

# Oil Market Report

16 November 2021

- Global oil demand is strengthening due to robust gasoline consumption and increasing international travel as more countries re-open their borders. However, new Covid waves in Europe, weaker industrial activity and higher oil prices will temper gains, leaving our forecast for oil demand growth largely unchanged since last month's *Report* at 5.5 mb/d for 2021 and 3.4 mb/d in 2022.
- US output is rising amid stronger oil prices. World oil supply is set to rise 1.5 mb/d over November and December, with the US providing 400 kb/d of the gain. Saudi and Russia combined would account for 330 kb/d in line with OPEC+ targets. Total oil supply had already leapt 1.4 mb/d m-o-m in October after the US rebounded from Hurricane Ida.
- Global refining throughput is set to increase by almost 3 mb/d from October through December as seasonal maintenance wraps up. Refinery margins rose in October, driven by exceptionally tight product markets, despite the sharp gains in crude oil prices. Further ahead, refinery throughputs are expected to stabilise and generally hold flat in 1H22 before the seasonal increase in 3Q22.
- OECD total industry stocks plunged by 51 mb in September, with crude oil and middle distillate holdings accounting for most of the declines. In terms of regions, Europe led the draw-down. At 2 762 mb, total OECD industry stocks stood 250 mb below the five-year average and at their lowest level since the start of 2015. Preliminary data for October point to a marginal stock build.
- Oil market drivers have begun to shift and benchmark crude prices are easing as a result. Brent crude futures were trading around \$81/bbl, down from a high of more than \$86/bbl in October. On physical markets, North Sea Dated prices rose in October by \$9.15/bbl m-o-m to \$83.54/bbl and WTI at Cushing by \$9.79/bbl to \$81.96/bbl.



## OMR publishing schedule – 2022

Wednesday	19 January
Friday	11 February
Wednesday	16 March <sup>(1)</sup>
Wednesday	13 April
Thursday	12 May
Wednesday	15 June <sup>(2)</sup>
Wednesday	13 July
Thursday	11 August <sup>(3)</sup>
Wednesday	14 September
Thursday	13 October
Tuesday	15 November
Wednesday	14 December

The 2022 Edition of the *Market Report \_Oil 2022* will be released on 16<sup>th</sup> March 2022.

<sup>(1)</sup> The 16<sup>th</sup> March *OMR* will comprise the usual data and projections through end-2022, but with abridged text.

<sup>(2)</sup> Supply/demand forecasts will be 'rolled out' to 2023 in the report dated 15 June 2022.

<sup>(3)</sup> The *Annual Statistical Supplement 2021 Edition* will be published in conjunction with the report dated 11 August 2022.

NB: On each of these dates, the report will be released at 10H00 Paris local time.

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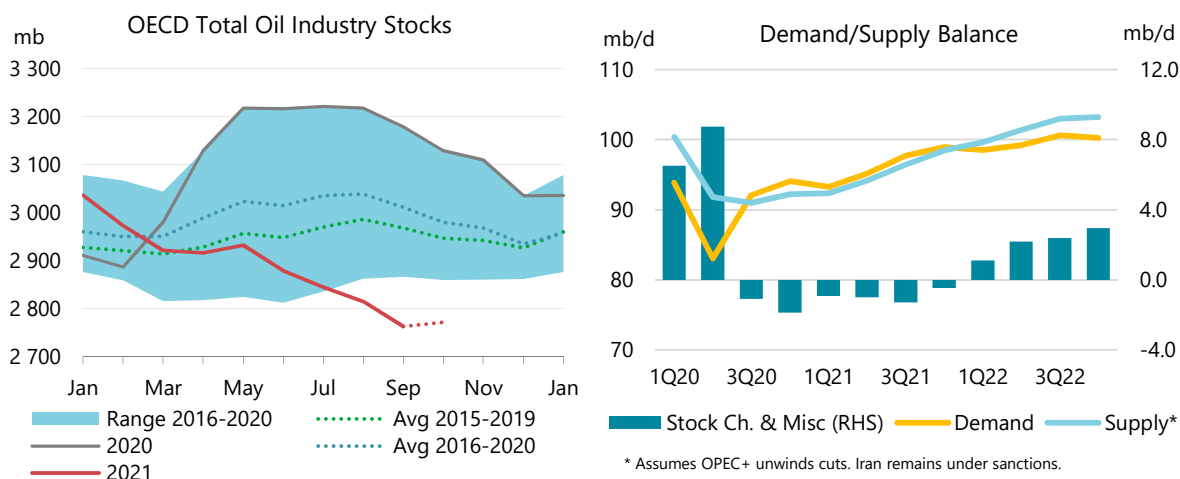
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# Tide turning?

The world oil market remains tight by all measures, but a reprieve from the price rally could be on the horizon. Contrary to hopes expressed in Glasgow at COP26 this is not because demand is declining, but rather due to rising oil supplies. Following another hefty inventory decline in September, benchmark crude oil prices surged by \$9/bbl to fresh highs above \$86/bbl for Brent and \$84/bbl for WTI. However, preliminary data and satellite observations of stock changes in October suggest the tide might be turning.



Global oil production is already rising. In October, oil supplies leapt by 1.4 mb/d to 97.7 mb/d, with the US post-hurricane recovery accounting for half the increase. A further boost of 1.5 mb/d is expected over November and December even as OPEC+ disregarded pleas from major consumers to ramp up beyond a monthly allocated 400 kb/d to cool prices. Over this period, the US is now poised to provide the largest increase in supply of any individual country. We have raised our forecast for the US by 300 kb/d for 4Q21 and by 200 kb/d on average in 2022 as current prices provide a strong incentive to boost activity even as operators stick to capital discipline pledges. The US is set to account for 60% of 2022 non-OPEC+ supply gains, now forecast at 1.9 mb/d. Even so, the US will not return to pre-Covid rates until the end of 2022.

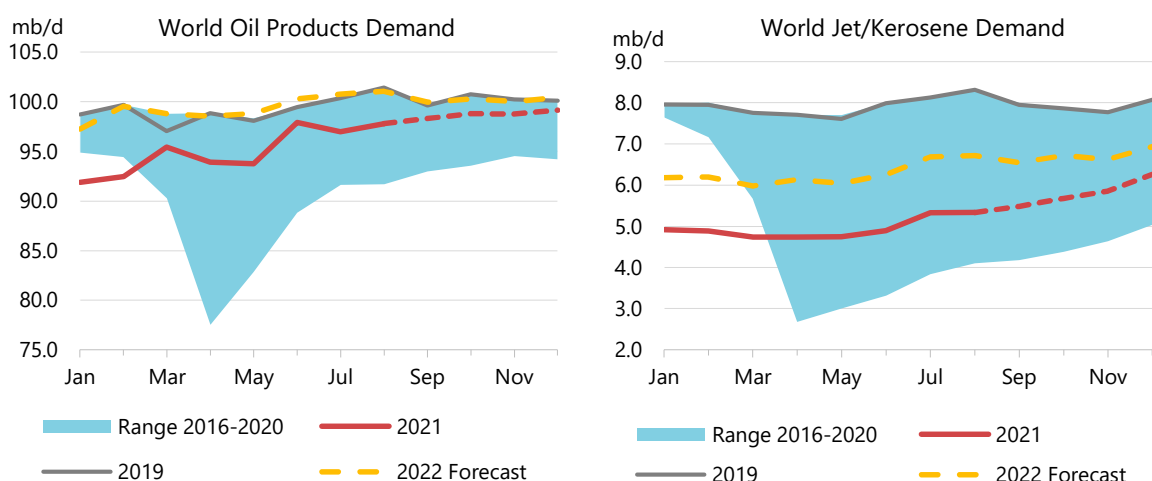
That increase will go some way to meet rising demand, still recovering from the 2020 Covid slump. Refinery activity is picking up after autumn maintenance, while end-user demand is on track to strengthen further as more countries open up to international travel, mobility levels increase and vaccination campaigns gather pace. Nevertheless, new Northern Hemisphere Covid outbreaks, slightly weaker industrial activity and higher oil prices will temper gains, leaving our forecast for oil demand growth largely unchanged from last month's *Report* at 5.5 mb/d for 2021 and 3.4 mb/d in 2022.

The world's storage tanks are likely to remain in deficit through year-end, as OPEC+ continues to hugely undershoot its target due to operational and technical issues in Nigeria, Angola and Malaysia. But the market is already trading January volumes. And by then, the bloc could be pumping more than 1 mb/d above the call on its crude, provided it continues to unwind its cuts and even if Iran remains under sanctions. By 2Q22, OPEC+ crude oil output could rise to 2.2 mb/d above the call. For consumers suffering from higher prices, a potential 2022 inventory build can't come soon enough.

# Demand

## Overview

Global oil demand is on track to strengthen further over the remainder of the year as more countries open their borders to international travel, mobility levels increase and vaccination campaigns move apace. Pent-up travel demand for gasoline, robust growth for naphtha from the petrochemical sector and additional demand in the power sector combine to provide a pillar of support for global oil consumption. Nevertheless, slightly weaker industrial activity and higher oil prices have tempered gains, leaving our forecast for oil demand growth largely unchanged since last month's *Report* at 5.5 mb/d for 2021 and 3.4 mb/d in 2022.



Long the weak link in the demand recovery, a resurgence in jet fuel consumption is at last on the horizon as a number of countries, including the US, Australia, Thailand and Singapore, are finally lifting international travel restrictions. Jet kerosene demand is forecast to rise by a sharp 550 kb/d in 4Q21 to 5.9 mb/d and 180 kb/d to 6.1 mb/d in 1Q22. Nonetheless, the recovery in air transport demand has been slower than expected, tempered by new waves of Covid cases and some behavioural changes (see Box *Jet fuel demand: Strong growth from a low base*), prompting a downgrade in our forecast for jet fuel demand by 170 kb/d in 4Q21 and 230 kb/d in 2022. We now forecast that jet kerosene demand in 2022 will jump 1.2 mb/d to 6.4 mb/d, still roughly 20% below pre-Covid levels.

Exceptional strength in gasoline demand in many countries is also underpinning the outlook. In this *Report* we have increased our gasoline demand forecast for 4Q21 by 250 kb/d and by 70 kb/d in 1H22. Recent data show that the use of personal cars rose above pre-Covid levels in many locations, with provisional data for the US pointing to very strong gasoline in September and October. Gasoline demand in Europe also remains at lofty levels while consumption in China and India is more than 10% above 2019 levels. This comes despite record levels of electric vehicle sales in September, and likely October as well.

We have also raised our outlook for naphtha for 2021 and 2022, by 70 kb/d and 130 kb/d respectively, as recent data show a significant increase in demand in major petrochemical centres.

Fuel switching to oil due to a supply shortage of natural gas, LNG and coal is also supporting stronger growth going into the winter months. However, we have revised our oil demand outlook stemming from fuel switching slightly down to 400 kb/d from last month's 500 kb/d estimate, due to easing power shortages in Asia, notably as coal availability has ramped-up in China and India.

World GDP growth was marginally lowered to 5.7% in 2021 and 4.5% in 2022 as supply chain disruptions and the energy crisis continued to weigh on the economic outlook. The recent wave of Covid cases could cause a deceleration in European growth. In the US, the Infrastructure Investment and Jobs Act adopted by the Congress (more than \$1 trillion in infrastructure spending over the next ten years) could support demand for various products (in particular asphalt) in 2022. We have revised up our 'other products' demand in the US in 2022 by 50 kb/d.

Global Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	12 648	12 666	13 257	13 674	590	417	4.7	3.1
Naphtha	6 306	6 333	6 801	7 013	468	212	7.4	3.1
Motor Gasoline	26 636	23 473	25 478	26 219	2 005	741	8.5	2.9
Jet Fuel & Kerosene	7 926	4 645	5 242	6 421	597	1 178	12.9	22.5
Gas/Diesel Oil	28 226	26 382	27 510	28 114	1 129	604	4.3	2.2
Residual Fuel Oil	6 141	5 693	6 011	6 170	318	159	5.6	2.6
Other Products	11 660	11 599	11 983	12 043	385	60	3.3	0.5
<b>Total Products</b>	<b>99 542</b>	<b>90 791</b>	<b>96 282</b>	<b>99 653</b>	<b>5 491</b>	<b>3 371</b>	<b>6.0</b>	<b>3.5</b>

Our oil price assumptions are slightly higher than in last month's *Report*. Brent prices average \$71.50/bbl in 2021 and \$79.40/bbl in 2022, with 2021 prices roughly 70% greater than in 2020 and 10% above 2019.

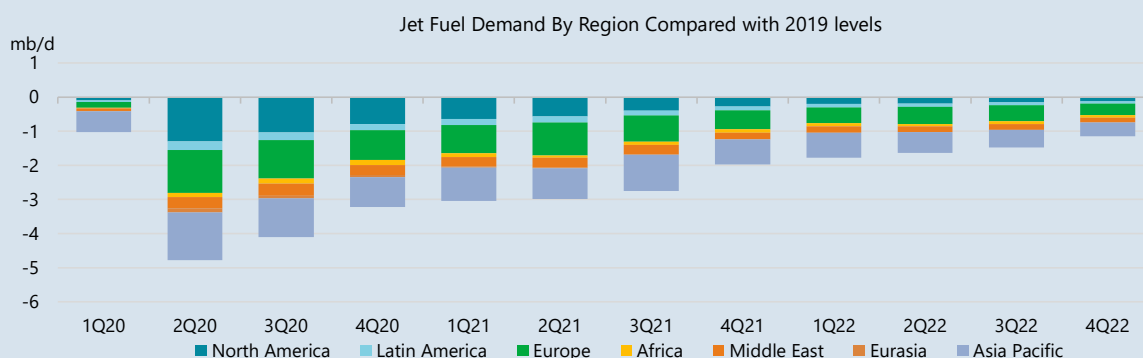
Mobility continues to improve versus last year in most regions, despite posting a seasonal decline in Europe and the US. Asian mobility indices reveal a very strong recovery from the latest wave of Covid. The increase in Covid cases in Europe and the FSU could have a small impact on mobility and economic activity in the coming months.

Global Demand by Region								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
Africa	4 244	3 791	4 009	4 087	218	78	5.8	2.0
Americas	31 767	28 037	30 217	31 172	2 180	955	7.8	3.2
Asia/Pacific	35 472	33 577	35 668	37 203	2 091	1 535	6.2	4.3
Europe	15 094	13 175	13 700	14 285	525	585	4.0	4.3
FSU	4 723	4 487	4 764	4 926	276	162	6.2	3.4
Middle East	8 243	7 725	7 925	7 980	200	55	2.6	0.7
<b>World</b>	<b>99 542</b>	<b>90 791</b>	<b>96 282</b>	<b>99 653</b>	<b>5 491</b>	<b>3 371</b>	<b>6.0</b>	<b>3.5</b>

### Box 1. Jet fuel demand: Strong growth from a low base

Long the laggard in the demand resurgence, jet fuel demand is finally picking up as a number of countries, and particularly the US, are lifting international travel restrictions. Jet fuel demand is forecast to rise by 550 kb/d in 4Q21 and by 180 kb/d in 1Q22 when it reaches 6.1 mb/d. Nonetheless, growth in air transport demand has been slower than anticipated, tempered by new waves of Covid cases affecting travel, prompting a downgrade in our forecast for jet fuel demand by 170 kb/d in 4Q21 and 230 kb/d in 2022. We now forecast that jet kerosene demand in 2021 will rise by 600 kb/d to 5.2 mb/d and in 2022 will jump 1.2 mb/d to 6.4 mb/d, roughly 20% below pre-Covid levels.

When the US announced at the end of September that an international travel ban could be lifted in November, bookings made in Europe for trips to the US rose from 15% of 2019 levels to 70%. Other major transportation hubs are also easing restrictions. In October, Singapore expanded quarantine-free travel lane arrangements to several European countries, as well as Canada and the US. Several other key tourist destinations are also re-opening. Last in a relatively long list, Thailand re-opened to international tourism in November. Restrictions still remain in place in many other countries, however. China announced in October it will limit international passenger flights to 408 per week up to March 2022 (from 644 during the summer), down 21% from 2020.



The re-opening of some countries to fully vaccinated travellers from places where Covid developments seem to be under control had been expected and so has not changed the global picture for aviation demand in 2022. Several aviation experts updated their forecasts in October and, while pointing to stronger growth in Revenue Passenger Kilometres (RPKs) in the coming months, their aviation forecasts for 2022 have not improved. In its latest forecast, the International Air Transport Association (IATA) expects global RPK at roughly 40% of 2019 levels in 2021 (compared with 43% in its April forecast), rising to only 60% of 2019 levels in 2022. The International Civil Aviation Organisation (ICAO) estimates a drop of around 50% in world total passengers in 2021 versus 2019.

Air traffic conditions are very different across regions and segments:

- Freight cargo traffic is strong while passenger traffic remains subdued. In September, global Cargo Tonnes Kilometres (CTKs) were up 9% compared with the same month of 2019. By contrast, passenger traffic measured by RPKs, although increasing by 18% m-o-m, remained 53% below pre-Covid levels.
- Domestic air traffic (36% of total flights in 2019 versus 54% in 2020 and 2021) is doing much better than international traffic. In September domestic RPKs were 24% below 2019 levels, while international RPKs were down by 69% compared with pre-Covid levels.

- Business travel, estimated to be roughly 20% of total passenger demand, is expected to remain subdued in the coming months and into 2022. We estimate that at least 10% of total business travel will never resume due to changes in personal preferences and corporate strategies.
- Americas performs better than the rest of the world. In September, North America and Latin America RPKs were down by 30% and 39%, respectively, compared with September 2019 while Africa and Europe RPKs was down 50 %, Middle East 66% and Asia 69%. Russia has performed surprisingly well (it also shows in jet fuel demand), benefitting from strong tourism and loose traffic restrictions. Domestic air traffic in Russia in September was 30% higher than pre-Covid levels.

According to IATA's October forecast, these elements are set to persist into 2022. IATA estimates that air freight transportation will remain very strong; after a drop of 8.7% in 2020, global CTKs will increase versus 2019 levels by 7.9% in 2021 and 13.2% in 2022. We estimate that air freight transportation accounts for roughly 15% of total commercial aviation jet fuel demand. By contrast, RPKs will remain well below pre-Covid levels through the end of the forecast. After a drop of 66% in 2020, global RPKs will remain 60% and 39% below 2019 levels in 2021 and 2022, respectively.

In our forecast we have a decline in total jet kerosene demand of 41% versus 2019 in 2020, 34% in 2021 and 19% in 2022. In addition to the growth in CTKs, the difference between changes in RPKs and changes in jet kerosene demand is explained by several factors. While commercial aviation is the main consuming sector of jet kerosene, heating (in particular in OECD Asia) and military demand also play a significant role. We estimate jet fuel demand at 7.2 mb/d in 2019, 3.9 mb/d in 2020, 4.5 mb/d in 2021 and 5.7 mb/d in 2022. During this period, "other kerosene" demand remains close to 700 kb/d. In addition, as indicated by IATA, airlines were slow to cut available capacity (Available Seat Kilometres, or ASK) versus the fall in demand in 2020. Compared with pre-Covid levels, ASK is expected to be 50% down in 2021 and 33% lower in 2022.

In 2022, North America jet kerosene demand will average 8% below pre-Covid levels, as aviation benefits from a strong domestic market. Jet kerosene demand in Latin America, Europe, Africa and the Middle East will be roughly 27% below 2019 levels during the same period. Asia Pacific will be close to 20% below 2019 levels, which is in line with the world average.

## OECD

OECD oil demand rose by 510 kb/d month-on-month (m-o-m) in August, contrary to normal seasonality, and by a further 490 kb/d in September. This sustained increase reflects improving mobility indicators across major developed economies, especially in the United States, amid the release of pent-up travel demand. At 46.2 mb/d in September, OECD oil demand was 3.5 mb/d higher than a year earlier, but still 1.3 mb/d below September 2019 levels.

In August, for which we now have complete data, demand increased by 650 kb/d m-o-m in the Americas but fell by 90 kb/d in Europe and by 50 kb/d in Asia Oceania. The overall increase was concentrated in naphtha (+180 kb/d), LPG/ethane (+120 kb/d) and jet/kerosene (+180 kb/d)



deliveries, with petrochemicals demand remaining strong and air passenger numbers showing a strong uptick.

We estimate that OECD oil demand averaged 45.7 mb/d in 3Q21, up 1.7 mb/d q-o-q but 2.7 mb/d lower than in 3Q19. We expect this gap versus 2019 levels to narrow to 1.9 mb/d in 4Q21, with road fuel demand remaining at elevated levels in key economies and with additional use of oil in power plants in response to increased natural gas prices.

OECD Demand based on Adjusted Preliminary Submissions - September 21																
(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>10.80</b>	<b>7.1</b>	<b>1.74</b>	<b>64.4</b>	<b>4.68</b>	<b>5.6</b>	<b>0.60</b>	<b>0.7</b>	<b>3.35</b>	<b>8.6</b>	<b>0.54</b>	<b>10.7</b>	<b>3.20</b>	<b>8.1</b>	<b>24.80</b>	<b>9.8</b>
US*	9.22	7.6	1.53	62.1	4.02	7.1	0.19	2.1	2.61	9.0	0.36	-0.5	2.64	8.4	20.49	10.4
Canada	0.90	7.9	0.12	93.8	0.26	-3.9	0.40	5.0	0.37	4.7	0.04	198.7	0.36	11.5	2.45	9.5
Mexico	0.60	-1.6	0.06	81.0	0.24	-5.0	0.02	-52.3	0.32	10.1	0.13	25.9	0.17	-6.0	1.54	1.9
<b>OECD Europe</b>	<b>2.13</b>	<b>5.3</b>	<b>1.04</b>	<b>46.7</b>	<b>5.26</b>	<b>0.6</b>	<b>1.60</b>	<b>18.9</b>	<b>1.08</b>	<b>-0.8</b>	<b>0.77</b>	<b>9.6</b>	<b>2.34</b>	<b>1.1</b>	<b>13.99</b>	<b>6.0</b>
Germany	0.51	4.9	0.17	84.7	0.72	-6.2	0.39	38.1	0.10	-1.4	0.05	9.8	0.38	9.5	2.31	9.1
United Kingdom	0.29	13.5	0.20	31.2	0.51	7.5	0.17	-2.5	0.09	-17.5	0.02	24.6	0.12	-14.8	1.37	6.4
France	0.23	10.7	0.12	40.3	0.81	2.9	0.15	101.6	0.12	-0.4	0.04	28.0	0.21	-6.9	1.68	9.5
Italy	0.19	10.4	0.07	62.2	0.53	6.2	0.10	11.7	0.10	7.5	0.07	23.7	0.27	3.3	1.32	9.4
Spain	0.12	5.0	0.10	114.9	0.45	3.8	0.20	-1.5	0.04	-40.7	0.12	13.8	0.20	11.4	1.20	7.4
<b>OECD Asia &amp; Oceania</b>	<b>1.41</b>	<b>-0.3</b>	<b>0.45</b>	<b>20.6</b>	<b>1.35</b>	<b>-0.7</b>	<b>0.52</b>	<b>10.3</b>	<b>0.73</b>	<b>0.4</b>	<b>0.46</b>	<b>8.1</b>	<b>2.54</b>	<b>18.0</b>	<b>7.40</b>	<b>7.7</b>
Japan	0.76	-5.6	0.21	12.7	0.41	2.5	0.29	6.2	0.38	6.3	0.24	18.9	1.05	22.5	3.36	8.4
Korea	0.25	9.9	0.15	26.6	0.36	-0.3	0.16	20.5	0.28	-6.5	0.19	-7.2	1.31	17.9	2.66	9.7
Australia	0.28	8.7	0.08	62.6	0.51	-3.4	0.00	-164.1	0.05	-6.7	0.01	32.3	0.11	-3.4	1.03	3.4
<b>OECD Total</b>	<b>14.35</b>	<b>6.1</b>	<b>3.22</b>	<b>50.9</b>	<b>11.28</b>	<b>2.5</b>	<b>2.72</b>	<b>12.7</b>	<b>5.16</b>	<b>5.3</b>	<b>1.76</b>	<b>9.5</b>	<b>8.07</b>	<b>8.8</b>	<b>46.20</b>	<b>8.3</b>

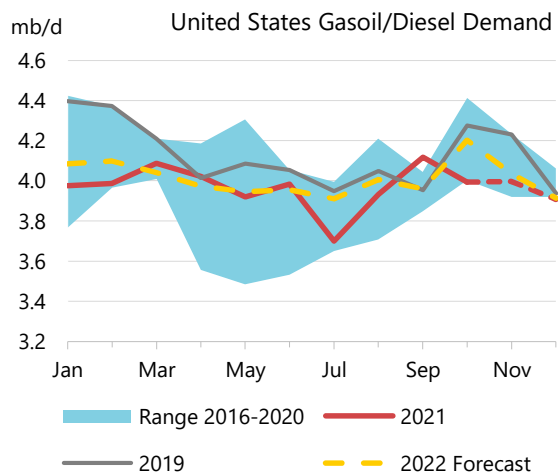
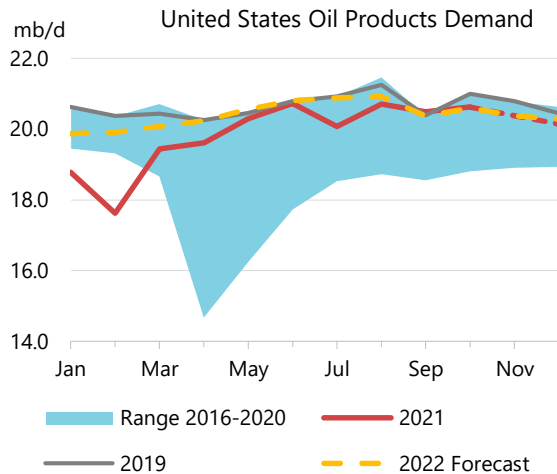
## OECD Americas

Provisional data indicate that both September and October demand was stronger than normal compared to August, due to robust US mobility. Demand in September was only 280 kb/d below August compared with declines of 740 kb/d on average in the previous five years. Regional oil demand rose by an estimated 270 kb/d m-o-m in October to stand only 10 kb/d lower than in August versus a typical seasonal decline of 550 kb/d.

This unusual, counter-seasonal development in demand results from a combination of relatively weak August demand (1.4 mb/d below 2019) and somewhat stronger demand in the following two months. The gap versus pre-pandemic levels is estimated to have narrowed to 460 kb/d and 800 kb/d for September and October, respectively.

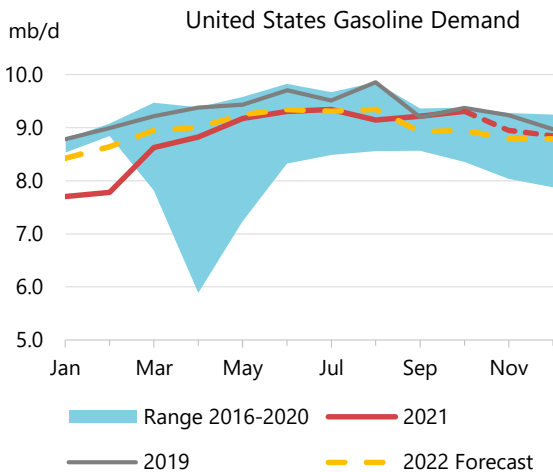
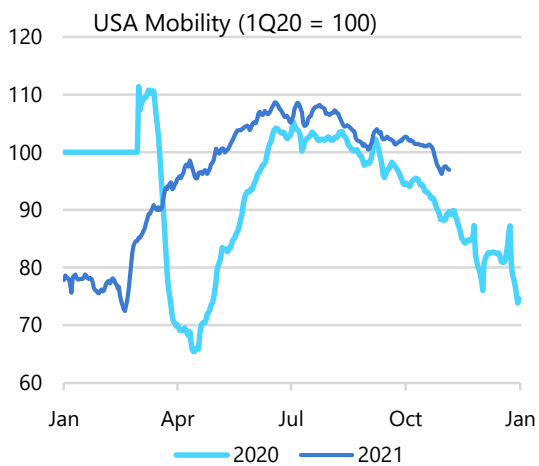
Overall, 3Q21 OECD Americas demand was about 440 kb/d higher q-o-q and 2.1 mb/d stronger y-o-y. Nevertheless, it remains 1.1 mb/d lower than 3Q19. In 4Q21, we forecast that demand will increase strongly versus 4Q20 (+1.9 mb/d), but will still lag 4Q19 levels (-720 kb/d). Forecast GDP growth in the US for 2021 and 2022 is slightly slower than was assumed for last month's *Report*. Growth should amount to 5.4% in 2021 and 4.3% in 2022. The October Institute for Supply Chain Management (ISM) Purchasing Managers' Index (PMI) also suggested a slight worsening of conditions, dropping to 60.8 (from 61.1 in September), though still indicating robust growth.

August demand for the US and Mexico has been revised substantially lower on the receipt of more complete monthly data. Growth in US gasoline (now down to -200 kb/d m-o-m) and gasoil (reduced to +230 kb/d m-o-m) deliveries saw the largest downwards revisions. We now also estimate Mexican September demand to have been lower, driven by lower road fuel demand.



In contrast, the latest weekly figures for the US in September and October indicate demand was stronger than previously expected. Unusually, October had higher deliveries of gasoline than August.

Prompt data indicators reflect this divergence from typical patterns of consumption in the US. In particular, experimental US Bureau of Transportation Statistics (BTS) data suggest that the distance driven by Americans fell uncharacteristically in August but returned to relatively high rates in September and October. Public transport use remains well below pre-pandemic levels. An analysis of BTS data indicates that, overall, mobility did not decline seasonally in September and October.



US deliveries of jet/kerosene in 3Q21 were 190 kb/d higher q-o-q and 560 kb/d higher y-o-y. They remain 270 kb/d lower than 3Q19. This 14% fall in demand mirrors a similar change in OAG flight capacity data.

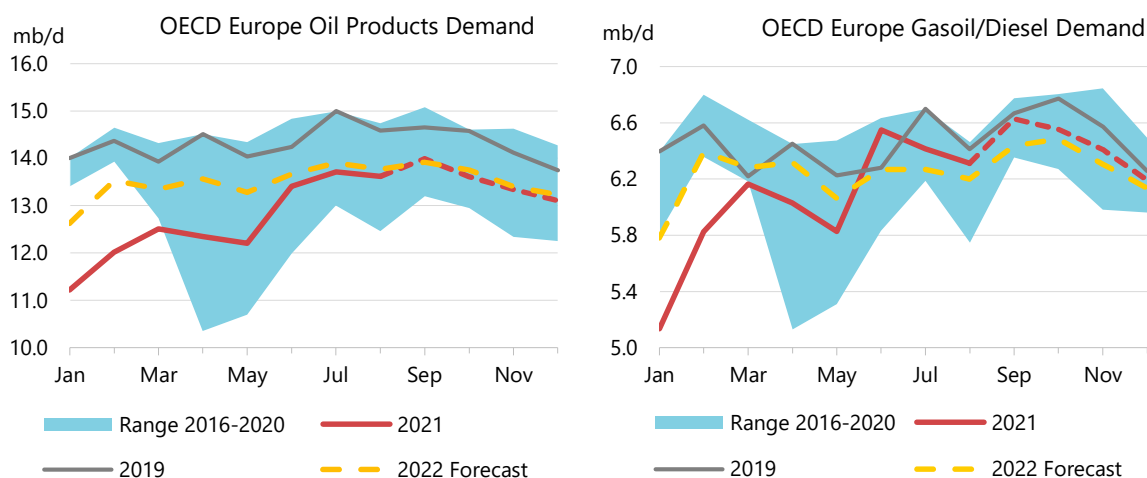
October LPG/ethane demand is expected to rebound (+350 kb/d) with various petrochemical facilities in Louisiana returning to operations following the impact of Hurricane Ida and the seasonal rise in LPG consumption for heating.

Canadian deliveries increased by 60 kb/d in August, less than the average change over the previous five years (120 kb/d). They remain 410 kb/d lower than in 2019.

Revised Mexican demand in August was 50 kb/d lower m-o-m, 460 kb/d behind 2019 and only 70 kb/d more than in 2020. Gasoil demand has been particularly weak during 2021, well below even 2020 levels for much of the year. We expect that average 2021 gasoil deliveries will fall by 40 kb/d from 2020 and that the recovery will be gradual in 2022 (+70 kb/d y-o-y). Overall Mexican demand for 2021 is forecast to lag 350 kb/d behind 2019.

## OECD Europe

European demand outperformed expectations in September, according to available data. Rather than plateauing, deliveries grew by 370 kb/d m-o-m, reaching their highest level since November 2019. In August, demand fell by 90 kb/d m-o-m, to 13.6 mb/d, 1.2 mb/d higher y-o-y but down by 970 kb/d in comparison to 2019.

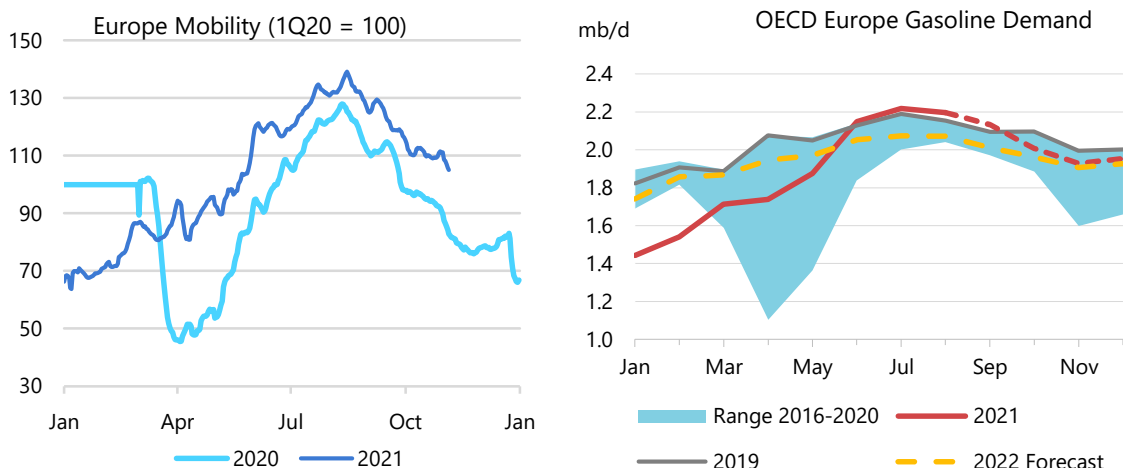


Gasoline demand has been particularly strong in Europe over recent months. Deliveries have been higher than in 2019 for each month from July to September. Demand jumped in 3Q21 by 260 kb/d q-o-q (+14%) and was 100 kb/d higher than 3Q19. This has been the result of changes in the composition of the car fleet, the release of pent-up demand and increasing mobility in key countries.

Mobility data from the German Federal Statistics Office indicates that for July-October this year average mobility was higher than in the equivalent months of 2019. Similarly, UK government data indicate that the number of vehicles on the road in recent months has been comfortably the highest since the Covid-19 pandemic began.

Demand for gasoil has been comparatively weaker than gasoline in recent months, but rose sharply in September for those countries where data is available. In Germany (+120 kb/d m-o-m) and France (+50 kb/d m-o-m) gasoil deliveries (excluding diesel) increased faster than typical seasonal trends, in response to the high cost of fuels for power generation.

Forecast GDP growth in major European economies over the next three quarters has slowed since the *October Report*, and the *IHS Markit Eurozone Manufacturing PMI* slid to an eight-month low, at 58.3. This reflects the challenges created by higher energy costs and the impact of supply chain disruptions. These factors will limit the potential for European demand to approach 2019 levels next year. The threat of renewed restrictions on activity, because of recent rises in Covid-19 cases in several European countries, could put a further drag on growth.



Total 3Q21 demand rose sharply compared to recent history (+1.1 mb/d q-o-q and +890 kb/d y-o-y). We expect demand to decline slightly into 4Q21 (-420 kb/d q-o-q) but remain much stronger than 4Q20 (+840 kb/d). Nevertheless, annual demand will remain well below the level of 2019 (-1.4 mb/d) and we expect this situation to persist into 2022 (-820 kb/d versus 2019).

## OECD Asia Oceania

Asia Oceania oil demand reversed the usual seasonal trend in September, jumping by 400 kb/d m-o-m. Over the previous five years, demand dropped by an average of 150 kb/d m-o-m in September. Demand had been largely steady over the previous three months, with August demand 50 kb/d lower than July and 810 kb/d behind the level of 2019. Japanese demand performed particularly strongly in September, increasing m-o-m by 250 kb/d. Demand in Korea also went up, by 75 kb/d.

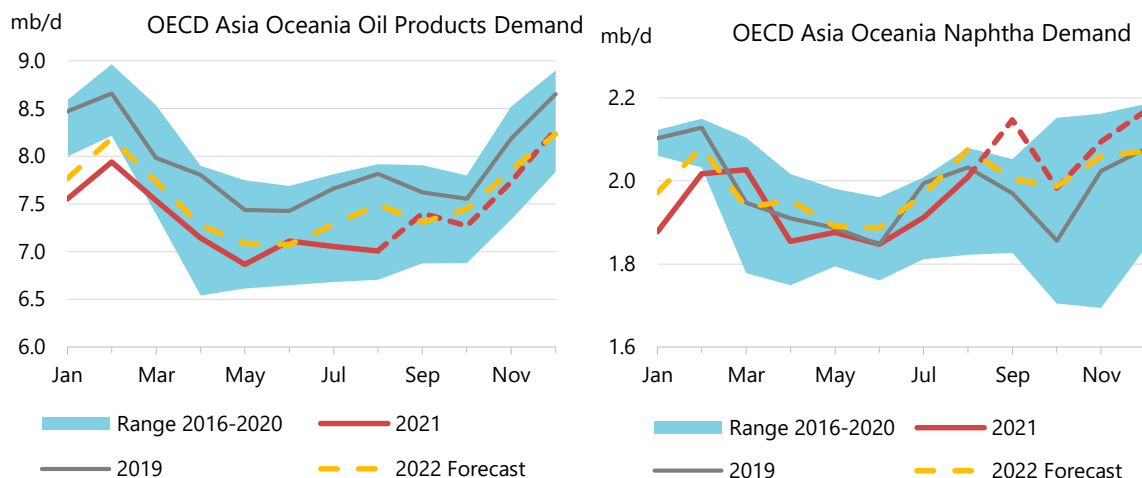
Strong y-o-y performance for naphtha (+110 kb/d), gasoil (+30 kb/d) and LPG (+20 kb/d) underpinned the increased Japanese deliveries in September (+8.4% y-o-y). Japanese naphtha demand was at its highest level for the month since 2015 and rose alongside elevated olefins and aromatics output reported by Japan's Ministry of Economy Trade and Industry. The fact that naphtha consumption (+14.3% m-o-m) rose so much faster than base chemicals output (ethylene +4.2% m-o-m, xylenes +4.8% m-o-m) suggests that some intermediate naphtha restocking took place.

The rapid rise in Asian LPG prices made naphtha a more competitive feedstock for steam crackers in August. A 9% m-o-m increase in Japan's September butadiene production (which is a larger co-product from naphtha cracking than LPG) also suggests that flexible steam cracker operators increased the share of naphtha feedstock at the expense of LPG. This typically happens later in the year.

In Korea, robust September demand (+90 kb/d m-o-m) benefited from a combination of higher naphtha (+40 kb/d), road fuel (gasoil +20 kb/d and gasoline +10 kb/d) and jet/kerosene deliveries (+30 kb/d). LPG deliveries fell (-20 kb/d), indicating that some LPG-to-naphtha feedstock switching has taken place in petrochemical plants.

Australian demand remained at low levels (below 1.0 mb/d) in August, 18% below 2019. However, we expect that it will gather momentum going into the southern hemisphere's

summertime, with restrictions easing in some states and the *IHS Markit Australia Manufacturing PMI* improving to 58.2 in October.



Asia Oceania oil demand in 3Q21 saw overall q-o-q growth of 110 kb/d, but remained nearer to 2020 than 2019 (+400 kb/d y-o-y, -550 kb/d since 2019). We expect the region to close-in on 2019 levels during 4Q21, increasing by 610 kb/d q-o-q to sit roughly midway between the 2019 and 2020 values. Part of this rise will be seasonal and part will be the result of easing Covid-19 restrictions as the pandemic comes under better control.

## Non-OECD

Coal and electricity shortages that were severely impacting economic activity and oil demand in several major non-OECD countries seem to be easing in recent weeks. In China and India domestic coal supply is increasing, allowing electricity generators to raise production. In Brazil, some dams have begun to fill, somewhat easing the hydroelectricity crunch.

Total non-OECD demand remained unchanged m-o-m in September. Drops in China (-460 kb/d), Latin America (-70 kb/d) and non-OECD European countries (-10 kb/d), offset a strong increase in other non-OECD Asian countries (+440 kb/d), and smaller rises in FSU and the Middle East. In October, non-OECD demand is estimated to have bounced back by 760 kb/d m-o-m, supported by a rebound in Chinese consumption (+280 kb/d) and other non-OECD Asian countries (+810 kb/d).

Non-OECD demand in 3Q21 is expected to reach 52 mb/d (+2.18 mb/d y-o-y and just 150 kb/d below 2019), rising to 52.9 mb/d in 4Q21 (+1.6 mb/d y-o-y and 420 kb/d above 2019 levels). Non-OECD oil demand is projected to increase by 3 mb/d in 2021 and 1.7 mb/d in 2022.

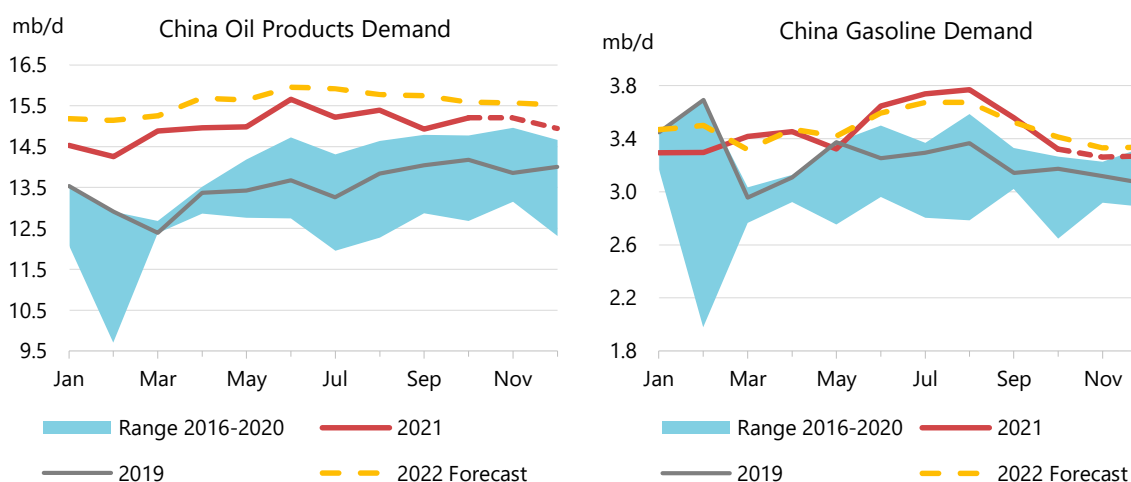
## China

Chinese economic activity picked up slightly in October, with the *Caixin Manufacturing PMI* rising to 50.6 from 50 in September. The upturn largely reflects better domestic demand. The *Caixin Service PMI* remained strong, rising from 53.4 in September to 53.8 in October. Coal market tensions, limiting electricity production, and supply chain disruptions combined to constrain economic activity in October. At the start of November, tensions in the coal and power markets were easing, following measures taken by the government to increase coal

supplies and with large users reducing their electricity consumption during peak hours. By the end of the first week of November, no region required residential and industrial users to cut their power use.

September apparent oil demand in China decreased by 460 kb/d from August, in part reflecting additional Covid restrictions. In mid-September several Chinese cities tightened lockdowns or restricted travel to stop the spread of the Delta variant. Renewed cases in Fujian prompted stay-at-home orders and the cancellation of long-distance bus services. Beijing also instructed residents of some districts, where cases had been detected, to stay in their apartments. Gasoil demand declined by 160 kb/d m-o-m. Jet kerosene demand remained 270 kb/d below its 2020 level. Air traffic rose by 12% m-o-m in September, according to OAG data, but remained 7% below 2019 levels. Air transport remained subdued in October, with OAG data showing a small increase in seat capacity (2.7% m-o-m) maintaining this indicator at 6% below 2019 levels.

Gasoline demand, by contrast, rose by 260 kb/d y-o-y in 3Q21 as car use appears to have benefitted from the cancellation of some public transportation services and/or reluctance to use them.



Chinese demand is estimated to have rebounded by 330 kb/d m-o-m in October, supported by stronger gasoil demand (+120 kb/d. This upturn is largely due to power shortages, and the increasing use of off-grid diesel-fired power generating units. These units added roughly 100 kb/d to gasoil demand in October, according to our calculations. As power shortages begin to ease in November, gasoil demand growth should slow.

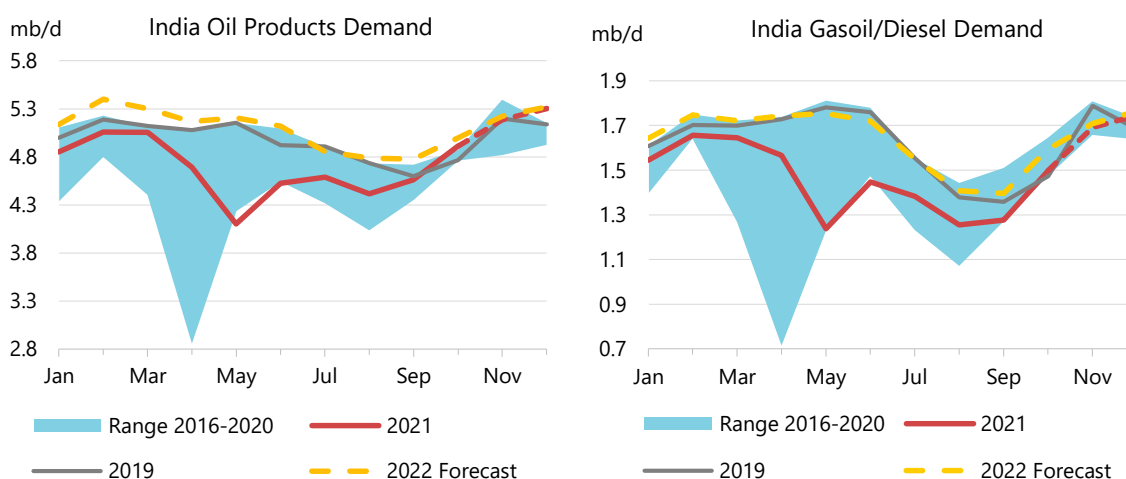
China: Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	1 737	1 837	2 131	2 225	293	94	16.0	4.4
Naphtha	1 338	1 444	1 623	1 759	179	136	12.4	8.4
Motor Gasoline	3 248	3 195	3 448	3 478	253	30	7.9	0.9
Jet Fuel & Kerosene	857	702	751	856	49	105	7.0	14.0
Gas/Diesel Oil	3 052	3 150	3 468	3 547	318	80	10.1	2.3
Residual Fuel Oil	432	433	451	470	17	19	4.0	4.3
Other Products	2 881	3 076	3 148	3 247	72	99	2.3	3.1
<b>Total Products</b>	<b>13 546</b>	<b>13 837</b>	<b>15 018</b>	<b>15 582</b>	<b>1 181</b>	<b>564</b>	<b>8.5</b>	<b>3.8</b>

Chinese oil demand declined slightly in 3Q21, by 20 kb/d q-o-q, but rose by a steep 610 kb/d from 3Q20, on strong road fuel and petrochemical demand. We expect 4Q21 demand to be 10 kb/d lower q-o-q, with a slowdown in gasoline demand more than offsetting a mediocre recovery in jet/kerosene and an increase in naphtha and LPG. Overall demand for 2021 is expected to increase by 1.2 mb/d y-o-y and should be 1.5 mb/d above 2019 levels. Demand in 2022 is expected to rise by 560 kb/d y-o-y.

## India

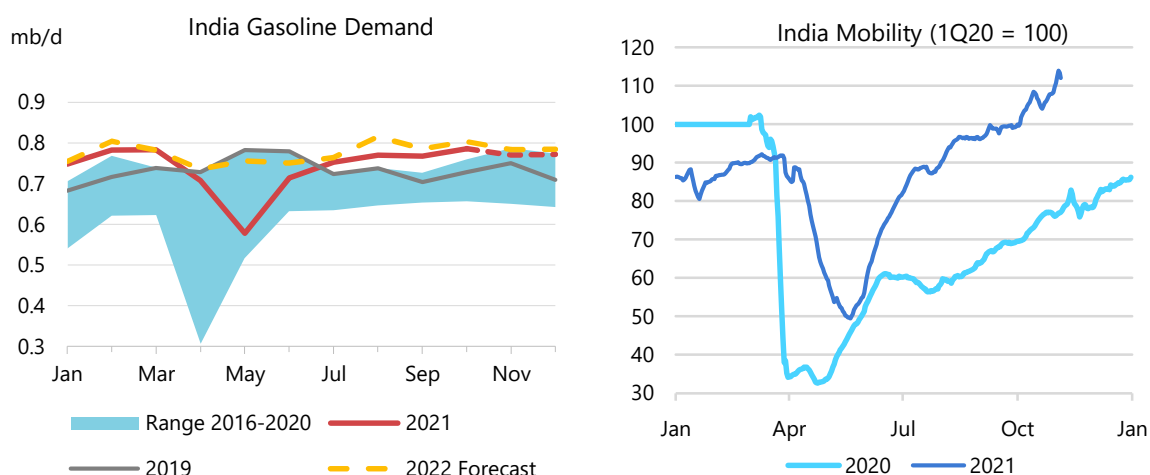
India's economic environment remains positive, with *IHS Markit Manufacturing PMI* rising to 55.9 in October from 53.7 in September. Mobility data were very strong in October, up by 10% m-o-m.

Overall oil deliveries in India rose by 350 kb/d m-o-m in October, reflecting typical seasonal developments. Gasoil demand rose by 220 kb/d. Oil demand in October was 150 kb/d above 2019.



Gasoline demand remained strong in October, up 25 kb/d y-o-y and 60 kb/d higher than pre-Covid levels. This is confirmed by mobility data, increasing strongly in recent weeks.

Gasoil demand in 4Q21 is expected to be supported by increased use from back-up electricity generators. In October, India suffered its highest power shortages in more than five years due to low coal stocks at power plants. Facing a strong increase in international coal prices, power plants cut their imports of coal, driving inventories to very low levels. After the government pressed miners to raise output, coal supplies are increasing, allowing power plants to start rebuilding stocks. As of 5 November, coal inventories at power plants averaged seven days, up from four days mid-October. Electricity shortages impacted mainly Gujarat, Jharkhand, Punjab and Rajasthan. We estimate that the use of back-up generators is adding roughly 40 kb/d to gasoil demand in 4Q21.



Data from OAG shows a small increase in air traffic in September (2.3% m-o-m) and an acceleration in October, 10.5% m-o-m, reflected in jet/kerosene demand (+15 kb/d m-o-m in September and +10 kb/d in October).

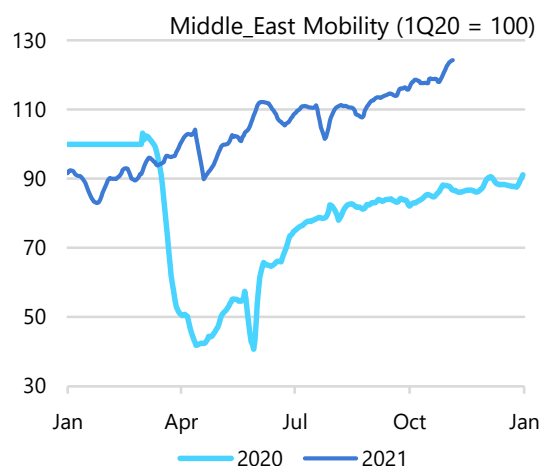
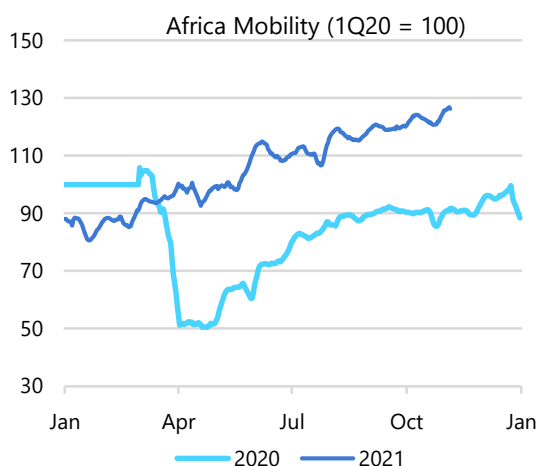
India: Demand by Product								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2022	2021	2022	2021	2022
LPG & Ethane	837	869	894	920	25	26	2.8%	2.9%
Naphtha	308	318	325	348	7	23	2.2%	7.1%
Motor Gasoline	734	667	746	779	79	32	11.9%	4.3%
Jet Fuel & Kerosene	225	120	131	155	11	24	9.1%	18.2%
Gas/Diesel Oil	1 667	1 414	1 536	1 687	122	150	8.7%	9.8%
Residual Fuel Oil	145	136	145	155	9	11	6.5%	7.3%
Other Products	1 076	1 016	1 001	1 073	- 15	72	-1.5%	7.2%
<b>Total Products</b>	<b>4 991</b>	<b>4 540</b>	<b>4 778</b>	<b>5 115</b>	<b>238</b>	<b>337</b>	<b>5.2%</b>	<b>7.1%</b>

Deliveries in 3Q21 increased by 85 kb/d q-o-q following the easing of Covid restrictions. Growth should quicken in 4Q21 (+610 kb/d q-o-q) supported by seasonal gasoil and LPG demand. We expect 4Q21 deliveries to be 100 kb/d above pre-pandemic levels. Annually, Indian oil demand is expected to increase by 240 kb/d in 2021 and 340 kb/d in 2022.

## Other Non-OECD

In **Africa**, we estimate that demand slowed by 75 kb/d q-o-q in 3Q21 to 3.9 mb/d. 3Q21 was about 190 kb/d higher than the same period in 2020, but 230 kb/d lower than 3Q19. Egyptian fuel deliveries rose by 40 kb/d m-o-m in August, probably reflecting lower gas availability.

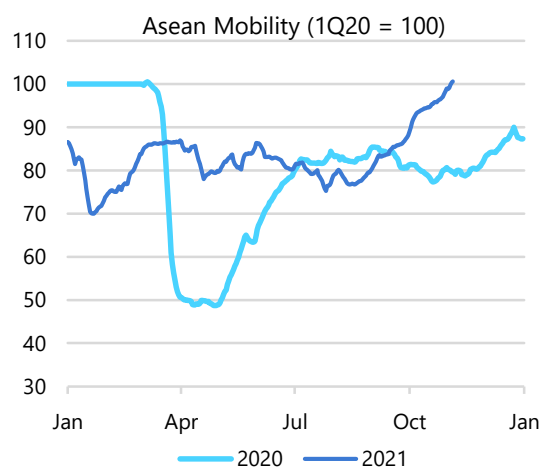
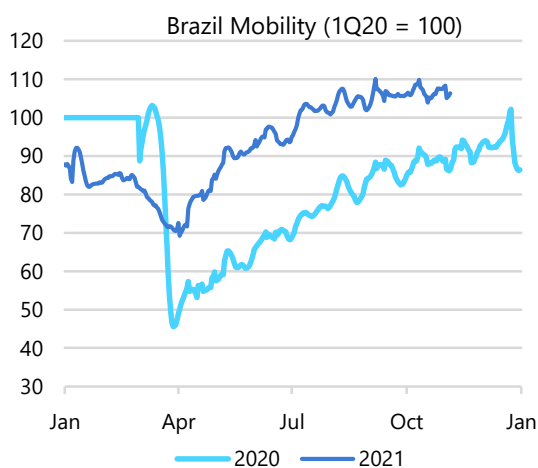




In the **Middle East**, demand rose by 530 kb/d q-o-q in 3Q21 as strong electricity use for air conditioning during the summer supported fuel oil and direct crude burning. In 3Q21, demand was about 150 kb/d higher than the same period in 2020, but 340 kb/d lower than 3Q19. Rising mobility is expected to push gasoline deliveries up by 50 kb/d q-o-q in 4Q21 and by 100 kb/d y-o-y. Gasoline will end 2021 only 60 kb/d below 2019 levels.

**Saudi Arabian** demand increased 100 kb/d m-o-m in August, supported by strong fuel oil deliveries (+110 kb/d). Gasoil deliveries also rose by 40 kb/d m-o-m. Total demand in August remained 80 kb/d below 2020 and 170 kb/d below pre-Covid levels.

**Brazilian** oil deliveries rose by 10 kb/d m-o-m in September. *IHS Markit Brazil Manufacturing PMI* fell from 54.4 in September to 51.7 in October. While the index remained in positive territory, it pointed to slowing m-o-m growth. Supply chain disruptions contributed to reduced industrial activity. Gasoil demand was 30 kb/d lower m-o-m while gasoline demand rose by 40 kb/d. Compared with the same period in 2019, September oil demand was about 90 kb/d stronger due to higher gasoil consumption.



Brazilian gasoil demand has been rising seasonally since March, due to the harvest season demand. The use of gasoil in power generation to offset reduced hydroelectricity generation has also supported growth. The hydroelectricity situation is getting better, however, and we assume lower additional gasoil demand during 4Q21 and 1Q22. Brazilian mobility appears to be

plateauing and gasoil demand posted a small decline in September (-30 kb/d m-o-m) and is set to continue to decline (-20 kb/d) in October.

In **Argentina**, demand remained roughly unchanged m-o-m in September. Oil deliveries were up 90 kb/d y-o-y to 620 kb/d. For the first time, demand was (10 kb/d) higher than pre-Covid levels.

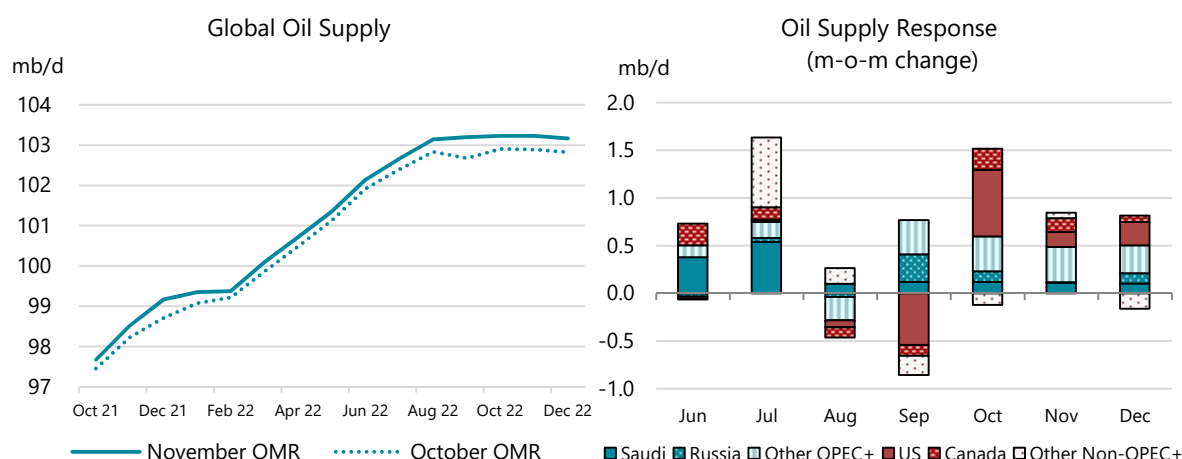
Non-OECD: Demand by Region								
(thousand barrels per day)								
	Demand				Annual Chg (kb/d)		Annual Chg (%)	
	3Q19	1Q21	2Q21	3Q21	2Q21	3Q21	2Q21	3Q21
Africa	4 136	4 070	3 985	3 911	574	191	16.8	5.1
Asia	27 271	28 083	28 057	27 788	2 664	984	10.5	3.7
FSU	4 902	4 557	4 681	4 935	630	282	15.5	6.1
Latin America	6 384	5 845	5 900	6 217	912	519	18.3	9.1
Middle East	8 659	7 670	7 794	8 321	709	146	10.0	1.8
Non-OECD Europe	797	743	739	825	59	59	8.7	7.7
<b>Total Products</b>	<b>52 148</b>	<b>50 967</b>	<b>51 155</b>	<b>51 996</b>	<b>5 548</b>	<b>2 180</b>	<b>12.2</b>	<b>4.4</b>

**ASEAN** countries are bouncing back from the latest Covid wave. Mobility increased strongly in September and October as most countries are re-opening. Oil demand in ASEAN countries (including Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam) is expected to average 6.2 mb/d in 2021 and 6.6 mb/d in 2022, compared with 5.9 mb/d in 2020 and 6.6 mb/d in 2019.

# Supply

## Overview

Oil production in the US is ramping up in tandem with stronger oil prices, leading world supply growth through the end of this year (see Box *US LTO ramp-up: Rigs, returns and restraint*). We now forecast a rise of 1.5 mb/d in global oil output from October through December, with the US alone set to account for 400 kb/d of those gains. Saudi Arabia and Russia between them contribute 330 kb/d in line with their allocated OPEC+ targets. By December, Saudi Arabia and Russia are each set to pump more than 10 mb/d of crude oil for the first time since April 2020. Global oil supply has been revised 330 kb/d higher for 4Q21, to reach 99.2 mb/d by year-end, up 6.4 mb/d year-on-year (y-o-y).



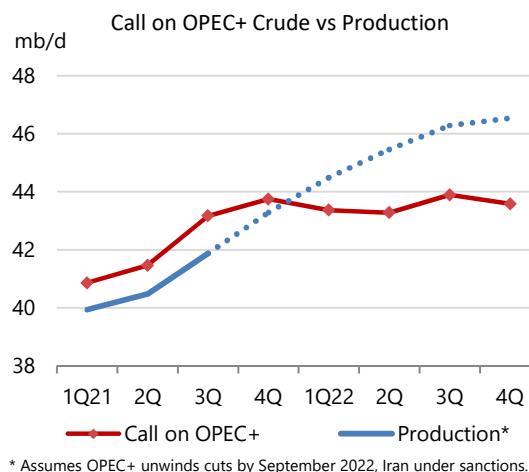
The US had already roared back from Hurricane Ida in October, accounting for half of an overall 1.4 mb/d month-on-month (m-o-m) increase that pushed world oil production to 97.7 mb/d for the month. Kazakhstan delivered a substantial post-maintenance gain of 260 kb/d, while Saudi Arabia and Russia ramped up as OPEC+ further eased 2020 curbs. Altogether, total OPEC+ oil supply, including condensates and NGLs, rose 610 kb/d to 50.5 mb/d. That still left the bloc with ample effective spare crude oil capacity of 6 mb/d, excluding Iranian crude shut in by sanctions.

As more wells open in the US shale patch, we have revised up our forecast for growth by 90 kb/d this year and 170 kb/d in 2022. Those more robust expectations will boost the world oil supply outlook, but US production is still expected to lag behind pre-Covid rates until the end of next year. Global oil production will see annual growth in 2021 of 1.5 mb/d, with OPEC+ making up 1 mb/d and those outside the alliance (non-OPEC+) the remainder. In 2022, if OPEC+ were to completely unwind its cuts, there could be a potential gain of 6.5 mb/d, with OPEC+ up by 4.5 mb/d and non-OPEC+ rising by 1.9 mb/d. The US will account for nearly 60% of non-OPEC+ growth next year.

While stronger oil prices are prompting some US producers to pump more, that is not the case with OPEC+. At their meeting in early November, ministers chose to hold firm with their existing policy to raise output by 400 kb/d a month despite calls from major consumers such as the US, Japan and India for a higher increase. They are due to meet again on 2 December.

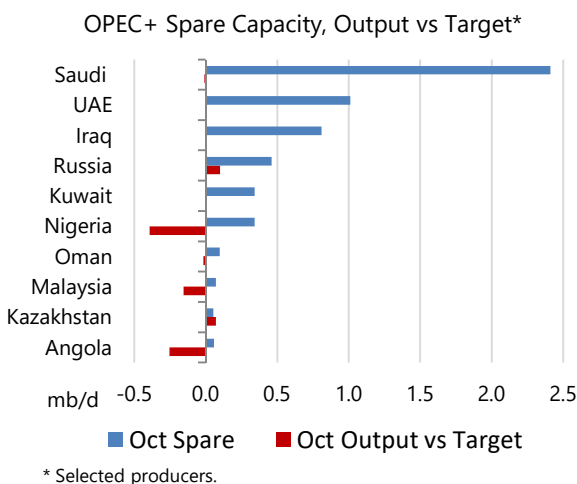
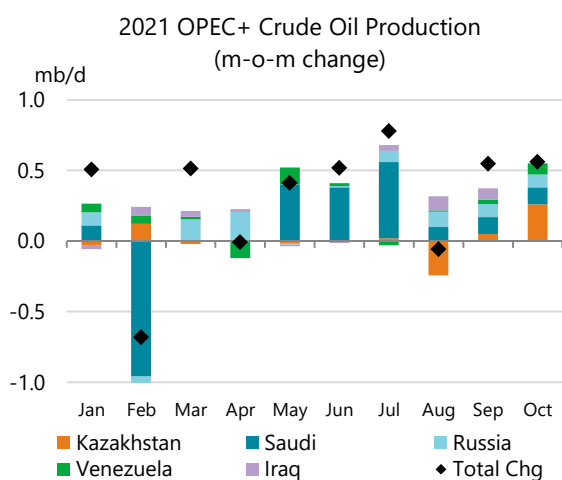
Higher anticipated flows from the US have slightly loosened our balances compared to last month's *Report*. We now expect OPEC+ to pump 460 kb/d below the requirement for its crude in 4Q21 (versus 700 kb/d previously).

In 1Q22, the group could pump 1.1 mb/d above the call on its crude, provided it continues to unwind its cuts and assuming Iran remains under sanctions. By 2Q22, OPEC+ crude oil output could rise to 2.2 mb/d above the call. The potential 2022 inventory builds could offset a prolonged period of stock draws that are set to last until the end of 2021.



## Kazakhstan leads OPEC+ boost

OPEC+ crude oil supply rose 560 kb/d in October to 42.79 mb/d, led by a rebound in output from Kazakhstan. Saudi Arabia and Russia ramped up significantly, while Venezuela, exempt from supply cuts, saw a solid gain thanks to the arrival of Iranian condensate that bolstered output of upgraded Orinoco crude.



Despite the substantial m-o-m increase, output remained far short of the overall OPEC+ target as Nigeria, Angola and Malaysia continue to struggle with operational and technical issues exacerbated by the difficult working environment caused by Covid-19. As a group, the 19 members subject to supply cuts pumped 730 kb/d below target in October (Nigeria and Angola accounted for 640 kb/d between them), to deliver a compliance rate of 116%. While not impacting current supply rates, the challenges from Covid-19 have also hit Kuwait, which substantially downgraded its production capacity (see *Kuwait seeks to boost capacity following sharp losses*).

During October, output of crude from OPEC members increased by 240 kb/d to 27.42 mb/d, with Saudi Arabia and Venezuela, which returned to pre-Covid rates, leading the gains. Crude

flows from the alliance's non-OPEC countries rose 320 kb/d to 15.37 mb/d, driven higher by Kazakhstan and Russia. In line with its agreement, the bloc will further ease curbs for November, with cuts versus baseline production at 4.2 mb/d, down from the record 9.7 mb/d when they were first enforced in May 2020.

OPEC+ Crude Oil Production <sup>1</sup>							
(million barrels per day)							
	Sep 2021 Supply	Oct 2021 Supply	October Compliance	Oct 2021 Target	Nov 2021 Target	Sustainable Capacity <sup>2</sup>	Spare Cap vs Oct
Algeria	0.94	0.95	93%	0.94	0.95	1.01	0.06
Angola	1.11	1.11	253%	1.36	1.38	1.17	0.06
Congo	0.28	0.28	129%	0.29	0.29	0.29	0.01
Equatorial Guinea	0.10	0.09	285%	0.11	0.12	0.12	0.03
Gabon	0.18	0.16	129%	0.17	0.17	0.21	0.05
Iraq	4.15	4.15	100%	4.15	4.19	4.96	0.81
Kuwait	2.47	2.50	102%	2.51	2.53	2.84	0.34
Nigeria	1.25	1.24	297%	1.63	1.65	1.58	0.34
Saudi Arabia	9.68	9.80	101%	9.81	9.91	12.21	2.41
UAE	2.80	2.83	99%	2.83	2.86	3.84	1.01
<b>Total OPEC-10</b>	<b>22.96</b>	<b>23.11</b>	<b>124%</b>	<b>23.79</b>	<b>24.05</b>	<b>28.23</b>	<b>5.12</b>
Iran <sup>3</sup>	2.46	2.46				3.80	1.34
Libya <sup>3</sup>	1.15	1.16				1.20	0.04
Venezuela <sup>3</sup>	0.61	0.69				0.69	0.00
<b>Total OPEC</b>	<b>27.18</b>	<b>27.42</b>				<b>33.92</b>	<b>6.50</b>
Azerbaijan	0.59	0.59	168%	0.64	0.65	0.63	0.04
Kazakhstan	1.33	1.60	61%	1.52	1.54	1.65	0.05
Mexico <sup>4</sup>	1.67	1.66		1.75	1.75	1.67	0.01
Oman	0.76	0.77	116%	0.79	0.80	0.87	0.10
Russia	9.82	9.91	92%	9.81	9.91	10.37	0.46
Others <sup>5</sup>	0.86	0.84	223%	0.99	1.00	0.95	0.11
<b>Total Non-OPEC</b>	<b>15.05</b>	<b>15.37</b>	<b>103%</b>	<b>15.50</b>	<b>15.65</b>	<b>16.14</b>	<b>0.77</b>
<b>OPEC+-19 in cut deal<sup>6</sup></b>	<b>36.33</b>	<b>36.82</b>	<b>116%</b>	<b>37.54</b>	<b>37.94</b>	<b>42.70</b>	<b>5.88</b>
<b>Total OPEC+</b>	<b>42.23</b>	<b>42.79</b>				<b>50.06</b>	<b>7.27</b>

1 Excludes condensates.

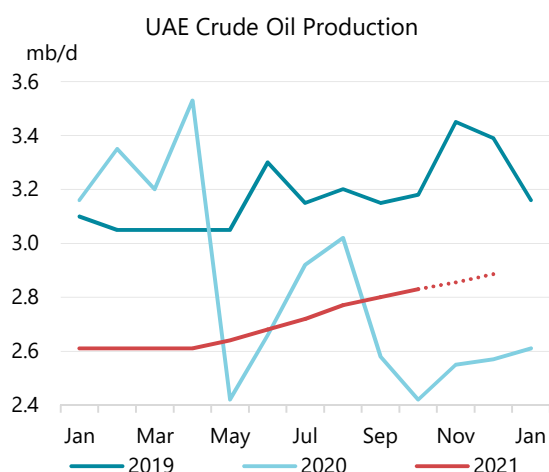
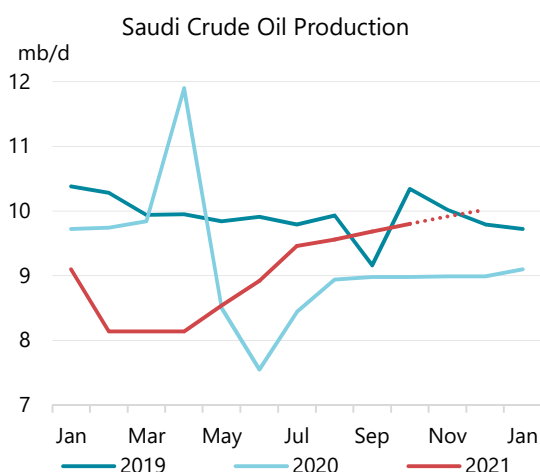
4 Mexico excluded from OPEC+ compliance. Only cut in May, June 2020.

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

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

3 Iran, Libya, Venezuela exempt from cuts.

**Saudi Arabia** pumped 9.8 mb/d during October (+120 kb/d m o m and +820 kb/d y-o-y), a touch below its higher quota. As per the new OPEC+ deal, the kingdom's supply target in November will rise to 9.91 mb/d, which would leave 2.3 mb/d to spare. Saudi Aramco has meanwhile pledged to achieve net zero emissions by 2050 as part of the kingdom's stated aim to reach that goal on a national basis by 2060.



At the same time, Aramco is pushing ahead with plans to boost production capacity to 13 mb/d by 2027. That has resulted in higher spending: its capital expenditure was \$7.6 billion in 3Q21, up 19% from a year earlier.

Saudi Arabia's net zero emissions plan follows the UAE's earlier announcement to reach that target by 2050 by investing \$163 billion in renewables. The UAE also intends to boost crude oil capacity at the same time. During October, crude oil production in the **UAE** edged up to 2.83 mb/d and rose to 2.5 mb/d in **Kuwait**. Output in **Oman** increased slightly to 770 kb/d while production from **Bahrain** eased to 170 kb/d.

Supply from **Iraq**, including the Kurdistan Regional Government, held steady at 4.15 mb/d (+350 kb/d y-o-y), in perfect compliance with its October quota. Total Iraqi shipments of crude eased 30 kb/d to 3.46 mb/d due to lower exports from the north. Roughly 450 kb/d was shipped from the region and the remainder from terminals in the Gulf. Basrah Medium accounted for 1.15 mb/d of those southern shipments, Basrah Heavy at 1.02 mb/d and Basrah Light at 840 kb/d. Iraq's State Organization for Marketing of Oil will halt shipments of Basrah Light from January following its decision to divert its lighter grade for domestic use.

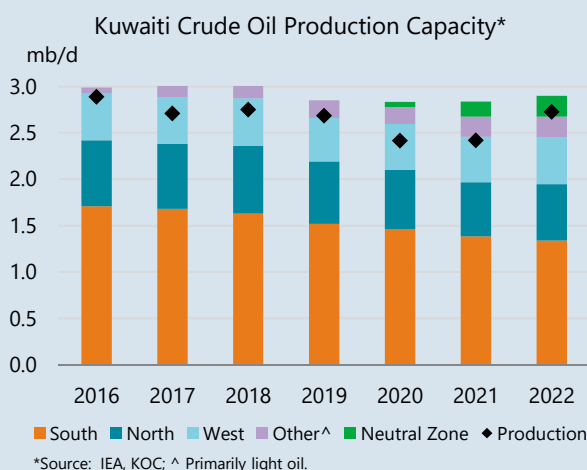
**Iran**, exempt from output cuts, held crude oil production steady in October at 2.46 mb/d (+500 kb/d y-o-y). Talks to revive its 2015 nuclear deal with world powers, which would enable a more substantial supply recovery, are set to resume on 29 November. If sanctions are eased, we believe Iran will be able to ramp up swiftly towards sustainable production capacity of 3.8 mb/d.

On the upstream front, Tehran is looking to the oil fields of North and South Azadegan, Yaran and Yadavaran to drive future growth. It reckons that a 1 mb/d boost from these core West Karun oil fields would require investment of up to \$11 billion.

### Box 2. Kuwait seeks to boost capacity following sharp losses

Following three straight years of declines, Kuwait has vowed to rebuild its crude production capacity through an ambitious drilling programme and more investment in infrastructure. The challenges arising from Covid-19 saw capacity drop by 180 kb/d to 2.63 mb/d (excluding the Neutral Zone shared equally with Saudi Arabia) for the financial year ending March 2021, Kuwait Oil Co (KOC) reported.

As a result, we have lowered our 2021 capacity estimate to 2.84 mb/d (including 160 kb/d of Kuwait's share of Neutral Zone capacity). That is a 160 kb/d downward revision from our *Oil 2021* outlook issued in March. The 2022 estimate shows only a marginal rise on this year, but capacity of 2.9 mb/d would allow Kuwait to fully unwind its cuts under the OPEC+ deal. We see slightly higher Neutral Zone capacity (220 kb/d for Kuwait) helping to offset further declines in the south, home to the giant Burgan oil field, which has suffered the steepest losses. Ongoing work may help stabilise output elsewhere.

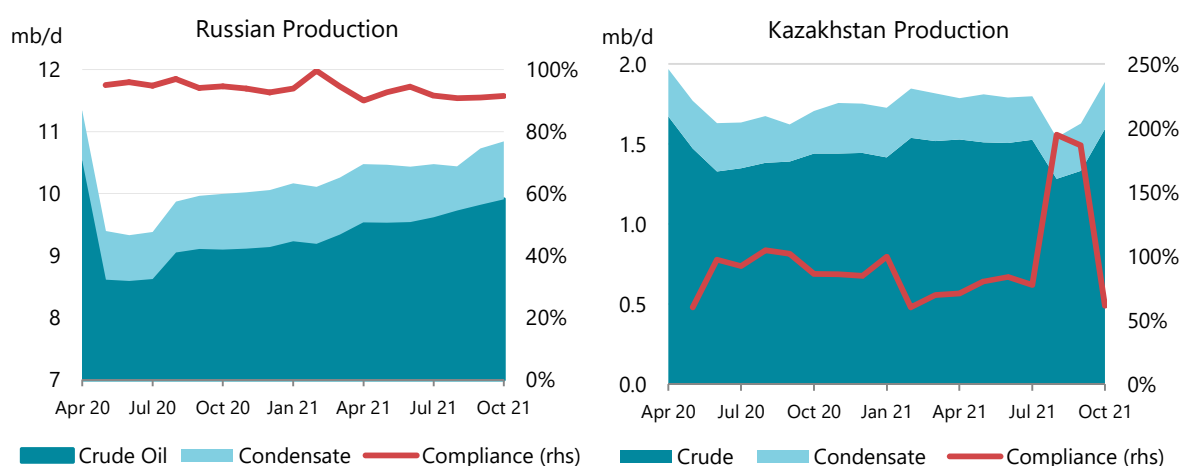


As for the 2021 KOC capacity figure, Hashem Hashem, CEO of parent company Kuwait Petroleum Corp says it “doesn’t provide a complete picture of the Kuwaiti oil sector’s performance in general, nor KOC’s performance”. He acknowledged that Covid-19 had significantly impacted several expansion projects, but said a new gathering centre to process 100 kb/d of crude had recently started up along with new facilities to handle 60 kb/d of Lower Fars Heavy Oil.

Over the next two years, he says capacity will rise by 500 kb/d thanks to an annual drilling programme of 500 wells, construction of two gathering centres as well as water injection facilities and other infrastructure that are now underway. In that case, domestic capacity would rise to 3.2 mb/d in 2025. An additional 350 kb/d from Kuwait’s share of the Neutral Zone could lift overall capacity above 3.5 mb/d. The offshore al-Khafji field and onshore Wafra were shut down for over four years, until 2020, due to a political dispute with Saudi Arabia. Hashem says the Neutral Zone will reach pre-closure rates of about 500 kb/d in 2022, increasing to 700 kb/d in 2023.

In our view, the capacity targets are likely to prove optimistic. Reviving and developing Kuwait’s ageing and complex oil fields (as well as those of the Neutral Zone) will require substantial investments to underpin the drilling effort along with more expensive Enhanced Oil Recovery technology.

Crude supply from **Russia** rose 90 kb/d in October to 9.91 mb/d, with compliance holding at 92%. Lukoil, Bashneft, Surgutneftegas and Rosneft all saw increases in crude production. Total oil supply, including condensates and NGLs, climbed by 110 kb/d m-o-m to 11.19 mb/d. Total condensate output for October edged up 20 kb/d to 930 kb/d. As per the OPEC+ pact, Russia’s crude oil supply target will rise by around 100 kb/d per month. For November, Russia would have to hold crude oil supply steady to meet its target of 9.91 mb/d.

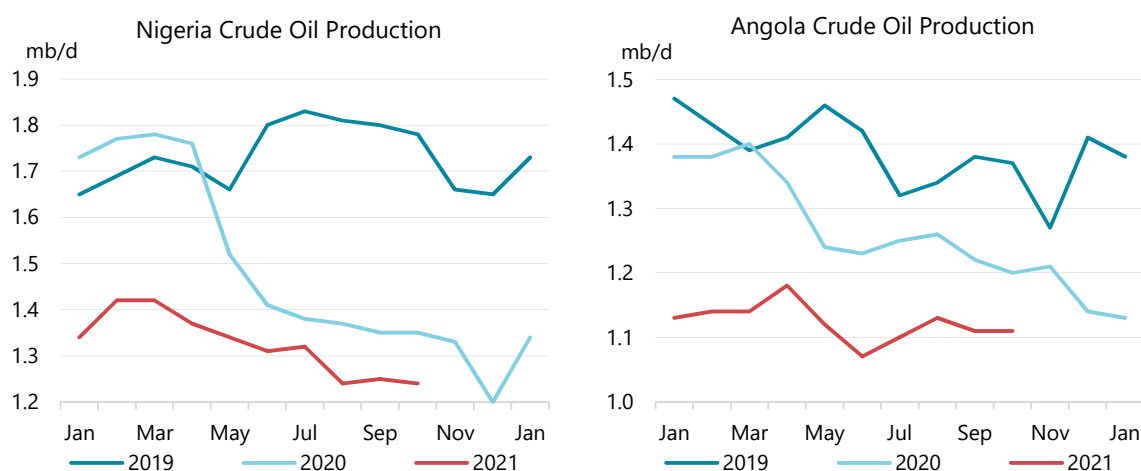


**Kazakhstan’s** output rose 260 kb/d to 1.6 mb/d in October, bolstered by higher flows from its Tengiz and Kashagan oilfields, which completed planned maintenance in September. The Chevron-led consortium that operates Tengiz has meanwhile started early flows from a \$45 billion project to boost output to 850 kb/d and support growth in the years ahead. Completion of the so-called Future Growth Project-Wellhead Pressure Management Project is

approaching 90%. Tengiz, the country's largest oil field, pumped an average 600 kb/d in the first seven months of this year prior to maintenance.

**Azeri** crude oil output held at 590 kb/d in October due to scheduled maintenance on the Chirag platform that started on 23 September and ran through mid-October. Output is expected to edge higher in November since maintenance is now finished at the platform, which pumps roughly 30 kb/d from the Azeri-Chirag-Guneshli fields in the Caspian Sea.

Combined production from African members of OPEC+ eased 20 kb/d versus the previous month. Production in **Nigeria** dipped in October to 1.24 mb/d, down 110 kb/d on a year ago, as operational issues and maintenance continued to restrict supply. Flows from Bonny Light declined further and Royal Dutch Shell declared *force majeure* on exports after a pipeline shut down. The Erha field, which had been producing around 60 kb/d in 3Q21, was offline for maintenance, while Forcados output recovered further.



In **Angola**, crude oil output in October was unchanged versus the previous month at 1.11 mb/d in October (-90 kb/d y-o-y). Damage to an underwater cable is expected to hamper operations in **Gabon** throughout 4Q21, with output in October slipping 20 kb/d to 160 kb/d. A military coup in **South Sudan** has yet to impact supply, with crude production in October holding steady at 160 kb/d. Crude oil production inched up in **Algeria**, held steady in **Sudan** and **Congo** and eased in **Equatorial Guinea**.

Output in **Libya**, exempt from official OPEC+ cuts, crept up in October to 1.16 mb/d (+710 kb/d y-o-y). Overall output was not impacted by a leak on a pipeline that delivers crude from the Waha Oil Co fields to the Es Sider export terminal. The country's oil sector is suffering from a lack of funding to revive ageing infrastructure that has been hit hard by a prolonged civil war. But there is some outside interest in the upstream. Tatneft, which signed four production service agreements with the Libyan National Oil Corp in the Ghadames and Sirte basins, has restarted seismic exploration in Block 4/82 in the al-Hamada area.

For Latin American members, spared from OPEC+ curbs, Venezuela saw a substantial increase in production while **Mexican** crude supply eased to 1.66 mb/d. Its total oil supply of 1.95 mb/d is expected to hold steady through 4Q21 and increase by 40 kb/d through 2022 as new fields offset existing declines.

Crude supply in **Venezuela** rose 80 kb/d in October to 690 kb/d (+290 kb/d y-o-y), the highest since February 2020, thanks to imports of Iranian condensate to dilute extra heavy Orinoco



crude. Output could rise further as the region's upgraders, now pumping around 400 kb/d, continue to ramp up. Petroleos de Venezuela (PDVSA) restarted the Petrocedeno upgrader after TotalEnergies and Equinor exited the joint venture in July. Petropiar, PDVSA's joint venture with Chevron, is also back in operation.

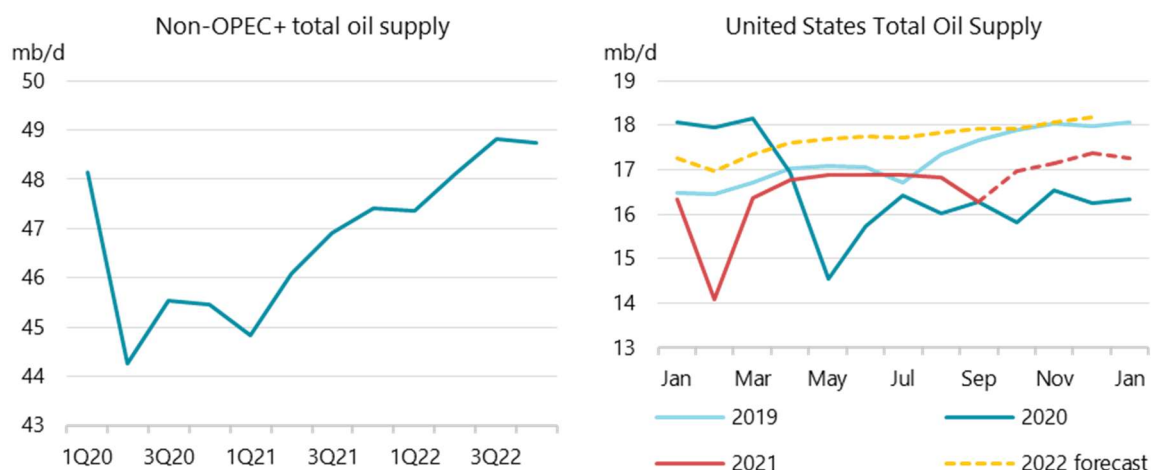
In Asia, **Malaysian** production remained restricted while repairs are carried out following a leak in a compressor at the Gumusut-Kakap project offshore Sabah. During October, crude output dipped to 380 kb/d (-55 kb/d y-o-y). In **Brunei**, crude supply held at 80 kb/d.

## US leads non-OPEC+ gains through 2022

A faster-than-expected recovery in US offshore production and steady gains in drilling activity in the shale patch, amid higher oil prices, are boosting the outlook for non-OPEC supply growth for the remainder of the year. Compared to our previous *Report*, non-OPEC+ production through 4Q21 has been revised up by 240 kb/d to 47.4 mb/d and by 170 kb/d in 2022, bringing forecast annual supply increases to 480 kb/d in 2021 and 1.9 mb/d next year.

Our 2022 forecast assumes continued growth of US light tight oil (LTO), NGLs, and in the Gulf of Mexico (GoM) production as well as fewer unplanned outages and normal maintenance schedules. Increased downtime has been a pervasive problem stemming from Covid-19 for the last 18 months.

In October, non-OPEC+ production rose by 800 kb/d m-o-m to 47.1 mb/d. Supply was up 2.1 mb/d y-o-y but off pre-Covid highs of 48.7 mb/d. Output increased on the return of US offshore production, US LTO, rising Norwegian production, and as maintenance ended at Canadian oil sands facilities and at offshore Ghana.



**US** supply rose sharply in October, by an estimated 700 kb/d to 17 mb/d. Gains were primarily driven by a return of US GoM crude oil production (+430 kb/d) post Hurricane Ida and by increased activity in the Permian Basin (+190 kb/d).

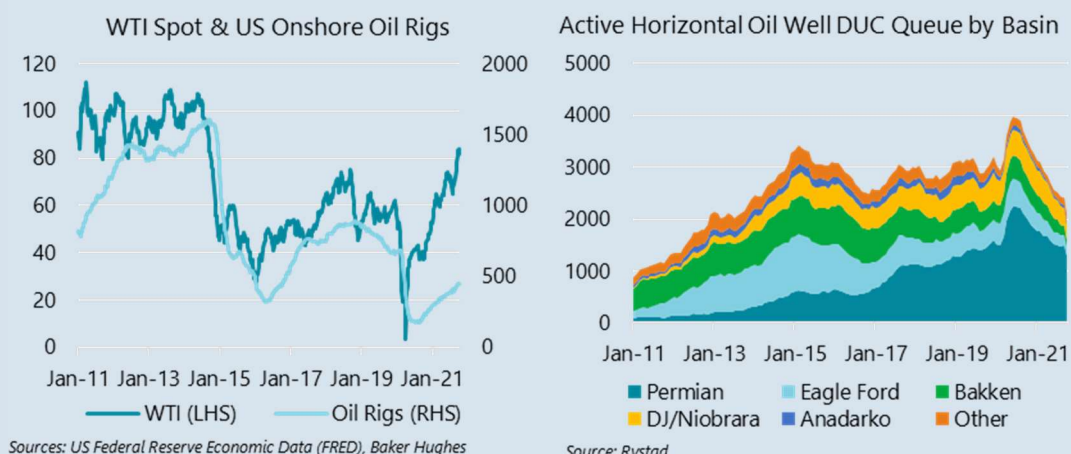
In early November, Shell announced that the Mars and Ursa fields had resumed operations with production passing through the now repaired WD-143 facility. Previously, Shell had estimated that WD-143 would be offline until 1Q22.

This development, as well as continued higher oil prices, have led to an upward revision of US production in this month's *Report*. The US 2021 exit rate has been adjusted higher by 370 kb/d, with 2021 production now forecast to increase 30 kb/d y-o-y to 16.6 mb/d compared to a projected decline of 60 kb/d previously. For 2022, annual supply is up by 170 kb/d for a total increase of 1.1 mb/d y-o-y. The 2022 gains are due primarily to LTO production growth of 710 kb/d (see *US LTO ramp up: Rigs, returns and restraint*). Increased supplies of NGLs (+200 kb/d) and from the Gulf of Mexico (+190 kb/d) are also contributing to stronger growth next year.

August data from the Energy Information Administration (EIA) show total US supply at 16.8 mb/d, down 70 kb/d m-o-m, with losses in GoM offset by record NGLs production and Alaska coming out of maintenance.

### Box 3. US LTO ramp up: Rigs, returns and restraint

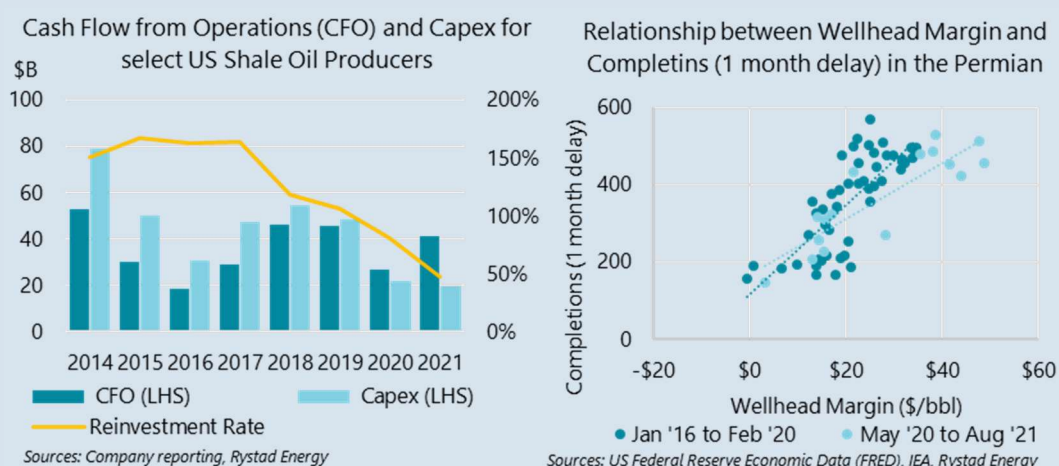
Higher oil prices are unlocking increased flows from the US shale patch, especially in the vital Permian Basin. We expect 710 kb/d more LTO during 4Q21 compared with a year ago and a further 710 kb/d in 2022 versus this year. The rig count is ramping up steadily, rising to 454 by mid-November, up 65% year-to-date and almost double that of a year ago, Baker Hughes data show. The gains look relatively tempered however, based on the historical relationship between WTI spot prices and onshore rigs.



For now, it is privately operated E&P companies that are drilling harder. They make up roughly half the US onshore horizontal oil and gas rig count, up from 35% pre-pandemic, according to *IHS Markit* data. However, in absolute terms they are still running fewer rigs than in 4Q19 (230 average monthly rigs in 4Q19 versus 210 in 3Q21). Independent E&Ps account for 40% of the rig count but are running 45% fewer rigs than in 4Q19. Global majors account for just 6% of the rig count compared to 18% pre-Covid; in part due to divestments and in part due to capital allocation.

As activity accelerates, operators have rapidly worked through the backlog of drilled but uncompleted (DUC) wells in the Eagle Ford, Bakken and Niobrara basins as the Permian regains its share of rigs. The DUC queue in the Permian Basin is roughly in line with 4Q18, but significantly higher than historical levels. The DUC inventory is important as it is the closest comparable US equivalent to OPEC spare capacity - buffering market volatility and informing capital allocation.

Additionally, monthly wellhead margins and the following month's completions for the Permian Basin show strong correlation. Using the NYMEX WTI forward curve and data on breakeven costs to project forward-looking margins suggests completion rates should hover around 480-550 per month into 2022. This, and modelling other basins, aligns with preliminary estimates given in 3Q21 earnings calls for 4Q21 and 2022 activity in the Permian Basin and other key US LTO basins. But private operators are more opaque; a further activity increase is expected in 2022 yet well productivity is less than publicly listed companies which is incorporated in our tempered view through 2022.



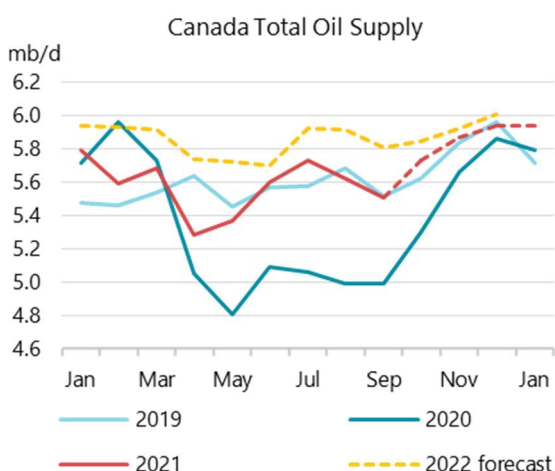
The recent earnings season shows that shareholder returns, supply chain issues and inflationary pressures are weighing heavily on the minds of banks and oil executives. The energy sector, when proxied by two exchange traded funds (ETFs), Energy Select Sector SPDR Fund (XLE) or SPDR S&P Oil & Gas Exploration & Production (XOP), has underperformed the broader S&P 500 index (SPY) by 15% and 22% per annum, respectively, over the last 10 years. Over the last 12 months, while prioritizing returning cash to investors, those two ETFs have outperformed the S&P 500 by 47% and 95%, respectively. Using the forward curve, 2022 re-investment rates are estimated to be between 35–50% for independent E&Ps.

To meet shareholder expectations, companies are continuing to signal capital restraint and have committed to dividend increases, special dividends, buy-back programmes and increased debt repayment. These trends look set to continue. Additionally, those that announced expected 2022 budgets anticipate modest rises in spending with efficiency measures offsetting an expected 10-15% cost escalation. But it may be hard for some companies to find the talent to execute this activity. According to the Dallas Fed's 3Q21 survey, 75% of oil and gas service firms were looking to staff up, of which 68% had difficulty hiring workers with lack of qualified workers and wages being oft-cited reasons.

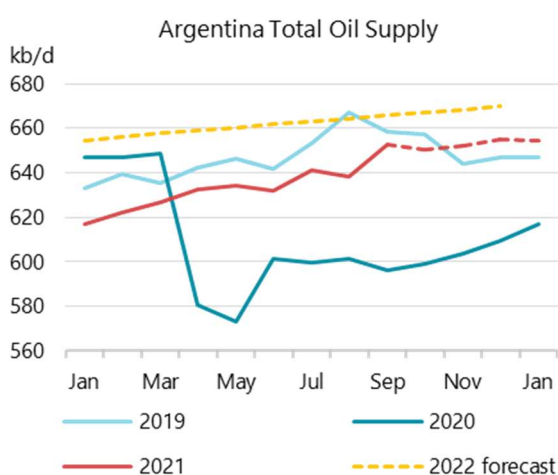
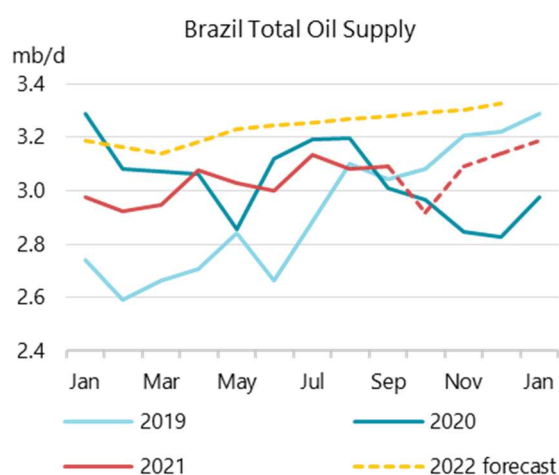
It remains to be seen how these factors will play out as OPEC+ continues to unwind cuts, and the macroeconomic environment and the energy transition continue to evolve. For now the US shale patch is more focused on returning cash than returning rigs.

**Canadian** production is estimated to have increased by 220 kb/d in October, to 5.7 mb/d, following the return of oil sands facilities from maintenance and restored output from Hebron offshore field.

In September, Canadian production fell by 120 kb/d, driven by a third consecutive month of declines in Alberta, falling by another 80 kb/d m-o-m according to data from the Alberta Energy Regulator. Provincial output is expected to increase modestly through year-end and into 2022. Recent earnings reports by Canadian oil sands behemoths suggest investment trends similar to US LTO companies: modest growth and returning capital to shareholders.



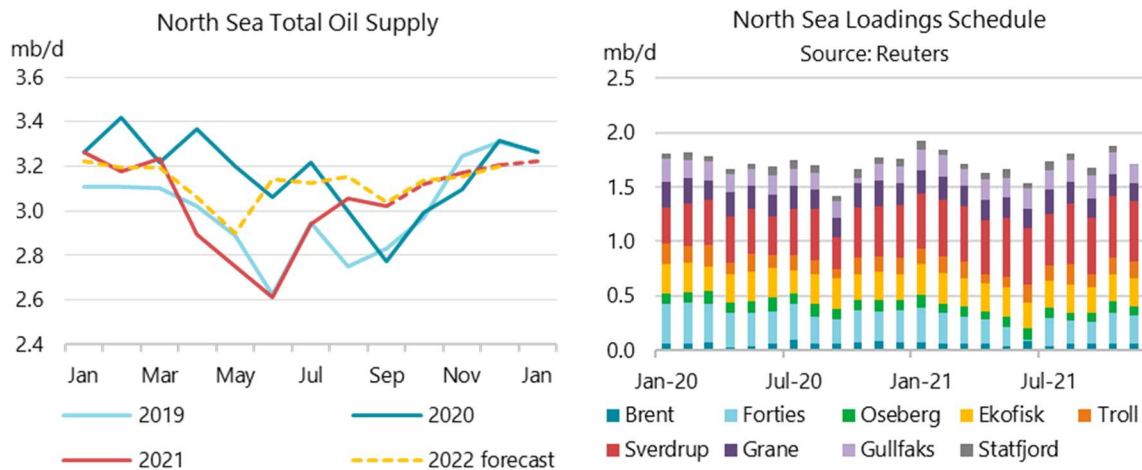
Atlantic Canada offshore production fell by 10 kb/d m-o-m to 240 kb/d, the lowest since September 2019, according to the Offshore Petroleum Board, on weaker output from the Hebron field. Atlantic offshore production is expected to post an annual decline of 20 kb/d y-o-y for 2021, however 2022 should be flat as ExxonMobil and Suncor have announced increases in activity. Additionally, Qatar Energy (formerly Qatar Petroleum) farmed in to ExxonMobil's EL 1165A block in the deep water Flemish Pass Basin off the coast of Canada's Newfoundland and Labrador province in the North Atlantic Ocean. Despite the challenging climate and difficult logistics, the project marks the first offshore Canada play for the Qatari NOC, where they will participate in the Hampden exploration well. This block is still a frontier area with only one previous well having been completed.



Preliminary daily data from the Agencia Nacional do Petroleo (ANP) show that **Brazilian** oil supply fell in October by 170 kb/d to 2.9 mb/d; mainly driven by maintenance on Buzios. Gains of close to 200 kb/d are forecast for Brazil in 2022. This strong growth assumes less unplanned outages than seen in 2021, a ramp up in flows from the Sepia field, new supply from the Mero field and that Equinor's Peregrino comes back online by 2Q22.

**Argentinean** production remained flat in September at 650 kb/d but is expected to grow modestly into the year-end as fracking activity continues to rise. In October, Vaca Muerta completions were up by 6.3% m-o-m and close to 300% since October 2019 according to Platts. At the same time, Neuquen crude exports were up 163% y-o-y through September at 5 mb (averaging 20 kb/d year to date) as increased Argentinean supply outpaced local demand. YPF and Shell provided more details about their development plans, highlighting the Bajada de Añelo block of the Vaca Muerta play where they plan on investing \$300 million over the next two years to drill 16 wells and build a processing plant capable of handling 15 kb/d and 2 million m<sup>3</sup>/d of gas.

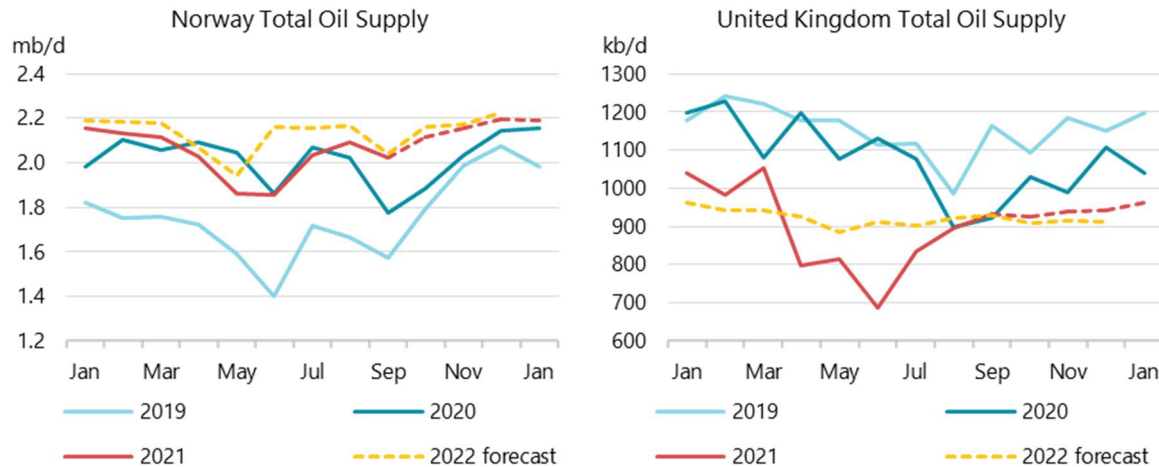
**Colombian** supply eased marginally to 740 kb/d in October despite a second month of pipeline attacks. Government data through September shows supply largely holding steady in 3Q21. However 2021 supply is still on track to fall 50 kb/d y-o-y, with very little progress toward achieving pre-pandemic levels of around 900 kb/d. In 2022, output is expected to slump a further 30 kb/d.



Preliminary loadings programmes show that North Sea supply rose in October, following seasonal maintenance in September. Loadings of Norway's Johan Sverdrup crude were slated to reach a record high of 570 kb/d in October and regional output was estimated at 3.1 mb/d (+100 kb/d m-o-m, +130 kb/d y-o-y). North Sea flows are expected to average 3 mb/d in 2021, down 120 kb/d y-o-y, the largest annual loss since 2013. In 2022, modest gains of 90 kb/d are anticipated thanks to rising Norwegian supply, while the UK holds broadly steady.

Data from the **Norwegian** Petroleum Directorate for September indicate that production slipped 70 kb/d m-o-m to 2 mb/d. The negative impact of seasonal maintenance, in particular at the Troll field, was partially offset by rising supply from Martin Linge, which came online in July and had already reached 30 kb/d in August. Aker BP announced first oil from Aerfugl Phase 2 in October. The satellite development is tied back to the Skarv Floating Production, Storage and Offloading (FPSO) vessel and will ramp up to around 20 kb/d. Less positive news came as Equinor announced a further delay to the Johan Castberg project. The 170 kb/d FPSO is now expected online in late 2024, having been originally planned for 2022.

A number of small projects due online in 4Q21 and 2022 will support annual gains of 70 kb/d in 2022, slightly higher than the 60 kb/d forecast for 2021. The second phase of Johan Sverdrup will be commissioned in 4Q22, raising the capacity of the field from 535 kb/d to 755 kb/d, higher than the previously announced target of 720 kb/d.



Department of Business, Energy and Industry data for September show that **UK** supply rose for a third consecutive month, by 40 kb/d m-o-m to 930 kb/d. Despite the completion of heavy work programmes associated with the full shutdown of the Forties pipeline in May and June, supply is still around 100 kb/d below 1Q21 levels. Production is expected to marginally increase through year end to 940 kb/d. Following an annual loss of 170 kb/d in 2021, UK annual flows are set to recover only 20 kb/d in 2022, to 920 kb/d.

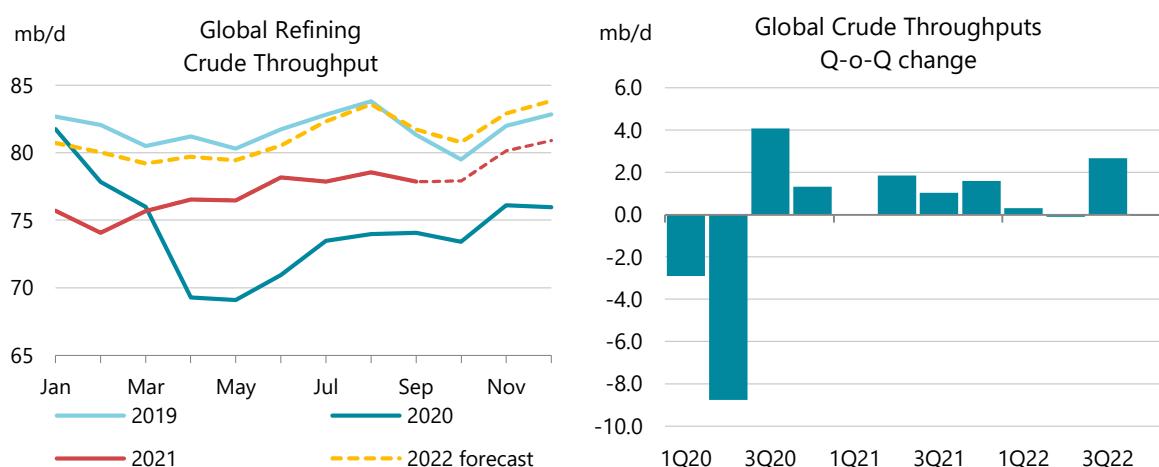
**Chinese** supply held steady at around 4.1 mb/d in October and is expected to remain around 150 kb/d above year-ago levels to the end of 2021. Healthy investment from domestic operators should sustain this level of output next year. **Indian** supply was estimated at 720 kb/d in October (-10 kb/d y-o-y) and **Indonesian** output was 680 kb/d (-60 kb/d y-o-y). **Ghanaian** production had almost returned to pre-maintenance levels of 160 kb/d.



# Refining

## Overview

Global refining throughput is on the rise after reaching a seasonal low in September, with crude intake set to ramp up by almost 3 mb/d in November and December. This month, global runs are expected to cross the 80 mb/d mark for the first time since January 2020 as China and India increase throughputs after particularly low 3Q21 levels. Overall, the global refining system in 4Q21 could see the last burst of significant quarterly growth before pausing for the first half of 2022 on slower seasonal demand and maintenance.



The ramp-up in November-December will only partly alleviate tight refined product markets, with 4Q21 refined product stocks expected to draw by another 1.2 mb/d. This could indicate upside potential to refinery runs. However, downside risks to refinery margins are also present. Adding to the usual uncertainties of demand developments, natural gas prices are a significant threat to refinery throughput rates. Refiners in Europe and Asia, which are gas-importing regions, are particularly exposed even as many tend to have longer-term contracts for natural gas supplies rather than purchasing it at spot rates. In theory, this could allow refiners in other regions, such as the US, Russia and the Middle East, which are either net gas exporters or have regulated gas prices for the industry, to increase their market share. In practice, some of these refiners are constrained by hydrogen production and hydrotreating capacity and won't be able to fully benefit from the opportunities that regional gas price differentials offer.

Overall, global refiners are expected to have restored some 3.2 mb/d of lost refining throughput this year, after a 7.3 mb/d decline in 2020. Next year, runs are forecast to increase by another 3.7 mb/d, with full recovery not to be achieved before 2023. Combining this with our estimate of refined products demand, resulting balances suggest that the product surplus from 2020 will have been mostly absorbed by the markets during 2021.

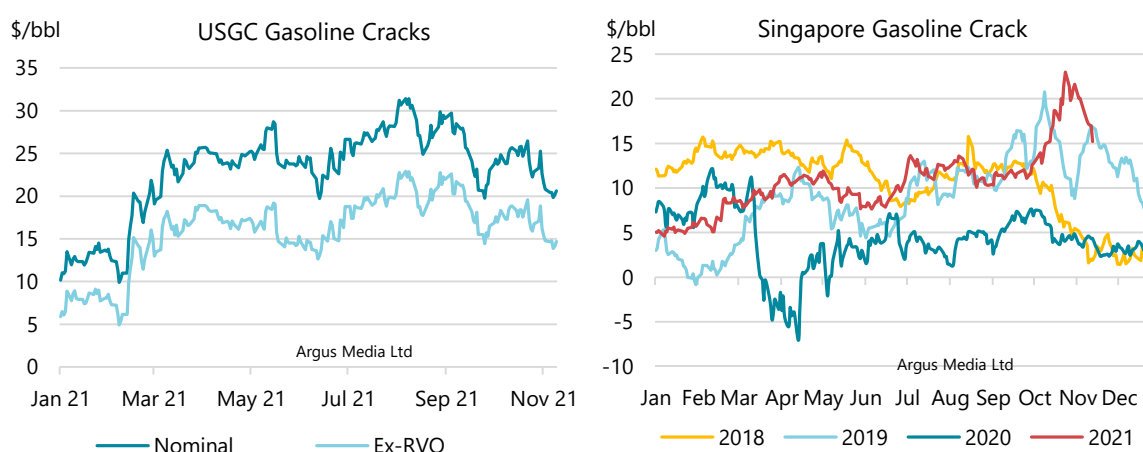
Global Refinery Crude Throughput <sup>1</sup>														
	(million barrels per day)													
	2019	2020	1Q21	2Q21	Aug-21	Sep-21	3Q21	Oct-21	Nov-21	Dec-21	4Q21	2021	1Q22	2022
Americas	19.1	16.5	16.5	18.1	18.2	17.8	18.1	17.6	18.3	18.8	18.2	17.7	18.0	18.8
Europe	12.2	10.7	10.2	10.7	11.6	11.3	11.4	11.0	11.3	11.2	11.2	10.9	11.4	11.4
Asia Oceania	6.8	5.9	5.8	5.5	6.0	5.8	5.8	5.8	6.0	6.1	6.0	5.8	5.7	5.8
Total OECD	38.0	33.1	32.5	34.2	35.9	35.0	35.3	34.4	35.6	36.1	35.4	34.4	35.2	36.0
FSU	6.8	6.4	6.6	6.6	7.0	6.7	6.7	6.7	6.9	7.1	6.9	6.7	6.9	6.9
Non-OECD Europe	0.5	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.5
China	13.0	13.4	14.0	14.3	13.7	13.6	13.7	13.7	14.0	14.1	13.9	14.0	14.1	14.3
Other Asia	10.3	9.2	9.5	9.4	9.1	9.5	9.4	9.7	10.0	10.1	9.9	9.6	10.2	10.1
Latin America	3.2	3.0	3.2	3.1	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.4	3.4
Middle East	7.8	6.8	7.1	7.1	7.4	7.6	7.4	7.7	7.8	7.8	7.8	7.4	7.7	8.0
Africa	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.9	2.0
Total Non-OECD	43.6	41.1	42.6	42.7	42.6	42.8	42.7	43.4	44.4	44.7	44.2	43.0	44.7	45.2
Total	81.6	74.2	75.1	77.0	78.4	77.8	78.0	77.8	80.0	80.8	79.5	77.4	79.9	81.1
Year-on-year change	-0.5	-7.4	-3.3	7.3	4.6	3.8	4.2	4.5	4.0	4.9	4.5	3.2	4.8	3.7

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

## Product cracks and refinery margins

Crude prices in October registered their steepest increase since June 2020, up by about \$9/bbl m-o-m. Nonetheless, product cracks continued the upward trend in October. September and October refined product balances implied the largest cumulative two-month deficit since 2010. Balances are expected to remain tight in November and December, but imply smaller draws.

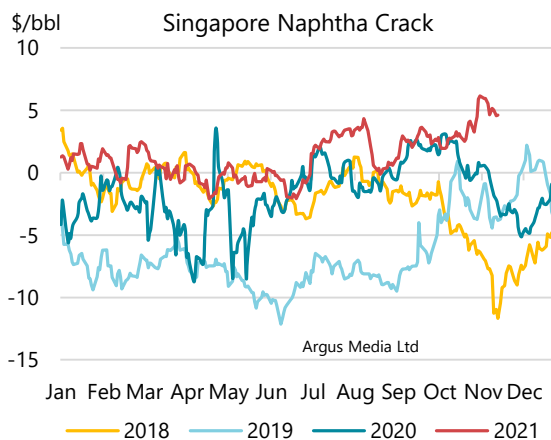
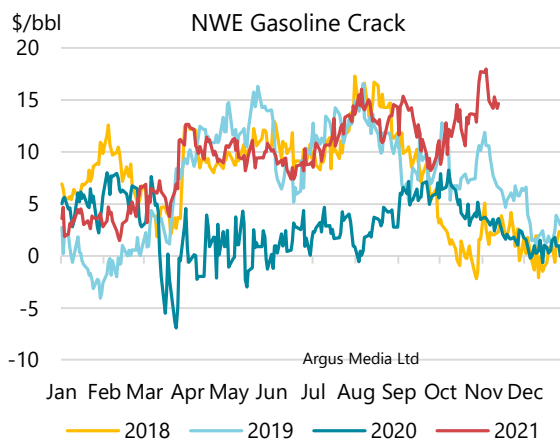
US Gulf Coast gasoline cracks fell seasonally in October, even as Renewable Volume Obligation (RVO) costs increased slightly m-o-m. Cracks net of RVO costs averaged \$17.60/bbl, down from an August peak of \$20.70/bbl. Singapore gasoline cracks were up by 50% m-o-m to \$17/bbl, the largest increase globally among all product cracks, due to refinery disruptions and strong demand. In early November, Singapore gasoline cracks spiked above \$20/bbl, exceeding even nominal US Gulf Coast cracks. Chinese gasoline exports fell by two-thirds in October, according to *Kpler* tanker tracking data, while imports rose. Official October product trade data will be published by the Chinese customs later this month.



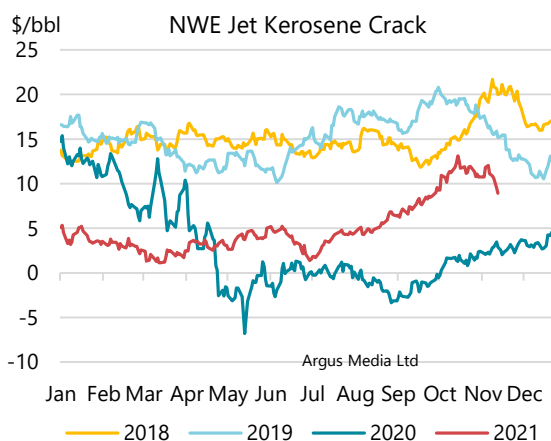
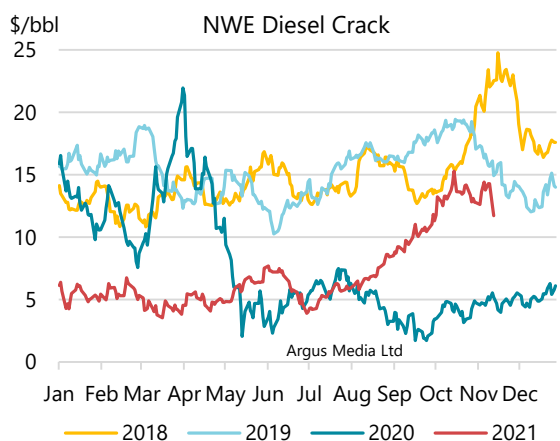
Gasoline cracks increased counter-seasonally in Europe, too, driven by robust regional demand and a tight global market. Specific local circumstances, such as low Rhine water levels, affected gasoline export availability by impeding barge traffic from inland refineries to the Amsterdam-



Rotterdam-Antwerp (ARA) trading hub. Naphtha was supported by strong gasoline and LPG prices and Asian cracker buying for the post-maintenance ramp-up in November and December. Singapore naphtha cracks reached record levels at end-October.

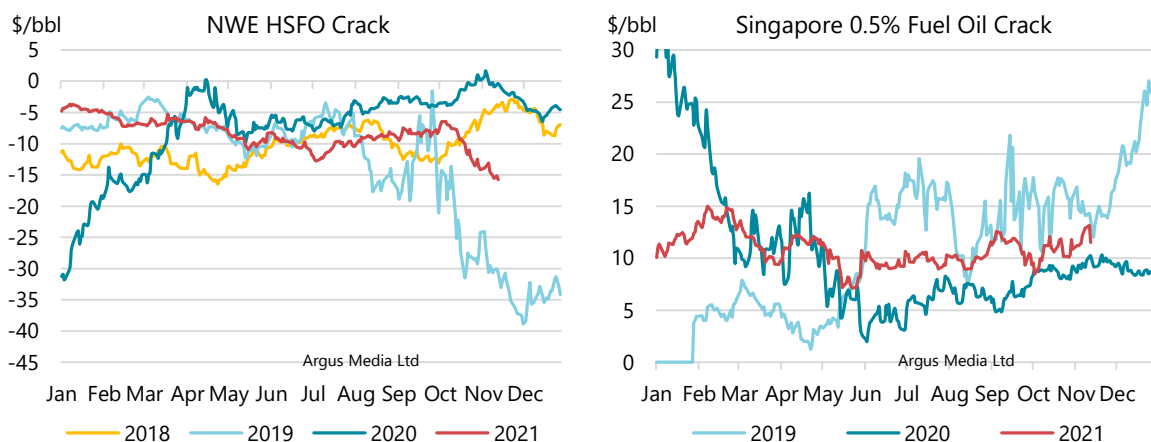


Distillate cracks across the globe all priced in double digits for the first time since January 2020. Jet kerosene cracks reached their highest rates since the January-February 2020 period on the continued air travel recovery. Diesel cracks also rose on relatively strong demand and constrained supply. Among premium transport fuels (gasoline, diesel and kerosene), diesel demand is closest to seasonal pre-pandemic levels, with only a small gap remaining in 4Q21. In addition to the generally tight supply-demand fundamentals, diesel cracks are likely also pricing in higher refining costs arising from a surge in natural gas prices. Among all refined products, diesel bears the highest hydrotreating costs. Diesel's higher density relative to gasoline and kerosene means that it naturally "inherits" more sulphur from crude oil than these two products. Diesel also has stricter sulphur specifications for its use as a road fuel compared to kerosene and fuel oils. Two refineries in Europe have reportedly shut their hydrocrackers due to the increased cost of hydrogen derived from natural gas.



High sulphur fuel oil cracks fell in October despite earlier expectations that the product would see increased demand to replace natural gas in power generation. October is a shoulder month in power generation between summer cooling demand and winter heating in Asia and the Middle East, traditionally leading to lower demand from the sector. Outages at two major

residue desulphurisation units in Korea and Kuwait also resulted in an increased availability of the product. Singapore 0.5% sulphur marine fuel oil cracks fell slightly in October.

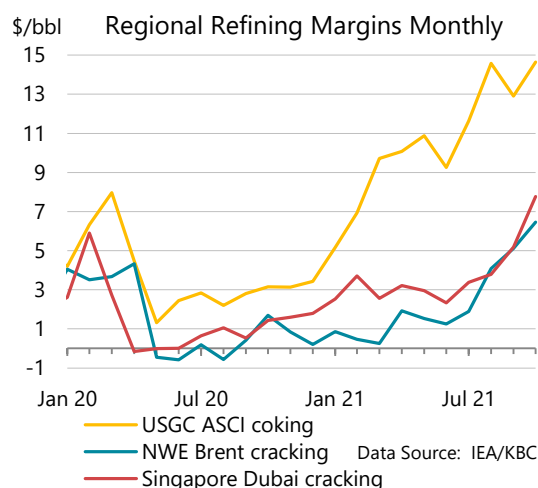
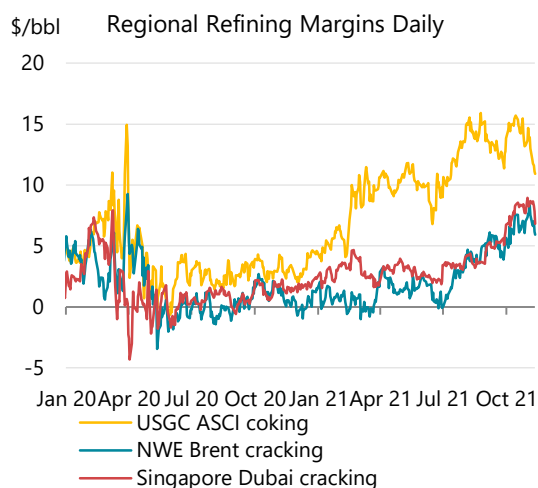


Spot Product Prices													
(monthly and weekly averages, \$/bbl)													
	Aug	Sep	Oct	Oct-Sep Chg	%	15 Oct	22 Oct	29 Oct	05 Nov	12 Nov	Aug	Sep	Oct
<b>Rotterdam, Barges FOB</b>													
Gasoline EBOB oxy	84.32	86.31	95.92	9.62	11.1	96.71	97.20	98.24	100.00	98.38	13.57	11.91	12.38
Naphtha	72.43	76.04	85.37	9.33	12.3	85.25	86.89	87.30	85.16	84.65	1.68	1.64	1.82
Jet/Kerosene	75.92	82.07	94.81	12.74	15.5	95.80	96.33	95.89	94.24	93.99	5.17	7.67	11.27
ULSD 10ppm	77.67	84.35	96.92	12.57	14.9	97.78	98.36	98.02	96.26	97.08	6.92	9.95	13.38
Gasoil 0.1%	76.03	82.90	95.22	12.32	14.9	96.43	96.80	95.26	93.26	94.47	5.28	8.51	11.68
VGO 2.0%	73.52	78.18	85.81	7.64	9.8	85.94	86.88	87.07	85.40	86.07	2.77	3.78	2.27
Fuel Oil 0.5%	76.51	81.33	90.22	8.89	10.9	90.60	92.80	91.10	88.35	88.65	5.76	6.94	6.68
LSFO 1%	69.35	74.86	82.72	7.86	10.5	82.96	83.57	82.82	80.41	79.91	-1.40	0.47	-0.82
HSFO 3.5%	61.71	66.05	74.26	8.21	12.4	76.12	74.28	72.00	69.31	68.55	-9.03	-8.35	-9.28
<b>Mediterranean, FOB Cargoes</b>													
Premium Unl 10 ppm	84.87	87.66	96.59	8.93	10.2	97.31	97.80	98.84	98.57	94.71	16.79	15.01	14.66
Naphtha	71.28	74.92	83.83	8.90	11.9	83.79	85.04	85.71	83.67	82.99	3.20	2.27	1.90
Jet Aviation fuel	75.05	81.21	93.58	12.37	15.2	94.55	94.80	94.74	93.09	92.65	6.97	8.56	11.64
ULSD 10ppm	77.54	84.05	96.44	12.39	14.7	97.31	97.80	97.42	95.38	95.59	9.47	11.40	14.51
Gasoil 0.1%	76.65	82.81	95.03	12.22	14.8	96.10	96.23	95.75	93.81	94.32	8.57	10.16	13.09
LSFO 1%	70.60	75.89	84.08	8.19	10.8	84.33	84.90	84.19	81.96	82.05	2.52	3.24	2.15
HSFO 3.5%	60.35	65.26	73.08	7.82	12.0	74.97	73.01	70.72	68.08	67.28	-7.72	-7.39	-8.86
<b>US Gulf, FOB Pipeline</b>													
Super Unleaded	96.96	97.86	106.50	8.65	8.8	106.65	109.05	107.71	105.00	102.90	28.64	25.26	24.40
Jet/Kerosene	76.45	84.05	96.22	12.17	14.5	97.25	97.46	96.93	95.39	95.21	8.13	11.46	14.12
ULSD 10ppm	84.70	90.38	103.07	12.69	14.0	104.00	105.00	103.37	100.97	100.60	16.38	17.79	20.96
Heating Oil	72.05	78.52	92.43	13.91	17.7	93.50	94.08	92.87	90.58	87.81	3.73	5.93	10.33
No. 6 3%*	60.92	65.20	72.89	7.69	11.8	74.83	73.00	71.41	68.46	67.76	-7.39	-7.40	-9.22
<b>Singapore, FOB Cargoes</b>													
Premium Unleaded	81.13	84.06	98.48	14.42	17.2	97.58	101.80	104.38	101.80	99.01	11.81	11.49	17.03
Naphtha	71.01	75.15	84.45	9.30	12.4	84.85	85.87	87.15	87.25	86.75	1.70	2.59	2.99
Jet/Kerosene	74.05	79.88	93.09	13.21	16.5	94.00	95.16	94.28	92.60	92.82	4.74	7.32	11.64
Gasoil 0.001%	76.53	82.92	95.49	12.57	15.2	96.68	97.45	96.33	94.81	95.40	7.22	10.35	14.04
Fuel Oil 0.5%	79.12	83.94	91.94	7.99	9.5	93.09	94.18	93.55	92.70	94.50	9.81	11.38	10.48
HSFO 180 CST	65.07	73.48	77.52	4.04	5.5	80.28	76.56	74.56	72.78	72.37	-4.24	0.91	-3.93
HSFO 380 CST 4%	63.34	70.30	76.02	5.73	8.1	79.14	75.45	72.88	71.08	71.01	-5.98	-2.27	-5.43

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\* Waterborne

With the strong increase in middle distillate cracks and higher gasoline and naphtha cracks in Europe and Asia, refinery margins gained in all seaborne hubs, but were down in the US Midwest. Singapore Dubai and US Gulf Coast sour cracking margins were at their highest since September 2017, while Northwest Europe Brent cracking margins rose to a two-year high.



IEA/KBC Global Indicator Refining Margins<sup>1</sup>  
(\$/bbl)

	Monthly Average				Change	Average for week ending:					
	Jul 21	Aug 21	Sep 21	Oct 21	Oct-Sep	15 Oct	22 Oct	29 Oct	05 Nov	12 Nov	
<b>NW Europe</b>											
Brent (Cracking)	1.89	4.09	5.11	6.44	↑ 1.34	6.86	6.66	6.73	7.73	6.51	
Urals (Cracking)	3.07	4.85	5.84	7.23	↑ 1.39	8.03	7.39	6.38	7.01	6.11	
Brent (Hydroskimming)	-0.79	1.23	2.60	3.22	↑ 0.62	3.50	3.31	3.14	3.46	2.34	
Urals (Hydroskimming)	-1.53	0.17	1.23	1.97	↑ 0.75	3.03	1.80	0.19	0.06	-0.85	
<b>Mediterranean</b>											
Es Sider (Cracking)	3.42	5.48	6.65	7.43	↑ 0.79	7.95	7.54	6.96	6.96	5.46	
Urals (Cracking)	1.77	4.69	5.38	6.71	↑ 1.33	7.40	6.78	5.98	6.02	4.88	
Es Sider (Hydroskimming)	1.70	3.78	4.88	4.92	↑ 0.03	5.33	4.89	4.18	4.01	2.68	
Urals (Hydroskimming)	-2.74	0.24	0.76	1.09	↑ 0.34	2.08	0.77	-0.57	-0.82	-2.00	
<b>US Gulf Coast</b>											
Mars (Cracking)	6.32	9.86	8.10	9.51	↑ 1.41	10.61	9.06	8.28	7.80	5.47	
50/50 HLS/LLS (Coking)	14.47	17.31	16.25	17.48	↑ 1.24	18.20	17.78	16.29	16.15	14.13	
50/50 Maya/Mars (Coking)	9.34	12.64	11.22	12.12	↑ 0.90	12.70	12.17	11.06	10.98	8.99	
ASCI (Coking)	11.64	14.57	12.91	14.64	↑ 1.72	15.31	14.71	13.97	13.84	11.51	
<b>US Midwest</b>											
30/70 WCS/Bakken (Cracking)	14.80	16.90	14.03	13.06	↓ -0.97	13.77	12.57	9.99	11.26	10.72	
Bakken (Cracking)	17.33	19.23	16.55	14.78	↓ -1.77	15.24	14.24	11.14	12.26	10.67	
WTI (Coking)	17.82	20.00	17.29	15.58	↓ -1.71	16.66	14.29	11.10	12.42	10.60	
30/70 WCS/Bakken (Coking)	18.44	20.13	17.12	16.08	↓ -1.04	16.65	15.54	12.85	14.62	14.04	
<b>Singapore</b>											
Dubai (Hydroskimming)	-3.58	-2.34	0.03	0.30	↑ 0.26	1.51	-0.30	-1.73	-1.39	-2.09	
Tapis (Hydroskimming)	-0.34	1.45	2.25	3.50	↑ 1.25	3.94	4.65	4.24	4.08	3.74	
Dubai (Hydrocracking)	3.38	3.78	5.18	7.78	↑ 2.60	7.96	8.39	8.03	8.60	8.04	
Tapis (Hydrocracking)	-0.42	1.53	2.22	4.70	↑ 2.48	4.93	5.89	5.73	5.49	4.58	

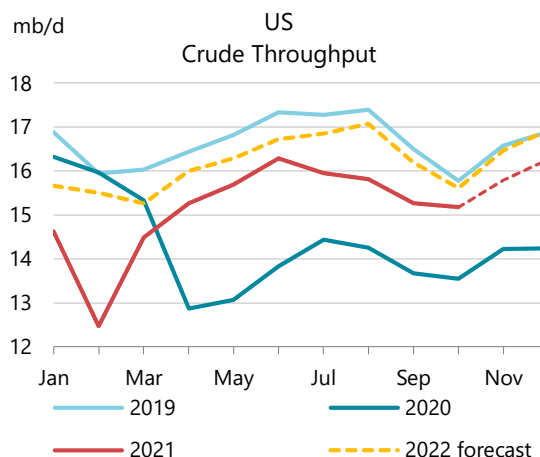
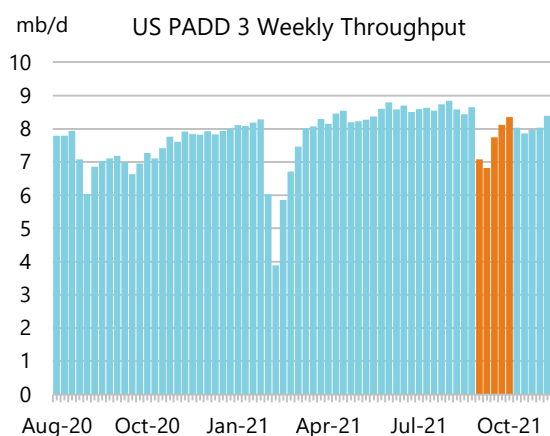
<sup>1</sup> Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crude for pricing purposes.

Source: IEA, KBC Advanced Technologies (KBC)

## Regional refining developments

**US** refinery throughput fell slightly in October to 15.1 mb/d on peak seasonal maintenance. Gulf Coast (PADD 3) intake dropped from a post-Ida high of 8.3 mb/d at end-September to just 8 mb/d on average in October. Shell's 225 kb/d Norco refinery suffered a fire when restarting from the hurricane outage and has been shut down since then for repairs. Phillips66 said it will convert its 250 kb/d Alliance refinery, that incurred the heaviest storm damage, into a midstream terminal, while it had previously planned to sell the site.

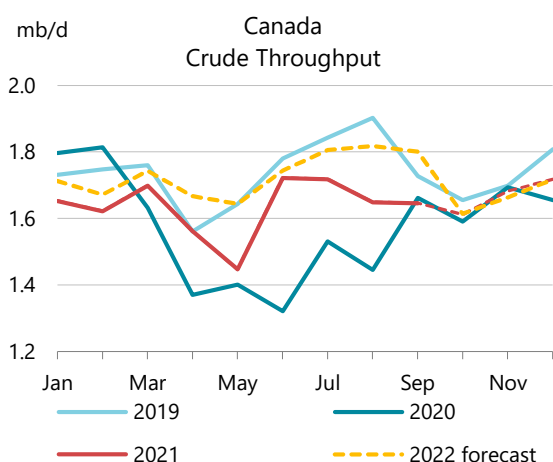
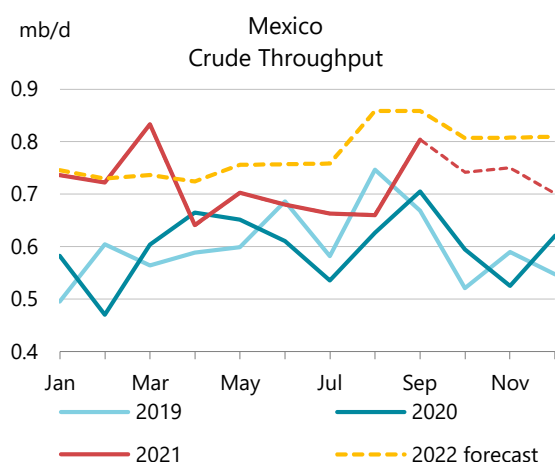
US refinery intake has lagged the recovery in demand. In 2020, US refinery throughputs fell by almost the same amount as the demand decline, or around 2.3 mb/d. While refined product demand has risen so far this year by 1.4 mb/d versus the same period a year ago, refinery runs have increased by only 770 kb/d. As a result, refined product stocks have drawn by about 200 kb/d since the start of the year (with lower exports and higher imports filling the gap). US refiners typically ramp up runs after October, even as demand for refined product seasonally declines. This year, there are more reasons to expect a strong increase. End-October refined product stocks were at multi-year seasonal lows, and US refiners are enjoying a natural gas price advantage versus European and Asian operators, even as they typically refine higher-sulphur grades than their European peers. Henry Hub prices in October average \$5.50/mmbtu, compared to \$30-35/mmbtu spot prices in Europe and Asia.



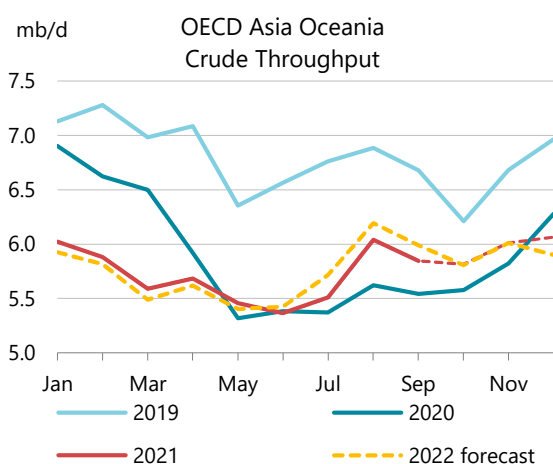
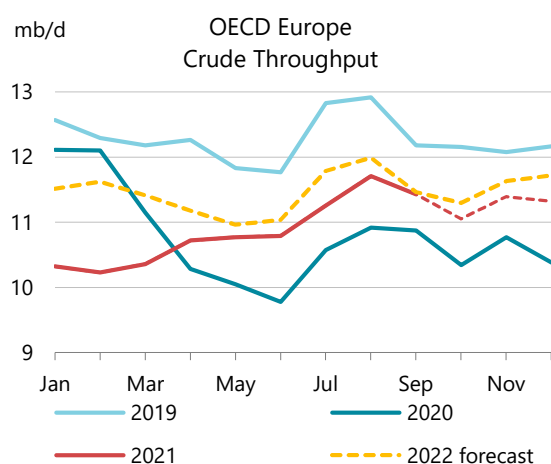
US refiners reported good downstream profits in 3Q21, but now expect a deterioration in earnings in 4Q21 due to higher energy costs. Marathon, the largest refinery operator in the US with about 3 mb/d capacity, is looking to sell its 63 kb/d Kenai refinery in Alaska. More refiners announced plans to start or increase renewable fuel production. The Environmental Protection Agency (EPA) issued its first decision out of 33 small refinery petitions for exemptions from the 2019 biofuel blending mandate, by denying the request. According to *Refinitiv* data, just three merchant refiners – PBF Energy, CVR Energy and Delta Airlines' Trainer refinery – accrued \$2.3 billion in liability for the renewable fuel blending credits by 3Q21. They expect the US authorities to cut past and future blending mandates, which would reduce their liability.

**Mexican** refinery intake was up by 145 kb/d m-o-m in September, but estimated lower in October as the 315 kb/d Tula refinery had to stop processing crude oil. Months-long protests have blocked the railroads out of the refinery, eventually leading to product storage to reach tank tops. The refinery reportedly resumed operations at the end of the month. **Canadian**

throughputs fell 70 kb/d m-o-m August and preliminary September data show runs flat m-o-m at 1.6 mb/d.



Preliminary September data for **OECD Europe** confirmed the seasonal slowdown, with runs falling by 280 kb/d to 11.3 mb/d. Among major refiners, only **Italy** countered the seasonal trend, with runs up 75 kb/d m-o-m to 1.3 mb/d, the highest level since November 2019. Regional runs in October are estimated another 380 kb/d lower m-o-m on continued maintenance and an unplanned outage at TotalEnergies' 110 kb/d Feyzin site in France. The refinery was reported back online later in the month. Shell announced that it will permanently shut crude processing at the 150 kb/d Wesseling site of its integrated Rheinland complex in **Germany** before 2025. This is the first refinery to be shut in Germany since 2013, and is adding to 640 kb/d European closures already announced since the start of the Covid-19 pandemic. Earlier, Shell had disclosed its plan to convert the Wesseling refinery into a synthetic fuels hub. In July, at the same site, the company launched the largest operating electrolysis plant in Europe (10 MW), using the hydrogen output in refinery processes.



Seasonal slowdown also affected OECD Asia throughputs in September. **Japanese** runs were down by 50 kb/d m-o-m in September to 2.6 mb/d, but October weekly data show a larger m-o-m fall to 2.4 mb/d. **Korean** refiners have outperformed relative to Japan since February this year. The two countries have similar levels of capacity, but in the tight product markets that

have prevailed this year, export-oriented Korean refiners have had higher utilisation rates. In 2020, the fall in Japanese refinery intake was more than twice as large as the decline in Korea.

### Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

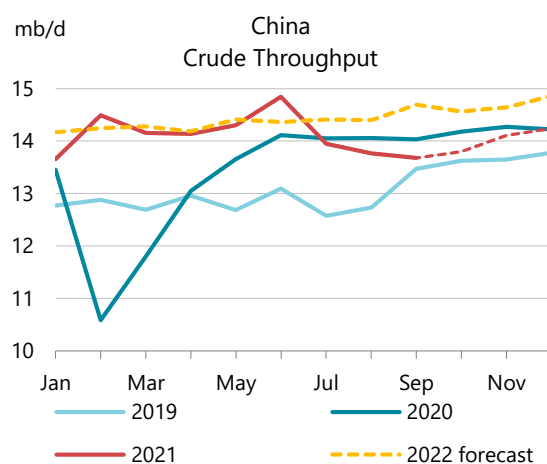
	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Change from		Utilisation rate	
							Aug 21	Sep 20	Sep 21	Sep 20
US <sup>1</sup>	15.16	15.59	16.19	15.85	15.72	15.16	-0.56	1.59	85%	74%
Canada	1.55	1.44	1.71	1.71	1.64	1.64	0.00	-0.02	81%	82%
Chile	0.17	0.17	0.18	0.17	0.21	0.20	-0.01	0.02	88%	80%
Mexico	0.63	0.69	0.67	0.65	0.65	0.79	0.14	0.10	48%	42%
<b>OECD Americas<sup>1</sup></b>	<b>17.58</b>	<b>17.93</b>	<b>18.75</b>	<b>18.39</b>	<b>18.22</b>	<b>17.79</b>	<b>-0.43</b>	<b>1.68</b>	<b>82%</b>	<b>72%</b>
France	0.62	0.62	0.72	0.79	0.82	0.75	-0.07	-0.04	66%	64%
Germany	1.72	1.66	1.58	1.71	1.81	1.70	-0.11	0.04	84%	82%
Italy	1.22	1.21	1.31	1.21	1.26	1.33	0.07	0.19	82%	66%
Netherlands	1.04	1.08	0.98	0.99	1.01	0.97	-0.04	-0.04	80%	83%
Spain	1.09	1.11	1.04	1.17	1.24	1.22	-0.02	0.14	87%	77%
United Kingdom	0.90	0.94	0.96	1.01	1.03	0.94	-0.08	0.05	79%	75%
Other OECD Europe <sup>2</sup>	4.02	4.05	4.10	4.28	4.44	4.42	-0.02	0.23	87%	82%
<b>OECD Europe</b>	<b>10.62</b>	<b>10.67</b>	<b>10.69</b>	<b>11.16</b>	<b>11.61</b>	<b>11.33</b>	<b>-0.28</b>	<b>0.56</b>	<b>83%</b>	<b>76%</b>
Japan	2.41	2.13	2.12	2.25	2.67	2.62	-0.05	0.33	76%	64%
South Korea	2.59	2.66	2.56	2.63	2.76	2.65	-0.11	0.08	75%	73%
Other Asia Oceania <sup>3</sup>	0.67	0.65	0.67	0.62	0.61	0.57	-0.03	-0.10	89%	78%
<b>OECD Asia Oceania</b>	<b>5.67</b>	<b>5.45</b>	<b>5.35</b>	<b>5.50</b>	<b>6.03</b>	<b>5.84</b>	<b>-0.19</b>	<b>0.30</b>	<b>77%</b>	<b>70%</b>
<b>OECD Total</b>	<b>33.88</b>	<b>34.04</b>	<b>34.80</b>	<b>35.04</b>	<b>35.86</b>	<b>34.96</b>	<b>-0.90</b>	<b>2.54</b>	<b>81%</b>	<b>73%</b>

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

<sup>2</sup> Includes Lithuania

<sup>3</sup> Includes Israel

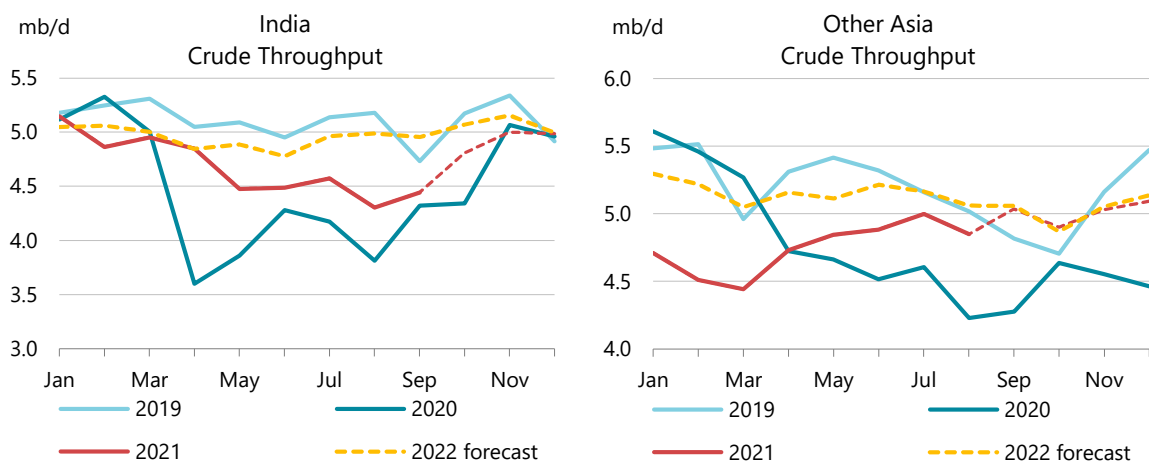
Chinese refinery intake in September fell for the third consecutive month, to just 13.6 mb/d. Runs were down 90 kb/d m-o-m and 360 kb/d y-o-y. This time, the fall was led by Hebei province, where Sinopec's Shijiazhuang refinery started a two-month maintenance outage at the end of August. In October, the throughput increased to 13.7 mb/d, a smaller than expected rebound. Chinese majors are reportedly ramping up activity further to supply more diesel to the domestic market. We forecast November and December runs back above 14 mb/d.



Due to restrictions on international travel, consumers continue to redirect spending to goods purchases, resulting in higher road freight demand. Coal and natural gas shortages also temporarily increased the call on diesel for power generation. Late October, China's National Food and Strategic Resources Administration said it was releasing strategic stocks of diesel and gasoline in several regions to alleviate shortages. Domestic ultra-low sulphur diesel cracks reached \$30-40/bbl in recent weeks, compared to international cracks at about \$15/bbl. This summer, blending of jet into diesel was effectively banned and a tax was imposed on imported blendstocks. These, combined with sharply lower refinery throughputs in August and September, contributed to the diesel supply crunch.

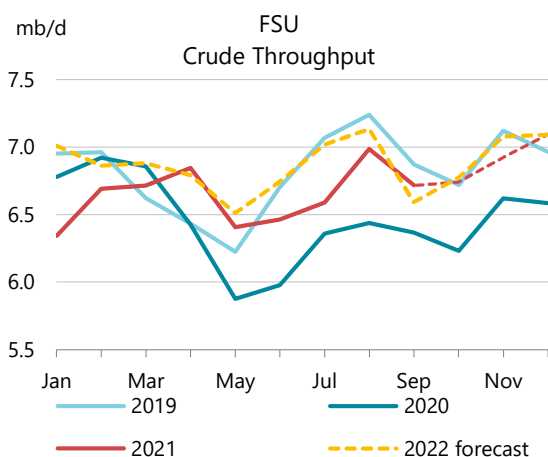
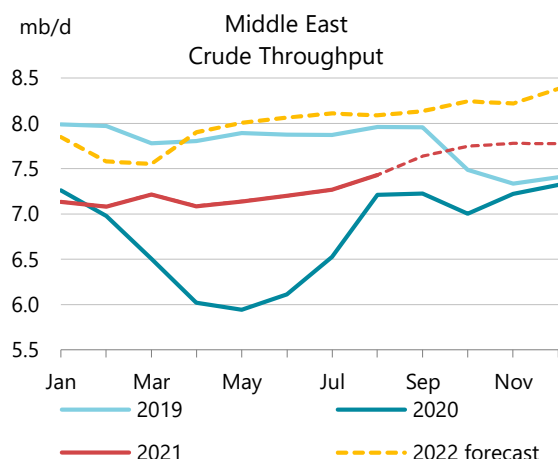
Independent refiners received their final batch of 2021 crude oil import quotas in October, which increased their annual allocation by 100 kb/d to 3.8 mb/d. For some of them, however, these volumes will be just enough to clear through customs backlog of cargoes waiting off the coast or scheduled to arrive by year-end. Imported seaborne barrels may take as long as 40 days of voyage. In October, imports cleared through customs fell to their lowest in three years at just 8.9 mb/d, while floating storage rose by 26 mb (840 kb/d) according to *Kpler* data. The government also issued the last batch of product export quotas in November, capping diesel, gasoline and jet fuel exports at 37.6 mt. This was down from last year's cap of 59 mt, of which, however, only 46 mt were exported. In 2021, January-September exports of the three products amounted to about 33 mt, comparable to 2020's 34 mt for the same period.

**Indian** runs recovered by a modest 140 kb/d m-o-m to 4.4 mb/d in September after reaching a 12-month low in August, due to heavy scheduled turnarounds. There was also not much incentive on the demand side as there was only a small increase in the consumption of premium fuels (kerosene, gasoline and diesel). The Indian government cut excise duties on gasoline and diesel, which are expected to benefit refiners, allowing them to pass on more costs to the consumers.



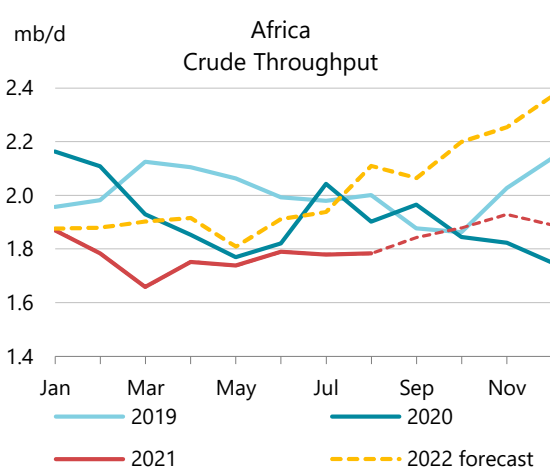
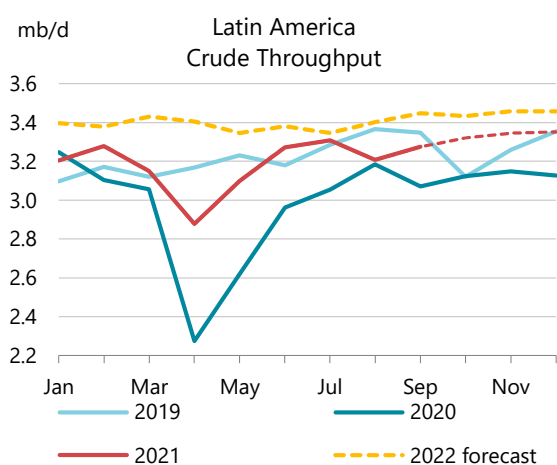
Refinery throughputs in the rest of Asia were estimated slightly above 2019 levels in September, for the first time since March 2020. Four countries with capacity above 1 mb/d, **Singapore, Thailand, Indonesia** and **Chinese Taipei**, have had capacity utilisation rates at 71-72% on average in recent months. Thailand is one of the least affected countries in terms of the Covid-19 impact on the refining sector, but the country's throughputs had already fallen by a substantial 110 kb/d y-o-y in 2019. **Vietnamese** refiners have started ramping up activity after run cuts this summer as internal travel restrictions are lifted.

Refinery throughputs in the Middle East increased for the fourth consecutive month in August and are expected to continue to rise until December. **Saudi** refinery intake was at its highest since August 2020. One of the two operating refineries in **Kuwait** suffered from a fire at its residue desulphurisation unit in October, probably leading to lower runs and some exports of high sulphur fuel oil. **Iraq** continues to report monthly throughputs in the 450-550 kb/d range, below the earlier stated objective of 700 kb/d. There have been several updates recently on the greenfield 140 kb/d Karbala refinery, as well as ongoing repairs and upgrades at existing refineries, suggesting that work has intensified on these projects. From next year, Iraq's State Organisation for Marketing of Oil will stop offering Basrah Light grade for exports, directing it to domestic refineries. At 34°API the crude is the lightest stream produced in the country.



Preliminary data for October show **Russian** refinery intake increasing counter-seasonally to 5.6 mb/d. **Kazakhstan** reported record run rates in September at just under 400 kb/d as the government urged refineries to produce more fuel to alleviate transport fuel shortages. In October, runs fell to 310 kb/d on maintenance at the Pavlodar refinery, which had been postponed three times this year due to domestic market tightness. The government extended the ban on oil product exports for another six months and plans to control the timing of maintenance shutdowns of the three main refineries over the next five years to avoid any product supply crunch. **Belarus** has not reported data since April, but the deputy prime minister said the country's refineries will process 16.8 mt of crude oil this year, which is slightly higher than our estimate of 300 kb/d. Socar, the operator of **Azerbaijan's** sole refinery, reported 3Q21 throughputs at 145 kb/d, up 60% y-o-y.

In Latin America, refinery intake inched up in September due to higher runs in **Brazil**. In **Argentina**, throughputs were flat m-o-m. YPF, the state-owned oil company, is planning to upgrade the 190 kb/d La Plata refinery to be able to increase processing of the light tight oil from the Vaca Muerta shale. In **Ecuador**, the government temporarily stopped adjustments of product prices that were pegged to the WTI quotes, which may affect margins of the country's two refineries. **African** runs were estimated flat m-o-m in August and up 60 kb/d in September.

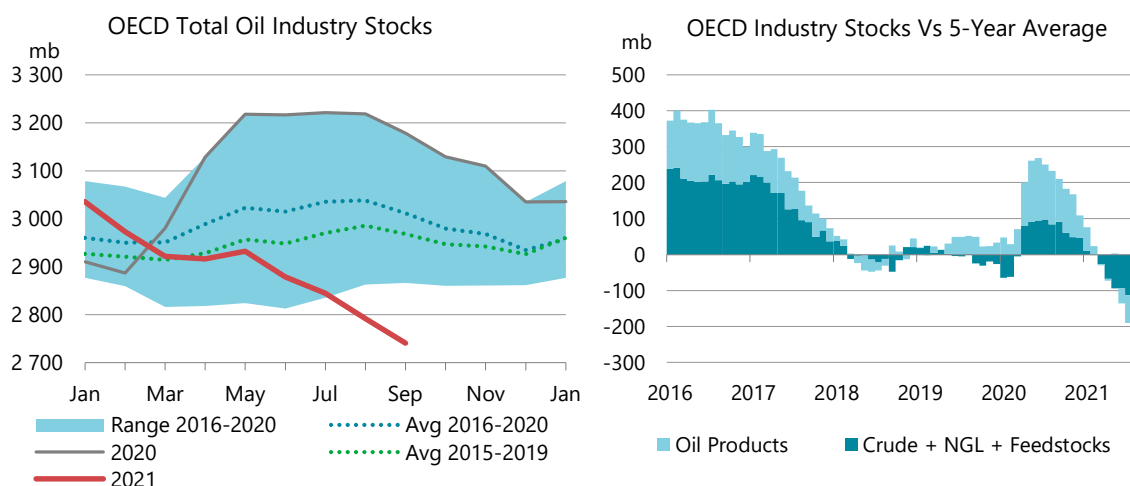




# Stocks

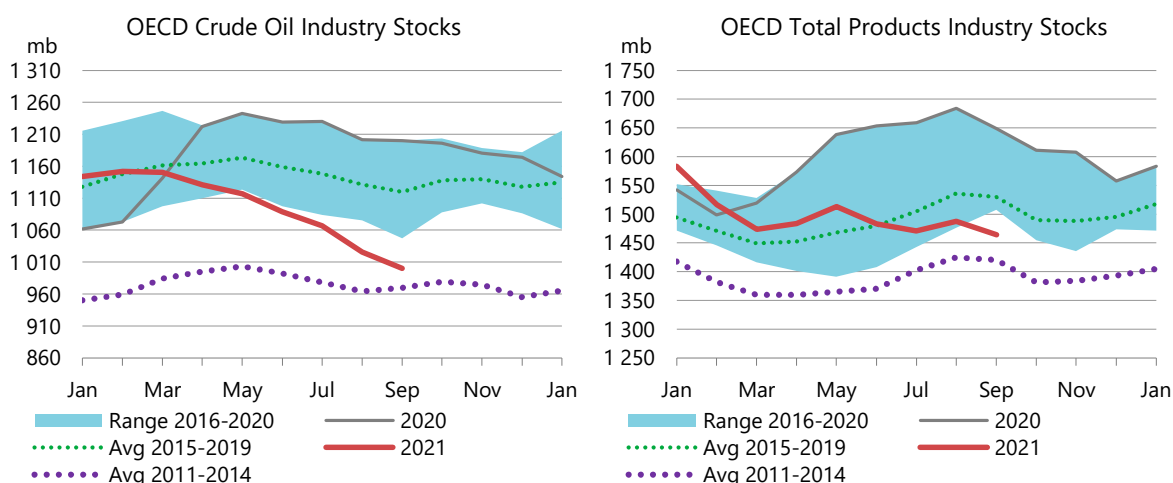
## Overview

Preliminary data for October suggest a slight reprieve in a tight oil market, with an encouraging 8.6 mb build in total OECD industry stocks. However, data for September showed that inventories fell for a fourth consecutive month, as demand continued to outpace supply. Total industry stocks in September plunged by a steep 51.5 mb, following the previous month's descent of 30.3 mb. From May to September, total OECD oil stocks have drawn by almost 170 mb to just above 2.76 billion barrels. Overall, OECD inventories have sunk to their lowest levels since 1Q15. Europe led the decline, dropping 42.2 mb since end-August as supply and imports fell far short of regional demand.



Total OECD crude inventories fell by 25.4 mb, when they typically run down on average by 11 mb. Sinking to 1 billion barrels in September, stocks sat 200 mb under a year ago and 134 mb below the five-year average. Alternatively, when looking at overall crude stock levels relative to the 2011-2014 average (where prices averaged \$95/bbl), inventories were up by 30 mb. Crude stocks in Europe plummeted for a second month, falling by 21.4 mb and 16.7 mb in August and September, respectively. September's decline was nearly five times the five-year average (-3.5 mb). Crude stocks in the OECD Americas and Asia Pacific dropped by 3.4 mb and 5 mb, in line with seasonal trends.

In September, OECD product inventories fell across all regions, dropping 23.4 mb to 1,465 mb. The majority of the decline came from middle distillates, down 25.4 mb, twice the usual drop of 13 mb. Europe dominated the draw, by 22.4 mb, compared to the average decrease of 14.8 mb. Concurrently, Americas eased by 0.9 mb and Pacific Asia a mere 0.2 mb.



Preliminary data for October show OECD inventories rising largely in Europe, but declining marginally in the US and Asia. Total US inventories eased by 0.1 mb, despite crude and NGL stocks building by a large 17.4 mb. However, crude stocks at Cushing drew 8.9 mb to just 26.4 mb or 31% of working storage capacity. A sharp draw on US product stocks of 17.5 mb offset the crude stock build, with gasoline down 10.8 mb. European oil stocks increased in October by 14.1 mb, according to preliminary *Euroilstock* data. Crude oil stocks gained 1.8 mb m-o-m, while total products swelled by a surprising 12.3 mb, after two months of solid declines. Japanese crude and NGL stocks fell 2.5 mb, the opposite of the typical 3.5 mb build. Product stocks fell by 2.9 mb (more than the seasonal norm of -0.3 mb). Gasoline stocks were down 0.5 mb, when they usually stay relatively unchanged.

Preliminary Industry Stock Change in September 2021 and Third Quarter 2021												
	September 2021 (preliminary)				Third Quarter 2021							
	(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>-3.4</b>	<b>-16.9</b>	<b>-5.0</b>	<b>-25.4</b>	<b>-0.1</b>	<b>-0.6</b>	<b>-0.2</b>	<b>-0.8</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-1.0</b>
Gasoline	3.0	-1.4	-0.5	1.2	0.1	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.2
Middle Distillates	-5.9	-18.0	-1.6	-25.4	-0.2	-0.6	-0.1	-0.8	-0.1	-0.3	0.1	-0.3
Residual Fuel Oil	-1.0	-0.1	0.4	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Products	2.9	-2.9	1.5	1.5	0.1	-0.1	0.1	0.1	0.3	0.0	0.1	0.4
<b>Total Products</b>	<b>-0.9</b>	<b>-22.4</b>	<b>-0.2</b>	<b>-23.4</b>	<b>0.0</b>	<b>-0.7</b>	<b>0.0</b>	<b>-0.8</b>	<b>0.0</b>	<b>-0.4</b>	<b>0.2</b>	<b>-0.2</b>
Other Oils <sup>1</sup>	1.7	-2.9	-1.6	-2.8	0.1	-0.1	-0.1	-0.1	0.0	-0.1	0.0	-0.1
<b>Total Oil</b>	<b>-2.6</b>	<b>-42.2</b>	<b>-6.7</b>	<b>-51.5</b>	<b>-0.1</b>	<b>-1.4</b>	<b>-0.2</b>	<b>-1.7</b>	<b>-0.3</b>	<b>-0.9</b>	<b>0.0</b>	<b>-1.3</b>

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

Total OECD stocks for August were revised down by 9.1 mb to 2 763 mb following more complete monthly data. In the OECD Americas, crude oil inventories were corrected lower by 6.5 mb to 597 mb, while product stocks shifted up by 6.3 mb to 761 mb. Notably, other product stocks were modified up 6 mb to 260 mb. Inventories in Europe were amended in August (-12.3 mb), with crude oil showing the bulk of the adjustments (-8.9 mb) alongside other products (-3.9 mb). Germany posted the largest revision to crude (-5.3 mb) with the rest of Europe down 3.6 mb. Italy showed a revision to July, reducing other product total by 3.9 mb to 50 mb.

## Revisions versus October 2021 Oil Market Report

(million barrels)

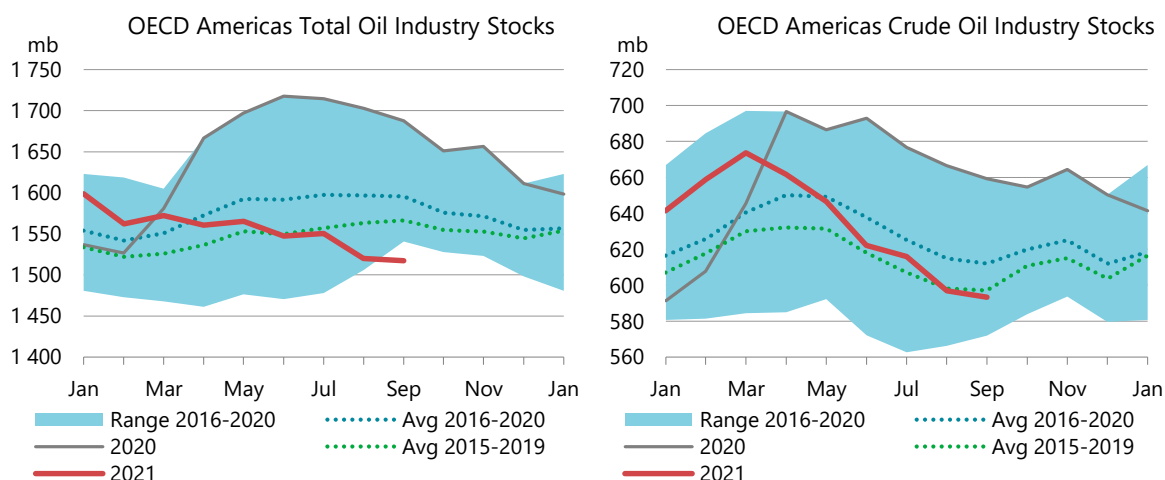
	Americas		Europe		Asia Oceania		OECD	
	Jul-21	Aug-21	Jul-21	Aug-21	Jul-21	Aug-21	Jul-21	Aug-21
<b>Crude Oil</b>	<b>-2.1</b>	<b>-6.5</b>	<b>0.8</b>	<b>-8.9</b>	<b>0.0</b>	<b>1.7</b>	<b>-1.3</b>	<b>-13.7</b>
Gasoline	0.0	-1.0	0.0	0.9	0.2	1.6	0.2	1.5
Middle Distillates	0.0	1.2	-0.5	2.0	0.0	1.1	-0.5	4.2
Residual Fuel Oil	0.0	0.1	-0.2	0.1	0.0	0.0	-0.2	0.2
Other Products	0.0	6.0	-4.0	-3.9	0.0	0.3	-3.9	2.3
<b>Total Products</b>	<b>0.0</b>	<b>6.3</b>	<b>-4.7</b>	<b>-0.9</b>	<b>0.3</b>	<b>3.0</b>	<b>-4.4</b>	<b>8.3</b>
Other Oils <sup>1</sup>	0.0	-1.1	-1.0	-2.5	0.0	-0.3	-1.0	-3.8
<b>Total Oil</b>	<b>-2.1</b>	<b>-1.3</b>	<b>-4.9</b>	<b>-12.3</b>	<b>0.3</b>	<b>4.4</b>	<b>-6.7</b>	<b>-9.1</b>

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

## Recent OECD industry stock changes

### OECD Americas

Following a steep decline in August of 30.4 mb, industry stocks in OECD Americas fell further by 2.6 mb in September, compared with the normal drop of about 1.1 mb. At 1.52 billion barrels, regional inventories were 170 mb lower than the previous year, and 78 mb below the five-year average by end-September.



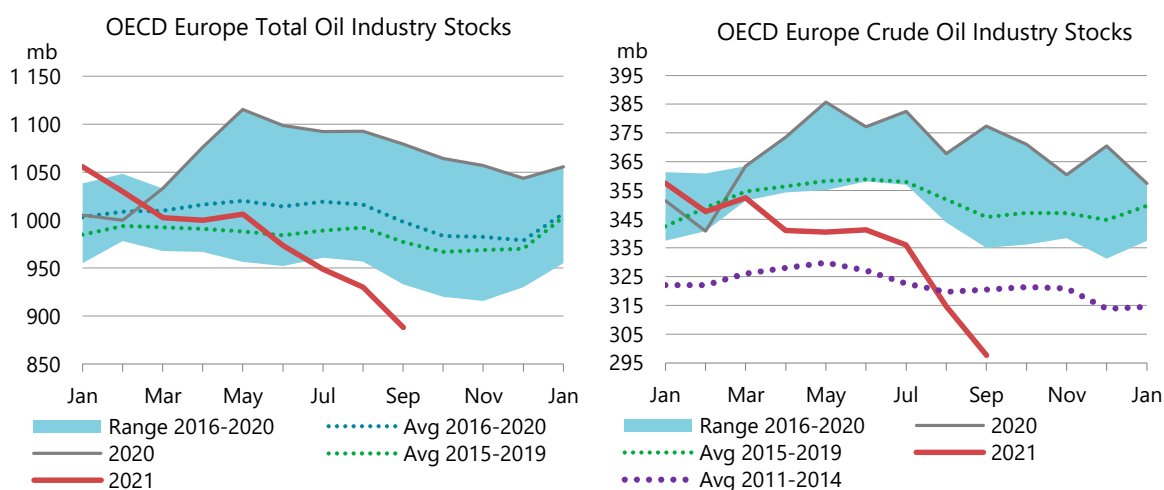
Crude oil stocks in OECD Americas were down 3.4 mb m-o-m in September, to 594 mb, coinciding with the normal decline of 2.9 mb. The fall in stocks can be attributed to lower production in the US (-538 kb/d) due to the impact of Hurricane Ida, which struck the US Gulf Coast at end-August, undermining production throughout September. Stocks have fallen 65.8 mb below last years' inventory levels and 18.6 mb under the latest five-year average.

Product stocks fell counter-seasonally in September, down 0.9 mb to 760 mb, when they typically increase by 2.4 mb. Middle distillates led with a 5.9 mb decline, as a result of higher than expected demand for distillates, combined with a downturn in production. According to the US Energy Information Administration (EIA), refinery output of distillates dropped by 355 kb/d m-o-m. At the same time, motor gasoline stocks were up 3 mb when they usually draw 2.2 mb on average.

Preliminary weekly data from the EIA shows a promising build in crude and NGL stocks (17.4 mb) in October, coming after months of steady declines. Despite the gains in crude inventories out of the US, lower Cushing volumes are now worryingly low. PADD 3 posted a strong build at 21 mb, masking the significant pull at Cushing, as stocks in the region fell 8.9 mb to 26.4 mb. Stocks in PADD 2 are 40 mb lower y-o-y in the region and 25.6 mb below the five-year average. The total builds in crude oil were negated with large product stock draws (-17.5 mb). Gasoline stocks were down 10.8 mb, more than the seasonal decline (6.6 mb). Middle distillates declined down 5.3 mb, when they typically fall by 15 mb. US Strategic Petroleum Reserve (SPR) volumes were down 8.4 mb in October. In total 11.9 mb have been drawn down from the 20 mb sale to date, the remaining is expected to be delivered before December of this year.

## OECD Europe

Industry stocks in Europe led the decline in September among the OECD regions, dropping 42.2 mb, compared with a typical decrease of 18 mb. Inventories closed the month at 888 mb, 191 mb below last year's level and 89 mb below the pre-Covid average. In terms of forward demand, end-September stocks covered 66.4 days, down 1.7 days m-o-m, and six days lower than the 2016-2020 average.



Crude oil in Europe declined by 16.9 mb, four times more than the 3.5 mb average decline, to close the month at 298 mb. Stock levels were 80 mb lower than last year, at the same time falling 55 mb below the five-year average. Remarkably, crude stocks are plunging past average levels held from 2011 to 2014, when the price of Brent reached all-time highs. The UK had the largest move in September, down 2.9 mb, alongside France (-1.2 mb) and Germany (-0.3 mb). While the Netherlands and Italy were up 1.9 mb and 0.7 mb, respectively, when they typically decline by 1.0 mb and 1.7 mb. The remaining countries in Europe fell 15.2 mb.

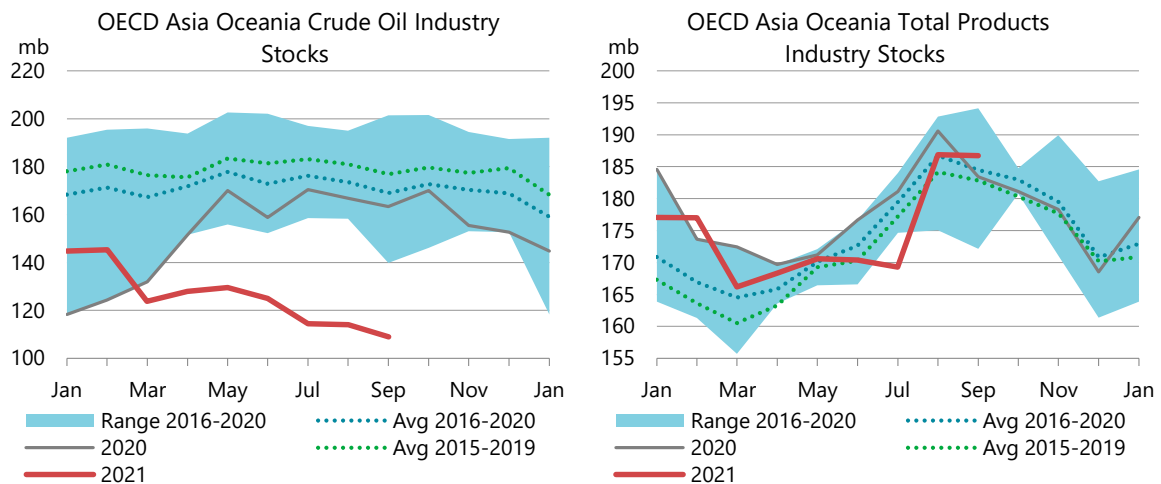
Total European oil product stocks drew by a large 22.4 mb in September falling to 518 mb, whereas the seasonal average draw is only 14.8 mb. Total product stocks in Europe were 95 mb lower y-o-y and 48 mb below to the five-year average. Middle distillates led the decrease, falling 18 mb to close at 277 mb, more than double the average seasonal decline (-7 mb). European gasoline stocks were down 1.4 mb to 79 mb, while they are typically flat. The UK had the most notable regression as middle distillates were down 3.1 mb to close the month at 21 mb (versus an average decline of 1.3 mb) while gasoline stocks drew by 0.6 mb to close at 8.7 mb (while they are typically flat).

Preliminary October data from *Euroilstock* showed overall inventories building by 14.1 mb, whereas the five-year average trend declines by 14 mb. Product stocks had the largest build, up 12.3 mb. Gasoline stocks took the lead, with an 8.8 mb increase m-o-m, followed by middle distillates (+3.8 mb). Germany saw notable gains in product stocks (gasoline +6 mb and middle distillates +2.3 mb). Crude oil inventories built by 1.8 mb m-o-m, led by the UK (+2.9 mb) and Portugal (+3.3 mb), despite Germany and France drawing crude down over the month by 2.2 mb and 1.8 mb, respectively.

## OECD Asia Oceania

Total industry stocks in the OECD Asia Oceania fell by 6.7 mb in September to 357 mb. Crude stocks were down 5 mb to close at 109 mb, with Japan leading the decline (-5.1 mb). Both the total stocks and crude stock draws are consistent with the seasonal averages of -7.9 mb and -4.5 mb, respectively. Crude stocks in Asia Pacific are down 54 mb y-o-y, falling 60 mb below the five-year average to 68 mb below their pre-pandemic levels.

Total product stocks in OECD Asia eased by 0.2 mb, less than the 2.3 mb typical seasonal decline. Stocks closed at 187 mb, up 3.3 mb y-o-y and 2.3 mb above the five-year average. Product stocks in Japan saw a counter-seasonal build of 3.1 mb. Stocks in Korea shrunk by 3.3 mb, significantly more than the seasonal average (-0.6 mb). Japan had stock builds largely in middle distillates (1.7 mb) and other products (1.2 mb), while stocks in Korea drew mostly in middle distillates (3.3 mb).

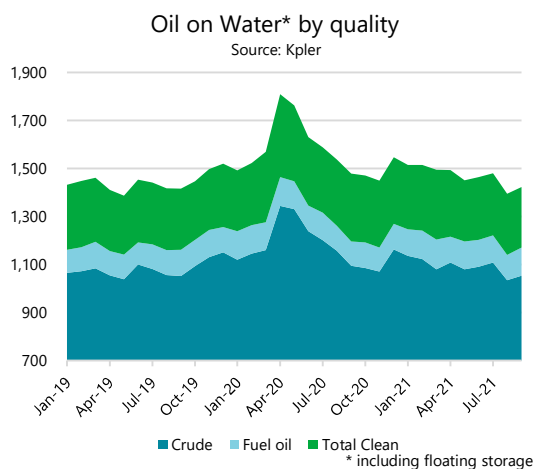
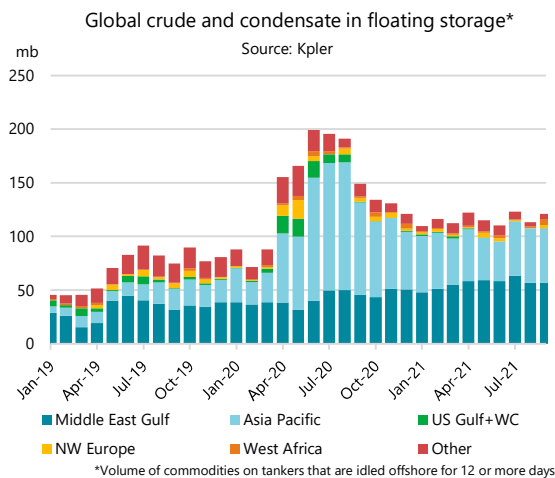


Preliminary data for October from the *Petroleum Association of Japan* show crude oil and NGL inventories declining by 2.5 mb m-o-m, contrary to the typical 3.5 mb stock build. Total product stocks drew by 2.9 mb, led by fuel oil (-1.4 mb), middle distillates (-1.3 mb) and gasoline (-0.5 mb). Interestingly, jet fuel stocks declined 0.9 mb inversely to the average build of 0.2 mb, as Asian countries re-opened borders and demand for travel accelerated.

## Other stock developments

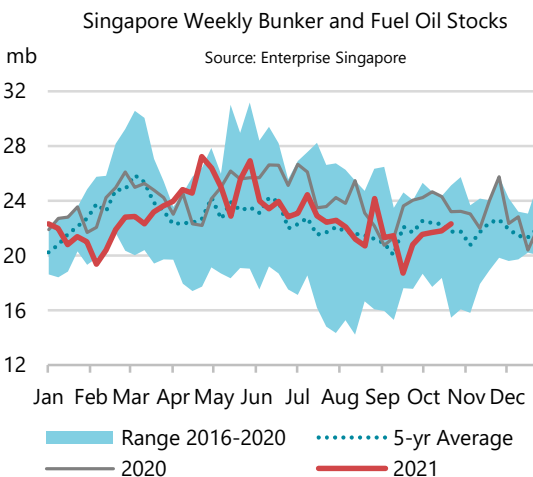
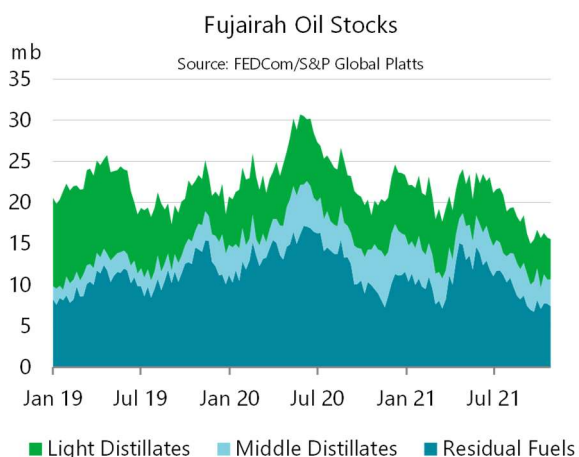
Total oil on the water for September (including floating storage), as surveyed by *Kpler*, rose by 28.5 mb to 1.4 billion barrels. The growth was led by crude oil, increasing 18.6 mb to 1 053 mb. Products on the water rose 9.8 mb to 370 mb, though clean products eased by 1.3 mb to 253 mb.

The increase in crude volumes on the water was mainly a result of the increase in output from OPEC+ countries in recent months.



In September, crude oil held in short-term floating storage rose 7.7 mb to 121 mb, according to *Kpler*. Oil held off the coast of Africa lead the increase with 4.1 mb, while Northwest Europe was higher by 2.5 mb.

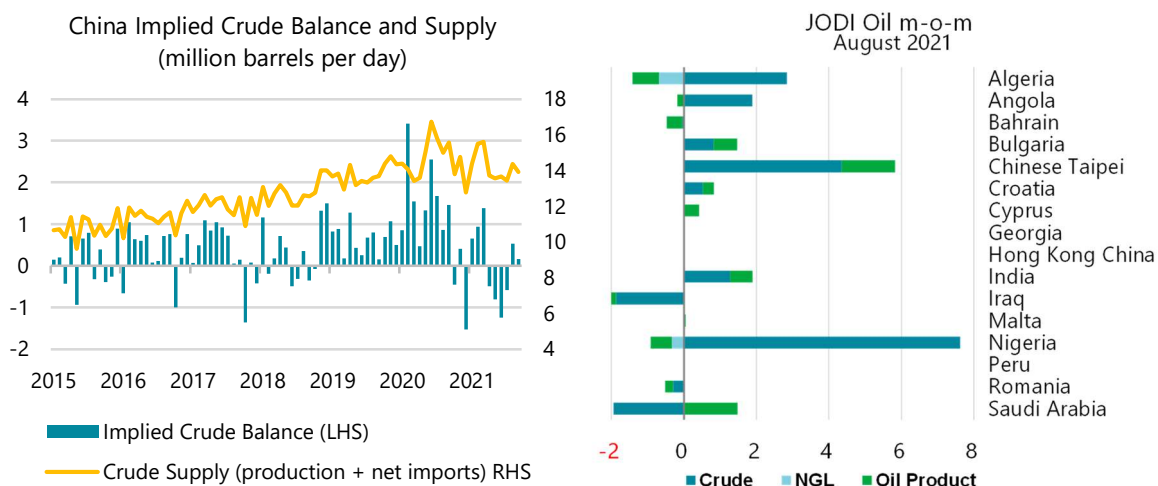
Product stocks held in floating storage built by 11.3 mb, from 45 mb to 57 mb. Notably, in the Asia Pacific they increased by 7.5 mb from August to September. Increases also occurred in the Middle East (+1.1 mb), West Africa (+1 mb) and other regions (+2.2 mb).



In Fujairah, independent product stocks eased by 0.4 mb in October to 15.7 mb, according to *FEDCom and S&P Global Platts*. Light distillates remained unchanged at 5.0 mb, middle distillates were down 0.8 mb to 3.0 mb, while fuel oil stocks were largely unchanged, up 0.4 mb to 7.7 mb.

Independent product stocks in Singapore, the world's largest bunkering hub, rose 2 mb, after three months of declines. Residual fuel oil inventories moved up 3.1 mb to close at 22.1 mb at end-October. Seasonally, product stocks build in Asia in preparation for winter, in order to boost fuel supplies.

The Chinese implied crude balance shows stocks built 6 mb (200 kb/d) in September m-o-m. Stock builds were due to output in China being marginally higher (+30 kb/d), combined with weaker refinery runs (-90 kb/d m-o-m). Compared to previous month build (17.5 mb), stock volumes only grew marginally due to lower import volumes (-465 mb).



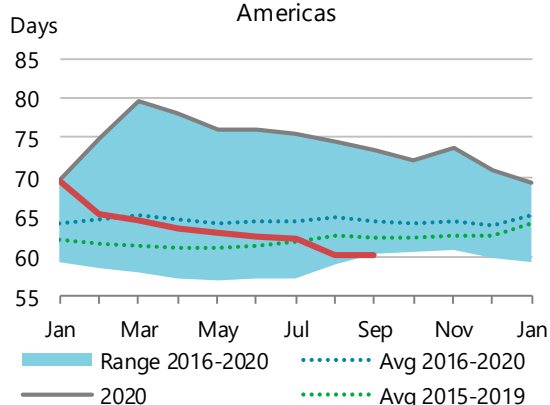
Total oil stocks in the 16 non-OECD economies reporting to the JODI-Oil Database for August show crude inventories increasing m-o-m by 14.4 mb, while NGL stocks declined by 1 mb. Total crude and NGLs stocks held by these countries ended the month at 310 mb, while oil products remained at 289 mb. Notable changes came from Nigeria, with a 7.6 increase in crude, along with Chinese Taipei and Algeria with 4.3 mb and 2.9 mb builds, respectively. Saudi Arabia and Iraq equally decreased stock volumes by 1.9 mb.

## Regional OECD End-of-Month Industry Stocks

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

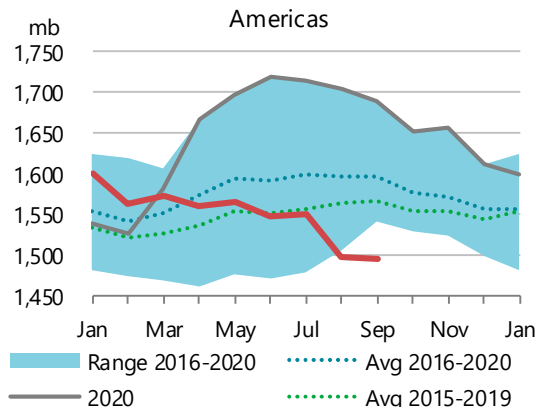
Days<sup>1</sup>

Americas

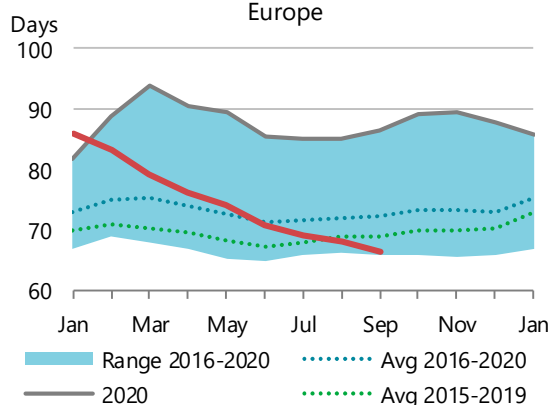


Million Barrels

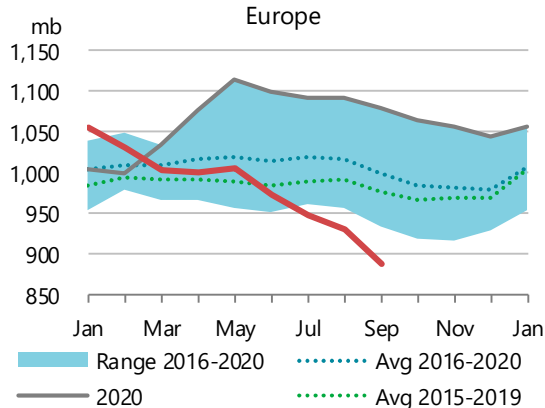
Americas



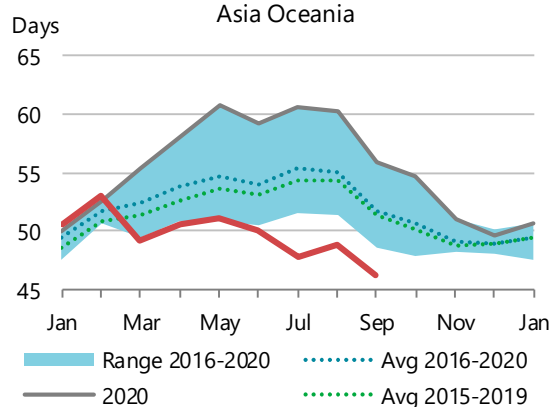
Europe



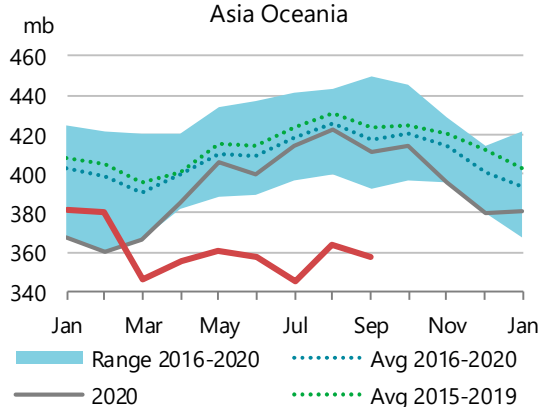
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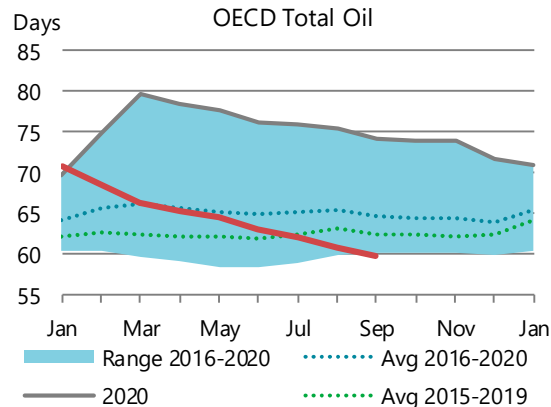
Asia Oceania



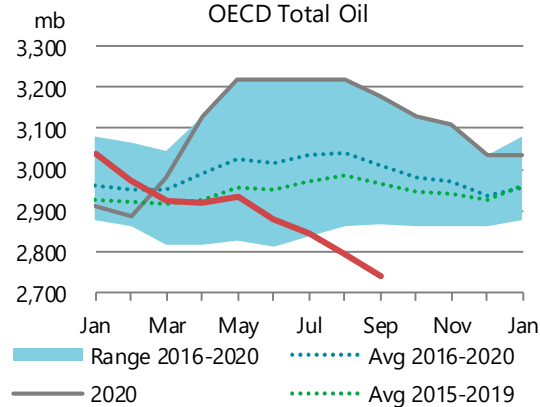
Asia Oceania



OECD Total Oil



OECD Total Oil



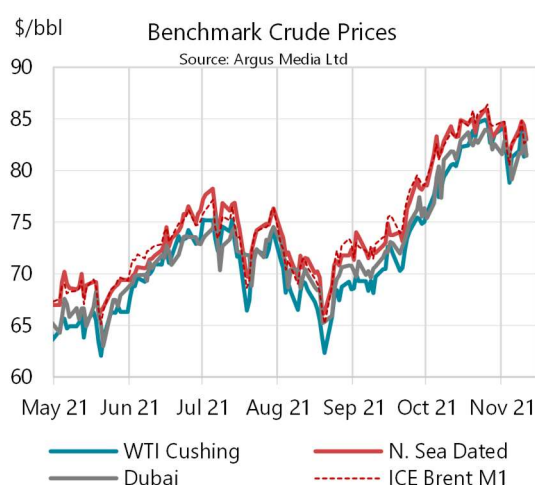
<sup>1</sup> Days of forward demand are based on average OECD demand over the next three months.



# Prices

## Overview

Steady growth in oil demand and a corresponding decline in global oil stocks combined to propel crude prices \$20/bbl higher from late August to mid-October before plateauing in recent weeks on increasing crude and product supplies. On a monthly basis, North Sea Dated crude prices nevertheless rose \$9.15/bbl in October to an average \$83.54/bbl while WTI prices increased \$9.79/bbl to \$81.36/bbl.



Crude Prices and Differentials (\$/bbl)						
	Month		Week of	Chng Oct-21		
	Oct-20	Sep-21	Oct-21	08 Nov	m-o-m	y-o-y
<b>Crude Futures (M1)</b>						
NYMEX WTI	39.55	71.54	81.22	81.96	9.68	41.67
ICE Brent	41.52	74.88	83.75	83.18	8.87	42.23
<b>Crude Marker Grades</b>						
North Sea Dated	40.01	74.40	83.54	83.77	9.15	43.54
WTI (Cushing)	39.53	71.56	81.36	81.96	9.79	41.83
Dubai	40.70	72.57	81.46	81.95	8.89	40.75
<b>Differential to North Sea Dated</b>						
WTI (Cushing)	-0.48	-2.83	-2.19	-1.81	0.65	-1.71
Dubai	0.70	-1.83	-2.09	-1.83	-0.26	-2.79
<b>Differential to ICE Brent</b>						
North Sea Dated	-1.51	-0.48	-0.21	0.59	0.28	1.31
NYMEX WTI	-1.97	-3.34	-2.53	-1.22	0.81	-0.56

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

The current price plateau may reflect a transition in a number of key market drivers. Crude futures contracts are forward-looking (the current ICE Brent prompt contract is for January 2022 delivery) and should reflect both the current and forward physical fundamentals at that horizon. Changes have come, or will soon come, to a number of structural factors behind the ongoing price recovery. These include the macroeconomic strength of the post-pandemic recovery, inflation, the surge in other energy prices as well as inventory movements.

The overriding driver behind the rise in oil prices in the past year has been the well-anticipated and steady fall in oil inventories worldwide. Money Managers have held net long positions in crude oil futures contracts relentlessly since December, with only limited swings in the ratio of their long to short positions. Crude stock draws persisted through the most recent period of rising prices from mid-August until mid-October, with sharp hurricane-linked losses in US crude supply not offset by the dip in refinery runs nor by OPEC+ that stuck to its scheduled 400 kb/d increments in output. However, the IEA's oil balance indicates a 1Q22 stock build that should correspond to an easing of prompt prices and a flattening of the price structure. The first signs of these changes may already be apparent with October's price plateau.

The gathering recovery in oil demand has boosted product refinery margins. Due to the rising crude price backwardation, cracks have been slow to respond until last month when gasoil and gasoline margins reached exceptional levels. Product prices were further supported by gas and coal price tensions in September and October that lifted demand for oil-fired power generation and forced refiners to shift their crude slates towards light sweet grades, akin to Brent and WTI (versus the medium sour grades provided by incremental OPEC+ production). This has certainly

given an extra boost to these marker crudes. While gas and coal prices remain high, they have eased from their extreme levels of early October, in turn reducing some tension that bled into in crude prices.

Perceptions regarding the two key macro-financial fundamentals for oil, GDP growth and inflation, have evolved over the course of October. Growth indicators now highlight a slowdown in the hectic pace of the recovery that has supported oil demand. That slowdown stems from several factors including new Covid waves with the onset of cooler weather, China's efforts to rein-in energy-intensive industries, and the persistent friction of supply-chain delays and disruptions. From a glass half full or empty approach, a slower pace of growth could mean either just a cooling-off period after a year of recovery at a sizzling pace or a more profound drop off in the rate of growth as headwinds develop, including reduced central bank liquidity. Either way, the incipient uncertainty surrounding the economic outlook has imbued investors with a degree of caution.

Investors have partly hedged their inflation concerns with commodities and oil futures contracts over the past months. However, while markets have speculated on higher inflation and increased interest rates, few central banks have responded by jacking-up policy rates so far. The major central banks (FED, ECB, BOE) have made generally dovish and reassuring comments regarding the continued temporary nature of this inflation cycle (despite more hawkish moves in Canada and Australia). The need to further hedge this inflation cycle remains uncertain, and the long-short ratio of Money Manager positions in oil markets remains just in-line with their levels since the recovery took hold.

## Futures markets

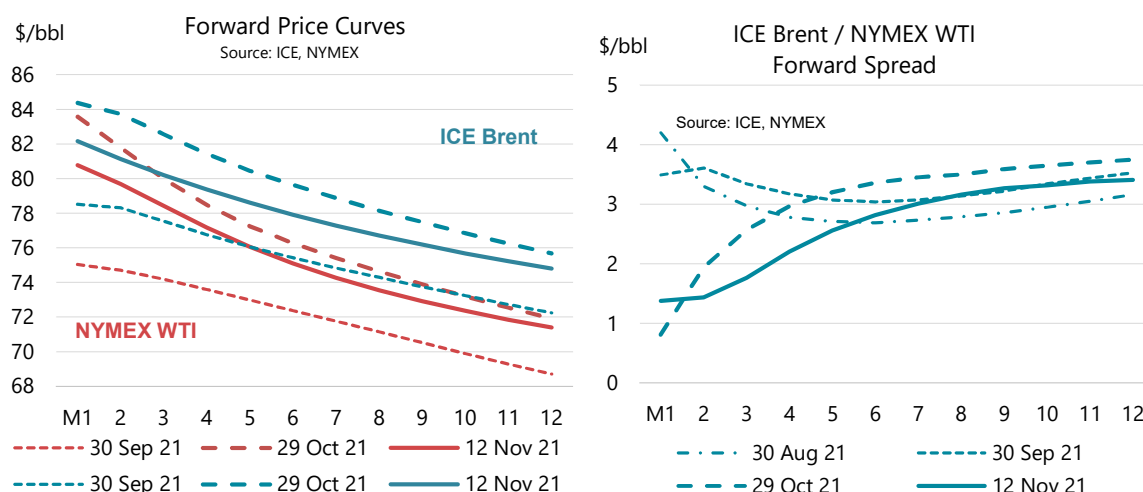
Crude futures prices gained another \$9-10/bbl m-o-m on average in October, extending until mid-month the steady rise that began in mid-August. ICE Brent prices rose \$8.87/bbl m-o-m in October to \$83.75/bbl and averaged \$85.13/bbl in the last week of the month while NYMEX WTI increased \$9.68/bbl m-o-m to \$81.22/bbl and averaged \$83.49/bbl in the week of 25 October. Futures prices fell in the first half of November with ICE Brent down \$2.07/bbl versus the last week of October and NYMEX WTI down \$1.62/bbl. The fall was at least partly linked to market concerns about the possible use by the US Administration of SPR barrels to ease gasoline price tensions. The continued strengthening of the US dollar has also contributed to oil price weakness, as did the easing of gas and coal prices that lessened the risk of higher of oil-fired power generation.

The rise in prompt futures over the month of October was accompanied by stronger backwardation and higher forward prices. The latter benefitted from the current market tensions but possibly as well from a recent focus on lack of upstream oil investment needed to meet growth in oil demand in the absence of more resolute measures to contain it. Prices for the 12<sup>th</sup>-month forward contract on WTI rose \$3.25/bbl to \$72.54/bbl on 29 October while they increased \$3.51/bbl to \$76.24/bbl for ICE Brent. However, from 29 October to 12 November prompt WTI prices lost -\$2.78/bbl and prompt Brent lost -\$2.21/bbl while contracts for the 12<sup>th</sup> month lost only -\$0.69/bbl for WTI and -\$0.86/bbl for Brent. Forward prices remain well supported.

The backwardation on futures contracts rose significantly over the month, reflecting the deepening oil stock deficit across the market. The NYMEX WTI backwardation on the 12-month strip rose from \$6.30/bbl at end-September to \$11.70/bbl at end-October before easing to

\$8.90-9.40/bbl in the first half of November. On ICE Brent, it rose from \$6.30/bbl to \$8.70/bbl before falling to \$6.30/bbl over the same period.. The steeper NYMEX WTI backwardation in late October reflects the exceptionally low levels of crude stocks at Cushing, Oklahoma, the physical delivery point of the contract.

The faster increase and subsequent slower decline in NYMEX WTI narrowed the discount versus ICE Brent by \$0.81/bbl to -\$2.53/bbl in October and to just -\$1.20 in the first half of November. While discounts of over -\$3.50/bbl in late-September and early-October supported strong US crude exports to Europe and Asia, the narrowing differentials - combined with higher freight rates - throttled-off trade.



Prompt product futures on both NYMEX and ICE rose considerably faster than crude, widening crack spreads for gasoline and middle distillates. Middle Distillates made larger gains than gasoline.

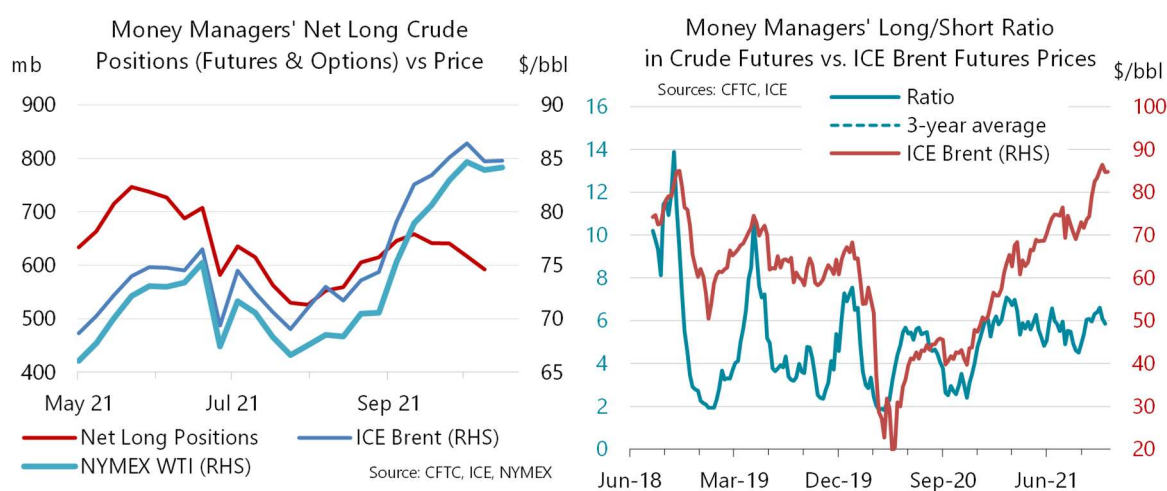
Prompt Month Oil Futures Prices												
(monthly and weekly averages, \$/bbl)												
	Oct-20	Aug-21	Sep-21	Oct-21	Oct-21		Week Commencing:					
					m-o-m Chg	y-o-y Chg	04 Oct	11 Oct	18 Oct	25 Oct	01 Nov	08 Nov
NYMEX												
Light Sweet Crude Oil (WTI)	39.55	67.71	71.54	81.22	9.68	41.67	78.33	81.04	83.11	83.49	81.78	81.96
RBOB	48.62	93.62	90.90	101.65	10.75	53.03	98.07	101.54	104.43	103.99	99.22	97.64
ULSD	48.32	87.00	92.43	105.66	13.23	57.34	103.37	106.52	107.44	106.43	103.39	103.14
ULSD (\$/mmbtu)	8.52	15.34	16.30	18.63	2.33	10.11	18.23	18.79	18.95	18.77	18.23	18.19
Henry Hub Natural Gas (\$/mmbtu)	2.84	4.03	5.12	5.57	0.46	2.74	5.80	5.51	5.13	5.84	5.53	5.05
ICE												
Brent	41.52	70.51	74.88	83.75	8.87	42.23	81.85	83.82	85.07	85.13	82.94	83.18
Gasoil	44.49	77.79	84.43	97.04	12.61	52.55	95.10	98.05	98.43	97.90	96.13	97.57
Prompt Month Differentials												
NYMEX WTI - ICE Brent	-1.97	-2.80	-3.34	-2.53	0.81	-0.56	-3.52	-2.78	-1.96	-1.64	-1.16	-1.22
NYMEX ULSD - WTI	8.77	19.29	20.89	24.44	3.55	15.67	25.04	25.48	24.33	22.94	21.61	21.18
NYMEX RBOB - WTI	9.07	25.91	19.36	20.43	1.07	11.36	19.74	20.50	21.32	20.50	17.44	15.68
NYMEX 3-2-1 Crack (RBOB)	8.97	23.70	19.87	21.77	1.90	12.79	21.51	22.16	22.33	21.31	18.83	17.51
NYMEX ULSD - Natural Gas (\$/mmbtu)	5.69	11.31	11.19	13.06	1.88	7.38	12.43	13.28	13.82	12.93	12.71	13.14
ICE Gasoil - ICE Brent	2.97	7.28	9.55	13.29	3.74	10.32	13.25	14.23	13.36	12.77	13.19	14.39

Source: ICE, NYMEX.

RBOB futures rose \$10.75/bbl m-o-m in October, lifting the RBOB crack by \$1.07/bbl m-o-m to \$20.43/bbl. The crack peaked in the third week of the month at \$21.32/bbl before falling to \$17.44/bbl and to \$15.68/bbl in the first and second weeks of November, below the average crack level in September. Gasoline cracks in New York Harbor initially benefitted from improving demand and limited exports from Europe where gasoline demand is also strong and supply has been limited by high refinery operating costs. The recent decline in RBOB cracks

reflects the rise in PADD 1 gasoline stocks in the first week of November as well as reduced yield constraints as the product specifications shift to winter grades that can tolerate more volatile components.

Prompt NYMEX ULSD futures rose \$13.23/bbl m-o-m in October, boosting the NYMEX ULSD crack by \$3.55/bbl to \$24.44/bbl. ULSD cracks peaked in the second week of the month at \$25.48/bbl before falling to \$21.40/bbl in the first half of November. ICE Gasoil gained \$12.61/bbl m-o-m to \$97.04/bbl and the ICE Gasoil crack versus Brent rose by \$3.74/bbl m-o-m to \$13.29/bbl and peaked in the second week of October at \$14.23/bbl before dipping and rebounding to reach \$14.39/bbl in the week of November 8<sup>th</sup>. Bullish demand trends (air travel recovery, robust freight transport, heating oil needs) sustained cracks overall, while incremental supply from refineries coming out of maintenance helped ease markets in the latter half of the month.



Money Manager net long positions in oil futures and options fell slightly during the month of October, after peaking at the beginning of the month. The decline in net long positions was driven by ICE Brent and NYMEX ULSD contracts, while positions on NYMEX WTI and ICE gasoil remained relatively flat. Net long positions on NYMEX RBOB contracts rose significantly during the month. The overall drop in positions reflected crude prices in the latter half of the month that traded lower in a narrow range.

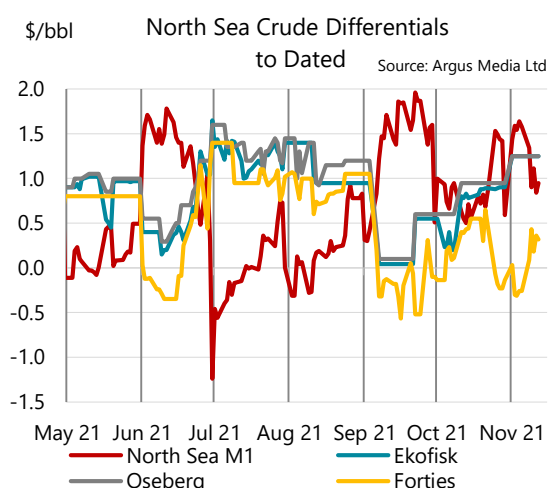
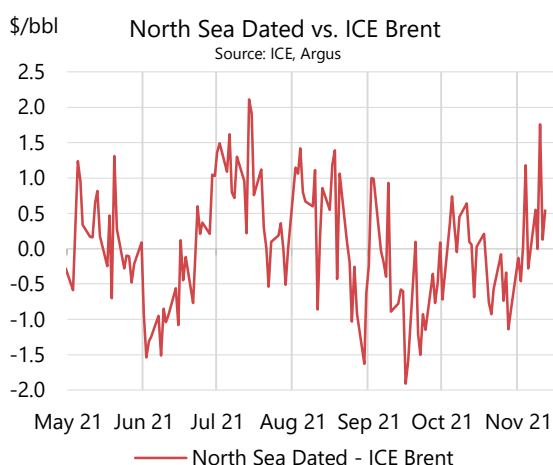
Since December 2020, the ratio of Money Manager long to short positions for ICE Brent has remained in a narrow range around 6:1, just slightly above the three-year average. The stability reflects a strong bias toward price tensions created by the steady and expected crude stock draws arising from OPEC+ supply management and industry restraint on upstream investment, notably in the responsive shale oil sector.

Money Manager net long positions on ICE Brent futures and options fell 25% in the four weeks to 2 November as investors cut outright long positions (-17%) and increased outright short positions (+27%). The change in position reflects recent disappointing data on the macroeconomic front and possibly a bias toward less stock tension internationally in the coming weeks. Net long positions on NYMEX WTI rose 5% over the past four weeks, reflecting a sharp 30% cut in net short positions. The steady fall in US PADD2 crude stocks at Cushing, Oklahoma and uncertain perspectives on rebuilding those stocks has limited the downside risk for the NYMEX crude oil price structure.

Overall, Money Manager net long positions on product future and options contracts fell 1% over the month, with outright long positions stable and outright short positions up 30%. Net long positions on NYMEX RBOB futures and options rose 10% over the four-week period as outright long positions rose 16% and despite a 43% increase in outright short positions (amounting to less than a quarter of long positions). With European refiners exporting less gasoline and strong petrochemical demand for naphtha, investors anticipate gasoline market tensions in the coming months. Money Manager net long positions on ICE gasoil futures and options rose slightly (+1%) over the four weeks to 2 November as outright long positions were unchanged but outright short positions fell -17%. Uncertainty linked to the upside for gasoil prices as a result of natural gas market tensions favoured cutting exposure to short positions. Net long positions on NYMEX ULSD futures fell 19% over the same period as outright long positions fell (-11%) and outright short positions rose (+25%). The shift reflects the anticipated demand for gasoil in transportation and winter heating, but also rising supply with the post-maintenance ramp-up in refinery runs.

## Spot crude oil prices

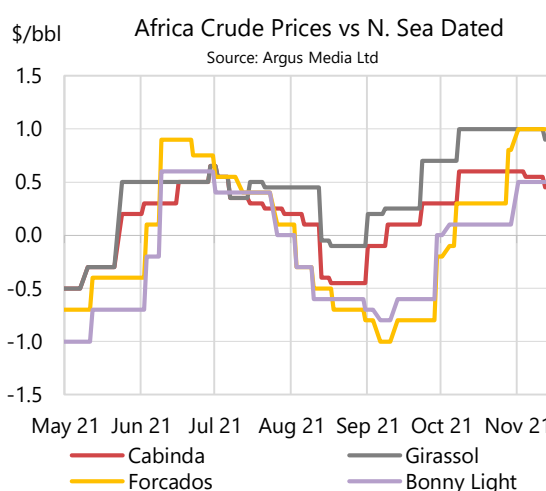
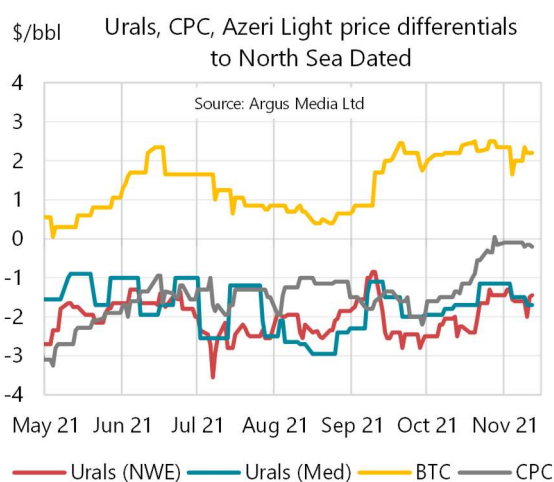
Physical crude prices rose over the month, tracking the dynamic of the futures markets as well as the abiding quality, inventory, and regional arbitrage issues of the physical market. The rise in physical crude prices outstripped that of crude futures in October, narrowing the North Sea Dated discount to ICE Brent. Sweet crudes performed better than sour grades as high natural gas prices continued to penalize the cost of desulphurisation across all regions but particularly in Europe. As well, medium sour barrels have dominated incremental OPEC+ production, pressuring sour grades as a whole. While high gas prices also raised the cost of refining heavy crude versus light grades, strong demand for petrochemicals, gasoline and middle distillates and an overhang in heavy fuel oil supply raised the value of light grades versus medium or sour grades. Finally, the seasonal ramp-up in Asian refinery activity plus a jump in Chinese crude buying - with a fourth small crude allocation to Chinese independent refiners - boosted crude demand East of Suez.



North Sea Dated discounts to ICE Brent narrowed m-o-m by \$0.28/bbl to -\$0.21/bbl in a volatile market that saw the discount swing to a premium in the first half of November. The premium for cash WTI versus NYMEX rose \$0.11/bbl m-o-m to \$0.14/bbl as it averaged \$0.25/bbl in the second half of October as Cushing stock levels dropped to particularly low levels. The WTI discount to North Sea Dated narrowed over the month by \$0.85/bbl to -\$2.32/bbl and reached

just -\$1.59/bbl in the third week of October before returning to \$2.25/bbl in the first half of November.

North Sea grade prices improved with respect to North Sea Dated as European refiners shifted their buying to local light sweet crude supply for quality reasons but also because the narrowing WTI discount to North Sea Dated and rising freight costs undermined the transatlantic arbitrage. While European refiners also sought West African barrels for their qualities, rising freight costs weakened their competitive positioning versus North Sea grades. Forties differentials improved by \$0.22/bbl m-o-m, flipping from a discount to a premium of \$0.20/bbl. Ekofisk differentials rose \$0.36/bbl m-o-m to \$0.70/bbl while Oseberg differentials rose \$0.43/bbl m-o-m to \$0.85/bbl reflecting the continued improvement in middle distillate cracks. Both reached \$1.25/bbl in the first half of November



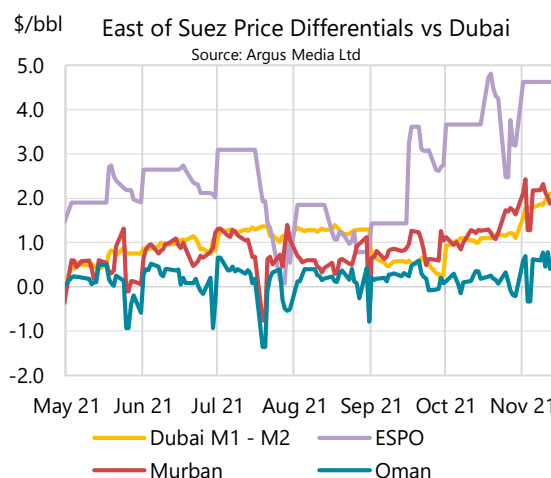
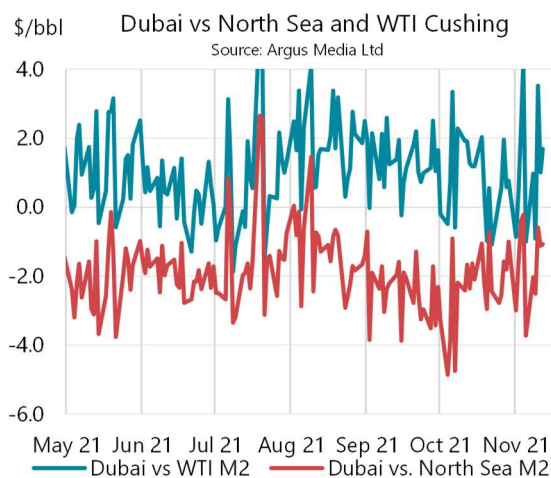
Russian Urals, a medium sour grade, saw its price discount to North Sea Dated in North West Europe unchanged m-o-m in October at -\$2.06/bbl. But after dipping from the beginning to the end of September, the price recovered during October and averaged -\$1.54/bbl in the first half of November. Urals discounts in the Mediterranean fared slightly better, narrowing \$0.14/bbl m-o-m to -\$1.61/bbl. While Russian crude exports rose by around 500 kb/d m-o-m in October, differentials benefitted from its lower sulphur content (1.5% mass) versus competing grades like Arab Medium (2.4% mass). Sweeter and lighter Caspian grades fared even better, with the BTC Blend premium widening by \$0.63/bbl to \$2.29/bbl and the CPC Blend discount narrowing by \$0.65/bbl m-o-m to -\$1.01/bbl in October and to -\$0.15/bbl in the first half of November.

West African grade price differentials to North Sea Dated also made strong improvements thanks to both European and Asian demand. Most of the light sweet Nigerian grades flipped from discounts in September to premiums in October (Forcados +\$1.06/bbl to \$0.27/bbl and to \$1/bbl in the first half of November, Bonny Light +\$0.70/bbl to \$0.10 and to \$0.50/bbl in the first half of November). Heavy sweet Angolan grades saw good increases in their premiums linked to strong Asian (Chinese) buying (Girassol +\$0.57/bbl m-o-m to \$0.93/bbl, Cabinda +\$0.43/bbl to \$0.53/bbl). Significant increases in freight rates offset some of the potential gains.

Middle East Dubai benefitted from stronger Asian demand for available Middle East barrels that offset the general pressure on sour crude prices and the effect of rising Middle East exports. Dubai discounts to North Sea Dated narrowed progressively over the month while strong WTI prices at Cushing due to low stocks narrowed their discount to Dubai. The Dubai front-month discount to North Sea second-month forward prices narrowed by \$0.08/bbl m-o-m to -\$2.34/bbl in October as the discount tapered to -\$1.46/bbl in the second week of November. The Dubai



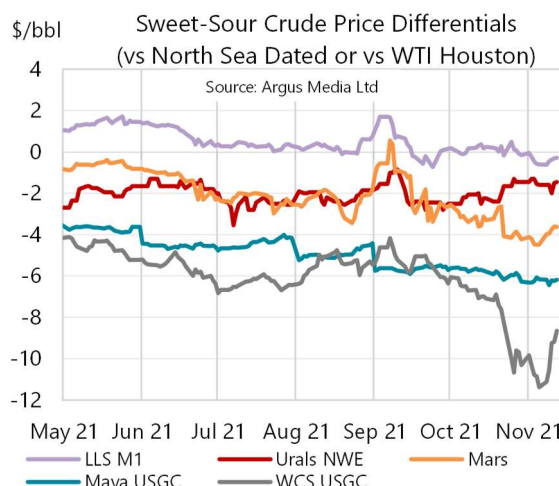
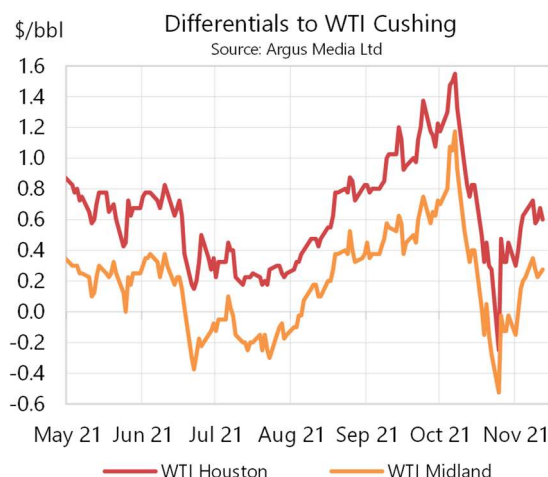
premium to WTI Cushing second month prices narrowed by \$0.40/bbl to \$0.83/bbl and fell to \$0.18/bbl in the third week of October before widening again in November. The narrow spread affected the WTI arbitrage to Asia.



Middle East and Asian crude price differentials to Dubai first month reflect similar drivers to those in other regions. The weakness of medium sour grades versus lighter and sweeter grades was amplified by the weakness of high sulphur fuel cracks and the strength of Asian demand of petrochemical feedstock. Light sweet Murban premiums to Dubai rose \$0.43/bbl m-o-m to \$1.27/bbl in October and reached \$2.05/bbl in the first half of November. Upper Zakhum premiums rose \$0.18/bbl to \$0.29/bbl and reached \$1.16/bbl in the week of 8 November. Differentials for heavier and more sour grades than Dubai deteriorated over the month, with Oman premiums to Dubai falling by -\$0.08/bbl to \$0.13/bbl and Qatari Al Shaheen losing -\$0.54/bbl to flip to a discount of -\$0.45/bbl and -\$0.89/bbl in the first week of November. Premiums to Dubai first month for very light sweet Indonesian Tapis rose \$1.20/bbl to \$4.93/bbl while premiums for light sweet Russian ESPO rose \$0.90/bbl to \$2.63/bbl. Both Tapis and ESPO benefitted from their market proximity to Asian refiners that reduces freight costs and cuts the effect of strong backwardation in the overall cost of acquiring supply.

WTI at Cushing saw its price discounts to Midland and Houston narrow as crude stocks at the Cushing delivery hub continued to draw to exceptionally low levels over the month of October. The draw reflects regional demand for light sweet crude combined with limited overall investment by regional producers to boost output of similar grades. Rising arrivals of heavy sour Western Canadian grades following the recent Enbridge Line 3 pipeline expansion only depressed their discounts rather than contributing to an overall rebalancing of the market. Regional demand for light sweet grades comes not just from refiners, but also from Marathon Pipeline filling their recently reversed Capline pipeline from the Patoka, Illinois storage hub to refineries in Saint James, Louisiana.

The WTI Houston premium to Cushing narrowed by -\$0.28/bbl m-o-m to \$0.75/bbl and fell briefly to \$0.27/bbl in the third week of October when the differential exceptionally, reversed. The WTI Midland premium to Cushing narrowed by -\$0.23/bbl to \$0.30 and flipped to discounts of around -\$0.15/bbl in the second half of October, pulling crude toward Cushing that is normally destined for export via ports on the western US Gulf of Mexico coastline.



Light sweet offshore LLS crude delivered into Louisiana by pipeline saws its premium to WTI at Houston narrow by  $-\$0.23/\text{bbl}$  m-o-m to  $\$0.11/\text{bbl}$  in October. It flipped to a discount of  $-\$0.4/\text{bbl}$  in the first half of November. The LLS second month premium to WTI first month at Cushing narrowed by  $-\$0.72/\text{bbl}$  to  $\$0.30/\text{bbl}$  in October and flipped to a discount of  $-\$0.63/\text{bbl}$  in the first half of November. The deterioration reflects the impending arrival of light sweet crude barrels from the US midcontinent thanks to the reversal of the Capline.

Medium sour Mars crude price discounts to WTI at Houston widened by  $-\$1.66/\text{bbl}$  m-o-m to  $-\$3.37/\text{bbl}$  in October and reached  $-\$4.00/\text{bbl}$  in the first half of November. The deterioration reflected both weak perspectives for medium sour crude in general but also the more difficult arbitrages to Europe and Asia due to the narrow WTI-North Sea and WTI-Dubai spreads and the rising freight costs.

Spot Crude Oil Prices and Differentials (monthly and weekly averages, \$/bbl)												
	Oct-20	Aug-21	Sep-21	Oct-21	Oct-21 m-o-m Chg	Oct-21 y-o-y Chg	04 Oct	11 Oct	Week Commencing:			
							18 Oct	25 Oct	01 Nov	08 Nov		
<b>Crudes</b>												
North Sea Dated	40.01	70.75	74.40	83.54	9.15	43.54	82.20	83.85	84.62	84.50	83.01	83.77
North Sea Mth 1	41.05	70.96	75.76	84.42	8.66	43.38	83.04	84.44	85.39	85.79	84.57	84.80
North Sea Mth 2	41.50	70.53	74.99	83.80	8.81	42.29	82.31	83.96	84.83	85.12	83.28	83.41
WTI (Cushing) Mth 1	39.53	67.73	71.56	81.36	9.79	41.83	78.33	81.04	83.43	83.72	81.78	81.96
WTI (Cushing) Mth 2	39.81	67.47	71.33	80.62	9.29	40.82	77.94	80.43	82.76	82.37	80.46	80.69
WTI (Houston) Mth 1	40.17	68.32	72.59	82.10	9.51	41.93	79.76	81.87	83.80	83.99	82.29	82.60
Urals (NWE)	40.26	68.58	72.35	81.49	9.14	41.23	79.91	81.64	82.44	83.04	81.57	82.14
Urals (Mediterranean)	40.26	68.08	72.65	81.93	9.28	41.67	80.28	82.13	83.03	83.35	81.72	82.15
North Sea Dated vs. ICE Brent	-1.51	0.24	-0.48	-0.21	0.28	1.31	0.35	0.03	-0.45	-0.63	0.07	0.59
WTI (Cushing) Mth1 vs. NYMEX	-0.02	0.02	0.02	0.14	0.11	0.16	0.00	0.00	0.32	0.23	0.00	0.00
<b>Differentials to Physical Markers</b>												
WTI (Houston) versus North Sea Mth 1	-0.88	-2.64	-3.17	-2.32	0.85	-1.44	-3.28	-2.57	-1.59	-1.80	-2.29	-2.21
WTI (Houston) versus WTI (Cushing) Mth 1	0.64	0.59	1.03	0.75	-0.28	0.10	1.43	0.84	0.37	0.27	0.50	0.64
Urals (NWE) versus North Sea Dated	0.25	-2.17	-2.05	-2.06	-0.01	-2.31	-2.29	-2.21	-2.18	-1.46	-1.44	-1.63
Urals (Med) versus North Sea Dated	0.26	-2.67	-1.75	-1.61	0.14	-1.87	-1.92	-1.72	-1.59	-1.15	-1.29	-1.62
Dubai versus North Sea Mth 2	-0.80	-1.22	-2.42	-2.34	0.08	-1.54	-3.32	-2.03	-1.89	-1.95	-1.90	-1.46
Dubai versus WTI (Cushing) Mth 2	0.90	1.85	1.24	0.83	-0.40	-0.06	1.06	1.50	0.18	0.81	0.92	1.25
<b>Prompt Month Differentials</b>												
Forward North Sea Mth1-Mth2	-0.46	0.43	0.77	0.63	-0.15	1.08	0.73	0.48	0.56	0.67	1.29	1.39
Forward WTI Cushing Mth1-Mth2	-0.28	0.26	0.23	0.73	0.50	1.01	0.39	0.61	0.67	1.36	1.32	1.27
Forward Dubai Mth1-Mth2	-0.36	1.29	0.51	1.09	0.58	1.45	1.05	1.04	1.13	1.17	1.73	1.96

Source: Argus Media Ltd, ICE

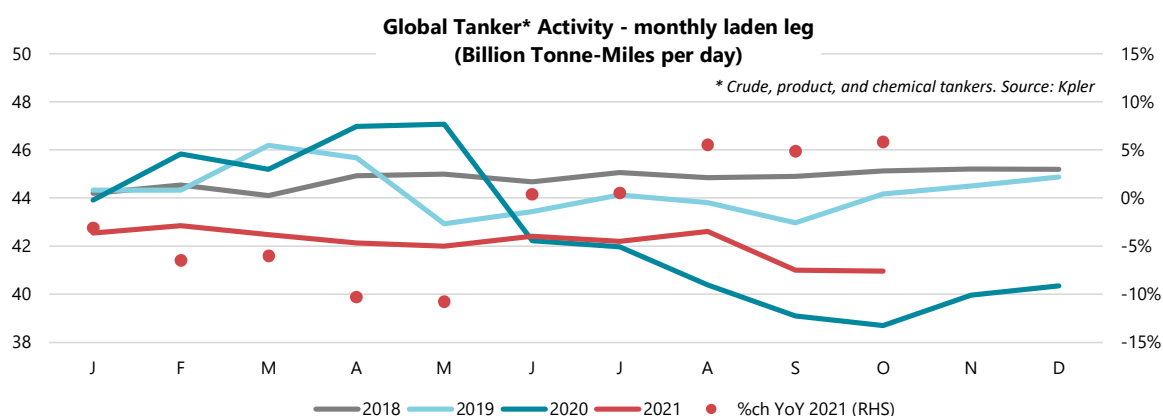
The discounts for Western Canadian Select (WCS) versus WTI widened in both Hardisty, Alberta and at Houston. The WCS discount to WTI Cushing at Hardisty widened by  $-\$3.39/\text{bbl}$  m-o-m to  $-\$15.59/\text{bbl}$  and to  $-\$22.60/\text{bbl}$  in the second week of November. The discount to WTI at Houston widened by  $-\$2.29/\text{bbl}$  m-o-m to  $-\$7.65/\text{bbl}$  in October and reached  $-\$10.20/\text{bbl}$  in the first half of November. The deterioration of discounts at Houston reflects the general pressure



on medium sour crude supply that is aggravated by the drawdown of 8.4 mb (270 kb/d) of medium sour crude from the US SPR during the month of October (the highest monthly volume since January). Another 12 mb of the 20 mb in the last SPR sale will be delivered in November and December. The deterioration in the discount at Hardisty reflects both the pressure on sour crude in general as well as rising local supply with the end of regional maintenance programs plus incremental production increases due to higher prices. Together, these factors have sustained export pressure despite increased pipeline capacity to the US market.

## Freight

Global tanker activity stagnated in October after falling seasonally in September, in line with a period of lower global crude output in August and September. Tankers continue to move around 5% more tonne-miles y-o-y, but activity remains well below the levels of 2018 or 2019. Consequently, a significant overhang in available tanker capacity continues to pressure the market, although scrapping in some tanker segments has mitigated the effects.



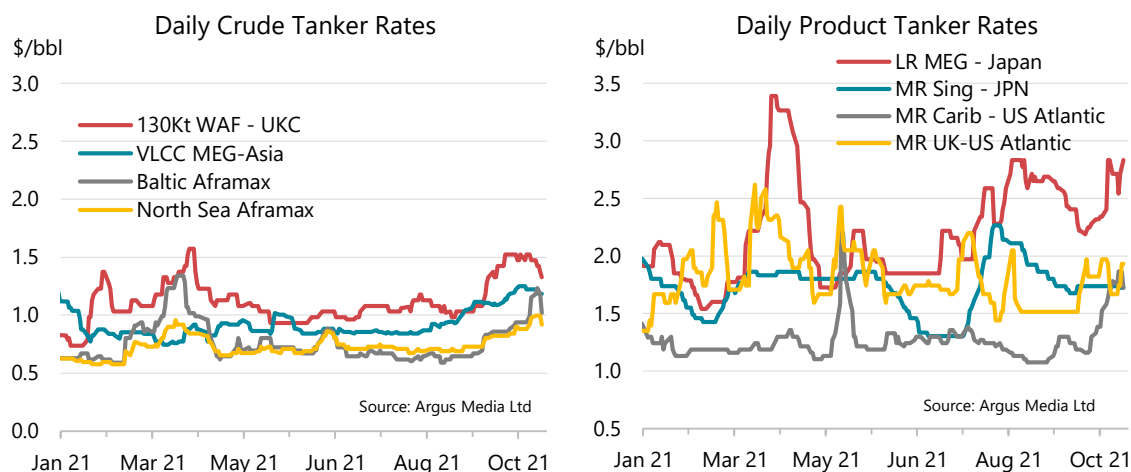
As tankers are chartered two to six weeks ahead of loading, freight rates reflect the forward-looking balance between tanker supply and demand. The steady m-o-m increases in exported world crude production from October through December, combined with the increase in crude demand with the end of refinery maintenance, have boosted tanker demand and lifted dirty freight rates through October and into November.

At the same time, demand for clean tanker tonne-miles has been disrupted by changing Atlantic Basin gasoline trade flows and the halt in Chinese product exports due to reduced refinery throughputs (following reduced crude import quotas for independent refineries and restricted power availability).

Freight costs for VLCCs from the Middle East Gulf to Asia in October rose around 17% m-o-m and were almost 25% higher in the first half of November than their average level in September. Chinese chartering accelerated with the allocation of new crude import quotas for independent refiners and with the pressure on state-owned refiners to boost runs to meet surging gasoil demand. Chartering elsewhere also picked-up as refiners bought crude to meet peak winter demand in December and January. Asian buyers focussed on the Middle East Gulf as well as West Africa and the US Gulf of Mexico for incremental sweet barrels.

Freight costs for Aframax vessels on the West Africa to UK Continent route rose 33% m-o-m in October and in the first half of November were 45% above their average September levels.

Desulphurisation cost-pressures have driven European refiners to maximize light and medium sweet grades in their crude slates. This boosted flows of West African grades to Europe. Aframax rates also benefitted from strong transatlantic chartering early in October when a wide Brent premium to WTI favoured exports of light sweet US crude to European refiners.



Freight costs for Aframax vessels on Baltic routes in Northwest Europe rose 33% m-o-m and were almost double the level of September in the second week of November. Strong demand for transatlantic routes reduced Aframax availability in the Baltic, despite steady increases in Russian exports and good European refinery demand for Urals crude. Increasing delays in the Turkish straights, as daylight hours shorten, has also contributed to tighter Aframax markets. North Sea Aframax rates were tributary to these tensions, rising 16% m-o-m and reaching almost 40% above average September levels in the first week of November.

Freight costs for Long-Range (LR) tankers from the Middle East Gulf to Japan fell around 13% m-o-m, but recovered by early November to reach a level in line with the September average. The decline in Chinese product exports briefly left an overhang of tankers in the market until other regional refiners picked up the slack and boosted product exports. Medium-Range (MR) tanker rates were tributary to these tensions, falling 10% m-o-m. Freight costs for MR vessels in the Atlantic basin rose m-o-m as more gasoline cargoes moved to West African markets from both the US Gulf of Mexico and Northwest Europe. Panama Canal delays and Mediterranean chartering for product deliveries has also supported the MR market.

Freight Costs												
(monthly and weekly averages, \$/bbl)												
	Oct-20	Aug-21	Sep-21	Oct-21	m-o-m chg	y-o-y chg	04-Oct	11-Oct	18-Oct	25-Oct	01-Nov	08-Nov
<b>Crude Tankers</b>												
VLCC MEG-Asia	0.87	0.85	0.98	1.14	0.16	0.3	1.11	1.09	1.15	1.23	1.23	1.20
130Kt WAF - UKC	0.75	1.08	1.04	1.38	0.34	0.6	1.20	1.38	1.50	1.50	1.50	1.40
Baltic Aframax	0.50	0.63	0.64	0.85	0.21	0.4	0.80	0.86	0.86	0.93	1.00	1.16
North Sea Aframax	0.58	0.70	0.71	0.82	0.12	0.2	0.78	0.82	0.83	0.88	0.91	0.98
<b>Product Tankers</b>												
LR MEG - Japan	1.95	2.37	2.70	2.35	-0.36	0.4	2.47	2.30	2.24	2.33	2.70	2.71
MR Sing - JPN	1.50	1.96	1.92	1.73	-0.20	0.2	1.71	1.71	1.74	1.74	1.74	1.73
MR Carib - US Atlantic	1.07	1.25	1.11	1.27	0.16	0.2	1.29	1.20	1.19	1.40	1.69	1.82
MR UK-US Atlantic	1.41	1.78	1.55	1.70	0.15	0.3	1.52	1.58	1.87	1.87	1.80	1.80

Source: Argus Media Ltd

#### Box 4. End user product prices rise more in some countries than others

As international crude oil prices rocketed to reach their highest level in seven years, end-user product prices have also risen sharply in many countries. By October 2021, gasoline and diesel prices in most countries exceeded their pre-pandemic levels of January 2020. However, countries where exchange rates versus the US dollar deteriorated saw steeper increases.

High fuel prices have become a significant drag on the world's economic recovery. A number of countries have taken steps to cope with the increase. The French government will provide a one-off payment of 100 euros for low and middle income households. India announced excise duty reductions for petrol and diesel by INR 5/litre and INR 10/litre while some states have cut Value Added Taxes (VAT) on petrol and diesel at the request of the central government.

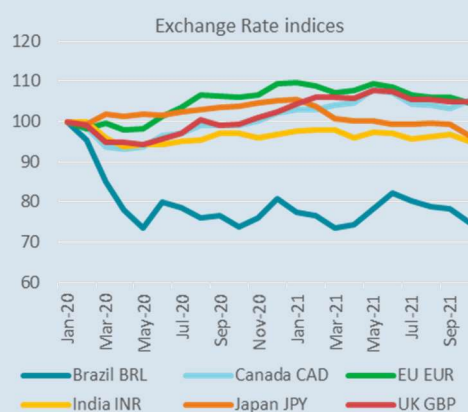
In a review of key consuming countries and regions, our analysis compares the domestic price of gasoline or diesel in local currency with the international price of the products in the corresponding region. We look at the individual factors driving the increase in domestic prices: the international market, exchange rates and other domestic market drivers.

After accounting for exchange rates, international spot prices only represent around 30-35% of domestic gasoline and diesel market prices in Europe, around 40-50% in Asia, 50-60% in Canada, and 70-75% in the US. Much of the rest reflects basis price differentials, transportation and distribution costs, marketing margins, and taxes. Low taxes in the US mean domestic retail prices closely track the international spot price, while high taxes in Europe, Japan and India result in a larger divergence.

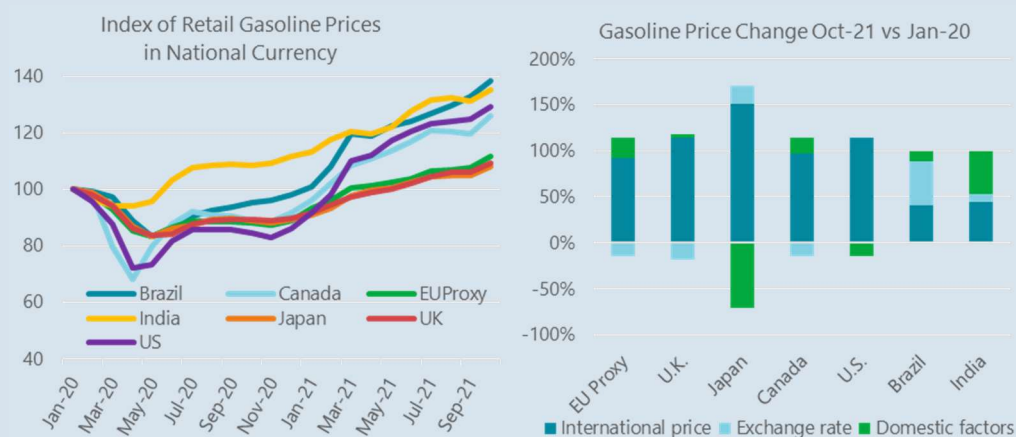
From January 2020 to October 2021, gasoline prices on international spot markets in US dollars rose 41% in Northwest Europe, 38% in Asia (Singapore), and 53% in North America (New York). Domestic market gasoline prices rose 8% in Japan, 9% in the UK, 12% in Europe, 26% in Canada, 29% in the US, 35% in India and 38% in Brazil. While stronger exchange rates for the EU, UK and Canada offset some of the increase in international prices, weaker exchange rates accentuated the rise of international prices, particularly in Brazil.

According to our analysis, around half the increase in Brazilian gasoline prices between January 2020 and October 2021 was caused by the exchange rate, another 40% by the international market, and around 10% due to domestic market factors. By contrast, in Europe over 90% of the increase on average arose from the international market and roughly 20% from domestic market drivers, but these costs were offset by a 5% improvement in the exchange rate.

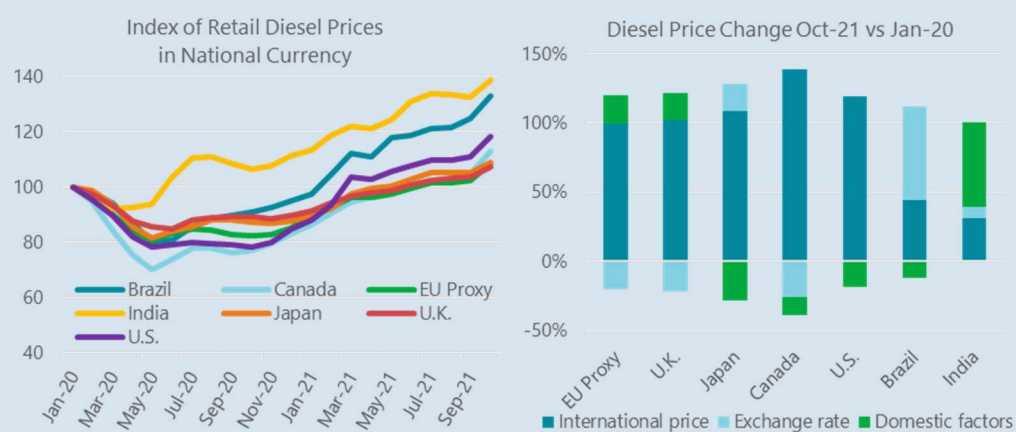
Local factors also drove changes in domestic market prices. In the US market, where there is no exchange rate impact, the increase in international prices was partly offset by local factors. Within these, rising biofuels and RIN/RVO costs have been offset by other factors likely including some pricing rigidities. Local factors added to price increases to a small degree in the EU, UK, Canada



and Brazil but to a much larger degree in India. The latter reflects an increase in product price taxes in 2020 to offset the decline of international prices and that has yet to be fully removed in 2021. In Japan, domestic factors offset the increase of international spot prices which may partly reflect a change in the basis risk versus Singapore prices with lower freight costs over the past year and changes in the North East Asia product balance.



Diesel prices on international spot markets in US dollars rose 27% in Northwest Europe, 25% in Asia (Singapore), and 36% in North America (New York) from January 2020 to October 2021. Domestic market diesel prices rose 7% in the UK, 9% in Japan and Europe, 13% in Canada, 19% in the US, 33% in Brazil and 39% in India. Domestic market factors eased the impact on local market prices in Japan, Canada, the US and Brazil but added to costs in the EU, UK, and India while weaker exchange rates accentuated the impact for Japan, Brazil, and India.



\*Mid-Grade Gasoline for Brazil, Unleaded premium (95 RON) for France, Germany, Italy, Spain, UK; regular unleaded for Canada, India, Japan and the United States. International price is based on North Sea Dated for Europe and Brazil, New York Harbor for North America and Singapore for Asia.

# Tables

**Table 1**  
**WORLD OIL SUPPLY AND DEMAND**  
(million barrels per day)

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
<b>OECD DEMAND</b>																	
Americas	25.4	25.5	24.3	19.8	22.6	23.0	22.4	22.7	24.3	24.8	24.9	24.2	24.5	25.2	25.6	25.1	25.1
Europe	14.3	14.3	13.3	11.0	12.9	12.5	12.4	11.9	12.7	13.8	13.4	12.9	13.2	13.5	13.9	13.5	13.5
Asia Oceania	8.0	7.9	7.9	6.6	6.8	7.4	7.1	7.7	7.0	7.2	7.8	7.4	7.9	7.1	7.4	7.8	7.6
<b>Total OECD</b>	<b>47.7</b>	<b>47.7</b>	<b>45.5</b>	<b>37.5</b>	<b>42.3</b>	<b>42.8</b>	<b>42.0</b>	<b>42.3</b>	<b>44.0</b>	<b>45.7</b>	<b>46.0</b>	<b>44.5</b>	<b>45.5</b>	<b>45.8</b>	<b>46.8</b>	<b>46.4</b>	<b>46.2</b>
<b>NON-OECD DEMAND</b>																	
FSU	4.7	4.7	4.6	4.1	4.7	4.7	4.5	4.6	4.7	4.9	4.9	4.8	4.7	4.8	5.1	5.0	4.9
Europe	0.8	0.8	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
China	13.0	13.5	11.8	14.1	14.6	14.8	13.8	14.6	15.2	15.2	15.1	15.0	15.2	15.8	15.8	15.6	15.6
Other Asia	14.0	14.0	13.5	11.3	12.2	13.4	12.6	13.5	12.9	12.6	14.0	13.2	14.4	14.1	13.6	14.2	14.1
Americas	6.3	6.3	5.8	5.0	5.7	5.9	5.6	5.8	5.9	6.2	6.1	6.0	5.9	6.0	6.2	6.2	6.1
Middle East	8.2	8.2	7.9	7.1	8.2	7.8	7.7	7.7	7.8	8.3	7.9	7.9	7.8	7.9	8.3	7.9	8.0
Africa	4.2	4.2	4.1	3.4	3.7	3.9	3.8	4.1	4.0	3.9	4.1	4.0	4.2	4.1	4.0	4.1	4.1
<b>Total Non-OECD</b>	<b>51.1</b>	<b>51.8</b>	<b>48.4</b>	<b>45.6</b>	<b>49.8</b>	<b>51.3</b>	<b>48.8</b>	<b>51.0</b>	<b>51.2</b>	<b>52.0</b>	<b>52.9</b>	<b>51.8</b>	<b>53.0</b>	<b>53.4</b>	<b>53.8</b>	<b>53.8</b>	<b>53.5</b>
<b>Total Demand<sup>1</sup></b>	<b>98.8</b>	<b>99.5</b>	<b>93.9</b>	<b>83.1</b>	<b>92.1</b>	<b>94.1</b>	<b>90.8</b>	<b>93.3</b>	<b>95.2</b>	<b>97.7</b>	<b>98.9</b>	<b>96.3</b>	<b>98.5</b>	<b>99.2</b>	<b>100.6</b>	<b>100.3</b>	<b>99.7</b>
<b>OECD SUPPLY</b>																	
Americas	23.0	24.8	25.9	22.6	23.2	23.7	23.8	23.3	24.2	24.2	25.0	24.2	25.1	25.4	25.7	26.0	25.6
Europe	3.5	3.4	3.7	3.6	3.4	3.5	3.6	3.6	3.1	3.4	3.6	3.4	3.6	3.4	3.5	3.5	3.5
Asia Oceania	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Total OECD<sup>4</sup></b>	<b>26.9</b>	<b>28.6</b>	<b>30.1</b>	<b>26.8</b>	<b>27.1</b>	<b>27.8</b>	<b>27.9</b>	<b>27.4</b>	<b>27.8</b>	<b>28.2</b>	<b>29.1</b>	<b>28.1</b>	<b>29.2</b>	<b>29.3</b>	<b>29.7</b>	<b>30.1</b>	<b>29.6</b>
<b>NON-OECD SUPPLY</b>																	
FSU	14.6	14.6	14.8	13.2	12.8	13.2	13.5	13.4	13.7	13.7	14.2	13.8	14.5	14.7	14.8	14.9	14.7
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	3.8	3.9	4.0	4.0	4.0	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Other Asia	3.4	3.3	3.2	3.0	2.9	3.0	3.0	3.0	2.9	2.8	2.8	2.9	2.8	2.8	2.8	2.7	2.8
Americas	5.1	5.3	5.6	5.1	5.4	5.2	5.3	5.3	5.3	5.4	5.4	5.3	5.5	5.5	5.6	5.7	5.6
Middle East	3.1	3.0	3.1	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.1	3.2	3.3	3.3	3.3	3.3
Africa	1.5	1.5	1.4	1.4	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3
<b>Total Non-OECD<sup>4</sup></b>	<b>31.6</b>	<b>31.8</b>	<b>32.2</b>	<b>29.9</b>	<b>29.6</b>	<b>29.7</b>	<b>30.4</b>	<b>30.2</b>	<b>30.5</b>	<b>30.5</b>	<b>31.0</b>	<b>30.6</b>	<b>31.5</b>	<b>31.8</b>	<b>31.9</b>	<b>32.0</b>	<b>31.8</b>
Processing gains <sup>3</sup>	2.4	2.4	2.3	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.7	2.8	2.2	2.5	3.1	2.6	2.6	2.1	2.9	3.2	2.9	2.8	2.5	3.2	3.5	3.0	3.0
<b>Total Non-OPEC Supply</b>	<b>63.5</b>	<b>65.6</b>	<b>66.8</b>	<b>61.1</b>	<b>61.9</b>	<b>62.2</b>	<b>63.0</b>	<b>61.9</b>	<b>63.4</b>	<b>64.2</b>	<b>65.3</b>	<b>63.7</b>	<b>65.6</b>	<b>66.6</b>	<b>67.5</b>	<b>67.4</b>	<b>66.8</b>
<b>OPEC<sup>2</sup></b>																	
Crude	31.4	29.6	28.2	25.6	24.1	24.9	25.7	25.3	25.5	26.9							
NGLs	5.5	5.4	5.4	5.1	5.0	5.1	5.2	5.2	5.3	5.3	5.3	5.3	5.4	5.4	5.5	5.5	5.5
<b>Total OPEC</b>	<b>36.8</b>	<b>35.0</b>	<b>33.6</b>	<b>30.7</b>	<b>29.1</b>	<b>30.0</b>	<b>30.8</b>	<b>30.5</b>	<b>30.8</b>	<b>32.2</b>							
<b>Total Supply</b>	<b>100.3</b>	<b>100.6</b>	<b>100.4</b>	<b>91.8</b>	<b>91.0</b>	<b>92.2</b>	<b>93.8</b>	<b>92.3</b>	<b>94.2</b>	<b>96.4</b>							
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>Reported OECD</b>																	
Industry	0.1	0.1	1.0	2.6	-0.4	-1.6	0.4	-1.3	-0.5	-1.3							
Government	-0.1	0.0	0.0	0.3	-0.1	-0.1	0.0	0.0	-0.2	-0.1							
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>2.9</b>	<b>-0.5</b>	<b>-1.7</b>	<b>0.4</b>	<b>-1.2</b>	<b>-0.7</b>	<b>-1.4</b>							
Floating storage/Oil in transit	0.3	0.1	0.6	0.4	-1.6	0.8	0.0	-0.6	-0.5	-0.5							
Miscellaneous to balance <sup>5</sup>	1.2	1.0	4.9	5.4	1.1	-1.0	2.6	0.9	0.2	0.5							
<b>Total Stock Ch. &amp; Misc</b>	<b>1.5</b>	<b>1.0</b>	<b>6.5</b>	<b>8.7</b>	<b>-1.1</b>	<b>-1.9</b>	<b>3.1</b>	<b>-0.9</b>	<b>-1.0</b>	<b>-1.3</b>							
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch. <sup>6</sup>	29.9	28.6	21.7	16.8	25.2	26.8	22.6	26.2	26.5	28.2	28.3	27.3	27.5	27.2	27.7	27.3	27.4

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

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

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

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

<sup>6</sup> Total demand minus total non-OPEC supply minus OPEC NGLs.

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

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
<b>OECD DEMAND</b>																	
Americas	-	-	-	-	-	-	-	-	-	-0.1	0.1	-	0.2	0.1	0.1	-	0.1
Europe	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-
Asia Oceania	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
<b>Total OECD</b>	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1	0.2	0.1
<b>NON-OECD DEMAND</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-0.1	-	0.1	0.1	-
Other Asia	-	-	-	-	-	0.1	-	-0.1	-0.1	-0.1	-	-0.1	-	-	-0.1	-0.1	-0.1
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-0.1	-0.2	-0.1	-0.1
Africa	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-
<b>Total Non-OECD</b>	-	-	-	-	-	0.1	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.1
<b>Total Demand</b>	-	-	-	-	-	0.1	-	-0.1	-	-0.1	0.1	-	-0.1	0.1	0.1	0.1	0.1
<b>OECD SUPPLY</b>																	
Americas	-	-	-	-	-	-	-	-	-	0.1	0.3	0.1	0.2	0.1	0.2	0.2	0.2
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total OECD</b>	-	-	-	-	-	-	-	-	-	0.1	0.3	0.1	0.2	0.1	0.2	0.2	0.2
<b>NON-OECD SUPPLY</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OECD</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OPEC Supply</b>	-	-	-	-	-	-	-	-	-	0.1	0.3	0.1	0.2	0.1	0.2	0.2	0.2
<b>OPEC</b>																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-	-0.1
<b>Total OPEC</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Supply</b>	-0.1	-0.1	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-	-
Miscellaneous to balance	-0.1	-0.1	-	-	-	-0.1	-	0.1	0.1	-	-	-	-	-	-	-	-
<b>Total Stock Ch. &amp; Misc</b>	-0.1	-0.1	-	-	-	-0.1	-	0.1	-	0.2	-	-	-	-	-	-	-
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch.	0.1	0.1	-	-	-	0.1	-	-0.1	-	-0.2	-0.2	-0.1	-0.1	0.1	-0.2	-0.1	-0.1

Note: When submitting their 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)

	2018	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
<b>Total Demand</b>	<b>98.8</b>	<b>99.5</b>	<b>93.9</b>	<b>83.1</b>	<b>92.1</b>	<b>94.1</b>	<b>90.8</b>	<b>93.3</b>	<b>95.2</b>	<b>97.7</b>	<b>98.9</b>	<b>96.3</b>	<b>98.5</b>	<b>99.2</b>	<b>100.6</b>	<b>100.3</b>	<b>99.7</b>
<b>OECD SUPPLY</b>																	
Americas <sup>2</sup>	20.9	22.8	23.9	20.7	21.3	21.8	21.9	21.3	22.3	22.3	23.0	22.2	23.1	23.4	23.7	24.0	23.6
Europe	3.5	3.4	3.7	3.6	3.4	3.5	3.6	3.6	3.1	3.4	3.6	3.4	3.6	3.4	3.5	3.5	3.5
Asia Oceania	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
<b>Total OECD (non-OPEC+)</b>	<b>24.8</b>	<b>26.7</b>	<b>28.1</b>	<b>24.8</b>	<b>25.2</b>	<b>25.9</b>	<b>26.0</b>	<b>25.5</b>	<b>25.8</b>	<b>26.2</b>	<b>27.1</b>	<b>26.2</b>	<b>27.2</b>	<b>27.3</b>	<b>27.7</b>	<b>28.0</b>	<b>27.6</b>
<b>NON-OECD SUPPLY</b>																	
FSU <sup>3</sup>	0.3	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
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	3.8	3.9	4.0	4.0	4.0	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Other Asia <sup>4</sup>	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1
Latin America	5.1	5.3	5.6	5.1	5.4	5.2	5.3	5.3	5.3	5.4	5.4	5.3	5.5	5.5	5.6	5.7	5.6
Middle East <sup>5</sup>	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Africa <sup>6</sup>	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
<b>Total Non-OECD (non-OPEC+)</b>	<b>15.1</b>	<b>15.3</b>	<b>15.6</b>	<b>14.9</b>	<b>15.2</b>	<b>14.9</b>	<b>15.1</b>	<b>15.1</b>	<b>15.1</b>	<b>15.2</b>	<b>15.1</b>	<b>15.1</b>	<b>15.2</b>	<b>15.2</b>	<b>15.3</b>	<b>15.3</b>	<b>15.3</b>
Processing Gains	2.4	2.4	2.3	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.7	2.8	2.2	2.5	3.1	2.6	2.6	2.1	2.9	3.2	2.9	2.8	2.5	3.2	3.5	3.0	3.0
<b>Total Non-OPEC+</b>	<b>45.0</b>	<b>47.1</b>	<b>48.2</b>	<b>44.2</b>	<b>45.5</b>	<b>45.4</b>	<b>45.8</b>	<b>44.8</b>	<b>46.1</b>	<b>46.9</b>	<b>47.4</b>	<b>46.3</b>	<b>47.3</b>	<b>48.1</b>	<b>48.8</b>	<b>48.7</b>	<b>48.3</b>
<b>OPEC+ CRUDE</b>																	
Algeria	1.0	1.0	1.0	0.9	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0
Angola	1.5	1.4	1.4	1.3	1.2	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1
Azerbaijan	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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	3.6	2.4	2.0	1.9	2.0	2.1	2.0	2.3	2.4	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.5
Iraq	4.6	4.7	4.6	4.1	3.7	3.8	4.0	3.9	3.9	4.1	4.2	4.0	4.3	4.5	4.6	4.7	4.5
Kazakhstan	1.6	1.6	1.7	1.5	1.4	1.4	1.5	1.5	1.5	1.4	1.6	1.5	1.6	1.6	1.7	1.7	1.6
Kuwait	2.7	2.7	2.7	2.4	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.4	2.6	2.7	2.8	2.8	2.7
Libya	1.0	1.1	0.3	0.1	0.1	0.9	0.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Malaysia	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Mexico	1.8	1.7	1.7	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Nigeria	1.6	1.7	1.8	1.6	1.4	1.3	1.5	1.4	1.3	1.3	1.3	1.3	1.5	1.5	1.6	1.6	1.5
Oman	0.9	0.8	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Russia	10.4	10.4	10.4	9.2	8.9	9.1	9.4	9.3	9.5	9.7	9.9	9.6	10.2	10.4	10.4	10.5	10.4
Saudi Arabia	10.3	9.9	9.8	9.3	8.8	9.0	9.2	8.5	8.5	9.6	9.9	9.1	10.2	10.6	10.9	11.0	10.7
South Sudan	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sudan	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
UAE	3.0	3.2	3.2	2.9	2.8	2.5	2.9	2.6	2.6	2.8	2.9	2.7	2.9	3.0	3.1	3.2	3.1
Venezuela	1.4	0.9	0.8	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7
<b>OPEC+ Crude</b>	<b>47.8</b>	<b>45.9</b>	<b>44.6</b>	<b>40.2</b>	<b>38.2</b>	<b>39.3</b>	<b>40.6</b>	<b>39.9</b>	<b>40.5</b>	<b>41.9</b>	<b>43.3</b>	<b>41.4</b>	<b>44.5</b>	<b>45.5</b>	<b>46.3</b>	<b>46.5</b>	<b>45.7</b>
OPEC+ NGLs & Condensate	7.5	7.4	7.5	7.2	7.2	7.4	7.3	7.5	7.5	7.5	7.6	7.5	7.7	7.7	7.8	7.8	7.7
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>55.4</b>	<b>53.4</b>	<b>52.2</b>	<b>47.6</b>	<b>45.5</b>	<b>46.8</b>	<b>48.0</b>	<b>47.5</b>	<b>48.1</b>	<b>49.5</b>	<b>51.0</b>	<b>49.0</b>	<b>52.3</b>	<b>53.3</b>	<b>54.2</b>	<b>54.5</b>	<b>53.6</b>
<b>Total Supply Oil</b>	<b>100.3</b>	<b>100.6</b>	<b>100.4</b>	<b>91.8</b>	<b>91.0</b>	<b>92.2</b>	<b>93.8</b>	<b>92.3</b>	<b>94.2</b>	<b>96.4</b>	<b>98.5</b>	<b>95.4</b>	<b>99.6</b>	<b>101.4</b>	<b>103.0</b>	<b>103.2</b>	<b>101.8</b>

**Memo items:**

Call on OPEC+ crude + Stock ch 46.3 44.9 38.1 31.5 39.3 41.2 37.5 40.9 41.5 43.2 43.7 42.3 43.4 43.3 43.9 43.6 43.5

<sup>1</sup> From Nov 2021 OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2022.<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**

	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
<b>Demand (mb/d)</b>																
Americas	25.47	24.31	19.85	22.64	22.98	22.44	22.73	24.33	24.77	24.91	24.19	24.47	25.20	25.58	25.13	25.10
Europe	14.31	13.34	11.01	12.88	12.51	12.44	11.91	12.65	13.77	13.35	12.93	13.16	13.50	13.86	13.46	13.50
Asia Oceania	7.93	7.86	6.60	6.75	7.35	7.14	7.67	7.04	7.15	7.76	7.40	7.89	7.15	7.36	7.84	7.56
<b>Total OECD</b>	<b>47.72</b>	<b>45.51</b>	<b>37.46</b>	<b>42.27</b>	<b>42.84</b>	<b>42.02</b>	<b>42.30</b>	<b>44.02</b>	<b>45.69</b>	<b>46.02</b>	<b>44.52</b>	<b>45.51</b>	<b>45.84</b>	<b>46.81</b>	<b>46.43</b>	<b>46.15</b>
Asia	27.54	25.30	25.39	26.80	28.23	26.44	28.08	28.06	27.79	29.12	28.26	29.55	29.83	29.40	29.80	29.64
Middle East	8.24	7.85	7.09	8.18	7.78	7.72	7.67	7.79	8.32	7.91	7.93	7.83	7.88	8.31	7.90	7.98
Americas	6.29	5.77	4.99	5.70	5.90	5.59	5.84	5.90	6.22	6.14	6.03	5.94	6.02	6.18	6.16	6.07
FSU	4.72	4.57	4.05	4.65	4.67	4.49	4.56	4.68	4.94	4.88	4.76	4.74	4.80	5.11	5.05	4.93
Africa	4.24	4.12	3.41	3.72	3.91	3.79	4.07	3.98	3.91	4.07	4.01	4.18	4.08	3.97	4.12	4.09
Europe	0.78	0.74	0.68	0.77	0.77	0.74	0.74	0.74	0.82	0.78	0.77	0.75	0.77	0.83	0.80	0.79
<b>Total Non-OECD</b>	<b>51.82</b>	<b>48.36</b>	<b>45.61</b>	<b>49.82</b>	<b>51.26</b>	<b>48.77</b>	<b>50.97</b>	<b>51.16</b>	<b>52.00</b>	<b>52.90</b>	<b>51.76</b>	<b>52.98</b>	<b>53.38</b>	<b>53.80</b>	<b>53.82</b>	<b>53.50</b>
<b>World</b>	<b>99.54</b>	<b>93.86</b>	<b>83.06</b>	<b>92.09</b>	<b>94.10</b>	<b>90.79</b>	<b>93.27</b>	<b>95.18</b>	<b>97.69</b>	<b>98.91</b>	<b>96.28</b>	<b>98.50</b>	<b>99.22</b>	<b>100.60</b>	<b>100.26</b>	<b>99.65</b>
of which:																
United States <sup>1</sup>	20.46	19.50	16.07	18.45	18.72	18.19	18.45	20.03	20.24	20.27	19.76	19.85	20.44	20.59	20.30	20.30
Europe five <sup>2</sup>	8.20	7.62	5.93	7.11	7.03	6.92	6.68	7.07	7.63	7.55	7.24	7.57	7.61	7.72	7.61	7.63
China	13.55	11.82	14.14	14.57	14.80	13.84	14.57	15.20	15.18	15.12	15.02	15.19	15.76	15.81	15.56	15.58
Japan	3.74	3.78	2.93	3.06	3.53	3.33	3.73	3.08	3.20	3.67	3.42	3.86	3.18	3.30	3.70	3.51
India	4.99	4.92	3.89	4.25	5.10	4.54	4.99	4.45	4.53	5.14	4.78	5.28	5.17	4.82	5.19	5.12
Russia	3.57	3.52	3.08	3.58	3.50	3.42	3.49	3.59	3.79	3.65	3.63	3.64	3.66	3.94	3.81	3.76
Brazil	3.08	2.95	2.64	2.99	3.13	2.93	2.97	2.98	3.19	3.16	3.08	2.99	2.97	3.08	3.11	3.04
Saudi Arabia	3.12	2.93	2.77	3.30	3.01	3.00	2.77	3.07	3.33	3.03	3.05	2.76	2.89	3.22	2.92	2.95
Canada	2.51	2.42	1.97	2.25	2.14	2.19	2.12	2.16	2.41	2.47	2.29	2.34	2.35	2.58	2.51	2.45
Korea	2.60	2.53	2.45	2.36	2.40	2.44	2.55	2.50	2.59	2.66	2.58	2.59	2.52	2.62	2.63	2.59
Mexico	1.96	1.85	1.40	1.50	1.58	1.58	1.62	1.63	1.56	1.64	1.61	1.74	1.86	1.88	1.80	1.82
Iran	1.93	1.97	1.78	1.89	1.88	1.88	1.97	1.78	1.86	1.89	1.87	1.98	1.87	1.89	1.89	1.90
<b>Total</b>	<b>69.70</b>	<b>65.80</b>	<b>59.02</b>	<b>65.32</b>	<b>66.83</b>	<b>64.25</b>	<b>65.91</b>	<b>67.55</b>	<b>69.52</b>	<b>70.26</b>	<b>68.32</b>	<b>69.79</b>	<b>70.28</b>	<b>71.45</b>	<b>71.02</b>	<b>70.64</b>
<b>% of World</b>	<b>70.0%</b>	<b>70.1%</b>	<b>71.1%</b>	<b>70.9%</b>	<b>71.0%</b>	<b>70.8%</b>	<b>70.7%</b>	<b>71.0%</b>	<b>71.2%</b>	<b>71.0%</b>	<b>71.0%</b>	<b>70.9%</b>	<b>70.8%</b>	<b>71.0%</b>	<b>70.8%</b>	<b>70.9%</b>
<b>Annual Change (% per annum)</b>																
Americas	0.2	-2.9	-21.6	-12.6	-10.3	-11.9	-6.5	22.6	9.4	8.4	7.8	7.7	3.6	3.3	0.9	3.7
Europe	0.0	-5.3	-22.8	-12.6	-11.6	-13.1	-10.7	14.9	6.9	6.7	3.9	10.5	6.7	0.7	0.8	4.4
Asia Oceania	-1.0	-6.0	-12.6	-12.3	-9.6	-10.0	-2.5	6.7	5.9	5.6	3.7	2.9	1.5	2.9	1.1	2.1
<b>Total OECD</b>	<b>-0.0</b>	<b>-4.2</b>	<b>-20.5</b>	<b>-12.6</b>	<b>-10.6</b>	<b>-11.9</b>	<b>-7.0</b>	<b>17.5</b>	<b>8.1</b>	<b>7.4</b>	<b>6.0</b>	<b>7.6</b>	<b>4.1</b>	<b>2.4</b>	<b>0.9</b>	<b>3.7</b>
Asia	2.0	-7.1	-8.0	-1.7	0.7	-4.0	11.0	10.5	3.7	3.2	6.9	5.2	6.3	5.8	2.3	4.9
Middle East	0.2	-2.1	-12.2	-5.6	-5.2	-6.3	-2.3	10.0	1.8	1.6	2.6	2.1	1.0	-0.2	-0.1	0.7
Americas	0.6	-6.5	-20.5	-10.7	-6.8	-11.1	1.2	18.3	9.1	3.9	7.8	1.6	2.0	-0.7	0.4	0.8
FSU	0.8	1.6	-12.6	-5.1	-3.7	-5.0	-0.3	15.5	6.1	4.5	6.2	3.9	2.6	3.6	3.5	3.4
Africa	0.7	-4.3	-20.4	-10.1	-8.0	-10.7	-1.2	16.8	5.1	4.1	5.8	2.7	2.5	1.5	1.2	2.0
Europe	3.4	-1.8	-13.4	-4.0	-3.1	-5.6	0.6	8.7	7.7	2.0	4.7	1.0	4.5	0.9	2.0	2.0
<b>Total Non-OECD</b>	<b>1.4</b>	<b>-5.1</b>	<b>-11.7</b>	<b>-4.5</b>	<b>-2.3</b>	<b>-5.9</b>	<b>5.4</b>	<b>12.2</b>	<b>4.4</b>	<b>3.2</b>	<b>6.1</b>	<b>4.0</b>	<b>4.4</b>	<b>3.5</b>	<b>1.8</b>	<b>3.4</b>
<b>World</b>	<b>0.7</b>	<b>-4.7</b>	<b>-15.9</b>	<b>-8.4</b>	<b>-6.3</b>	<b>-8.8</b>	<b>-0.6</b>	<b>14.6</b>	<b>6.1</b>	<b>5.1</b>	<b>6.0</b>	<b>5.6</b>	<b>4.3</b>	<b>3.0</b>	<b>1.4</b>	<b>3.5</b>
<b>Annual Change (mb/d)</b>																
Americas	0.06	-0.73	-5.48	-3.26	-2.65	-3.03	-1.58	4.48	2.13	1.93	1.75	1.74	0.86	0.81	0.22	0.91
Europe	0.00	-0.75	-3.25	-1.86	-1.64	-1.88	-1.43	1.64	0.89	0.84	0.49	1.25	0.85	0.09	0.11	0.57
Asia Oceania	-0.08	-0.50	-0.95	-0.95	-0.78	-0.79	-0.19	0.44	0.40	0.41	0.26	0.22	0.11	0.21	0.08	0.15
<b>Total OECD</b>	<b>-0.01</b>	<b>-1.98</b>	<b>-9.68</b>	<b>-6.07</b>	<b>-5.06</b>	<b>-5.70</b>	<b>-3.20</b>	<b>6.56</b>	<b>3.42</b>	<b>3.18</b>	<b>2.50</b>	<b>3.21</b>	<b>1.82</b>	<b>1.11</b>	<b>0.42</b>	<b>1.63</b>
Asia	0.55	-1.92	-2.22	-0.47	0.19	-1.10	2.79	2.66	0.98	0.89	1.83	1.47	1.77	1.61	0.67	1.38
Middle East	0.02	-0.17	-0.99	-0.48	-0.43	-0.52	-0.18	0.71	0.15	0.13	0.20	0.16	0.08	-0.01	0.00	0.06
Americas	0.04	-0.40	-1.29	-0.69	-0.43	-0.70	0.07	0.91	0.52	0.23	0.43	0.10	0.12	-0.04	0.02	0.05
FSU	0.04	0.07	-0.59	-0.25	-0.18	-0.24	-0.02	0.63	0.28	0.21	0.28	0.18	0.12	0.18	0.17	0.16
Africa	0.03	-0.18	-0.87	-0.42	-0.34	-0.45	-0.05	0.57	0.19	0.16	0.22	0.11	0.10	0.06	0.05	0.08
Europe	0.03	-0.01	-0.11	-0.03	-0.02	-0.04	0.00	0.06	0.06	0.02	0.03	0.01	0.03	0.01	0.02	0.02
<b>Total Non-OECD</b>	<b>0.70</b>	<b>-2.62</b>	<b>-6.06</b>	<b>-2.33</b>	<b>-1.22</b>	<b>-3.05</b>	<b>2.61</b>	<b>5.55</b>	<b>2.18</b>	<b>1.64</b>	<b>2.99</b>	<b>2.02</b>	<b>2.23</b>	<b>1.80</b>	<b>0.93</b>	<b>1.74</b>
<b>World</b>	<b>0.69</b>	<b>-4.60</b>	<b>-15.74</b>	<b>-8.41</b>	<b>-6.28</b>	<b>-8.75</b>	<b>-0.59</b>	<b>12.11</b>	<b>5.60</b>	<b>4.81</b>	<b>5.49</b>	<b>5.23</b>	<b>4.05</b>	<b>2.91</b>	<b>1.35</b>	<b>3.37</b>
<b>Revisions to Oil Demand from Last Month's Report (mb/d)</b>																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	0.14	0.00	0.17	0.14	0.12	0.03	0.11
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.04	0.03	-0.05	0.02	0.03	0.12	0.03
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	-0.03	0.01	-0.02	-0.04	-0.02	0.03	-0.01
<b>Total OECD</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>0.14</b>	<b>0.05</b>	<b>0.09</b>	<b>0.12</b>	<b>0.13</b>	<b>0.17</b>	<b>0.13</b>
Asia	0.00	-0.02	-0.01	-0.04	0.08	0.00	-0.10	-0.11	-0.16	-0.13	-0.13	-0.16	0.00	0.02	-0.02	-0.04
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	0.04	0.00	0.00	-0.05	-0.18	-0.06	-0.07
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	-0.02	-0.03	-0.03	-0.03	-0.03
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.04	0.00	-0.02	0.08	0.07	-0.03	0.03
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.03	0.04	0.04	0.02	0.02	0.01	0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.01	0.01	0.01	0.03	0.01	0.01
<b>Total Non-OECD</b>	<b>0.00</b>	<b>-0.02</b>	<b>-0.01</b>	<b>-0.04</b>	<b>0.09</b>	<b>0.00</b>	<b>-0.10</b>	<b>-0.06</b>	<b>-0.09</b>	<b>-0.09</b>	<b>-0.08</b>	<b>-0.15</b>	<b>0.03</b>	<b>-0.07</b>	<b>-0.12</b>	<b>-0.08</b>
<b>World</b>	<b>0.00</b>	<b>-0.02</b>	<b>-0.01</b>	<b>-0.04</b>	<b>0.09</b>	<b>0.00</b>	<b>-0.10</b>	<b>-0.02</b>	<b>-0.07</b>	<b>0.06</b>	<b>-0.03</b>	<b>-0.05</b>	<b>0.15</b>	<b>0.06</b>	<b>0.06</b>	<b>0.05</b>
<b>Revisions to Oil Demand Growth from Last Month's Report (mb/d)</b>																
World	0.00	-0.01	-0.01	-0.05	0.08	0.00	-0.08	-0.01	-0.03	-0.03	-0.04	0.04	0.16	0.14	0.00	0.09

<sup>1</sup> US figures exclude US territories.

<sup>2</sup> France, Germany, Italy, Spain and UK



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

	Latest month vs.										
	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21 <sup>2</sup>	Jul 21	Aug 20
<b>Americas</b>											
LPG and ethane	3.40	3.46	3.16	3.75	3.66	3.50	3.62	3.32	3.63	0.31	0.49
Naphtha	0.25	0.25	0.25	0.26	0.23	0.27	0.27	0.26	0.26	0.00	0.00
Motor gasoline	11.04	9.53	10.02	9.55	9.38	10.57	10.88	10.96	10.76	-0.20	0.75
Jet and kerosene	2.05	1.23	1.10	1.24	1.28	1.49	1.59	1.71	1.78	0.07	0.63
Gasoil/diesel oil	5.37	4.92	4.79	5.08	5.08	5.03	5.04	4.75	5.00	0.25	0.24
Residual fuel oil	0.54	0.40	0.50	0.41	0.54	0.51	0.61	0.56	0.57	0.01	0.07
Other products	2.82	2.66	2.82	2.70	2.56	2.95	3.07	2.87	3.08	0.20	0.08
<b>Total</b>	<b>25.47</b>	<b>22.44</b>	<b>22.64</b>	<b>22.98</b>	<b>22.73</b>	<b>24.33</b>	<b>25.08</b>	<b>24.43</b>	<b>25.08</b>	<b>0.65</b>	<b>2.27</b>
<b>Europe</b>											
LPG and ethane	1.20	1.08	1.10	1.06	1.12	1.07	1.11	1.20	1.09	-0.11	0.00
Naphtha	1.02	1.07	1.03	1.16	1.23	1.02	0.95	1.04	1.12	0.09	0.09
Motor gasoline	2.04	1.75	2.05	1.72	1.57	1.92	2.15	2.22	2.20	-0.02	0.16
Jet and kerosene	1.56	0.73	0.66	0.65	0.61	0.67	0.76	0.93	1.04	0.11	0.34
Gasoil/diesel oil	6.46	5.96	6.09	6.07	5.70	6.13	6.55	6.41	6.31	-0.10	0.56
Residual fuel oil	0.84	0.68	0.69	0.68	0.69	0.69	0.70	0.73	0.72	-0.02	0.04
Other products	1.20	1.15	1.26	1.17	1.00	1.14	1.19	1.18	1.14	-0.04	-0.04
<b>Total</b>	<b>14.31</b>	<b>12.44</b>	<b>12.88</b>	<b>12.51</b>	<b>11.91</b>	<b>12.65</b>	<b>13.41</b>	<b>13.71</b>	<b>13.62</b>	<b>-0.09</b>	<b>1.16</b>
<b>Asia Oceania</b>											
LPG and ethane	0.82	0.78	0.72	0.79	0.86	0.77	0.81	0.77	0.70	-0.07	-0.02
Naphtha	1.98	1.82	1.82	1.75	1.97	1.86	1.85	1.91	2.01	0.10	0.19
Motor gasoline	1.52	1.35	1.42	1.42	1.32	1.37	1.39	1.38	1.37	-0.01	-0.09
Jet and kerosene	0.89	0.61	0.37	0.69	0.82	0.47	0.44	0.41	0.41	0.00	0.05
Gasoil/diesel oil	1.93	1.79	1.73	1.89	1.82	1.82	1.84	1.76	1.73	-0.03	0.06
Residual fuel oil	0.43	0.43	0.39	0.44	0.50	0.41	0.41	0.44	0.45	0.00	0.09
Other products	0.37	0.35	0.30	0.38	0.37	0.35	0.37	0.38	0.35	-0.03	0.02
<b>Total</b>	<b>7.93</b>	<b>7.14</b>	<b>6.75</b>	<b>7.35</b>	<b>7.67</b>	<b>7.04</b>	<b>7.11</b>	<b>7.05</b>	<b>7.01</b>	<b>-0.05</b>	<b>0.30</b>
<b>OECD</b>											
LPG and ethane	5.41	5.32	4.98	5.59	5.64	5.35	5.55	5.29	5.42	0.12	0.48
Naphtha	3.26	3.15	3.10	3.16	3.43	3.16	3.07	3.21	3.39	0.18	0.28
Motor gasoline	14.59	12.64	13.49	12.69	12.27	13.86	14.41	14.56	14.32	-0.23	0.82
Jet and kerosene	4.50	2.57	2.13	2.58	2.71	2.62	2.79	3.05	3.23	0.18	1.02
Gasoil/diesel oil	13.75	12.67	12.61	13.04	12.61	12.99	13.43	12.92	13.04	0.12	0.87
Residual fuel oil	1.81	1.51	1.58	1.53	1.72	1.60	1.72	1.74	1.74	0.00	0.19
Other products	4.40	4.16	4.38	4.25	3.92	4.45	4.63	4.43	4.56	0.13	0.06
<b>Total</b>	<b>47.72</b>	<b>42.02</b>	<b>42.27</b>	<b>42.84</b>	<b>42.30</b>	<b>44.02</b>	<b>45.59</b>	<b>45.20</b>	<b>45.70</b>	<b>0.51</b>	<b>3.73</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.

North America 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)

	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21 <sup>2</sup>	Latest month vs.	
										Jul 21	Aug 20
<b>United States<sup>3</sup></b>											
LPG and ethane	2.63	2.74	2.48	3.01	2.85	2.76	2.81	2.55	2.80	0.25	0.33
Naphtha	0.21	0.18	0.19	0.19	0.16	0.21	0.20	0.22	0.18	-0.03	-0.02
Motor gasoline	9.27	8.05	8.51	8.06	8.00	9.07	9.27	9.31	9.11	-0.20	0.59
Jet and kerosene	1.75	1.08	0.97	1.10	1.14	1.34	1.43	1.49	1.58	0.09	0.55
Gasoil/diesel oil	4.08	3.78	3.70	3.94	3.97	3.93	3.94	3.66	3.89	0.23	0.22
Residual fuel oil	0.27	0.21	0.32	0.22	0.26	0.25	0.34	0.33	0.35	0.02	0.04
Other products	2.24	2.13	2.28	2.21	2.05	2.47	2.55	2.34	2.60	0.26	0.24
<b>Total</b>	<b>20.46</b>	<b>18.19</b>	<b>18.45</b>	<b>18.72</b>	<b>18.45</b>	<b>20.03</b>	<b>20.54</b>	<b>19.89</b>	<b>20.51</b>	<b>0.62</b>	<b>1.95</b>
<b>Japan</b>											
LPG and ethane	0.43	0.41	0.35	0.42	0.50	0.40	0.41	0.37	0.33	-0.04	0.00
Naphtha	0.74	0.68	0.67	0.71	0.74	0.68	0.65	0.64	0.69	0.06	0.00
Motor gasoline	0.85	0.76	0.81	0.78	0.71	0.71	0.73	0.78	0.79	0.02	-0.06
Jet and kerosene	0.47	0.36	0.19	0.44	0.55	0.24	0.21	0.20	0.21	0.01	0.01
Diesel	0.44	0.40	0.39	0.42	0.41	0.39	0.40	0.39	0.37	-0.02	-0.01
Other gasoil	0.33	0.30	0.27	0.33	0.35	0.28	0.28	0.26	0.26	0.00	0.01
Residual fuel oil	0.23	0.21	0.19	0.23	0.27	0.21	0.22	0.24	0.23	-0.01	0.06
Other products	0.24	0.20	0.19	0.20	0.20	0.18	0.17	0.24	0.22	-0.02	0.02
<b>Total</b>	<b>3.74</b>	<b>3.33</b>	<b>3.06</b>	<b>3.53</b>	<b>3.73</b>	<b>3.08</b>	<b>3.06</b>	<b>3.12</b>	<b>3.11</b>	<b>-0.01</b>	<b>0.04</b>
<b>Germany</b>											
LPG and ethane	0.12	0.11	0.11	0.10	0.11	0.13	0.13	0.12	0.12	0.01	0.01
Naphtha	0.27	0.29	0.28	0.32	0.35	0.31	0.26	0.31	0.31	0.01	0.03
Motor gasoline	0.50	0.45	0.49	0.44	0.40	0.44	0.48	0.47	0.49	0.02	0.01
Jet and kerosene	0.22	0.10	0.09	0.08	0.09	0.11	0.12	0.15	0.16	0.01	0.06
Diesel	0.76	0.71	0.75	0.71	0.60	0.71	0.77	0.77	0.76	-0.01	0.06
Other gasoil	0.34	0.36	0.25	0.33	0.23	0.26	0.25	0.21	0.25	0.03	0.05
Residual fuel oil	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.00	0.00
Other products	0.08	0.08	0.09	0.07	0.06	0.06	0.06	0.05	0.07	0.02	0.00
<b>Total</b>	<b>2.35</b>	<b>2.15</b>	<b>2.12</b>	<b>2.11</b>	<b>1.89</b>	<b>2.07</b>	<b>2.11</b>	<b>2.13</b>	<b>2.21</b>	<b>0.08</b>	<b>0.23</b>
<b>Italy</b>											
LPG and ethane	0.10	0.09	0.09	0.10	0.11	0.09	0.09	0.09	0.09	0.00	0.00
Naphtha	0.11	0.10	0.11	0.12	0.11	0.10	0.08	0.08	0.10	0.02	-0.01
Motor gasoline	0.18	0.14	0.17	0.14	0.13	0.17	0.19	0.21	0.19	-0.01	0.02
Jet and kerosene	0.11	0.04	0.04	0.04	0.02	0.04	0.05	0.06	0.07	0.01	0.03
Diesel	0.47	0.42	0.48	0.45	0.44	0.49	0.53	0.54	0.48	-0.06	0.05
Other gasoil	0.07	0.06	0.06	0.07	0.05	0.06	0.07	0.07	0.06	0.00	0.02
Residual fuel oil	0.06	0.06	0.06	0.06	0.05	0.05	0.06	0.07	0.06	-0.01	0.01
Other products	0.15	0.14	0.15	0.15	0.14	0.16	0.16	0.17	0.12	-0.04	-0.01
<b>Total</b>	<b>1.26</b>	<b>1.05</b>	<b>1.17</b>	<b>1.13</b>	<b>1.04</b>	<b>1.15</b>	<b>1.24</b>	<b>1.28</b>	<b>1.19</b>	<b>-0.09</b>	<b>0.10</b>
<b>France</b>											
LPG and ethane	0.14	0.11	0.12	0.11	0.12	0.13	0.12	0.12	0.12	0.00	0.00
Naphtha	0.11	0.12	0.11	0.14	0.15	0.12	0.11	0.12	0.12	0.01	0.01
Motor gasoline	0.20	0.17	0.22	0.17	0.18	0.20	0.24	0.25	0.24	-0.01	0.02
Jet and kerosene	0.17	0.09	0.08	0.08	0.08	0.07	0.08	0.10	0.12	0.02	0.03
Diesel	0.76	0.67	0.76	0.69	0.68	0.72	0.81	0.80	0.73	-0.07	0.04
Other gasoil	0.14	0.14	0.06	0.13	0.17	0.09	0.08	0.08	0.09	0.01	0.03
Residual fuel oil	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	-0.01	-0.01
Other products	0.11	0.09	0.11	0.09	0.07	0.09	0.13	0.13	0.10	-0.03	0.01
<b>Total</b>	<b>1.69</b>	<b>1.42</b>	<b>1.51</b>	<b>1.44</b>	<b>1.47</b>	<b>1.45</b>	<b>1.61</b>	<b>1.63</b>	<b>1.56</b>	<b>-0.08</b>	<b>0.15</b>
<b>United Kingdom</b>											
LPG and ethane	0.13	0.13	0.12	0.12	0.13	0.09	0.08	0.11	0.10	0.00	0.00
Naphtha	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	-0.02
Motor gasoline	0.29	0.22	0.24	0.23	0.20	0.26	0.28	0.27	0.28	0.01	0.03
Jet and kerosene	0.34	0.19	0.13	0.17	0.17	0.14	0.13	0.12	0.16	0.04	0.03
Diesel	0.52	0.43	0.44	0.46	0.42	0.50	0.54	0.47	0.50	0.02	0.04
Other gasoil	0.14	0.11	0.13	0.11	0.11	0.14	0.14	0.13	0.14	0.01	0.02
Residual fuel oil	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.00	0.00
Other products	0.12	0.10	0.10	0.10	0.09	0.11	0.12	0.11	0.12	0.00	0.01
<b>Total</b>	<b>1.58</b>	<b>1.21</b>	<b>1.20</b>	<b>1.22</b>	<b>1.16</b>	<b>1.25</b>	<b>1.31</b>	<b>1.24</b>	<b>1.32</b>	<b>0.08</b>	<b>0.09</b>
<b>Canada</b>											
LPG and ethane	0.39	0.37	0.35	0.37	0.46	0.40	0.46	0.41	0.45	0.04	0.12
Naphtha	0.02	0.03	0.03	0.04	0.03	0.03	0.04	0.02	0.04	0.02	0.01
Motor gasoline	0.88	0.75	0.81	0.74	0.67	0.77	0.86	0.89	0.90	0.01	0.11
Jet and kerosene	0.17	0.07	0.06	0.06	0.05	0.05	0.07	0.10	0.10	0.00	0.04
Diesel	0.26	0.27	0.26	0.26	0.27	0.27	0.27	0.26	0.26	0.00	0.00
Other gasoil	0.38	0.33	0.35	0.35	0.32	0.32	0.35	0.33	0.37	0.04	0.02
Residual fuel oil	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.02	0.02	0.00	-0.02
Other products	0.36	0.33	0.36	0.29	0.28	0.28	0.32	0.33	0.28	-0.05	-0.18
<b>Total</b>	<b>2.51</b>	<b>2.19</b>	<b>2.25</b>	<b>2.14</b>	<b>2.12</b>	<b>2.16</b>	<b>2.39</b>	<b>2.36</b>	<b>2.42</b>	<b>0.06</b>	<b>0.10</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)

	2020	2021	2022	2Q21	3Q21	4Q21	1Q22	2Q22	Aug 21	Sep 21	Oct 21
<b>OPEC</b>											
<b>Crude Oil</b>											
Saudi Arabia	9.21			8.53	9.57				9.56	9.68	9.80
Iran	2.00			2.40	2.46				2.42	2.46	2.46
Iraq	4.05			3.94	4.06				4.07	4.15	4.15
UAE	2.86			2.64	2.76				2.77	2.80	2.83
Kuwait	2.41			2.35	2.44				2.44	2.47	2.50
Angola	1.27			1.12	1.11				1.13	1.11	1.11
Nigeria	1.49			1.34	1.27				1.24	1.25	1.24
Libya	0.35			1.15	1.16				1.15	1.15	1.16
Algeria	0.90			0.89	0.92				0.92	0.94	0.95
Congo	0.30			0.27	0.27				0.27	0.28	0.28
Gabon	0.20			0.18	0.18				0.18	0.18	0.16
Equatorial Guinea	0.11			0.11	0.10				0.10	0.10	0.09
Venezuela	0.53			0.55	0.59				0.58	0.61	0.69
<b>Total Crude Oil</b>	<b>25.69</b>			<b>25.48</b>	<b>26.90</b>				<b>26.83</b>	<b>27.18</b>	<b>27.42</b>
of which Neutral Zone <sup>1</sup>	0.11			0.26	0.24				0.22	0.26	0.24
<b>Total NGLs<sup>2</sup></b>	<b>5.16</b>	<b>5.27</b>	<b>5.45</b>	<b>5.27</b>	<b>5.31</b>	<b>5.31</b>	<b>5.40</b>	<b>5.44</b>	<b>5.31</b>	<b>5.31</b>	<b>5.31</b>
<b>Total OPEC<sup>3</sup></b>	<b>30.85</b>			<b>30.75</b>	<b>32.21</b>				<b>32.14</b>	<b>32.49</b>	<b>32.73</b>
<b>NON-OPEC<sup>4</sup></b>											
<b>OECD</b>											
<b>Americas</b>											
United States	16.56	16.59	17.69	16.85	16.67	17.17	17.20	17.68	16.82	16.28	16.98
Mexico	1.93	1.95	1.99	1.96	1.95	1.95	1.96	1.98	1.91	1.96	1.95
Canada	5.35	5.64	5.86	5.42	5.62	5.84	5.93	5.72	5.62	5.51	5.73
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>											
UK	1.08	0.90	0.92	0.77	0.89	0.94	0.95	0.91	0.90	0.93	0.93
Norway	2.01	2.06	2.14	1.92	2.05	2.16	2.19	2.06	2.09	2.02	2.12
Others	0.48	0.45	0.44	0.44	0.46	0.46	0.45	0.44	0.45	0.47	0.46
<b>Asia Oceania</b>											
Australia	0.52	0.51	0.52	0.46	0.54	0.53	0.53	0.52	0.56	0.53	0.53
Others	0.45	0.44	0.45	0.39	0.46	0.46	0.46	0.45	0.48	0.46	0.45
Others	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.08	0.07
<b>Total OECD</b>	<b>27.94</b>	<b>28.11</b>	<b>29.57</b>	<b>27.81</b>	<b>28.18</b>	<b>29.05</b>	<b>29.20</b>	<b>29.31</b>	<b>28.36</b>	<b>27.70</b>	<b>28.70</b>
<b>NON-OECD</b>											
<b>Former USSR</b>											
Russia	13.50	13.75	14.72	13.69	13.67	14.22	14.48	14.73	13.45	13.82	14.19
Azerbaijan	10.61	10.86	11.69	10.80	10.89	11.23	11.51	11.71	10.78	11.07	11.19
Kazakhstan	0.70	0.71	0.74	0.69	0.71	0.73	0.73	0.73	0.71	0.71	0.70
Others	1.84	1.82	1.93	1.84	1.70	1.91	1.87	1.92	1.59	1.68	1.94
<b>Asia</b>											
China	6.99	6.93	6.86	6.96	6.88	6.88	6.90	6.88	6.88	6.91	6.87
Malaysia	3.97	4.08	4.09	4.09	4.08	4.08	4.10	4.10	4.08	4.11	4.09
India	0.60	0.56	0.57	0.57	0.53	0.55	0.57	0.57	0.52	0.52	0.53
Indonesia	0.75	0.73	0.71	0.72	0.73	0.72	0.72	0.71	0.72	0.73	0.72
Others	0.73	0.68	0.66	0.68	0.68	0.67	0.67	0.66	0.68	0.68	0.68
<b>Europe</b>											
Others	0.93	0.88	0.83	0.90	0.86	0.86	0.85	0.84	0.88	0.86	0.85
<b>Americas</b>											
Brazil	0.12	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Argentina	5.32	5.34	5.57	5.31	5.42	5.37	5.46	5.53	5.40	5.42	5.24
Colombia	3.04	3.03	3.24	3.04	3.10	3.05	3.16	3.22	3.08	3.09	2.92
Ecuador	0.61	0.64	0.66	0.63	0.64	0.65	0.66	0.66	0.64	0.65	0.65
Others	0.79	0.74	0.71	0.72	0.75	0.74	0.73	0.72	0.75	0.75	0.75
<b>Middle East</b>											
Oman	0.48	0.50	0.47	0.50	0.49	0.49	0.48	0.48	0.49	0.49	0.49
Qatar	0.40	0.43	0.48	0.42	0.44	0.43	0.43	0.45	0.44	0.44	0.43
Others	3.04	3.12	3.27	3.10	3.13	3.17	3.24	3.27	3.13	3.14	3.14
<b>Africa</b>											
Egypt	0.96	0.98	1.08	0.96	0.98	1.02	1.05	1.07	0.98	0.99	1.00
Others	1.80	1.85	1.88	1.85	1.85	1.86	1.88	1.88	1.85	1.85	1.86
Others	0.28	0.29	0.31	0.28	0.29	0.30	0.31	0.31	0.29	0.30	0.28
<b>Total Non-OECD</b>	<b>30.36</b>	<b>30.57</b>	<b>31.78</b>	<b>30.51</b>	<b>30.49</b>	<b>31.04</b>	<b>31.47</b>	<b>31.77</b>	<b>30.26</b>	<b>30.63</b>	<b>30.84</b>
Processing gains <sup>5</sup>	2.11	2.25	2.38	2.22	2.34	2.32	2.38	2.38	2.38	2.29	2.27
Global Biofuels	2.58	2.78	3.05	2.89	3.19	2.90	2.52	3.15	3.22	3.15	3.14
<b>TOTAL NON-OPEC</b>	<b>63.00</b>	<b>63.72</b>	<b>66.78</b>	<b>63.44</b>	<b>64.19</b>	<b>65.31</b>	<b>65.57</b>	<b>66.62</b>	<b>64.21</b>	<b>63.77</b>	<b>64.94</b>
<b>TOTAL SUPPLY</b>	<b>93.84</b>			<b>94.19</b>	<b>96.40</b>				<b>96.35</b>	<b>96.27</b>	<b>97.67</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)

	2020	2021	2022	2Q21	3Q21	4Q21	1Q22	2Q22	Aug 21	Sep 21	Oct 21
<b>United States</b>											
Alaska	448	440	451	443	409	454	460	457	409	439	449
California	404	372	358	374	370	366	363	359	371	368	367
Texas	4854	4735	5098	4808	4786	4939	5021	5101	4834	4705	4883
Federal Gulf of Mexico <sup>2</sup>	1644	1705	1893	1791	1517	1712	1844	1876	1535	1157	1591
Other US Lower 48	3934	3892	4247	3867	3980	4056	4135	4231	3993	4035	4090
NGLs <sup>3</sup>	5175	5341	5537	5459	5502	5533	5271	5542	5568	5481	5504
Other Hydrocarbons	100	103	110	104	109	106	102	109	114	99	96
<b>Total</b>	<b>16558</b>	<b>16587</b>	<b>17693</b>	<b>16848</b>	<b>16671</b>	<b>17167</b>	<b>17196</b>	<b>17675</b>	<b>16823</b>	<b>16283</b>	<b>16981</b>
<b>Canada</b>											
Alberta Light/Medium/Heavy	423	431	428	429	438	437	433	430	444	442	436
Alberta Bitumen	1718	1972	2219	1886	1942	2167	2142	2184	1989	1935	2145
Saskatchewan	435	442	429	437	442	439	435	431	447	440	440
Other Crude	490	464	433	469	455	462	435	434	452	437	463
NGLs	949	1012	1033	1004	1016	1011	1038	1027	1020	991	1014
Other Upgraders	219	175	177	163	178	179	194	163	170	169	165
Synthetic Crudes	1116	1148	1141	1027	1148	1151	1249	1051	1098	1092	1063
<b>Total</b>	<b>5349</b>	<b>5643</b>	<b>5862</b>	<b>5416</b>	<b>5620</b>	<b>5845</b>	<b>5926</b>	<b>5721</b>	<b>5621</b>	<b>5505</b>	<b>5726</b>
<b>Mexico</b>											
Crude	1721	1776	1835	1781	1784	1788	1797	1823	1752	1807	1784
NGLs	206	166	149	175	158	157	153	150	158	143	161
<b>Total</b>	<b>1932</b>	<b>1947</b>	<b>1989</b>	<b>1961</b>	<b>1947</b>	<b>1949</b>	<b>1955</b>	<b>1978</b>	<b>1915</b>	<b>1955</b>	<b>1950</b>
<b>UK</b>											
Brent Fields	35	26	21	29	19	22	24	24	16	16	15
Forties Fields	297	196	188	133	179	216	210	178	181	193	219
Ninian Fields	31	27	24	24	28	26	25	24	26	28	27
Flotta Fields	51	59	69	37	68	71	71	66	74	74	70
Other Fields	575	529	549	502	525	530	548	544	527	541	528
NGLs	88	67	71	42	69	71	71	71	71	79	68
<b>Total</b>	<b>1078</b>	<b>904</b>	<b>922</b>	<b>767</b>	<b>887</b>	<b>936</b>	<b>950</b>	<b>907</b>	<b>895</b>	<b>931</b>	<b>927</b>
<b>Norway<sup>5</sup></b>											
Ekofisk-Ula Area	132	141	128	141	145	141	138	130	144	143	142
Oseberg-Troll Area	234	215	236	190	208	234	236	230	209	206	230
Statfjord-Gullfaks Area	230	268	266	244	279	285	278	271	288	268	284
Haltenbanken Area	280	286	308	248	282	296	298	305	286	275	293
Sleipner-Frigg Area	743	832	895	824	817	885	892	889	831	842	875
Other Fields	101	67	63	67	60	58	89	-15	65	47	37
NGLs	288	255	243	200	258	257	254	248	266	240	258
<b>Total</b>	<b>2007</b>	<b>2064</b>	<b>2138</b>	<b>1915</b>	<b>2049</b>	<b>2156</b>	<b>2185</b>	<b>2057</b>	<b>2090</b>	<b>2022</b>	<b>2118</b>
<b>Other OECD Europe</b>											
Denmark	71	65	61	67	67	65	63	62	69	64	66
Italy	101	100	106	79	107	108	107	107	102	115	107
Turkey	62	66	66	67	67	67	67	66	65	67	67
Other	90	102	95	99	103	101	99	97	106	102	102
NGLs	7	7	6	7	7	7	7	6	7	7	7
Non-Conventional Oils	151	114	106	115	106	113	107	106	100	111	113
<b>Total</b>	<b>481</b>	<b>454</b>	<b>442</b>	<b>435</b>	<b>457</b>	<b>460</b>	<b>449</b>	<b>444</b>	<b>450</b>	<b>467</b>	<b>461</b>
<b>Australia</b>											
Gippsland Basin	8	5	5	6	6	6	6	5	6	6	6
Cooper-Eromanga Basin	35	25	22	25	24	24	23	23	24	24	24
Carnarvon Basin	106	113	113	105	123	120	117	114	127	121	119
Other Crude	202	193	204	163	203	202	206	204	215	205	200
NGLs	102	99	102	87	106	105	104	103	111	101	106
<b>Total</b>	<b>453</b>	<b>436</b>	<b>447</b>	<b>386</b>	<b>462</b>	<b>455</b>	<b>455</b>	<b>450</b>	<b>482</b>	<b>457</b>	<b>454</b>
<b>Other OECD Asia Oceania</b>											
New Zealand	21	18	17	18	18	18	17	17	18	18	18
Japan	4	4	4	4	4	4	4	4	4	4	4
NGLs	11	10	9	10	10	10	10	9	11	10	10
Non-Conventional Oils	34	40	43	38	43	43	43	43	42	44	43
<b>Total</b>	<b>71</b>	<b>72</b>	<b>73</b>	<b>71</b>	<b>76</b>	<b>75</b>	<b>74</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>75</b>
<b>OECD</b>											
Crude Oil	19480	19568	20834	19364	19455	20298	20587	20673	19611	19127	20081
NGLs	6834	6962	7157	6992	7132	7155	6912	7162	7218	7056	7132
Non-Conventional Oils <sup>4</sup>	1624	1584	1583	1451	1589	1598	1699	1479	1530	1521	1486
<b>Total</b>	<b>27938</b>	<b>28114</b>	<b>29574</b>	<b>27806</b>	<b>28176</b>	<b>29051</b>	<b>29198</b>	<b>29313</b>	<b>28358</b>	<b>27704</b>	<b>28699</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 counted as crude oil.

<sup>4</sup> Does not include biofuels.

<sup>5</sup> North Sea production is grouped by area including all fields being processed through the named field complex, ie, not just the field of that name.

<sup>6</sup> Other North Sea NGLs are included.

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

	2020	2021	2022	1Q21	2Q21	3Q21	4Q21	1Q22	Aug 21	Sep 21	Oct 21
<b>OPEC+</b>											
<b>Crude Oil</b>											
Algeria	0.90	0.91	0.99	0.87	0.89	0.92	0.95	0.98	0.92	0.94	0.95
Angola	1.27	1.13	1.15	1.14	1.12	1.11	1.14	1.17	1.13	1.11	1.11
Azerbaijan	0.61	0.60	0.61	0.59	0.60	0.60	0.61	0.62	0.60	0.59	0.59
Bahrain	0.17	0.18	0.19	0.17	0.17	0.18	0.18	0.19	0.18	0.18	0.17
Brunei	0.08	0.09	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.08	0.08
Congo	0.30	0.28	0.29	0.28	0.27	0.27	0.29	0.29	0.27	0.28	0.28
Equatorial Guinea	0.11	0.11	0.12	0.11	0.11	0.10	0.11	0.12	0.10	0.10	0.09
Gabon	0.20	0.18	0.18	0.17	0.18	0.18	0.17	0.17	0.18	0.18	0.16
Iran	2.00	2.42	2.50	2.32	2.40	2.46	2.49	2.50	2.42	2.46	2.46
Iraq	4.05	4.02	4.51	3.88	3.94	4.06	4.19	4.33	4.07	4.15	4.15
Kazakhstan	1.50	1.49	1.65	1.49	1.52	1.38	1.56	1.59	1.28	1.33	1.60
Kuwait	2.41	2.42	2.72	2.34	2.35	2.44	2.53	2.61	2.44	2.47	2.50
Libya	0.35	1.16	1.16	1.15	1.15	1.16	1.16	1.16	1.15	1.15	1.16
Malaysia	0.46	0.42	0.43	0.45	0.43	0.39	0.40	0.43	0.38	0.39	0.38
Mexico	1.66	1.67	1.69	1.67	1.69	1.66	1.66	1.66	1.62	1.67	1.66
Nigeria	1.49	1.34	1.53	1.39	1.34	1.27	1.35	1.46	1.24	1.25	1.24
Oman	0.76	0.75	0.85	0.73	0.74	0.76	0.79	0.82	0.76	0.76	0.77
Russia	9.42	9.62	10.38	9.26	9.54	9.72	9.95	10.23	9.73	9.82	9.91
Saudi Arabia	9.21	9.13	10.67	8.47	8.53	9.57	9.91	10.23	9.56	9.68	9.80
South Sudan	0.16	0.15	0.15	0.14	0.16	0.16	0.15	0.15	0.15	0.16	0.16
Sudan	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
UAE	2.86	2.72	3.08	2.61	2.64	2.76	2.86	2.95	2.77	2.80	2.83
Venezuela	0.53	0.59	0.69	0.55	0.55	0.59	0.69	0.69	0.58	0.61	0.69
<b>Total Crude Oil</b>	<b>40.57</b>	<b>41.41</b>	<b>45.70</b>	<b>39.94</b>	<b>40.48</b>	<b>41.88</b>	<b>43.28</b>	<b>44.48</b>	<b>41.68</b>	<b>42.23</b>	<b>42.79</b>
<i>of which Neutral Zone</i>	<i>0.11</i>			<i>0.23</i>	<i>0.26</i>				<i>0.22</i>	<i>0.26</i>	<i>0.24</i>
<b>Total NGLs</b>	<b>7.43</b>	<b>7.64</b>	<b>7.86</b>	<b>7.58</b>	<b>7.63</b>	<b>7.60</b>	<b>7.74</b>	<b>7.78</b>	<b>7.48</b>	<b>7.70</b>	<b>7.75</b>
<b>TOTAL OPEC+</b>	<b>48.0</b>	<b>49.0</b>	<b>53.6</b>	<b>47.5</b>	<b>48.1</b>	<b>49.5</b>	<b>51.0</b>	<b>52.3</b>	<b>49.2</b>	<b>49.9</b>	<b>50.5</b>
<b>NON-OPEC+</b>											
<b>OECD</b>											
<b>Americas<sup>2</sup></b>											
United States	16.56	16.59	17.69	15.64	16.85	16.67	17.17	17.20	16.82	16.28	16.98
Canada	5.35	5.64	5.86	5.69	5.42	5.62	5.84	5.93	5.62	5.51	5.73
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>	<b>3.57</b>	<b>3.42</b>	<b>3.50</b>	<b>3.63</b>	<b>3.12</b>	<b>3.39</b>	<b>3.55</b>	<b>3.58</b>	<b>3.44</b>	<b>3.42</b>	<b>3.51</b>
UK	1.08	0.90	0.92	1.03	0.77	0.89	0.94	0.95	0.90	0.93	0.93
Norway	2.01	2.06	2.14	2.14	1.92	2.05	2.16	2.19	2.09	2.02	2.12
Others	0.48	0.45	0.44	0.46	0.44	0.46	0.46	0.45	0.45	0.47	0.46
<b>Asia Oceania</b>	<b>0.52</b>	<b>0.51</b>	<b>0.52</b>	<b>0.51</b>	<b>0.46</b>	<b>0.54</b>	<b>0.53</b>	<b>0.53</b>	<b>0.56</b>	<b>0.53</b>	<b>0.53</b>
Australia	0.45	0.44	0.45	0.44	0.39	0.46	0.46	0.46	0.48	0.46	0.45
Others	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07	0.08	0.07
<b>Total OECD (non-OPEC+)</b>	<b>26.01</b>	<b>26.17</b>	<b>27.58</b>	<b>25.47</b>	<b>25.85</b>	<b>26.23</b>	<b>27.10</b>	<b>27.24</b>	<b>26.44</b>	<b>25.75</b>	<b>26.75</b>
<b>Non-OECD</b>											
<b>FSU</b>	<b>0.36</b>	<b>0.36</b>	<b>0.37</b>	<b>0.35</b>	<b>0.35</b>	<b>0.36</b>	<b>0.36</b>	<b>0.37</b>	<b>0.36</b>	<b>0.36</b>	<b>0.36</b>
<b>Asia</b>	<b>6.27</b>	<b>6.26</b>	<b>6.17</b>	<b>6.29</b>	<b>6.28</b>	<b>6.25</b>	<b>6.22</b>	<b>6.22</b>	<b>6.25</b>	<b>6.28</b>	<b>6.24</b>
China	3.97	4.08	4.09	4.06	4.09	4.08	4.08	4.10	4.08	4.11	4.09
India	0.75	0.73	0.71	0.74	0.72	0.73	0.72	0.72	0.72	0.73	0.72
Indonesia	0.73	0.68	0.66	0.70	0.68	0.68	0.67	0.67	0.68	0.68	0.68
Others	0.82	0.77	0.72	0.79	0.79	0.76	0.75	0.73	0.77	0.76	0.75
<b>Europe</b>	<b>0.12</b>	<b>0.11</b>	<b>0.10</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>	<b>0.11</b>
<b>Americas</b>	<b>5.32</b>	<b>5.34</b>	<b>5.57</b>	<b>5.27</b>	<b>5.31</b>	<b>5.42</b>	<b>5.37</b>	<b>5.46</b>	<b>5.40</b>	<b>5.42</b>	<b>5.24</b>
Brazil	3.04	3.03	3.24	2.95	3.04	3.10	3.05	3.16	3.08	3.09	2.92
Argentina	0.61	0.64	0.66	0.62	0.63	0.64	0.65	0.66	0.64	0.65	0.65
Colombia	0.79	0.74	0.71	0.75	0.72	0.75	0.74	0.73	0.75	0.75	0.75
Ecuador	0.48	0.50	0.47	0.51	0.50	0.49	0.49	0.48	0.49	0.49	0.49
Others	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
<b>Middle East</b>	<b>1.90</b>	<b>1.96</b>	<b>1.99</b>	<b>1.95</b>	<b>1.95</b>	<b>1.96</b>	<b>1.96</b>	<b>1.99</b>	<b>1.96</b>	<b>1.96</b>	<b>1.96</b>
Qatar	1.80	1.85	1.88	1.85	1.85	1.85	1.86	1.88	1.85	1.85	1.86
Others	0.10	0.10	0.11	0.10	0.10	0.10	0.11	0.11	0.11	0.10	0.11
<b>Africa</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>	<b>1.11</b>	<b>1.11</b>	<b>1.06</b>	<b>1.07</b>	<b>1.07</b>	<b>1.07</b>	<b>1.01</b>	<b>1.07</b>
Egypt	0.60	0.57	0.54	0.57	0.58	0.56	0.56	0.55	0.56	0.56	0.56
Others	0.57	0.52	0.51	0.54	0.53	0.50	0.51	0.52	0.51	0.45	0.51
<b>Total non-OECD (non-OPEC+)</b>	<b>15.14</b>	<b>15.12</b>	<b>15.25</b>	<b>15.09</b>	<b>15.12</b>	<b>15.17</b>	<b>15.10</b>	<b>15.21</b>	<b>15.15</b>	<b>15.14</b>	<b>14.98</b>
Processing gains	2.11	2.25	2.38	2.13	2.22	2.34	2.32	2.38	2.38	2.29	2.27
Global biofuels	2.58	2.78	3.05	2.14	2.89	3.19	2.90	2.52	3.22	3.15	3.14
<b>TOTAL NON-OPEC+</b>	<b>45.84</b>	<b>46.32</b>	<b>48.26</b>	<b>44.83</b>	<b>46.08</b>	<b>46.92</b>	<b>47.42</b>	<b>47.35</b>	<b>47.19</b>	<b>46.34</b>	<b>47.13</b>
<b>TOTAL SUPPLY</b>	<b>93.84</b>	<b>95.37</b>	<b>101.82</b>	<b>92.35</b>	<b>94.19</b>	<b>96.40</b>	<b>98.45</b>	<b>99.61</b>	<b>96.35</b>	<b>96.27</b>	<b>97.67</b>

<sup>1</sup> From Nov 2021 OPEC+ supply reflects latest OPEC+ deal and individual country's sustainable capacity. Libya, Iran, Venezuela held at most recent level through 2022.

<sup>2</sup> Excludes Mexico

**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			
	May2021	Jun2021	Jul2021	Aug2021	Sep2021 <sup>6</sup>	Sep2018	Sep2019	Sep2020	4Q2020	1Q2021	2Q2021	3Q2021
<b>OECD INDUSTRY-CONTROLLED STOCKS<sup>1</sup></b>												
<b>OECD Americas</b>												
Crude	647.0	622.6	616.5	597.3	593.9	572.3	582.0	659.7	-0.10	0.26	-0.57	-0.31
Motor Gasoline	267.7	264.8	258.5	251.1	254.1	270.2	257.8	256.2	0.17	-0.06	-0.02	-0.12
Middle Distillate	207.9	210.0	211.9	207.1	201.3	216.2	202.4	235.1	-0.11	-0.16	-0.01	-0.10
Residual Fuel Oil	40.4	38.7	36.1	36.4	35.4	35.1	35.7	38.6	-0.01	0.02	-0.01	-0.04
Total Products <sup>3</sup>	755.7	759.0	765.3	761.1	760.3	800.6	810.5	853.3	-0.65	-0.65	0.26	0.01
<b>Total<sup>4</sup></b>	<b>1565.7</b>	<b>1547.9</b>	<b>1550.8</b>	<b>1520.4</b>	<b>1517.8</b>	<b>1541.3</b>	<b>1558.8</b>	<b>1688.0</b>	<b>-0.83</b>	<b>-0.44</b>	<b>-0.27</b>	<b>-0.33</b>
<b>OECD Europe</b>												
Crude	341.0	341.8	336.5	315.1	298.2	335.4	355.4	377.8	-0.07	-0.20	-0.12	-0.47
Motor Gasoline	97.3	86.5	80.1	80.2	78.8	84.5	85.9	90.2	0.09	-0.10	-0.04	-0.08
Middle Distillate	316.4	306.1	295.1	294.5	276.5	266.5	279.7	334.7	-0.19	-0.06	-0.07	-0.32
Residual Fuel Oil	68.0	64.6	63.5	65.1	65.0	55.7	65.6	68.6	-0.02	0.00	-0.02	0.00
Total Products <sup>3</sup>	587.4	554.5	536.8	540.3	517.9	521.4	548.7	613.0	-0.19	-0.26	-0.20	-0.40
<b>Total<sup>4</sup></b>	<b>1006.0</b>	<b>973.5</b>	<b>948.8</b>	<b>930.2</b>	<b>887.9</b>	<b>932.8</b>	<b>988.1</b>	<b>1079.4</b>	<b>-0.39</b>	<b>-0.46</b>	<b>-0.32</b>	<b>-0.93</b>
<b>OECD Asia Oceania</b>												
Crude	129.5	125.0	114.5	114.0	109.0	139.8	142.3	163.3	-0.12	-0.33	0.01	-0.17
Motor Gasoline	29.0	29.4	26.1	28.3	27.9	25.3	26.9	26.8	-0.01	0.04	0.00	-0.02
Middle Distillate	64.7	65.3	66.2	75.0	73.4	78.2	79.4	72.0	-0.06	-0.03	0.02	0.09
Residual Fuel Oil	17.6	16.8	17.7	18.2	18.6	19.1	21.0	17.2	-0.02	0.02	0.00	0.02
Total Products <sup>3</sup>	170.6	170.4	169.3	186.9	186.7	186.7	194.1	183.4	-0.16	-0.02	0.05	0.18
<b>Total<sup>4</sup></b>	<b>360.6</b>	<b>357.5</b>	<b>345.2</b>	<b>363.9</b>	<b>357.2</b>	<b>391.9</b>	<b>400.8</b>	<b>411.3</b>	<b>-0.34</b>	<b>-0.38</b>	<b>0.12</b>	<b>0.00</b>
<b>Total OECD</b>												
Crude	1117.5	1089.3	1067.4	1026.4	1001.1	1047.5	1079.7	1200.8	-0.29	-0.27	-0.67	-0.96
Motor Gasoline	393.9	380.8	364.7	359.6	360.8	379.9	370.6	373.1	0.26	-0.12	-0.06	-0.22
Middle Distillate	588.9	581.4	573.1	576.6	551.2	560.8	561.6	641.7	-0.36	-0.25	-0.05	-0.33
Residual Fuel Oil	125.9	120.0	117.3	119.7	119.0	109.9	122.3	124.4	-0.04	0.03	-0.04	-0.01
Total Products <sup>3</sup>	1513.7	1483.9	1471.4	1488.3	1464.9	1508.7	1553.3	1649.6	-0.99	-0.93	0.11	-0.21
<b>Total<sup>4</sup></b>	<b>2932.3</b>	<b>2878.9</b>	<b>2844.8</b>	<b>2814.5</b>	<b>2763.0</b>	<b>2866.0</b>	<b>2947.7</b>	<b>3178.7</b>	<b>-1.56</b>	<b>-1.28</b>	<b>-0.47</b>	<b>-1.26</b>
<b>OECD GOVERNMENT-CONTROLLED STOCKS<sup>5</sup></b>												
<b>OECD Americas</b>												
Crude	627.6	621.3	621.3	621.3	617.8	660.0	644.8	642.2	-0.04	0.00	-0.18	-0.04
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	206.2	205.8	204.4	204.0	204.8	212.1	206.3	207.4	-0.02	0.02	-0.02	-0.01
Products	281.4	278.9	277.8	277.7	277.2	271.3	274.3	280.6	0.00	0.03	-0.05	-0.02
<b>OECD Asia Oceania</b>												
Crude	374.5	374.5	373.9	371.3	371.3	383.4	377.0	377.6	-0.03	0.00	0.00	-0.04
Products	38.8	38.8	38.8	38.8	38.8	38.7	38.9	39.4	0.00	0.00	0.00	0.00
<b>Total OECD</b>												
Crude	1208.3	1201.6	1199.6	1196.5	1193.9	1255.4	1228.0	1227.1	-0.10	0.02	-0.20	-0.08
Products	322.3	319.7	318.6	318.6	318.0	312.0	315.2	322.0	-0.01	0.03	-0.05	-0.02
<b>Total<sup>4</sup></b>	<b>1532.5</b>	<b>1523.6</b>	<b>1519.8</b>	<b>1516.8</b>	<b>1513.5</b>	<b>1570.1</b>	<b>1544.5</b>	<b>1551.4</b>	<b>-0.11</b>	<b>0.05</b>	<b>-0.24</b>	<b>-0.11</b>

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

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

<sup>3</sup> Total products includes gasoline, middle distillates, fuel oil and other products.

<sup>4</sup> Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

<sup>5</sup> Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

<sup>6</sup> Estimated

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

(million barrels)

	April			May			June			July			August		
	2020	2021	%	2020	2021	%	2020	2021	%	2020	2021	%	2020	2021	%
<b>United States<sup>2</sup></b>															
Crude	529.0	489.7	-7.4	521.6	476.6	-8.6	532.7	448.0	-15.9	520.1	438.9	-15.6	504.4	421.7	-16.4
Motor Gasoline	258.5	238.4	-7.8	259.0	239.9	-7.4	254.5	237.2	-6.8	250.4	230.8	-7.8	237.5	225.7	-5.0
Middle Distillate	192.6	178.1	-7.5	218.7	185.0	-15.4	220.5	186.4	-15.5	221.9	187.5	-15.5	222.2	182.4	-17.9
Residual Fuel Oil	36.2	31.3	-13.5	38.5	31.7	-17.7	39.5	31.1	-21.3	35.9	29.1	-18.9	34.4	29.4	-14.5
Other Products	230.6	210.1	-8.9	240.2	219.9	-8.5	256.7	225.9	-12.0	273.7	239.5	-12.5	291.1	246.9	-15.2
Total Products	717.9	657.9	-8.4	756.4	676.5	-10.6	771.2	680.6	-11.7	781.9	686.9	-12.1	785.2	684.4	-12.8
Other <sup>3</sup>	156.8	141.8	-9.6	154.3	140.7	-8.8	153.8	142.9	-7.1	152.0	143.0	-5.9	147.9	135.1	-8.7
<b>Total</b>	<b>1403.7</b>	<b>1289.4</b>	<b>-8.1</b>	<b>1432.3</b>	<b>1293.8</b>	<b>-9.7</b>	<b>1457.7</b>	<b>1271.5</b>	<b>-12.8</b>	<b>1454.0</b>	<b>1268.8</b>	<b>-12.7</b>	<b>1437.5</b>	<b>1241.2</b>	<b>-13.7</b>
<b>Japan</b>															
Crude	97.4	69.8	-28.3	98.6	78.4	-20.5	91.0	76.0	-16.5	94.1	70.5	-25.1	94.2	73.9	-21.5
Motor Gasoline	13.1	12.9	-1.5	12.5	14.9	19.2	11.5	14.3	24.3	11.9	9.9	-16.8	12.1	9.9	-18.2
Middle Distillate	29.0	29.2	0.7	30.5	32.2	5.6	31.9	31.5	-1.3	33.0	30.8	-6.7	37.1	34.4	-7.3
Residual Fuel Oil	7.6	7.2	-5.3	7.6	7.6	0.0	7.5	7.0	-6.7	7.4	7.1	-4.1	7.2	7.3	1.4
Other Products	32.9	31.9	-3.0	37.1	33.1	-10.8	36.6	31.9	-12.8	36.0	31.7	-11.9	38.4	36.3	-5.5
Total Products	82.6	81.2	-1.7	87.7	87.8	0.1	87.5	84.7	-3.2	88.3	79.5	-10.0	94.8	87.9	-7.3
Other <sup>3</sup>	55.0	49.7	-9.6	55.5	51.0	-8.1	55.7	51.3	-7.9	53.6	51.1	-4.7	56.1	52.9	-5.7
<b>Total</b>	<b>235.0</b>	<b>200.7</b>	<b>-14.6</b>	<b>241.8</b>	<b>217.2</b>	<b>-10.2</b>	<b>234.2</b>	<b>212.0</b>	<b>-9.5</b>	<b>236.0</b>	<b>201.1</b>	<b>-14.8</b>	<b>245.1</b>	<b>214.7</b>	<b>-12.4</b>
<b>Germany</b>															
Crude	51.5	49.0	-4.9	51.1	46.7	-8.6	51.4	48.7	-5.3	49.9	50.6	1.4	50.2	47.8	-4.8
Motor Gasoline	9.8	10.2	4.1	10.0	11.3	13.0	9.6	9.4	-2.1	8.9	9.0	1.1	10.0	9.5	-5.0
Middle Distillate	21.8	24.1	10.6	26.1	26.7	2.3	25.3	24.1	-4.7	25.5	25.4	-0.4	27.6	25.2	-8.7
Residual Fuel Oil	7.8	7.8	0.0	7.6	7.9	3.9	8.2	7.9	-3.7	7.4	7.9	6.8	8.3	8.1	-2.4
Other Products	9.5	10.0	5.3	10.0	10.3	3.0	9.3	9.9	6.5	9.5	10.1	6.3	9.6	10.6	10.4
Total Products	48.9	52.1	6.5	53.7	56.2	4.7	52.4	51.3	-2.1	51.3	52.4	2.1	55.5	53.4	-3.8
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>100.4</b>	<b>101.1</b>	<b>0.7</b>	<b>104.8</b>	<b>102.9</b>	<b>-1.8</b>	<b>103.8</b>	<b>100.0</b>	<b>-3.7</b>	<b>101.2</b>	<b>103.0</b>	<b>1.8</b>	<b>105.7</b>	<b>101.2</b>	<b>-4.3</b>
<b>Italy</b>															
Crude	42.4	38.6	-9.0	39.8	42.9	7.8	41.6	42.7	2.6	43.2	36.0	-16.7	40.8	32.9	-19.4
Motor Gasoline	14.1	12.6	-10.6	12.9	12.1	-6.2	13.0	10.4	-20.0	11.5	9.4	-18.3	11.4	9.3	-18.4
Middle Distillate	33.7	28.8	-14.5	33.0	30.0	-9.1	32.9	29.4	-10.6	31.2	22.6	-27.6	31.3	26.6	-15.0
Residual Fuel Oil	9.5	7.4	-22.1	9.0	7.3	-18.9	9.2	7.5	-18.5	8.0	7.0	-12.5	8.4	7.5	-10.7
Other Products	17.8	11.1	-37.6	18.6	10.9	-41.4	17.8	10.8	-39.3	17.4	10.8	-37.9	19.0	11.5	-39.5
Total Products	75.1	59.9	-20.2	73.5	60.3	-18.0	72.9	58.1	-20.3	68.1	49.8	-26.9	70.1	54.9	-21.7
Other <sup>3</sup>	17.8	15.3	-14.0	16.6	15.6	-6.0	17.5	15.0	-14.3	17.8	13.9	-21.9	17.6	14.3	-18.8
<b>Total</b>	<b>135.3</b>	<b>113.8</b>	<b>-15.9</b>	<b>129.9</b>	<b>118.8</b>	<b>-8.5</b>	<b>132.0</b>	<b>115.8</b>	<b>-12.3</b>	<b>129.1</b>	<b>99.7</b>	<b>-22.8</b>	<b>128.5</b>	<b>102.1</b>	<b>-20.5</b>
<b>France</b>															
Crude	11.5	12.8	11.3	14.2	12.4	-12.7	11.9	13.0	9.2	14.0	13.6	-2.9	11.6	13.4	15.5
Motor Gasoline	5.3	4.8	-9.4	4.5	4.9	8.9	4.9	3.6	-26.5	4.5	3.8	-15.6	5.0	4.2	-16.0
Middle Distillate	20.2	21.9	8.4	20.1	23.1	14.9	22.9	22.9	0.0	22.0	21.6	-1.8	25.9	21.3	-17.8
Residual Fuel Oil	1.2	1.8	50.0	0.9	1.9	111.1	1.6	1.7	6.2	1.6	2.0	25.0	1.5	1.7	13.3
Other Products	4.8	3.4	-29.2	4.7	3.7	-21.3	4.1	3.2	-22.0	4.2	3.3	-21.4	4.1	3.1	-24.4
Total Products	31.5	31.9	1.3	30.2	33.6	11.3	33.5	31.4	-6.3	32.3	30.7	-5.0	36.5	30.3	-17.0
Other <sup>3</sup>	9.6	7.9	-17.7	9.3	7.8	-16.1	8.7	8.4	-3.4	8.7	7.6	-12.6	9.1	7.0	-23.1
<b>Total</b>	<b>52.6</b>	<b>52.6</b>	<b>0.0</b>	<b>53.7</b>	<b>53.8</b>	<b>0.2</b>	<b>54.1</b>	<b>52.8</b>	<b>-2.4</b>	<b>55.0</b>	<b>51.9</b>	<b>-5.6</b>	<b>57.2</b>	<b>50.7</b>	<b>-11.4</b>
<b>United Kingdom</b>															
Crude	30.3	24.8	-18.2	30.0	29.3	-2.3	32.1	26.5	-17.4	31.8	26.8	-15.7	28.4	24.0	-15.5
Motor Gasoline	10.8	8.9	-17.6	9.2	9.6	4.3	9.5	9.0	-5.3	9.8	9.4	-4.1	9.3	9.3	0.0
Middle Distillate	31.5	25.4	-19.4	31.3	25.6	-18.2	32.3	24.2	-25.1	32.1	24.5	-23.7	32.0	23.7	-25.9
Residual Fuel Oil	1.5	1.3	-13.3	1.3	1.5	15.4	1.8	1.3	-27.8	1.5	1.5	0.0	1.8	1.2	-33.3
Other Products	7.2	6.3	-12.5	6.8	6.6	-2.9	6.3	6.4	1.6	7.2	6.3	-12.5	7.3	6.9	-5.5
Total Products	51.0	41.9	-17.8	48.6	43.3	-10.9	49.9	40.9	-18.0	50.6	41.7	-17.6	50.4	41.1	-18.5
Other <sup>3</sup>	8.1	7.9	-2.5	7.6	8.1	6.6	7.9	8.8	11.4	7.8	8.8	12.8	7.3	8.2	12.3
<b>Total</b>	<b>89.4</b>	<b>74.6</b>	<b>-16.6</b>	<b>86.2</b>	<b>80.7</b>	<b>-6.4</b>	<b>89.9</b>	<b>76.2</b>	<b>-15.2</b>	<b>90.2</b>	<b>77.3</b>	<b>-14.3</b>	<b>86.1</b>	<b>73.3</b>	<b>-14.9</b>
<b>Canada<sup>4</sup></b>															
Crude	145.4	139.2	-4.3	142.0	137.1	-3.5	137.5	141.3	2.8	133.5	143.3	7.3	130.9	141.6	8.2
Motor Gasoline	15.6	16.8	7.7	15.0	15.5	3.3	15.6	14.9	-4.5	15.0	15.1	0.7	14.3	13.9	-2.8
Middle Distillate	12.0	15.1	25.8	12.6	12.7	0.8	12.5	13.7	9.6	13.1	15.0	14.5	11.6	15.2	31.0
Residual Fuel Oil	2.8	2.5	-10.7	2.5	3.6	44.0	2.6	2.9	11.5	2.7	3.1	14.8	2.7	2.4	-11.1
Other Products	10.6	10.4	-1.9	10.3	10.4	1.0	9.4	10.1	7.4	9.6	10.3	7.3	8.6	10.8	25.6
Total Products	41.0	44.8	9.3	40.4	42.2	4.5	40.1	41.6	3.7	40.4	43.5	7.7	37.2	42.3	13.7
Other <sup>3</sup>	18.5	19.0	2.7	21.4	21.7	1.4	24.8	23.2	-6.5	28.4	25.7	-9.5	30.9	26.7	-13.6
<b>Total</b>	<b>204.9</b>	<b>203.0</b>	<b>-0.9</b>	<b>203.8</b>	<b>201.0</b>	<b>-1.4</b>	<b>202.4</b>	<b>206.1</b>	<b>1.8</b>	<b>202.3</b>	<b>212.5</b>	<b>5.0</b>	<b>199.0</b>	<b>210.6</b>	<b>5.8</b>

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

2 US figures exclude US territories.

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

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



**Table 5**  
**TOTAL STOCKS ON LAND IN OECD COUNTRIES<sup>1</sup>**  
(millions of barrels<sup>1</sup> and 'days')

	End September 2020		End December 2020		End March 2021		End June 2021		End September 2021 <sup>1</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	195.7	92	199.1	94	201.0	93	206.1	-	-	-
Chile	11.9	32	11.0	33	9.7	30	11.7	-	-	-
Mexico	35.1	25	36.3	26	38.1	27	36.4	-	-	-
United States <sup>4</sup>	2067.4	110	1983.4	108	1941.5	97	1894.8	-	-	-
<b>Total<sup>4</sup></b>	<b>2332.2</b>	<b>102</b>	<b>2252.0</b>	<b>100</b>	<b>2212.4</b>	<b>92</b>	<b>2171.2</b>	<b>88</b>	<b>2137.6</b>	<b>86</b>
<b>OECD Asia Oceania</b>										
Australia	40.9	39	40.2	39	43.5	40	39.8	-	-	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	559.5	158	532.4	143	506.5	164	528.6	-	-	-
Korea	219.4	91	213.3	84	201.5	81	194.9	-	-	-
New Zealand	8.4	51	8.0	51	8.3	57	7.6	-	-	-
<b>Total</b>	<b>828.2</b>	<b>113</b>	<b>793.8</b>	<b>104</b>	<b>759.7</b>	<b>108</b>	<b>770.9</b>	<b>108</b>	<b>767.3</b>	<b>99</b>
<b>OECD Europe<sup>5</sup></b>										
Austria	24.4	107	23.6	113	23.6	97	23.0	-	-	-
Belgium	52.8	94	51.7	82	51.2	82	51.0	-	-	-
Czech Republic	22.7	115	23.8	134	23.1	108	21.8	-	-	-
Denmark	32.1	241	32.3	257	31.7	229	27.8	-	-	-
Estonia	3.6	139	3.7	150	2.9	107	2.9	-	-	-
Finland	43.3	235	38.5	235	39.1	230	39.5	-	-	-
France	167.7	116	158.4	107	162.1	112	163.0	-	-	-
Germany	276.6	131	278.2	148	278.0	134	275.8	-	-	-
Greece	34.9	150	35.0	153	34.4	144	30.5	-	-	-
Hungary	26.9	152	26.8	172	25.8	147	25.6	-	-	-
Ireland	12.2	85	11.9	94	11.7	86	12.4	-	-	-
Italy	139.9	124	135.8	130	126.8	110	128.9	-	-	-
Latvia	3.5	103	3.2	101	3.0	82	3.0	-	-	-
Lithuania	7.6	120	7.9	146	7.8	116	8.5	-	-	-
Luxembourg	0.6	12	0.6	13	0.6	13	0.8	-	-	-
Netherlands	165.5	194	156.6	195	158.1	196	147.2	-	-	-
Norway	31.8	136	30.1	114	28.2	146	23.6	-	-	-
Poland	82.2	122	81.6	131	82.7	126	80.0	-	-	-
Portugal	22.3	108	22.4	123	20.7	98	19.9	-	-	-
Slovak Republic	12.6	157	12.7	171	12.4	144	12.4	-	-	-
Slovenia	5.4	131	5.3	126	5.3	117	5.3	-	-	-
Spain	126.7	112	123.1	110	121.7	106	118.1	-	-	-
Sweden	66.5	268	62.7	219	48.8	162	45.2	-	-	-
Switzerland	34.5	196	34.0	206	33.7	192	32.9	-	-	-
Turkey	89.9	98	85.4	107	84.4	91	85.1	-	-	-
United Kingdom	83.5	68	85.5	74	76.9	61	76.2	-	-	-
<b>Total</b>	<b>1569.6</b>	<b>125</b>	<b>1531.0</b>	<b>129</b>	<b>1494.9</b>	<b>119</b>	<b>1460.4</b>	<b>106</b>	<b>1371.6</b>	<b>103</b>
<b>Total OECD</b>	<b>4730.0</b>	<b>111</b>	<b>4576.8</b>	<b>109</b>	<b>4467.0</b>	<b>102</b>	<b>4402.4</b>	<b>96</b>	<b>4276.5</b>	<b>93</b>
<b>DAYS OF IEA Net Imports<sup>6</sup></b>	<b>-</b>	<b>254</b>	<b>-</b>	<b>245</b>	<b>-</b>	<b>241</b>	<b>-</b>	<b>167</b>	<b>-</b>	<b>-</b>

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

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

3 End September 2021 forward demand figures are IEA Secretariat forecasts.

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

5 Data not available for Iceland.

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

### TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government <sup>1</sup>	Industry	Total	Government <sup>1</sup>	Industry
		controlled			controlled	
		Millions of Barrels			Days of Fwd. Demand <sup>2</sup>	
3Q2018	4436	1570	2866	93	33	60
4Q2018	4425	1552	2873	93	33	61
1Q2019	4435	1557	2878	94	33	61
2Q2019	4487	1549	2938	93	32	61
3Q2019	4492	1544	2948	94	32	62
4Q2019	4432	1535	2896	98	34	64
1Q2020	4517	1537	2980	121	41	80
2Q2020	4778	1561	3217	114	37	76
3Q2020	4730	1551	3179	111	36	75
4Q2020	4577	1541	3035	109	37	72
1Q2021	4467	1546	2921	102	35	67
2Q2021	4402	1524	2879	96	33	63
3Q2021	4276	1514	2763	93	33	60

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

2 Days of forward demand calculated using actual demand except in 3Q2021 (where latest forecasts are used).



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

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	change
Saudi Light & Extra Light												
Americas	0.66	0.20	0.26	0.03	0.11	0.18	0.31	0.41	0.42	0.40	-	-
Europe	0.69	0.68	0.60	0.50	0.53	0.43	0.40	0.41	0.55	0.61	0.47	0.14
Asia Oceania	1.45	1.42	1.39	1.34	1.44	1.41	1.12	1.10	0.95	1.35	1.24	0.11
Saudi Medium												
Americas	0.30	0.12	0.14	0.06	0.03	0.06	-	-	-	-	0.08	-
Europe	0.01	0.02	0.02	0.01	0.01	0.01	-	-	0.01	0.03	0.02	0.01
Asia Oceania	0.41	0.23	0.25	0.25	0.26	0.22	0.17	0.18	0.20	0.18	0.26	-0.08
Canada Heavy												
Americas	2.41	2.27	2.39	2.23	2.55	2.62	2.43	2.42	2.41	2.46	2.21	0.24
Europe	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.02	0.05	0.04	0.06	-0.01
Asia Oceania	0.00	0.00	0.00	0.01	-	0.01	0.04	0.05	-	0.01	-	-
Iraqi Basrah Light <sup>2</sup>												
Americas	0.50	0.31	0.11	0.07	0.05	0.06	0.05	-	0.12	-	0.12	-
Europe	0.76	0.85	0.58	0.54	0.54	0.56	0.63	0.74	0.58	0.63	0.50	0.13
Asia Oceania	0.43	0.37	0.22	0.23	0.20	0.15	0.17	0.13	0.19	0.16	0.37	-0.21
Kuwait Blend												
Americas	0.02	-	-	-	-	-	-	-	-	-	-	-
Europe	0.13	0.11	0.04	0.01	-	-	-	-	-	-	0.00	-
Asia Oceania	0.66	0.61	0.55	0.43	0.47	0.47	0.45	0.43	0.51	0.43	0.44	0.00
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.16	0.00	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.01	0.00	-	-	-	-	-	-	-	-	-	-
Iranian Heavy <sup>3</sup>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.35	0.04	-	-	-	-	-	-	-	-	-	-
Asia Oceania	0.28	0.14	-	-	-	-	-	-	-	-	-	-
BFOE												
Americas	0.00	0.00	-	-	-	-	0.00	0.00	0.02	-	-	-
Europe	0.35	0.37	0.43	0.48	0.43	0.39	0.28	0.18	0.43	0.39	0.46	-0.07
Asia Oceania	0.09	0.01	0.03	0.06	0.03	0.08	0.07	0.03	-	-	0.13	-
Kazakhstan												
Americas	-	-	-	-	-	-	0.03	-	-	-	-	-
Europe	0.75	0.76	0.76	0.78	0.74	0.75	0.75	0.68	0.84	0.74	0.71	0.03
Asia Oceania	0.19	0.18	0.07	0.08	0.03	0.07	0.10	0.10	0.10	0.10	0.10	0.00
Venezuelan 22 API and heavier												
Americas	0.44	0.05	-	-	-	-	-	-	-	-	-	-
Europe	0.03	0.09	0.04	0.08	0.01	-	-	-	-	-	0.04	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.63	0.51	0.48	0.47	0.37	0.36	0.45	0.54	0.40	0.48	0.47	0.02
Europe	0.21	0.19	0.16	0.16	0.18	0.15	0.15	0.17	0.13	0.13	0.16	-0.03
Asia Oceania	0.08	0.13	0.12	0.10	0.16	0.15	0.12	0.10	0.19	0.13	0.10	0.03
Russian Urals												
Americas	0.01	0.01	-	-	-	-	-	-	-	-	-	-
Europe	1.40	1.37	1.20	1.13	1.07	1.05	1.11	1.28	0.97	1.30	1.13	0.17
Asia Oceania	0.00	-	-	-	-	0.01	-	-	-	-	-	-
Cabinda and Other Angola												
North America	0.06	0.01	0.01	-	-	-	-	-	-	-	-	-
Europe	0.14	0.15	0.12	0.09	0.10	0.02	0.04	0.03	-	0.06	0.12	-0.06
Pacific	0.01	0.00	-	-	-	-	-	-	-	-	-	-
Nigerian Light <sup>4</sup>												
Americas	0.01	0.03	-	-	-	-	0.06	0.07	0.03	0.03	-	-
Europe	0.53	0.51	0.49	0.57	0.52	0.41	0.31	0.35	0.45	0.41	0.61	-0.20
Asia Oceania	0.02	0.02	0.02	0.01	0.02	0.00	0.01	-	-	-	0.03	-
Libya Light and Medium												
Americas	-	0.00	-	-	-	-	0.03	-	0.09	0.09	-	-
Europe	0.62	0.67	0.19	0.04	0.49	0.75	0.79	0.73	0.98	0.72	0.04	0.68
Asia Oceania	0.02	0.03	0.01	-	-	0.01	0.02	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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	% change
<b>Crude Oil</b>												
Americas	3759	2698	1880	1671	1625	1698	2111	2247	2364	2307	1493	55%
Europe	9814	9872	8349	8145	8053	7780	8382	8582	8606	8791	7928	11%
Asia Oceania	6697	6542	5603	5237	5511	5336	5459	5196	4994	5831	5283	10%
<b>Total OECD</b>	<b>20269</b>	<b>19111</b>	<b>15833</b>	<b>15053</b>	<b>15189</b>	<b>14814</b>	<b>15952</b>	<b>16025</b>	<b>15965</b>	<b>16929</b>	<b>14703</b>	<b>15%</b>
<b>LPG</b>												
Americas	22	26	28	26	26	21	16	13	24	16	25	-36%
Europe	457	434	422	430	429	394	421	389	409	355	416	-15%
Asia Oceania	553	582	559	532	506	642	555	610	569	504	472	7%
<b>Total OECD</b>	<b>1032</b>	<b>1042</b>	<b>1009</b>	<b>988</b>	<b>961</b>	<b>1057</b>	<b>992</b>	<b>1011</b>	<b>1002</b>	<b>874</b>	<b>912</b>	<b>-4%</b>
<b>Naphtha</b>												
Americas	8	5	7	10	5	7	7	7	12	6	20	-69%
Europe	391	347	409	339	410	526	514	387	531	376	326	15%
Asia Oceania	1021	993	1005	981	889	1087	1076	1152	1167	1265	1027	23%
<b>Total OECD</b>	<b>1420</b>	<b>1345</b>	<b>1422</b>	<b>1330</b>	<b>1303</b>	<b>1620</b>	<b>1597</b>	<b>1546</b>	<b>1710</b>	<b>1647</b>	<b>1372</b>	<b>20%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	773	817	567	695	565	598	1074	1037	1042	939	679	38%
Europe	110	112	109	92	108	102	159	87	34	120	96	25%
Asia Oceania	113	114	126	175	116	155	196	207	134	162	151	7%
<b>Total OECD</b>	<b>996</b>	<b>1043</b>	<b>802</b>	<b>962</b>	<b>789</b>	<b>854</b>	<b>1429</b>	<b>1331</b>	<b>1210</b>	<b>1221</b>	<b>927</b>	<b>32%</b>
<b>Jet &amp; Kerosene</b>												
Americas	140	175	158	175	145	108	166	169	152	219	181	21%
Europe	509	520	337	302	295	281	291	234	386	358	342	5%
Asia Oceania	89	76	63	41	58	100	71	86	51	28	59	-52%
<b>Total OECD</b>	<b>738</b>	<b>771</b>	<b>558</b>	<b>518</b>	<b>498</b>	<b>489</b>	<b>528</b>	<b>489</b>	<b>590</b>	<b>605</b>	<b>582</b>	<b>4%</b>
<b>Gasoil/Diesel</b>												
Americas	124	118	135	91	256	267	149	174	115	150	101	49%
Europe	1339	1300	1192	1105	1178	1099	1172	1232	1238	1250	1126	11%
Asia Oceania	253	262	328	365	320	336	353	358	368	361	382	-6%
<b>Total OECD</b>	<b>1716</b>	<b>1680</b>	<b>1656</b>	<b>1561</b>	<b>1754</b>	<b>1701</b>	<b>1673</b>	<b>1764</b>	<b>1721</b>	<b>1761</b>	<b>1609</b>	<b>9%</b>
<b>Heavy Fuel Oil</b>												
Americas	161	116	143	136	129	116	96	152	72	120	185	-35%
Europe	197	223	295	318	310	368	315	256	371	341	266	28%
Asia Oceania	162	101	88	118	80	109	116	99	137	112	52	118%
<b>Total OECD</b>	<b>520</b>	<b>440</b>	<b>526</b>	<b>571</b>	<b>519</b>	<b>594</b>	<b>527</b>	<b>507</b>	<b>581</b>	<b>573</b>	<b>502</b>	<b>14%</b>
<b>Other Products</b>												
Americas	679	713	592	606	515	507	698	771	644	632	598	6%
Europe	1011	865	574	541	491	515	512	558	571	557	530	5%
Asia Oceania	263	268	241	229	232	246	260	259	310	206	225	-9%
<b>Total OECD</b>	<b>1952</b>	<b>1846</b>	<b>1406</b>	<b>1376</b>	<b>1238</b>	<b>1268</b>	<b>1470</b>	<b>1589</b>	<b>1526</b>	<b>1395</b>	<b>1353</b>	<b>3%</b>
<b>Total Products</b>												
Americas	1908	1971	1629	1739	1641	1623	2206	2323	2061	2082	1788	16%
Europe	4013	3800	3339	3126	3221	3286	3384	3143	3540	3356	3102	8%
Asia Oceania	2454	2397	2410	2440	2200	2674	2627	2771	2738	2638	2368	11%
<b>Total OECD</b>	<b>8374</b>	<b>8168</b>	<b>7378</b>	<b>7305</b>	<b>7062</b>	<b>7583</b>	<b>8217</b>	<b>8237</b>	<b>8339</b>	<b>8076</b>	<b>7257</b>	<b>11%</b>
<b>Total Oil</b>												
Americas	5666	4669	3510	3410	3266	3321	4317	4570	4425	4389	3280	34%
Europe	13827	13672	11688	11271	11274	11066	11765	11724	12147	12147	11030	10%
Asia Oceania	9151	8939	8014	7677	7711	8011	8087	7968	7732	8469	7650	11%
<b>Total OECD</b>	<b>28644</b>	<b>27279</b>	<b>23211</b>	<b>22358</b>	<b>22251</b>	<b>22397</b>	<b>24169</b>	<b>24262</b>	<b>24304</b>	<b>25005</b>	<b>21960</b>	<b>14%</b>

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

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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	% change
<b>Crude Oil</b>												
Americas	3606	2553	1820	1643	1547	1615	2007	2107	2244	2216	1449	53%
Europe	9088	8913	7115	6869	6786	6643	7109	7181	7385	7463	6592	13%
Asia Oceania	6249	5914	5076	4816	5003	4710	4840	4515	4368	5130	4830	6%
<b>Total OECD</b>	<b>18943</b>	<b>17380</b>	<b>14011</b>	<b>13328</b>	<b>13336</b>	<b>12968</b>	<b>13957</b>	<b>13803</b>	<b>13997</b>	<b>14810</b>	<b>12871</b>	<b>15%</b>
<b>LPG</b>												
Americas	15	23	22	23	18	19	16	13	24	16	19	-17%
Europe	350	303	252	246	231	244	229	247	242	277	241	15%
Asia Oceania	158	74	57	61	65	58	60	34	57	22	49	-55%
<b>Total OECD</b>	<b>523</b>	<b>400</b>	<b>331</b>	<b>330</b>	<b>314</b>	<b>321</b>	<b>304</b>	<b>295</b>	<b>323</b>	<b>315</b>	<b>310</b>	<b>2%</b>
<b>Naphtha</b>												
Americas	4	2	1	1	1	4	2	4	5	2	3	-9%
Europe	360	320	390	328	377	427	452	284	449	334	311	7%
Asia Oceania	924	898	835	840	744	870	948	1000	862	1108	866	28%
<b>Total OECD</b>	<b>1288</b>	<b>1220</b>	<b>1226</b>	<b>1169</b>	<b>1122</b>	<b>1301</b>	<b>1402</b>	<b>1288</b>	<b>1316</b>	<b>1444</b>	<b>1180</b>	<b>22%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	271	308	194	226	167	174	330	298	325	349	247	42%
Europe	105	108	104	87	103	98	152	85	28	116	88	31%
Asia Oceania	90	88	109	152	116	144	189	207	134	162	123	32%
<b>Total OECD</b>	<b>466</b>	<b>504</b>	<b>406</b>	<b>465</b>	<b>386</b>	<b>417</b>	<b>671</b>	<b>591</b>	<b>488</b>	<b>627</b>	<b>457</b>	<b>37%</b>
<b>Jet &amp; Kerosene</b>												
Americas	56	39	54	53	47	31	63	75	48	75	54	39%
Europe	445	464	297	259	278	248	273	208	329	301	299	1%
Asia Oceania	89	76	63	41	58	100	71	86	51	28	59	-52%
<b>Total OECD</b>	<b>590</b>	<b>579</b>	<b>414</b>	<b>353</b>	<b>382</b>	<b>378</b>	<b>406</b>	<b>369</b>	<b>428</b>	<b>404</b>	<b>411</b>	<b>-2%</b>
<b>Gasoil/Diesel</b>												
Americas	100	86	103	69	190	203	94	106	69	105	66	59%
Europe	1160	1126	1062	914	1082	1027	1094	1120	1112	1107	863	28%
Asia Oceania	253	261	324	358	316	336	353	358	368	361	382	-6%
<b>Total OECD</b>	<b>1513</b>	<b>1473</b>	<b>1489</b>	<b>1341</b>	<b>1588</b>	<b>1566</b>	<b>1541</b>	<b>1585</b>	<b>1549</b>	<b>1573</b>	<b>1311</b>	<b>20%</b>
<b>Heavy Fuel Oil</b>												
Americas	147	102	110	113	97	105	84	145	67	98	151	-35%
Europe	185	202	279	298	295	340	281	234	347	313	256	22%
Asia Oceania	162	100	88	118	80	109	116	99	137	112	52	118%
<b>Total OECD</b>	<b>493</b>	<b>404</b>	<b>477</b>	<b>529</b>	<b>472</b>	<b>554</b>	<b>481</b>	<b>479</b>	<b>551</b>	<b>523</b>	<b>459</b>	<b>14%</b>
<b>Other Products</b>												
Americas	522	542	514	526	466	469	631	667	574	589	508	16%
Europe	702	629	352	335	334	358	337	368	382	340	333	2%
Asia Oceania	182	184	164	152	162	176	198	209	206	127	134	-6%
<b>Total OECD</b>	<b>1406</b>	<b>1355</b>	<b>1030</b>	<b>1013</b>	<b>962</b>	<b>1004</b>	<b>1166</b>	<b>1244</b>	<b>1162</b>	<b>1056</b>	<b>976</b>	<b>8%</b>
<b>Total Products</b>												
Americas	1115	1103	998	1012	986	1005	1219	1309	1111	1234	1047	18%
Europe	3307	3152	2735	2466	2699	2742	2817	2547	2891	2786	2391	17%
Asia Oceania	1857	1681	1640	1722	1540	1793	1934	1994	1815	1921	1666	15%
<b>Total OECD</b>	<b>6279</b>	<b>5936</b>	<b>5373</b>	<b>5200</b>	<b>5225</b>	<b>5540</b>	<b>5971</b>	<b>5850</b>	<b>5817</b>	<b>5941</b>	<b>5104</b>	<b>16%</b>
<b>Total Oil</b>												
Americas	4721	3656	2818	2654	2533	2620	3227	3416	3355	3451	2496	38%
Europe	12395	12064	9850	9336	9485	9385	9927	9728	10276	10250	8983	14%
Asia Oceania	8106	7595	6716	6538	6543	6503	6775	6509	6183	7051	6496	9%
<b>Total OECD</b>	<b>25223</b>	<b>23316</b>	<b>19384</b>	<b>18528</b>	<b>18561</b>	<b>18508</b>	<b>19928</b>	<b>19653</b>	<b>19814</b>	<b>20751</b>	<b>17975</b>	<b>15%</b>

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

2 Excludes intra-regional trade

3 Includes additives

**Table 7b**  
**INTER-REGIONAL OECD TRANSFERS<sup>1,2</sup>**  
(thousand barrels per day)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	% change
<b>Crude Oil</b>												
Americas	153	145	60	28	78	83	104	141	120	90	44	107%
Europe	726	959	1234	1276	1268	1137	1272	1400	1221	1328	1336	-1%
Asia Oceania	448	628	527	421	508	627	619	681	626	701	453	55%
<b>Total OECD</b>	<b>1326</b>	<b>1731</b>	<b>1821</b>	<b>1724</b>	<b>1853</b>	<b>1846</b>	<b>1995</b>	<b>2222</b>	<b>1968</b>	<b>2119</b>	<b>1832</b>	<b>16%</b>
<b>LPG</b>												
Americas	7	3	6	4	8	3	0	0	0	0	6	-100%
Europe	107	131	171	184	197	150	193	141	167	78	175	-55%
Asia Oceania	395	508	501	470	442	584	495	575	512	482	422	14%
<b>Total OECD</b>	<b>508</b>	<b>642</b>	<b>678</b>	<b>658</b>	<b>647</b>	<b>737</b>	<b>688</b>	<b>717</b>	<b>679</b>	<b>560</b>	<b>603</b>	<b>-7%</b>
<b>Naphtha</b>												
Americas	4	3	6	9	4	3	4	3	7	4	17	-77%
Europe	31	27	20	12	33	99	62	103	82	42	15	181%
Asia Oceania	97	96	170	140	144	217	128	152	306	157	160	-2%
<b>Total OECD</b>	<b>132</b>	<b>125</b>	<b>196</b>	<b>161</b>	<b>181</b>	<b>319</b>	<b>195</b>	<b>258</b>	<b>394</b>	<b>203</b>	<b>192</b>	<b>6%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	502	509	373	469	398	423	744	738	716	590	432	36%
Europe	5	4	5	5	5	3	7	2	6	4	8	-48%
Asia Oceania	23	26	18	23	0	11	8	0	0	0	29	-100%
<b>Total OECD</b>	<b>530</b>	<b>539</b>	<b>396</b>	<b>497</b>	<b>403</b>	<b>437</b>	<b>759</b>	<b>740</b>	<b>722</b>	<b>594</b>	<b>469</b>	<b>27%</b>
<b>Jet &amp; Kerosene</b>												
Americas	84	136	104	123	99	77	103	94	105	144	127	13%
Europe	64	56	40	43	18	33	19	26	57	57	43	31%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>148</b>	<b>192</b>	<b>144</b>	<b>165</b>	<b>116</b>	<b>110</b>	<b>122</b>	<b>120</b>	<b>162</b>	<b>201</b>	<b>171</b>	<b>18%</b>
<b>Gasoil/Diesel</b>												
Americas	25	32	32	22	66	64	55	67	46	45	34	31%
Europe	178	174	131	191	96	72	77	112	126	143	263	-46%
Asia Oceania	0	1	4	7	3	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>203</b>	<b>207</b>	<b>167</b>	<b>220</b>	<b>166</b>	<b>136</b>	<b>132</b>	<b>179</b>	<b>172</b>	<b>188</b>	<b>297</b>	<b>-37%</b>
<b>Heavy Fuel Oil</b>												
Americas	15	14	33	22	33	11	12	7	5	22	33	-34%
Europe	12	21	16	20	15	29	34	22	24	28	10	182%
Asia Oceania	0	1	0	0	0	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>27</b>	<b>36</b>	<b>49</b>	<b>42</b>	<b>47</b>	<b>39</b>	<b>46</b>	<b>29</b>	<b>29</b>	<b>50</b>	<b>43</b>	<b>15%</b>
<b>Other Products</b>												
Americas	157	171	78	79	48	38	67	104	70	43	90	-52%
Europe	308	236	222	206	158	157	175	191	189	217	197	10%
Asia Oceania	81	83	77	77	70	70	62	50	105	79	90	-13%
<b>Total OECD</b>	<b>546</b>	<b>490</b>	<b>377</b>	<b>363</b>	<b>276</b>	<b>264</b>	<b>304</b>	<b>345</b>	<b>364</b>	<b>339</b>	<b>377</b>	<b>-10%</b>
<b>Total Products</b>												
Americas	793	867	631	727	655	618	986	1013	950	848	740	14%
Europe	706	649	604	660	522	543	566	596	650	569	711	-20%
Asia Oceania	597	716	770	718	660	881	693	777	922	717	702	2%
<b>Total OECD</b>	<b>2095</b>	<b>2232</b>	<b>2005</b>	<b>2105</b>	<b>1836</b>	<b>2043</b>	<b>2246</b>	<b>2387</b>	<b>2522</b>	<b>2134</b>	<b>2153</b>	<b>-1%</b>
<b>Total Oil</b>												
Americas	945	1012	691	755	733	701	1090	1154	1070	938	784	20%
Europe	1432	1608	1838	1935	1789	1681	1839	1997	1871	1897	2047	-7%
Asia Oceania	1044	1343	1297	1139	1168	1508	1312	1459	1549	1419	1155	23%
<b>Total OECD</b>	<b>3421</b>	<b>3963</b>	<b>3827</b>	<b>3830</b>	<b>3690</b>	<b>3889</b>	<b>4241</b>	<b>4609</b>	<b>4490</b>	<b>4253</b>	<b>3985</b>	<b>7%</b>

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

<sup>2</sup> Excludes intra-regional trade

<sup>3</sup> Includes additives

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

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier Aug 20	change
<b>OECD Americas</b>												
Venezuela	506	81	-	-	-	-	-	-	-	-	-	-
Other Central & South America	795	867	745	782	750	648	689	656	664	808	743	65
North Sea	150	143	60	28	78	83	93	107	120	90	44	47
Other OECD Europe	1	2	1	-	-	-	11	33	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	145	189	91	80	96	128	295	342	305	346	68	278
Saudi Arabia	983	601	572	441	293	333	370	469	435	444	267	177
Kuwait	78	45	21	29	16	7	20	-	37	24	-	-
Iran	-	-	-	-	-	12	-	-	-	-	-	-
Iraq	519	331	177	143	107	115	172	180	220	131	209	-78
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	5	3	5	2	10	-	-	-	34	31	-	-
Other Middle East	-	-	-	-	-	-	-	-	-	-	-	-
West Africa <sup>2</sup>	317	267	145	128	188	207	273	304	333	244	128	116
Other Africa	196	137	45	34	67	149	172	156	170	172	34	138
Asia	61	32	17	4	11	17	16	-	47	16	-	-
Other	3	0	3	-	10	-	-	-	-	-	-	-
<b>Total</b>	<b>3759</b>	<b>2698</b>	<b>1880</b>	<b>1671</b>	<b>1625</b>	<b>1698</b>	<b>2111</b>	<b>2247</b>	<b>2364</b>	<b>2307</b>	<b>1493</b>	<b>814</b>
<b>of which Non-OECD</b>	<b>3606</b>	<b>2553</b>	<b>1820</b>	<b>1643</b>	<b>1547</b>	<b>1615</b>	<b>2007</b>	<b>2107</b>	<b>2244</b>	<b>2216</b>	<b>1449</b>	<b>768</b>
<b>OECD Europe</b>												
Canada	81	60	95	80	117	108	81	74	103	94	100	-6
Mexico + USA	645	900	1139	1196	1150	1029	1191	1326	1118	1233	1235	-2
Venezuela	57	106	44	91	13	-	-	-	-	-	51	-
Other Central & South America	132	118	208	248	205	143	272	340	222	307	218	89
Non-OECD Europe	12	14	25	21	34	23	19	31	34	23	24	-1
Former Soviet Union	4149	4240	3506	3409	3270	3306	3466	3462	3496	3526	3377	150
Saudi Arabia	818	792	756	637	602	517	484	475	566	602	671	-69
Kuwait	137	97	48	7	30	-	-	-	0	-	2	-
Iran	536	74	6	4	2	-	-	-	-	17	-	-
Iraq	962	1124	814	822	759	783	916	1071	971	915	579	336
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	2	2	-	-	-	-	-	-	-	-	-	-
Other Middle East	-	3	8	13	1	6	12	11	-	18	22	-4
West Africa <sup>2</sup>	1115	1140	1074	1128	976	780	719	636	935	928	1133	-204
Other Africa	1161	1180	596	450	858	1071	1204	1150	1155	1085	451	634
Asia	-	-	0	1	-	-	-	-	-	-	-	-
Other	9	13	11	12	5	-	-	-	-	15	14	1
<b>Total</b>	<b>9816</b>	<b>9863</b>	<b>8330</b>	<b>8119</b>	<b>8022</b>	<b>7767</b>	<b>8364</b>	<b>8577</b>	<b>8600</b>	<b>8764</b>	<b>7875</b>	<b>888</b>
<b>of which Non-OECD</b>	<b>9088</b>	<b>8913</b>	<b>7115</b>	<b>6869</b>	<b>6786</b>	<b>6643</b>	<b>7109</b>	<b>7181</b>	<b>7385</b>	<b>7463</b>	<b>6592</b>	<b>871</b>
<b>OECD Asia Oceania</b>												
Canada	3	5	1	6	-	17	38	55	-	6	-	-
Mexico + USA	344	613	477	336	444	493	491	525	569	593	284	309
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	35	48	91	75	114	107	145	205	116	76	69	7
North Sea	100	10	49	79	64	116	90	101	57	102	169	-66
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	435	435	300	286	295	328	372	274	209	321	402	-81
Saudi Arabia	2040	1878	1867	1858	1976	1868	1574	1480	1389	1766	1768	-2
Kuwait	672	666	584	459	508	482	484	464	546	437	462	-25
Iran	274	137	-	-	-	-	-	-	-	-	-	-
Iraq	435	364	224	226	205	151	165	129	187	161	372	-211
Oman	56	59	22	35	19	15	43	82	64	65	-	-
United Arab Emirates	1098	1256	1096	975	960	908	1094	880	1034	1275	902	373
Other Middle East	450	449	387	374	374	396	383	363	317	332	370	-38
West Africa <sup>2</sup>	95	56	65	70	49	46	119	121	118	76	91	-15
Other Africa	105	90	42	40	23	59	35	20	44	118	48	70
Non-OECD Asia	319	220	161	128	207	193	161	156	108	184	116	68
Other	235	255	234	290	268	155	264	339	231	304	231	73
<b>Total</b>	<b>6697</b>	<b>6542</b>	<b>5602</b>	<b>5237</b>	<b>5505</b>	<b>5336</b>	<b>5455</b>	<b>5196</b>	<b>4988</b>	<b>5815</b>	<b>5283</b>	<b>532</b>
<b>of which Non-OECD</b>	<b>6249</b>	<b>5914</b>	<b>5076</b>	<b>4816</b>	<b>5003</b>	<b>4710</b>	<b>4840</b>	<b>4515</b>	<b>4368</b>	<b>5130</b>	<b>4830</b>	<b>300</b>
<b>Total OECD Trade</b>	<b>20271</b>	<b>19103</b>	<b>15812</b>	<b>15027</b>	<b>15152</b>	<b>14801</b>	<b>15931</b>	<b>16021</b>	<b>15952</b>	<b>16885</b>	<b>14650</b>	<b>2235</b>
<b>of which Non-OECD</b>	<b>18943</b>	<b>17380</b>	<b>14011</b>	<b>13328</b>	<b>13336</b>	<b>12968</b>	<b>13957</b>	<b>13803</b>	<b>13997</b>	<b>14810</b>	<b>12871</b>	<b>1939</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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	change
<b>OECD Americas</b>												
Venezuela	23	4	-	-	-	-	-	-	-	-	-	-
Other Central & South America	64	83	40	44	24	10	67	28	12	50	42	8
ARA (Belgium Germany Netherlands)	167	189	146	199	138	127	312	375	281	227	202	25
Other Europe	323	293	207	255	241	275	380	316	397	328	208	120
FSU	80	100	67	71	89	100	112	110	98	147	96	52
Saudi Arabia	11	7	6	16	-	4	50	84	65	41	-	-
Algeria	1	-	4	5	-	4	-	-	-	-	10	-
Other Middle East & Africa	19	14	13	15	20	23	12	11	22	13	29	-16
Singapore	8	5	1	3	-	4	3	6	5	9	10	-1
OECD Asia Oceania	13	28	21	15	19	21	52	48	39	44	24	20
Non-OECD Asia (excl. Singapore)	84	116	72	84	53	47	99	98	131	107	81	26
Other	0	0	-	-	-	0	-	-	-	-	-	-
<b>Total<sup>2</sup></b>	<b>794</b>	<b>838</b>	<b>578</b>	<b>707</b>	<b>585</b>	<b>615</b>	<b>1088</b>	<b>1077</b>	<b>1050</b>	<b>967</b>	<b>703</b>	<b>264</b>
<b>of which Non-OECD</b>	<b>271</b>	<b>308</b>	<b>194</b>	<b>226</b>	<b>167</b>	<b>174</b>	<b>330</b>	<b>298</b>	<b>325</b>	<b>349</b>	<b>247</b>	<b>103</b>
<b>OECD Europe</b>												
OECD Americas	4	3	3	3	4	2	5	2	6	3	7	-4
Venezuela	0	0	0	-	-	1	1	-	3	-	-	-
Other Central & South America	5	3	4	2	5	8	2	3	-	6	2	4
Non-OECD Europe	11	18	16	18	12	9	16	13	10	10	19	-8
FSU	70	62	44	26	41	25	16	17	28	50	34	15
Saudi Arabia	2	0	8	5	21	-	-	-	-	-	-	-
Algeria	0	0	1	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	4	8	3	3	3	8	6	2	3	1	1	0
Singapore	2	3	2	2	1	-	-	-	0	0	2	-2
OECD Asia Oceania	1	1	1	1	1	1	2	-	0	1	1	0
Non-OECD Asia (excl. Singapore)	2	0	0	-	2	3	2	2	2	4	-	-
Other	20	21	37	45	27	57	117	63	7	60	41	18
<b>Total<sup>2</sup></b>	<b>122</b>	<b>121</b>	<b>120</b>	<b>106</b>	<b>116</b>	<b>113</b>	<b>168</b>	<b>101</b>	<b>59</b>	<b>135</b>	<b>108</b>	<b>27</b>
<b>of which Non-OECD</b>	<b>105</b>	<b>108</b>	<b>104</b>	<b>87</b>	<b>103</b>	<b>98</b>	<b>152</b>	<b>85</b>	<b>28</b>	<b>116</b>	<b>88</b>	<b>28</b>
<b>OECD Asia Oceania</b>												
OECD Americas	4	6	4	0	0	2	0	0	0	0	0	0
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	13	14	4	6	-	9	7	-	0	-	4	-
Other Europe	7	5	10	17	-	-	-	-	-	-	25	-
FSU	1	0	2	-	-	-	-	-	-	-	-	-
Saudi Arabia	0	1	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	1	-	1	3	-	-	-	-	-	-	10	-
Singapore	49	46	51	72	44	86	98	128	86	118	57	61
Non-OECD Asia (excl. Singapore)	19	21	37	55	52	39	58	59	29	25	37	-11
Other	20	21	19	19	19	20	33	20	19	19	19	0
<b>Total<sup>2</sup></b>	<b>114</b>	<b>114</b>	<b>128</b>	<b>173</b>	<b>116</b>	<b>155</b>	<b>196</b>	<b>207</b>	<b>134</b>	<b>162</b>	<b>151</b>	<b>11</b>
<b>of which Non-OECD</b>	<b>90</b>	<b>88</b>	<b>109</b>	<b>152</b>	<b>116</b>	<b>144</b>	<b>189</b>	<b>207</b>	<b>134</b>	<b>162</b>	<b>123</b>	<b>40</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>1029</b>	<b>1073</b>	<b>826</b>	<b>987</b>	<b>816</b>	<b>883</b>	<b>1451</b>	<b>1386</b>	<b>1243</b>	<b>1263</b>	<b>962</b>	<b>302</b>
<b>of which Non-OECD</b>	<b>466</b>	<b>504</b>	<b>406</b>	<b>465</b>	<b>386</b>	<b>417</b>	<b>671</b>	<b>591</b>	<b>488</b>	<b>627</b>	<b>457</b>	<b>170</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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	change
<b>OECD Americas</b>												
Venezuela	4	1	-	-	-	-	-	-	-	-	-	-
Other Central and South America	30	38	34	40	39	40	30	39	29	24	38	-14
ARA (Belgium Germany Netherlands)	6	5	11	2	36	51	31	48	26	9	-	-
Other Europe	3	2	5	2	4	3	9	1	1	-	-	-
FSU	16	6	12	-	26	35	21	32	6	1	-	-
Saudi Arabia	17	3	8	10	17	23	9	-	-	25	10	14
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	8	2	9	4	29	48	8	3	-	30	-	-
Singapore	1	0	-	-	-	-	2	3	-	17	-	-
OECD Asia Oceania	15	24	16	18	26	10	15	17	18	36	34	1
Non-OECD Asia (excl. Singapore)	23	30	34	13	64	48	16	17	17	9	13	-3
Other	-	7	6	3	15	8	8	11	17	-	5	-
<b>Total<sup>2</sup></b>	<b>124</b>	<b>118</b>	<b>135</b>	<b>91</b>	<b>256</b>	<b>267</b>	<b>149</b>	<b>174</b>	<b>115</b>	<b>150</b>	<b>101</b>	<b>50</b>
<b>of which Non-OECD</b>	<b>100</b>	<b>86</b>	<b>103</b>	<b>69</b>	<b>190</b>	<b>203</b>	<b>94</b>	<b>106</b>	<b>69</b>	<b>105</b>	<b>66</b>	<b>39</b>
<b>OECD Europe</b>												
OECD Americas	154	138	99	156	64	34	38	77	79	88	216	-127
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	4	0	3	7	2	-	1	-	1	2	16	-14
Non-OECD Europe	39	41	30	34	33	28	30	26	31	25	37	-13
FSU	714	685	661	555	633	721	716	698	652	547	578	-31
Saudi Arabia	225	205	193	183	260	131	114	120	152	151	166	-16
Algeria	-	0	2	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	76	83	71	68	73	65	129	125	135	221	43	179
Singapore	14	27	17	10	13	10	18	14	30	17	7	10
OECD Asia Oceania	25	36	32	36	32	38	39	35	46	55	48	7
Non-OECD Asia (excl. Singapore)	151	152	101	72	89	72	108	197	108	165	48	117
Other	12	10	15	11	10	23	7	-16	25	4	-1	5
<b>Total<sup>2</sup></b>	<b>1413</b>	<b>1378</b>	<b>1224</b>	<b>1131</b>	<b>1210</b>	<b>1122</b>	<b>1201</b>	<b>1276</b>	<b>1260</b>	<b>1275</b>	<b>1157</b>	<b>118</b>
<b>of which Non-OECD</b>	<b>1160</b>	<b>1126</b>	<b>1062</b>	<b>914</b>	<b>1082</b>	<b>1027</b>	<b>1094</b>	<b>1120</b>	<b>1112</b>	<b>1107</b>	<b>863</b>	<b>244</b>
<b>OECD Asia Oceania</b>												
OECD Americas	-	1	4	7	3	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	0	-	0	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	0	-	-	-	0	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	4	4	2	1	1	1	1	1	1	4	2	1
Saudi Arabia	3	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	8	7	13	23	8	13	-	-	-	-	50	-
Singapore	141	111	91	103	85	82	92	123	130	188	116	72
Non-OECD Asia (excl. Singapore)	91	133	208	214	215	229	249	229	233	155	193	-38
Other	5	5	10	16	8	11	11	5	5	15	22	-7
<b>Total<sup>2</sup></b>	<b>253</b>	<b>262</b>	<b>328</b>	<b>365</b>	<b>320</b>	<b>336</b>	<b>353</b>	<b>358</b>	<b>368</b>	<b>361</b>	<b>382</b>	<b>-21</b>
<b>of which Non-OECD</b>	<b>253</b>	<b>261</b>	<b>324</b>	<b>358</b>	<b>316</b>	<b>336</b>	<b>353</b>	<b>358</b>	<b>368</b>	<b>361</b>	<b>382</b>	<b>-21</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>1790</b>	<b>1758</b>	<b>1687</b>	<b>1588</b>	<b>1785</b>	<b>1724</b>	<b>1702</b>	<b>1807</b>	<b>1743</b>	<b>1786</b>	<b>1640</b>	<b>146</b>
<b>of which Non-OECD</b>	<b>1513</b>	<b>1473</b>	<b>1489</b>	<b>1341</b>	<b>1588</b>	<b>1566</b>	<b>1541</b>	<b>1585</b>	<b>1549</b>	<b>1573</b>	<b>1311</b>	<b>262</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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	change
<b>OECD Americas</b>												
Venezuela	6	0	-	-	-	-	-	-	-	-	-	-
Other Central and South America	2	7	5	7	5	3	-	-	-	-	2	-
ARA (Belgium Germany Netherlands)	0	-	-	-	-	4	0	1	8	19	-	-
Other Europe	0	0	4	8	4	6	5	3	16	2	6	-4
FSU	0	-	0	1	-	-	0	1	-	0	-	-
Saudi Arabia	1	2	6	1	14	-	4	6	6	2	2	0
Algeria	-	-	1	3	-	9	0	-	-	7	-	-
Other Middle East and Africa	2	10	11	13	18	6	31	36	13	25	-	-
Singapore	6	3	4	3	-	-	2	2	-	11	10	1
OECD Asia Oceania	84	136	100	115	95	67	98	90	80	123	122	2
Non-OECD Asia (excl. Singapore)	27	14	22	24	10	13	25	31	27	20	40	-21
Other	11	3	4	-	-	-	-	-	2	11	-	-
<b>Total<sup>2</sup></b>	<b>140</b>	<b>175</b>	<b>158</b>	<b>175</b>	<b>145</b>	<b>108</b>	<b>166</b>	<b>169</b>	<b>152</b>	<b>219</b>	<b>181</b>	<b>38</b>
<b>of which Non-OECD</b>	<b>56</b>	<b>39</b>	<b>54</b>	<b>53</b>	<b>47</b>	<b>31</b>	<b>63</b>	<b>75</b>	<b>48</b>	<b>75</b>	<b>54</b>	<b>21</b>
<b>OECD Europe</b>												
OECD Americas	32	20	13	5	1	1	2	0	1	7	8	-2
Venezuela	1	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	2	1	0	-	-	-	-	-	-	-	-	-
Non-OECD Europe	6	2	0	1	-	-	-	-	-	-	-	-
FSU	40	45	22	14	26	34	25	26	41	22	25	-2
Saudi Arabia	98	105	40	25	30	36	39	33	15	5	39	-33
Algeria	9	11	9	6	6	6	8	8	-	9	8	1
Other Middle East and Africa	197	199	155	166	153	137	136	157	196	183	143	41
Singapore	25	29	10	6	8	3	4	-	-	31	11	20
OECD Asia Oceania	32	36	27	37	16	32	17	25	56	50	35	15
Non-OECD Asia (excl. Singapore)	69	73	50	38	54	17	59	42	31	52	71	-19
Other	1	2	10	4	2	12	2	-56	48	0	3	-3
<b>Total<sup>2</sup></b>	<b>512</b>	<b>523</b>	<b>337</b>	<b>302</b>	<b>296</b>	<b>278</b>	<b>292</b>	<b>236</b>	<b>388</b>	<b>360</b>	<b>342</b>	<b>18</b>
<b>of which Non-OECD</b>	<b>445</b>	<b>464</b>	<b>297</b>	<b>259</b>	<b>278</b>	<b>248</b>	<b>273</b>	<b>208</b>	<b>329</b>	<b>301</b>	<b>299</b>	<b>2</b>
<b>OECD Asia Oceania</b>												
OECD Americas	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	1	-	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	1	-	-	-	-	3	-	-	-	-	-	-
Singapore	28	21	14	17	10	6	18	27	19	20	31	-11
Non-OECD Asia (excl. Singapore)	26	29	28	16	28	55	37	40	24	1	20	-20
Other	33	26	21	9	19	36	17	19	8	8	8	0
<b>Total<sup>2</sup></b>	<b>89</b>	<b>76</b>	<b>63</b>	<b>41</b>	<b>58</b>	<b>100</b>	<b>71</b>	<b>86</b>	<b>51</b>	<b>28</b>	<b>59</b>	<b>-31</b>
<b>of which Non-OECD</b>	<b>89</b>	<b>76</b>	<b>63</b>	<b>41</b>	<b>58</b>	<b>100</b>	<b>71</b>	<b>86</b>	<b>51</b>	<b>28</b>	<b>59</b>	<b>-31</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>741</b>	<b>774</b>	<b>558</b>	<b>518</b>	<b>499</b>	<b>486</b>	<b>529</b>	<b>491</b>	<b>592</b>	<b>607</b>	<b>582</b>	<b>25</b>
<b>of which Non-OECD</b>	<b>590</b>	<b>579</b>	<b>414</b>	<b>353</b>	<b>382</b>	<b>378</b>	<b>406</b>	<b>369</b>	<b>428</b>	<b>404</b>	<b>411</b>	<b>-7</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)

	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	Jun 21	Jul 21	Aug 21	Year Earlier	
											Aug 20	change
<b>OECD Americas</b>												
Venezuela	42	7	-	-	-	-	-	-	-	-	-	-
Other Central and South America	72	50	52	34	38	29	25	57	39	32	48	-16
ARA (Belgium Germany Netherlands)	7	6	12	9	15	3	2	-	-	14	8	6
Other Europe	7	8	21	13	17	8	10	7	5	6	25	-20
FSU	23	30	44	43	51	62	36	46	19	23	68	-45
Saudi Arabia	-	2	2	7	-	-	0	1	-	-	-	-
Algeria	-	8	2	0	-	8	4	6	7	0	-	-
Other Middle East and Africa	7	5	10	30	7	6	11	29	1	43	36	7
Singapore	-	1	1	-	-	-	-	-	-	-	-	-
OECD Asia Oceania	-	-	-	-	-	-	-	-	0	2	-	-
Non-OECD Asia (excl. Singapore)	0	0	-	-	-	-	8	6	-	0	-	-
Other	2	-	-	-	-	-	-	-	-	-	-	-
<b>Total<sup>2</sup></b>	<b>161</b>	<b>117</b>	<b>145</b>	<b>136</b>	<b>129</b>	<b>116</b>	<b>96</b>	<b>152</b>	<b>72</b>	<b>120</b>	<b>185</b>	<b>-65</b>
<b>of which Non-OECD</b>	<b>147</b>	<b>102</b>	<b>110</b>	<b>113</b>	<b>97</b>	<b>105</b>	<b>84</b>	<b>145</b>	<b>67</b>	<b>98</b>	<b>151</b>	<b>-53</b>
<b>OECD Europe</b>												
OECD Americas	4	7	12	17	12	28	32	20	16	28	9	19
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	3	5	6	14	5	5	1	2	2	23	16	6
Non-OECD Europe	17	21	13	16	21	12	13	14	6	21	16	5
FSU	154	154	149	141	156	272	154	186	288	151	163	-12
Saudi Arabia	1	-	2	-	-	-	-	-	-	-	-	-
Algeria	1	0	2	-	-	3	-	-	-	6	-	-
Other Middle East and Africa	15	19	13	9	14	14	10	9	11	11	5	7
Singapore	-	1	3	1	4	2	7	13	-	7	-	-
OECD Asia Oceania	8	14	4	3	3	0	2	2	7	0	1	-1
Non-OECD Asia (excl. Singapore)	0	3	-	-	-	-	-	-	-	-	-	-
Other	5	8	93	113	99	48	94	8	47	128	60	68
<b>Total<sup>2</sup></b>	<b>208</b>	<b>232</b>	<b>295</b>	<b>313</b>	<b>315</b>	<b>384</b>	<b>313</b>	<b>254</b>	<b>378</b>	<b>375</b>	<b>270</b>	<b>105</b>
<b>of which Non-OECD</b>	<b>185</b>	<b>202</b>	<b>279</b>	<b>298</b>	<b>295</b>	<b>340</b>	<b>281</b>	<b>234</b>	<b>347</b>	<b>313</b>	<b>256</b>	<b>56</b>
<b>OECD Asia Oceania</b>												
OECD Americas	0	1	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	0	-	0	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	16	6	5	2	-	1	-	-	-	-	-	-
Saudi Arabia	-	1	1	3	-	-	14	22	35	3	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	23	27	38	61	35	32	27	17	31	30	26	4
Singapore	37	25	18	23	14	27	44	19	13	26	-	-
Non-OECD Asia (excl. Singapore)	85	40	26	29	31	49	30	42	59	53	25	28
Other	0	1	-	-	-	-	-	-	-	-	-	-
<b>Total<sup>2</sup></b>	<b>162</b>	<b>101</b>	<b>88</b>	<b>118</b>	<b>80</b>	<b>109</b>	<b>116</b>	<b>99</b>	<b>137</b>	<b>112</b>	<b>52</b>	<b>61</b>
<b>of which Non-OECD</b>	<b>162</b>	<b>100</b>	<b>88</b>	<b>118</b>	<b>80</b>	<b>109</b>	<b>116</b>	<b>99</b>	<b>137</b>	<b>112</b>	<b>52</b>	<b>61</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>531</b>	<b>450</b>	<b>528</b>	<b>567</b>	<b>524</b>	<b>609</b>	<b>524</b>	<b>505</b>	<b>588</b>	<b>607</b>	<b>506</b>	<b>101</b>
<b>of which Non-OECD</b>	<b>493</b>	<b>404</b>	<b>477</b>	<b>529</b>	<b>472</b>	<b>554</b>	<b>481</b>	<b>479</b>	<b>551</b>	<b>523</b>	<b>459</b>	<b>64</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**  
 (\$/bbl)

	2018	2019	2020	4Q20	1Q21	2Q21	3Q21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21
<b>CRUDE OIL PRICES</b>													
<b>IEA CIF Average Import<sup>1</sup></b>													
IEA Americas	60.02	56.93	37.31	40.17	53.66	63.76		63.14	67.39	68.34	65.75		
IEA Europe	70.52	64.25	42.85	43.99	60.09	67.22		66.96	70.68	73.48	70.32		
IEA Asia Oceania	72.46	66.38	46.28	44.27	57.82	67.63		67.05	70.26	73.53	74.49		
<b>IEA Total</b>	<b>67.77</b>	<b>62.75</b>	<b>42.16</b>	<b>43.00</b>	<b>57.61</b>	<b>66.29</b>		<b>65.86</b>	<b>69.55</b>	<b>72.00</b>	<b>70.09</b>		
<b>FOB Spot</b>													
North Sea Dated	71.27	64.12	41.76	44.03	61.07	68.84	73.42	68.54	72.96	74.99	70.75	74.40	83.54
Brent (Asia) Mth 1	72.23	64.86	44.86	45.86	61.55	69.50	74.09	68.50	74.09	75.36	71.12	75.70	84.27
WTI (Cushing) Mth 1	65.20	57.03	39.25	42.63	58.13	66.19	70.54	65.18	71.38	72.46	67.73	71.56	81.36
Urals (Mediterranean)	70.17	64.31	41.93	44.49	60.41	67.48	71.32	67.30	71.57	73.09	68.08	72.65	81.93
Dubai (1st month)	69.65	63.49	42.36	44.62	60.20	67.01	71.60	66.34	71.50	72.88	69.32	72.57	81.46
Tapis (Dated)	72.81	69.16	43.28	44.21	62.30	69.81	75.30	69.45	74.00	77.33	72.22	76.30	86.39
<b>PRODUCT PRICES</b>													
<b>Rotterdam, Barges FOB</b>													
Premium Unl 10 ppm	78.78	71.35	44.65	46.99	65.71	78.57	85.64	78.36	81.96	86.22	84.32	86.31	95.92
Naphtha	64.48	56.27	39.64	43.64	60.82	66.69	74.61	66.32	70.92	75.26	72.43	76.04	85.37
Jet/Kerosene	86.39	79.24	44.79	46.75	64.04	72.52	78.87	72.45	76.88	78.49	75.92	82.07	94.81
ULSD 10ppm	86.22	79.45	49.32	48.86	66.15	74.64	80.81	74.53	79.34	80.29	77.67	84.35	96.92
Gasoil 0.1 %	84.28	77.73	48.10	48.05	65.02	73.43	79.41	73.42	78.21	79.15	76.03	82.90	95.22
LSFO 1%	63.22	62.21	42.78	46.27	62.77	66.88	72.12	65.89	69.73	72.02	69.35	74.86	82.72
HSFO 3.5%	61.13	50.31	34.43	41.40	55.34	60.08	63.95	58.94	63.31	63.99	61.71	66.05	74.26
<b>Mediterranean, FOB Cargoes</b>													
Premium Unl 10 ppm	79.41	71.31	45.59	47.42	66.81	77.94	86.49	77.42	81.40	86.87	84.87	87.66	96.59
Naphtha	66.08	54.43	37.81	42.80	59.29	65.19	73.44	64.72	69.56	74.03	71.28	74.92	83.83
Jet Aviation Fuel	85.37	77.76	43.28	46.01	62.77	71.22	77.96	71.03	75.73	77.48	75.05	81.21	93.58
ULSD 10ppm	86.03	79.05	48.76	49.02	65.71	74.07	80.64	73.90	78.85	80.19	77.54	84.05	96.44
Gasoil 0.1 %	84.74	77.70	47.60	48.48	64.76	72.94	79.60	72.48	77.86	79.20	76.65	82.81	95.03
LSFO 1%	64.31	63.90	44.06	47.07	63.60	67.84	73.10	66.78	70.56	72.71	70.60	75.89	84.08
HSFO 3.5%	62.06	52.17	34.36	39.72	53.60	58.23	62.69	57.32	61.34	62.36	60.35	65.26	73.08
<b>US Gulf, FOB Pipeline</b>													
Super Unleaded	85.71	79.24	50.64	52.94	76.13	90.78	97.57	90.81	94.75	98.99	96.43	97.33	105.98
Unleaded	80.10	72.28	46.02	49.93	72.92	85.70	91.72	85.60	88.96	92.39	91.17	91.63	101.08
Jet/Kerosene	85.12	78.81	46.20	49.16	65.77	73.74	79.86	73.41	77.94	79.25	76.45	84.05	96.22
ULSD 10 ppm	85.94	79.09	50.17	52.24	71.63	82.05	87.33	82.82	86.89	87.04	84.70	90.38	103.07
No. 6 3% <sup>2</sup>	60.20	52.57	34.63	40.20	51.93	57.77	62.33	56.54	60.55	60.93	60.92	65.20	72.89
<b>Singapore, FOB Cargoes</b>													
Premium Unleaded	80.21	72.55	46.65	48.72	67.39	76.86	83.45	76.11	80.31	85.14	81.13	84.06	98.48
Naphtha	67.50	57.15	40.77	43.51	61.09	66.41	73.93	65.94	70.64	75.57	71.01	75.15	84.45
Jet/Kerosene	85.05	77.26	44.83	47.08	63.47	71.52	77.10	71.71	75.91	77.25	74.05	79.88	93.09
Gasoil 0.05%	84.33	77.23	48.43	48.38	64.93	72.28	77.16	72.11	76.78	77.93	73.77	79.66	93.38
HSFO 180 CST	67.04	58.62	39.32	44.09	56.74	61.28	68.34	59.71	64.79	66.22	65.07	73.48	77.52
HSFO 380 CST 4%	66.01	57.57	38.25	43.26	56.09	60.20	66.13	58.63	63.64	64.56	63.34	70.30	76.02

<sup>1</sup> IEA CIF Average Import price for August is an estimate.

IEA Americas includes United States and Canada.

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

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

<sup>2</sup> Waterborne

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

October 2021

	NATIONAL CURRENCY *						US DOLLARS					
	Total Price	% change from		Ex-Tax Price	% change from		Total Price	% change from		Ex-Tax Price	% change from	
		Sep-21	Oct-20		Sep-21	Oct-20		Sep-21	Oct-20		Sep-21	Oct-20
GASOLINE <sup>1</sup> (per litre)												
France	1.636	3.3	22.7	0.672	7.0	60.0	1.898	1.9	21.0	0.780	5.5	57.7
Germany	1.709	4.8	33.2	0.781	9.1	73.2	1.983	3.3	31.3	0.906	7.5	70.7
Italy	1.719	3.2	23.8	0.681	6.9	66.1	1.994	1.8	22.1	0.790	5.4	63.7
Spain	1.474	3.0	27.1	0.745	4.9	53.3	1.710	1.5	25.2	0.864	3.4	51.1
United Kingdom	1.387	2.8	22.4	0.576	5.7	58.2	1.900	2.5	29.1	0.789	5.4	66.9
Japan	163.5	3.2	21.8	92.0	5.3	40.7	1.446	0.5	13.3	0.814	2.5	30.9
Canada	1.477	5.3	41.7	0.992	7.2	61.0	1.187	7.2	50.5	0.797	9.2	71.0
United States	0.870	3.7	52.6	0.740	4.4	67.0	0.870	3.7	52.6	0.740	4.4	67.0
AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)												
France	1.536	6.2	27.9	0.671	12.4	71.2	1.782	4.6	26.1	0.778	10.8	68.7
Germany	1.530	8.3	46.3	0.816	13.8	88.9	1.775	6.7	44.2	0.947	12.2	86.2
Italy	1.576	4.2	25.1	0.675	8.3	62.3	1.828	2.7	23.3	0.783	6.8	59.9
Spain	1.344	5.2	30.6	0.732	8.3	55.4	1.559	3.7	28.7	0.849	6.7	53.2
United Kingdom	1.423	3.5	20.4	0.606	7.1	49.6	1.949	3.2	27.0	0.830	6.8	57.8
Japan	143.3	3.5	24.7	98.3	4.8	35.6	1.267	0.9	16.0	0.869	2.1	26.1
Canada	1.449	7.9	46.8	1.014	10.6	64.9	1.165	9.9	55.9	0.815	12.6	75.1
United States	0.954	6.7	51.2	0.804	8.1	66.5	0.954	6.7	51.2	0.804	8.1	66.5
DOMESTIC HEATING OIL (per litre)												
France	1.025	12.2	47.8	0.698	15.3	65.5	1.189	10.6	45.7	0.809	13.7	63.1
Germany	0.886	13.7	98.4	0.683	15.1	111.1	1.028	12.0	95.5	0.793	13.4	108.1
Italy	1.386	6.0	27.4	0.732	9.7	50.0	1.607	4.5	25.6	0.850	8.1	47.9
Spain	0.829	10.0	60.5	0.588	11.8	78.2	0.961	8.4	58.2	0.682	10.2	75.7
United Kingdom	0.722	17.7	67.2	0.576	21.9	92.1	0.989	17.4	76.3	0.790	21.6	102.7
Japan <sup>2</sup>	99.3	4.0	25.7	87.5	4.1	26.8	0.878	1.3	17.0	0.774	1.4	17.9
Canada	1.328	7.5	52.7	1.155	7.8	51.7	1.068	9.5	62.2	0.929	9.8	61.1
United States	-	-	-	-	-	-	-	-	-	-	-	-
LOW SULPHUR FUEL OIL FOR INDUSTRY <sup>3</sup> (per kg)												
France	0.673	8.0	47.6	0.533	10.3	68.6	0.780	6.5	45.5	0.619	8.7	66.2
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.607	9.7	66.4	0.576	10.2	72.6	0.704	8.1	64.0	0.668	8.7	70.1
Spain	0.496	5.9	62.7	0.479	6.1	66.4	0.575	4.4	60.4	0.555	4.6	64.0
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

<sup>1</sup> Unleaded premium (95 RON) for France, Germany, Italy, Spain, UK; regular unleaded for Canada, Japan and the United States.

<sup>2</sup> Kerosene for Japan.

<sup>3</sup> VAT excluded from prices for low sulphur fuel oil when refunded to industry.

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

**Table 15**  
**IEA/KBC Global Indicator Refining Margins<sup>1</sup>**  
 (\$/bbl)

	Monthly Average					Change	Average for week ending:				
	Jul 21	Aug 21	Sep 21	Oct 21		Oct-Sep	15 Oct	22 Oct	29 Oct	05 Nov	12 Nov
NW Europe											
Brent (Cracking)	1.89	4.09	5.11	6.44	↑	1.34	6.86	6.66	6.73	7.73	6.51
Urals (Cracking)	3.07	4.85	5.84	7.23	↑	1.39	8.03	7.39	6.38	7.01	6.11
Brent (Hydroskimming)	-0.79	1.23	2.60	3.22	↑	0.62	3.50	3.31	3.14	3.46	2.34
Urals (Hydroskimming)	-1.53	0.17	1.23	1.97	↑	0.75	3.03	1.80	0.19	0.06	-0.85
Mediterranean											
Es Sider (Cracking)	3.42	5.48	6.65	7.43	↑	0.79	7.95	7.54	6.96	6.96	5.46
Urals (Cracking)	1.77	4.69	5.38	6.71	↑	1.33	7.40	6.78	5.98	6.02	4.88
Es Sider (Hydroskimming)	1.70	3.78	4.88	4.92	↑	0.03	5.33	4.89	4.18	4.01	2.68
Urals (Hydroskimming)	-2.74	0.24	0.76	1.09	↑	0.34	2.08	0.77	-0.57	-0.82	-2.00
US Gulf Coast											
Mars (Cracking)	6.32	9.86	8.10	9.51	↑	1.41	10.61	9.06	8.28	7.80	5.47
50/50 HLS/LLS (Coking)	14.47	17.31	16.25	17.48	↑	1.24	18.20	17.78	16.29	16.15	14.13
50/50 Maya/Mars (Coking)	9.34	12.64	11.22	12.12	↑	0.90	12.70	12.17	11.06	10.98	8.99
ASCI (Coking)	11.64	14.57	12.91	14.64	↑	1.72	15.31	14.71	13.97	13.84	11.51
US Midwest											
30/70 WCS/Bakken (Cracking)	14.80	16.90	14.03	13.06	↓	-0.97	13.77	12.57	9.99	11.26	10.72
Bakken (Cracking)	17.33	19.23	16.55	14.78	↓	-1.77	15.24	14.24	11.14	12.26	10.67
WTI (Coking)	17.82	20.00	17.29	15.58	↓	-1.71	16.66	14.29	11.10	12.42	10.60
30/70 WCS/Bakken (Coking)	18.44	20.13	17.12	16.08	↓	-1.04	16.65	15.54	12.85	14.62	14.04
Singapore											
Dubai (Hydroskimming)	-3.58	-2.34	0.03	0.30	↑	0.26	1.51	-0.30	-1.73	-1.39	-2.09
Tapis (Hydroskimming)	-0.34	1.45	2.25	3.50	↑	1.25	3.94	4.65	4.24	4.08	3.74
Dubai (Hydrocracking)	3.38	3.78	5.18	7.78	↑	2.60	7.96	8.39	8.03	8.60	8.04
Tapis (Hydrocracking)	-0.42	1.53	2.22	4.70	↑	2.48	4.93	5.89	5.73	5.49	4.58

<sup>1</sup> Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crude for pricing purposes.  
 Source: IEA, KBC Advanced Technologies (KBC)

**Table 16**  
**REFINED PRODUCT YIELDS BASED ON TOTAL INPUT (%)<sup>1</sup>**

	Jun-21	Jul-21	Aug-21	Aug-20	Aug 21 vs Previous Month	Aug 21 vs Previous Year	Aug 21 vs 5 Year Average	5 Year Average
<b>OECD Americas</b>								
Naphtha	1.2	1.2	1.2	1.3	0.0	-0.1	-0.3	1.5
Motor gasoline	44.6	45.0	45.7	46.0	0.8	-0.2	0.9	44.9
Jet/kerosene	7.3	7.7	7.9	5.3	0.2	2.6	-0.9	8.9
Gasoil/diesel oil	27.9	27.7	27.4	30.3	-0.3	-2.9	-0.9	28.3
Residual fuel oil	2.6	2.7	2.7	2.7	0.1	0.0	-0.5	3.3
Petroleum coke	4.4	4.2	4.3	4.4	0.1	-0.1	-0.2	4.5
Other products	14.5	14.4	14.3	13.4	-0.1	0.8	1.4	12.9
<b>OECD Europe</b>								
Naphtha	8.0	8.2	8.4	8.5	0.2	-0.1	0.5	7.9
Motor gasoline	20.5	21.5	21.3	21.0	-0.3	0.2	0.7	20.6
Jet/kerosene	5.7	6.0	6.6	4.9	0.6	1.7	-1.7	8.3
Gasoil/diesel oil	41.9	41.0	40.5	43.3	-0.5	-2.9	0.3	40.2
Residual fuel oil	8.0	7.6	7.7	6.9	0.1	0.8	-1.1	8.7
Petroleum coke	1.5	1.5	1.6	1.5	0.1	0.2	0.3	1.4
Other products	17.1	17.3	16.6	16.7	-0.7	-0.1	1.1	15.4
<b>OECD Asia Oceania</b>								
Naphtha	15.0	15.0	15.6	16.5	0.6	-0.9	0.0	15.6
Motor gasoline	22.7	23.1	22.0	22.4	-1.1	-0.4	-0.4	22.4
Jet/kerosene	11.8	12.2	12.2	12.2	0.0	0.0	-2.4	14.6
Gasoil/diesel oil	31.3	30.3	30.6	31.3	0.2	-0.7	0.9	29.6
Residual fuel oil	7.9	8.3	8.0	6.0	-0.3	2.0	1.3	6.7
Petroleum coke	0.4	0.4	0.5	0.4	0.1	0.0	0.1	0.4
Other products	13.4	13.1	12.9	14.1	-0.1	-1.1	0.2	12.7
<b>OECD Total</b>								
Naphtha	5.5	5.7	6.0	6.3	0.3	-0.3	-0.1	6.1
Motor gasoline	33.7	34.0	33.8	33.7	-0.2	0.1	0.8	33.0
Jet/kerosene	7.5	7.9	8.2	6.4	0.3	1.8	-1.5	9.7
Gasoil/diesel oil	32.8	32.4	32.2	34.8	-0.2	-2.6	-0.2	32.4
Residual fuel oil	5.1	5.1	5.2	4.7	0.1	0.6	-0.4	5.6
Petroleum coke	2.9	2.8	2.8	2.7	0.0	0.0	0.0	2.8
Other products	15.1	15.1	14.8	14.6	-0.3	0.2	1.1	13.7

<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)

	2019	2020	2021	1Q21	2Q21	3Q21	Aug 21	Sep 21	Oct 21
<b>ETHANOL</b>									
<b>OECD Americas<sup>1</sup></b>	<b>1060</b>	<b>936</b>	<b>993</b>	<b>932</b>	<b>1021</b>	<b>991</b>	<b>969</b>	<b>957</b>	<b>1003</b>
United States	1029	906	962	901	991	959	938	925	971
Other	31	30	31	31	31	31			
<b>OECD Europe<sup>2</sup></b>	<b>97</b>	<b>90</b>	<b>102</b>	<b>83</b>	<b>108</b>	<b>118</b>	<b>129</b>	<b>99</b>	<b>99</b>
France	20	16	17	13	19	24	29	11	11
Germany	12	11	12	11	18	15	24	4	4
Spain	9	8	9	7	7	9	8	13	13
United Kingdom	4	4	11	9	12	12	14	11	11
Other	51	50	53	43	52	57			
<b>OECD Asia Oceania<sup>3</sup></b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>5</b>
Australia	4	3	3	4	4	3	2	3	3
Other	1	1	1	1	1	1			
<b>Total OECD Ethanol</b>	<b>1163</b>	<b>1030</b>	<b>1100</b>	<b>1020</b>	<b>1134</b>	<b>1113</b>	<b>1101</b>	<b>1061</b>	<b>1107</b>
<b>Total Non-OECD Ethanol</b>	<b>813</b>	<b>743</b>	<b>795</b>	<b>320</b>	<b>904</b>	<b>1162</b>	<b>1183</b>	<b>1128</b>	<b>1052</b>
Brazil	621	560	575	99	683	942	963	907	832
China	67	69	76	76	76	76			
Argentina	19	15	18	18	18	18			
Other	106	99	126	126	126	126	220	220	220
<b>TOTAL ETHANOL</b>	<b>1976</b>	<b>1774</b>	<b>1895</b>	<b>1339</b>	<b>2038</b>	<b>2275</b>	<b>2284</b>	<b>2188</b>	<b>2159</b>
<b>BIODIESEL</b>									
<b>OECD Americas<sup>1</sup></b>	<b>119</b>	<b>125</b>	<b>149</b>	<b>104</b>	<b>115</b>	<b>164</b>	<b>187</b>	<b>194</b>	<b>211</b>
United States	113	118	141	99	110	157	182	182	199
Other	7	6	7	5	5	7			
<b>OECD Europe<sup>2</sup></b>	<b>281</b>	<b>261</b>	<b>290</b>	<b>257</b>	<b>291</b>	<b>297</b>	<b>298</b>	<b>315</b>	<b>315</b>
France	42	41	43	43	47	46	49	34	34
Germany	66	60	66	54	61	72	75	76	76
Italy	18	28	31	28	30	30			
Spain	38	34	39	34	35	39	35	48	48
Other	116	99	112	99	117	110	106	121	121
<b>OECD Asia Oceania<sup>3</sup></b>	<b>15</b>	<b>20</b>	<b>23</b>	<b>15</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>29</b>	<b>29</b>
Australia	2	3	4	3	3	4	3	6	6
Other	13	17	19	12	21	20			
<b>Total OECD Biodiesel</b>	<b>415</b>	<b>405</b>	<b>462</b>	<b>376</b>	<b>429</b>	<b>486</b>	<b>509</b>	<b>538</b>	<b>555</b>
<b>Total Non-OECD Biodiesel</b>	<b>388</b>	<b>405</b>	<b>425</b>	<b>424</b>	<b>425</b>	<b>425</b>	<b>425</b>	<b>425</b>	<b>425</b>
Brazil	102	111	116	117	117	115	116	116	116
Argentina*	42	27	36	36	36	36			
Other	245	267	273	271	272	274			
<b>TOTAL BIODIESEL</b>	<b>803</b>	<b>810</b>	<b>887</b>	<b>800</b>	<b>855</b>	<b>911</b>	<b>934</b>	<b>963</b>	<b>980</b>
<b>GLOBAL BIOFUELS</b>	<b>2779</b>	<b>2584</b>	<b>2782</b>	<b>2140</b>	<b>2892</b>	<b>3185</b>	<b>3218</b>	<b>3152</b>	<b>3139</b>

\* monthly data not available.

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