPORTS<sup>1,2</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier	
											May 22	% change
<b>Crude Oil</b>												
Americas	1896	2077	2115	2075	2161	2128	2105	2260	2216	2181	1970	11%
Europe	8349	8520	9092	9207	9302	8985	8368	8030	8620	7831	9211	-15%
Asia Oceania	5579	5514	5871	5397	6228	5724	5926	5923	5765	5162	5198	-1%
<b>Total OECD</b>	<b>15823</b>	<b>16110</b>	<b>17078</b>	<b>16679</b>	<b>17691</b>	<b>16838</b>	<b>16399</b>	<b>16213</b>	<b>16601</b>	<b>15173</b>	<b>16379</b>	<b>-7%</b>
<b>LPG</b>												
Americas	28	21	25	21	24	18	31	30	35	18	16	12%
Europe	422	404	525	516	514	578	543	486	619	524	488	7%
Asia Oceania	559	562	579	568	532	538	677	743	481	486	601	-19%
<b>Total OECD</b>	<b>1009</b>	<b>987</b>	<b>1130</b>	<b>1105</b>	<b>1070</b>	<b>1134</b>	<b>1251</b>	<b>1259</b>	<b>1135</b>	<b>1027</b>	<b>1105</b>	<b>-7%</b>
<b>Naphtha</b>												
Americas	7	8	7	6	7	8	5	6	15	19	2	1045%
Europe	409	513	305	409	225	191	176	127	137	140	472	-70%
Asia Oceania	1003	1146	1046	970	1063	1074	1118	1040	1018	842	930	-9%
<b>Total OECD</b>	<b>1419</b>	<b>1667</b>	<b>1358</b>	<b>1386</b>	<b>1294</b>	<b>1273</b>	<b>1298</b>	<b>1172</b>	<b>1171</b>	<b>1001</b>	<b>1404</b>	<b>-29%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	576	805	675	890	733	590	548	542	946	979	942	4%
Europe	109	106	101	126	108	69	63	48	74	38	117	-68%
Asia Oceania	116	153	176	184	179	179	196	179	197	228	192	19%
<b>Total OECD</b>	<b>801</b>	<b>1064</b>	<b>952</b>	<b>1200</b>	<b>1020</b>	<b>838</b>	<b>807</b>	<b>770</b>	<b>1216</b>	<b>1245</b>	<b>1251</b>	<b>0%</b>
<b>Jet &amp; Kerosene</b>												
Americas	159	165	134	123	115	177	178	173	142	173	114	51%
Europe	337	329	453	431	535	536	383	344	497	539	396	36%
Asia Oceania	60	69	87	75	67	139	160	116	78	130	76	72%
<b>Total OECD</b>	<b>556</b>	<b>563</b>	<b>674</b>	<b>629</b>	<b>716</b>	<b>852</b>	<b>721</b>	<b>633</b>	<b>717</b>	<b>842</b>	<b>586</b>	<b>44%</b>
<b>Gasoi/Diesel</b>												
Americas	134	197	99	76	41	120	158	113	64	78	109	-29%
Europe	1192	1188	1225	1149	1136	1486	1164	960	1229	1275	1046	22%
Asia Oceania	328	349	319	343	311	325	344	349	287	461	394	17%
<b>Total OECD</b>	<b>1654</b>	<b>1735</b>	<b>1644</b>	<b>1568</b>	<b>1489</b>	<b>1931</b>	<b>1666</b>	<b>1422</b>	<b>1579</b>	<b>1813</b>	<b>1549</b>	<b>17%</b>
<b>Heavy Fuel Oil</b>												
Americas	143	102	122	135	82	132	105	94	54	31	119	-74%
Europe	295	374	260	253	244	241	146	179	185	154	273	-44%
Asia Oceania	88	119	89	97	68	75	109	93	70	97	73	32%
<b>Total OECD</b>	<b>526</b>	<b>594</b>	<b>470</b>	<b>485</b>	<b>393</b>	<b>448</b>	<b>361</b>	<b>366</b>	<b>310</b>	<b>281</b>	<b>465</b>	<b>-40%</b>
<b>Other Products</b>												
Americas	591	580	497	534	502	457	472	447	546	358	461	-22%
Europe	574	605	629	582	643	605	561	532	595	590	577	2%
Asia Oceania	207	229	213	189	225	209	197	172	223	272	165	65%
<b>Total OECD</b>	<b>1372</b>	<b>1414</b>	<b>1338</b>	<b>1304</b>	<b>1370</b>	<b>1270</b>	<b>1229</b>	<b>1151</b>	<b>1365</b>	<b>1220</b>	<b>1202</b>	<b>1%</b>
<b>Total Products</b>												
Americas	1639	1878	1558	1786	1502	1502	1497	1406	1803	1655	1763	-6%
Europe	3339	3518	3499	3466	3405	3708	3035	2676	3336	3259	3369	-3%
Asia Oceania	2360	2628	2510	2426	2445	2538	2800	2691	2353	2516	2431	4%
<b>Total OECD</b>	<b>7338</b>	<b>8024</b>	<b>7567</b>	<b>7678</b>	<b>7352</b>	<b>7747</b>	<b>7333</b>	<b>6773</b>	<b>7493</b>	<b>7430</b>	<b>7562</b>	<b>-2%</b>
<b>Total Oil</b>												
Americas	3534	3955	3674	3861	3663	3630	3603	3666	4019	3835	3733	3%
Europe	11688	12037	12591	12673	12707	12693	11403	10706	11956	11090	12580	-12%
Asia Oceania	7939	8141	8381	7823	8673	8262	8726	8614	8118	7678	7629	1%
<b>Total OECD</b>	<b>23161</b>	<b>24134</b>	<b>24645</b>	<b>24357</b>	<b>25043</b>	<b>24585</b>	<b>23732</b>	<b>22986</b>	<b>24094</b>	<b>22604</b>	<b>23942</b>	<b>-6%</b>

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<sup>1,2</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier	
											May 22	% change
<b>Crude Oil</b>												
Americas	1835	1982	2049	2012	2093	2056	2053	2249	2111	2142	1914	12%
Europe	7115	7265	7525	7695	7612	7251	6564	6282	6590	5969	7477	-20%
Asia Oceania	5051	4904	5293	4883	5690	5083	5372	5457	5208	4709	4739	-1%
<b>Total OECD</b>	<b>14002</b>	<b>14151</b>	<b>14866</b>	<b>14591</b>	<b>15395</b>	<b>14390</b>	<b>13989</b>	<b>13987</b>	<b>13909</b>	<b>12820</b>	<b>14130</b>	<b>-9%</b>
<b>LPG</b>												
Americas	22	20	25	21	24	18	31	30	35	18	16	12%
Europe	252	243	256	249	236	283	263	271	321	259	226	15%
Asia Oceania	58	46	62	52	54	52	50	22	35	51	41	24%
<b>Total OECD</b>	<b>331</b>	<b>309</b>	<b>343</b>	<b>322</b>	<b>314</b>	<b>353</b>	<b>345</b>	<b>323</b>	<b>391</b>	<b>328</b>	<b>283</b>	<b>16%</b>
<b>Naphtha</b>												
Americas	1	4	3	2	2	6	3	6	5	8	1	647%
Europe	390	426	271	332	224	190	162	120	111	116	371	-69%
Asia Oceania	832	974	945	929	952	958	1047	1003	983	780	905	-14%
<b>Total OECD</b>	<b>1223</b>	<b>1404</b>	<b>1219</b>	<b>1263</b>	<b>1179</b>	<b>1155</b>	<b>1212</b>	<b>1129</b>	<b>1099</b>	<b>905</b>	<b>1276</b>	<b>-29%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	195	248	174	233	214	137	155	210	319	338	217	56%
Europe	104	100	84	103	90	58	49	29	54	23	95	-76%
Asia Oceania	98	149	176	184	179	179	196	179	197	228	192	19%
<b>Total OECD</b>	<b>397</b>	<b>497</b>	<b>434</b>	<b>521</b>	<b>484</b>	<b>374</b>	<b>399</b>	<b>418</b>	<b>570</b>	<b>589</b>	<b>504</b>	<b>17%</b>
<b>Jet &amp; Kerosene</b>												
Americas	55	63	47	33	25	89	91	75	42	80	20	305%
Europe	297	294	393	383	461	423	370	327	414	493	361	37%
Asia Oceania	60	69	87	74	67	139	160	116	78	130	76	72%
<b>Total OECD</b>	<b>413</b>	<b>426</b>	<b>527</b>	<b>490</b>	<b>552</b>	<b>650</b>	<b>622</b>	<b>518</b>	<b>534</b>	<b>703</b>	<b>456</b>	<b>54%</b>
<b>Gasoi/Diesel</b>												
Americas	103	134	43	26	12	48	98	40	56	38	33	17%
Europe	1062	1107	1120	1065	1034	1315	1008	869	1042	1051	986	7%
Asia Oceania	323	349	319	343	311	325	344	349	287	461	394	17%
<b>Total OECD</b>	<b>1488</b>	<b>1591</b>	<b>1482</b>	<b>1434</b>	<b>1358</b>	<b>1688</b>	<b>1450</b>	<b>1258</b>	<b>1384</b>	<b>1551</b>	<b>1413</b>	<b>10%</b>
<b>Heavy Fuel Oil</b>												
Americas	110	86	90	101	56	96	86	80	42	27	92	-70%
Europe	279	347	239	239	215	220	126	154	159	145	262	-45%
Asia Oceania	88	119	89	97	68	75	109	93	70	97	73	32%
<b>Total OECD</b>	<b>477</b>	<b>552</b>	<b>418</b>	<b>437</b>	<b>339</b>	<b>390</b>	<b>320</b>	<b>327</b>	<b>271</b>	<b>268</b>	<b>427</b>	<b>-37%</b>
<b>Other Products</b>												
Americas	514	530	420	471	397	359	385	358	497	318	422	-25%
Europe	352	427	443	404	453	415	314	295	332	388	358	8%
Asia Oceania	130	151	140	120	148	138	131	114	143	187	109	72%
<b>Total OECD</b>	<b>996</b>	<b>1107</b>	<b>1003</b>	<b>995</b>	<b>998</b>	<b>911</b>	<b>830</b>	<b>767</b>	<b>972</b>	<b>893</b>	<b>889</b>	<b>0%</b>
<b>Total Products</b>												
Americas	1000	1085	803	887	730	753	848	799	996	827	799	3%
Europe	2735	2944	2805	2775	2715	2903	2291	2064	2433	2474	2659	-7%
Asia Oceania	1590	1857	1818	1798	1779	1864	2038	1876	1792	1935	1790	8%
<b>Total OECD</b>	<b>5325</b>	<b>5885</b>	<b>5427</b>	<b>5461</b>	<b>5224</b>	<b>5521</b>	<b>5177</b>	<b>4739</b>	<b>5222</b>	<b>5236</b>	<b>5248</b>	<b>0%</b>
<b>Total Oil</b>												
Americas	2835	3067	2852	2900	2824	2810	2901	3049	3108	2969	2713	9%
Europe	9850	10209	10330	10471	10327	10154	8855	8345	9023	8443	10136	-17%
Asia Oceania	6641	6760	7111	6682	7469	6948	7409	7332	7000	6643	6529	2%
<b>Total OECD</b>	<b>19327</b>	<b>20037</b>	<b>20293</b>	<b>20052</b>	<b>20619</b>	<b>19912</b>	<b>19166</b>	<b>18726</b>	<b>19131</b>	<b>18056</b>	<b>19378</b>	<b>-7%</b>

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<sup>1,2</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier	
											May 22	% change
<b>Crude Oil</b>												
Americas	60	95	66	62	68	72	52	11	105	38	56	-31%
Europe	1234	1255	1567	1512	1690	1735	1804	1749	2029	1862	1734	7%
Asia Oceania	527	610	578	514	538	641	554	466	557	453	459	-1%
<b>Total OECD</b>	<b>1821</b>	<b>1959</b>	<b>2212</b>	<b>2088</b>	<b>2296</b>	<b>2448</b>	<b>2410</b>	<b>2226</b>	<b>2691</b>	<b>2354</b>	<b>2249</b>	<b>5%</b>
<b>LPG</b>												
Americas	6	1	1	0	0	0	0	0	0	0	0	-100%
Europe	171	161	269	267	278	296	280	215	298	265	262	1%
Asia Oceania	501	516	517	517	478	486	626	721	446	435	560	-22%
<b>Total OECD</b>	<b>678</b>	<b>678</b>	<b>787</b>	<b>783</b>	<b>756</b>	<b>782</b>	<b>906</b>	<b>936</b>	<b>744</b>	<b>699</b>	<b>822</b>	<b>-15%</b>
<b>Naphtha</b>												
Americas	6	4	3	4	4	2	2	0	10	11	1	1850%
Europe	20	87	35	77	1	1	14	7	27	24	101	-77%
Asia Oceania	170	172	101	42	110	115	70	37	36	62	25	144%
<b>Total OECD</b>	<b>196</b>	<b>263</b>	<b>139</b>	<b>123</b>	<b>115</b>	<b>119</b>	<b>86</b>	<b>44</b>	<b>72</b>	<b>97</b>	<b>127</b>	<b>-24%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	382	557	501	656	518	452	393	333	627	641	725	-12%
Europe	5	6	17	22	18	11	15	20	19	15	22	-29%
Asia Oceania	18	5	0	0	0	0	0	0	0	0	0	61%
<b>Total OECD</b>	<b>404</b>	<b>567</b>	<b>518</b>	<b>679</b>	<b>537</b>	<b>464</b>	<b>408</b>	<b>353</b>	<b>646</b>	<b>656</b>	<b>747</b>	<b>-12%</b>
<b>Jet &amp; Kerosene</b>												
Americas	103	102	87	90	90	88	87	98	100	93	95	-2%
Europe	40	35	60	48	74	114	12	16	83	47	35	33%
Asia Oceania	0	0	0	1	0	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>144</b>	<b>137</b>	<b>147</b>	<b>139</b>	<b>164</b>	<b>202</b>	<b>100</b>	<b>115</b>	<b>183</b>	<b>140</b>	<b>130</b>	<b>7%</b>
<b>Gasoi/Diesel</b>												
Americas	31	63	56	50	29	72	61	72	8	39	76	-49%
Europe	131	81	106	84	101	171	156	92	187	223	60	273%
Asia Oceania	4	0	0	0	0	0	0	0	0	0	0	-100%
<b>Total OECD</b>	<b>166</b>	<b>144</b>	<b>162</b>	<b>135</b>	<b>131</b>	<b>243</b>	<b>217</b>	<b>164</b>	<b>194</b>	<b>263</b>	<b>136</b>	<b>93%</b>
<b>Heavy Fuel Oil</b>												
Americas	33	16	31	34	25	35	20	14	13	3	27	-87%
Europe	16	27	21	14	28	22	21	25	26	9	11	-19%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>49</b>	<b>42</b>	<b>52</b>	<b>48</b>	<b>53</b>	<b>57</b>	<b>40</b>	<b>39</b>	<b>39</b>	<b>12</b>	<b>38</b>	<b>-67%</b>
<b>Other Products</b>												
Americas	78	50	77	64	105	98	87	89	49	40	39	3%
Europe	222	178	186	178	190	190	247	238	264	202	218	-8%
Asia Oceania	77	78	73	69	77	71	66	58	80	85	55	53%
<b>Total OECD</b>	<b>377</b>	<b>307</b>	<b>335</b>	<b>310</b>	<b>372</b>	<b>359</b>	<b>400</b>	<b>384</b>	<b>392</b>	<b>327</b>	<b>313</b>	<b>4%</b>
<b>Total Products</b>												
Americas	639	793	755	899	772	748	649	606	807	828	963	-14%
Europe	604	574	693	691	690	804	744	612	903	785	710	11%
Asia Oceania	770	771	692	628	666	673	763	816	561	582	641	-9%
<b>Total OECD</b>	<b>2013</b>	<b>2138</b>	<b>2140</b>	<b>2217</b>	<b>2128</b>	<b>2226</b>	<b>2156</b>	<b>2034</b>	<b>2271</b>	<b>2194</b>	<b>2314</b>	<b>-5%</b>
<b>Total Oil</b>												
Americas	699	888	822	961	840	820	701	617	912	866	1019	-15%
Europe	1838	1829	2261	2202	2380	2539	2548	2361	2933	2647	2444	8%
Asia Oceania	1297	1381	1270	1141	1204	1314	1317	1282	1118	1035	1100	-6%
<b>Total OECD</b>	<b>3834</b>	<b>4097</b>	<b>4352</b>	<b>4305</b>	<b>4424</b>	<b>4674</b>	<b>4567</b>	<b>4260</b>	<b>4963</b>	<b>4548</b>	<b>4564</b>	<b>0%</b>

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 8**  
**REGIONAL OECD CRUDE IMPORTS BY SOURCE<sup>1</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier May 22	change
<b>OECD Americas</b>												
Venezuela	-	-	-	-	-	-	69	109	140	185	-	-
Other Central & South America	745	719	845	802	917	878	837	927	737	800	747	54
North Sea	59	92	64	62	60	72	52	11	105	26	56	-30
Other OECD Europe	1	3	-	-	-	-	-	-	-	12	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	91	229	43	27	25	19	23	-	49	24	24	0
Saudi Arabia	588	427	535	569	487	516	487	513	450	424	543	-118
Kuwait	21	21	27	25	14	42	14	12	12	24	24	0
Iran	-	3	1	-	-	-	-	-	-	-	-	-
Iraq	177	152	244	229	277	245	257	223	193	194	234	-40
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	5	17	12	19	19	-	16	46	-	-	-	-
Other Middle East	-	-	-	-	-	-	-	-	-	-	-	-
West Africa <sup>2</sup>	145	228	186	211	201	160	265	342	363	262	252	9
Other Africa	45	161	153	131	139	196	80	61	167	229	90	139
Asia	17	25	5	-	21	-	-	-	-	-	-	-
Other	3	-	-	-	-	-	6	17	-	-	-	-
<b>Total</b>	<b>1896</b>	<b>2077</b>	<b>2115</b>	<b>2075</b>	<b>2161</b>	<b>2128</b>	<b>2105</b>	<b>2260</b>	<b>2216</b>	<b>2181</b>	<b>1970</b>	<b>210</b>
<b>of which Non-OECD</b>	<b>1835</b>	<b>1982</b>	<b>2049</b>	<b>2012</b>	<b>2093</b>	<b>2056</b>	<b>2053</b>	<b>2249</b>	<b>2111</b>	<b>2142</b>	<b>1914</b>	<b>228</b>
<b>OECD Europe</b>												
Canada	95	83	129	139	124	172	131	116	279	194	179	15
Mexico + USA	1139	1172	1438	1372	1566	1562	1673	1633	1751	1669	1556	113
Venezuela	44	-	15	-	35	23	8	24	39	-	-	-
Other Central & South America	208	219	409	412	561	443	610	634	696	375	339	36
Non-OECD Europe	25	23	15	12	12	15	19	16	11	23	10	13
Former Soviet Union	3504	3538	3179	3197	2951	2527	1813	1741	1804	1754	3147	-1393
Saudi Arabia	756	518	764	779	867	882	873	766	912	756	767	-11
Kuwait	48	0	-	-	-	-	-	-	-	-	-	-
Iran	6	1	-	-	-	-	-	-	-	-	-	-
Iraq	814	912	989	1013	1121	940	932	901	908	748	1061	-313
Oman	-	-	-	-	-	-	11	0	-	-	-	-
United Arab Emirates	-	-	48	31	86	76	75	116	98	13	-	-
Other Middle East	8	9	7	6	11	10	22	33	-	-	18	-
West Africa <sup>2</sup>	1074	822	1001	1171	970	1055	1090	1075	987	1015	1138	-123
Other Africa	596	1198	1071	1041	979	1269	1064	959	1123	1245	958	287
Asia	0	0	1	-	-	-	-	-	-	-	-	-
Other	11	1	3	8	-	-	0	0	-	-	-	-
<b>Total</b>	<b>8329</b>	<b>8496</b>	<b>9069</b>	<b>9181</b>	<b>9282</b>	<b>8975</b>	<b>8321</b>	<b>8014</b>	<b>8606</b>	<b>7791</b>	<b>9171</b>	<b>-1381</b>
<b>of which Non-OECD</b>	<b>7115</b>	<b>7265</b>	<b>7525</b>	<b>7695</b>	<b>7612</b>	<b>7251</b>	<b>6564</b>	<b>6282</b>	<b>6590</b>	<b>5969</b>	<b>7477</b>	<b>-1508</b>
<b>OECD Asia Oceania</b>												
Canada	1	16	6	6	10	-	-	-	-	-	-	-
Mexico + USA	477	496	538	452	486	633	554	466	533	453	395	58
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	91	110	120	102	140	109	95	92	62	145	96	48
North Sea	49	98	34	56	42	8	-	-	24	-	64	-
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	300	335	239	274	116	161	154	185	161	202	164	38
Saudi Arabia	1867	1766	1991	1862	2040	2033	2128	2092	2001	1759	1785	-26
Kuwait	584	506	534	472	516	524	586	560	520	449	409	40
Iran	-	-	-	-	-	-	-	-	-	-	-	-
Iraq	224	167	220	204	262	241	247	251	191	235	189	46
Oman	22	32	40	39	68	26	28	-	50	32	48	-16
United Arab Emirates	1096	1083	1287	1200	1509	1288	1220	1222	1436	1408	1326	81
Other Middle East	387	362	370	326	424	289	371	390	420	415	357	58
West Africa <sup>2</sup>	65	71	64	61	88	55	35	77	-	-	90	-
Other Africa	42	56	40	37	33	43	44	20	20	19	19	0
Non-OECD Asia	161	175	119	124	97	135	131	163	117	113	133	-20
Other	210	235	265	183	397	173	332	405	230	-68	122	-191
<b>Total</b>	<b>5577</b>	<b>5509</b>	<b>5868</b>	<b>5397</b>	<b>6228</b>	<b>5720</b>	<b>5926</b>	<b>5923</b>	<b>5765</b>	<b>5162</b>	<b>5198</b>	<b>-36</b>
<b>of which Non-OECD</b>	<b>5051</b>	<b>4904</b>	<b>5293</b>	<b>4883</b>	<b>5690</b>	<b>5083</b>	<b>5372</b>	<b>5457</b>	<b>5208</b>	<b>4709</b>	<b>4739</b>	<b>-30</b>
<b>Total OECD Trade</b>	<b>15801</b>	<b>16083</b>	<b>17052</b>	<b>16653</b>	<b>17670</b>	<b>16824</b>	<b>16353</b>	<b>16197</b>	<b>16587</b>	<b>15133</b>	<b>16340</b>	<b>-1207</b>
<b>of which Non-OECD</b>	<b>14002</b>	<b>14151</b>	<b>14866</b>	<b>14591</b>	<b>15395</b>	<b>14390</b>	<b>13989</b>	<b>13987</b>	<b>13909</b>	<b>12820</b>	<b>14130</b>	<b>-1310</b>

<sup>1</sup> 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.

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

**Table 9**  
**REGIONAL OECD GASOLINE IMPORTS BY SOURCE<sup>1</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier		
											May 22	change	
<b>OECD Americas</b>													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	40	41	45	44	61	62	49	36	44	75	50	25	
ARA (Belgium Germany Netherlands)	149	194	170	255	199	100	97	89	199	215	230	-15	
Other Europe	213	327	293	364	266	320	259	190	354	369	434	-65	
FSU	56	83	8	3	0	-	-	-	-	-	-	-	
Saudi Arabia	6	24	27	62	19	20	8	24	19	37	53	-16	
Algeria	4	1	1	-	2	1	-	-	64	-	-	-	
Other Middle East & Africa	13	13	14	14	22	13	15	23	14	39	10	29	
Singapore	1	4	2	-	4	2	10	27	17	28	-	-	
OECD Asia Oceania	21	37	38	39	54	32	38	53	83	63	61	1	
Non-OECD Asia (excl. Singapore)	72	81	76	108	107	38	71	100	152	153	104	50	
Other	-	0	0	0	-	0	-	-	-	-	-	-	
<b>Total<sup>2</sup></b>	<b>576</b>	<b>805</b>	<b>675</b>	<b>890</b>	<b>733</b>	<b>590</b>	<b>548</b>	<b>542</b>	<b>946</b>	<b>979</b>	<b>942</b>	<b>37</b>	
<b>of which Non-OECD</b>	<b>195</b>	<b>248</b>	<b>174</b>	<b>233</b>	<b>214</b>	<b>137</b>	<b>155</b>	<b>210</b>	<b>319</b>	<b>338</b>	<b>217</b>	<b>121</b>	
<b>OECD Europe</b>													
OECD Americas	3	5	16	21	17	11	11	10	19	15	18	-3	
Venezuela	0	2	2	2	3	2	3	3	2	2	2	1	
Other Central & South America	4	7	10	4	14	6	7	4	9	6	3	3	
Non-OECD Europe	16	10	8	6	14	6	8	1	20	0	-	-	
FSU	31	8	9	24	3	2	7	1	1	1	37	-36	
Saudi Arabia	8	3	1	1	2	-	0	0	-	-	1	-	
Algeria	1	-	6	12	7	4	7	6	5	-	5	-	
Other Middle East & Africa	3	5	8	9	6	5	5	5	4	6	4	2	
Singapore	2	0	2	2	1	3	2	1	2	2	3	0	
OECD Asia Oceania	1	1	1	1	1	1	4	10	-	0	3	-3	
Non-OECD Asia (excl. Singapore)	0	3	3	2	4	3	3	3	2	2	1	1	
Other	37	63	36	41	37	26	8	5	8	3	40	-37	
<b>Total<sup>2</sup></b>	<b>107</b>	<b>106</b>	<b>101</b>	<b>126</b>	<b>108</b>	<b>69</b>	<b>63</b>	<b>48</b>	<b>74</b>	<b>38</b>	<b>117</b>	<b>-79</b>	
<b>of which Non-OECD</b>	<b>104</b>	<b>100</b>	<b>84</b>	<b>103</b>	<b>90</b>	<b>58</b>	<b>49</b>	<b>29</b>	<b>54</b>	<b>23</b>	<b>95</b>	<b>-73</b>	
<b>OECD Asia Oceania</b>													
OECD Americas	4	1	0	0	0	0	0	0	0	0	0	0	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central & South America	-	-	-	-	-	-	-	-	-	0	-	-	
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	-	-	-	-	-	-	-	-	11	-	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East & Africa	1	-	-	-	-	-	-	-	-	-	-	-	
Singapore	51	100	126	124	121	125	140	126	123	153	123	30	
Non-OECD Asia (excl. Singapore)	37	29	30	44	35	27	39	38	46	59	52	6	
Other	9	20	21	17	23	27	17	16	17	16	16	0	
<b>Total<sup>2</sup></b>	<b>116</b>	<b>153</b>	<b>176</b>	<b>184</b>	<b>179</b>	<b>179</b>	<b>196</b>	<b>179</b>	<b>197</b>	<b>228</b>	<b>192</b>	<b>37</b>	
<b>of which Non-OECD</b>	<b>98</b>	<b>149</b>	<b>176</b>	<b>184</b>	<b>179</b>	<b>179</b>	<b>196</b>	<b>179</b>	<b>197</b>	<b>228</b>	<b>192</b>	<b>37</b>	
<b>Total OECD Trade<sup>2</sup></b>	<b>799</b>	<b>1064</b>	<b>952</b>	<b>1200</b>	<b>1020</b>	<b>838</b>	<b>807</b>	<b>770</b>	<b>1216</b>	<b>1245</b>	<b>1251</b>	<b>-6</b>	
<b>of which Non-OECD</b>	<b>397</b>	<b>497</b>	<b>434</b>	<b>521</b>	<b>484</b>	<b>374</b>	<b>399</b>	<b>418</b>	<b>570</b>	<b>589</b>	<b>504</b>	<b>85</b>	

<sup>1</sup> Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

<sup>2</sup> Total figure excludes intra-regional trade.



**Table 10**  
**REGIONAL OECD GASOIL/DIESEL IMPORTS BY SOURCE<sup>1</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier		
											May 22	change	
<b>OECD Americas</b>													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	34	28	6	6	12	3	15	13	18	23	4	19	
ARA (Belgium Germany Netherlands)	11	34	15	6	3	11	3	-	-	-	11	-	
Other Europe	4	5	2	3	0	3	0	-	-	1	8	-7	
FSU	12	25	6	-	-	-	-	-	-	2	-	-	
Saudi Arabia	8	15	9	15	-	5	9	-	-	-	19	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	9	25	4	-	-	8	7	10	16	-	-	-	
Singapore	-	2	1	-	-	2	3	-	-	-	-	-	
OECD Asia Oceania	16	25	39	42	26	58	57	72	8	38	58	-20	
Non-OECD Asia (excl. Singapore)	34	27	5	2	-	17	52	18	21	13	2	11	
Other	6	12	11	3	-	13	12	-	-	-	8	-	
<b>Total<sup>2</sup></b>	<b>134</b>	<b>197</b>	<b>99</b>	<b>76</b>	<b>41</b>	<b>120</b>	<b>158</b>	<b>113</b>	<b>64</b>	<b>78</b>	<b>109</b>	<b>-31</b>	
<b>of which Non-OECD</b>	<b>103</b>	<b>134</b>	<b>43</b>	<b>26</b>	<b>12</b>	<b>48</b>	<b>98</b>	<b>40</b>	<b>56</b>	<b>38</b>	<b>33</b>	<b>6</b>	
<b>OECD Europe</b>													
OECD Americas	99	38	76	63	84	126	126	60	158	187	40	148	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	3	1	1	1	3	0	-	-	-	-	-	-	
Non-OECD Europe	30	35	44	46	43	45	24	26	40	29	37	-8	
FSU	627	612	530	473	506	538	299	264	260	296	429	-133	
Saudi Arabia	193	141	169	171	184	221	231	230	134	295	144	151	
Algeria	2	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	71	156	161	159	143	200	208	141	273	236	190	46	
Singapore	17	19	37	50	28	33	33	38	41	27	38	-10	
OECD Asia Oceania	32	42	30	22	18	45	30	32	28	36	20	16	
Non-OECD Asia (excl. Singapore)	101	123	152	145	105	269	204	161	291	155	132	23	
Other	15	21	23	21	23	9	9	8	0	12	16	-4	
<b>Total<sup>2</sup></b>	<b>1190</b>	<b>1188</b>	<b>1223</b>	<b>1149</b>	<b>1136</b>	<b>1486</b>	<b>1164</b>	<b>960</b>	<b>1226</b>	<b>1275</b>	<b>1046</b>	<b>229</b>	
<b>of which Non-OECD</b>	<b>1062</b>	<b>1107</b>	<b>1120</b>	<b>1065</b>	<b>1034</b>	<b>1315</b>	<b>1008</b>	<b>869</b>	<b>1042</b>	<b>1051</b>	<b>986</b>	<b>65</b>	
<b>OECD Asia Oceania</b>													
OECD Americas	4	0	0	-	0	0	0	-	-	-	-	-	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	0	-	-	-	-	-	-	-	-	-	-	-	
ARA (Belgium Germany Netherlands)	0	0	0	0	0	0	0	-	0	-	0	-	
Other Europe	-	0	0	-	0	-	0	-	-	-	-	-	
FSU	2	1	-	-	-	-	-	-	-	-	-	-	
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	13	4	6	11	14	-	-	-	-	-	5	-	
Singapore	91	109	112	118	112	97	124	132	66	98	144	-45	
Non-OECD Asia (excl. Singapore)	208	229	191	209	176	209	218	214	215	360	235	125	
Other	9	6	10	5	9	20	3	3	6	2	11	-8	
<b>Total<sup>2</sup></b>	<b>328</b>	<b>349</b>	<b>319</b>	<b>343</b>	<b>311</b>	<b>325</b>	<b>344</b>	<b>349</b>	<b>287</b>	<b>461</b>	<b>394</b>	<b>67</b>	
<b>of which Non-OECD</b>	<b>323</b>	<b>349</b>	<b>319</b>	<b>343</b>	<b>311</b>	<b>325</b>	<b>344</b>	<b>349</b>	<b>287</b>	<b>461</b>	<b>394</b>	<b>67</b>	
<b>Total OECD Trade<sup>2</sup></b>	<b>1652</b>	<b>1734</b>	<b>1641</b>	<b>1568</b>	<b>1489</b>	<b>1931</b>	<b>1666</b>	<b>1422</b>	<b>1576</b>	<b>1813</b>	<b>1549</b>	<b>264</b>	
<b>of which Non-OECD</b>	<b>1488</b>	<b>1591</b>	<b>1482</b>	<b>1434</b>	<b>1358</b>	<b>1688</b>	<b>1450</b>	<b>1258</b>	<b>1384</b>	<b>1551</b>	<b>1413</b>	<b>138</b>	

<sup>1</sup> Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

<sup>2</sup> Total figure excludes intra-regional trade.

**Table 11**  
**REGIONAL OECD JET AND KEROSENE IMPORTS BY SOURCE<sup>1</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier	
											May 22	change
<b>OECD Americas</b>												
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	5	1	0	-	-	1	1	2	3	-	-	-
ARA (Belgium Germany Netherlands)	-	5	0	0	-	0	-	-	-	1	0	1
Other Europe	4	7	1	1	-	4	11	31	4	-	2	-
FSU	0	4	1	-	-	-	-	-	-	-	-	-
Saudi Arabia	6	6	1	-	-	1	3	5	14	-	-	-
Algeria	1	4	0	-	-	1	-	-	-	-	-	-
Other Middle East and Africa	11	18	16	10	6	38	33	22	14	50	6	44
Singapore	4	2	1	2	1	2	-	-	4	6	-	-
OECD Asia Oceania	100	91	85	90	90	85	80	77	96	92	93	-1
Non-OECD Asia (excl. Singapore)	23	27	24	18	17	44	48	36	8	24	3	21
Other	4	1	3	4	1	1	4	-	-	-	10	-
<b>Total<sup>2</sup></b>	<b>159</b>	<b>165</b>	<b>134</b>	<b>123</b>	<b>115</b>	<b>177</b>	<b>178</b>	<b>173</b>	<b>142</b>	<b>173</b>	<b>114</b>	<b>58</b>
<b>of which Non-OECD</b>	<b>55</b>	<b>63</b>	<b>47</b>	<b>33</b>	<b>25</b>	<b>89</b>	<b>91</b>	<b>75</b>	<b>42</b>	<b>80</b>	<b>20</b>	<b>60</b>
<b>OECD Europe</b>												
OECD Americas	13	3	6	4	6	11	6	8	6	2	4	-2
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	0	0	0	1	1	-	3	8	-	-	2	-
Non-OECD Europe	0	0	3	4	4	5	1	-	-	9	7	2
FSU	21	27	16	12	16	14	15	15	13	20	1	18
Saudi Arabia	40	27	57	66	62	61	45	27	42	59	51	8
Algeria	9	5	4	8	5	-	-	-	-	-	-	-
Other Middle East and Africa	155	153	172	183	208	145	186	201	159	242	157	85
Singapore	10	11	13	11	25	10	11	25	-	-	-	-
OECD Asia Oceania	27	32	54	44	68	102	6	8	77	45	32	14
Non-OECD Asia (excl. Singapore)	50	61	121	93	125	187	107	47	199	159	140	19
Other	10	9	5	2	14	0	1	2	-	0	2	-2
<b>Total<sup>2</sup></b>	<b>336</b>	<b>328</b>	<b>452</b>	<b>427</b>	<b>535</b>	<b>536</b>	<b>380</b>	<b>341</b>	<b>496</b>	<b>536</b>	<b>396</b>	<b>140</b>
<b>of which Non-OECD</b>	<b>297</b>	<b>294</b>	<b>393</b>	<b>383</b>	<b>461</b>	<b>423</b>	<b>370</b>	<b>327</b>	<b>414</b>	<b>493</b>	<b>361</b>	<b>132</b>
<b>OECD Asia Oceania</b>												
OECD Americas	-	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	-	-	-	-	-	-	-
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	45	39	45	23	22
Non-OECD Asia (excl. Singapore)	28	34	38	38	20	72	83	58	18	69	39	30
Other	18	19	15	7	5	27	33	13	21	16	14	2
<b>Total<sup>2</sup></b>	<b>60</b>	<b>69</b>	<b>87</b>	<b>75</b>	<b>67</b>	<b>139</b>	<b>160</b>	<b>116</b>	<b>78</b>	<b>130</b>	<b>76</b>	<b>54</b>
<b>of which Non-OECD</b>	<b>60</b>	<b>69</b>	<b>87</b>	<b>74</b>	<b>67</b>	<b>139</b>	<b>160</b>	<b>116</b>	<b>78</b>	<b>130</b>	<b>76</b>	<b>54</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>555</b>	<b>562</b>	<b>673</b>	<b>625</b>	<b>716</b>	<b>852</b>	<b>719</b>	<b>630</b>	<b>716</b>	<b>839</b>	<b>586</b>	<b>253</b>
<b>of which Non-OECD</b>	<b>413</b>	<b>426</b>	<b>527</b>	<b>490</b>	<b>552</b>	<b>650</b>	<b>622</b>	<b>518</b>	<b>534</b>	<b>703</b>	<b>456</b>	<b>247</b>

<sup>1</sup> Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

<sup>2</sup> Total figure excludes intra-regional trade.

**Table 12**  
**REGIONAL OECD RESIDUAL FUEL OIL IMPORTS BY SOURCE<sup>1</sup>**  
(thousand barrels per day)

	2020	2021	2022	2Q22	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	Year Earlier		
											May 22	change	
<b>OECD Americas</b>													
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	52	34	53	53	36	69	44	32	19	20	59	-38	
ARA (Belgium Germany Netherlands)	12	6	12	11	14	18	9	3	2	3	15	-12	
Other Europe	21	10	19	23	11	18	11	11	1	0	12	-11	
FSU	43	34	21	24	4	9	1	2	5	1	-	-	
Saudi Arabia	2	0	7	12	8	6	3	-	-	0	11	-11	
Algeria	2	7	4	10	4	1	18	22	2	-	21	-	
Other Middle East and Africa	10	8	4	1	3	5	15	22	12	6	1	5	
Singapore	1	0	-	-	-	-	-	-	-	-	-	-	
OECD Asia Oceania	-	0	-	-	-	-	-	-	10	-	-	-	
Non-OECD Asia (excl. Singapore)	-	2	2	-	2	6	4	2	4	-	-	-	
Other	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total<sup>2</sup></b>	<b>143</b>	<b>102</b>	<b>122</b>	<b>135</b>	<b>82</b>	<b>132</b>	<b>105</b>	<b>94</b>	<b>54</b>	<b>31</b>	<b>119</b>	<b>-88</b>	
<b>of which Non-OECD</b>	<b>110</b>	<b>86</b>	<b>90</b>	<b>101</b>	<b>56</b>	<b>96</b>	<b>86</b>	<b>80</b>	<b>42</b>	<b>27</b>	<b>92</b>	<b>-65</b>	
<b>OECD Europe</b>													
OECD Americas	12	24	13	6	21	11	5	5	11	2	7	-4	
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	
Other Central and South America	6	4	5	3	6	10	4	5	7	21	7	14	
Non-OECD Europe	13	12	31	35	47	25	21	23	19	33	33	-1	
FSU	141	247	121	119	89	63	45	44	65	65	136	-71	
Saudi Arabia	2	-	-	-	-	-	10	29	0	0	-	-	
Algeria	2	2	5	13	4	2	5	0	6	7	10	-4	
Other Middle East and Africa	13	14	21	34	9	31	27	41	59	16	52	-36	
Singapore	3	3	2	0	2	0	1	-	-	-	-	-	
OECD Asia Oceania	4	3	8	7	7	11	16	19	15	6	4	2	
Non-OECD Asia (excl. Singapore)	-	0	2	0	3	6	8	7	-	-	0	-	
Other	93	59	45	33	51	67	2	2	1	1	22	-21	
<b>Total<sup>2</sup></b>	<b>288</b>	<b>368</b>	<b>254</b>	<b>251</b>	<b>238</b>	<b>227</b>	<b>144</b>	<b>176</b>	<b>184</b>	<b>152</b>	<b>272</b>	<b>-120</b>	
<b>of which Non-OECD</b>	<b>279</b>	<b>347</b>	<b>239</b>	<b>239</b>	<b>215</b>	<b>220</b>	<b>126</b>	<b>154</b>	<b>159</b>	<b>145</b>	<b>262</b>	<b>-117</b>	
<b>OECD Asia Oceania</b>													
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	22	-	-	
Algeria	-	-	-	-	-	-	-	-	-	-	-	-	
Other Middle East and Africa	38	30	7	6	2	13	9	17	-	3	-	-	
Singapore	18	29	22	22	18	14	39	22	17	25	27	-2	
Non-OECD Asia (excl. Singapore)	26	47	44	39	32	41	54	44	43	47	46	1	
Other	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total<sup>2</sup></b>	<b>88</b>	<b>119</b>	<b>89</b>	<b>97</b>	<b>68</b>	<b>75</b>	<b>109</b>	<b>93</b>	<b>70</b>	<b>97</b>	<b>73</b>	<b>23</b>	
<b>of which Non-OECD</b>	<b>88</b>	<b>119</b>	<b>89</b>	<b>97</b>	<b>68</b>	<b>75</b>	<b>109</b>	<b>93</b>	<b>70</b>	<b>97</b>	<b>73</b>	<b>23</b>	
<b>Total OECD Trade<sup>2</sup></b>	<b>519</b>	<b>588</b>	<b>464</b>	<b>482</b>	<b>387</b>	<b>434</b>	<b>358</b>	<b>363</b>	<b>308</b>	<b>279</b>	<b>464</b>	<b>-185</b>	
<b>of which Non-OECD</b>	<b>477</b>	<b>552</b>	<b>418</b>	<b>437</b>	<b>339</b>	<b>390</b>	<b>320</b>	<b>327</b>	<b>271</b>	<b>268</b>	<b>427</b>	<b>-159</b>	

<sup>1</sup> Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.

<sup>2</sup> Total figure excludes intra-regional trade.

**Table 13**  
**AVERAGE IEA CIF CRUDE COST AND SPOT CRUDE AND PRODUCT PRICES**

	2020	2021	2022	3Q22	4Q22	1Q23	2Q23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23
(\$/bbl)													
<b>CRUDE PRICES</b>													
<b>IEA CIF Average Import<sup>1</sup></b>													
IEA Europe	42.91	70.67	100.22	102.36	89.42	82.21		82.83	81.05	84.16	78.41		
IEA Americas	37.31	64.78	90.77	92.16	77.18	67.91		68.51	66.85	72.32	70.16		
IEA Asia Oceania	46.28	70.41	102.56	111.62	96.43	86.14		86.84	84.82	83.91	85.27		
<b>IEA Total</b>	<b>42.19</b>	<b>68.87</b>	<b>98.2</b>	<b>101.9</b>	<b>87.96</b>	<b>79.25</b>		<b>79.87</b>	<b>78.12</b>	<b>80.98</b>	<b>77.77</b>		
<b>SPOT PRICES<sup>2</sup></b>													
North Sea Dated	41.76	70.82	101.10	100.66	88.36	81.11	78.02	82.50	78.29	84.84	75.49	74.73	80.09
North Sea Dated M1	42.90	71.51	101.17	100.16	89.54	82.37	78.02	83.74	79.51	84.29	75.57	75.13	80.50
WTI (Cushing) M1	39.25	68.10	94.58	91.63	82.82	75.96	73.54	76.84	73.37	79.44	71.59	70.24	76.39
WTI (Houston) M1	40.71	69.01	96.19	93.77	84.33	77.74	74.69	79.28	74.86	80.31	72.57	71.83	77.91
Urals	41.21	69.00	76.58	75.41	62.46	46.77	54.63	46.78	47.60	58.00	52.00	54.26	63.31
Dubai M1	42.36	69.35	96.27	96.57	84.68	80.20	77.56	82.05	78.42	83.40	74.94	74.88	80.33
<b>PRODUCT PRICES<sup>2</sup></b>													
<b>Northwest Europe</b>													
Gasoline	44.64	80.07	117.01	113.82	99.41	96.17	99.44	96.35	94.89	103.69	97.06	98.12	105.34
Diesel	49.34	78.41	142.36	145.01	139.55	113.71	96.12	109.89	106.98	100.97	91.52	96.34	105.24
Jet/Kero	45.80	77.31	139.91	141.82	130.90	114.74	95.43	112.29	104.39	100.50	91.73	94.64	106.12
Naphtha	40.18	71.58	86.51	76.81	72.63	77.95	67.47	80.77	75.90	76.17	65.87	61.81	64.42
HSFO	33.99	61.18	76.58	70.47	59.55	60.51	67.96	60.62	60.60	70.30	63.97	69.68	73.63
0.5% Fuel Oil	48.50	76.78	107.05	106.21	87.19	83.99	79.21	85.41	81.33	83.18	76.06	78.84	81.92
<b>Mediterranean Europe</b>													
Gasoline	45.57	80.50	119.73	116.78	103.89	100.36	98.77	99.83	100.85	104.65	94.33	98.01	105.88
Diesel	48.82	77.93	136.11	135.88	130.46	112.08	94.97	108.43	104.41	99.34	90.68	95.30	104.35
Jet/Kero	45.57	77.19	140.02	142.03	131.28	114.89	95.43	112.51	104.39	100.50	91.73	94.64	106.08
Naphtha	39.04	70.65	84.62	75.15	70.36	75.83	65.93	78.84	73.22	73.96	64.60	60.56	62.93
HSFO	34.17	60.05	73.40	65.38	56.73	56.97	65.19	56.03	59.10	68.44	63.34	64.21	74.44
<b>US Gulf Coast</b>													
Gasoline	47.30	86.49	123.00	118.71	103.04	105.58	103.93	103.64	106.68	109.52	101.24	101.70	112.06
Diesel	50.26	84.73	145.74	146.73	141.65	120.39	100.11	116.17	112.42	105.72	96.61	98.68	109.56
Jet/Kero	46.30	77.95	140.05	140.46	134.73	125.00	94.79	117.43	111.18	99.44	91.39	94.14	105.09
Naphtha	40.12	72.24	91.24	84.50	76.09	80.92	74.87	80.36	78.04	77.93	74.69	72.30	69.63
HSFO	34.71	59.90	76.96	75.98	55.48	57.10	64.07	57.56	58.34	66.85	60.29	65.53	72.69
0.5% Fuel Oil	49.88	79.69	112.92	111.76	92.69	90.54	82.18	93.47	87.17	88.34	78.88	80.06	84.63
<b>Singapore</b>													
Gasoline	45.28	78.49	110.86	105.71	89.89	95.15	89.57	95.86	94.25	96.26	85.69	87.43	93.13
Diesel	49.60	77.80	135.47	137.89	126.25	108.44	93.09	107.64	102.80	98.44	89.05	92.31	101.79
Jet/Kero	45.06	75.29	126.90	129.27	118.30	106.38	91.57	106.77	98.86	96.68	88.49	90.06	98.85
Naphtha	40.94	71.02	83.79	74.51	70.92	74.21	63.26	76.98	73.19	71.48	62.12	57.01	62.43
HSFO	38.33	63.20	77.65	69.60	58.60	62.36	68.53	62.14	65.41	72.77	66.96	66.28	74.54
0.5% Fuel Oil	52.85	80.81	116.78	115.77	97.77	90.95	86.97	94.11	86.64	89.84	84.10	87.25	86.94

<sup>1</sup> IEA CIF Average Import price for May 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.

<sup>2</sup> Copyright © 2023 Argus Media Limited - All rights Reserved. Currently, no 0.5% Fuel Oil assessment for Mediterranean is available.

**Table 14**  
**MONTHLY AVERAGE END-USER PRICES FOR PETROLEUM PRODUCTS**

July 2023

	NATIONAL CURRENCY <sup>1</sup>						US DOLLARS					
	Total	% change from		Ex-Tax	% change from		Total	% change from		Ex-Tax	% change from	
		Price	Jun-23		Jul-22	Price		Jun-23	Jul-22		Price	Jun-23
<b>GASOLINE <sup>2</sup> (per litre)</b>												
France	1.842	-1.7	-8.3	0.844	-3.0	-25.5	2.036	0.3	-0.4	0.933	-1.1	-19.1
Germany	1.868	0.8	0.1	0.847	1.6	-29.9	2.065	2.8	8.7	0.936	3.6	-23.9
Italy	1.862	1.4	-7.1	0.798	2.7	-31.5	2.058	3.4	0.9	0.882	4.7	-25.6
Spain	1.611	1.0	-21.1	0.858	1.5	-35.9	1.781	3.0	-14.3	0.949	3.5	-30.4
United Kingdom	1.433	0.2	-24.4	0.664	0.3	-36.8	1.846	2.2	-18.8	0.855	2.3	-32.1
Japan	174.3	2.7	1.3	101.9	4.2	2.1	1.236	2.8	-1.7	0.722	4.4	-1.0
Canada	1.670	1.0	-11.6	1.162	0.8	-16.5	1.264	1.6	-13.5	0.879	1.3	-18.2
United States	0.950	0.7	-21.2	0.816	0.6	-24.0	0.950	0.7	-21.2	0.816	0.6	-24.0
<b>AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)</b>												
France	1.696	0.9	-14.8	0.804	1.5	-33.0	1.875	2.9	-7.5	0.889	3.5	-27.2
Germany	1.651	3.5	-16.2	0.842	5.9	-36.5	1.825	5.6	-9.0	0.931	8.0	-31.0
Italy	1.706	1.9	-12.9	0.781	3.4	-37.0	1.886	3.9	-5.4	0.863	5.5	-31.6
Spain	1.459	2.2	-27.1	0.827	3.2	-40.9	1.613	4.2	-20.8	0.914	5.3	-35.8
United Kingdom	1.452	-0.4	-26.7	0.680	-0.7	-39.3	1.870	1.6	-21.2	0.876	1.2	-34.8
Japan	153.9	2.8	1.3	107.9	3.7	1.6	1.091	3.0	-1.8	0.765	3.8	-1.5
Canada	1.604	5.2	-20.4	1.139	6.2	-26.4	1.214	5.8	-22.0	0.862	6.7	-28.0
United States	1.025	2.1	-29.3	0.870	2.4	-33.0	1.025	2.1	-29.3	0.870	2.4	-33.0
<b>DOMESTIC HEATING OIL (per litre)</b>												
France	1.166	2.7	-28.0	0.815	3.3	-31.6	1.289	4.8	-21.8	0.901	5.3	-25.8
Germany	0.994	1.9	-32.3	0.694	2.3	-40.8	1.099	4.0	-26.5	0.767	4.4	-35.7
Italy	1.478	2.5	-23.9	0.808	3.9	-32.0	1.634	4.6	-17.3	0.893	5.9	-26.1
Spain	0.953	2.9	-36.2	0.691	3.3	-39.3	1.054	4.9	-30.7	0.764	5.3	-34.1
United Kingdom	0.711	9.4	-37.0	0.575	11.3	-40.9	0.916	11.6	-32.4	0.741	13.5	-36.5
Japan <sup>3</sup>	114.7	2.6	1.8	101.5	2.7	1.8	0.813	2.8	-1.3	0.720	2.9	-1.3
Canada	1.572	11.4	-18.1	1.286	3.6	-24.9	1.189	12.1	-19.8	0.973	4.2	-26.5
United States	-	-	-	-	-	-	-	-	-	-	-	-
<b>LOW SULPHUR FUEL OIL FOR INDUSTRY <sup>4</sup> (per kg)</b>												
France	0.675	2.2	-17.5	0.535	2.8	-21.1	0.746	4.3	-10.4	0.592	4.9	-14.3
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.632	3.0	-20.5	0.601	3.2	-21.3	0.699	5.1	-13.7	0.664	5.3	-14.6
Spain	0.598	4.5	-14.8	0.581	4.6	-15.1	0.662	6.6	-7.4	0.643	6.7	-7.8
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

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

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

<sup>3</sup> Kerosene for Japan.

<sup>4</sup> VAT excluded from prices for low sulphur fuel oil as it is refunded to industry.

**Table 15**  
**IEA Global Indicator Refining Margins**

\$/bbl	2020	2021	2022	3Q22	4Q22	1Q23	2Q23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23
<b>NW Europe</b>													
Light sweet hydroskimming	1.11	2.54	10.05	9.07	10.81	8.41	4.42	7.28	6.84	2.15	4.06	6.61	8.24
Light sweet cracking	2.07	3.51	16.22	15.31	18.77	14.08	7.07	11.96	12.16	5.47	6.44	8.95	10.82
Light sweet cracking + Petchem	3.23	6.55	18.44	17.07	19.59	14.69	7.03	12.24	13.40	6.45	6.56	7.93	9.99
Medium sour cracking*	4.30	6.11	39.13	37.55	38.86	19.33	11.87	15.99	17.54	10.93	10.64	13.75	16.00
Mediumsour cracking + Petchem*	5.44	9.07	41.28	39.25	39.67	19.94	11.82	16.27	18.77	11.89	10.76	12.73	15.18
<b>Mediterranean</b>													
Light sweet hydroskimming	2.36	2.90	9.08	7.73	10.84	8.45	5.24	7.49	6.77	3.22	4.48	7.59	9.37
Light sweet cracking	3.34	4.97	16.82	15.98	19.14	15.80	9.42	13.91	13.56	8.19	8.10	11.63	14.56
Medium sour cracking	5.70	5.68	21.65	20.58	24.36	21.78	12.02	18.75	18.83	11.03	10.46	14.25	16.04
<b>US Gulf Coast</b>													
Light sweet cracking	4.28	11.04	26.64	26.71	25.10	25.53	18.83	21.25	25.41	18.65	18.13	19.72	23.51
Medium sour cracking	6.61	15.79	35.69	35.28	35.01	33.40	23.21	29.28	30.92	23.75	22.27	23.71	26.58
Heavy sour coking	9.73	19.98	45.92	46.45	49.73	44.90	28.64	40.69	40.14	30.31	28.05	27.74	32.59
<b>US Midwest</b>													
Light sweet cracking	3.74	12.33	29.90	34.28	30.81	25.23	22.00	22.25	26.10	20.25	23.01	22.53	17.66
Heavy sour coking	13.26	26.02	50.61	54.05	55.59	46.84	36.17	42.96	43.57	36.77	37.14	34.61	31.77
<b>Singapore</b>													
Light sweet cracking	0.20	3.10	11.46	10.91	8.75	9.94	3.19	9.43	7.75	2.82	2.54	4.16	5.99
Light sweet cracking + Petchem	2.03	4.82	12.94	12.81	10.05	10.83	4.45	10.15	8.93	4.00	3.94	5.37	6.73
Medium sour cracking	1.80	3.92	12.81	7.88	10.83	11.35	5.04	10.21	9.52	4.77	4.99	5.33	7.91
Medium sour cracking + Petchem	3.61	5.61	14.27	9.76	12.11	12.23	6.29	10.93	10.69	5.93	6.37	6.53	8.63

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)<sup>1</sup>**

	Mar-23	Apr-23	May-23	May-22	May 23 vs Previous Month	May 23 vs Previous Year	May 23 vs 5 Year Average	5 Year Average
<b>OECD Americas</b>								
Naphtha	1.1	1.1	1.1	1.0	0.0	0.0	-0.2	1.2
Motor gasoline	44.1	44.0	43.8	43.5	-0.2	0.3	-0.5	44.2
Jet/kerosene	9.3	9.5	9.3	9.4	-0.2	-0.1	1.5	7.8
Gasoil/diesel oil	27.6	27.5	27.7	28.3	0.2	-0.6	-1.6	29.3
Residual fuel oil	3.5	3.7	3.2	2.8	-0.5	0.4	0.1	3.1
Petroleum coke	4.1	4.2	4.1	4.3	-0.1	-0.2	-0.3	4.4
Other products	12.8	13.4	13.8	13.9	0.5	-0.1	0.1	13.8
<b>OECD Europe</b>								
Naphtha	9.3	8.9	9.2	8.0	0.3	1.2	1.0	8.2
Motor gasoline	20.7	21.0	21.4	21.1	0.4	0.3	1.4	20.0
Jet/kerosene	8.4	8.4	9.0	8.7	0.6	0.3	1.8	7.2
Gasoil/diesel oil	38.9	39.0	39.0	38.8	-0.1	0.2	-1.5	40.5
Residual fuel oil	8.2	8.1	7.8	9.3	-0.3	-1.4	-1.2	9.1
Petroleum coke	1.7	1.6	1.5	1.5	-0.1	0.0	0.1	1.4
Other products	15.3	15.5	15.3	14.7	-0.2	0.6	-0.6	15.8
<b>OECD Asia Oceania</b>								
Naphtha	17.0	17.2	18.7	16.5	1.5	2.2	2.4	16.3
Motor gasoline	20.9	20.8	21.0	21.0	0.3	0.1	0.0	21.1
Jet/kerosene	14.1	14.3	13.7	12.4	-0.6	1.3	0.2	13.5
Gasoil/diesel oil	30.2	29.4	29.7	30.3	0.3	-0.6	-0.9	30.6
Residual fuel oil	8.5	8.1	7.2	8.8	-0.9	-1.6	-0.4	7.6
Petroleum coke	0.4	0.4	0.4	0.2	0.0	0.2	0.0	0.4
Other products	11.1	11.5	11.9	12.3	0.4	-0.4	-0.9	12.8
<b>OECD Total</b>								
Naphtha	6.4	6.3	6.5	5.8	0.2	0.7	0.4	6.1
Motor gasoline	32.7	32.8	33.1	32.5	0.3	0.6	0.6	32.5
Jet/kerosene	9.9	9.9	9.9	9.7	0.0	0.3	1.4	8.6
Gasoil/diesel oil	31.6	31.5	31.5	32.0	0.0	-0.5	-1.6	33.1
Residual fuel oil	5.9	5.8	5.3	5.9	-0.5	-0.6	-0.5	5.8
Petroleum coke	2.7	2.7	2.7	2.7	0.0	0.0	-0.1	2.7
Other products	13.3	13.7	13.9	13.9	0.2	0.1	-0.3	14.3

<sup>1</sup> 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	May 23	Jun 23	Jul 23
<b>ETHANOL</b>									
<b>OECD Americas</b>	<b>1031</b>	<b>1027</b>	<b>1017</b>	<b>1041</b>	<b>1035</b>	<b>1024</b>	<b>1035</b>	<b>1026</b>	<b>1026</b>
United States	1002	993	982	1012	1000	989	1001	992	992
Other <sup>1</sup>	29	34	35	29	34	34			
<b>OECD Europe</b>	<b>107</b>	<b>107</b>	<b>110</b>	<b>97</b>	<b>101</b>	<b>109</b>	<b>109</b>	<b>109</b>	<b>109</b>
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 <sup>1</sup>	54	55	55	54	49	56			
<b>OECD Asia Oceania</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
Australia	4	4	4	4	4	4	4	4	4
Other <sup>1</sup>	0	1	1	0	0	1			
<b>Total OECD Ethanol</b>	<b>1142</b>	<b>1139</b>	<b>1131</b>	<b>1142</b>	<b>1140</b>	<b>1137</b>	<b>1149</b>	<b>1140</b>	<b>1140</b>
<b>Total Non-OECD Ethanol</b>	<b>763</b>	<b>844</b>	<b>872</b>	<b>707</b>	<b>399</b>	<b>935</b>	<b>1086</b>	<b>1119</b>	<b>1212</b>
Brazil	528	586	603	472	141	677	828	862	954
China <sup>1</sup>	81	136	146	86	136	136			
Argentina <sup>1</sup>	21	22	23	21	22	22			
Other	133	100	100	127	100	100	258	258	258
<b>TOTAL ETHANOL</b>	<b>1904</b>	<b>1983</b>	<b>2004</b>	<b>1849</b>	<b>1538</b>	<b>2072</b>	<b>2235</b>	<b>2259</b>	<b>2352</b>
<b>BIODIESEL</b>									
<b>OECD Americas</b>	<b>209</b>	<b>257</b>	<b>308</b>	<b>222</b>	<b>247</b>	<b>266</b>	<b>257</b>	<b>257</b>	<b>257</b>
United States	202	242	291	216	243	247	239	239	239
Other <sup>1</sup>	6	15	18	6	4	18			
<b>OECD Europe</b>	<b>307</b>	<b>313</b>	<b>323</b>	<b>296</b>	<b>275</b>	<b>326</b>	<b>326</b>	<b>326</b>	<b>326</b>
France	48	48	48	45	51	47	47	47	47
Germany	64	63	62	63	53	66	66	66	66
Italy <sup>1</sup>	25	25	25	23	23	26			
Spain	31	32	35	31	26	34	34	34	34
Other	139	145	153	135	122	153	153	153	153
<b>OECD Asia Oceania</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>11</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
Australia	0	0	0	0	0	0	0	0	0
Other <sup>1</sup>	14	13	13	12	11	14			
<b>Total OECD Biodiesel</b>	<b>530</b>	<b>584</b>	<b>644</b>	<b>530</b>	<b>533</b>	<b>606</b>	<b>597</b>	<b>597</b>	<b>597</b>
<b>Total Non-OECD Biodiesel</b>	<b>513</b>	<b>580</b>	<b>630</b>	<b>513</b>	<b>580</b>	<b>580</b>	<b>580</b>	<b>580</b>	<b>580</b>
Brazil	108	124	156	108	102	130	133	137	131
Argentina <sup>1</sup>	42	40	40	42	40	40			
Other <sup>1</sup>	363	416	434	363	438	410			
<b>TOTAL BIODIESEL</b>	<b>1043</b>	<b>1163</b>	<b>1275</b>	<b>1043</b>	<b>1113</b>	<b>1186</b>	<b>1177</b>	<b>1177</b>	<b>1177</b>
<b>GLOBAL BIOFUELS</b>	<b>2947</b>	<b>3146</b>	<b>3278</b>	<b>2892</b>	<b>2651</b>	<b>3258</b>	<b>3412</b>	<b>3436</b>	<b>3528</b>

<sup>1</sup> monthly data not available.



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