International Energy Agency

Oil Market Report

15 December 2020

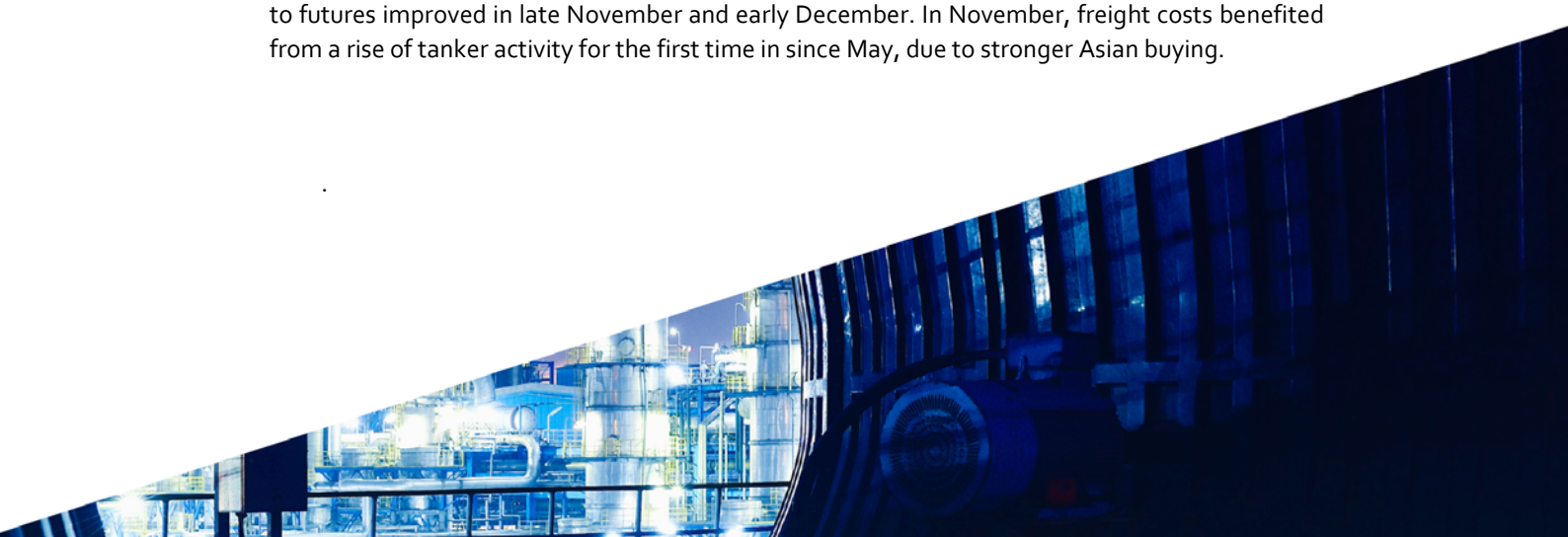
- We forecast that oil demand will fall by 8.8 mb/d y-o-y in 2020, a modest 50 kb/d downward revision from our previous Report. Our 2021 demand forecast was revised down by 170 kb/d. This is mainly because of another downgrade for jet fuel/kerosene demand, which will account for around 80% of the overall 3.1 mb/d shortfall in consumption in 2021 versus 2019. In 2021, demand for both gasoline and diesel is projected to return to 97-99% of their 2019 levels.

- Global oil supply rose 1.5 mb/d in November to 92.7 mb/d as the US recovered from hurricane shut-ins and Libya built up production. In December, production may rise again ahead of OPEC+ increasing its quota by 0.5 mb/d in January. OPEC+ dominates global growth in the near term, with virtually all the 4Q20 gains and 80% in 1Q21. For 2021 as a whole, non-OPEC producers outside OPEC+ are expected to increase output by 400 kb/d after a fall of 1.3 mb/d in 2020.

- Global refinery throughputs fell almost 1 mb/d in October mainly due to maintenance and hurricane shutdowns. The seasonal slowdown of refined product demand in the northern hemisphere winter combined with tighter crude oil markets will result in a challenging environment for refiners in the short-term. Estimated product stock draws reached their 2020 peak in October and are expected to slow until the next leg of the demand recovery in 2Q21.

- OECD industry stocks fell in October by 55.3 mb (1.78 mb/d) to 3 129 mb, and were 183.4 mb above the five-year average. Observed global stocks fell by 4.1 mb/d. Our analysis suggests that the global crude market will have a stock surplus of 625 mb at the start of 2021 versus December 2019. If we assume that Chinese balances are neutral in 2021, the market will absorb the 183 mb located elsewhere and in July it will move into deficit versus end-2019.

- Oil prices have moved rapidly and smoothly from contango to backwardation, based on stronger Asian demand and effective OPEC+ supply management. ICE Brent futures rose $2.46/bbl in November to $43.98/bbl and closed at $49.97/bbl on 11 December. Physical crude price discounts to futures improved in late November and early December. In November, freight costs benefited from a rise of tanker activity for the first time in since May, due to stronger Asian buying.



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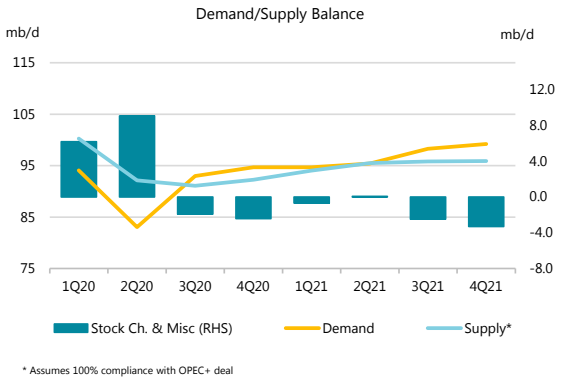
Goodbye to 2020

We are close to the end of 2020 and Brent futures prices have recently moved above $50/bbl for the first time since early March. Indeed, futures markets have moved into a shallow backwardation looking twelve months ahead. On the other hand, physical barrels have only recently traded close to futures prices, underlining the continued uncertainty that Covid-19 is causing oil demand and market stability.

The understandable euphoria around the start of vaccination programmes partly explains higher prices but it will be several months before we reach a critical mass of vaccinated, economically active people and thus see an impact on oil demand. In the meantime, the end of year holiday season will soon be upon us with the risk of another surge in Covid-19 cases and the possibility of yet more confinement measures. From the supply side, sentiment has also been boosted by news that the OPEC+ countries will increase their production quotas in January by significantly less than planned.

In the short term, oil demand remains weak and we have reduced our estimate for the fourth quarter of 2020 by 0.2 million barrels per day on small data revisions in various countries. For the year as a whole, global demand will be 91.2 mb/d, which is 8.8 mb/d below the 2019 level and down 0.1 mb/d from our last *Report*. Demand has recovered from its trough in the second quarter when it was 16.3 mb/d (16.4%) below the year-earlier level, but in 4Q20 it remains 6.2 mb/d down year-on-year, reflecting the impact of the second wave of lockdowns.



The recovery in the second half of 2020 is almost entirely due to China's fast rebound from lockdown. Demand there will grow by 0.7 mb/d in the period. The picture in OECD countries is bleak: in the same period demand will be 5.3 mb/d *lower* than a year ago. Indeed, Europe appears to be going backwards with demand in 4Q20 *lower* than in 3Q20 as re-imposed lockdowns take their toll. Globally, weakness in the aviation sector largely explains a downgrade to demand in this *Report* of 0.3 mb/d for the first half of 2021. This contributes to a smaller rebound in demand in 2021 of 5.7 mb/d.

On the supply side, the OPEC+ countries have shown flexibility in amending their quota arrangements. Demand is clearly going to be lower for longer than expected when the supply agreement was concluded in April and there is rising production from Libya to accommodate. The agreement to increase the quota by a modest 0.5 mb/d each month, subject to conditions providing the headroom for more supply, is based on a recognition that the market remains fragile and is in need of careful adjustment.

In 2020, we have seen unprecedented and historic turbulence in energy markets. The disruption to normal life caused by the pandemic has had a serious impact on the health and welfare of millions of people. We hope that the New Year will bring better times to you and your families.

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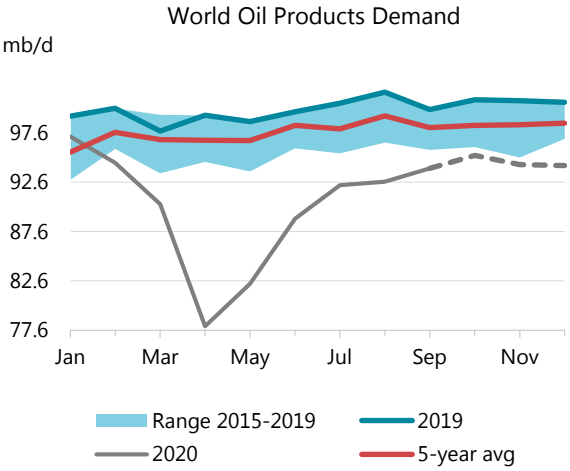
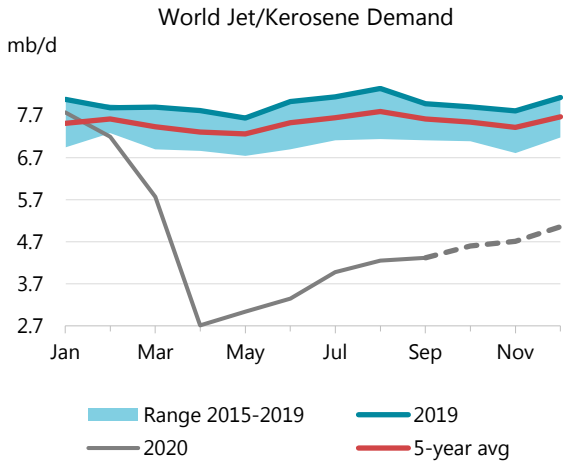
Demand

Overview

As 2020 draws to a close, the focus is now on the New Year. We expect a solid recovery in demand from the lows reached in 2020 due to the Covid-19 pandemic. Oil demand will recover nearly two-thirds of the amount lost in 2020, rising by 5.7 mb/d year-on-year (y-o-y). Most of these gains are explained by a rebound in economic activity and the expected easing of social distancing measures. Growth in gasoline and diesel should be particularly strong and demand for both fuels is projected to return to 97-99% of their 2019 levels. The shortfall is mostly due to Covid-19 counter-measures in OECD countries in 1Q21 and the tough economic situation.





Jet fuel/kerosene demand is not expected to recover quickly, as governments intend to keep in place border closures and travel restrictions until a vaccine is widely available. In addition, while many consumers will be keen to fly on holiday once restrictions are eased, older citizens are likely to remain cautious, while those affected by the economic crisis will have less to spend on tickets. Business travel may also remain muted in the interests of cost cutting and penalised by the proliferation of online meetings. Jet fuel/kerosene demand will rise by 720 kb/d y-o-y in 2021, but remain 2.5 mb/d below its pre-pandemic level. It will account for around 80% of the overall 3.1 mb/d shortfall in consumption in 2021 versus 2019. This month, we revise down our 2021 jet fuel/kerosene forecast by 300 kb/d due to the slower path of recovery of the industry.

Our central assumption is that vaccines will be introduced in OECD countries in 1Q21 and widely administered in 2Q21 and 3Q21, thus allowing many activities to progressively return to normal. However, considerable uncertainty remains about vaccines' efficacy, availability, and deployment. It is possible that, after the upcoming holiday season, a third wave of the virus will affect Europe and other parts of the world before vaccines have time to take effect. This would bring renewed downward pressure on oil demand.

For 2020, we have revised down our demand estimate by a modest 50 kb/d in this *Report*. However, within the annual number there are significant downgrades to both 3Q20 (-160 kb/d) and 4Q20 (-180 kb/d). This reflects the resurgence of the pandemic in Europe, Russia and the United States. Demand in 2Q20 has been revised up with new data for Indonesia. We now

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expect oil demand to fall 8.8 mb/d y-o-y. Our 2021 forecast for growth was revised down by 110 kb/d to 5.7 mb/d, largely because of the lower aviation estimates.

Global Oil Demand (2019-2021)

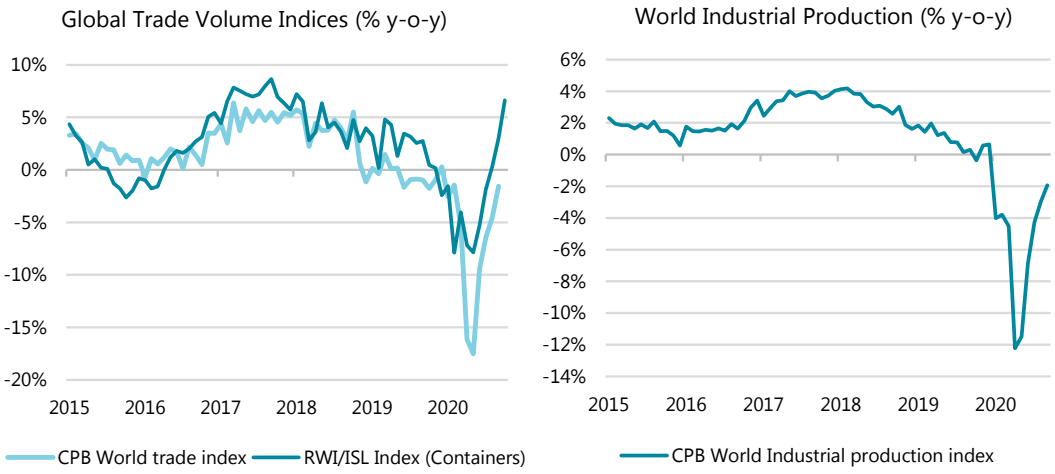
(million barrels per day)*

	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021
Africa	4.3	4.3	4.2	4.3	4.3	4.2	3.3	3.9	4.0	3.9	4.2	4.1	4.0	4.2	4.1
Americas	31.4	31.7	32.3	32.1	31.9	30.1	24.9	28.5	29.2	28.2	28.9	29.5	31.0	31.1	30.1
Asia/Pacific	35.9	35.6	35.2	36.4	35.8	33.3	32.2	34.0	35.8	33.9	36.1	35.6	35.4	36.7	35.9
Europe	14.8	15.0	15.5	14.8	15.0	14.1	11.6	13.6	13.3	13.1	13.4	13.9	14.5	14.5	14.1
FSU	4.6	4.7	5.0	4.9	4.8	4.6	4.0	4.8	4.7	4.5	4.5	4.5	5.0	4.9	4.7
Middle East	8.1	8.1	8.7	8.3	8.3	7.8	7.0	8.2	7.6	7.6	7.6	7.8	8.4	7.8	7.9
World	**99.1**	**99.3**	**100.8**	**100.9**	**100.0**	**94.1**	**83.1**	**93.0**	**94.7**	**91.2**	**94.7**	**95.4**	**98.3**	**99.2**	**96.9**
Annual Chg (%)	0.5	0.5	0.8	1.4	0.8	-5.0	-16.4	-7.7	-6.1	-8.8	0.7	14.9	5.7	4.8	6.2
Annual Chg (mb/d)	0.5	0.5	0.8	1.4	0.8	-5.0	-16.3	-7.8	-6.2	-8.8	0.6	12.4	5.3	4.5	5.7
Changes from last OMR (mb/d)	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	-0.2	-0.1	-0.2	-0.4	-0.2	0.1	-0.2

* Including biofuels

Fundamentals

Recent economic indicators show a very strong rebound in growth in 3Q20 in most countries after a sharp fall in 2Q20. Global trade and industrial activity have also recovered fast. The RWI/ISL index, which tracks global container movements, rose by 6.6% y-o-y in October. The CPB index showed the y-o-y gap in industrial production and in volume of world trade narrowed to 2% in September.



However, these indicators lag current developments and do not reflect new Covid-19 containment measures seen in 4Q20. Mobility indicators show a sharp slowdown in October and November. Some of these measures were amended or lifted recently and mobility has started to rebound. Mobility has declined in North America (in particular the US), where there is a strong rise in Covid cases. In non-OECD countries, mobility has continued to improve in some places in November (e.g. India) and the start of December, but not in others (e.g. Brazil).

The global purchasing managers' index (PMI) reflects this evolution: it reached 53.3 in October, its highest level since August 2018, before declining to 53.1 in November. In spite of higher Covid cases, the US composite PMI posted the biggest expansion, followed by China, India and Brazil. The manufacturing PMI was the highest in Brazil, followed by Germany, India and the US. The services PMI were the highest in the US, followed by China and India. As expected,

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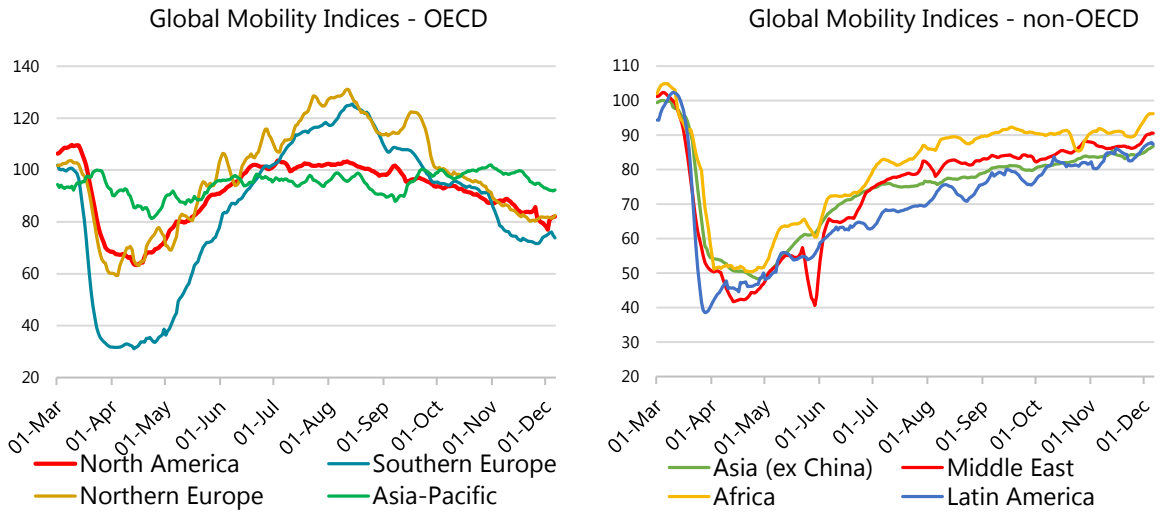
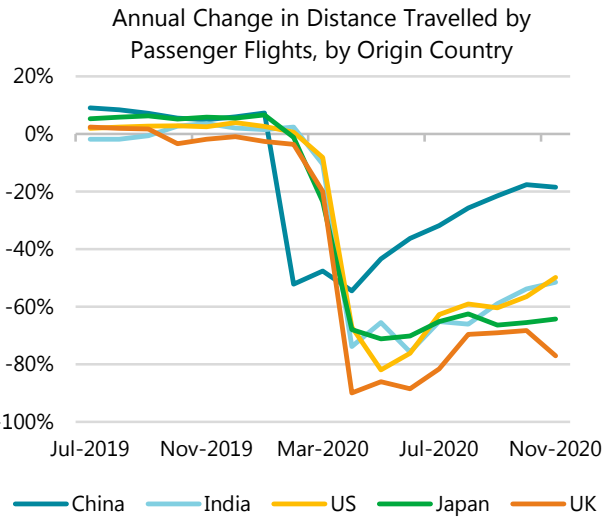
some of the lowest figures were found in countries that have introduced tough new measures against Covid, for example in France, Italy and Spain. The Eurozone economy fell back into a broad contraction in November. However, business sentiment about the year ahead jumped to its highest in six years, thanks to positive vaccine news.



Source: computed from Google mobility data

The launch of vaccination campaigns in several countries and the expected wide availability of vaccines have raised expectations that global economic activity could return relatively rapidly to normal in most regions. Most economic forecasters now expect global GDP to return to pre-pandemic levels by the end of 2021. However, it will not be the case for oil demand. Certainly, in the early part of 2021 Covid containment will continue to require social distancing measures and restrictions to cross-border travel. Industrial activity could recover relatively fast, supporting diesel demand, but the services sector (in particular tourism) will continue to suffer.



The aviation industry continues to struggle in the face of the pandemic. In November, the latest month for which full *OAG* data is available, passenger flights measured in tonne-miles fell 58% y-o-y. This is up just 3 percentage points in the last four months. Notable increases were seen in some countries with significant domestic aviation sectors (including Brazil, India, South Africa and the US), but they were largely offset by falls in Europe. The *International Civil Aviation Organisation* (ICAO) released, at the end of November, a set of scenarios exploring the short-term impact of Covid on civil aviation. Under its most favourable scenario, seat capacity in Europe and the Middle East would end 2020 at 70% and 55% below a "business as usual" situation, respectively, and will be roughly 40% below normal in mid-2021. Other regions could perform better, being roughly 40% below normal at the end of 2020 and 20% below normal in mid-2021. Globally, the *International Air Transport Association* (IATA) expects air passenger

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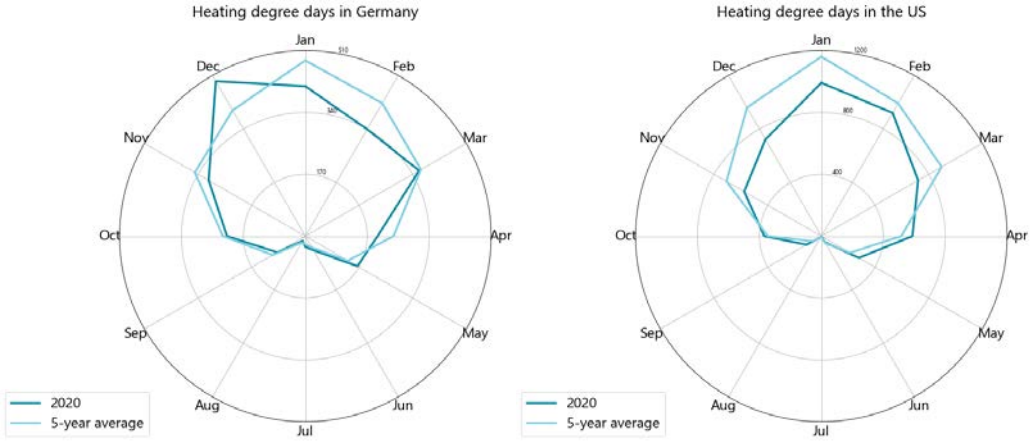
demand to be roughly 60% of 2019 levels in 2021. Based on these recent forecasts, we have reduced our own assessment of traffic and jet fuel demand.

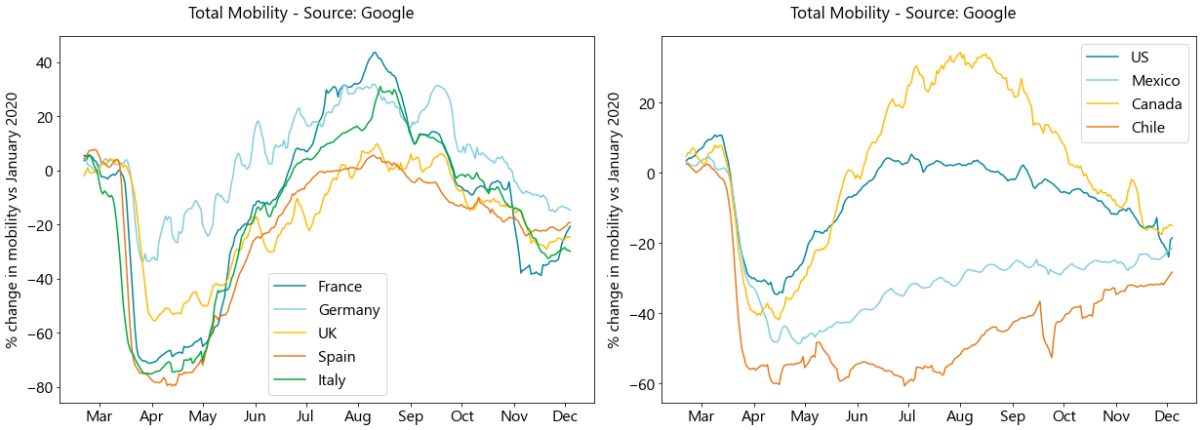
Temperatures were warmer than usual in much of the northern hemisphere during November, keeping heating fuel demand in check. In December, temperatures turned colder than normal in Europe and in Asia, but remained mild in North America. We expect heating degree days to be above trend in Europe during the month, in line with seasonal norms in Japan/Korea and below trend in the US.



Sources: NOAA, WeatherBit. Note: The figures for December 2020 include weather forecasts and are therefore not final.

OECD

OECD oil demand rose counter-seasonally by 720 kb/d m-o-m in September, the latest month for which full data is available, but it was still 4.8 mb/d down y-o-y. Diesel demand gained the most, rising counter-seasonally by 640 kb/d, while gasoline demand rose 40 kb/d instead of posting a seasonal decline.



Mobility indices point to a slowdown in transport demand in October and a fall in November as rising Covid cases and social distancing measures forced citizens to stay at home. The y-o-y decline in OECD oil demand is estimated to have narrowed to 4.3 mb/d in October but then expanded to 5 mb/d in November. France, Italy and the UK were the most impacted by the second wave of Covid cases and containment measures.

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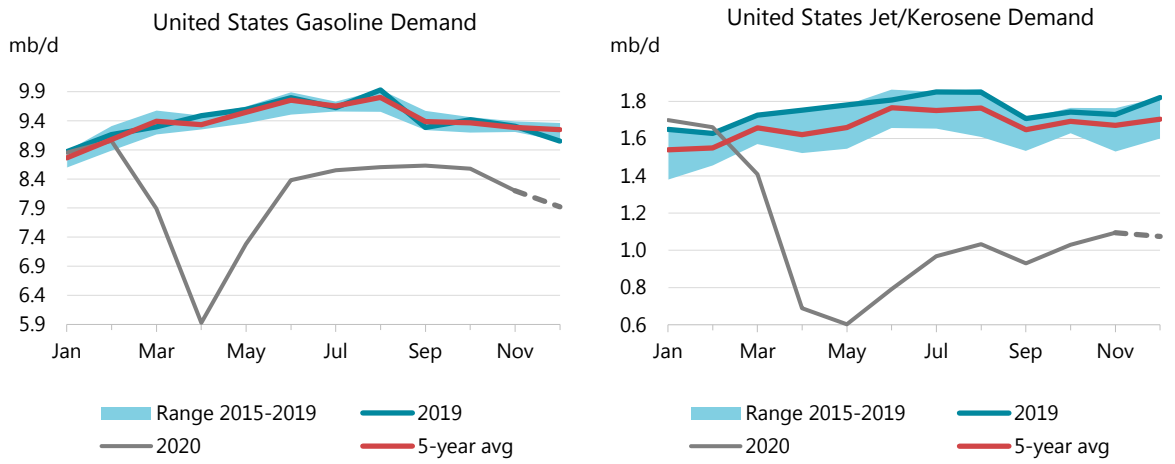
OECD Demand based on Adjusted Preliminary Submissions - October 20 (million barrels per day)	Gasoline		Jet/Kerosene		Diesel		LPG/Ethane		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD Americas	**10.09**	**-9.2**	**1.18**	**-42.6**	**4.59**	**-7.5**	**4.07**	**5.1**	**0.55**	**-5.5**	**3.16**	**-5.7**	**23.66**	**-8.9**
US*	8.55	-8.9	1.06	-40.1	3.91	-6.5	3.22	7.6	0.40	-6.5	2.15	-8.0	19.29	-8.6
Canada	0.83	-5.1	0.07	-59.8	0.25	-4.1	0.40	-5.4	0.03	-21.1	0.73	0.9	2.30	-7.6
Mexico	0.64	-17.5	0.03	-57.8	0.27	-21.3	0.39	-3.6	0.12	0.5	0.25	-4.4	1.71	-14.0
OECD Europe	**1.98**	**-5.9**	**0.67**	**-58.5**	**4.94**	**-5.7**	**1.05**	**-0.7**	**0.74**	**-1.6**	**3.70**	**-0.7**	**13.10**	**-9.8**
Germany	0.49	-4.1	0.05	-78.6	0.75	-6.0	0.11	9.3	0.05	13.0	0.72	2.2	2.19	-9.4
United Kingdom	0.26	-8.6	0.15	-54.5	0.46	-7.9	0.10	48.9	0.02	-6.5	0.28	-0.1	1.26	-14.4
France	0.20	-3.7	0.08	-55.4	0.69	-3.0	0.12	3.1	0.03	-17.2	0.40	-9.5	1.50	-10.0
Italy	0.18	-12.5	0.04	-66.3	0.42	-10.5	0.10	-1.2	0.06	-6.1	0.32	-6.6	1.13	-14.2
Spain	0.11	-10.6	0.07	-53.6	0.45	-8.9	0.05	-30.2	0.10	-19.0	0.35	-2.4	1.14	-14.7
OECD Asia & Oceania	**1.37**	**-6.5**	**0.50**	**-37.6**	**1.41**	**-2.6**	**0.68**	**-6.3**	**0.42**	**7.4**	**2.44**	**-5.0**	**6.83**	**-7.8**
Japan	0.74	-7.6	0.23	-39.7	0.41	-6.5	0.28	-4.3	0.23	0.5	1.19	-1.5	3.08	-8.1
Korea	0.22	-5.6	0.13	-30.6	0.44	4.6	0.32	-9.6	0.17	22.9	1.00	-11.7	2.29	-7.5
Australia	0.31	-3.4	0.10	-40.8	0.50	-5.2	0.06	-1.4	0.01	3.1	0.11	6.4	1.09	-8.3
OECD Total	**13.45**	**-8.5**	**2.36**	**-47.5**	**10.95**	**-6.1**	**5.80**	**2.5**	**1.72**	**-0.9**	**9.30**	**-3.6**	**43.58**	**-9.0**

* Including US territories

OECD Americas

Oil deliveries in the OECD Americas remained 3.3 mb/d below last year in 3Q20, a much narrower gap than in 2Q20 (5.5 mb/d). Gasoline demand fell 1.3 mb/d, jet/kerosene 1.1 mb/d and gasoil/diesel 470 kb/d.



In the **US**, gasoline demand rose 30 kb/d month-on-month in September and the y-o-y deficit narrowed to 650 kb/d from 1.3 mb/d in August. Since then, declining mobility with higher Covid cases is estimated to have increased the y-o-y decline to 840 kb/d in October and 1.1 mb/d in November. The latest *Department of Energy* weekly statistics point to a significant decline in gasoline demand recently, with the latest data (4 December) showing a fall in demand below 8 mb/d (on a four-week average basis). Gasoil/diesel demand fared better and is estimated to be only 200 kb/d lower y-o-y in November. Consumption is projected to be 240 kb/d below last year in 4Q20 and 110 kb/d below last year in 1Q21. Gasoline demand is estimated to be 1 mb/d below last year's level in 4Q20 and is projected to remain 520 kb/d lower in 1Q21. Jet/kerosene demand will continue to be impacted, declining by 700 kb/d y-o-y in 4Q20 and 550 kb/d in 1Q21.

In **Mexico**, demand rose slightly more than normal, by 100 kb/d m-o-m, in October. Total demand remains 280 kb/d below last year, of which 140 kb/d is due to lower gasoline demand. **Canada's** oil demand declined by 260 kb/d y-o-y in September.

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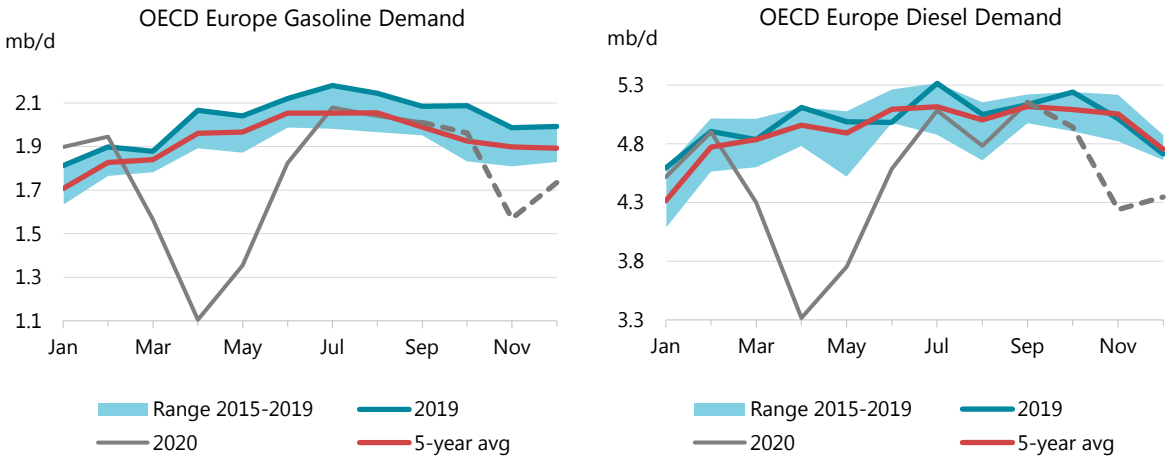
OECD Americas oil demand is projected to fall by 3 mb/d y-o-y in 2020 and to recover by only 1.6 mb/d in 2021. Jet/kerosene demand will be the most impacted, declining by 830 kb/d in 2020 and recovering by only 130 kb/d in 2021. After a drop of 1.5 mb/d in 2020, gasoline demand will increase by 810 kb/d in 2021.

OECD Europe

Oil demand in OECD Europe dropped by 1.8 mb/d y-o-y in 3Q20, largely on lower jet/kerosene deliveries (-1.1 mb/d). However, in September, oil consumption rose by 670 kb/d m-o-m, more than the regular seasonal increase. Diesel demand, in particular, jumped by 370 kb/d m-o-m. In addition, heating oil deliveries rose seasonally by around 200 kb/d. After a drop of 650 kb/d y-o-y in 2Q20, the gasoline demand deficit narrowed to 90 kb/d in 3Q20. With the second wave of Covid cases, Europe is expected to experience a second decrease in gasoline and diesel demand. The y-o-y gasoline decline is expected to widen to 260 kb/d in 4Q20.



In October, European demand fell a little m-o-m, according to preliminary data, due to lower transport fuel deliveries. In November, we expect consumption to fall by 1.2 mb/d m-o-m due to restrictions to contain Covid cases introduced in several countries. The impact of the renewed restrictive measures on transport fuel demand is estimated to be roughly half of that of the measures against the first wave. While gasoline demand declined by 840 kb/y in April compared to February, we forecast a fall of 440 kb/d in November versus September levels. Diesel demand dropped by 1.6 mb/d in April and is expected to decline by only 915 kb/d in November.

Overall, European oil consumption is set to fall by 320 kb/d quarter-on-quarter (q-o-q) in 4Q20. For the year as a whole, demand is expected to decline by 1.8 mb/d in 2020 and to rebound by 890 kb/d in 2021.

OECD Asia Oceania

OECD Asia Oceania oil demand was 870 kb/d below last year in 3Q20 and the y-o-y difference is expected to narrow to 540 kb/d in 4Q20. Jet/kerosene demand is the most affected, declining by 370 kb/d y-o-y in 3Q20 and 260 kb/d in 4Q20. Consumption in the region is improving relatively fast, as the pandemic is better contained than in the Americas or Europe.

Total OECD Asia demand rose by 30 kb/d in October and 660 kb/d m-o-m in November. In November, the **Korean** manufacturing PMI rose to 52.9, the highest since 2011, and exports

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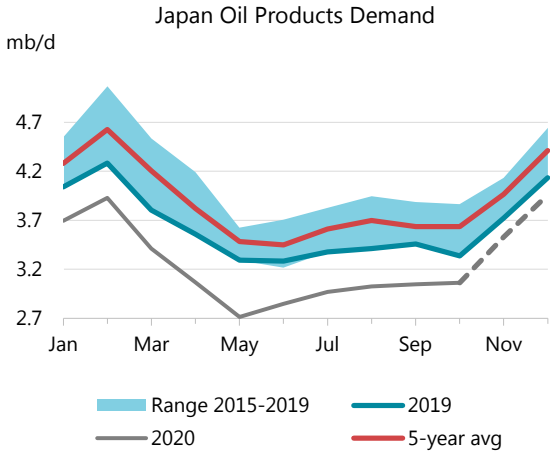
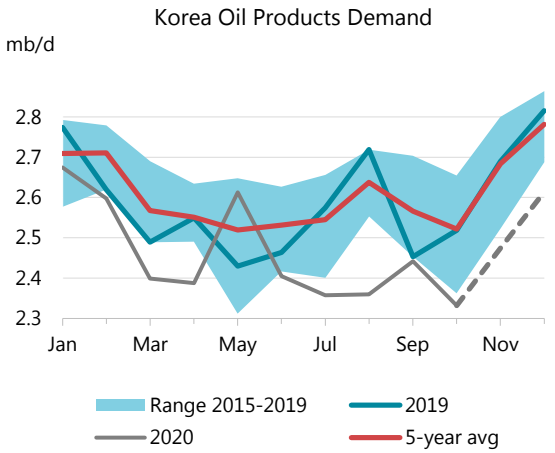
rose 4% y-o-y showing that the Korean economy is benefitting from a rebound in world trade. **Japan's** economy is also recovering from Covid, with 3Q20 GDP expanding at a q-o-q annualised rate of 23% after a contraction of 29.2% in 2Q20.





We expect 4Q20 oil demand to grow 760 kb/d versus 3Q20, helped by higher jet/kerosene and naphtha deliveries. For the year 2020, demand will fall 680 kb/d, the smallest decline in absolute and relative terms of all OECD regions. For 2021, we expect growth of 300 kb/d.

Non-OECD

Non-OECD oil demand rose 440 kb/d m-o-m in October, the sixth consecutive monthly gain following the first wave of Covid-19. Consumption of gasoil/diesel was up 650 kb/d, as mobility and economic activity continued to recover in emerging economies. Jet fuel and kerosene demand increased by 80 kb/d. By contrast, gasoline demand was down 150 kb/d on the month, with slowdowns registered in China and Russia. On a yearly basis, demand from non-OECD countries was down 1.4 mb/d in October, a much lower amount than in the OECD (-4.3 mb/d). We expect consumption to contract by 1.7 mb/d y-o-y in 4Q20 and to decline 3.3 mb/d on average in 2020. In 2021, non-OECD countries are likely to see demand gains of 2.9 mb/d, meaning that overall consumption will be almost back to 2019 levels, and higher than 2019 for certain products and countries.

Non-OECD: Demand by Region
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	1Q20	2Q20	3Q20	2Q20	3Q20	2Q20	3Q20
Africa	4 217	3 335	3 880	- 983	- 288	-22.8	-6.9
Asia	25 561	25 688	27 362	-2 473	- 280	-8.8	-1.0
FSU	4 617	4 032	4 789	- 655	- 162	-14.0	-3.3
Latin America	5 726	4 864	5 763	-1 317	- 518	-21.3	-8.2
Middle East	7 791	6 993	8 153	-1 147	- 582	-14.1	-6.7
Non-OECD Europe	734	614	764	- 161	- 23	-20.8	-3.0
Total Products	**48 645**	**45 525**	**50 711**	**-6 737**	**-1 854**	**-12.9**	**-3.5**

New Covid-19 cases have surged in Brazil and Russia in recent weeks, and in Indonesia and South Africa cases have begun to climb once again. Elsewhere, in countries such as Argentina, India and Saudi Arabia, the epidemic has remained under control. Covid-19 movement

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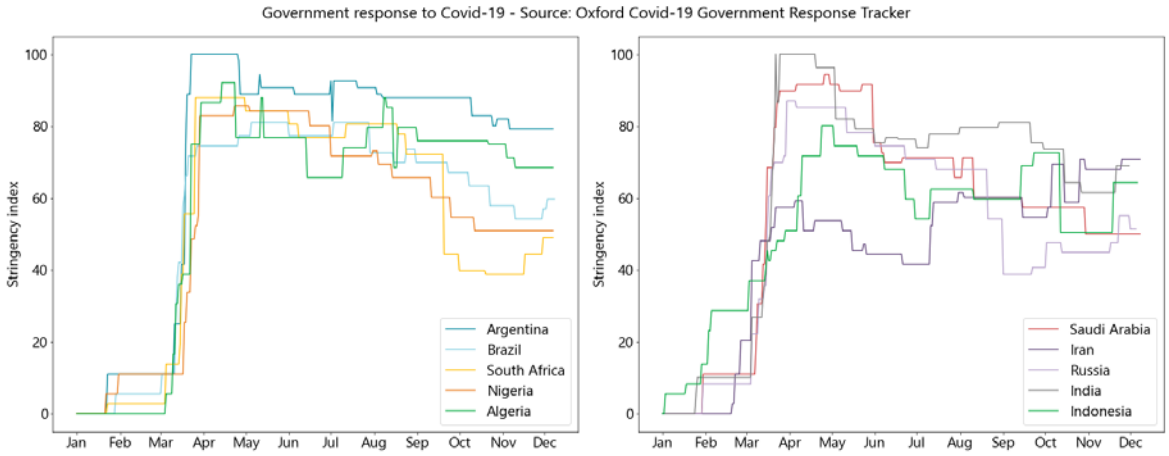
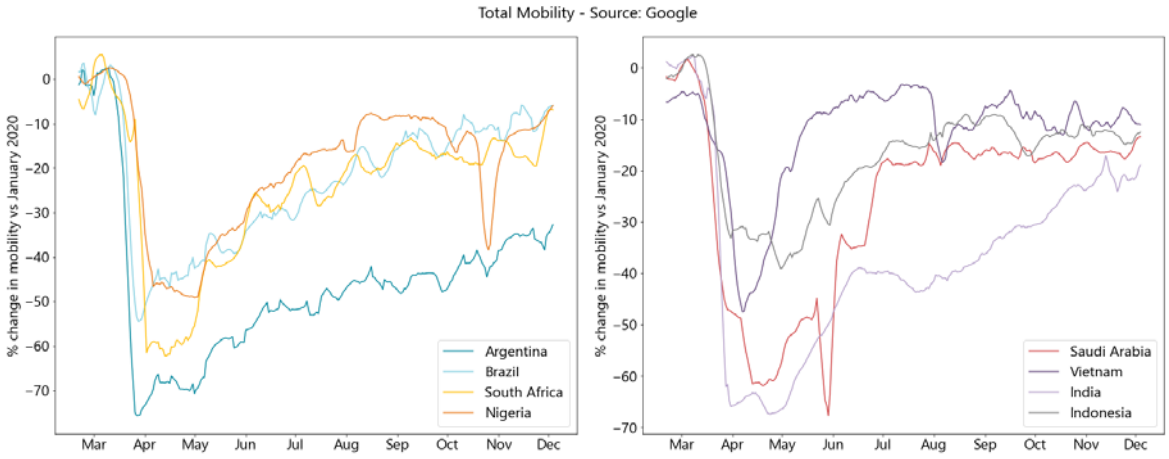
restrictions have been strengthened in Brazil, Russia and South Africa in recent weeks, but are generally less severe than earlier this year.



Mobility in non-OECD countries has generally followed an uptrend in the last few months in line with the easing of restrictions by governments, as shown by figures released by *Google*, based on anonymised mobile phone data. However, data for November show that mobility improvements have slowed in several countries, e.g. Brazil, Vietnam, India and Indonesia. In most countries, overall mobility remains below pre-pandemic levels.



China

Chinese oil demand fell by 30 kb/d m-o-m in October. While this was in contrast with the recent trajectory of oil consumption, demand was up 640 kb/d on the year, by far the strongest performance amongst major oil consumers. The m-o-m fall in October was caused by a slowdown in gasoline deliveries (-150 kb/d) and jet fuel/kerosene (-10 kb/d). By contrast, gasoil/diesel demand (+130 kb/d) grew robustly.

We expect 4Q20 demand to grow 480 kb/d y-o-y, helped by the strong recovery in manufacturing over the last few months. For 2020 as a whole, consumption should increase by 110 kb/d, a slower pace than in recent years but showing a remarkable recovery from the Covid-19 pandemic. We expect 2021 demand to grow by 850 kb/d, the highest annual growth rate since 2010.

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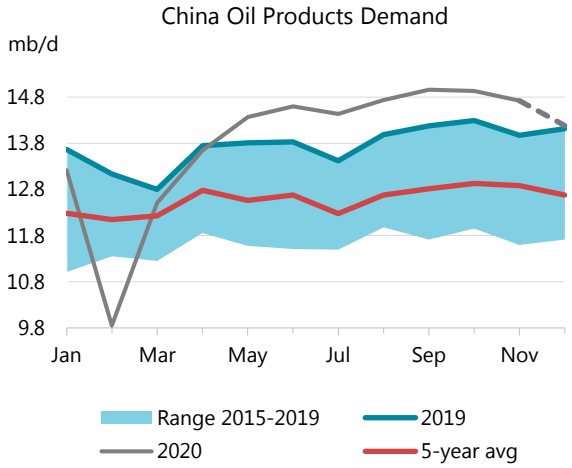
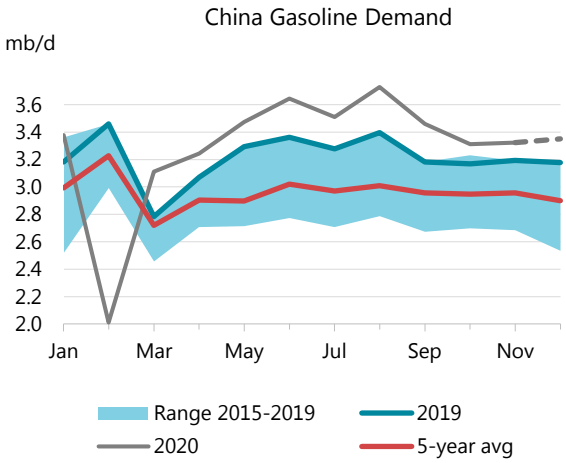
China: Demand by Product (thousand barrels per day)	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2020	2021	2020	2021
LPG & Ethane	1 681	1 753	1 844	72	91	4.3	5.2
Naphtha	1 360	1 470	1 610	110	141	8.1	9.6
Motor Gasoline	3 203	3 293	3 493	91	199	2.8	6.1
Jet Fuel & Kerosene	792	648	788	- 144	141	-18.2	21.7
Gas/Diesel Oil	3 719	3 772	3 924	53	151	1.4	4.0
Residual Fuel Oil	427	456	517	30	60	6.9	13.2
Other Products	2 533	2 435	2 498	- 99	63	-3.9	2.6
Total Products	**13 714**	**13 827**	**14 674**	**112**	**847**	**0.8**	**6.1**





India

Indian oil demand grew by a robust 440 kb/d m-o-m in October, buoyed by gasoil/diesel sales (+320 kb/d), which rose at their quickest pace since May. Gasoline demand increased by 30 kb/d on the month, while jet and kerosene sales were unchanged. This meant oil consumption was back above 2019 levels (+120 kb/d y-o-y) for the first time since the Covid-19 pandemic struck the country in February. A slowdown in new Covid cases, reduced government restrictions and the month's planned holiday celebrations all helped to boost consumption.

India: Demand by Product (thousand barrels per day)	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2019	2020	2021	2020	2021	2020	2021
LPG & Ethane	858	893	899	35	6	4.1	0.6
Naphtha	332	342	371	10	29	3.1	8.4
Motor Gasoline	745	676	734	- 69	58	-9.3	8.6
Jet Fuel & Kerosene	237	130	162	- 106	31	-45.0	24.2
Gas/Diesel Oil	1 735	1 492	1 699	- 243	207	-14.0	13.9
Residual Fuel Oil	143	136	140	- 8	4	-5.3	3.1
Other Products	1 065	998	1 055	- 68	57	-6.4	5.7
Total Products	**5 114**	**4 666**	**5 058**	**- 449**	**392**	**-8.8**	**8.4**

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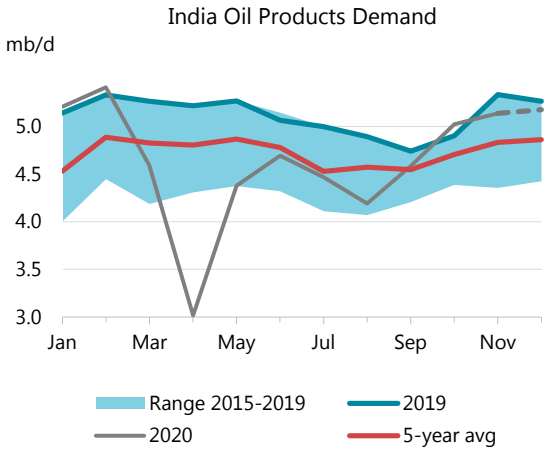
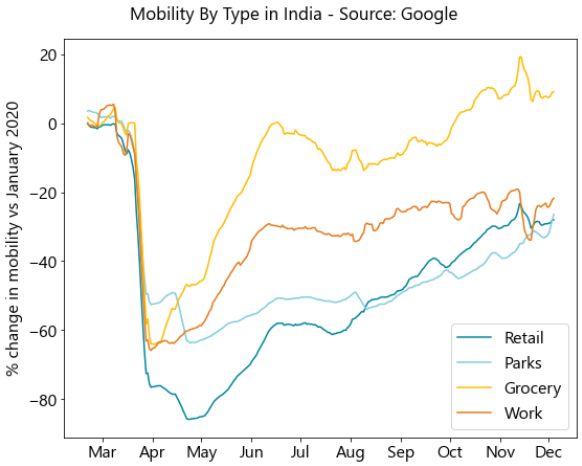
Nonetheless, there are reasons to believe one-off factors contributed to October's strong performance, and we expect demand to return below year-ago levels in November-December. For 2020 as a whole, demand should decrease by 450 kb/d, before increasing by 390 kb/d in 2021.

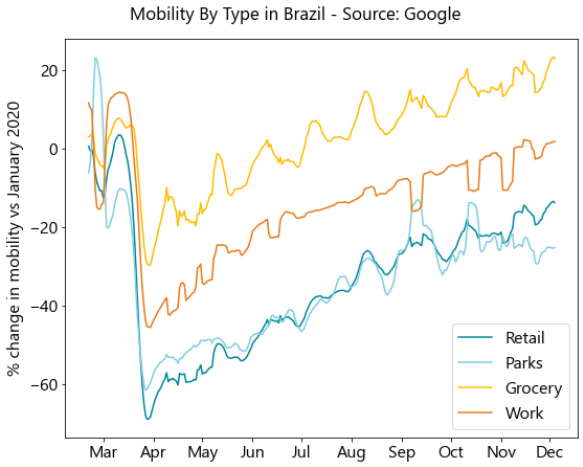


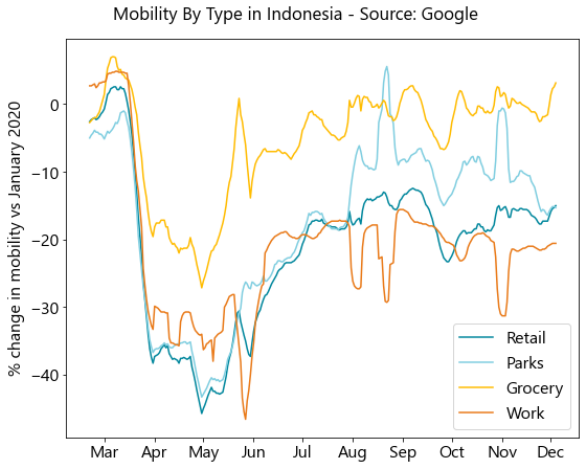


All forms of mobility in India have increased in recent months, *Google* data showed. However, mobility, other than grocery-related, remain around 20-30% below January 2020 levels.

Other Non-OECD

In **Argentina**, oil demand figures for September came in 80 kb/d below last year, likely due to a strong resurgence of Covid-19 cases (and movement restrictions). New cases have since gone down sharply and we expect oil consumption to recover at a modest pace in 2021, given the tough economic situation. Overall, total oil consumption is likely to fall by 90 kb/d in 2020, before recovering by 30 kb/d in 2021.





In **Brazil**, oil demand was up 150 kb/d on the month and down just 20 kb/d y-o-y, the smallest deficit versus year-ago levels recorded since February. Gasoline and diesel purchases contributed significantly.

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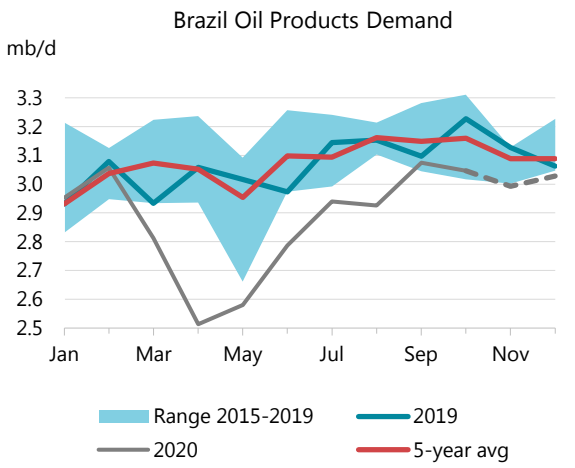
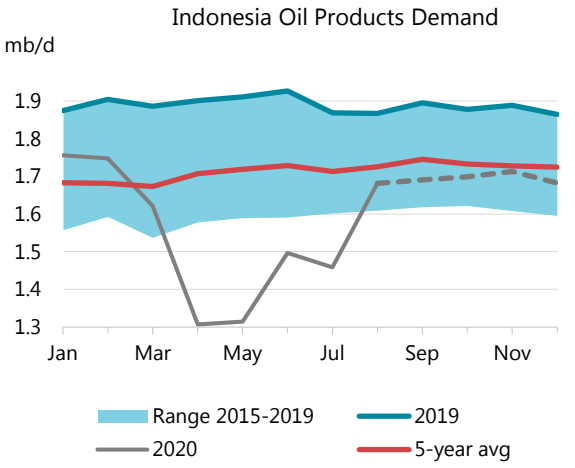
We raised our **Indonesian** oil demand estimate by 20 kb/d in 3Q20 and reduced it by 10 kb/d in 4Q20. We expect the country's consumption to fall by 180 kb/d y-o-y in 4Q20 and by 240 kb/d in 2020, before rising by 60 kb/d in 2021.

Nigerian oil consumption rose 20 kb/d m-o-m and 45 kb/d y-o-y in September, as gasoline deliveries increased. The country's demand is expected to fall by just 10 kb/d in 2020.

Russia has been affected by a second wave of Covid-19, but restrictions have not been as extensive as earlier in the year. We expect deliveries to fall by 110 kb/d y-o-y in 4Q20. In 2020, consumption should decrease by 140 kb/d, before recovering by 120 kb/d in 2021.





In **Kuwait,** recent data reported by the *MEES* show a surge in direct use of crude oil in power generation, at the expense of fuel oil. In recent months (May to October 2020) we estimate that roughly 90 kb/d of residual fuel oil used in power generation was replaced by the direct use of crude oil. Strong fuel oil prices versus crude prices in recent months may explain the switch.

Non-OECD: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	1Q20	2Q20	3Q20	2Q20	3Q20	2Q20	3Q20
LPG & Ethane	6 894	7 107	7 230	136	50	2.0	0.7
Naphtha	3 301	3 211	3 251	133	126	4.3	4.0
Motor Gasoline	10 940	9 507	11 685	-2 454	- 324	-20.5	-2.7
Jet Fuel & Kerosene	2 754	1 404	1 980	-1 917	-1 483	-57.7	-42.8
Gas/Diesel Oil	14 039	13 486	15 109	-1 986	- 246	-12.8	-1.6
Residual Fuel Oil	4 268	4 173	4 232	- 348	- 322	-7.7	-7.1
Other Products	6 449	6 638	7 225	- 302	346	-4.3	5.0
Total Products	**48 645**	**45 525**	**50 711**	**-6 737**	**-1 854**	**-12.9**	**-3.5**

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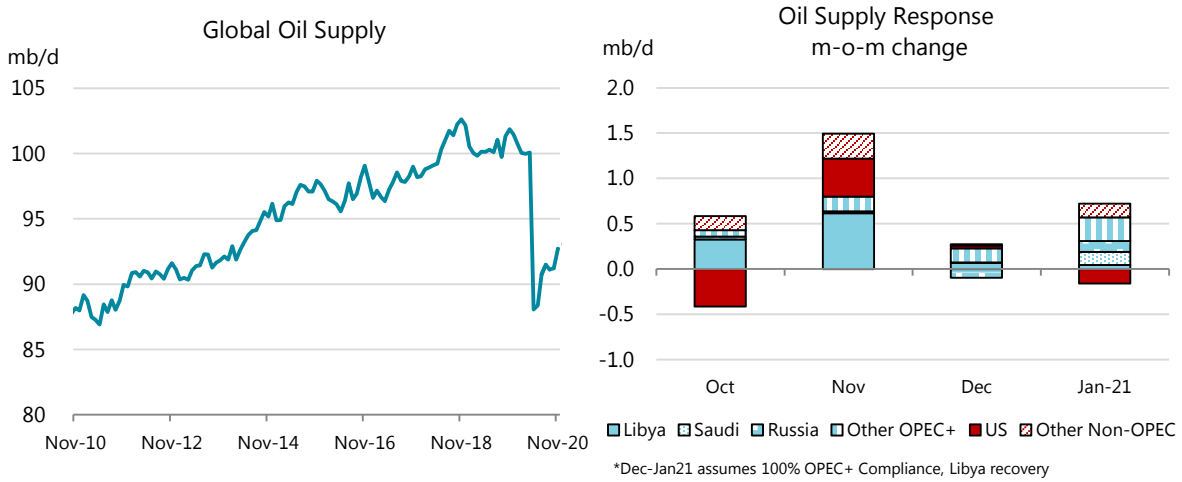
Supply

World oil supply rose by 1.5 mb/d month on month (m-o-m) in November after the United States rebounded from hurricane shut-ins and Libya rapidly built up output. At 92.7 mb/d, production was the highest since May, when OPEC+ enforced record supply cuts, but was 9.2 mb/d below a year ago. Global supply looks set to edge higher in December before OPEC+ ramps up at the start of 2021.



Taking into account the very gradual recovery in market sentiment, OPEC+ producers agreed in early December to lift supply by a modest amount in January, far less than originally planned (see *OPEC+ takes cautious approach to higher targets*). A swift, strong recovery by Libya – exempt from OPEC+ cuts – is also likely to have influenced decision-making.

OPEC+ Crude Oil Production[1]

(million barrels per day)

	Oct 2020 Supply	Nov 2020 Supply	Supply Baseline[2]	November Compliance	Average Compliance	May-July Target	Aug-Dec Target[5]	Jan 2021 Target[5]
Algeria	0.86	0.86	1.06	102%	102%	0.82	0.86	0.88
Angola	1.20	1.19	1.53	121%	97%	1.18	1.25	1.27
Congo	0.27	0.29	0.33	59%	47%	0.25	0.27	0.27
Equatorial Guinea	0.11	0.10	0.13	117%	77%	0.10	0.10	0.11
Gabon	0.20	0.20	0.19	-38%	-42%	0.14	0.15	0.16
Iraq	3.82	3.81	4.65	99%	91%	3.59	3.80	3.86
Kuwait	2.30	2.30	2.81	99%	101%	2.17	2.30	2.33
Nigeria	1.35	1.33	1.83	149%	119%	1.41	1.50	1.52
Saudi Arabia	8.98	8.99	11.00	100%	107%	8.49	8.99	9.12
UAE	2.42	2.50	3.17	116%	81%	2.45	2.59	2.63
Total OPEC 10	**21.51**	**21.57**	**26.68**	**105%**	**99%**	**20.60**	**21.82**	**22.12**
Iran[3]	1.93	1.96						
Libya[3]	0.45	1.04						
Venezuela[3]	0.40	0.45						
Total OPEC	**24.29**	**25.02**						
Azerbaijan	0.59	0.59	0.72	100%	100%	0.55	0.59	0.60
Kazakhstan	1.44	1.44	1.71	87%	89%	1.32	1.40	1.42
Oman	0.72	0.72	0.88	101%	103%	0.68	0.72	0.73
Russia	9.10	9.07	11.00	96%	95%	8.49	8.99	9.12
Others[4]	0.92	0.92	1.11	94%	93%	0.85	0.90	0.92
Total Non-OPEC	**12.77**	**12.74**	**15.42**	**95%**	**94%**	**11.90**	**12.60**	**12.78**
Total OPEC+ (supply pact)	**34.28**	**34.31**	**42.10**	**101%**	**97%**	**32.50**	**34.42**	**34.90**

1 Excludes condensates.
2 Based on Oct-2018, except for Saudi and Russia which each have an 11 mb/d baseline.
3 Iran, Libya, Venezuela exempt from cuts.
4 Bahrain, Brunei, Malaysia, Sudan and South Sudan.
5 Table excludes Mexico, who only cut production in May and June.

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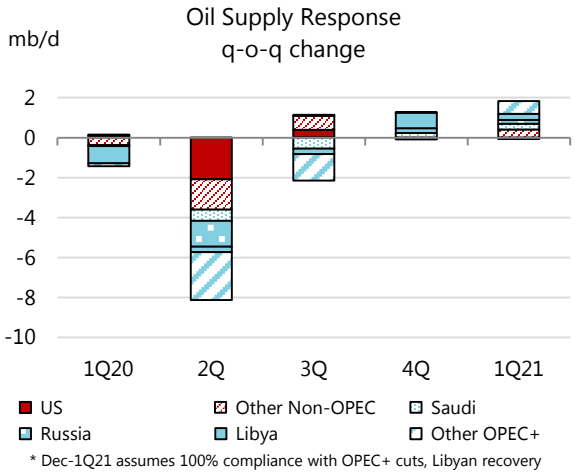
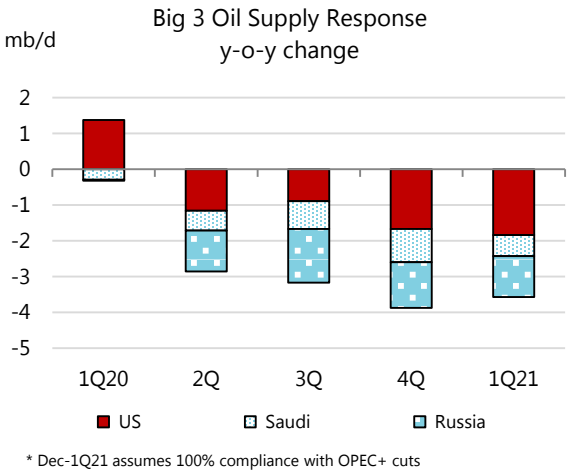
As for OPEC's 13 members, Libya led the group's m-o-m increase in November with overall crude supply rising 730 kb/d to 25 mb/d, but down 4.3 mb/d year-on- year (y-o-y).

Global oil supply growth in the near-term will be dominated by OPEC+, which is set to account for virtually all the 4Q20 gains and 80% in the first quarter of next year. Libya's rebound, if sustained, is likely to help boost fourth quarter 2020 oil output by 1.2 mb/d and contribute to an overall increase of 1.8 mb/d in the first three months of next year assuming OPEC+ nations lift their supply target by 0.5 mb/d each month. Libyan output would account for 790 kb/d of the 4Q20 increase and 300 kb/d in 1Q21. Saudi Arabia and Russia between them add 460 kb/d in 4Q20 and 480 kb/d in 1Q21. The US, however, could decline by about 80 kb/d in the last quarter of this year and 70 kb/d in the first quarter of 2021.





Compared with year earlier levels, however, the US sees the biggest decline in 4Q20, with output slumping 1.7 mb/d. Total oil production in Russia falls by 1.3 mb/d over the same period while Saudi Arabia posts a reduction of 0.9 mb/d.

For the year as a whole, global oil supply is on track to decline by 6.6 mb/d and increase by 1.4 mb/d in 2021, assuming 100% compliance with anticipated OPEC+ targets. Of the Big-3 producers, the US this year is expected to post an annual decline of 600 kb/d in total oil output, while Saudi Arabia falls by a similar amount and Russia drops by nearly 1 mb/d. In 2021, the US is set to fall by 510 kb/d. Saudi total oil output would rise by 260 kb/d in 2021 and Russia by 120 kb/d. We expect non-OPEC producers outside the OPEC+ agreement, including the US, to increase output in 2021 by around 400 kb/d after a decline of 1.3 mb/d this year.

Box 1. OPEC+ takes cautious approach to higher targets

OPEC+ producers agreed on 3 December to raise their supply target in 2021 – starting off with an increase of roughly 0.5 mb/d in January. This is a more nuanced approach to market management than the previously planned one-off boost of 2 mb/d that was to stay in place through April 2022. With Libyan production recovering swiftly and much uncertainty about the pace of the demand recovery, a bigger increase threatened to halt the gradual de-stocking we have seen in the latter months of 2020.

The OPEC+ nations will meet every month to consider "further production adjustments for the

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following month", but each will not exceed 0.5 mb/d. If production is adjusted higher each month from January to March, global stocks could draw by around 0.7 mb/d in 1Q21. The next monthly meeting is set for 4 January.

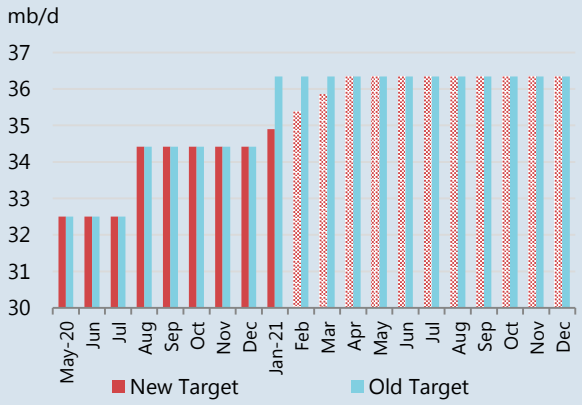
OPEC+ ministers had been discussing an extension of the existing production cuts of 7.7 mb/d until at least March, but a more optimistic picture on Covid 19 vaccines sparked a price rally that led some producers to ask whether it was necessary to maintain such a deep reduction. Russia, the UAE, Iraq and Nigeria reportedly were inclined towards higher supply in 2021 with Saudi Arabia opposed to this. The bloc must strike a balance between boosting prices to support their budgets but not pushing them so high that US shale production can stage a strong recovery.

New OPEC+ Supply Targets

	Aug-Dec Target	New Jan Target	New Increase	Pvs Jan-Apr22 Target	Pvs Increase
Algeria	0.86	0.88	0.01	0.91	0.05
Angola	1.25	1.27	0.02	1.32	0.07
Congo	0.27	0.27	0.00	0.28	0.02
Equa. Guinea	0.10	0.11	0.00	0.11	0.01
Gabon	0.15	0.16	0.00	0.16	0.01
Iraq	3.80	3.86	0.05	4.02	0.21
Kuwait	2.30	2.33	0.03	2.43	0.13
Nigeria	1.50	1.52	0.02	1.58	0.08
Saudi Arabia	8.99	9.12	0.13	9.50	0.50
UAE	2.59	2.63	0.04	2.74	0.15
Total OPEC 10	21.82	22.12	0.30	23.03	1.22
Azerbaijan	0.59	0.60	0.01	0.62	0.03
Kazakhstan	1.40	1.42	0.02	1.48	0.08
Oman	0.72	0.73	0.01	0.76	0.04
Russia	8.99	9.12	0.13	9.50	0.50
Others*	0.90	0.92	0.01	0.96	0.05
Total Non-OPEC	12.60	12.78	0.18	13.31	0.71
Total OPEC+	34.42	34.90	0.48	36.34	1.92

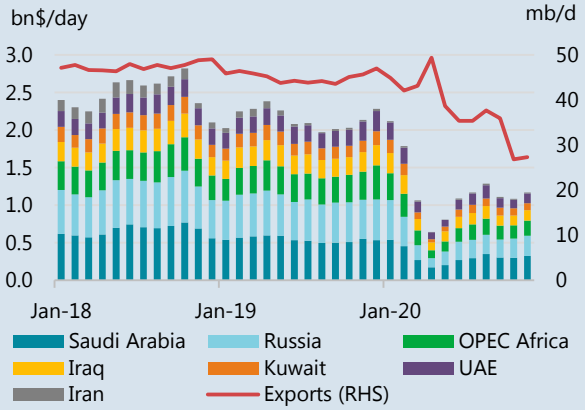
*Bahrain, Brunei, Malaysia, Sudan, South Sudan

OPEC+ New Monthly Target Approach*



*Feb-Dec 2021 new targets assumed

Gross Oil Exports Revenues*



* IEA estimate for selected countries based on crude and product exports

It is clear that all in OPEC+ are feeling the pain of lower oil prices combined with reduced oil exports. For example, our estimates show Saudi gross oil export revenues are down 45% on average since cuts were enforced in May versus the same May-November period in 2019. Russian revenues have tumbled 55%, Nigeria nearly 50% and Iraq and the UAE around 40%.

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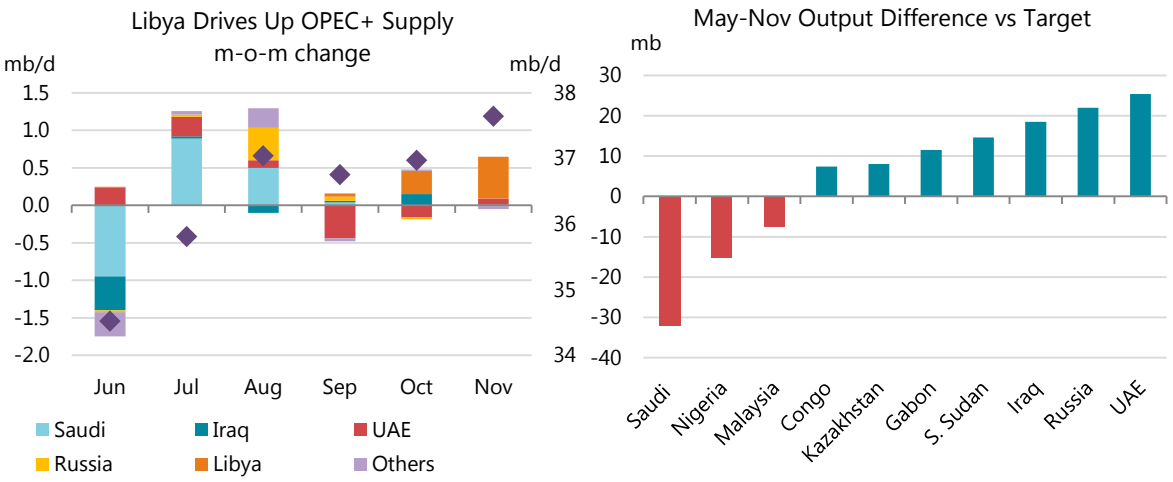
Libya boosts OPEC+

Libya led a rise in OPEC+ crude oil output during November, with overall supply from the bloc increasing 695 kb/d m-o-m to 37.8 mb/d.



Apart from the UAE, which saw an 80 kb/d m-o-m increase, other members taking part in cuts held output broadly steady, keeping OPEC+ compliance at a robust 101% in November.

Compliance with the agreed targets has averaged 97% for the May-November period and countries that have over-produced have agreed to make up for it by pumping less. The deadline for making-up this surplus production was extended from end-2020 to 31 March 2021 at the recent OPEC+ meeting. Our calculations show that non-compliant producers have exceeded their targets by nearly 100 mb (0.5 mb/d). The largest excess volumes are in the UAE (25 mb), Russia (22 mb) and Iraq (19 mb).

Libya, Venezuela and Iran, all spared from OPEC+ cuts, raised output by a combined 670 kb/d during November. Most of the increase was from **Libya**, whose rapid rebound caught many by surprise. An eight-month blockade had cut production below 100 kb/d, but Libya's recovery began in earnest in September after a cease-fire agreement. Since then, and after all ports and oil fields reopened, crude oil production has risen by 900 kb/d to top 1 mb/d in November. At 1.04 mb/d, up 590 kb/d m-o-m, supply in November was just 120 kb/d below a year ago. Crude oil loading schedules for December point to still higher flows this month.

On the upstream front, National Oil Corp (NOC) and Total have discussed plans to boost production and capacity. NOC a year ago approved Total's purchase of Marathon's 16.33% stake in the Waha onshore concession. Total agreed to spend $650 million to boost overall production by 180 kb/d of oil equivalent, lifting Waha's overall output to around 530 kb/d of oil equivalent. Total's other assets in Libya include shares in the offshore al-Jurf field and stakes in the core el-Sharara field operated by Repsol.

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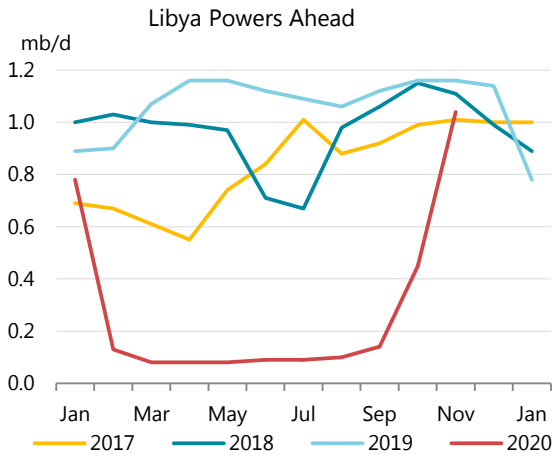

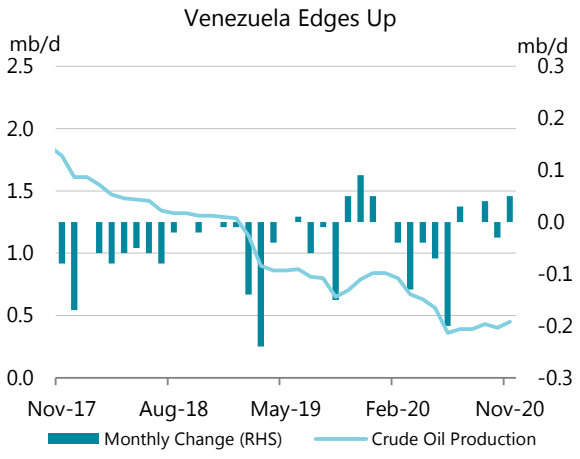

Production rose by 50 kb/d m-o-m in **Venezuela** to reach 450 kb/d, down 340 kb/d on November 2019. Crude oil exports increased sharply in November, but some of the volume appears to have come from storage. As for the upstream, the US issued a new license to Chevron, the last major US oil company operating in Venezuela, giving it until 3 June to unwind its joint ventures. Washington last year imposed sanctions barring imports of Venezuelan oil and deals made in US dollars with Petroleos de Venezuela. Chevron's US operating license was due to expire on 1 December. Output in **Iran** rose to 1.96 mb/d in November, down 140 kb/d on a year ago. The volume of oil stored at sea fell to 58 mb at the end of November from 63 mb the previous month. Tough US sanctions have slowed Iran's oil exports to a trickle from a peak above 2.5 mb/d in 2018. With Iran taking steps to keep its shipments off-radar, it has grown increasingly difficult to track exports.

Of the 19 OPEC+ countries taking part in supply cuts, the **UAE** posted the largest m-o-m increase in November. However, at 2.5 mb/d, output was below its supply target for the third straight month. Following a 20% across-the-board cut in crude oil loadings for December, the Abu Dhabi National Oil Co (Adnoc) has informed some buyers that it will ease cuts in January contract loadings. Flagship Murban reportedly will be cut by 20%, while Upper Zakum and Das will be cut by 15%. Umm Lulu will be trimmed by 5%.

Although curbing output now, Adnoc is pushing ahead with capacity building. It intends to spend $122 billion in 2021-25, roughly $10 billion less than its previous five-year capital expenditure. Adnoc also said it discovered 22 bn barrels of unconventional oil and 2 bn barrels of conventional oil reserves. The investments, along with the newly found resources, will help boost Murban, which is due to be launched at the end of 1Q21 as a futures contract on the ICE Futures Abu Dhabi Exchange. Adnoc has also awarded Occidental an oil and gas exploration concession in its second bidding round.

Iraq saw lower crude oil exports during November, with the volumes not exported moving into stocks. At 3.81 mb/d, production was just a touch above its target and down 820 kb/d on a year ago. Underscoring the security risks to the oil sector in northern Iraq, two wells in a small oil field were set on fire by explosives on 9 December. Overall output at the 25 kb/d Khabbaz field was not affected by what Iraq called a "terrorist attack".

Battered by plunging oil revenues, Baghdad sought a cash injection of around $2 billion in a tender for one year of Basrah crude sales (July 2021 to June 2022) against advanced payment by buyers. China's Zhenhua is reportedly tipped to win the tender, the federal government's first

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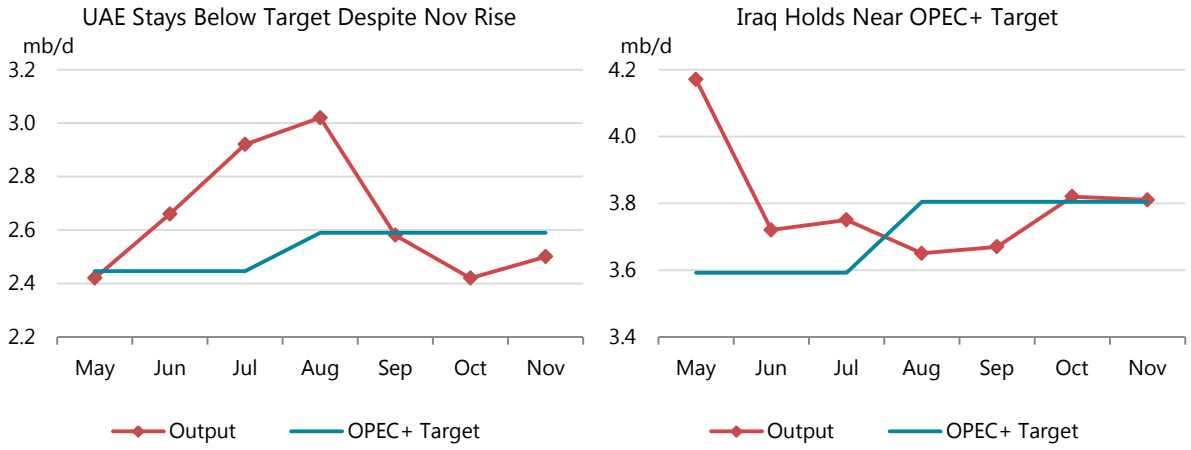
attempt to raise prompt financing from future oil exports. During November, shipments of Basrah crude fell to 2.6 mb/d from just under 2.8 mb/d the previous month.

Early next year, Iraq plans to start up a third crude export grade, Basrah Medium, alongside its existing Basrah Light and Basrah Heavy streams. Shipments of Basra Medium, with a gravity of 27.9 degrees API, will be around 1 mb/d, similar to Basrah Light (see *Prices*).



Elsewhere in the Middle East, production was broadly steady. Supply in **Saudi Arabia** crept up to 8.99 mb/d, just a touch below its target. Shipments of crude oil to world markets were relatively stable at around 6.2 mb/d, according to *Kpler* data. **Kuwaiti** production was 2.3 mb/d in November, 410 kb/d below a year ago. Kuwait Petroleum Corp meanwhile has signed a 3.14 mb crude oil storage deal with Japan's Ministry of Economy, Trade and Industry (Meti). Crude oil output in **Oman** was unchanged at 720 kb/d. Oman has set up a new oil company, Energy Development Oman (EDO), to run its oil and gas assets, including Block 6, with capacity of 650 kb/d. The wholly state-owned firm will receive oil and gas revenues to cover capital and operational expenditure in support of production.

Production from African countries taking part in the cuts was relatively stable m-o-m. Supply in **Nigeria** dipped to 1.33 mb/d, down 330 kb/d y-o-y, after loadings of Brass River were disrupted following a pipeline explosion towards the end of November. Around 30 kb/d of production has been hit and a *force majeure* is in place. Brass River production has averaged around 95 kb/d in recent months. In **Angola**, output slipped to 1.19 mb/d, down 80 kb/d on a year ago. BP has resumed drilling at the Platina oil field in Block 18 which will be able to pump 30 kb/d after it comes online in 4Q21. Platina is the second project in block 18 after the Greater Plutonio field began production in 2007. Angola's crude output has fallen from a peak of 1.9 mb/d in 2010 with key fields in decline. Elsewhere in West Africa, supply in **Congo** edged up to 290 kb/d in November and it held steady in **Gabon** – leaving both well above their supply targets. Output inched lower in **Equatorial Guinea**. In North Africa, **Algerian** output was unchanged on the previous month at 860 kb/d, just below its OPEC+ target.

The supply projections for non-OPEC countries taking part in the OPEC+ agreement has been cut by 330 kb/d for 1Q21 following the group's 3 December decision to amend its quota system. While production targets beyond January will be decided on a monthly basis, we have assumed an overall 500 kb/d increase each month through April for modelling purposes. The January target is largely in line with actual/estimated November output but would imply a 175 kb/d increase from December if the group delivers perfect compliance this month.

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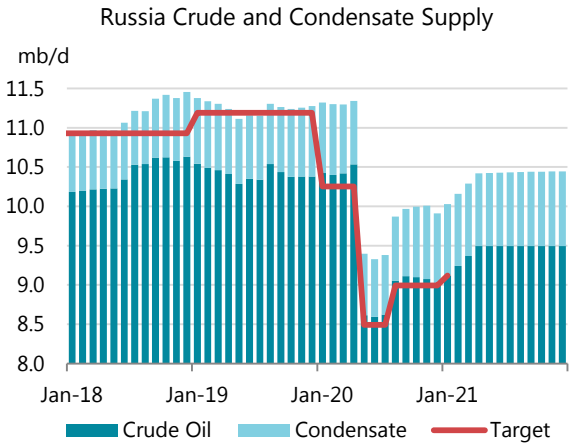
Russian crude and condensate production held largely steady in November at around 10 mb/d, 1.25 mb/d lower than one year ago. Excluding condensates, exempt from cuts, production is estimated at around 9.07 mb/d, 80 kb/d above its 8.993 mb/d target. The target rises to 9.1 mb/d in January, not taking into account compensation for earlier non-compliance. Since May, Russia's adherence to the deal has averaged 95%, or a total of 22 mb (0.1 mb/d) above the agreed level.



Source: CDU-Tek, IEA estimates. From 2020, target for crude. only.

According to Deputy Prime Minister Alexander Novak, Russian oil companies are ready to increase oil production by 125 kb/d starting in January. Novak said that despite having difficulties with increasing production in the winter period, Russia hopes to fully prepare for the output hike in the coming month but that the output boost would not have a substantial impact on the market. Novak is reportedly set to meet with Saudi energy minister Prince Abdulaziz bin Salman on 19 December in Riyadh to discuss the Russian-Saudi energy cooperation, as well as current market conditions.

Kazakhstan's crude oil output was unchanged at an estimated 1.44 mb/d in November, 40 kb/d above its production target according to IEA calculations based on preliminary data. Tengiz produced 540 kb/d, Kashagan 300 kb/d, while output from other operators stood around 630 kb/d. Condensate production from the Karachaganak field rose by 45 kb/d m-o-m to 280 kb/d. From January, Kazkahstan's crude oil production target will increase from 1.397 mb/d to 1.417 mb/d, still marginally lower than November's assessed production level. Scheduled maintenance could help Kazakhstan compensate for over-production in 2021. According to the energy ministry, the Kashagan field will go into maintenance from 15-27 January. The Karachaganak field plans work from 19-21 April while the country's largest field, Tengiz, will undergo lengthy maintenance from 1 August to 15 September. It is unclear if the maintenance reductions will have an overall impact on production or just compensate for higher supply in other months.

Azerbaijan's crude oil production held steady at 587 kb/d in November, in full compliance with its target. The ACG complex pumped 461 kb/d while Socar's fields produced 126 kb/d. Condensate supply, primarily from the Shah Deniz field rose to 99 kb/d from 88 kb/d in October. In January, Azerbaijan will be allowed to increase crude oil supply by 8 kb/d to 595 kb/d according to the revised deal.

Outlook improves for non-OPEC supply

The supply outlook for countries not taking part in the OPEC+ agreement has marginally improved since last month's *Report*. Higher prices and a tighter market fueled increased drilling and completion activity in the US while the recovery in Canada has exceeded expectations. As a result, 2021 estimates for production from these non-OPEC countries have been raised by 150 kb/d on average, with North America accounting for the bulk of the increase. Total non-OPEC oil supply is now seen falling by 2.6 mb/d on average in 2020 and then expanding by 0.5 mb/d in 2021.

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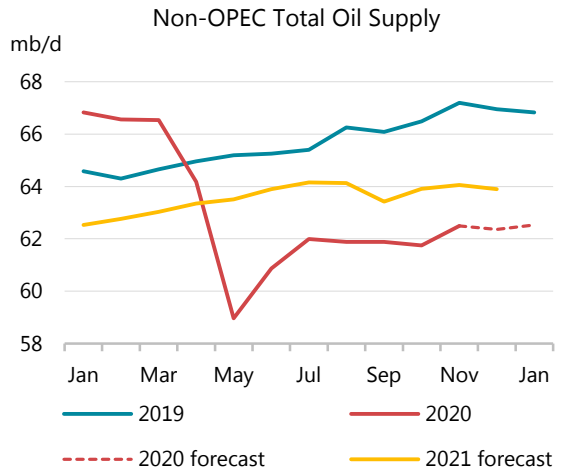
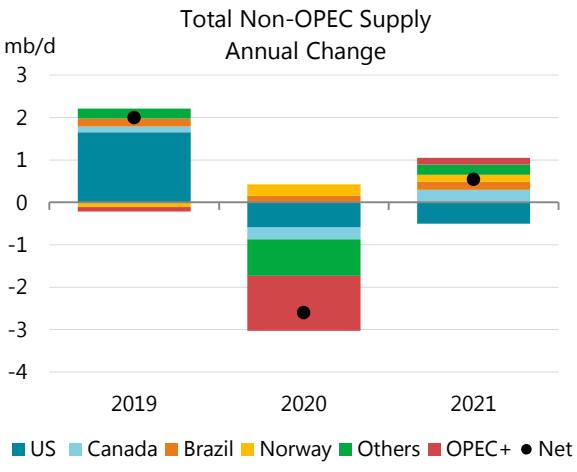
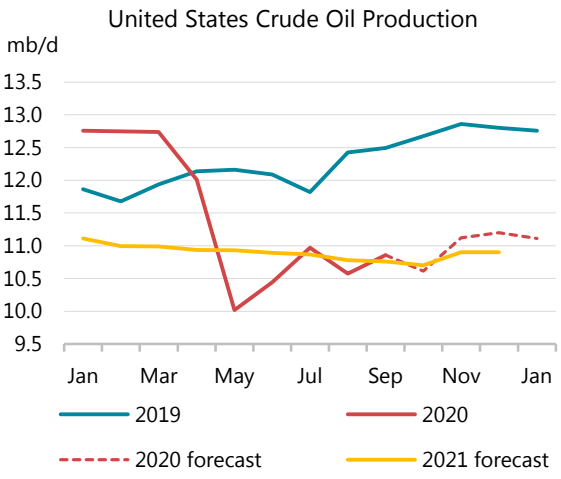
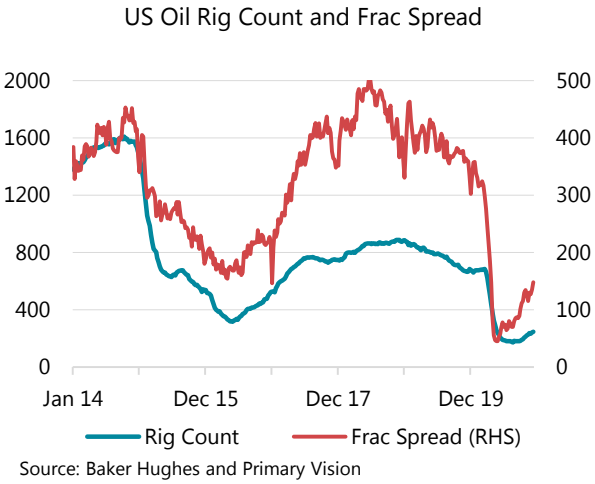




Sharply higher crude oil prices during November fuelled increased activity in the US shale patch, improving the outlook for supplies for the remainder of the year and 2021. US crude oil production is now expected to decline by 0.9 mb/d on average in 2020 and by a smaller 0.4 mb/d in 2021. Including NGLs which, contrary to crude, have posted strong growth this year, total oil supply is set to fall by 595 kb/d and 505 kb/d, respectively.

During November, US crude oil prices rose by ~$9-10/bbl, or 26-28%, to trade in a range of $45-47/bbl by early December. That increase should support an acceleration in drilling and fracking. Indeed, in November, the recovery gathered pace with operators adding another 25 rigs to bring the total increase since August to 74. The number of wells completed was also boosted, with the frac spread rising by 21 to 148, taking the total increase since May to 103. In November, US crude oil production is estimated to have risen by just over 0.5 mb/d m-o-m to 11.1 mb/d as the offshore recovered from extensive storm shut-ins. Even so, output was 1.7 mb/d lower than a year earlier. A further increase is expected in December, before output eases and stabilises at around 10.9 mb/d on average in 2021.





Source: Baker Hughes and Primary Vision

Canadian oil production continued to recover during October, rising by an estimated 250 kb/d m-o-m to 5.3 mb/d. Alberta led the gain, boosting raw bitumen production by 160 kb/d from a month earlier to 1.8 mb/d, its highest level since March. Synthetic crude oil supply rose marginally to just above 1 mb/d while the province's conventional supply held steady at around 0.4 mb/d. Offshore production, meanwhile, was largely unchanged as the Terra Nova

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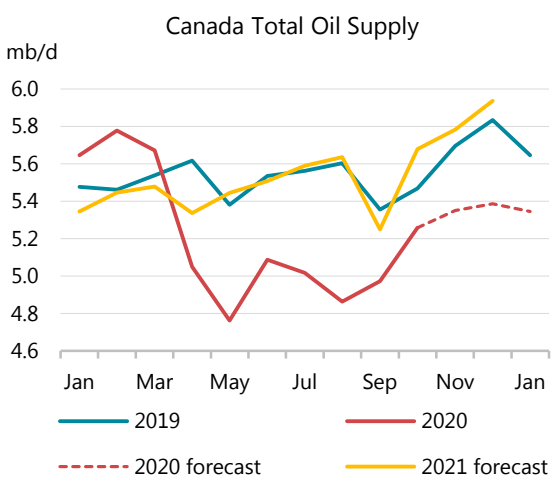
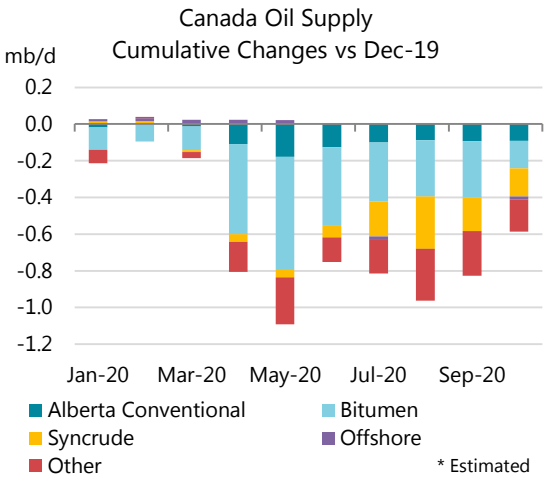
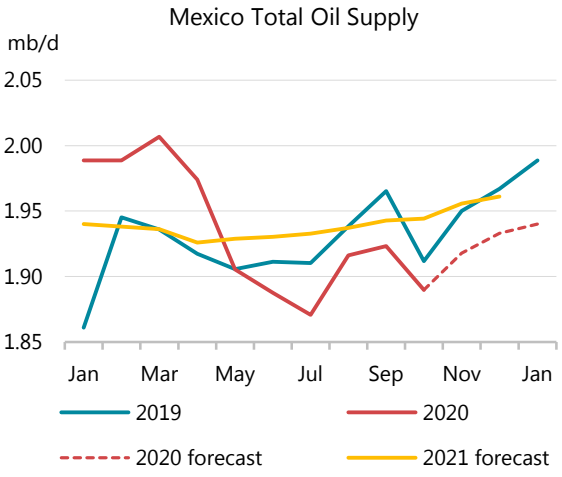
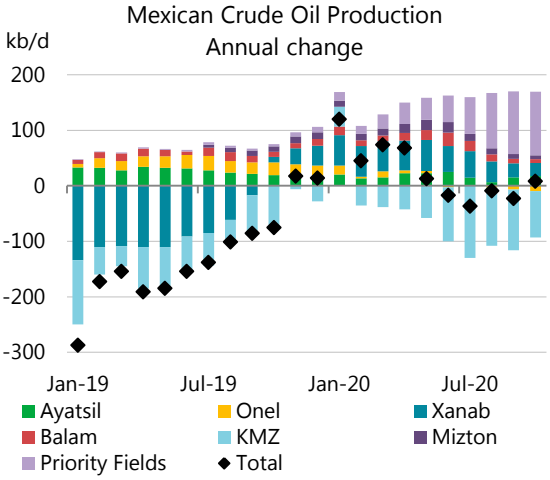
production facility remained offline. While the year-on-year deficit of Canadian oil production narrowed to 215 kb/d, total oil supply remained 580 kb/d lower than in December 2019. During November, Canadian crude oil exports to the US averaged 3.4 mb/d, an increase of roughly 400 kb/d from their low point in May but 240 kb/d less than end-2019 levels.





Mexico's oil supply dipped by 33 kb/d in October, with the decline split almost evenly between crude and NGLs. Crude and condensate production stood near 1.7 mb/d, largely in line with a year ago. Gains from Pemex's priority fields, along with a recovery at the Xanab field over the past year, have more than offset declines from mature fields. The Ku-Maloob-Zaap system slipped to 640 kb/d in October, 85 kb/d less than a year ago. By contrast, the priority fields pumped 125 kb/d, up from only 9 kb/d in October 2019.





North Sea oil supply recovered from a one-year low, rising 190 kb/d in October to 2.94 mb/d, according to preliminary data. With lingering maintenance and some fields in Norway impacted by industrial action, oil production was nevertheless sharply lower than levels seen earlier in the year. Further gains are expected in November and into 2021, as scheduled work concludes and production curtailments in Norway expire next year. Scheduled loadings show a 180 kb/d increase in shipments of key grades last month and relatively high flows in December. Regional production is expected to average 3.25 mb/d next year, up from 3.14 mb/d in 2020 and 2.97 mb/d in 2019.

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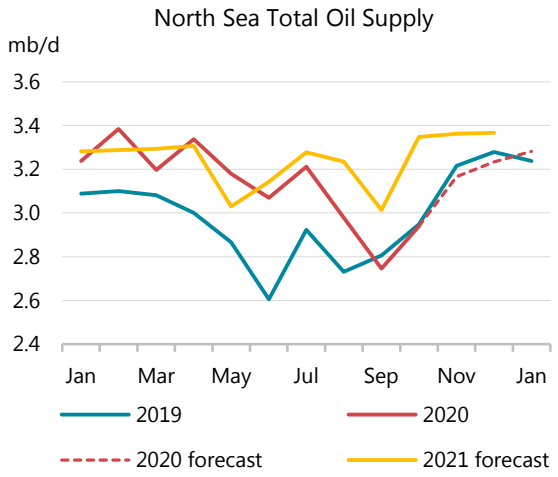

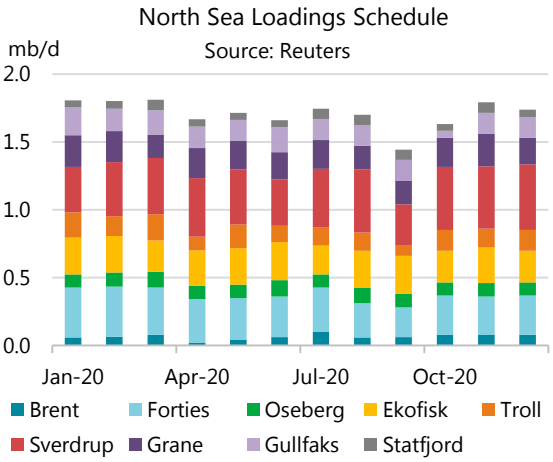

Norwegian oil production rose by 100 kb/d in October, partly reversing September's steep decline of 250 kb/d that was caused by maintenance. Production is estimated to have posted further gains in November as maintenance works completed, with higher shipments from the Gullfaks and Johan Sverdrup boosting flows.

Output could rise further in 2021 as government mandated production restrictions lapse, capacity from Johan Sverdrup increases and as the Snorre expansion project comes on line earlier than expected. Equinor announced it is increasing Johan Sverdrup's production capacity from 470 kb/d to around 500 kb/d by the end of the year and said it had successfully tested the plant capacity in November to verify the potential production rise. Indeed, tanker tracking data from *Kpler* show exports from the Mongstad terminal that handles Sverdrup crude rose to an all-time high of 630 kb/d last month, sharply up on the 540 kb/d shipped in October and 340 kb/d in September when the field was undergoing maintenance works. Capacity is set to increase to around 720 kb/d by the end of 2022, when the project's second phase is scheduled to come online. In early December, Equinor received the approval from the Norwegian Petroleum Directorate to start up the Snorre expansion projects that is expected to add 80 kb/d of oil at peak.

By contrast, **UK** oil output continues to slump. Despite rising 90 kb/d m-o-m in October, total oil output stood 80 kb/d below a year earlier at just below 1 mb/d. Crude and condensate production averaged just 880 kb/d, according to UK government statistics, compared with 1.1 mb/d at the start of the year. The decline was driven by lower production at smaller fields. Loading programmes suggest that output of the largest crude grade, Forties, was higher month-on-month in October at 290 kb/d, and loadings of Brent and Flotta Gold were also higher than in September.

As part of its pledge to reduce greenhouse gas emissions, **Denmark** announced in early December that it will phase out North Sea oil and gas production by 2050. The country's eighth licensing round and all future rounds have been cancelled. Denmark, which began producing oil and gas in 1972, currently has 19 oil and gas fields in operation. The majority of the fields (15) are operated by Total on behalf of the Danish Underground Consortium (DUC), while three are operated by Ineos and one by Hess. In October, Danish crude production averaged 72 kb/d while gas output stood at 130.9 mcf/d. Production has been constrained since the Tyra field and its satellites were shut down for a redevelopment project in September last year. The project is not expected to be completed until the second quarter of 2023, having been delayed by a year by the Covid-19 pandemic.

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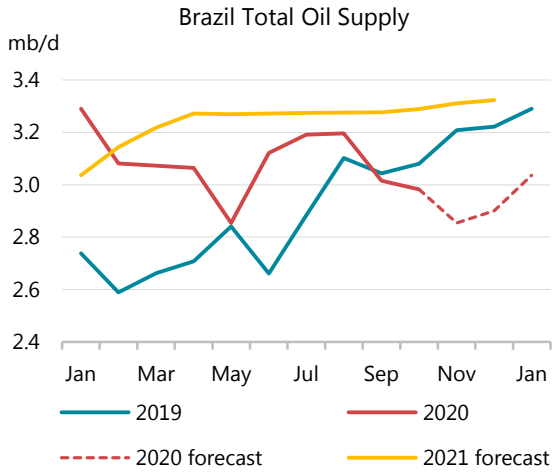
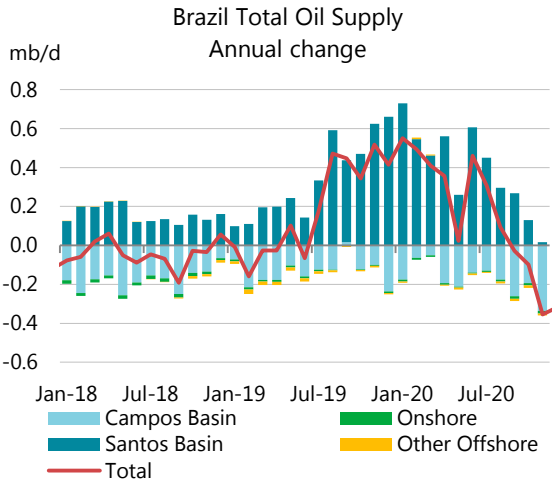
Brazilian oil output fell for a third consecutive month in November, dropping 130 kb/d m-o-m to 2.9 mb/d according to preliminary daily data. Tanker tracking data from *Kpler* show crude exports falling 210 kb/d m-o-m to around 1.2 mb/d. Production slumped by 180 kb/d in September to around 3 mb/d and held around this level through October as a long-delayed maintenance programme finally got underway.

In an updated business plan, Petrobras cut its five-year investment budget by 27% from a year ago to $55 billion to preserve cash. The company plans to focus on the prolific deep-water oil fields in the so-called pre-salt area in the Santos Basin and sell non-core assets to reduce debt. Petrobras said it plans to invest $46 billion, or 84% of the total investments, in exploration and production. That compares with $64 billion budgeted a year ago. The company said it would limit spending approval to new projects that can be profitable with oil prices as low as $35/bbl. The spending cut will reduce Petrobras' daily production to around 2.75 mboe/d in 2021 from an expected output of 2.84 mboe/d in 2020. However, production of oil and natural gas should rise to 3.3 mboe/d by 2024 and hold steady in 2025, according to the new plan.





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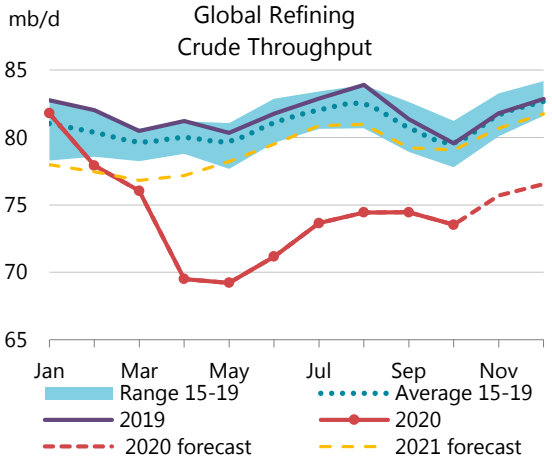
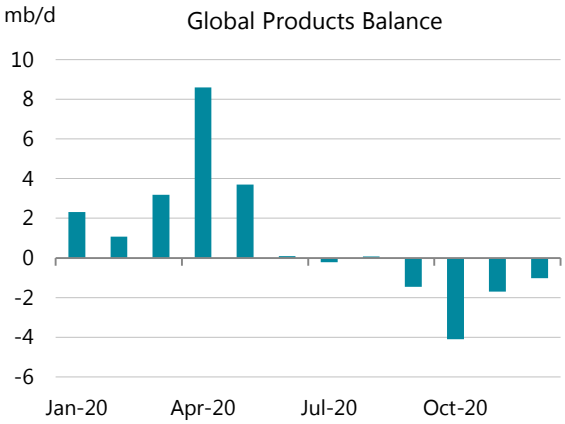
Refining

Overview

Global refining throughput in October fell almost 1 mb/d from the upwardly revised September numbers, as maintenance shutdowns in Europe added to the hurricane impact in the United States Gulf Coast reported previously. This was in contrast with the global demand trend which increased month-on-month (m-o-m) in October to the highest post-pandemic level. In November, however, due to a seasonal slowdown and new mobility restrictions in several regions, demand retreated back to September levels. In our demand forecast, the next leg of demand recovery does not happen until the second quarter of 2021. While total oil consumption usually declines in winter months, demand for LPG increases, mostly due to its use as a heating fuel in the US North East, Europe, and, increasingly, in the emerging markets in temperate latitudes. Consequently, demand for refined products falls by more than total oil demand in winter months, and propane stocks draw in winter to fill for seasonal spikes in consumption.





Refinery throughputs are expected to continue rising from October through January, before the subsequent start of the maintenance season in 1Q21. Therefore, product stock draws may have peaked in October when refinery margins saw relatively large gains in the recent low-margin environment. In November, refinery margins fell again. Global crude stocks in 4Q20 and 1Q21 are forecast to draw at a slower rate than in 3Q20, however, they will have a greater impact on crude prices and consequently, refinery margins. This is because draws will have to come from onshore stocks whereas in the period of May through November onshore stocks were relatively stable, with the draws coming from the contraction of oil on water volumes (see *Stocks*).

The volume of crude oil on water peaked at 19 days of refinery cover in April and fell to its normal levels of 14-15 days in November. The significance of this metric is increasing as the refiners East of Suez lead the recovery in refining throughputs and is forecast to recover to 2019 levels next year. On average, voyage times for deliveries to Asian importers are longer than for European and US importers as the latter mostly rely on pipelines and shorter haul sources. Consequently, oil on water volumes globally should increase to account for longer seaborne journeys to Asian destinations, which will accelerate onshore stocks draw. Also, as OPEC+ cuts have had a large impact on Middle East crude output, East of Suez crude balances turned

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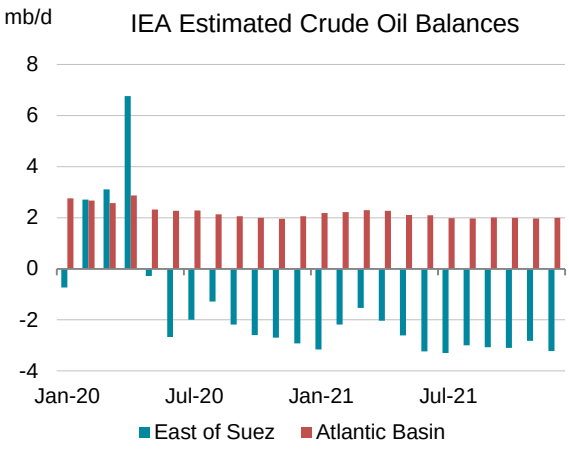
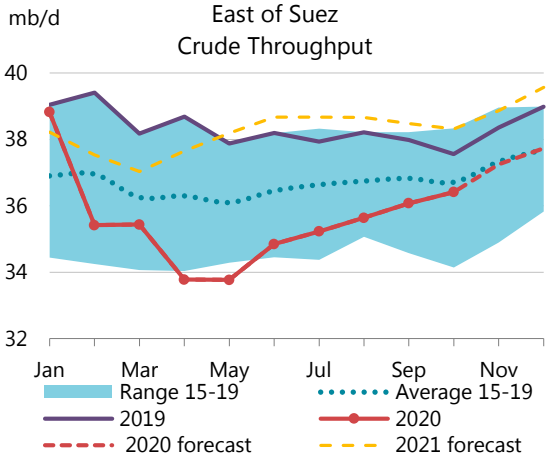
negative in 3Q20, requiring larger inflows of Atlantic Basin crudes and thus, directly competing with refiners there for feedstock.





Overall, our estimate for 2020 refining throughput is unchanged from the last *Report*, but we have revised our 2021 forecast up by 0.2 mb/d, expecting a stronger recovery in Europe. After a 7.2 mb/d decline in 2020, refining intake is forecast to increase by 4.7 mb/d in 2021.

Global Refinery Crude Throughput[1]

(million barrels per day)

	2019	1Q20	2Q20	Sep 20	3Q20	Oct 20	Nov 20	Dec 20	4Q20	2020	1Q21	2021
Americas	**19.1**	**18.3**	**15.3**	16.1	**16.3**	15.6	16.3	16.7	**16.2**	**16.5**	**17.2**	**17.8**
Europe	**12.2**	**11.7**	**9.9**	10.8	**10.7**	10.3	10.4	10.5	**10.4**	**10.7**	**10.9**	**11.1**
Asia Oceania	**6.8**	**6.7**	**5.5**	5.5	**5.5**	5.5	5.8	5.9	**5.7**	**5.8**	**5.9**	**5.9**
Total OECD	**38.0**	**36.6**	**30.7**	32.4	**32.5**	31.3	32.5	33.1	**32.3**	**33.0**	**34.0**	**34.8**
FSU	**6.8**	**6.9**	**6.1**	6.4	**6.4**	6.1	6.6	6.6	**6.4**	**6.4**	**6.6**	**6.7**
Non-OECD Europe	**0.6**	**0.5**	**0.4**	0.5	**0.4**	0.5	0.5	0.5	**0.5**	**0.4**	**0.5**	**0.5**
China	**13.0**	**11.9**	**13.5**	13.9	**14.0**	14.1	14.1	14.0	**14.1**	**13.4**	**13.8**	**14.0**
Other Asia	**10.3**	**10.6**	**8.6**	8.9	**8.7**	9.3	9.5	9.7	**9.5**	**9.3**	**9.9**	**10.2**
Latin America	**3.2**	**3.1**	**2.6**	3.1	**3.1**	3.1	3.1	3.1	**3.1**	**3.0**	**3.1**	**3.2**
Middle East	**7.7**	**6.9**	**6.1**	7.2	**7.0**	7.1	7.3	7.6	**7.3**	**6.8**	**7.5**	**7.8**
Africa	**2.0**	**2.1**	**1.8**	2.0	**2.0**	2.0	2.0	1.9	**2.0**	**2.0**	**1.9**	**2.0**
Total Non-OECD	**43.6**	**41.9**	**39.1**	42.0	**41.6**	42.1	43.1	43.4	**42.9**	**41.4**	**43.4**	**44.3**
Total	**81.6**	**78.5**	**69.9**	74.4	**74.1**	73.4	75.6	76.5	**75.2**	**74.4**	**77.3**	**79.1**
Year-on-year change	*-0.4*	*-3.1*	*-11.1*	*-6.9*	*-8.5*	*-6.0*	*-6.1*	*-6.3*	*-6.1*	*-7.2*	*-1.2*	*4.7*

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

Product cracks and refinery margins

Crude prices resumed their rise in November, supported by positive vaccine news and renewed interest from Asian buyers that purchase cargoes two to three months ahead. This optimism, however, is largely shrugged off by product markets, grappling with yet another volume loss, from the second wave of Covid-19 lockdowns and the seasonal demand slowdown. In November, refined product demand is estimated to have fallen 1.2 mb/d m-o-m, the first monthly decline since April. For the first time since May all benchmark product cracks were in single digits on a monthly average basis.

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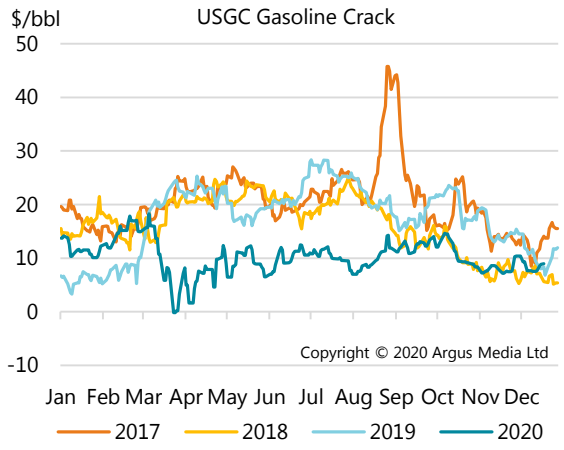
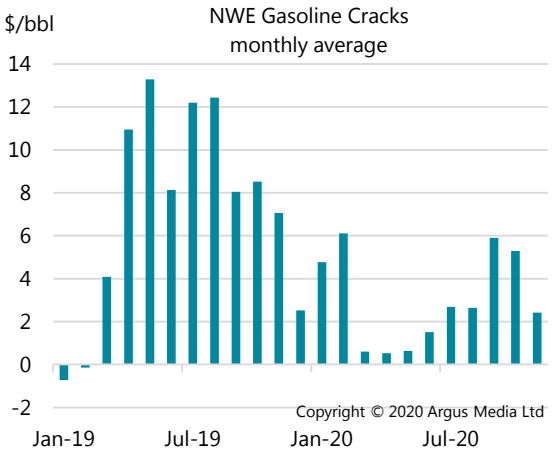
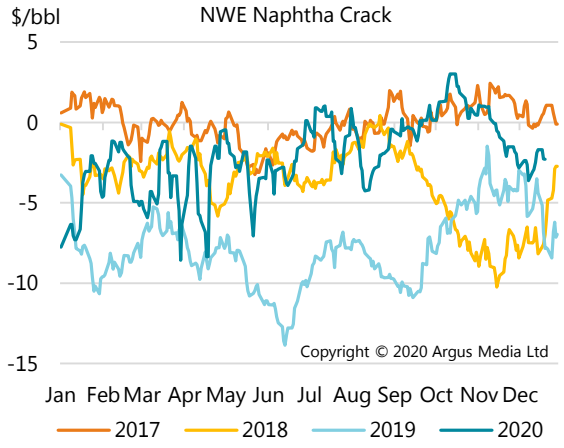
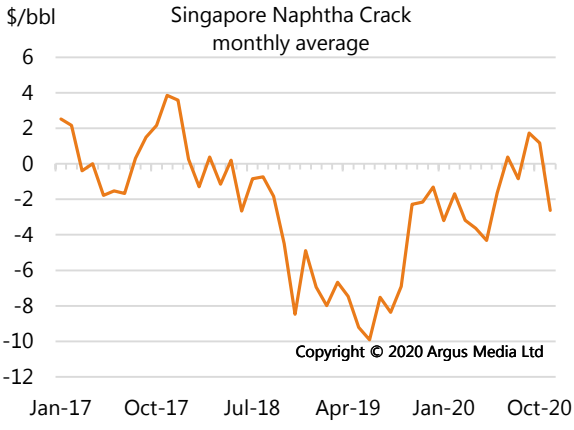
The fall was particularly large for gasoline cracks, down around $2.5/bbl m-o-m on average across all regions, under a combination of seasonally lower demand and higher refinery runs in the US and Europe. North West Europe gasoline cracks halved in November to just $2.4/bbl, and were below diesel cracks for the first time since July. In Singapore, gasoline cracks saw smaller losses. Asian mobility indicators have been more robust than in Europe and the US, implying more stable gasoline demand in the region.





In November, naphtha cracks in Europe retreated sharply from their relatively strong levels in October, falling to a discount of $1.4/bbl after having maintained a premium for the two previous months. They were impacted by weakness spreading from Asia due to seasonal cracker maintenance. Outright naphtha prices in Singapore fell to a rare discount to North West Europe prices. Singapore naphtha is usually priced at a premium to attract cargoes from Europe and the Middle East. For the second consecutive month, Singapore naphtha cracks versus Dubai were lower than North West Europe naphtha cracks against North Sea Dated.





Middle distillate cracks continued their upward trend in November. In the US, diesel cracks overtook monthly average gasoline cracks. European cracks increased but could not break through $5/bbl. In Singapore, 10 ppm diesel cracks were below 0.5% sulphur bunker fuel.

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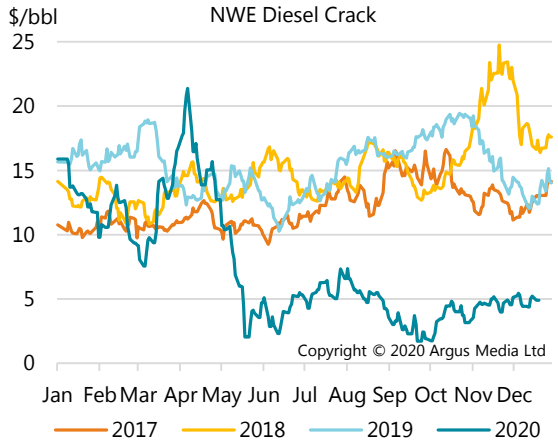

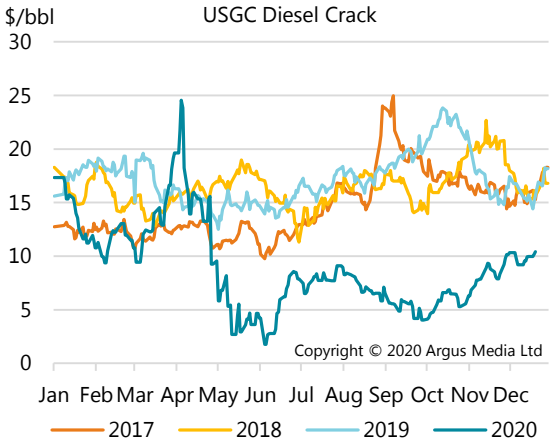

Spot Product Prices

(monthly and weekly averages, $/bbl)

	Sep	Oct	Nov	Nov-Oct *Chg*	%	Week Ending 13 Nov	20 Nov	27 Nov	04 Dec	11 Dec	Sep	Oct	Nov	Chg
Rotterdam, Barges FOB											**Differential to North Sea Dated**			
Gasoline EBOB oxy	46.48	45.30	44.97	-0.33	-0.7	44.86	44.62	48.10	48.30	49.81	5.90	5.29	2.42	-2.87
Naphtha	40.78	41.72	41.13	-0.59	-1.4	40.72	41.04	43.60	44.48	47.15	0.20	1.72	-1.41	-3.13
Jet/Kerosene	38.95	41.45	45.33	3.88	9.4	44.81	45.58	49.43	50.79	52.33	-1.63	1.45	2.79	1.34
ULSD 10ppm	43.36	44.17	47.45	3.28	7.4	46.96	47.54	51.42	52.36	54.33	2.78	4.16	4.91	0.74
Gasoil 0.1%	42.19	43.34	46.66	3.32	7.7	46.24	46.59	50.65	51.45	53.60	1.61	3.33	4.12	0.79
VGO 2.0%	43.33	43.27	45.72	2.45	5.7	45.48	45.77	49.21	49.31	51.54	2.75	3.26	3.18	-0.08
Fuel Oil 0.5%	45.32	47.07	50.12	3.06	6.5	50.10	50.13	53.43	54.55	56.21	4.74	7.06	7.58	0.52
LSFO 1%	40.11	42.48	45.74	3.26	7.7	45.75	45.74	48.76	49.07	49.99	-0.48	2.48	3.20	0.72
HSFO 3.5%	37.37	38.25	41.12	2.86	7.5	41.24	40.92	43.45	43.13	43.81	-3.22	-1.75	-1.42	0.33
Mediterranean, FOB Cargoes											**Differential to Urals**			
Premium Unl 10 ppm	47.44	45.56	45.45	-0.11	-0.2	45.56	45.12	48.24	48.74	50.26	6.46	5.30	2.09	-3.20
Naphtha	39.21	41.07	40.34	-0.74	-1.8	39.93	40.28	42.73	43.44	46.12	-1.77	0.81	-3.02	-3.83
Jet Aviation fuel	37.51	40.89	44.62	3.73	9.1	44.08	44.92	48.67	49.83	51.45	-3.47	0.63	1.27	0.65
ULSD 10ppm	43.14	44.47	47.47	3.00	6.7	46.91	47.59	51.47	52.49	54.54	2.16	4.21	4.12	-0.09
Gasoil 0.1%	42.28	43.78	46.96	3.18	7.3	46.45	47.29	51.17	52.12	54.23	1.30	3.52	3.60	0.09
LSFO 1%	40.89	43.63	46.55	2.93	6.7	46.63	46.48	49.39	49.52	49.98	-0.09	3.37	3.20	-0.16
HSFO 3.5%	35.74	36.95	39.15	2.20	6.0	39.25	38.94	41.39	41.11	41.95	-5.25	-3.31	-4.20	-0.89
US Gulf, FOB Pipeline											**Differential to WTI Houston**			
Super Unleaded	53.04	51.35	50.34	-1.01	-2.0	50.16	50.06	55.78	55.12	55.86	12.63	11.18	8.44	-2.74
Jet/Kerosene	42.52	44.21	47.51	3.30	7.5	47.08	47.78	51.63	52.99	54.37	2.10	4.04	5.62	1.58
ULSD 10ppm	45.57	46.64	51.00	4.36	9.3	50.41	51.62	55.65	56.19	57.71	5.15	6.47	9.10	2.63
Heating Oil	40.34	42.36	45.50	3.14	7.4	44.75	45.99	51.09	51.17	52.31	-0.08	2.19	3.60	1.41
No. 6 3%*	35.99	37.37	39.44	2.07	5.5	39.21	40.05	42.94	42.19	41.89	-4.43	-2.80	-2.45	0.34
Singapore, FOB Cargoes											**Differential to Dubai**			
Premium Unleaded	47.27	45.96	46.67	0.71	1.5	46.74	46.44	49.82	50.64	52.09	5.82	5.26	3.34	-1.92
Naphtha	43.19	41.88	40.71	-1.17	-2.8	40.05	40.88	42.57	43.07	46.09	1.74	1.18	-2.62	-3.80
Jet/Kerosene	39.37	41.65	45.64	3.99	9.6	45.14	45.99	49.40	51.17	52.79	-2.08	0.95	2.31	1.36
Gasoil 0.001%	44.19	43.92	47.57	3.65	8.3	47.08	48.37	51.51	52.66	54.36	2.74	3.22	4.24	1.02
Fuel Oil 0.5%	47.79	49.35	52.84	3.49	7.1	52.43	53.69	56.28	56.78	57.47	6.34	8.65	9.51	0.86
HSFO 180 CST	39.61	41.19	43.64	2.45	5.9	43.29	44.68	46.27	46.12	46.15	-1.84	0.48	0.30	-0.18
HSFO 380 CST 4%	38.59	39.53	43.41	3.89	9.8	43.2	44.3	46.2	45.8	45.6	-2.85	-1.17	0.08	1.26

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In Europe, jet kerosene cracks increased to $2.8/bbl in November, just above April levels, and were higher than monthly average gasoline cracks. Jet kerosene yields globally went through a dramatic adjustment in 2Q-3Q20, helping to restrict supply and eventually reverse negative cracks. But the gasoline pool was one of the destinations of unwanted jet molecules. In Singapore jet cracks remained at the lowest level among clean products in the region. The regrade in Singapore expanded again to $5.2/tonne, the highest since February.

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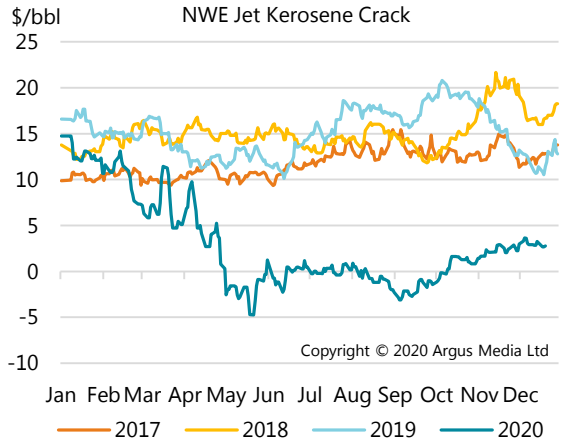
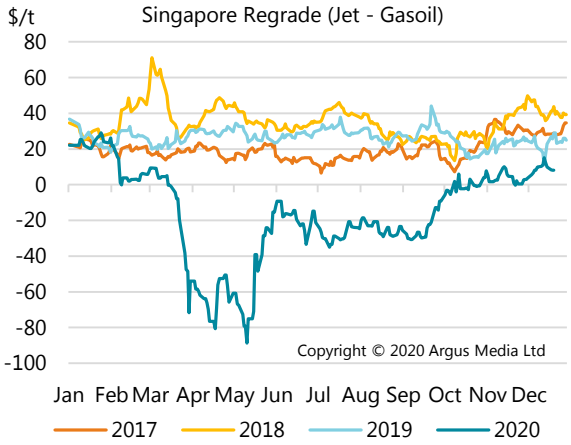
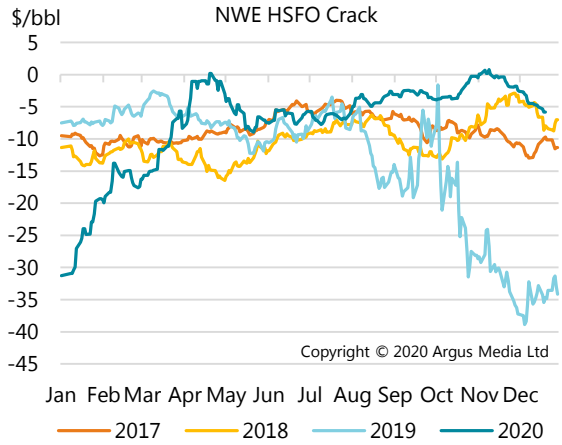
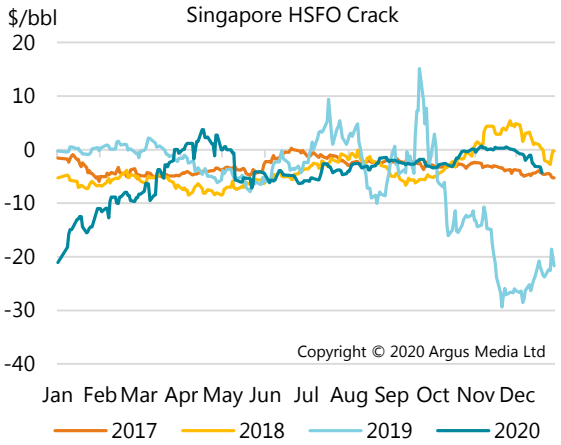




Density continues to positively influence product prices with continued strengthening of fuel oil cracks across the whole complex. In Europe, LSFO cracks were positive in October and November, while the high-sulphur (HSFO) discount in November moved to its narrowest discount to North Sea Dated in 25 years. In Singapore, HSFO was at parity with Dubai in November, and the 0.5% sulphur bunker fuel jumped to $9.5/bbl, the highest since April.





Refinery margins mostly fell m-o-m in November as the weakness in light distillate cracks was not fully offset by gains in middle distillates and the fuel oil complex. All margin indicators were down in North West Europe, but the surge in Libyan export barrels in November supported light sweet margins in the Mediterranean. US Gulf Coast margins declined slightly, while the Midwest margins were largely unchanged. In Singapore, stronger fuel oil cracks resulted in higher Dubai margins.

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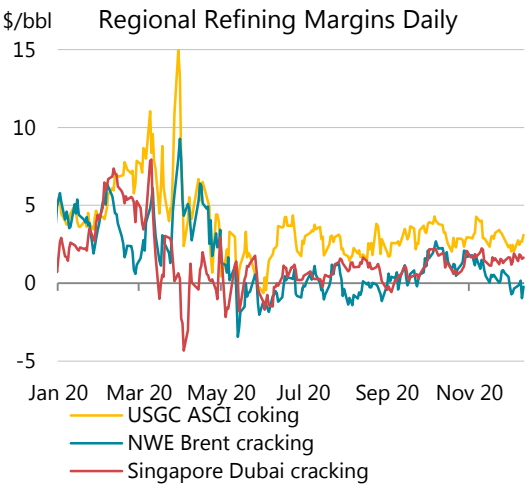
IEA/KBC Global Indicator Refining Margins[1]

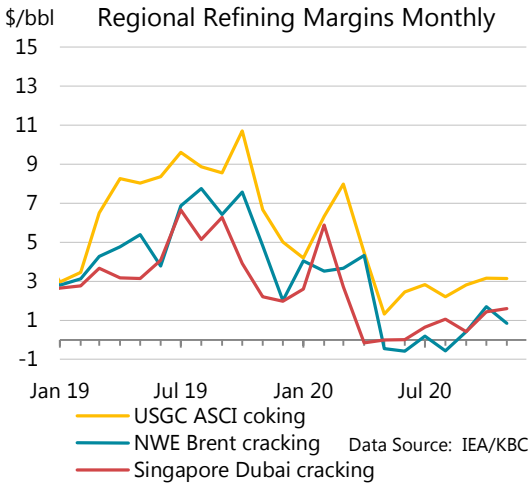
($/bbl)

	Monthly Average					Change	Average for week ending:				
	Aug 20	Sep 20	Oct 20	Nov 20		Nov-Oct	13 Nov	20 Nov	27 Nov	04 Dec	11 Dec
NW Europe											
Brent (Cracking)	-0.57	0.42	1.70	0.85	↓	-0.85	1.02	0.39	0.50	-0.31	-0.24
Urals (Cracking)	0.13	0.52	1.38	0.69	↓	-0.69	0.91	0.20	0.28	-0.53	-0.18
Brent (Hydroskimming)	-1.33	-0.52	1.21	0.86	↓	-0.34	1.09	0.46	0.45	-0.41	-0.53
Urals (Hydroskimming)	-1.42	-1.21	-0.15	-0.39	↓	-0.24	-0.07	-0.86	-1.04	-2.03	-1.96
Mediterranean											
Es Sider (Cracking)	0.41	1.01	2.35	3.33	↑	0.98	3.77	3.21	2.46	1.07	1.07
Urals (Cracking)	-0.54	-0.28	1.22	0.21	↓	-1.00	0.44	-0.18	-0.33	-0.82	-0.38
Es Sider (Hydroskimming)	-0.22	0.54	2.24	3.34	↑	1.11	3.89	3.22	2.30	0.72	0.42
Urals (Hydroskimming)	-2.55	-2.09	-0.50	-1.55	↓	-1.04	-1.18	-1.99	-2.46	-3.29	-3.11
US Gulf Coast											
Mars (Cracking)	0.36	0.90	1.61	1.37	↓	-0.24	1.57	1.10	1.48	0.19	0.13
50/50 HLS/LLS (Coking)	4.61	5.21	5.19	4.92	↓	-0.27	5.02	4.71	5.17	4.65	5.06
50/50 Maya/Mars (Coking)	1.54	2.34	3.00	2.62	↓	-0.38	2.89	2.17	2.36	1.52	2.09
ASCI (Coking)	2.20	2.81	3.15	3.14	↓	-0.02	3.30	2.89	3.30	2.26	2.73
US Midwest											
30/70 WCS/Bakken (Cracking	7.24	6.13	6.18	6.12	↓	-0.06	5.94	5.09	5.37	4.64	4.86
Bakken (Cracking)	7.58	7.27	6.88	6.89	↑	0.01	7.02	5.52	5.67	5.18	5.42
WTI (Coking)	7.65	6.47	5.91	5.50	↓	-0.41	5.55	4.08	4.18	3.15	3.44
30/70 WCS/Bakken (Coking)	8.17	7.29	7.20	7.23	↑	0.03	7.09	6.05	6.16	5.77	6.16
Singapore											
Dubai (Hydroskimming)	-2.17	-2.58	-1.30	-0.77	↑	0.53	-0.47	-0.80	-1.24	-1.63	-2.17
Tapis (Hydroskimming)	-0.81	3.02	3.82	3.22	↓	-0.60	3.85	3.34	2.03	1.64	1.46
Dubai (Hydrocracking)	1.06	0.42	1.44	1.59	↑	0.16	1.84	1.40	1.41	1.56	1.66
Tapis (Hydrocracking)	-1.24	2.59	3.03	2.28	↓	-0.75	2.94	2.26	1.08	0.86	0.87

[1] 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)





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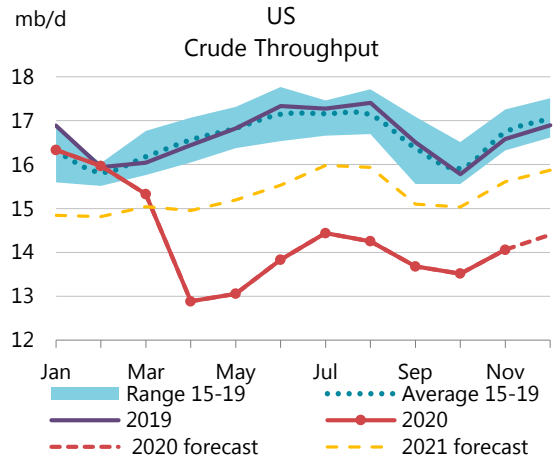
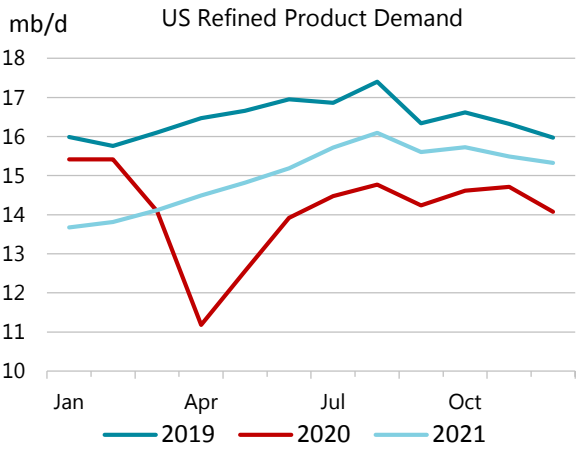
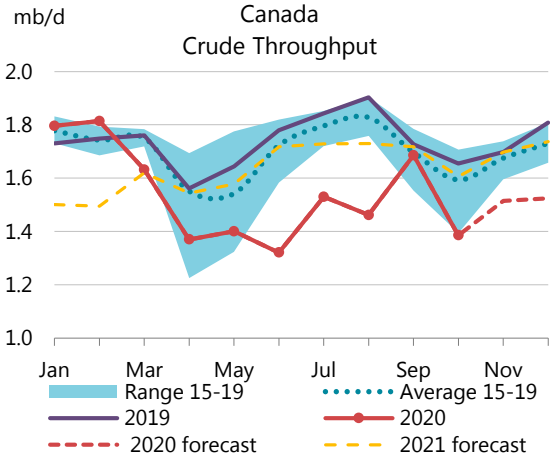
Regional refining outlook

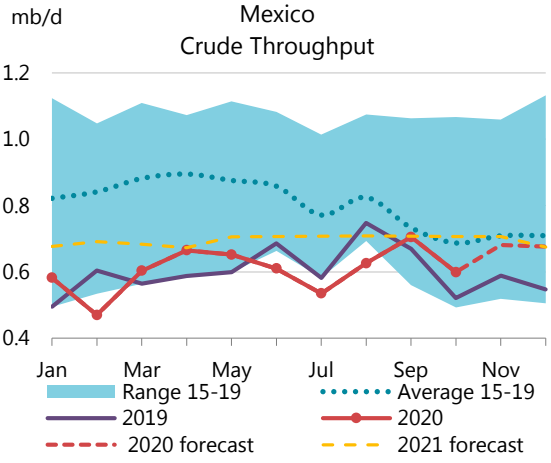
In November, the recovery of PADD 3 throughputs from hurricane-related and maintenance outages in October drove the first monthly increase in **US** throughputs since July. PADD 3 runs increased by 550 kb/d while activity in other PADDs remained relatively flat m-o-m. Even as US demand continued recovering, estimated refined products demand has fallen since July, in line with seasonal trends and slowing mobility with the onset of the second Covid-19 wave. It may not return to July 2020 levels before April 2021. Similarly, the pace of throughput recovery is not expected to accelerate before 2Q21 (once seasonal refinery maintenance programs are finished in the US).





Canadian estimates for September crude runs were revised up sharply, to the highest level seen since March. However, October preliminary data saw runs fall to a four-month low. Synthetic oil intake is not always fully incorporated in recent data points and the finalised numbers may show an upward revision.





Mexican runs fell in October, and were broadly in line with seasonal trends, but this contradicts optimistic outlooks from the government regarding the recovery in refining activity.

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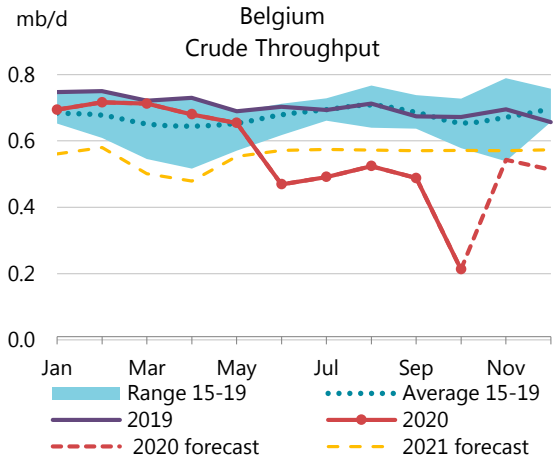
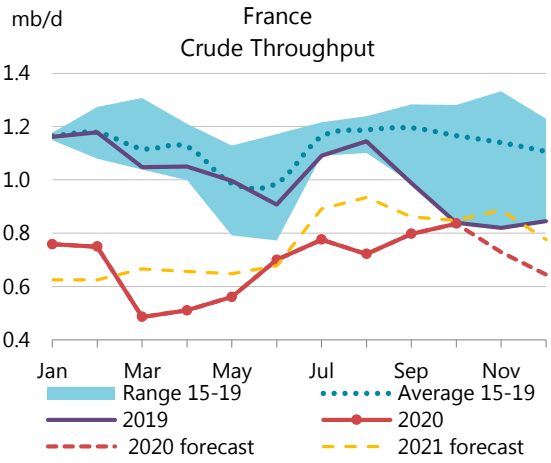
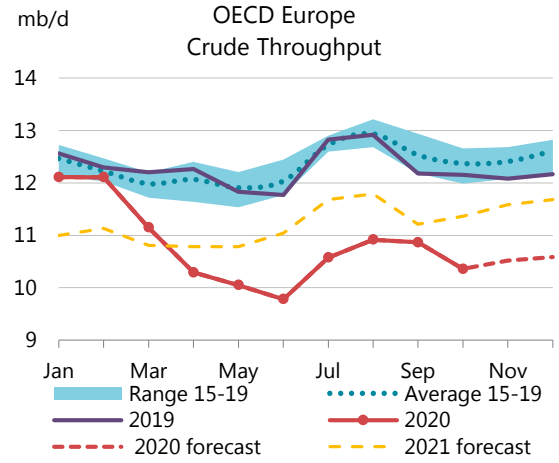
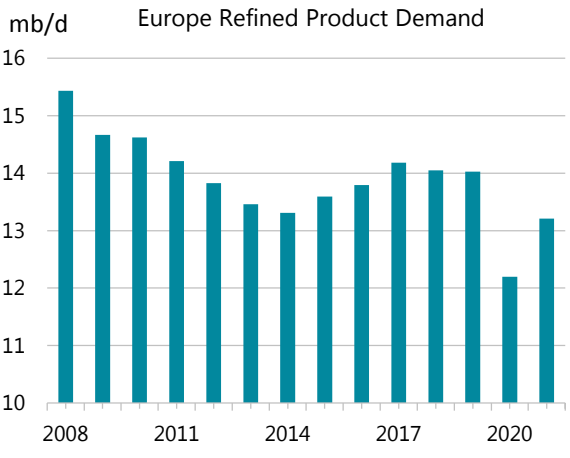
October throughput in Europe fell by 0.5 mb/d on seasonal maintenance and economic run cuts. More than half of the decline came from **Belgium** where the two largest refineries were shut for maintenance, resulting in a multi-decade low for refinery intake in the country.





In **France**, throughputs edged up in October, but are expected to fall again. Total, which accounts for just over half of the country's refining capacity, will see crude processing units at three out of its four refineries idle over the next few months. Its largest, the 240 kb/d Gonfreville refinery in Normandy, is not expected to resume crude intake until the summer of 2021, after suffering fire damage at the end of last year. The second-largest refinery, at Donges, was temporarily shut in November due to low margins. Crude processing at the Grandpuits site, set for conversion to a bio-refinery, will cease earlier than expected as the refinery reportedly received its last crude delivery in December. For several months, the 110 kb/d Feyzin refinery will be the only Total refinery in France still processing crude. Feyzin and Grandpuits are both landlocked, with Feyzin serving the Lyon region. Grandpuits is located near Paris, but imports from the Atlantic coast and arrivals from the Le Havre already complement supply from Grandpuits to meet Paris' needs, and these deliveries will suffice in the future when the refinery closes. The other three refineries in France are operated by ExxonMobil and Petroineos, with no reported issues.





Petroineos, however, cut the processing capacity of its other refining asset, the Grangemouth plant in the **UK**. It mothballed one of the crude distillation units, reducing its capacity from

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205 kb/d to 150 kb/d. In the south of the continent, several temporary closures were reported. Repsol shut down a crude distillation unit at its Bilbao refinery in Spain after a brief restart from a previous economic shutdown. In Portugal, Galp stopped the Porto refinery, also due to low margins.

Overall, European runs are expected to remain below 3Q20 levels until 3Q21, alongside the seasonal decline in demand for refined products. After a 1.5 mb/d decline in 2020 throughput is expected to increase by 0.5 mb/d in 2021. This is broadly in line with developments in refined products demand (down by 1.8 mb/d in 2020 and up by 1 mb/d in 2021).

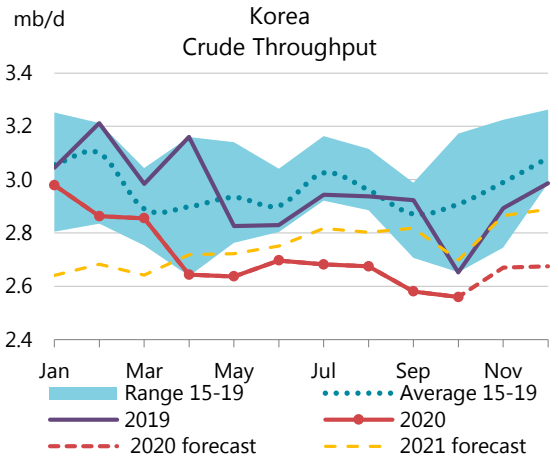
Refinery Crude Throughput and Utilisation in OECD Countries
(million barrels per day)

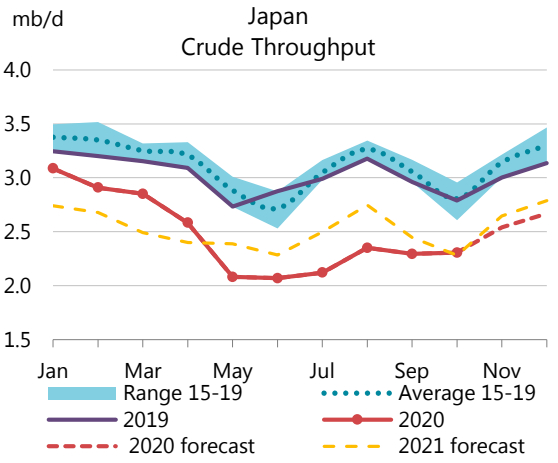
							Change from		Utilisation rate [1]	
	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	*Sep 20*	*Oct 19*	Oct 20	Oct 19
US[2]	12.96	13.73	14.34	14.15	13.58	13.42	-0.16	-2.26	71%	82%
Canada	1.39	1.31	1.52	1.45	1.68	1.38	-0.30	-0.27	68%	82%
Chile	0.13	0.10	0.10	0.12	0.18	0.21	0.03	0.01	93%	90%
Mexico	0.64	0.60	0.53	0.62	0.70	0.59	-0.11	0.08	36%	31%
OECD Americas[3]	**15.12**	**15.74**	**16.48**	**16.34**	**16.13**	**15.59**	**-0.54**	**-2.45**	**68%**	**79%**
France	0.55	0.69	0.77	0.71	0.79	0.83	0.04	0.00	67%	67%
Germany	1.77	1.75	1.74	1.75	1.66	1.74	0.08	-0.11	86%	91%
Italy	0.97	1.00	1.09	1.21	1.14	1.07	-0.07	-0.28	61%	78%
Netherlands	0.86	0.77	0.85	0.91	1.03	0.92	-0.11	-0.27	71%	92%
Spain	1.07	0.99	1.02	1.08	1.09	1.06	-0.02	-0.29	75%	96%
United Kingdom	0.83	0.78	0.87	0.84	0.90	0.90	0.01	-0.22	71%	89%
Other OECD Europe	3.91	3.71	4.14	4.33	4.16	3.74	-0.42	-0.63	72%	84%
OECD Europe	**9.95**	**9.68**	**10.47**	**10.82**	**10.77**	**10.26**	**-0.51**	**-1.80**	**71%**	**84%**
Japan	2.07	2.06	2.11	2.34	2.29	2.30	0.01	-0.48	65%	78%
South Korea	2.63	2.69	2.67	2.67	2.57	2.55	-0.02	-0.09	72%	75%
Other Asia Oceania	0.61	0.63	0.58	0.60	0.63	0.60	-0.03	-0.17	69%	89%
OECD Asia Oceania	**5.31**	**5.37**	**5.36**	**5.61**	**5.49**	**5.45**	**-0.04**	**-0.75**	**69%**	**78%**
OECD Total	**30.37**	**30.79**	**32.32**	**32.76**	**32.38**	**31.30**	**-1.08**	**-4.99**	**69%**	**80%**

1 Expressed as a percentage, based on crude throughput and current operable refining capacity

2 US50

3 OECD Americas includes Chile and OECD Asia Oceania includes Israel. OECD Europe includes Slovenia and Estonia, though neither country has a refinery





Korean refining activity fell for the second consecutive month to the lowest level since 2014. Korean refiners are set to suffer from changes to import tax rates in Viet Nam, one of the largest product importers in the region. In 2021, Viet Nam will remove preferential tariffs for

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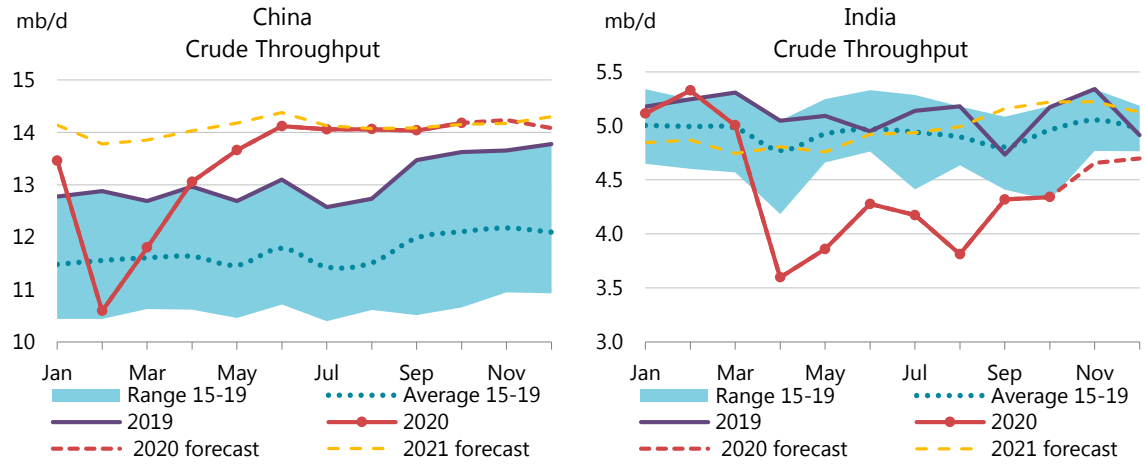
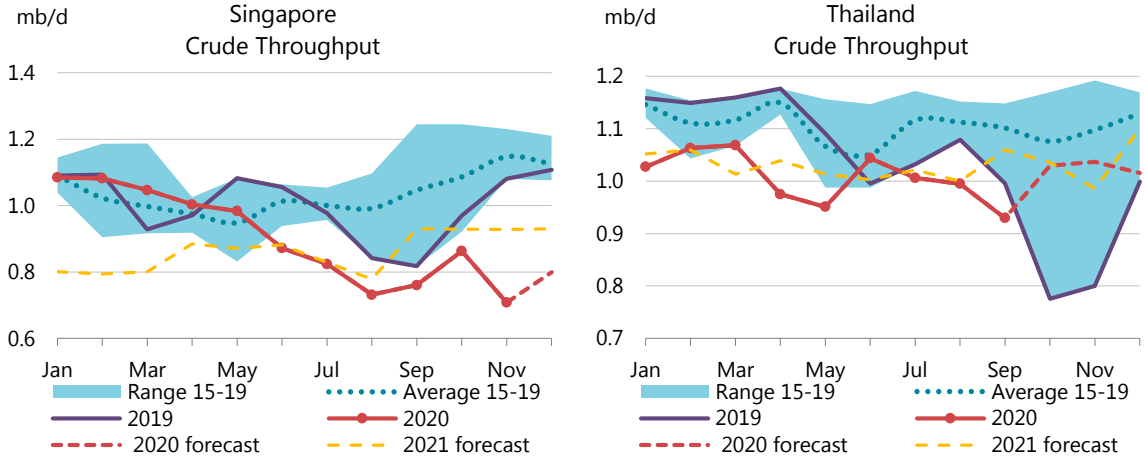
Korean product imports, introducing a single import tax rate. In **Japan**, October refining levels were unchanged from September. Weekly data for November showed an expected increase thanks to colder weather boosting kerosene demand. Runs could increase more in December and January.

China reported a new record refining intake in October, at 14.1 mb/d, although the increase was relatively modest. November surveys indicate even higher throughputs for the month Despite lower product exports so far this year, the Ministry of Commerce allocated the third batch of product export quotas for 2020. The 800 kb/d Rongsheng Petrochemical facility, China's largest refinery, received gasoline, diesel and jet fuel quotas for the first time.



Indian refinery throughput flat-lined in October after strong gains in September. Maintenance at the privately-owned 400 kb/d Nayara refinery offset monthly increases at several state-run refineries. In November, most state-owned refineries reported running close to pre-Covid levels. Throughputs are estimated to increase in November and December, before a demand-led slowdown in 1Q21, followed by spring maintenance.



Our estimates for **Singapore** refinery throughput show a sharp decline in November to the lowest monthly figure in our records. In **Thailand**, official data for September show the lowest refinery runs since October 2019 due to maintenance. Throughput in Chinese Taipei bounced back in September but likely fell afterwards due to economic run cuts. Petronas announced plans to restart the newly built 300 kb/d Rapid complex in **Malaysia** in 1Q21, which has been

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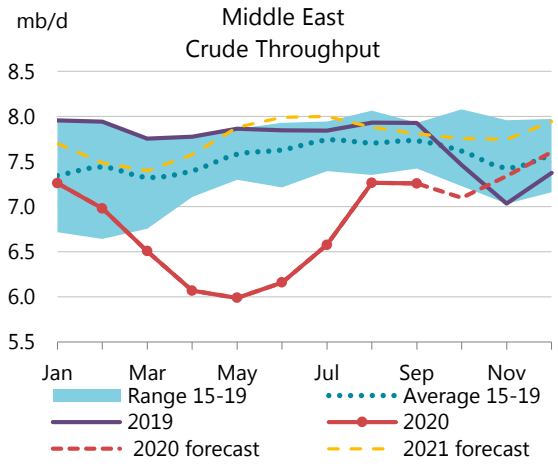
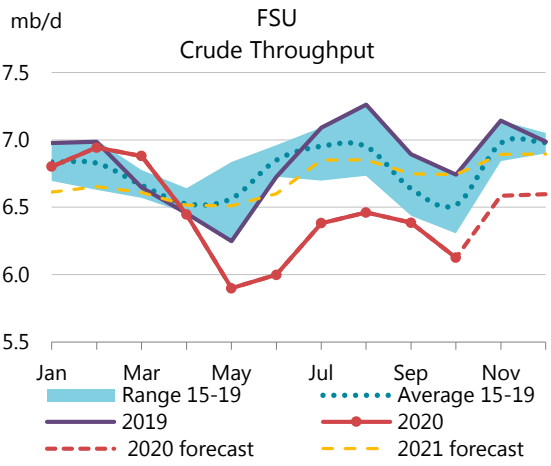
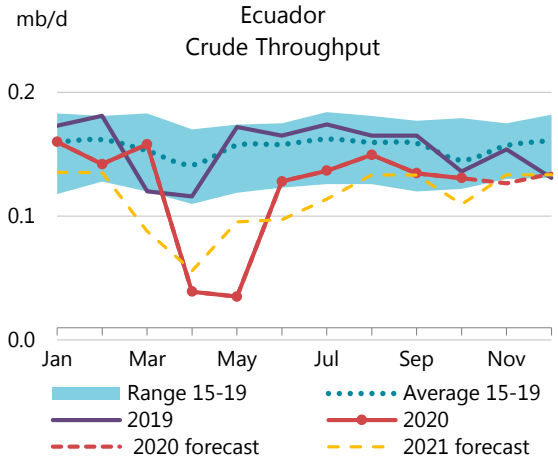
shut since a fire early last year. **Laos** launched its first refinery in November, a 30 kb/d plant built by Chinese investors that is expected to fully cover current oil product demand in the country.

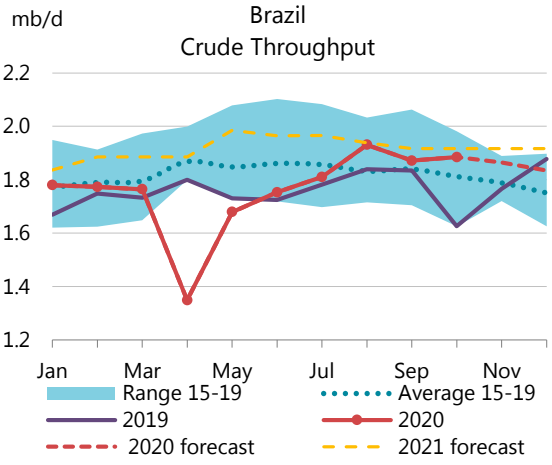
September refining intake in **Saudi Arabia** fell by 220 kb/d from heady August levels, and **Bahrain** and **Iraq** reported small monthly declines. Higher estimates for the rest of the region offset these falls. **Kuwait** announced the completion of its clean fuels project which upgraded and integrated its two refineries (Mina Abdullah and Mina Al Ahmadi). It also announced the first delivery of crude for storage at the new 615 kb/d Al-Zour refinery site, expected to come on stream within the next two years. The country has not reported refining intake data since January.





Russian refinery intake in November rebounded seasonally by 400 kb/d m-o-m to the highest level since March, but was down 500 kb/d y-o-y. The country did not implement a second lockdown, despite the increase in Covid-19 cases and death rates. Runs in **Kazakhstan** returned to pre-Covid levels in September. The Kazakh product market has been in oversupply since the completion of refinery upgrades last year, leading to higher throughputs, exacerbated by the impact of Covid-19 on demand. In summer, Kazakhstan banned imports of gasoline and jet fuel, and recently banned imports of diesel until 2Q21.





Brazil and **Argentina** reported slightly higher crude runs in October. We updated **Ecuador's** refinery intake for June-October, with official data showing an initial rebound in June after a pipeline incident in April reduced run rates at the country's main refinery. In **Venezuela**, PDVSA

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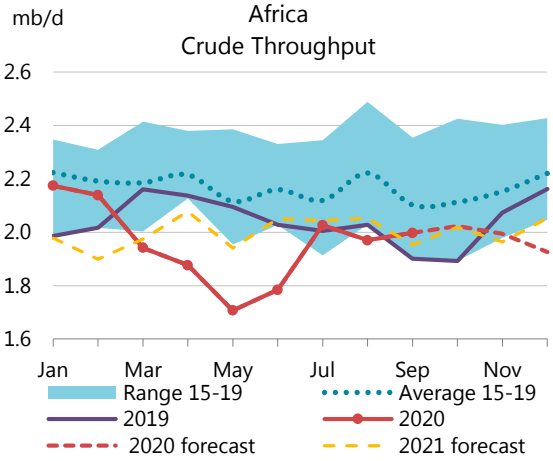
reportedly restarted crude distillation units at the Puerto La Cruz and El Palito refineries, after repairs by Chinese and Iranian engineering firms. The units are preparing to start commercial production early next year.

Egypt reported a 50 kb/d increase in refinery runs in September, while **Algerian** throughput fell slightly m-o m. An explosion at Engen's 120 kb/d Durban refinery in **South Africa** in early December will likely result in the site closing for several months.



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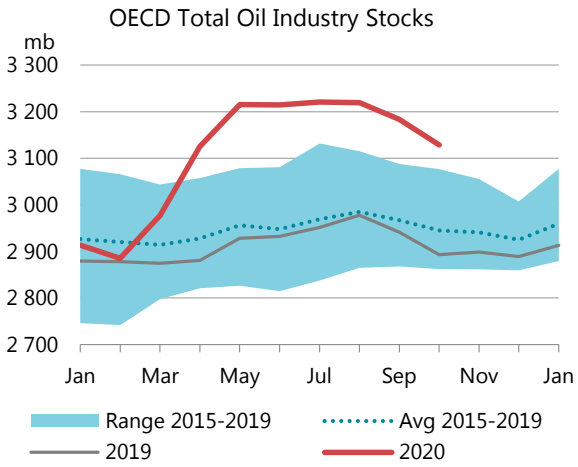
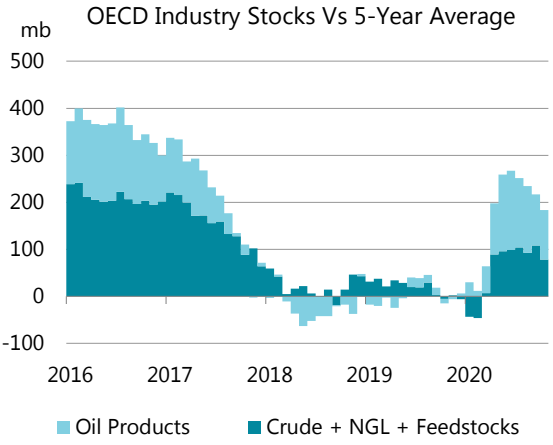
Stocks

Overview

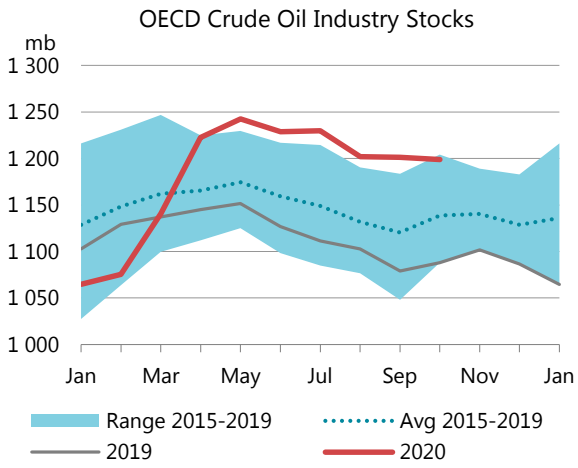
In October, total OECD industry stocks fell for the third consecutive month. The fall was 55.3 million barrels (1.78 mb/d) month-on-month to 3 129 mb. Stocks reached their peak in July (3 221 mb) and drew by 92.4 mb (1 mb/d) in the August to October period. As the first half of the year saw a big stock build of 325 mb (1.79 mb/d), at end-October they remained 183.4 mb above the five-year average. In terms of forward demand, end-month industry stocks covered 72.2 days, a decrease of 1.1 days m-o-m but 10.1 days above the average.





OECD industry crude inventories drew modestly in October by 2.5 mb to 1 199 mb. This was only 43.6 mb below the peak level seen in May and the average draw since then is very modest at approximately 285 kb/d. The OECD Americas region led the decrease in October with a counter-seasonal fall of 7.1 mb. Crude stocks in Europe also fell by 0.4 mb. In contrast, Asia Oceania saw crude stocks increase by 5.1 mb.

Oil product inventories drew by 44.1 mb (1.42 mb/d) to 1 571 mb in October. Other oil stocks fell by 24.1 mb, nearly three times the usual decrease for the month. Middle distillate stocks decreased by 17.4 mb, notably in the Americas (-21.3 mb). Fuel oil inventories also drew by 4.5 mb. On the other hand, gasoline stocks rose counter-seasonally by 2 mb.



In November, preliminary data show that crude stocks in the United States built by 9.5 mb m-o-m, when they typically increase by 2.1 mb. Total product stocks in the US decreased by 24.4 mb, led by other products (-25 mb, mainly propane) and middle distillate stocks (-6.3 mb). European crude stocks

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increased by 0.4 mb, notably in France (3.3 mb). Total oil product stocks in Europe fell by 3.1 mb. Japanese crude stocks fell more than usual by 8 mb and product stocks built by 1.5 mb.

Preliminary Industry Stock Change in October 2020 and Third Quarter 2020

	October 2020 (preliminary) (million barrels)				October 2020 (preliminary) (million barrels per day)				Third Quarter 2020 (million barrels per day)			
	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total
Crude Oil	**-7.1**	**-0.4**	**5.1**	**-2.5**	**-0.2**	**0.0**	**0.2**	**-0.1**	**-0.4**	**0.0**	**0.1**	**-0.3**
Gasoline	-0.1	1.7	0.4	2.0	0.0	0.1	0.0	0.1	-0.3	-0.1	0.0	-0.4
Middle Distillates	-21.3	2.3	1.6	-17.4	-0.7	0.1	0.1	-0.6	0.0	-0.1	0.1	-0.1
Residual Fuel Oil	-0.4	-3.2	-1.0	-4.5	0.0	-0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.2
Other Products	-15.7	-5.7	-2.7	-24.1	-0.5	-0.2	-0.1	-0.8	0.4	0.0	0.0	0.4
Total Products	**-37.5**	**-4.9**	**-1.7**	**-44.1**	**-1.2**	**-0.2**	**-0.1**	**-1.4**	**0.0**	**-0.2**	**0.1**	**-0.2**
Other Oils[1]	-1.9	-5.4	-1.4	-8.7	-0.1	-0.2	0.0	-0.3	0.1	0.0	0.0	0.1
Total Oil	**-46.5**	**-10.7**	**1.9**	**-55.3**	**-1.5**	**-0.3**	**0.1**	**-1.8**	**-0.2**	**-0.2**	**0.1**	**-0.3**

[1] Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD stock data for September were revised down by 7.9 mb to 3 184 mb. The largest adjustment was for product inventories in Europe that decreased by 15 mb, notably middle distillate stocks (-9.7 mb). Total crude stocks in September were revised up by 9.7 mb mainly due to changes in the Americas. August figures were revised up by 7.8 mb in total, again notably in crude oil stocks in the Americas (+7.2 mb).

Revisions versus November 2020 Oil Market Report

(million barrels)

	Americas		Europe		Asia Oceania		OECD	
	Aug-20	Sep-20	Aug-20	Sep-20	Aug-20	Sep-20	Aug-20	Sep-20
Crude Oil	**7.2**	**6.1**	**0.0**	**4.3**	**0.0**	**-0.7**	**7.2**	**9.7**
Gasoline	0.5	-0.7	0.0	-5.6	0.0	0.7	0.5	-5.5
Middle Distillates	-0.2	-2.4	-0.1	-9.7	0.0	-2.2	-0.3	-14.2
Residual Fuel Oil	0.2	-0.6	0.0	-1.1	0.0	0.0	0.2	-1.6
Other Products	-0.1	-7.0	0.0	1.4	0.0	-0.3	-0.1	-6.0
Total Products	**0.4**	**-10.7**	**-0.1**	**-15.0**	**0.0**	**-1.7**	**0.3**	**-27.4**
Other Oils[1]	0.3	8.4	0.0	0.9	0.0	0.5	0.3	9.8
Total Oil	**7.9**	**3.9**	**-0.1**	**-9.8**	**0.0**	**-2.0**	**7.8**	**-7.9**

[1] Other oils includes NGLs, feedstocks and other hydrocarbons.

Implied balance

In this *Report*, we have updated our 3Q20 estimate of crude and product stock changes and compared them to the IEA's oil balance (the difference between our supply and demand forecasts). We use revised OECD data for September, preliminary OECD data for October and available indicators for other regions and components. The table shows that revised and new data for October show a steep stock draw for the month of 4.16 mb/d and early data for November suggest that a significant draw has also been seen for the month.

Crude oil and products on water, including floating storage, rose by a combined 101.4 mb (0.56 mb/d) in 1H20 but fell by 119.4 mb (-1.3 mb/d) in 3Q20 according to tanker tracking data from *Refinitiv*. Oil on water volumes returned to the end-December 2019 level in September and onshore inventories started to draw gradually.

In 3Q20, OECD industry crude stocks, including NGLs and feedstocks, decreased by 16.1 mb (-0.17 mb/d). The Americas saw the majority of the fall, accounting for 20.6 mb, or -0.22 mb/d. Those in Europe also fell, by a modest 0.5 mb while in Asia Pacific they rose by 5 mb. OECD industry product stocks drew by 14.5 mb (-0.16 mb/d). Product stocks in the Americas and

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Europe drew by 1.7 mb and 19.8 mb, respectively, while those in Asia Pacific rose by 7 mb. OECD total industry stocks in 3Q20 fell gradually by 30.6 mb (-0.33 mb/d), compared with a large build in 1H20 of more than 325 mb (1.79 mb/d).

For non-OECD economies, excluding China, crude oil inventories were largely unchanged in 3Q20, building by 3.2 mb. The implied crude stock change in China in the same period, as calculated by the IEA, was a build of 116.6 mb (1.27 mb/d) amidst high net crude imports. On the contrary, although far more modestly, independent product stocks in Fujairah and Singapore fell by 7.4 mb and 1 mb, respectively.

Updated 1H20 and preliminary 3Q20 implied balance (mb/d)

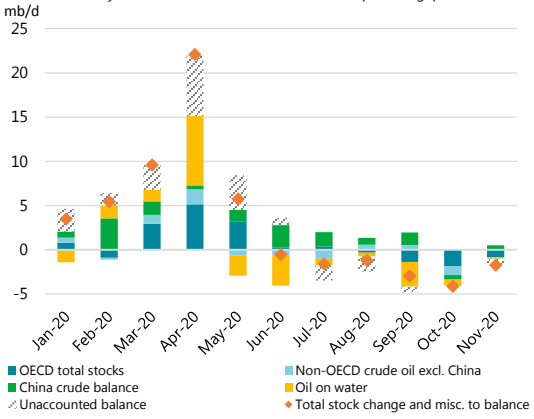
	1Q20	2Q20	1H20	Jul-20	Aug-20	Sep-20	3Q20	Oct-20	*Nov-20**
OECD industry crude oil, NGLs and feedstocks	0.66	1.17	0.91	0.10	-0.76	0.15	-0.17	-0.36	*0.08*
OECD industry product stocks	0.31	1.44	0.87	0.11	0.71	-1.33	-0.16	-1.42	*-0.87*
OECD government stocks	0.02	0.27	0.14	0.15	-0.27	-0.21	-0.11	-0.09	*-0.03*
Non-OECD crude oil excl. China	0.47	0.15	0.31	-1.02	0.58	0.56	0.03	-0.97	*-0.02*
Independent product stocks (Fujairah and Singapore)	0.14	0.08	0.11	-0.10	-0.06	-0.11	-0.09	-0.11	*-0.57*
Crude oil on water including floating storage	0.12	0.82	0.47	-0.85	-1.09	-2.27	-1.39	-0.76	*-0.23*
Products on water including floating storage	0.33	-0.16	0.09	0.11	0.66	-0.51	0.09	0.06	*0.05*
Total known stock change excluding China (as above)	2.05	3.77	2.91	-1.50	-0.25	-3.71	-1.80	-3.65	*-1.59*
IEA estimate - Chinese crude balance	1.90	1.43	1.66	1.64	0.78	1.39	1.27	-0.51	*0.52*
Total known and estimated stock change	**3.95**	**5.20**	**4.57**	**0.14**	**0.53**	**-2.33**	**-0.53**	**-4.16**	***-1.07***
Total stock change and misc. to balance**	**6.18**	**9.06**	**7.62**	**-1.58**	**-1.18**	**-2.97**	**-1.90**	**-4.14**	***-1.72***
Unaccounted balance	2.23	3.86	3.05	-1.72	-1.71	-0.65	-1.37	0.03	*-0.65*

* OECD stocks are extrapolated using data from *Energy Information Administration* , *Euroilstock* and *Petroleum Association of Japan* for November

** Assessed supply minus assessed demand from the IEA oil market balance.

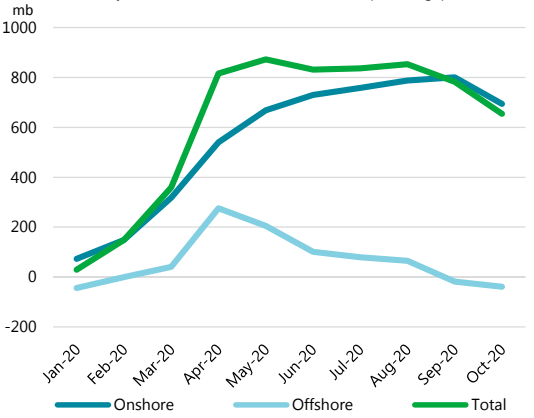
Stock changes by key components

Source: IEA, Kayrros, FEDCom/S&P Global Platts, Enterprise Singapore, Refinitiv



Cumulative stock changes vs Dec-19

Source: IEA, Kayrros, FEDCom/S&P Global Platts, Enterprise Singapore, Refinitiv



Recent OECD industry stock changes

OECD Americas

Industry stocks in the OECD Americas region fell by a large 46.5 mb (1.5 mb/d) m-o-m in October to 1 644 mb, but remained 90.7 mb above the five-year average. The decrease was nearly four times larger than the norm as counter-seasonal crude stock draws and large product inventory falls led the way.

Crude oil inventories fell by 7.1 mb m-o-m and stood at 652 mb, 40.1 mb above the five-year average, partly due to a shutdown in offshore Gulf Coast production amidst a heavy hurricane

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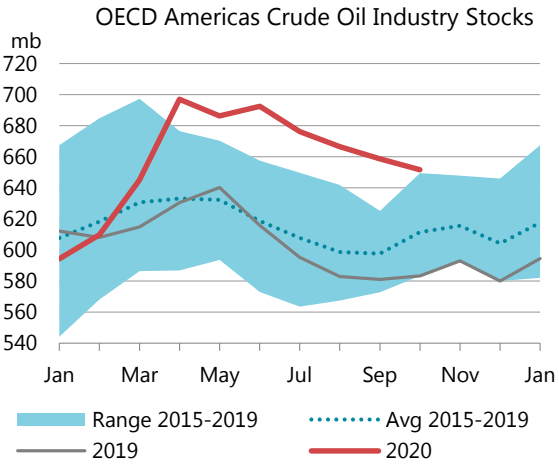
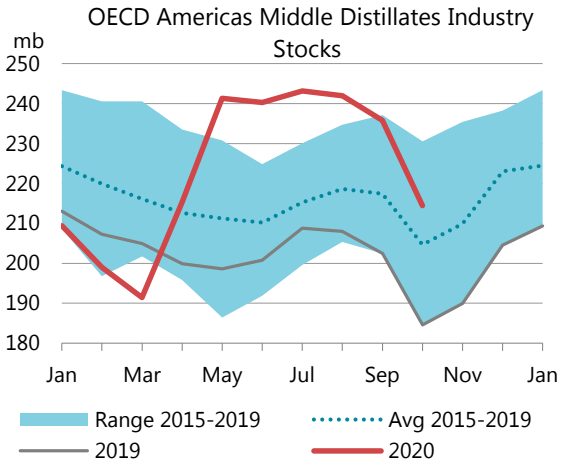
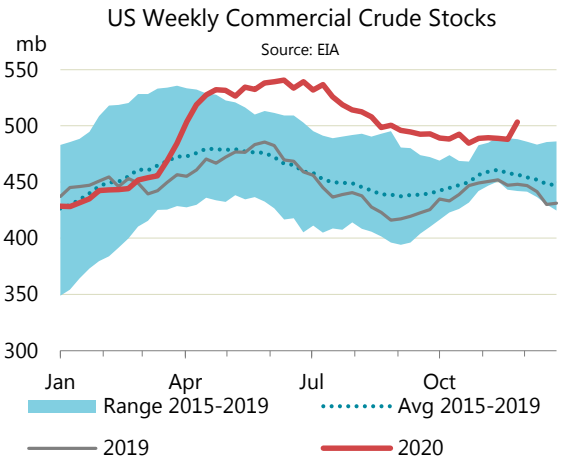
season. Crude oil imports into the US increased 130 kb/d m-o-m in October but remained relatively low at an average rate of 5.3 mb/d.





Oil product stocks decreased by 37.5 mb (1.2 mb/d). Middle distillate and other product (mainly propane) inventories led the way by drawing 21.3 mb and 15.7 mb, respectively. The fall in middle distillate inventories were nearly double the usual and end-month stocks stood at 214 mb, 9.8 mb above the five-year average. Gasoline inventories drew modestly by 0.1 mb amidst lower demand in the US (-840 kb/d year-on-year (y-o-y)). Fuel oil stocks decreased by 0.4 mb in line with the seasonal pattern.



Weekly data from the *US Energy Information Administration* showed that crude oil stocks rose by 9.5 mb in November. PADD 3 led the increase with 13.1 mb as offshore production rebounded and imports surged. By contrast, crude stocks in Cushing, Oklahoma, fell by 1.9 mb to 58.9 mb, representing a capacity utilisation rate of 75%. PADD 5 also drew by 4.9 mb m-o-m. Data for the week to 4 December showed an extraordinary total crude stock build of 15.2 mb.

Total product stocks fell by 24.4 mb in November, led by a 25 mb draw in other products. Middle distillate stocks decreased counter-seasonally by 6.3 mb. Residual fuel oil stocks fell by 1.2 mb. In contrast, gasoline inventories rose by 8.1 mb in line with the seasonal trend.

OECD Europe

In October, industry stocks in OECD Europe drew by 10.7 mb to 1 068 mb, which was 101.1 mb above the five-year average. The decrease was in line with the seasonal pattern in total but crude oil, NGL and feedstock inventories fell counter-seasonally.

Crude oil inventories fell by 0.4 mb, compared to a normal build of 1.5 mb for the month. They stood at 378 mb in October and were 30.8 mb above the five-year average. Crude stocks decreased counter-seasonally by 4.5 mb in France and 3.5 mb in the UK. Monthly seaborne

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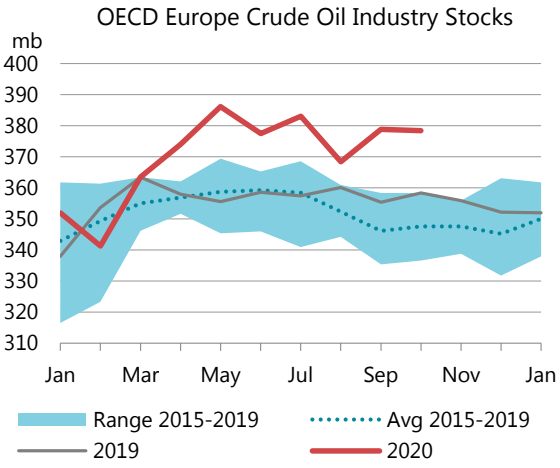
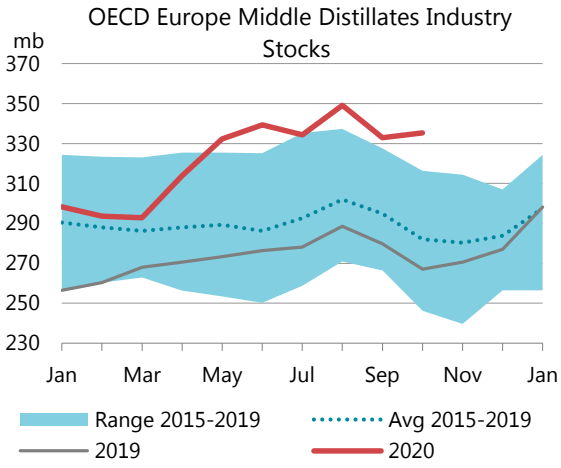
crude oil imports to OECD Europe fell by 60.1 mb y-o-y, notably in France (-14.7 mb) and the UK (-9.6 mb) according to *Kpler*, and this explains draws in these two countries.





Total oil product stocks fell by 4.9 mb, less than half the usual draw (they normally fall by 12.4 mb for the month). Fuel oil and other oil inventories led the decrease, falling 3.2 mb and 5.7 mb, respectively. Middle distillate stocks rose counter-seasonally by 2.3 mb. Motor gasoline stocks increased by 1.7 mb.

Preliminary November data from *Euroilstock* showed overall inventories falling by 2.7 mb. Crude oil stocks increased by 0.4 mb, notably in France (3.3 mb) while those in Austria and Italy each fell by 1.5 mb. Total oil product stocks decreased by 3.1 mb. Middle distillate stocks led the fall by 3 mb. Gasoline and fuel oil inventories fell by 0.1 mb each. Naphtha stocks rose by 0.1 mb.

OECD Asia Oceania

Total industry stocks in the OECD Asia Oceania region built by 1.9 mb in October to 416 mb. Crude stocks rose by 5.1 mb, which is larger than the normal seasonal pattern (2.9 mb) as crude inventories in Korea increased counter-seasonally by 5.4 mb. Japanese crude oil stocks fell by 0.3 mb, when typically they build by 5.2 mb.

Oil product stocks in the region drew by 1.7 mb in October. Fuel oil and other oil stocks fell by 1 mb and 2.7 mb, respectively. Middle distillate inventories, which typically decrease by 1.4 mb, rose counter-seasonally by 1.6 mb. Gasoline stocks built by 0.4 mb in line with the seasonal norm.

Preliminary data for November from the *Petroleum Association of Japan* showed crude oil inventories falling by 8 mb m-o-m. The decrease was larger than usual for the month, which normally sees a draw of 1.2 mb, partly due to year-on-year lower crude oil imports (-15.8 mb) according to tanker tracking data from *Kpler*. Total product stocks rose by 1.5 mb. Other product stocks, mainly naphtha, led the increase by 0.7 mb. Gasoline and residual fuel oil inventories rose 0.5 mb each. Middle distillate stocks fell counter-seasonally by 0.3 mb.

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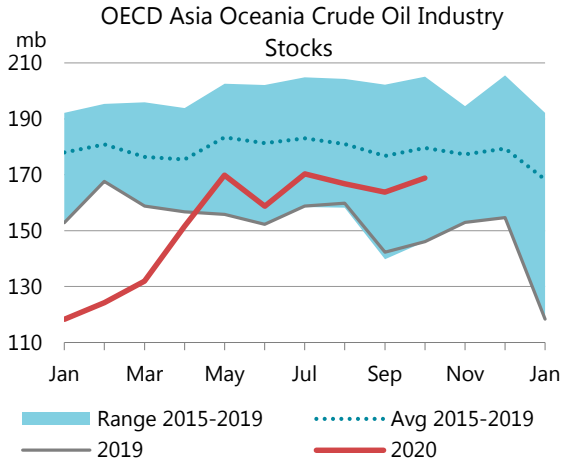
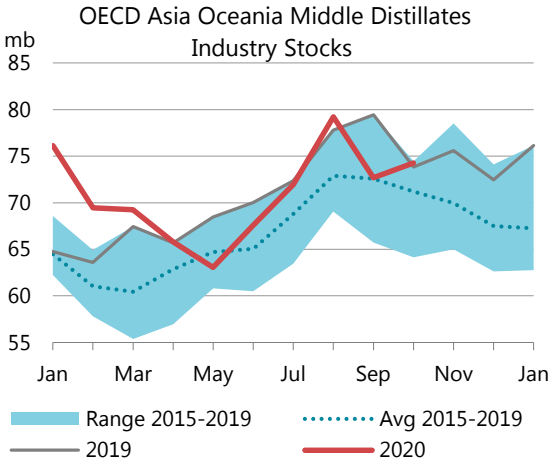
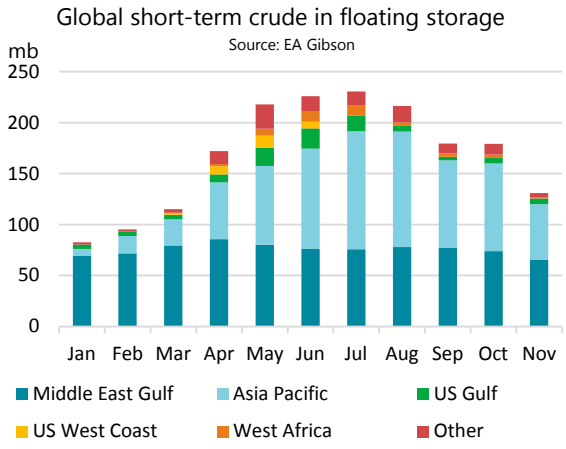


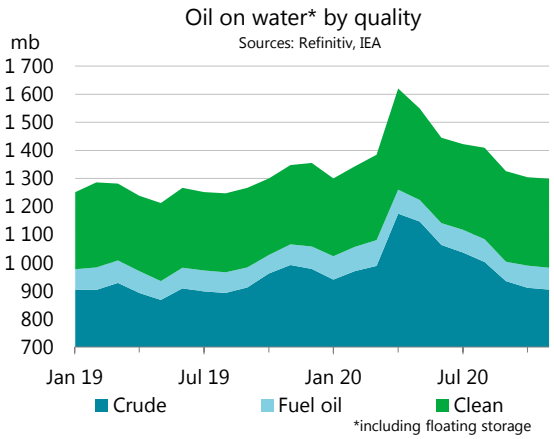


Other stock developments

Volumes of crude oil held in short-term floating storage fell significantly by 48.2 mb (1.6 mb/d) to 131 mb in November according to data from *EA Gibson*. The Asia Pacific region led the decrease with 31.2 mb and stood at 54.8 mb. Crude oil stored in the Middle East Gulf fell by 8.5 mb to 65.4 mb. The Mediterranean, North West Europe and West Africa regions also decreased by 4.3 mb, 2.1 mb and 2.1 mb, respectively.

At end-November, 55 VLCCs and 10 Suezmaxes were used for floating storage globally. In Iran, 27 VLCCs (down by two from October) and four Suezmaxes (fell by one) remained in use. The number of vessels utilised for floating storage fell consistently from July (126 vessels) and, at 65 vessels, was well below the level seen in April (91 vessels) this year.





Volumes of oil on water (including floating storage), based on data from *Refinitiv*, fell 21.6 mb in October. These decreases include 23.6 mb for crude oil and 7.3 mb for clean products. Fuel oil volumes on water increased by 9.2 mb. According to tanker tracking data from *Kpler*, seaborne crude oil exports from Venezuela fell by 10.2 mb m-o-m in October. The US, the UAE and Mexico also reduced their crude exports by more than 4 mb each.

In Fujairah, stocks built in November by 0.9 mb m-o-m to 20.6 mb, according to data from *FEDCom and S&P Global Platts*. Light and middle distillate stocks rose by 1.6 mb and 0.3 mb,

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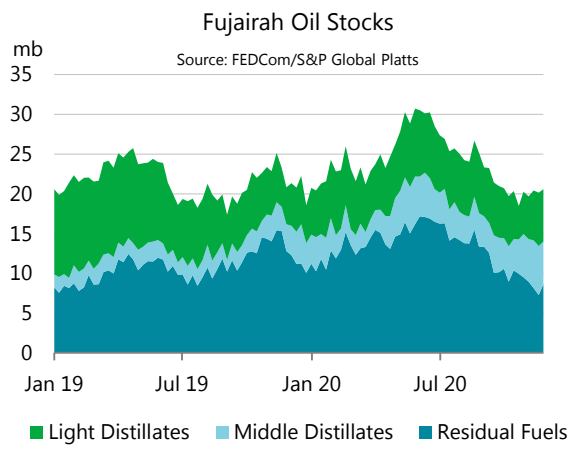
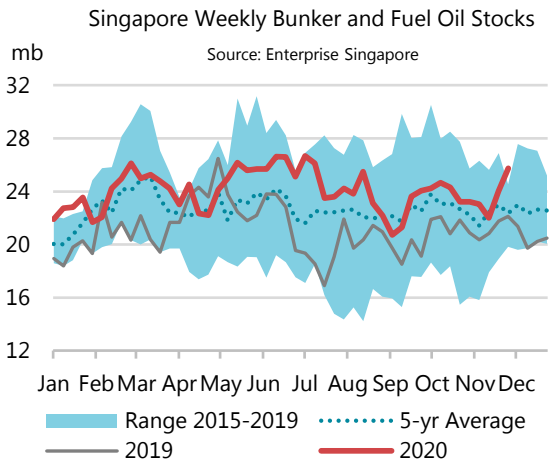
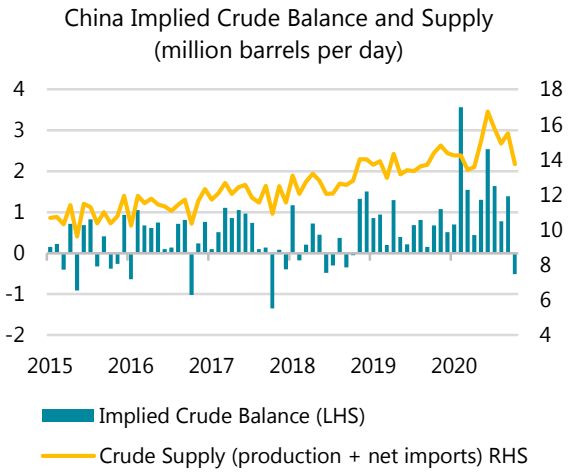
respectively. Residual fuel stocks used in marine and power industries fell by 1 mb to 8.6 mb, the lowest level since January 2019.





Product inventories in Singapore, the world's largest bunkering hub, increased by 2.7 mb to 53.3 mb in November based on data from *Enterprise Singapore*. Residual fuel stocks led the way with a 2 mb increase. Light distillate inventories rose by 0.4 mb after three consecutive monthly decreases. Middle distillate stocks rose by 0.3 mb.

The Chinese implied crude balance fell by 15.8 mb (0.5 mb/d) in October, according to data derived from reported crude production, refinery runs and net crude imports. Net crude oil imports fell 1.77 mb/d m-o-m in October to 9.94 mb/d, the lowest level since April, while refinery runs increased marginally m-o-m to hit a fresh all-time high of 14.08 mb/d.



Total oil stocks in 19 non-OECD economies reported to the *JODI-Oil* database fell 5.1 mb m-o-m in September. Crude stocks in Angola and Chinese Taipei decreased by 2.9 mb and 2 mb, respectively. Saudi Arabia's stocks fell by 1.6 mb. On the contrary, crude stocks in Brazil rose by 1.7 mb. For oil products, stocks decreased by a combined 2.1 mb, led by Iraq (-1.3 mb) and Hong Kong China (-1.3 mb). Chinese Taipei and Saudi Arabia increased their product stocks by 2.1 mb and 1.5 mb, respectively.

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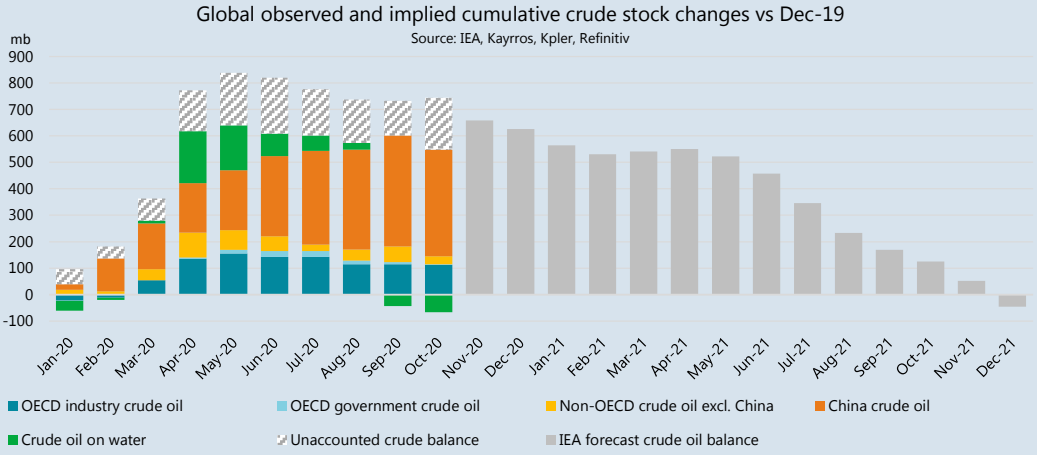
Box 2. When do crude stocks return to pre-pandemic levels?

The severe impact of Covid-19 on global oil demand led to an unprecedented oversupply in oil markets in the first half of 2020. Crude stocks increased in almost every country where data are reported. Oil on water volumes rose and, as onshore tanks filled up, floating storage absorbed the excess. A particularly acute shortage of storage availability in Cushing, Oklahoma, caused the WTI price to drop to -$37/bbl at the close of the May contract on 20 April. Crude stocks started drawing in June, after OPEC+ agreements and falling non-OPEC output curtailed oil supply while refinery runs started recovering from the low point reached in May.

How long will it now take global crude oil stocks to go back to pre-pandemic levels? This is a key question for markets, for OPEC+ members, and for consumer-country policy makers concerned about future price trends that impact their economies notably through commodity price inflation. We use December 2019 as the reference date for our analysis since China's lockdown began in January after first detecting Covid-19 cases in November 2019.

Not all countries report crude oil inventory statistics. In the absence of a full global coverage of reported oil stocks, we use the IEA's derived crude balance as a proxy for stock changes. Our global crude balance is the difference between crude oil and condensate output on the supply side and refinery and condensate splitter intake along with direct use of crude oil on the demand side.



Global crude balances showed a cumulative build of 838 mb from end-December to end-May. The crude balance was negative in June, so the 1H20 cumulative build was 819 mb. Of this increase, observed stocks, including OECD data from the IEA, non-OECD estimates (excluding China) from satellite data company *Karyrros* and *Kpler*, and oil on water data from *Refinitiv*, accounted for 306 mb. For China, which does not report crude inventory statistics, we use the Chinese crude balance, calculated as production plus imports, net of refinery intake, exports and direct use. Chinese implied crude oil stock builds in 1H20 amounted to 303 mb. This left 210 mb of unaccounted for stock builds elsewhere in the world, or 26% of the cumulative total crude stock build in 1H20.

These "missing" barrels are due to a combination of factors. Satellite observations include only floating roof tanks, but not underground storage, fixed roof tanks or other unobservable infrastructure (e.g. pipelines). In addition, there is always a margin of error in the reported statistics

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not only for stocks but also for production and demand, and in the measurement of observed stocks, including oil in floating storage and oil in transit. Thus, part of the unaccounted for stocks could be an error in the balances, and not real accumulated barrels.

Our current balances suggest that global crude oil stocks will return to pre-pandemic levels by December 2021, as the 1.7 mb/d build in 2020 is followed by 1.8 mb/d draw in 2021. This simplified calculation assumes proportionate crude stock draws everywhere. This may not be the case in countries such as India, Australia and most notably China who have taken advantage of relatively low oil prices to build up their strategic reserves to enhance energy security. These reserves are unlikely to be used in the short-term.

China has continued investing into storage capacity and adding to strategic and commercial crude oil stocks. It recently overtook the US in terms of total tank and underground storage capacity, which is now estimated at almost 1.7 billion barrels. As a result, China accounted for the lion's share of the 2020 inventory build, based on the IEA's crude balance calculations, accumulating an estimated 403 mb by end-October. It is unlikely that China will want to draw all of these barrels from storage next year. It may also continue building stocks, as it has done for the past decade. Given China's unique role in the global oil market, understanding how global crude stocks could evolve next year must take into account specific assumptions for China's inventory strategy.

Based on our current supply and refining forecast, the global crude oil market will have a stock surplus of 625 mb at the start of 2021 versus December 2019, of which 183 mb is outside China.

Case 1. Chinese balances are neutral in 2021; they neither build nor draw storage. The market will absorb the 183 mb located outside China in the first half of the year. In July, inventories move to a deficit versus December 2019 levels. By December 2021, the deficit will reach 488 mb.

Case 2. Here we assume China's stocks draw 200 mb, just under half of the 2020 stock-build. In this case global oil inventories outside China return to pre-Covid levels in August 2021. By December 2021, global inventories outside China will be 288 mb lower than in December 2019.

Case 3. China continues to build crude oil stocks at a rate of 300 kb/d, aiming to fill new storage capacity coming online next year. In this case, the drawdown in the global crude oil stock surplus outside China returns it to pre-pandemic levels in June 2021. By December 2021, they will be 596 mb lower than the December 2019 level.

Case 4. Like Case 1, but assuming that only half of the unobserved crude stocks are real (the remainder being the result of uncertainties highlighted above). The global crude market outside China would begin the year with a surplus of only around 90-100 mb, which would be eliminated during 2Q21.

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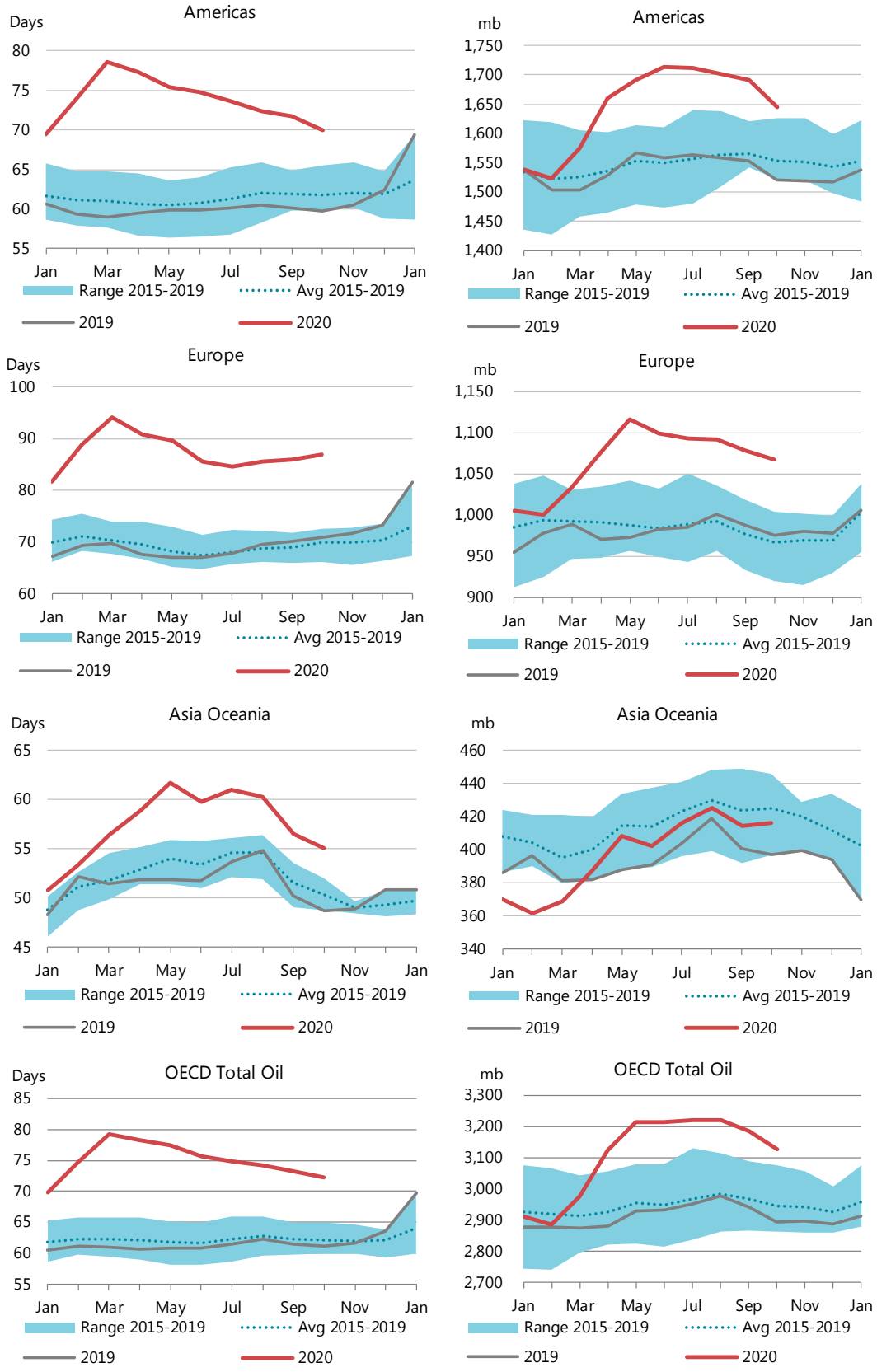
Regional OECD End-of-Month Industry Stocks

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

Days[1] **Million Barrels**



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

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Prices

Overview

Oil prices have moved rapidly and smoothly from contango to backwardation, based on stronger Asian demand and persistent and effective OPEC+ supply management. This is a significant transformation, as backwardation makes the crude market more dynamic but more volatile. In a tighter backwardated market, cargoes sell faster and prices are less restrained in moving upward. Financial investors, who had previously moved to the back of the futures price curve (to minimise the monthly cost of rolling positions in contango) have now shifted to the front of the curve to benefit from the monthly gains of rolling positions in backwardation. The consequent selling of forward contracts and buying of prompt contracts reinforces the backwardation; and the roll-gains (selling the high-valued prompt contract to reposition versus a cheaper contract 1-2 months forward on the price curve) will attract ever more buyers, supporting backwardation and prices.

The increased cost of holding stocks in a backwardatted market should drive a crude stock draw. However, with the ex-China stock surplus versus pre-Covid December 2019 located principally in Europe and North America and the centre of surging demand growth being East of Suez, there is a natural lag for the transfer of surplus crude from one region to the other. While the demand recovery East of Suez drives the price tensions, Atlantic Basin demand remains weak, slowing the fall in the regional stock surplus. Once again, demand in emerging markets has demonstrated its importance as an oil price driver versus developed markets.

The outcome of the US elections and the announcement of not one but three successful vaccines (so far) drove all financial markets, including oil futures, higher during November. ICE Brent oil prices opened the month at $39/bbl and surged past $41/bbl on 4 November, the morning after the US elections. Cagey investors jumped back into financial markets with renewed confidence, including into oil markets. In a series of back-and-forward steps, ICE Brent futures rapidly rose to $48.61/bbl on 25 November before easing back to close the month at $47.59/bbl. ICE Brent futures made a full $10/bbl (+27%) gain versus the closing price for October 2020 of $37.46/bbl. Since end-November, ICE Brent futures prices have gained more than $1.0/bbl to average almost $49/bbl in the first days of December. They closed at $49.97/bbl on 11 December.

Such price gains have not been seen since late May or early June when the market rebounded from its collapse in April and have rarely been seen in previous years. They highlight the transformation in the outlook. While much of the action occurred at the front of the market, a strong recovery also occurred at the back of the futures curve, aided by the positive news on vaccines.

While the news on vaccines is welcome, there remain considerable headwinds. Loss of revenues and the accumulation of debt will impact people and businesses. Unemployment is already increasing and bankruptcies will start to rise. Nevertheless, the return to "normal" economic activity will boost oil consumption worldwide.

Continued price gains in December also reflect the outcome of the OPEC+ meeting on 3 December (see *Supply*). The agreement to increase the quota each month by up to 0.5 mb/d

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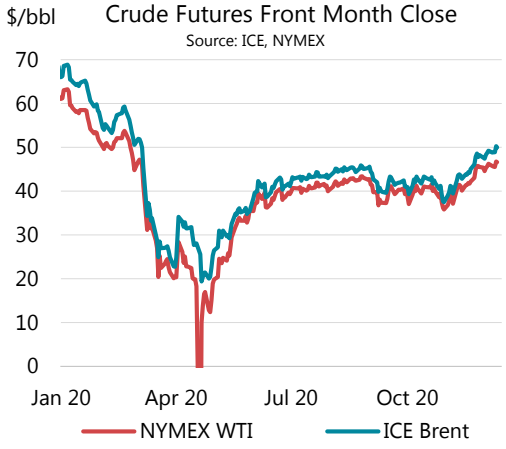
gives OPEC+ a useful tool to adapt its supply to the market. However, as crude cargoes are frequently negotiated six or more weeks forward (including for many OPEC producers), monthly supply adjustments might create uncertainty and increase volatility.

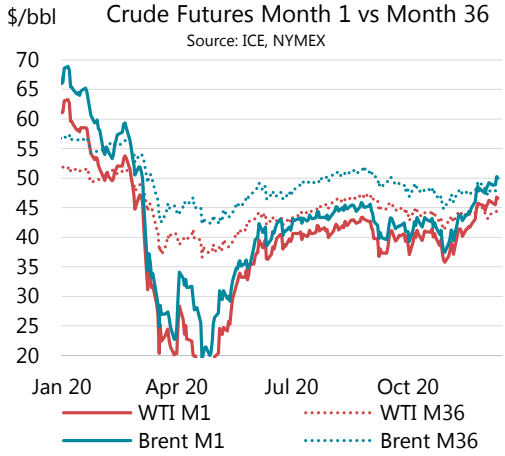
Physical crude price discounts to futures improved in late November and early December. Price discounts narrowed as stronger demand in Asia met lower than expected OPEC+ supply targets and tighter stocks. Crude price differentials in the Middle East, the North Sea, and West Africa all benefitted.

Freight rates also benefitted modestly from stronger Asian buying. Asian refiners picking up large volumes of Middle East, West African and European crudes drove a stronger call on available tanker capacity.

Futures markets

Crude futures prices made steady gains over the month of November for both prompt and forward contracts. By end-November, contract prices had flattened across the curve (through 36 months and beyond) approaching $50/bbl for ICE Brent and $45/bbl for NYMEX WTI. In early December, the price curves began a steepening backwardation over the first 24 months with forward prices stagnating while prompt contracts remained sustained or rose. Backwardation on futures prices last occurred in February, before the spread of the pandemic from Asia.





Prompt prices opened the month of November at $36.81/bbl for NYMEX WTI and $38.97/bbl for ICE Brent, still under pressure from financial market uncertainties ahead of the US elections. After the US election, prompt prices rose rapidly through a series of irregular steps to a late month peak (ICE Brent, $48.61/bbl, NYMEX WTI, $45.71/bbl). On 30 November, price curves were nearly flat, with the prompt ICE Brent contract at a $1.20/bbl discount to the 36th contract and the prompt NYMEX WTI contract at a $0.46/bbl premium to the 36th contract.

As backwardation on the futures curves increased in December, particularly for ICE Brent, forward contracts stagnated while prompt contracts rose. On 11 December, the prompt crude futures contracts closed at $50.47/bbl for ICE Brent and $47.00/bbl for NYMEX WTI while the 12th contract closed at $48.92/bbl for ICE Brent and at $46.59/bbl for NYMEX WTI.

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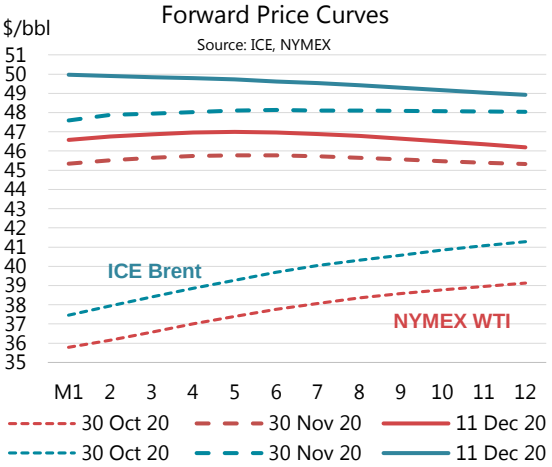
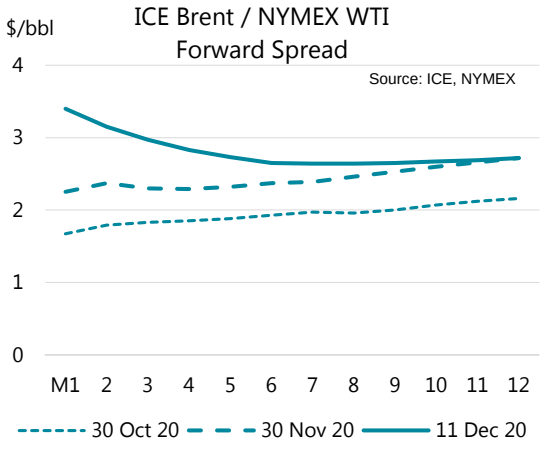
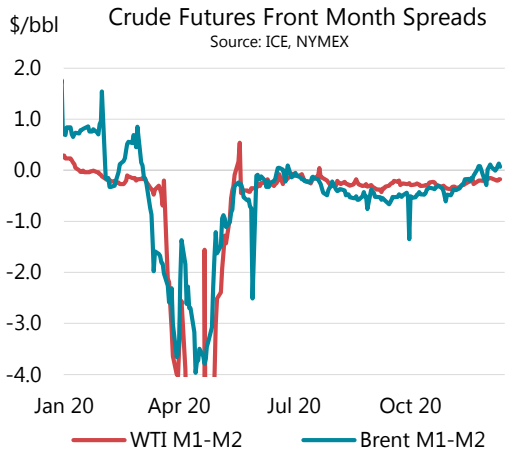
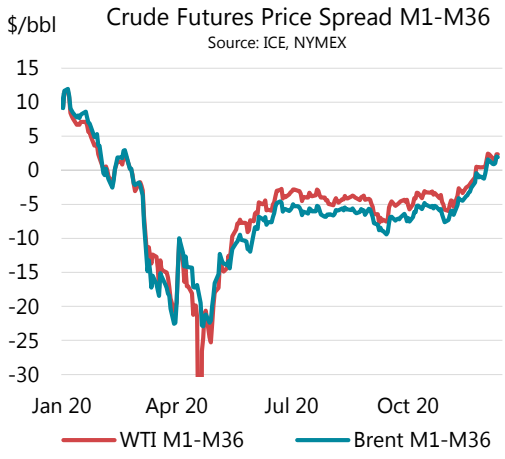




The ICE Brent premium to NYMEX WTI narrowed sharply from the beginning of September to the end of October as hurricanes reduced crude production in the US Gulf of Mexico. However, the contract spread widened in November as US crude production recovered and as the strength of Asian demand boosted international markets, to the benefit of ICE Brent. The forward curve of the price spread twisted into backwardation from end-November to mid-December. The change reflects slowing US demand due to rising Covid cases versus persistent international tensions from recovering Asian demand. After hovering around a $0.50/bbl contango since late June, backwardation on the forward curve of the spread rose to around $0.70/bbl on 11 December, from $3.40/bbl on the prompt contract to $2.72/bbl on the 12th contact. The prompt price tension will boost US crude exports in the coming weeks.





Middle distillate product futures rose slightly faster than crude futures on average from October to November, for gains of $3.16/bbl on ICE gasoil and $4.09/bbl on NYMEX ULSD. The ICE gasoil crack spread rose $0.70/bbl over the month while the NYMEX ULSD crack spread rose $2.29/bbl, reflecting the recovery in US road freight transport. The modest increase of NYMEX RBOB gasoline blendstock futures ($0.37/bbl) lagged that of NYMEX crude futures, resulting in a sharp fall in the crack spread over the month of November (-$1.43/bbl). The gasoline weakness reflects the impact of rising US Covid cases and renewed European lockdowns.

Money managers cut their short positions and boosted their long positions in crude contracts leading to a sharp increase in net length over the month of November and into December. The increase was dominated by Brent contracts, although net length also increased for WTI and for products overall. The increase paralleled the strong rise in crude prices during the month. The

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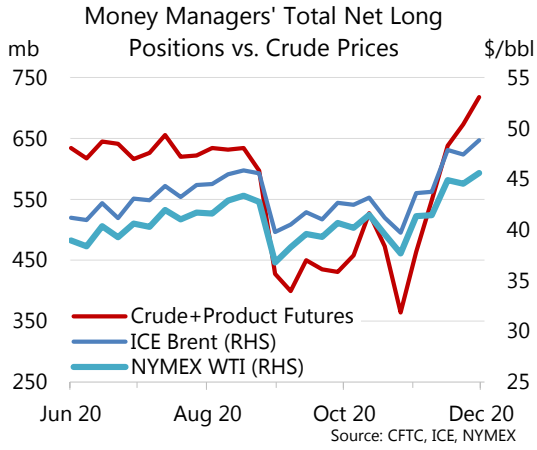
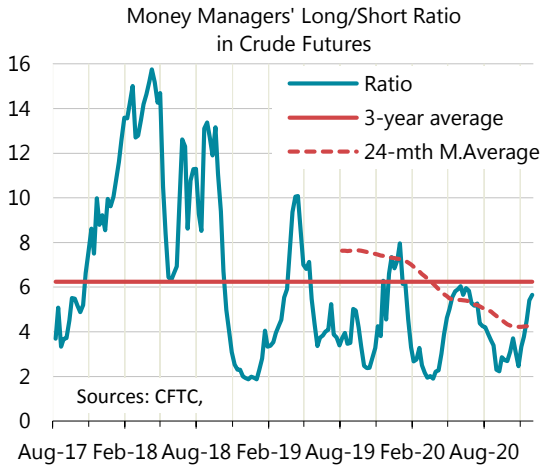
previously low level of net long positions on both crude and products relative to recent years had set up the market for a sharp price recovery when views turned more optimistic.

Over the month to 8 December, outright positions on Brent rose almost 50% for longs and fell almost 40% for shorts, resulting in a near 120% increase in the net long position. On WTI, outright long positions rose only 10% while outright short positions fell by around 10% for a net long position increase of 15% in November. The long-short ratio rose over the month by ~140% for Brent and ~25% for WTI. It is now only slightly below its three year average and well above that of the past 24 months.

On product futures through 8 December, outright longs were flat overall as rising longs on ICE gasoil were offset by falling positions on NYMEX ULSD and RBOB. On outright short positions, they fell overall by almost 50% (the fall impacting all contracts), which lifted net long positions on products by 140%. The overall long-short ratio for product futures doubled.





Prompt Month Oil Futures Prices
(monthly and weekly averages, $/bbl)

	Sep	Oct	Nov	Nov-Oct Avg Chg	% Chg	Week Commencing: 02 Nov	09 Nov	16 Nov	23 Nov	30 Nov	07 Dec
NYMEX											
Light Sweet Crude Oil (WTI)	39.63	39.55	41.35	1.80	4.6	37.91	40.87	41.70	44.80	45.41	46.05
RBOB	49.40	48.62	49.00	0.37	0.8	45.67	48.83	48.73	52.83	52.41	53.86
ULSD	47.34	48.32	52.42	4.09	8.5	48.09	51.68	52.83	57.09	57.67	59.45
ULSD ($/mmbtu)	8.35	8.52	9.24	0.72	8.5	8.48	9.11	9.32	10.07	10.17	10.49
Henry Hub Natural Gas ($/mmbtu	2.28	2.84	2.87	0.04	1.3	3.04	2.96	2.67	2.81	2.73	2.48
ICE											
Brent	41.87	41.52	43.98	2.46	5.9	40.06	43.22	44.21	47.70	48.24	49.34
Gasoil	44.13	44.49	47.65	3.16	7.1	42.99	47.15	47.81	51.78	52.56	54.03
Prompt Month Differentials											
NYMEX WTI - ICE Brent	-2.24	-1.97	-2.63	-0.66		-2.15	-2.35	-2.51	-2.90	-2.83	-3.29
NYMEX ULSD - WTI	7.71	8.77	11.07	2.29		10.18	10.81	11.13	12.29	12.26	13.40
NYMEX RBOB - WTI	9.77	9.07	7.65	-1.43		7.76	7.96	7.03	8.03	7.00	7.81
NYMEX 3-2-1 Crack (RBOB)	9.08	8.97	8.79	-0.19		8.57	8.91	8.39	9.45	8.75	9.67
NYMEX ULSD - Natural Gas ($/m	6.07	5.69	6.37	0.69		5.45	6.15	6.65	7.26	7.45	8.01
ICE Gasoil - ICE Brent	2.26	2.97	3.67	0.70		2.93	3.93	3.60	4.08	4.32	4.69

Source: ICE, NYMEX.

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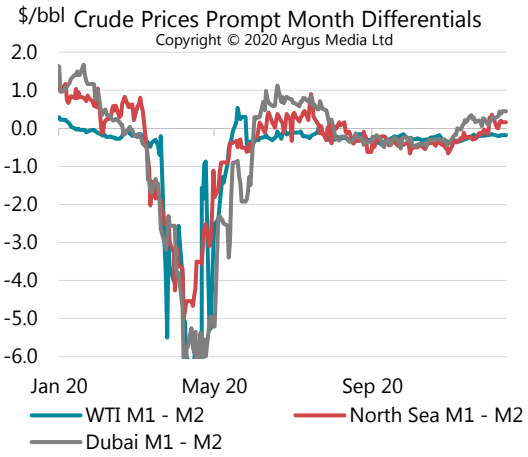
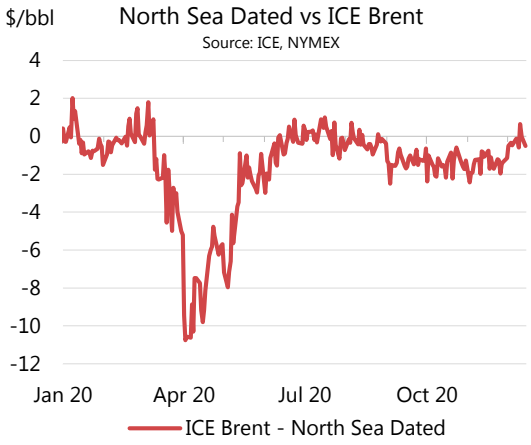
Spot crude oil prices

Since October, the prompt (M1-M2) price structure on the physical forward prices for the marker grades has reflected the overall tightening of the crude market. While the contango on North Sea and WTI narrowed over the month (+$0.22 /bbl to -$0.24/bbl and +$0.01/bbl to $0.26/bbl respectively), Dubai rapidly swung from contango to backwardation (+$0.46 /bbl to +$0.10/bbl), flipping on 10 November. The dislocation between Dubai and the Atlantic Basin grades reflects the abiding strength of Asian oil demand that is leading the tightening across all the oil markets.





Significantly, the spot discount of North Sea Dated to ICE Brent prices, while volatile, remained relatively flat over the month (+$0.08 /bbl m-o-m to -$1.44/bbl in November). The North Sea Dated discount to ICE Brent narrowed to less than $0.10 /bbl in the first 11 days of December 2020 and flipped briefly to a premium as Asian demand for crude in Europe and the Atlantic Basin tightened the market.

Monthly average North Sea Dated prices rose $2.54/bbl m-o-m to $42.54/bbl in October. Steady gains lifted prices from $36.18/bbl on 30 October to $46.45/bbl on 30 November, peaking at $46.81/bbl on 27 November. Prices subsequently continued to make steady gains reaching $50.89/bbl on 10 December (+93 cts/bbl vs. ICE Brent) then slipped to $49.95/bbl on 11 December.

The monthly average for Dubai prices rose $2.63/bbl m-o-m to $43.33/bbl in November and reached $48.35/bbl in the first 11 days of December. The Dubai premium to North Sea Dated continued to widen in November (+$0.09/bbl to $0.79/bbl), but in the first 10 days of December it reversed to a discount of $0.42/bbl. Dubai's widening premium to North Sea Dated made Atlantic Basin crudes attractive to Asian refiners who bought in considerable volumes in late November and early December, notably from West Africa and the Mediterranean.

The monthly average WTI price at Cushing rose $1.57/bbl m-o-m to $41.10/bbl in November while it increased $1.73/bbl at Houston to $41.90/bbl. Prices in Houston benefitted from the strong international market that attracted US crude exports, while prices in Cushing reflected the pressure from rising PADD2 crude stocks during the month. The price differential for WTI at Houston vs. North Sea Dated flipped back to a discount over the month (-$0.81/bbl to -$0.64/bbl), underlining the need for prices to reposition in favour of US crude exports. In the

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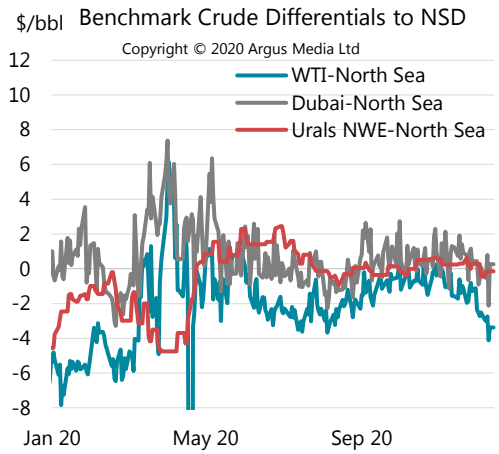
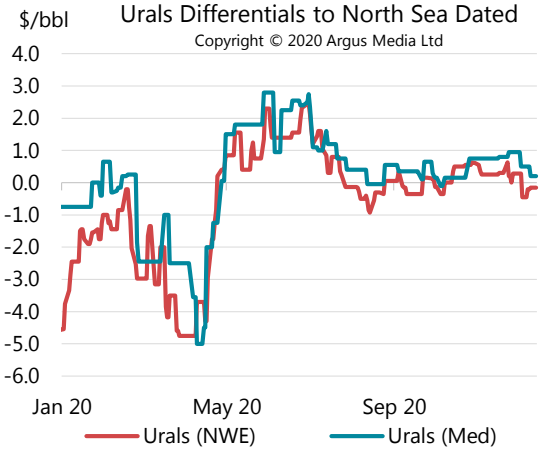
first 11 days of December, WTI at Houston rose to an average of $47.20/bbl, widening its discount to North Sea Dated to -$1.49/bbl.

Urals maintained its modest premium to North Sea Dated in Northwest Europe, rising $0.03 /bbl to $0.28/bbl in November. However, the premium swung back to an average discount of $0.08 /bbl in the first 11 days of December reflecting the strong recovery in North Sea Dated prices. While Urals continues to benefit from abiding tensions in global sour crude markets, a large Russian loading program from Baltic ports in December pressured the market. On the other hand, the Urals price premium to North Sea Dated in the Mediterranean rose $0.55 /bbl to $0.81/bbl in October, reflecting stronger Asian demand for Mediterranean crude (notably Caspian grades) as well as rising transit delays in the Turkish Straights due to shorter days with the onset of winter.





The North Sea grades began the month of November under pressure from ample Libyan supply, but this gave way in mid-month to stronger differentials as Asian, and in particular Chinese, buying drew down the regional overhang in supply - including a large share of the barrels in floating storage. Amongst others, Chinese refiners in Shangdong province booked 14.4 mb (480 kb/d) of Johan Sverdrup Norwegian crude for delivery in February (up from 8.7 mb or 290 kb/d) for delivery in January. Overall, the weak start to the month pressured differentials which eased for Ekofisk (-$0.03 /bbl to $0.10/bbl) and Forties (-$0.06 /bbl to -$0.41/bbl). Oseberg differentials also narrowed (-$0.05 /bbl to $0.27/bbl) on continued weak European refinery demand and weak gasoil prices. Differentials rose to premiums for most grades in the first 11 days of December.

West African crude price differentials to North Sea Dated rose in November as both China and India rapidly bought up available cargoes, particularly in the latter half of the month. The lighter grades benefitted less than the heavy sweet grades. Angolan barrels, that refiners prize for their fuel oil yields that are well adapted to the low sulphur bunker market, continue to benefit from the recovery in global trade. Strong Asian demand offset weak European buying, undermined by poor throughputs and the recent increase in Libyan production. Indian demand cleared most of the light Nigerian grades as refinery runs continued to recover. Strong Chinese buying accounted for most of the demand for heavy sweet Angolan grades. The light sweet Nigerian grades flipped from discounts vs. North Sea Dated to premiums, rising $0.67/bbl to $0.26/bbl for Forcados and $0.61/bbl to $0.07/bbl for Bonny Light. Angolan heavy sweet Girassol rose $0.85/bbl to $1.57/bbl and Cabinda rose $0.84/bbl to $0.97/bbl. The premiums eased slightly in the first 11 days of December.

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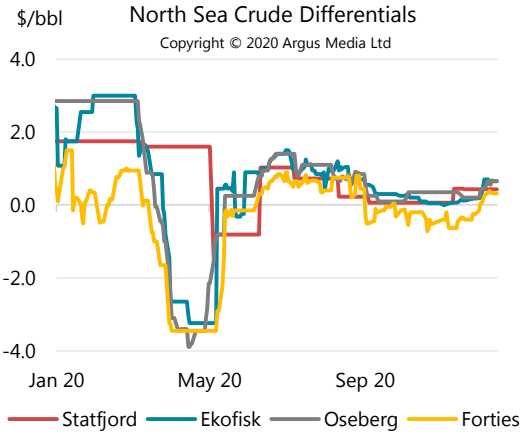
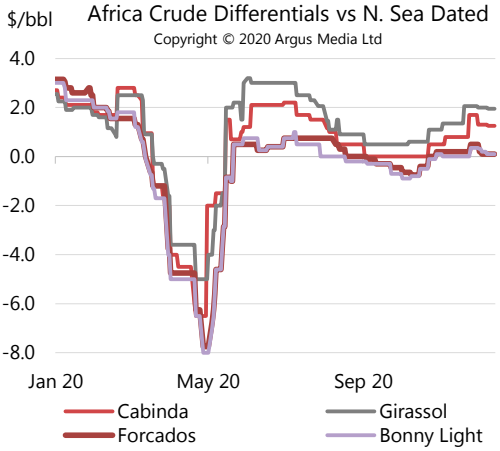
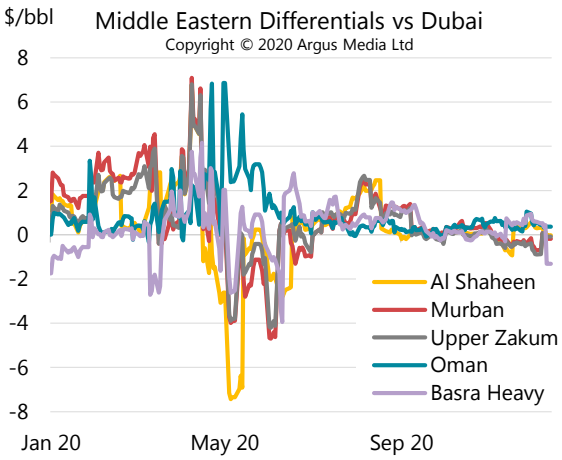
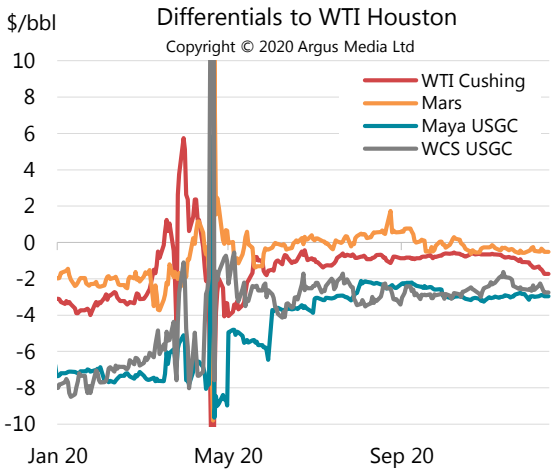




Middle East sour grades gained strong support from Asian and Chinese buying throughout the month. Crude price differentials versus Dubai for Oman rose $0.09/bbl to $0.50/bbl but eased slightly in the first 11 Days of December. For Heavy sour Iraqi Basrah, they rose $0.31 /bbl to a premium of $0.33/bbl before flipping back to a discount in early December. Buyers of Iraqi crude jumped on remaining December barrels ahead of the imminent January change in the quality specifications (see *Box: Iraq Announces New Basrah Medium Grade to be Marketed in 2021).*





UAE grades Murban and Upper Zakum remained at discounts to Dubai which narrowed in early December. Middle East crude availability remains tight but will ease slightly in January following the OPEC+ decision to add 0.5 mb/d of supply to the market.

Box 3. Iraq announces new Basrah Medium Grade to be marketed in 2021

In early November, Iraq's State Organization for Oil Marketing (SOMO) announced that it would market a fourth crude quality starting January 2021. The new grade, Basrah Medium (27.9° API, 3% sulphur), will be positioned between a modified Basrah Light grade (31.4° API and 2.74% sulphur versus 29.9° API and 2.9% sulphur currently marketed, and an official specification of 34° API) and a modified Basrah Heavy grade (24° API and 4.05% sulphur versus 26° API and 3.8% sulphur). Kirkuk (32.8° API) will remain unchanged. Heavier crudes dominate Iraq's incremental production, making it difficult to meet the official Basrah Light specifications. In mid-2015, with rising production volumes and constraints on blending crude streams, Iraq split its sole export grade into

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Basrah Light and Basrah Heavy. In the first 11 months of 2020, Basrah Light exports were 2.15 mb/d and Basrah Heavy 0.8 mb/d (Kirkuk 0.1 mb/d, and various Kurdistan Regional Government grades to 0.4 mb/d). A compensation mechanism will continue to offer clients a financial correction for variations in the final crude density versus the announced specification. At ~31° API, Basrah Light will compete with Kuwait Blend (30.8° API), Arab Medium (30.8° API) or Urals (typically 29.9-30.7° API). Basrah Medium will compete with Khafji from the Neutral Zone (26.9° API) and Arab Heavy (26.9° API). Both the latter crudes sell in small volumes, leaving a good niche for Basrah Medium. Basrah Heavy will compete with similar heavy sour crudes from Latin America (e.g. Ecuador, Mexico and Venezuela) that are increasingly in short supply.

In North America, sour crude price trends diverged. Discounts to WTI at Houston for domestic grade Mars widened by $0.16 /bbl to $0.37/bbl in November. With the growing wave of US Covid cases that discouraged Thanksgiving weekend travel and impacted refinery requirements for crude, that discount continued to widen in December. On the other hand, discounts to WTI at Houston for Canadian heavy WCS narrowed by $0.52 /bbl to $2.24/bbl. Western Canadian production continued to rise over November, leading to pipeline congestion and increased movement of crude by rail. Maya price discounts to WTI at Houston narrowed by $0.11/bbl over the month of November to $2.97/bbl, boosted by rising ICE Brent prices (Maya Americas formula: 65% Argus WTI Houston + 35% ICE Brent + K factor). The premium for WTI at Houston versus Cushing rose in November by $0.16/bbl to $0.80/bbl and continued rising into early December.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, $/bbl)

	Sep	Oct	Nov	Nov-Oct Avg Chg	% Chg	Week Commencing: 02 Nov	09 Nov	16 Nov	23 Nov	30 Nov	07 Dec
Crudes											
North Sea Dated	40.58	40.01	42.54	2.54	6.3	38.25	42.04	42.85	46.25	47.66	49.28
North Sea Mth 1	41.52	41.05	43.65	2.60	6.3	39.45	43.22	43.81	47.40	48.44	49.74
WTI (Cushing) Mth 1	39.60	39.53	41.10	1.57	4.0	37.91	40.87	41.70	44.37	45.41	46.05
WTI (Houston) Mth 1	40.41	40.17	41.90	1.73	4.3	38.56	41.61	42.53	45.38	46.69	47.56
Urals (NWE)	40.50	40.26	42.83	2.57	6.4	38.58	42.29	43.14	46.51	47.80	49.05
Urals (Mediterranean)	40.98	40.26	43.35	3.09	7.7	39.00	42.79	43.64	47.17	48.43	49.66
Dubai (1st month)	41.45	40.70	43.33	2.63	6.5	39.13	42.74	43.97	46.78	47.55	48.86
Tapis (Dated)	39.48	39.15	42.54	3.39	8.7	37.75	41.54	42.87	47.05	48.46	50.08
Differentials to Futures											
North Sead Dated vs. ICE Brent	-1.29	-1.51	-1.44	0.08		-1.81	-1.18	-1.36	-1.45	-0.58	-0.06
WTI (Cushing) Mth1 vs. NYMEX	-0.03	-0.02	-0.25	-0.23		0.00	0.00	0.00	-0.43	0.00	0.00
Differential to North Sea Dated											
WTI (Houston)	-0.17	0.16	-0.64	-0.81		0.30	-0.43	-0.32	-0.87	-0.98	-1.72
Urals (NWE)	-0.08	0.25	0.28	0.03		0.33	0.25	0.29	0.26	0.13	-0.23
Urals (Mediterranean)	0.40	0.26	0.81	0.55		0.75	0.75	0.79	0.92	0.77	0.38
Dubai	0.87	0.70	0.79	0.09		0.88	0.70	1.12	0.54	-0.11	-0.41
Tapis (Dated)	-1.10	-0.85	0.00	0.85		-0.50	-0.50	0.02	0.80	0.80	0.80
Prompt Month Differential											
Forward Cash Brent Mth1-Mth2	-0.36	-0.46	-0.24	0.22		-0.38	-0.22	-0.26	-0.11	0.20	0.11
Forward WTI Cushing Mth1-Mth2	-0.28	-0.28	-0.26	0.01		-0.34	-0.30	-0.21	-0.19	-0.16	-0.19
Forward Dubai Mth1-Mth2	-0.32	-0.36	0.10	0.46		-0.17	0.11	0.27	0.19	0.20	0.38

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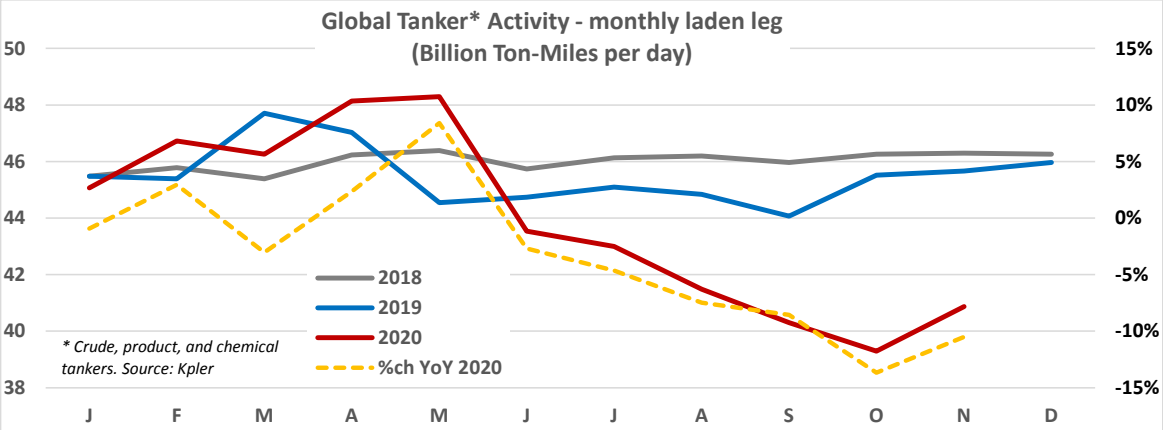
Freight

The accelerating y-o-y contraction in tanker activity finally slowed in November as activity picked up. Ton-miles transported per day on tankers rose +4.0% from October to November, but were still down -10.5% vs. November 2019. Despite the improvement, demand remains quite depressed across most tanker segments.

The increase in tanker activity combined with rising bunker prices (tracking crude prices higher) provided support for tanker freight rates in November and into early December.



Crude tanker rates slid over November for VLCC tankers on Middle East to Asia routes. The weakness reflects the steady reduced level of loadings, due to OPEC+ cuts, and ample tonnage availability. Crude in floating storage (dominated by VLCCs) drew steadily in November, releasing tonnage to the market. The recent OPEC+ announcement for increased loadings in January has given the market a modest boost. West Africa to Asia or US Gulf Coast to Asia VLCC routes saw stronger chartering rates due to a lack of tonnage positioned in the Atlantic Basin.

Suezmax tankers (130 ktonne) on the West Africa to UK Continent route saw rates rise sharply in November (+15.6%), boosted briefly in mid-month by chartering for distressed cargoes. Rates eased toward end-month before rising into December on continued chartering to Asia

Aframax tanker rates on the North Sea route stagnated over November but rose +6.6% in the Baltic. OPEC+ export cuts for Russian crude moving to Northwest Europe have pressured rates, but tighter tanker availability lifted rates in the Baltic. Some of the European tonnage overhang balasted to the USGC to cover a pick-up in local chartering needs in late November, likely linked to a widening Brent-WTI spread that favours more US crude moving to Europe. The Aframax fleet has seen few new deliveries this year but also limited scrapping.

Rates for product tankers were again mixed. LR and MR tanker rates on the Middle East to Japan route again rose sharply in November (+12.5% and +7.5% respectively) and extended the strong increase into December, supported by continued Asian demand for naphtha and middle distillate from the Middle East. The shutdown of the 120 kb/d Engen refinery in South Africa on 4 December has lead to increased product imports adding to tensions on the LR and MR markets.

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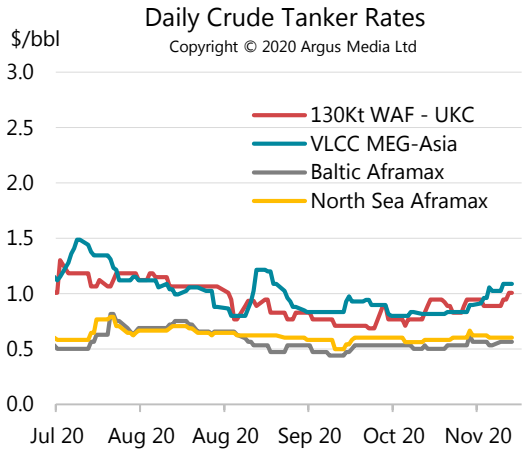

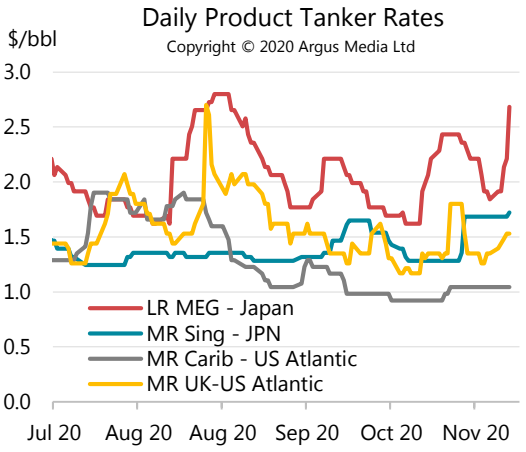

Freight Costs

(monthly and weekly averages, $/bbl)

				Nov-Oct		Week Ending				
	Sep	Oct	Nov	*Chg*	%	13 Nov	20 Nov	27 Nov	04 Dec	11 Dec
Crude Tankers										
VLCC MEG-Asia	0.96	0.87	0.83	-0.04	-4.8	0.82	0.83	0.90	1.06	1.09
130Kt WAF - UKC	0.86	0.75	0.86	0.12	15.6	0.95	0.89	0.95	0.89	1.01
Baltic Aframax	0.55	0.50	0.53	0.03	6.6	0.50	0.53	0.63	0.53	0.56
North Sea Aframax	0.62	0.58	0.59	0.01	1.5	0.58	0.58	0.66	0.60	0.60
Product Tankers										
LR MEG - Japan	54.93	60.25	67.76	7.51	12.5	63.50	63.50	88.00	93.50	109.00
MR Sing - JPN	2.21	1.95	2.09	0.15	7.5	2.06	2.43	2.28	1.92	2.21
MR Carib - US Atlantic	1.31	1.50	1.38	-0.13	-8.5	1.28	1.28	1.69	1.69	1.69
MR UK-US Atlantic	1.18	1.07	0.96	-0.11	-10.2	0.92	0.98		1.04	1.04

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Tables

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

	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021
OECD DEMAND																	
Americas	25.1	25.7	25.3	25.5	26.0	25.8	25.7	24.3	20.0	22.8	23.4	22.6	23.2	23.7	24.9	25.1	24.2
Europe	14.4	14.3	14.0	14.2	14.7	14.1	14.3	13.3	11.0	12.8	12.5	12.4	12.6	13.2	13.7	13.7	13.3
Asia Oceania	8.1	8.0	8.2	7.4	7.6	8.0	7.8	7.8	6.5	6.7	7.4	7.1	7.8	7.0	7.2	7.7	7.4
Total OECD	**47.7**	**48.0**	**47.5**	**47.1**	**48.3**	**47.9**	**47.7**	**45.4**	**37.5**	**42.3**	**43.3**	**42.2**	**43.6**	**43.9**	**45.8**	**46.5**	**44.9**
NON-OECD DEMAND																	
FSU	4.7	4.7	4.6	4.7	5.0	4.9	4.8	4.6	4.0	4.8	4.7	4.5	4.5	4.5	5.0	4.9	4.7
Europe	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8
China	12.5	13.0	13.2	13.8	13.8	14.1	13.7	11.9	14.2	14.7	14.6	13.8	14.4	14.8	14.7	14.8	14.7
Other Asia	13.7	14.0	14.5	14.4	13.8	14.4	14.3	13.7	11.5	12.7	13.8	12.9	13.9	13.8	13.6	14.2	13.9
Americas	6.4	6.2	6.1	6.2	6.3	6.2	6.2	5.7	4.9	5.8	5.8	5.5	5.7	5.8	6.1	6.1	5.9
Middle East	8.3	8.3	8.1	8.1	8.7	8.3	8.3	7.8	7.0	8.2	7.6	7.6	7.6	7.8	8.4	7.8	7.9
Africa	4.2	4.3	4.3	4.3	4.2	4.3	4.3	4.2	3.3	3.9	4.0	3.9	4.2	4.1	4.0	4.2	4.1
Total Non-OECD	**50.4**	**51.2**	**51.5**	**52.3**	**52.6**	**53.0**	**52.3**	**48.6**	**45.5**	**50.7**	**51.4**	**49.1**	**51.1**	**51.5**	**52.5**	**52.7**	**52.0**
Total Demand[1]	**98.1**	**99.2**	**99.1**	**99.3**	**100.8**	**100.9**	**100.0**	**94.1**	**83.1**	**93.0**	**94.7**	**91.2**	**94.7**	**95.4**	**98.3**	**99.2**	**96.9**
OECD SUPPLY																	
Americas	20.5	23.0	24.0	24.5	24.6	25.5	24.6	25.7	22.8	23.1	23.6	23.8	23.6	23.4	23.5	23.8	23.6
Europe	3.5	3.4	3.5	3.2	3.2	3.5	3.3	3.7	3.6	3.4	3.5	3.5	3.7	3.6	3.6	3.8	3.6
Asia Oceania	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6
Total OECD[4]	**24.4**	**26.9**	**27.9**	**28.2**	**28.4**	**29.6**	**28.5**	**29.9**	**26.9**	**27.1**	**27.6**	**27.8**	**27.8**	**27.6**	**27.6**	**28.1**	**27.8**
NON-OECD SUPPLY																	
FSU	14.3	14.6	14.8	14.4	14.6	14.7	14.6	14.8	13.2	12.8	13.1	13.5	13.3	13.7	13.7	13.7	13.6
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	3.9	3.8	3.9	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9
Other Asia	3.5	3.4	3.4	3.3	3.2	3.2	3.3	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Americas	5.1	5.1	5.1	5.2	5.5	5.6	5.3	5.6	5.1	5.4	5.2	5.3	5.5	5.6	5.6	5.6	5.6
Middle East	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2
Africa	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3
Total Non-OECD[4]	**31.6**	**31.7**	**32.0**	**31.7**	**32.0**	**32.2**	**32.0**	**32.3**	**30.0**	**29.7**	**29.9**	**30.5**	**30.4**	**30.9**	**30.8**	**30.7**	**30.7**
Processing gains[3]	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.3	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3
Global Biofuels	2.5	2.7	2.2	2.9	3.2	2.7	2.8	2.2	2.5	3.0	2.6	2.6	2.3	2.9	3.2	2.8	2.8
Total Non-OPEC Supply	**60.8**	**63.6**	**64.5**	**65.1**	**65.9**	**66.9**	**65.6**	**66.6**	**61.3**	**61.9**	**62.2**	**63.0**	**62.8**	**63.6**	**63.9**	**63.9**	**63.5**
OPEC[2]																	
Crude	31.5	31.4	30.1	29.6	29.0	29.3	29.5	28.2	25.6	24.1							
NGLs	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.2	5.1	5.2	5.2	5.3	5.3	5.3	5.3	5.3
Total OPEC	**36.9**	**36.9**	**35.6**	**35.1**	**34.4**	**34.7**	**34.9**	**33.6**	**30.8**	**29.2**							
Total Supply	**97.6**	**100.5**	**100.1**	**100.2**	**100.3**	**101.6**	**100.6**	**100.3**	**92.1**	**91.1**							
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	-0.4	0.1	0.0	0.6	0.1	-0.6	0.0	0.9	2.6	-0.3							
Government	-0.1	-0.1	0.1	-0.1	0.0	-0.1	0.0	0.0	0.3	-0.1							
Total	**-0.5**	**0.0**	**0.1**	**0.5**	**0.1**	**-0.7**	**0.0**	**0.9**	**2.9**	**-0.4**							
Floating storage/Oil in transit	0.4	0.0	-0.3	-0.1	0.0	0.9	0.1	0.5	0.7	-1.3							
Miscellaneous to balance[5]	-0.3	1.3	1.3	0.4	-0.6	0.4	0.4	4.8	5.5	-0.2							
Total Stock Ch. & Misc	**-0.5**	**1.3**	**1.1**	**0.9**	**-0.5**	**0.6**	**0.5**	**6.2**	**9.1**	**-1.9**							
Memo items:																	
Call on OPEC crude + Stock ch.[6]	31.9	30.1	29.1	28.7	29.5	28.7	29.0	22.0	16.6	26.0	27.3	23.0	26.6	26.5	29.1	29.9	28.0

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply. Includes Biofuels.
2 OPEC data based on today's membership throughout the time series.
3 Net volumetric gains and losses in the refining process and marine transportation losses.
4 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
5 Includes changes in non-reported stocks in OECD and non-OECD areas.
6 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.

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

	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021
OECD DEMAND																	
Americas	-	-	-0.1	-	-	-	-	-	-	-0.1	-0.2	-0.1	-0.2	-0.2	-	0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.2	-0.2	-	-0.1
Asia Oceania	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	0.1	-
Total OECD	**-**	**-**	**-0.2**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.2**	**-0.1**	**-0.1**	**-0.2**	**-0.3**	**-0.2**	**0.2**	**-0.1**
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	0.1	0.1	-	0.1
Other Asia	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-0.1	-0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-	-	-0.1
Africa	-	-	-	-	-	-	-	-	-	-	-0.1	-	0.1	-	0.1	0.1	0.1
Total Non-OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.1**	**-**	**-0.1**	**-**	**-**	**-0.1**	**-**	**-0.1**	**-**
Total Demand	**-**	**-**	**-0.1**	**-**	**-**	**-**	**-**	**-**	**0.1**	**-0.2**	**-0.2**	**-0.1**	**-0.2**	**-0.4**	**-0.2**	**0.1**	**-0.2**
OECD SUPPLY																	
Americas	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.2	0.3	0.2	0.2	0.2
Europe	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.1**	**-**	**0.2**	**0.2**	**0.3**	**0.2**	**0.2**
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.3	-	-	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas[2]	-	-	-	-	-	-	-	-	-	-	-0.2	-	-0.1	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**-**	**-**	**-**	**-0.1**	**-**	**-0.5**	**-**	**-**	**-**	**-0.1**
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC Supply	**0.1**	**-**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**-**	**-**	**-**	**-0.3**	**0.3**	**0.2**	**0.1**	**0.1**
OPEC																	
Crude[2]	-	-	-	-	-	-	-	-	-	-							
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**							
Total Supply	**0.1**	**-**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**-**	**-**							
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-0.1							
Government	-	-	-	-	-	-	-	-	-	-							
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-0.1**							
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-	0.2							
Miscellaneous to balance	-	-	0.2	0.1	0.1	-	0.1	0.1	-0.1	0.1							
Total Stock Ch. & Misc	**-**	**-**	**0.2**	**0.1**	**0.1**	**-**	**0.1**	**-**	**-0.1**	**0.2**							
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-0.2	-0.1	-0.1	-	-0.1	-	-	-0.2	-0.2	-0.1	0.1	-0.7	-0.4	-	-0.3

1 When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

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Table 2
SUMMARY OF GLOBAL OIL DEMAND

	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021
Demand (mb/d)																
Americas	25.73	25.29	25.47	26.02	25.82	25.65	24.33	20.01	22.76	23.38	22.62	23.19	23.70	24.92	25.08	24.23
Europe	14.32	14.02	14.20	14.68	14.09	14.25	13.35	10.99	12.84	12.51	12.42	12.65	13.20	13.69	13.71	13.31
Asia Oceania	7.95	8.22	7.41	7.55	7.99	7.79	7.75	6.54	6.69	7.45	7.11	7.76	6.99	7.17	7.70	7.41
Total OECD	**47.99**	**47.54**	**47.08**	**48.26**	**47.90**	**47.70**	**45.43**	**37.54**	**42.28**	**43.34**	**42.15**	**43.59**	**43.89**	**45.78**	**46.49**	**44.95**
Asia	27.03	27.71	28.16	27.64	28.46	27.99	25.56	25.69	27.36	28.35	26.75	28.33	28.60	28.25	28.99	28.54
Middle East	8.29	8.08	8.14	8.74	8.34	8.32	7.79	6.99	8.15	7.65	7.65	7.65	7.80	8.42	7.82	7.92
Americas	6.23	6.10	6.18	6.28	6.24	6.20	5.73	4.86	5.76	5.81	5.54	5.74	5.80	6.05	6.06	5.91
FSU	4.68	4.55	4.69	4.95	4.90	4.78	4.62	4.03	4.79	4.73	4.54	4.49	4.54	4.95	4.92	4.73
Africa	4.25	4.33	4.32	4.17	4.29	4.28	4.22	3.33	3.88	4.05	3.87	4.16	4.06	4.03	4.15	4.10
Europe	0.76	0.74	0.78	0.79	0.78	0.77	0.73	0.61	0.76	0.76	0.72	0.74	0.73	0.79	0.78	0.76
Total Non-OECD	**51.24**	**51.52**	**52.26**	**52.56**	**53.01**	**52.34**	**48.64**	**45.52**	**50.71**	**51.36**	**49.07**	**51.10**	**51.53**	**52.49**	**52.71**	**51.97**
World	**99.23**	**99.06**	**99.34**	**100.82**	**100.91**	**100.04**	**94.08**	**83.06**	**92.99**	**94.70**	**91.22**	**94.69**	**95.43**	**98.27**	**99.20**	**96.91**
of which: US50	20.50	20.36	20.46	20.72	20.63	20.54	19.32	16.08	18.36	18.64	18.10	18.37	18.88	19.96	20.12	19.34
Europe 5*	8.23	8.13	8.13	8.32	8.03	8.15	7.63	5.90	7.05	6.86	6.86	7.15	7.43	7.68	7.74	7.50
China	13.00	13.17	13.76	13.82	14.10	13.71	11.87	14.17	14.68	14.58	13.83	14.43	14.76	14.70	14.80	14.67
Japan	3.79	4.05	3.39	3.43	3.74	3.65	3.69	2.89	3.03	3.53	3.28	3.76	3.11	3.23	3.63	3.43
India	4.96	5.24	5.18	4.88	5.16	5.11	5.06	4.03	4.41	5.16	4.67	5.18	5.12	4.78	5.15	5.06
Russia	3.50	3.43	3.50	3.74	3.63	3.58	3.53	3.09	3.62	3.51	3.44	3.38	3.44	3.75	3.67	3.56
Brazil	2.98	2.96	2.99	3.11	3.12	3.04	2.92	2.60	2.96	2.99	2.87	2.87	2.95	3.04	3.07	2.98
Saudi Arabia	3.06	2.90	2.99	3.42	3.03	3.08	2.90	2.73	3.26	2.95	2.96	2.86	3.05	3.32	2.91	3.04
Canada	2.53	2.15	2.27	2.57	2.49	2.37	2.33	1.88	2.20	2.29	2.18	2.26	2.25	2.41	2.38	2.33
Korea	2.57	2.58	2.43	2.54	2.63	2.55	2.51	2.42	2.34	2.43	2.43	2.54	2.46	2.50	2.54	2.51
Mexico	2.01	2.07	2.08	2.06	2.00	2.05	1.97	1.48	1.59	1.78	1.70	1.84	1.90	1.87	1.89	1.88
Iran	1.98	1.99	1.95	1.95	2.02	1.98	1.86	1.68	1.81	1.76	1.78	1.85	1.78	1.87	1.86	1.84
Total	**69.11**	**69.03**	**69.13**	**70.55**	**70.56**	**69.83**	**65.57**	**58.95**	**65.29**	**66.49**	**64.08**	**66.51**	**67.13**	**69.11**	**69.76**	**68.14**
% of World	**69.6%**	**69.7%**	**69.6%**	**70.0%**	**69.9%**	**69.8%**	**69.7%**	**71.0%**	**70.2%**	**70.2%**	**70.3%**	**70.2%**	**70.3%**	**70.3%**	**70.3%**	**70.3%**
Annual Change (% per annum)																
Americas	2.4	-0.9	-0.2	-0.1	0.1	-0.3	-3.8	-21.4	-12.5	-9.4	-11.8	-4.7	18.5	9.5	7.3	7.1
Europe	-0.7	-0.7	-0.6	-0.2	-0.5	-0.5	-4.8	-22.6	-12.6	-11.2	-12.8	-5.3	20.1	6.6	9.5	7.2
Asia Oceania	-2.4	-4.1	-2.7	-1.1	0.1	-2.0	-5.7	-11.7	-11.5	-6.7	-8.8	0.1	6.9	7.3	3.4	4.2
Total OECD	**0.7**	**-1.4**	**-0.7**	**-0.3**	**-0.1**	**-0.6**	**-4.4**	**-20.3**	**-12.4**	**-9.5**	**-11.6**	**-4.1**	**16.9**	**8.3**	**7.3**	**6.6**
Asia	3.2	3.9	3.4	2.8	4.2	3.6	-7.8	-8.8	-1.0	-0.4	-4.5	10.8	11.4	3.2	2.2	6.7
Middle East	-0.1	0.3	-2.7	1.3	3.0	0.4	-3.5	-14.1	-6.7	-8.3	-8.1	-1.8	11.6	3.2	2.2	3.6
Americas	-2.3	-0.6	0.0	-0.5	-0.6	-0.4	-6.1	-21.3	-8.2	-6.8	-10.6	0.3	19.2	5.0	4.2	6.7
FSU	0.6	2.2	2.0	1.6	2.0	1.9	1.4	-14.0	-3.3	-3.6	-4.9	-2.8	12.7	3.4	4.0	4.0
Africa	2.3	0.5	1.1	0.5	0.1	0.6	-2.7	-22.8	-6.9	-5.6	-9.5	-1.3	21.6	3.8	2.6	5.9
Europe	-0.7	1.6	4.8	2.4	-0.8	2.0	-0.9	-20.8	-2.9	-2.5	-6.8	0.3	18.8	3.4	2.9	5.8
Total Non-OECD	**1.6**	**2.3**	**1.7**	**1.8**	**2.8**	**2.2**	**-5.6**	**-12.9**	**-3.5**	**-3.1**	**-6.3**	**5.1**	**13.2**	**3.5**	**2.6**	**5.9**
World	**1.2**	**0.5**	**0.5**	**0.8**	**1.4**	**0.8**	**-5.0**	**-16.4**	**-7.8**	**-6.2**	**-8.8**	**0.7**	**14.9**	**5.7**	**4.8**	**6.2**
Annual Change (mb/d)																
Americas	0.61	-0.22	-0.06	-0.04	0.03	-0.07	-0.96	-5.46	-3.26	-2.44	-3.03	-1.15	3.69	2.16	1.70	1.61
Europe	-0.10	-0.09	-0.08	-0.03	-0.07	-0.07	-0.68	-3.21	-1.85	-1.58	-1.83	-0.70	2.21	0.85	1.19	0.89
Asia Oceania	-0.20	-0.36	-0.21	-0.08	0.00	-0.16	-0.47	-0.86	-0.87	-0.54	-0.68	0.01	0.45	0.49	0.26	0.30
Total OECD	**0.32**	**-0.67**	**-0.35**	**-0.15**	**-0.04**	**-0.30**	**-2.11**	**-9.54**	**-5.97**	**-4.56**	**-5.54**	**-1.84**	**6.35**	**3.50**	**3.15**	**2.80**
Asia	0.85	1.04	0.93	0.74	1.14	0.96	-2.15	-2.47	-0.28	-0.10	-1.25	2.77	2.92	0.89	0.63	1.80
Middle East	-0.01	0.02	-0.23	0.11	0.24	0.04	-0.28	-1.15	-0.58	-0.69	-0.68	-0.14	0.81	0.26	0.17	0.27
Americas	-0.15	-0.04	0.00	-0.03	-0.04	-0.03	-0.37	-1.32	-0.52	-0.42	-0.66	0.02	0.93	0.29	0.24	0.37
FSU	0.03	0.10	0.09	0.08	0.10	0.09	0.06	-0.66	-0.16	-0.18	-0.23	-0.13	0.51	0.16	0.19	0.18
Africa	0.09	0.02	0.05	0.02	0.01	0.03	-0.12	-0.98	-0.29	-0.24	-0.41	-0.06	0.72	0.15	0.11	0.23
Europe	-0.01	0.01	0.04	0.02	-0.01	0.01	-0.01	-0.16	-0.02	-0.02	-0.05	0.00	0.12	0.03	0.02	0.04
Total Non-OECD	**0.81**	**1.16**	**0.88**	**0.94**	**1.44**	**1.11**	**-2.87**	**-6.74**	**-1.85**	**-1.65**	**-3.27**	**2.46**	**6.01**	**1.78**	**1.36**	**2.90**
World	**1.13**	**0.49**	**0.53**	**0.79**	**1.41**	**0.81**	**-4.98**	**-16.27**	**-7.83**	**-6.21**	**-8.82**	**0.61**	**12.36**	**5.28**	**4.51**	**5.69**
Revisions to Oil Demand from Last Month's Report (mb/d)																
Americas	0.00	-0.15	-0.04	0.00	0.00	-0.05	-0.01	-0.03	-0.15	-0.19	-0.09	-0.17	-0.15	-0.03	0.11	-0.06
Europe	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	-0.04	-0.01	-0.17	-0.16	-0.15	0.04	-0.11
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	0.11	0.02	0.12	0.00	0.00	0.05	0.04
Total OECD	**-0.00**	**-0.16**	**-0.04**	**0.00**	**-0.01**	**-0.05**	**-0.01**	**-0.02**	**-0.20**	**-0.12**	**-0.09**	**-0.21**	**-0.31**	**-0.19**	**0.20**	**-0.13**
Asia	0.00	0.02	0.01	0.00	0.02	0.01	0.05	0.14	0.04	0.16	0.10	0.08	0.01	0.07	-0.01	0.04
Middle East	0.00	0.01	0.01	0.01	0.02	0.01	0.02	-0.01	0.02	-0.07	-0.01	-0.12	-0.13	-0.05	-0.05	-0.09
Americas	0.01	0.01	0.01	0.01	0.01	0.01	-0.01	-0.01	0.01	-0.06	-0.02	-0.03	-0.02	-0.06	-0.08	-0.05
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.01	0.01	0.02	0.02	0.02	0.02
Africa	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.02	-0.07	-0.03	0.05	0.04	0.05	0.06	0.05
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Total Non-OECD	**0.01**	**0.04**	**0.03**	**0.02**	**0.04**	**0.03**	**0.04**	**0.12**	**0.04**	**-0.07**	**0.03**	**-0.02**	**-0.09**	**0.02**	**-0.07**	**-0.04**
World	**0.01**	**-0.11**	**-0.01**	**0.02**	**0.03**	**-0.02**	**0.04**	**0.10**	**-0.16**	**-0.18**	**-0.05**	**-0.23**	**-0.40**	**-0.16**	**0.13**	**-0.17**
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	-0.10	-0.04	0.05	0.00	-0.02	0.15	0.11	-0.19	-0.21	-0.04	-0.27	-0.50	0.00	0.32	-0.11

* France, Germany, Italy, Spain and UK

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Table 2a
OECD REGIONAL OIL DEMAND[1]
(million barrels per day)

	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20 [2]	Latest month vs. Aug 20	Latest month vs. Sep 19
Americas											
LPG and ethane	3.70	3.84	4.10	4.13	3.50	3.53	3.62	3.43	3.54	0.12	-0.12
Naphtha	0.32	0.24	0.22	0.25	0.21	0.23	0.24	0.24	0.22	-0.02	-0.05
Motor gasoline	11.17	11.09	10.99	10.16	8.38	10.03	9.97	10.01	10.12	0.11	-0.87
Jet and kerosene	2.03	2.08	2.08	1.87	0.78	1.12	1.12	1.18	1.06	-0.11	-1.01
Gasoil/diesel oil	5.43	5.41	5.43	5.26	4.56	4.81	4.72	4.78	4.93	0.15	-0.26
Residual fuel oil	0.60	0.56	0.49	0.41	0.38	0.53	0.53	0.54	0.52	-0.02	-0.06
Other products	2.48	2.43	2.51	2.25	2.20	2.50	2.41	2.71	2.38	-0.33	-0.24
Total	**25.73**	**25.65**	**25.82**	**24.33**	**20.01**	**22.76**	**22.62**	**22.88**	**22.78**	**-0.10**	**-2.60**
Europe											
LPG and ethane	1.19	1.17	1.11	1.22	0.97	1.10	1.10	1.11	1.10	-0.01	0.01
Naphtha	1.04	1.01	1.02	1.06	1.06	1.02	1.09	1.02	0.94	-0.08	0.07
Motor gasoline	2.00	2.04	2.04	1.82	1.45	2.06	2.10	2.06	2.03	-0.03	-0.07
Jet and kerosene	1.52	1.55	1.48	1.25	0.40	0.67	0.59	0.71	0.72	0.02	-1.03
Gasoil/diesel oil	6.45	6.45	6.53	6.22	5.35	6.03	6.11	5.70	6.28	0.58	-0.38
Residual fuel oil	0.88	0.83	0.75	0.71	0.64	0.68	0.68	0.67	0.70	0.02	-0.11
Other products	1.25	1.20	1.17	1.06	1.11	1.27	1.27	1.18	1.35	0.17	0.03
Total	**14.32**	**14.25**	**14.09**	**13.35**	**10.99**	**12.84**	**12.94**	**12.45**	**13.12**	**0.67**	**-1.48**
Asia Oceania											
LPG and ethane	0.73	0.76	0.80	0.82	0.69	0.67	0.67	0.66	0.67	0.01	-0.01
Naphtha	1.99	1.96	1.96	1.93	1.75	1.80	1.79	1.80	1.80	0.00	-0.14
Motor gasoline	1.55	1.53	1.52	1.40	1.25	1.47	1.45	1.51	1.46	-0.05	-0.08
Jet and kerosene	0.92	0.91	1.00	0.99	0.40	0.37	0.37	0.36	0.37	0.01	-0.42
Gasoil/diesel oil	1.90	1.92	1.96	1.83	1.78	1.77	1.77	1.71	1.82	0.12	0.03
Residual fuel oil	0.51	0.42	0.43	0.45	0.41	0.39	0.38	0.36	0.42	0.07	0.05
Other products	0.35	0.29	0.31	0.32	0.26	0.23	0.19	0.25	0.24	-0.01	-0.10
Total	**7.95**	**7.79**	**7.99**	**7.75**	**6.54**	**6.69**	**6.62**	**6.65**	**6.80**	**0.15**	**-0.67**
OECD											
LPG and ethane	5.62	5.77	6.02	6.18	5.16	5.30	5.39	5.20	5.31	0.12	-0.12
Naphtha	3.34	3.21	3.20	3.25	3.03	3.05	3.12	3.06	2.96	-0.10	-0.13
Motor gasoline	14.71	14.66	14.55	13.38	11.08	13.57	13.52	13.58	13.61	0.04	-1.03
Jet and kerosene	4.47	4.55	4.56	4.11	1.58	2.16	2.07	2.24	2.15	-0.09	-2.45
Gasoil/diesel oil	13.77	13.77	13.92	13.31	11.69	12.60	12.59	12.19	13.04	0.85	-0.61
Residual fuel oil	1.99	1.81	1.66	1.57	1.43	1.60	1.60	1.57	1.64	0.07	-0.11
Other products	4.08	3.93	3.98	3.63	3.57	4.00	3.88	4.14	3.98	-0.17	-0.31
Total	**47.99**	**47.70**	**47.90**	**45.43**	**37.54**	**42.28**	**42.18**	**41.98**	**42.70**	**0.72**	**-4.76**

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

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Table 2b
OIL DEMAND IN SELECTED OECD COUNTRIES[1]
(million barrels per day)

	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20 [2]	Latest month vs. Aug 20	Latest month vs. Sep 19
United States[3]											
LPG and ethane	2.87	2.94	3.18	3.22	2.71	2.69	2.80	2.63	2.63	0.00	-0.19
Naphtha	0.23	0.21	0.19	0.20	0.16	0.19	0.20	0.20	0.17	-0.03	-0.05
Motor gasoline	9.33	9.31	9.16	8.49	7.11	8.50	8.46	8.51	8.55	0.04	-0.65
Jet and kerosene	1.71	1.75	1.76	1.58	0.69	0.97	0.97	1.03	0.93	-0.10	-0.78
Gasoil/diesel oil	4.15	4.10	4.12	3.96	3.51	3.70	3.61	3.66	3.82	0.16	-0.10
Residual fuel oil	0.32	0.28	0.27	0.17	0.15	0.32	0.34	0.31	0.32	0.02	0.02
Other products	1.89	1.96	1.95	1.70	1.75	1.99	1.95	2.11	1.89	-0.22	-0.18
Total	**20.50**	**20.54**	**20.63**	**19.32**	**16.08**	**18.36**	**18.32**	**18.44**	**18.31**	**-0.13**	**-1.94**
Japan											
LPG and ethane	0.37	0.35	0.36	0.40	0.31	0.27	0.28	0.26	0.28	0.02	0.02
Naphtha	0.73	0.73	0.76	0.70	0.62	0.66	0.63	0.68	0.67	-0.01	-0.02
Motor gasoline	0.88	0.85	0.84	0.78	0.69	0.85	0.82	0.89	0.85	-0.04	-0.06
Jet and kerosene	0.50	0.48	0.55	0.61	0.22	0.19	0.19	0.20	0.19	-0.01	-0.19
Diesel	0.44	0.44	0.44	0.41	0.39	0.40	0.40	0.39	0.42	0.02	-0.03
Other gasoil	0.34	0.33	0.34	0.34	0.29	0.28	0.29	0.26	0.28	0.02	-0.02
Residual fuel oil	0.27	0.23	0.24	0.23	0.20	0.19	0.19	0.17	0.20	0.03	-0.03
Other products	0.26	0.24	0.22	0.23	0.18	0.18	0.18	0.19	0.17	-0.02	-0.09
Total	**3.79**	**3.65**	**3.74**	**3.69**	**2.89**	**3.03**	**2.98**	**3.04**	**3.06**	**0.02**	**-0.41**
Germany											
LPG and ethane	0.11	0.12	0.11	0.11	0.11	0.11	0.10	0.12	0.10	-0.01	-0.02
Naphtha	0.27	0.27	0.30	0.29	0.27	0.27	0.30	0.28	0.21	-0.06	0.01
Motor gasoline	0.49	0.50	0.50	0.46	0.39	0.49	0.51	0.48	0.48	0.00	-0.03
Jet and kerosene	0.22	0.22	0.21	0.18	0.06	0.09	0.08	0.09	0.09	0.00	-0.14
Diesel	0.76	0.77	0.76	0.72	0.65	0.75	0.77	0.70	0.77	0.07	-0.01
Other gasoil	0.31	0.35	0.33	0.44	0.44	0.26	0.29	0.20	0.27	0.07	-0.08
Residual fuel oil	0.06	0.05	0.04	0.04	0.04	0.04	0.06	0.03	0.04	0.00	0.00
Other products	0.10	0.09	0.08	0.08	0.07	0.09	0.09	0.07	0.12	0.04	0.00
Total	**2.33**	**2.36**	**2.33**	**2.32**	**2.03**	**2.09**	**2.21**	**1.98**	**2.09**	**0.11**	**-0.26**
Italy											
LPG and ethane	0.10	0.10	0.11	0.11	0.07	0.09	0.09	0.09	0.09	0.01	0.00
Naphtha	0.13	0.10	0.10	0.08	0.09	0.11	0.11	0.11	0.11	0.00	0.00
Motor gasoline	0.18	0.18	0.19	0.15	0.13	0.20	0.20	0.19	0.20	0.00	-0.01
Jet and kerosene	0.11	0.11	0.11	0.07	0.03	0.06	0.05	0.06	0.06	0.00	-0.08
Diesel	0.47	0.44	0.45	0.36	0.27	0.41	0.44	0.37	0.43	0.06	-0.01
Other gasoil	0.08	0.07	0.08	0.06	0.07	0.07	0.07	0.06	0.08	0.02	0.00
Residual fuel oil	0.07	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.00	-0.01
Other products	0.14	0.14	0.14	0.12	0.12	0.15	0.16	0.13	0.15	0.02	-0.01
Total	**1.27**	**1.20**	**1.23**	**1.02**	**0.82**	**1.14**	**1.19**	**1.07**	**1.17**	**0.11**	**-0.12**
France											
LPG and ethane	0.12	0.13	0.13	0.14	0.10	0.13	0.13	0.13	0.13	0.00	0.03
Naphtha	0.10	0.11	0.08	0.11	0.14	0.11	0.13	0.11	0.10	-0.01	0.01
Motor gasoline	0.19	0.20	0.20	0.18	0.13	0.22	0.24	0.22	0.21	-0.01	0.01
Jet and kerosene	0.17	0.17	0.16	0.14	0.04	0.08	0.07	0.09	0.09	0.00	-0.10
Diesel	0.69	0.68	0.69	0.65	0.54	0.75	0.80	0.68	0.78	0.09	0.09
Other gasoil	0.24	0.23	0.23	0.22	0.16	0.07	0.07	0.06	0.07	0.01	-0.22
Residual fuel oil	0.05	0.05	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.00	-0.02
Other products	0.12	0.12	0.11	0.08	0.08	0.11	0.12	0.09	0.13	0.04	-0.01
Total	**1.69**	**1.69**	**1.63**	**1.54**	**1.22**	**1.52**	**1.59**	**1.42**	**1.54**	**0.13**	**-0.21**
United Kingdom											
LPG and ethane	0.15	0.14	0.10	0.15	0.13	0.12	0.12	0.12	0.11	-0.01	0.02
Naphtha	0.03	0.03	0.03	0.04	0.05	0.03	0.04	0.02	0.03	0.01	-0.01
Motor gasoline	0.28	0.29	0.29	0.27	0.14	0.23	0.20	0.25	0.25	0.00	-0.04
Jet and kerosene	0.33	0.33	0.33	0.32	0.11	0.13	0.10	0.13	0.15	0.02	-0.20
Diesel	0.52	0.51	0.51	0.49	0.31	0.43	0.39	0.45	0.45	0.00	-0.08
Other gasoil	0.14	0.14	0.14	0.12	0.11	0.12	0.10	0.12	0.14	0.02	0.00
Residual fuel oil	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00
Other products	0.12	0.12	0.11	0.10	0.08	0.11	0.10	0.11	0.11	0.01	-0.01
Total	**1.61**	**1.57**	**1.52**	**1.52**	**0.96**	**1.18**	**1.08**	**1.20**	**1.25**	**0.05**	**-0.31**
Canada											
LPG and ethane	0.39	0.44	0.43	0.41	0.41	0.41	0.40	0.37	0.48	0.11	0.08
Naphtha	0.05	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.00	0.00
Motor gasoline	0.88	0.83	0.89	0.78	0.62	0.80	0.79	0.76	0.84	0.08	-0.05
Jet and kerosene	0.16	0.18	0.17	0.14	0.04	0.06	0.07	0.07	0.05	-0.02	-0.18
Diesel	0.26	0.26	0.26	0.27	0.27	0.26	0.26	0.26	0.27	0.01	0.01
Other gasoil	0.37	0.34	0.35	0.33	0.24	0.30	0.28	0.32	0.31	-0.01	-0.07
Residual fuel oil	0.04	0.04	0.03	0.04	0.03	0.02	0.02	0.03	0.01	-0.02	-0.01
Other products	0.37	0.26	0.34	0.34	0.25	0.33	0.28	0.41	0.30	-0.11	-0.03
Total	**2.53**	**2.37**	**2.49**	**2.33**	**1.88**	**2.20**	**2.10**	**2.23**	**2.28**	**0.05**	**-0.26**

1 Demand, measured as deliveries from refineries and primary stocks, comprises inland deliveries, international bunkers and refinery fuel. It includes crude for direct burning, oil from non-conventional sources and other sources of supply. Jet/kerosene comprises jet kerosene and non-aviation kerosene. Gasoil comprises diesel, light heating oil and other gasoils.
2 Latest official OECD submissions (MOS).
3 US figures exclude US territories.

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Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2019	2020	2021	2Q20	3Q20	4Q20	1Q21	2Q21	Sep 20	Oct 20	Nov 20
OPEC											
Crude Oil											
Saudi Arabia	9.80			9.31	8.78				8.98	8.98	8.99
Iran	2.36			1.95	1.94				1.96	1.93	1.96
Iraq	4.71			4.13	3.69				3.67	3.82	3.81
UAE	3.18			2.87	2.84				2.58	2.42	2.50
Kuwait	2.68			2.42	2.25				2.30	2.30	2.30
Angola	1.39			1.26	1.24				1.22	1.20	1.19
Nigeria	1.73			1.57	1.37				1.35	1.35	1.33
Libya	1.09			0.08	0.11				0.14	0.45	1.04
Algeria	1.02			0.87	0.84				0.86	0.86	0.86
Congo	0.33			0.31	0.30				0.30	0.27	0.29
Gabon	0.21			0.21	0.19				0.19	0.20	0.20
Equatorial Guinea	0.11			0.11	0.11				0.10	0.11	0.10
Venezuela	0.87			0.52	0.40				0.43	0.40	0.45
Total Crude Oil	**29.49**			**25.61**	**24.08**				**24.08**	**24.29**	**25.02**
of which Neutral Zone [1]	*0.00*			*0.10*	*0.13*				*0.18*	*0.20*	*0.20*
Total NGLs [2]	**5.44**	**5.24**	**5.32**	**5.20**	**5.12**	**5.20**	**5.29**	**5.33**	**5.16**	**5.18**	**5.20**
Total OPEC [3]	**34.94**			**30.81**	**29.20**				**29.24**	**29.47**	**30.22**
NON-OPEC [4]											
OECD											
Americas	24.65	23.78	23.57	22.77	23.14	23.55	23.58	23.45	23.25	23.05	23.74
United States	17.16	16.57	16.06	15.87	16.27	16.19	16.12	16.09	16.31	15.90	16.32
Mexico	1.93	1.93	1.94	1.92	1.90	1.91	1.94	1.93	1.92	1.89	1.92
Canada	5.54	5.27	5.56	4.96	4.96	5.44	5.52	5.42	5.01	5.25	5.49
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	3.33	3.53	3.65	3.56	3.37	3.52	3.69	3.57	3.13	3.35	3.58
UK	1.13	1.05	1.01	1.12	0.95	1.00	1.03	0.95	0.90	0.98	1.01
Norway	1.74	2.01	2.17	2.00	1.96	2.03	2.18	2.13	1.78	1.88	2.08
Others	0.47	0.47	0.47	0.43	0.46	0.49	0.48	0.48	0.46	0.48	0.49
Asia Oceania	0.53	0.54	0.56	0.54	0.54	0.55	0.56	0.56	0.53	0.55	0.55
Australia	0.46	0.47	0.49	0.47	0.47	0.48	0.49	0.49	0.47	0.48	0.48
Others	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Total OECD	**28.51**	**27.85**	**27.79**	**26.86**	**27.05**	**27.63**	**27.83**	**27.57**	**26.92**	**26.95**	**27.87**
NON-OECD											
Former USSR	14.64	13.48	13.59	13.24	12.78	13.11	13.34	13.66	12.99	13.12	13.19
Russia	11.58	10.59	10.71	10.35	10.08	10.31	10.50	10.76	10.31	10.34	10.35
Azerbaijan	0.77	0.70	0.72	0.69	0.66	0.68	0.71	0.73	0.65	0.68	0.69
Kazakhstan	1.94	1.83	1.81	1.84	1.69	1.76	1.78	1.82	1.67	1.76	1.80
Others	0.35	0.36	0.35	0.36	0.36	0.35	0.35	0.35	0.36	0.36	0.35
Asia	7.20	7.02	6.93	6.99	6.94	6.96	7.02	6.99	6.89	6.94	6.96
China	3.92	3.98	3.93	3.98	3.98	3.97	3.99	3.98	3.99	3.94	4.00
Malaysia	0.67	0.61	0.66	0.56	0.58	0.62	0.65	0.67	0.58	0.62	0.59
India	0.80	0.74	0.69	0.74	0.73	0.71	0.70	0.70	0.71	0.72	0.71
Indonesia	0.77	0.73	0.71	0.74	0.72	0.73	0.72	0.72	0.69	0.73	0.73
Others	1.04	0.96	0.93	0.96	0.93	0.93	0.95	0.93	0.92	0.94	0.92
Europe	0.12	0.11	0.10	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.11
Americas	5.34	5.34	5.59	5.11	5.40	5.22	5.49	5.62	5.27	5.26	5.16
Brazil	2.90	3.05	3.25	3.01	3.14	2.91	3.13	3.27	3.02	2.98	2.85
Argentina	0.65	0.61	0.61	0.58	0.60	0.60	0.61	0.61	0.60	0.60	0.60
Colombia	0.89	0.79	0.75	0.76	0.75	0.76	0.76	0.75	0.76	0.76	0.76
Ecuador	0.54	0.49	0.54	0.36	0.52	0.52	0.53	0.54	0.52	0.51	0.52
Others	0.36	0.40	0.45	0.39	0.39	0.42	0.46	0.45	0.39	0.40	0.42
Middle East	3.19	3.14	3.21	3.15	3.10	3.14	3.17	3.21	3.11	3.14	3.14
Oman	0.98	0.96	0.99	0.95	0.92	0.95	0.96	0.99	0.93	0.95	0.95
Qatar	1.91	1.89	1.92	1.90	1.90	1.90	1.92	1.92	1.90	1.90	1.90
Others	0.31	0.29	0.30	0.29	0.28	0.29	0.30	0.30	0.29	0.29	0.29
Africa	1.48	1.38	1.28	1.41	1.37	1.33	1.30	1.29	1.35	1.34	1.36
Egypt	0.63	0.60	0.56	0.61	0.59	0.58	0.58	0.57	0.58	0.59	0.58
Others	0.85	0.78	0.72	0.81	0.78	0.75	0.72	0.72	0.77	0.76	0.77
Total Non-OECD	**31.98**	**30.47**	**30.70**	**30.01**	**29.70**	**29.87**	**30.43**	**30.88**	**29.72**	**29.92**	**29.91**
Processing gains [5]	2.35	2.11	2.26	1.98	2.10	2.12	2.20	2.24	2.09	2.06	2.13
Global Biofuels	2.78	2.57	2.80	2.47	3.04	2.58	2.30	2.89	3.08	2.82	2.58
TOTAL NON-OPEC	**65.61**	**63.01**	**63.55**	**61.32**	**61.89**	**62.20**	**62.77**	**63.58**	**61.80**	**61.75**	**62.49**
TOTAL SUPPLY	**100.55**			**92.12**	**91.09**				**91.05**	**91.22**	**92.71**

1 Neutral Zone production is already included in Saudi Arabia and Kuwait production with their respective shares.
2 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. NGLs in Qatar and Nigeria and non-oil inputs to Saudi Arabian MTBE.
3 OPEC data based on today's membership throughout the time series.
4 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
5 Net volumetric gains and losses in refining and marine transportation losses.

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Table 3a
OIL SUPPLY IN OECD COUNTRIES[1]
(thousand of barrels per day)

	2019	2020	2021	2Q20	3Q20	4Q20	1Q21	2Q21	Sep 20	Oct 20	Nov 20
United States											
Alaska	466	449	436	409	443	466	462	442	442	463	469
California	455	408	377	413	392	387	383	379	386	390	387
Texas	5070	4876	4480	4734	4686	4687	4589	4489	4628	4695	4678
Federal Gulf of Mexico[2]	1897	1672	1860	1695	1450	1584	1800	1857	1510	1196	1744
Other US Lower 48	4360	3929	3744	3564	3830	3854	3800	3754	3895	3871	3844
NGLs[3]	4825	5121	5002	4956	5334	5067	4935	4996	5309	5146	5053
Other Hydrocarbons	92	116	164	101	130	144	150	170	143	140	145
Total	**17164**	**16570**	**16063**	**15872**	**16266**	**16189**	**16119**	**16087**	**16312**	**15900**	**16321**
Canada											
Alberta Light/Medium/Heavy	487	421	392	367	411	412	395	393	411	413	412
Alberta Bitumen	1837	1703	1920	1462	1662	1829	1786	1788	1668	1824	1819
Saskatchewan	487	442	454	385	421	468	460	456	437	455	475
Other Crude	489	490	491	504	459	477	487	485	457	459	487
NGLs	961	949	990	950	911	964	991	1026	891	926	981
Other Upgraders	172	170	177	174	148	174	188	171	153	158	178
Synthetic Crudes	1111	1093	1139	1122	952	1118	1209	1104	989	1018	1144
Total	**5544**	**5266**	**5562**	**4964**	**4964**	**5442**	**5517**	**5424**	**5006**	**5253**	**5495**
Mexico											
Crude	1705	1722	1740	1710	1696	1712	1733	1727	1716	1698	1711
NGLs	217	208	197	208	204	199	202	199	204	189	204
Total	**1926**	**1933**	**1939**	**1922**	**1903**	**1914**	**1938**	**1928**	**1923**	**1890**	**1918**
UK											
Brent Fields	44	35	28	40	33	30	33	31	37	22	35
Forties Fields	327	292	226	307	257	262	255	191	242	269	259
Ninian Fields	37	32	24	37	31	29	28	21	26	30	29
Flotta Fields	57	51	44	55	47	47	46	42	50	46	46
Other Fields	582	562	609	593	509	554	596	593	485	521	565
NGLs	79	80	75	90	73	81	77	76	57	96	72
Total	**1126**	**1053**	**1007**	**1121**	**950**	**1002**	**1034**	**954**	**898**	**985**	**1005**
Norway[5]											
Ekofisk-Ula Area	138	133	142	125	131	133	147	142	130	130	132
Oseberg-Troll Area	259	226	218	233	204	207	218	213	159	189	216
Statfjord-Gullfaks Area	237	240	266	244	251	226	251	262	232	193	245
Haltenbanken Area	287	277	294	272	265	278	287	291	267	272	280
Sleipner-Frigg Area	429	732	800	745	725	764	797	798	622	747	752
Other Fields	91	118	188	95	105	159	207	161	100	94	180
NGLs	299	285	260	287	278	268	273	266	268	253	277
Total	**1740**	**2011**	**2168**	**2001**	**1959**	**2035**	**2180**	**2133**	**1777**	**1878**	**2084**
Other OECD Europe											
Denmark	101	73	67	70	70	71	70	68	68	71	71
Italy	78	77	95	71	77	83	92	96	77	81	84
Turkey	58	62	63	61	63	63	63	63	64	63	63
Other	104	93	98	86	89	104	101	99	87	105	104
NGLs	8	7	6	6	6	6	6	6	7	6	6
Non-Conventional Oils	118	155	146	141	158	157	146	146	153	156	159
Total	**466**	**465**	**475**	**435**	**462**	**485**	**479**	**478**	**456**	**482**	**487**
Australia											
Gippsland Basin	9	8	7	9	7	7	7	7	7	7	7
Cooper-Eromanga Basin	34	36	33	36	35	35	34	33	35	35	35
Carnarvon Basin	72	108	121	110	118	124	123	122	125	125	124
Other Crude	246	203	205	202	188	196	200	202	174	193	192
NGLs	98	116	128	111	122	122	122	126	124	121	121
Total	**458**	**470**	**493**	**468**	**470**	**484**	**486**	**490**	**466**	**481**	**479**
Other OECD Asia Oceania											
New Zealand	24	19	19	18	18	20	19	19	20	20	20
Japan	4	4	5	4	5	5	5	5	5	5	5
NGLs	12	11	10	11	11	10	10	10	11	10	10
Non-Conventional Oils	28	36	36	36	36	36	36	36	34	36	37
Total	**69**	**70**	**69**	**70**	**70**	**71**	**70**	**69**	**69**	**70**	**72**
OECD											
Crude Oil	20473	19491	19445	18657	18678	19272	19477	19229	18561	18684	19472
NGLs	6508	6785	6676	6627	6949	6725	6624	6711	6879	6755	6732
Non-Conventional Oils[4]	1526	1572	1665	1578	1426	1632	1731	1632	1476	1510	1666
Total	**28506**	**27848**	**27786**	**26863**	**27053**	**27630**	**27833**	**27572**	**26916**	**26949**	**27870**

1 Subcategories refer to crude oil only unless otherwise noted.
2 Only production from Federal waters is included.
3 To the extent possible, condensates from natural gas processing plants are included with NGLs, while field condensates are counted as crude oil.
4 Does not include biofuels.
5 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.
6 Other North Sea NGLs is included.

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Table 4
OECD STOCKS AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jun2020	Jul2020	Aug2020	Sep2020	Oct2020*	Oct2017	Oct2018	Oct2019	4Q2019	1Q2020	2Q2020	3Q2020
OECD INDUSTRY-CONTROLLED STOCKS[1]												
OECD Americas												
Crude	692.5	676.4	666.7	658.7	651.6	617.1	597.1	583.4	-0.01	0.71	0.52	-0.37
Motor Gasoline	280.9	276.6	263.4	256.1	256.1	247.3	261.8	250.9	0.24	0.11	-0.10	-0.27
Middle Distillate	240.3	243.2	242.0	235.8	214.5	200.9	196.8	184.6	0.02	-0.14	0.54	-0.05
Residual Fuel Oil	46.7	43.1	41.5	38.5	38.2	35.8	34.9	34.9	0.00	0.04	0.07	-0.09
Total Products[3]	819.2	828.3	825.2	817.5	780.0	722.6	734.7	725.8	-0.14	-0.19	0.90	-0.02
Total[4]	**1713.3**	**1712.0**	**1701.5**	**1690.9**	**1644.5**	**1540.0**	**1535.3**	**1521.2**	**-0.38**	**0.56**	**1.51**	**-0.24**
OECD Europe												
Crude	377.5	383.1	368.4	378.8	378.4	336.6	340.2	358.4	-0.04	0.13	0.15	0.01
Motor Gasoline	99.8	94.4	95.1	90.2	91.9	90.7	85.6	87.3	0.06	0.09	0.00	-0.10
Middle Distillate	339.4	334.3	349.2	333.0	335.3	277.7	246.1	267.0	-0.03	0.17	0.51	-0.07
Residual Fuel Oil	74.2	74.2	71.4	68.6	65.5	63.3	55.2	66.4	-0.07	0.13	0.04	-0.06
Total Products[3]	631.3	621.2	636.6	611.5	606.7	543.7	500.5	532.2	-0.03	0.44	0.50	-0.22
Total[4]	**1098.9**	**1093.0**	**1092.4**	**1078.6**	**1067.9**	**954.2**	**919.9**	**974.9**	**-0.11**	**0.61**	**0.72**	**-0.22**
OECD Asia Oceania												
Crude	158.8	170.3	166.8	163.8	168.8	188.4	157.2	146.1	0.13	-0.25	0.29	0.05
Motor Gasoline	26.9	27.4	27.8	28.2	28.6	22.9	27.5	26.2	0.00	0.01	-0.01	0.01
Middle Distillate	67.6	72.0	79.2	72.7	74.3	72.5	74.5	73.9	-0.08	-0.04	-0.02	0.06
Residual Fuel Oil	17.4	18.3	16.5	17.2	16.3	20.4	18.0	20.1	-0.04	0.02	-0.01	0.00
Total Products[3]	179.0	183.4	193.0	186.0	184.2	182.6	184.7	184.2	-0.20	0.00	0.04	0.08
Total[4]	**402.3**	**416.0**	**425.3**	**414.3**	**416.2**	**435.1**	**407.0**	**396.9**	**-0.08**	**-0.27**	**0.37**	**0.13**
Total OECD												
Crude	1228.8	1229.8	1201.9	1201.3	1198.8	1142.1	1094.5	1087.8	0.09	0.59	0.97	-0.30
Motor Gasoline	407.6	398.3	386.3	374.6	376.6	360.9	374.8	364.4	0.30	0.21	-0.11	-0.36
Middle Distillate	647.3	649.5	670.3	641.5	624.0	551.1	517.4	525.4	-0.08	0.00	1.03	-0.06
Residual Fuel Oil	138.3	135.7	129.5	124.4	119.9	119.5	108.0	121.3	-0.10	0.18	0.09	-0.15
Total Products[3]	1629.5	1632.9	1654.8	1615.0	1570.9	1448.9	1419.8	1442.3	-0.37	0.26	1.44	-0.16
Total[4]	**3214.4**	**3221.0**	**3219.2**	**3183.8**	**3128.5**	**2929.2**	**2862.2**	**2893.0**	**-0.57**	**0.89**	**2.61**	**-0.33**
OECD GOVERNMENT-CONTROLLED STOCKS[5]												
OECD Americas												
Crude	656.0	656.1	647.5	642.2	639.0	669.0	654.8	641.2	-0.11	0.00	0.23	-0.15
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
OECD Europe												
Crude	208.8	207.8	207.8	207.7	206.0	207.4	213.1	207.9	0.01	-0.01	0.02	-0.01
Products	276.5	281.5	281.4	280.5	282.4	266.3	268.1	273.6	-0.01	0.03	0.01	0.04
OECD Asia Oceania												
Crude	377.3	377.2	377.5	377.6	377.6	385.0	382.7	377.4	0.00	0.00	0.00	0.00
Products	39.0	39.4	39.4	39.4	39.4	38.3	38.7	38.9	0.00	0.00	0.00	0.00
Total OECD												
Crude	1242.1	1241.2	1232.8	1227.5	1222.6	1261.4	1250.7	1226.5	-0.09	-0.01	0.25	-0.16
Products	317.5	322.9	322.7	321.8	323.8	306.6	308.8	314.5	-0.01	0.03	0.01	0.05
Total[4]	**1561.5**	**1566.1**	**1557.6**	**1551.3**	**1548.3**	**1571.5**	**1562.3**	**1542.5**	**-0.10**	**0.02**	**0.27**	**-0.11**

* estimated

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

2 Closing stock levels.

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

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

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

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Table 4a
INDUSTRY STOCKS[1] ON LAND IN SELECTED COUNTRIES

(million barrels)

	May			June			July			August			September		
	2019	2020	%	2019	2020	%	2019	2020	%	2019	2020	%	2019	2020	%
United States[2]															
Crude	481.1	521.0	8.3	463.4	531.9	14.8	441.6	519.3	17.6	430.1	504.0	17.2	425.6	497.3	16.8
Motor Gasoline	235.8	258.2	9.5	229.9	253.3	10.2	235.4	249.3	5.9	230.4	236.6	2.7	232.0	226.5	-2.4
Middle Distillate	171.2	218.0	27.3	173.5	218.9	26.2	182.8	220.7	20.7	180.9	221.4	22.4	178.2	214.1	20.1
Residual Fuel Oil	30.2	39.4	30.5	30.5	39.6	29.8	30.7	36.3	18.2	28.8	34.8	20.8	30.0	32.1	7.0
Other Products	210.5	218.8	3.9	225.7	232.6	3.1	233.6	246.7	5.6	243.5	260.9	7.1	246.2	270.6	9.9
Total Products	647.7	734.4	13.4	659.6	744.4	12.9	682.5	753.0	10.3	683.6	753.7	10.3	686.4	743.3	8.3
Other[3]	178.2	170.1	-4.5	181.2	176.5	-2.6	185.0	178.7	-3.4	187.0	178.5	-4.5	186.3	181.3	-2.7
Total	**1307.0**	**1425.5**	**9.1**	**1304.2**	**1452.8**	**11.4**	**1309.1**	**1451.0**	**10.8**	**1300.7**	**1436.2**	**10.4**	**1298.3**	**1421.9**	**9.5**
Japan															
Crude	97.2	98.6	1.4	91.9	91.0	-1.0	102.6	94.1	-8.3	96.5	94.2	-2.4	86.3	90.2	4.5
Motor Gasoline	9.8	12.5	27.6	9.5	11.5	21.1	9.6	11.9	24.0	10.0	12.1	21.0	9.5	12.2	28.4
Middle Distillate	27.4	30.5	11.3	28.2	31.9	13.1	31.0	33.0	6.5	35.8	37.1	3.6	34.6	37.7	9.0
Residual Fuel Oil	8.0	7.6	-5.0	7.8	7.5	-3.8	7.7	7.4	-3.9	7.5	7.2	-4.0	7.9	6.9	-12.7
Other Products	33.8	37.1	9.8	35.8	36.6	2.2	37.0	36.0	-2.7	42.0	38.4	-8.6	39.4	38.5	-2.3
Total Products	79.0	87.7	11.0	81.3	87.5	7.6	85.3	88.3	3.5	95.3	94.8	-0.5	91.4	95.3	4.3
Other[3]	50.8	55.5	9.3	53.1	55.7	4.9	53.8	53.6	-0.4	56.7	56.1	-1.1	54.2	54.4	0.4
Total	**227.0**	**241.8**	**6.5**	**226.3**	**234.2**	**3.5**	**241.7**	**236.0**	**-2.4**	**248.5**	**245.1**	**-1.4**	**231.9**	**239.9**	**3.4**
Germany															
Crude	48.6	51.2	5.3	47.7	51.4	7.8	49.8	50.0	0.4	48.6	50.2	3.3	47.1	49.5	5.1
Motor Gasoline	10.1	10.1	0.0	11.9	9.6	-19.3	11.7	8.9	-23.9	10.1	10.0	-1.0	10.6	9.3	-12.3
Middle Distillate	22.7	26.1	15.0	24.8	25.3	2.0	23.8	25.5	7.1	24.4	27.6	13.1	24.1	22.3	-7.5
Residual Fuel Oil	7.0	7.6	8.6	6.8	8.2	20.6	6.6	7.4	12.1	7.2	8.3	15.3	7.4	8.0	8.1
Other Products	10.1	10.0	-1.0	10.4	9.3	-10.6	10.5	9.5	-9.5	10.5	9.6	-8.6	10.3	9.8	-4.9
Total Products	49.9	53.8	7.8	53.9	52.4	-2.8	52.6	51.3	-2.5	52.2	55.5	6.3	52.4	49.4	-5.7
Other[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**98.5**	**105.0**	**6.6**	**101.6**	**103.8**	**2.2**	**102.4**	**101.3**	**-1.1**	**100.8**	**105.7**	**4.9**	**99.5**	**98.9**	**-0.6**
Italy															
Crude	40.4	39.8	-1.5	45.0	41.6	-7.6	42.2	43.2	2.4	41.6	40.8	-1.9	42.7	40.0	-6.3
Motor Gasoline	11.0	12.9	17.3	11.3	13.0	15.0	11.5	11.5	0.0	11.5	11.4	-0.9	12.5	11.5	-8.0
Middle Distillate	29.3	33.0	12.6	28.0	32.9	17.5	28.0	31.2	11.4	30.9	31.3	1.3	31.1	30.1	-3.2
Residual Fuel Oil	8.6	9.0	4.7	8.7	9.2	5.7	8.9	8.0	-10.1	9.4	8.4	-10.6	8.8	7.9	-10.2
Other Products	11.7	18.6	59.0	12.4	17.8	43.5	12.0	17.4	45.0	12.8	19.0	48.4	13.8	19.9	44.2
Total Products	60.6	73.5	21.3	60.4	72.9	20.7	60.4	68.1	12.7	64.6	70.1	8.5	66.2	69.4	4.8
Other[3]	16.2	16.6	2.5	13.8	17.5	26.8	15.1	17.8	17.9	15.1	17.6	16.6	15.7	17.3	10.2
Total	**117.2**	**129.9**	**10.8**	**119.2**	**132.0**	**10.7**	**117.7**	**129.1**	**9.7**	**121.3**	**128.5**	**5.9**	**124.6**	**126.7**	**1.7**
France															
Crude	13.7	14.2	3.6	15.8	11.9	-24.7	13.5	14.0	3.7	14.0	11.6	-17.1	11.0	13.9	26.4
Motor Gasoline	4.5	4.5	0.0	5.9	4.9	-16.9	5.7	4.5	-21.1	5.5	5.0	-9.1	4.9	4.9	0.0
Middle Distillate	21.7	20.1	-7.4	21.1	22.9	8.5	19.6	22.0	12.2	22.1	25.9	17.2	20.1	24.7	22.9
Residual Fuel Oil	0.8	0.9	12.5	0.9	1.6	77.8	1.2	1.6	33.3	1.6	1.5	-6.3	0.6	1.6	166.7
Other Products	3.9	4.7	20.5	4.3	4.1	-4.7	4.4	4.2	-4.5	4.4	4.1	-6.8	4.1	3.9	-4.9
Total Products	30.9	30.2	-2.3	32.2	33.5	4.0	30.9	32.3	4.5	33.6	36.5	8.6	29.7	35.1	18.2
Other[3]	7.6	9.3	22.4	8.5	8.7	2.4	8.0	8.7	8.7	8.4	9.1	8.3	7.5	8.2	9.3
Total	**52.2**	**53.7**	**2.9**	**56.5**	**54.1**	**-4.2**	**52.4**	**55.0**	**5.0**	**56.0**	**57.2**	**2.1**	**48.2**	**57.2**	**18.7**
United Kingdom															
Crude	29.2	30.0	2.7	31.1	32.1	3.2	26.9	31.8	18.2	27.8	28.4	2.2	26.2	27.7	5.7
Motor Gasoline	9.0	9.2	2.2	8.7	9.5	9.2	9.2	9.8	6.5	8.9	9.3	4.5	9.3	9.9	6.5
Middle Distillate	24.9	31.3	25.7	24.3	32.3	32.9	26.6	32.1	20.7	27.5	32.0	16.4	25.3	30.3	19.8
Residual Fuel Oil	1.3	1.3	0.0	1.4	1.8	28.6	1.1	1.5	36.4	1.3	1.8	38.5	1.4	1.2	-14.3
Other Products	6.1	6.7	9.8	6.6	6.3	-4.5	6.4	7.1	10.9	7.2	7.2	0.0	7.0	6.4	-8.6
Total Products	41.3	48.5	17.4	41.0	49.9	21.7	43.3	50.5	16.6	44.9	50.3	12.0	43.0	47.8	11.2
Other[3]	8.8	7.6	-13.6	8.9	7.9	-11.2	9.5	7.8	-17.9	9.7	7.3	-24.7	9.0	7.8	-13.3
Total	**79.3**	**86.1**	**8.6**	**81.0**	**89.9**	**11.0**	**79.7**	**90.1**	**13.0**	**82.4**	**86.0**	**4.4**	**78.2**	**83.3**	**6.5**
Canada[4]															
Crude	126.2	142.0	12.5	121.0	137.5	13.6	120.5	133.5	10.8	122.3	130.9	7.0	122.2	128.5	5.2
Motor Gasoline	14.4	15.0	4.2	13.9	15.6	12.2	14.2	15.0	5.6	14.7	14.3	-2.7	14.5	15.9	9.7
Middle Distillate	15.5	12.6	-18.7	14.9	12.5	-16.1	15.9	13.1	-17.6	15.8	11.6	-26.6	14.4	12.2	-15.3
Residual Fuel Oil	1.6	2.5	56.3	2.0	2.6	30.0	2.0	2.7	35.0	1.5	2.7	80.0	1.8	3.0	66.7
Other Products	11.2	10.3	-8.0	9.6	9.4	-2.1	10.6	9.6	-9.4	10.0	8.6	-14.0	9.8	7.2	-26.5
Total Products	42.7	40.4	-5.4	40.4	40.1	-0.7	42.7	40.4	-5.4	42.0	37.2	-11.4	40.5	38.3	-5.4
Other[3]	18.5	21.4	15.7	20.5	24.8	21.0	22.0	28.4	29.1	23.8	30.9	29.8	22.8	33.0	44.7
Total	**187.4**	**203.8**	**8.8**	**181.9**	**202.4**	**11.3**	**185.2**	**202.3**	**9.2**	**188.1**	**199.0**	**5.8**	**185.5**	**199.8**	**7.7**

1 Stocks are primary national territory stocks on land (excluding utilitity stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.
2 US figures exclude US territories.
3 Other includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.
4 Canadian stock information for recent months is the administration's best estimate. Data are usually finalised three months after first publication.

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Table 5
TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]
('millions of barrels' and 'days')

	End September 2019		End December 2019		End March 2020		End June 2020		End September 2020 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
OECD Americas										
Canada	185.6	75	181.3	78	197.6	105	202.3	92	199.8	-
Chile	12.3	33	11.5	30	11.9	43	12.4	42	11.9	-
Mexico	34.3	18	20.9	13	23.1	18	23.6	17	35.1	-
United States[4]	1945.2	94	1918.8	99	1957.7	122	2110.9	115	2066.2	-
Total[4]	**2199.5**	**86**	**2154.7**	**90**	**2212.4**	**112**	**2371.3**	**105**	**2335.1**	**100**
OECD Asia Oceania										
Australia	44.8	37	42.6	37	42.7	46	41.3	43	40.9	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	551.6	147	551.9	150	534.9	185	553.8	183	559.5	-
Korea	210.2	80	206.3	82	196.5	81	213.4	91	219.4	-
New Zealand	10.1	53	9.2	52	11.0	95	10.1	71	11.4	-
Total	**816.6**	**102**	**810.0**	**105**	**785.1**	**120**	**818.6**	**122**	**831.2**	**112**
OECD Europe[5]										
Austria	20.9	79	22.0	89	24.2	111	22.7	87	23.8	-
Belgium	47.5	71	45.7	70	47.9	86	50.1	90	52.8	-
Czech Republic	21.4	101	22.3	117	24.0	148	23.2	105	22.7	-
Denmark	28.2	170	26.9	191	29.2	220	34.1	239	32.0	-
Estonia	2.7	90	3.9	131	2.6	99	4.4	138	3.6	-
Finland	39.2	192	36.4	172	38.7	194	39.7	185	43.3	-
France	160.4	99	158.6	103	162.5	134	165.5	109	167.7	-
Germany	276.6	118	277.0	119	278.5	137	281.2	134	276.6	-
Greece	32.0	107	29.4	107	35.7	147	38.3	147	34.7	-
Hungary	24.9	139	26.2	159	26.2	160	26.2	151	26.9	-
Ireland	8.8	54	9.7	61	10.3	95	12.3	94	12.2	-
Italy	134.9	109	128.3	126	145.2	177	142.3	124	139.9	-
Latvia	3.6	97	2.5	80	2.7	84	3.4	90	3.5	-
Lithuania	8.0	121	6.9	121	7.3	116	7.7	106	7.6	-
Luxembourg	0.6	10	0.6	11	0.7	16	0.7	14	0.6	-
Netherlands	149.1	162	145.6	153	147.1	176	174.4	197	165.6	-
Norway	27.1	162	23.8	131	28.5	160	27.3	158	31.8	-
Poland	79.3	113	81.2	127	83.2	137	82.3	115	82.4	-
Portugal	24.1	97	24.3	111	25.7	152	22.0	103	22.3	-
Slovak Republic	11.7	141	12.3	153	12.5	163	12.1	141	12.6	-
Slovenia	4.8	91	5.3	114	5.2	112	5.4	105	5.4	-
Spain	123.1	94	124.8	102	127.4	145	128.0	115	126.7	-
Sweden	42.8	157	44.5	174	46.1	205	72.4	312	66.7	-
Switzerland	32.1	139	32.3	149	33.4	182	34.4	190	34.5	-
Turkey	88.0	89	88.3	100	89.4	112	86.0	79	89.9	-
United Kingdom	78.3	51	81.2	54	83.1	87	89.8	76	83.2	-
Total	**1470.0**	**105**	**1460.0**	**109**	**1517.2**	**138**	**1586.0**	**124**	**1568.7**	**125**
Total OECD	**4486.1**	**94**	**4424.7**	**98**	**4514.8**	**121**	**4775.9**	**114**	**4735.1**	**109**
DAYS OF IEA Net Imports[6] -		**214**	-	**212**	-	**217**	-	**259**	-	**255**

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot 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 2020 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions (see www.iea.org/netimports.asp). Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand*[2]		
3Q2017	4553	1579	2974	94	33	62
4Q2017	4428	1569	2860	92	33	59
1Q2018	4395	1577	2818	93	33	59
2Q2018	4389	1575	2814	91	33	58
3Q2018	4438	1570	2868	93	33	60
4Q2018	4427	1552	2875	93	33	61
1Q2019	4432	1557	2875	94	33	61
2Q2019	4481	1549	2932	93	32	61
3Q2019	4486	1544	2942	94	32	62
4Q2019	4425	1535	2889	98	34	64
1Q2020	4515	1537	2978	121	41	80
2Q2020	4776	1561	3214	114	37	76
3Q2020	4735	1551	3184	109	36	73

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 3Q2020 (when latest forecasts are used).

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Table 6
IEA MEMBER COUNTRY DESTINATIONS OF SELECTED CRUDE STREAMS[1]
(million barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
Saudi Light & Extra Light												
Americas	0.59	0.66	0.20	0.23	0.49	0.41	0.03	0.03	-	0.05	0.25	-0.21
Europe	0.69	0.69	0.68	0.56	0.56	0.79	0.49	0.38	0.47	0.61	0.57	0.04
Asia Oceania	1.56	1.45	1.42	1.32	1.41	1.36	1.34	1.61	1.24	1.16	1.32	-0.16
Saudi Medium												
Americas	0.33	0.30	0.12	0.06	0.06	0.39	0.06	-	0.08	0.11	0.21	-0.10
Europe	0.01	0.01	0.02	0.02	0.05	0.03	0.01	-	0.02	-	0.05	-
Asia Oceania	0.37	0.41	0.23	0.19	0.22	0.26	0.25	0.24	0.26	0.26	0.16	0.09
Canada Heavy												
Americas	2.23	2.41	2.27	2.33	2.64	2.14	2.23	2.33	2.21	2.13	2.28	-0.15
Europe	0.02	0.04	0.04	0.04	0.04	0.02	0.03	0.02	0.06	0.03	0.03	-0.01
Asia Oceania	-	0.00	0.00	0.01	-	-	0.01	-	-	0.02	0.02	0.00
Iraqi Basrah Light[2]												
Americas	0.63	0.50	0.31	0.21	0.26	0.05	0.07	-	0.12	0.10	0.40	-0.30
Europe	0.76	0.76	0.85	0.59	0.62	0.60	0.51	0.57	0.50	0.46	0.93	-0.47
Asia Oceania	0.40	0.43	0.37	0.39	0.27	0.20	0.23	0.12	0.37	0.18	0.20	-0.02
Kuwait Blend												
Americas	0.11	0.02	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.13	0.11	0.10	0.08	0.09	0.01	0.02	0.00	-	0.21	-
Asia Oceania	0.68	0.66	0.61	0.57	0.63	0.67	0.43	0.38	0.44	0.48	0.68	-0.20
Iranian Light												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.27	0.16	0.00	-	-	-	-	-	-	-	-	-
Asia Oceania	0.01	0.01	0.00	-	-	-	-	-	-	-	-	-
Iranian Heavy[3]												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.52	0.35	0.04	-	-	-	-	-	-	-	-	-
Asia Oceania	0.57	0.28	0.14	-	-	-	-	-	-	-	-	-
BFOE												
Americas	0.02	0.00	0.00	-	-	-	-	-	-	-	0.02	-
Europe	0.45	0.35	0.37	0.45	0.48	0.32	0.47	0.55	0.46	0.41	0.35	0.06
Asia Oceania	0.10	0.09	0.01	-	-	0.02	0.06	-	0.13	0.03	-	-
Kazakhstan												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.75	0.75	0.76	0.67	0.80	0.69	0.72	0.80	0.70	0.67	0.59	0.09
Asia Oceania	0.10	0.19	0.18	0.15	0.10	0.07	0.08	0.03	0.10	0.10	0.21	-0.11
Venezuelan 22 API and heavier												
Americas	0.48	0.44	0.05	-	-	-	-	-	-	-	-	-
Europe	0.04	0.03	0.09	0.09	0.03	0.04	0.08	0.12	0.04	0.08	0.13	-0.05
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
Americas	0.58	0.63	0.51	0.46	0.55	0.53	0.47	0.52	0.47	0.41	0.41	0.01
Europe	0.20	0.21	0.19	0.17	0.13	0.15	0.16	0.16	0.16	0.17	0.13	0.03
Asia Oceania	0.07	0.08	0.13	0.14	0.14	0.10	0.10	0.12	0.10	0.09	0.13	-0.04
Russian Urals												
Americas	0.01	0.01	0.01	-	-	-	-	-	-	-	0.02	-
Europe	1.64	1.40	1.37	1.23	1.40	1.10	1.00	0.90	0.97	1.14	1.39	-0.25
Asia Oceania	0.01	0.00	-	-	-	-	-	-	-	-	-	-
Cabinda and Other Angola												
North America	0.07	0.06	0.01	-	-	0.03	-	-	-	-	-	-
Europe	0.11	0.14	0.15	0.13	0.18	0.11	0.09	0.05	0.12	0.11	0.19	-0.08
Pacific	0.01	0.01	0.00	0.01	-	-	-	-	-	-	-	-
Nigerian Light[4]												
Americas	0.04	0.01	0.03	-	-	-	-	-	-	-	-	-
Europe	0.39	0.53	0.51	0.50	0.50	0.39	0.57	0.53	0.61	0.56	0.55	0.00
Asia Oceania	0.02	0.02	0.02	0.02	0.04	0.01	0.01	0.01	0.03	-	0.03	-
Libya Light and Medium												
Americas	0.02	-	0.00	-	-	-	-	-	-	-	-	-
Europe	0.54	0.62	0.67	0.70	0.20	0.03	0.04	0.02	0.04	0.05	0.70	-0.65
Asia Oceania	0.03	0.02	0.03	0.02	0.04	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report. IEA Americas includes United States and Canada. IEA Europe includes all countries in OECD Europe except Estonia, Hungary, Slovenia and Latvia. IEA Asia Oceania includes Australia, New Zealand, Korea and Japan.
2 Iraqi Total minus Kirkuk.
3 Iranian Total minus Iranian Light.
4 33° API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

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Table 7
REGIONAL OECD IMPORTS[1,2]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	% change
Crude Oil												
Americas	4361	3759	2698	2292	2097	2134	1671	1864	1493	1656	2618	-37%
Europe	9902	9814	9872	9589	9309	7894	8219	8193	7921	8553	10036	-15%
Asia Oceania	6849	6697	6542	6520	6372	5298	5216	5291	5248	5106	5787	-12%
Total OECD	**21112**	**20269**	**19111**	**18401**	**17779**	**15326**	**15106**	**15348**	**14662**	**15315**	**18442**	**-17%**
LPG												
Americas	20	22	26	28	31	28	26	38	25	16	22	-28%
Europe	432	457	434	438	533	305	431	471	402	420	363	16%
Asia Oceania	551	553	582	586	647	551	532	565	472	559	602	-7%
Total OECD	**1003**	**1032**	**1042**	**1052**	**1210**	**884**	**989**	**1075**	**899**	**995**	**988**	**1%**
Naphtha												
Americas	19	8	5	5	7	7	10	7	20	3	9	-67%
Europe	369	391	347	396	421	466	289	362	306	196	290	-32%
Asia Oceania	978	1021	993	1061	1109	1044	981	1022	1027	890	945	-6%
Total OECD	**1366**	**1420**	**1345**	**1462**	**1536**	**1517**	**1280**	**1392**	**1352**	**1089**	**1244**	**-12%**
Gasoline[3]												
Americas	727	773	817	669	507	499	695	654	679	754	812	-7%
Europe	153	110	112	90	112	123	70	71	85	53	112	-53%
Asia Oceania	102	113	114	110	103	111	182	257	151	136	152	-10%
Total OECD	**983**	**996**	**1043**	**869**	**722**	**734**	**948**	**983**	**916**	**944**	**1076**	**-12%**
Jet & Kerosene												
Americas	171	140	175	170	164	146	175	157	181	188	208	-9%
Europe	504	509	520	496	422	325	310	245	349	337	548	-39%
Asia Oceania	80	89	76	94	119	35	42	44	59	22	62	-65%
Total OECD	**755**	**738**	**771**	**760**	**704**	**506**	**527**	**446**	**589**	**546**	**818**	**-33%**
Gasoil/Diesel												
Americas	77	124	118	117	77	115	91	72	101	102	44	133%
Europe	1337	1339	1300	1253	1263	1216	1195	1176	1276	1130	1251	-10%
Asia Oceania	196	253	262	286	281	346	380	400	382	356	232	54%
Total OECD	**1610**	**1716**	**1680**	**1656**	**1622**	**1677**	**1666**	**1648**	**1759**	**1589**	**1526**	**4%**
Heavy Fuel Oil												
Americas	131	161	116	127	156	153	136	87	185	135	73	84%
Europe	233	197	223	206	283	267	343	432	311	285	210	36%
Asia Oceania	146	162	101	80	108	46	118	139	52	164	119	37%
Total OECD	**510**	**520**	**440**	**413**	**546**	**466**	**596**	**658**	**547**	**584**	**403**	**45%**
Other Products												
Americas	717	679	713	809	704	542	606	646	598	571	695	-18%
Europe	1012	1011	865	723	665	601	559	529	581	568	856	-34%
Asia Oceania	263	263	268	273	288	215	229	203	223	263	283	-7%
Total OECD	**1991**	**1952**	**1846**	**1804**	**1656**	**1359**	**1394**	**1379**	**1403**	**1402**	**1834**	**-24%**
Total Products												
Americas	1862	1908	1971	1924	1645	1491	1739	1662	1788	1769	1863	-5%
Europe	4040	4013	3800	3602	3699	3304	3198	3286	3311	2990	3630	-18%
Asia Oceania	2316	2454	2397	2490	2654	2349	2463	2632	2366	2390	2396	0%
Total OECD	**8218**	**8374**	**8168**	**8016**	**7997**	**7144**	**7400**	**7580**	**7464**	**7149**	**7889**	**-9%**
Total Oil												
Americas	6223	5666	4669	4216	3742	3625	3410	3526	3280	3424	4481	-24%
Europe	13942	13827	13672	13191	13008	11198	11417	11480	11232	11543	13666	-16%
Asia Oceania	9164	9151	8939	9010	9027	7647	7680	7923	7614	7497	8184	-8%
Total OECD	**29330**	**28644**	**27279**	**26418**	**25776**	**22470**	**22506**	**22928**	**22126**	**22464**	**26331**	**-15%**

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.

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Table 7a
REGIONAL OECD IMPORTS FROM NON-OECD COUNTRIES[1,2]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier % change
Crude Oil												
Americas	4235	3606	2553	2203	2047	2048	1643	1837	1449	1642	2422	-32%
Europe	9436	9088	8913	8397	8026	6794	6975	7051	6696	7185	9235	-22%
Asia Oceania	6553	6249	5914	5795	5690	4799	4796	4997	4795	4587	5166	-11%
Total OECD	**20224**	**18943**	**17380**	**16395**	**15764**	**13640**	**13413**	**13885**	**12940**	**13415**	**16823**	**-20%**
LPG												
Americas	16	15	23	25	25	22	23	33	19	16	22	-28%
Europe	337	350	303	282	303	227	235	253	229	223	244	-9%
Asia Oceania	205	158	74	54	46	57	62	47	49	89	53	66%
Total OECD	**557**	**523**	**400**	**362**	**373**	**306**	**319**	**334**	**297**	**327**	**320**	**2%**
Naphtha												
Americas	16	4	2	2	1	2	1	0	3	1	6	-74%
Europe	350	360	320	348	398	455	266	321	288	186	272	-32%
Asia Oceania	931	924	898	941	924	831	840	864	866	788	867	-9%
Total OECD	**1297**	**1288**	**1220**	**1291**	**1323**	**1288**	**1107**	**1185**	**1157**	**975**	**1145**	**-15%**
Gasoline[3]												
Americas	213	271	308	234	168	213	226	250	247	180	308	-41%
Europe	149	105	108	87	108	118	63	63	75	52	109	-52%
Asia Oceania	102	90	88	101	86	81	159	218	123	136	137	-1%
Total OECD	**464**	**466**	**504**	**421**	**362**	**412**	**449**	**532**	**444**	**369**	**555**	**-33%**
Jet & Kerosene												
Americas	67	56	39	34	58	60	53	37	54	68	38	80%
Europe	436	445	464	446	356	288	261	216	305	262	447	-41%
Asia Oceania	80	89	76	94	119	35	42	44	59	22	62	-65%
Total OECD	**583**	**590**	**579**	**573**	**533**	**383**	**356**	**297**	**417**	**352**	**547**	**-36%**
Gasoil/Diesel												
Americas	50	100	86	82	61	92	69	53	66	89	35	153%
Europe	1086	1160	1126	1168	1148	1100	1008	1016	1028	980	1000	-2%
Asia Oceania	195	253	261	286	281	340	373	380	382	356	232	54%
Total OECD	**1331**	**1513**	**1473**	**1537**	**1490**	**1533**	**1451**	**1449**	**1477**	**1425**	**1267**	**12%**
Heavy Fuel Oil												
Americas	123	147	102	107	124	107	113	83	151	106	72	47%
Europe	218	185	202	191	268	253	327	416	305	257	188	36%
Asia Oceania	146	162	100	80	108	46	118	139	52	164	119	37%
Total OECD	**487**	**493**	**404**	**378**	**500**	**406**	**558**	**638**	**508**	**526**	**380**	**39%**
Other Products												
Americas	542	522	542	646	611	453	526	568	508	502	539	-7%
Europe	731	702	629	510	365	374	369	381	383	341	633	-46%
Asia Oceania	186	182	184	198	199	144	152	128	133	196	180	9%
Total OECD	**1459**	**1406**	**1355**	**1354**	**1175**	**971**	**1047**	**1077**	**1024**	**1039**	**1353**	**-23%**
Total Products												
Americas	1026	1115	1103	1129	1047	948	1012	1024	1047	962	1020	-6%
Europe	3307	3307	3152	3031	2947	2815	2529	2667	2613	2300	2895	-21%
Asia Oceania	1845	1857	1681	1755	1762	1535	1745	1821	1664	1751	1652	6%
Total OECD	**6179**	**6279**	**5936**	**5915**	**5757**	**5299**	**5286**	**5512**	**5324**	**5014**	**5566**	**-10%**
Total Oil												
Americas	5261	4721	3656	3332	3095	2996	2654	2861	2496	2605	3442	-24%
Europe	12744	12395	12064	11429	10973	9609	9504	9718	9309	9485	12130	-22%
Asia Oceania	8398	8106	7595	7550	7452	6334	6541	6819	6459	6339	6817	-7%
Total OECD	**26403**	**25223**	**23316**	**22310**	**21520**	**18939**	**18700**	**19397**	**18264**	**18429**	**22389**	**-18%**

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

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Table 7b
INTER-REGIONAL OECD TRANSFERS[1,2]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier % change
Crude Oil												
Americas	126	153	145	89	50	86	28	26	44	13	197	-93%
Europe	466	726	959	1192	1283	1100	1244	1143	1225	1367	801	71%
Asia Oceania	296	448	628	725	682	499	421	294	453	519	622	-16%
Total OECD	**888**	**1326**	**1731**	**2007**	**2015**	**1685**	**1693**	**1463**	**1722**	**1900**	**1619**	**17%**
LPG												
Americas	4	7	3	3	6	6	4	6	6	0	0	na
Europe	95	107	131	156	230	78	196	218	173	198	119	66%
Asia Oceania	346	395	508	532	601	494	470	518	422	470	549	-14%
Total OECD	**445**	**508**	**642**	**690**	**837**	**578**	**670**	**741**	**601**	**668**	**668**	**0%**
Naphtha												
Americas	3	4	3	3	6	5	9	7	17	1	3	-55%
Europe	19	31	27	48	23	11	23	41	18	11	18	-39%
Asia Oceania	47	97	96	120	185	213	140	158	160	102	78	30%
Total OECD	**69**	**132**	**125**	**171**	**213**	**229**	**172**	**206**	**195**	**114**	**99**	**15%**
Gasoline[3]												
Americas	514	502	509	436	339	286	469	404	432	574	504	14%
Europe	5	5	4	3	4	5	7	8	11	1	3	-57%
Asia Oceania	0	23	26	9	17	30	23	39	29	0	15	-100%
Total OECD	**519**	**530**	**539**	**448**	**360**	**321**	**499**	**451**	**472**	**575**	**522**	**10%**
Jet & Kerosene												
Americas	104	84	136	137	106	87	123	120	127	120	170	-29%
Europe	68	64	56	50	65	37	49	28	44	74	101	-27%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
Total OECD	**172**	**148**	**192**	**186**	**171**	**124**	**171**	**149**	**172**	**194**	**271**	**-28%**
Gasoil/Diesel												
Americas	28	25	32	35	16	22	22	19	34	13	8	50%
Europe	250	178	174	85	115	116	186	160	248	151	250	-40%
Asia Oceania	1	0	1	0	0	6	7	20	0	0	0	na
Total OECD	**279**	**203**	**207**	**120**	**132**	**144**	**215**	**198**	**282**	**163**	**259**	**-37%**
Heavy Fuel Oil												
Americas	8	15	14	20	31	46	22	5	33	29	1	2500%
Europe	15	12	21	15	15	15	16	16	6	28	22	32%
Asia Oceania	0	0	1	0	0	0	0	0	0	0	0	na
Total OECD	**23**	**27**	**36**	**35**	**46**	**61**	**39**	**20**	**39**	**57**	**23**	**153%**
Other Products												
Americas	175	157	171	163	93	90	79	78	90	70	157	-56%
Europe	280	308	236	213	299	228	191	149	198	227	222	2%
Asia Oceania	77	81	83	75	89	70	77	75	90	66	103	-35%
Total OECD	**532**	**546**	**490**	**451**	**481**	**388**	**348**	**302**	**379**	**363**	**482**	**-25%**
Total Products												
Americas	836	793	867	795	597	543	727	638	740	806	843	-4%
Europe	733	706	649	571	752	489	669	619	698	690	735	-6%
Asia Oceania	470	597	716	735	892	813	718	810	702	639	745	-14%
Total OECD	**2039**	**2095**	**2232**	**2101**	**2241**	**1845**	**2114**	**2068**	**2140**	**2135**	**2323**	**-8%**
Total Oil												
Americas	962	945	1012	884	647	629	755	665	784	820	1039	-21%
Europe	1199	1432	1608	1763	2034	1589	1913	1762	1923	2058	1536	34%
Asia Oceania	766	1044	1343	1461	1574	1312	1139	1104	1155	1158	1366	-15%
Total OECD	**2927**	**3421**	**3963**	**4108**	**4256**	**3530**	**3807**	**3531**	**3862**	**4035**	**3942**	**2%**

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

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Table 8
REGIONAL OECD CRUDE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
OECD Americas												
Venezuela	618	506	81	-	-	-	-	-	-	-	-	-
Other Central & South America	928	795	867	849	823	625	782	776	743	828	670	158
North Sea	124	150	143	89	50	83	28	26	44	13	197	-183
Other OECD Europe	-	1	2	-	-	4	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	121	145	189	143	146	42	80	87	68	86	209	-123
Saudi Arabia	1043	983	601	501	545	1015	441	673	267	381	593	-212
Kuwait	144	78	45	26	37	-	29	67	-	18	-	-
Iran	-	-	-	-	-	-	-	-	-	-	-	-
Iraq	605	519	331	292	284	176	143	136	209	83	400	-316
Oman	14	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	20	5	3	-	-	9	2	5	-	-	34	-
Other Middle East	2	-	-	-	-	-	-	-	-	-	-	-
West Africa[2]	497	317	267	244	118	146	128	71	128	187	313	-126
Other Africa	214	196	137	92	56	24	34	9	34	59	135	-76
Asia	26	61	32	54	40	12	4	13	-	-	68	-
Other	4	3	0	0	-	-	-	-	-	-	-	-
Total	**4361**	**3759**	**2698**	**2292**	**2097**	**2134**	**1671**	**1864**	**1493**	**1656**	**2618**	**-963**
of which Non-OECD	**4235**	**3606**	**2553**	**2203**	**2047**	**2048**	**1643**	**1837**	**1449**	**1642**	**2422**	**-780**
OECD Europe												
Canada	45	81	60	65	115	67	81	82	103	56	26	30
Mexico + USA	419	645	900	1127	1167	1033	1163	1061	1122	1312	775	537
Venezuela	67	57	106	104	33	40	91	129	51	93	147	-53
Other Central & South America	160	132	118	156	229	151	248	148	247	351	162	189
Non-OECD Europe	9	12	14	25	34	13	21	19	24	19	14	5
Former Soviet Union	4437	4149	4240	4186	4131	3217	3385	3547	3238	3371	4095	-724
Saudi Arabia	750	818	792	624	716	1071	637	514	647	752	834	-82
Kuwait	201	137	97	53	90	64	61	92	89	-	143	-
Iran	801	536	74	32	18	-	1	-	-	4	49	-45
Iraq	995	962	1124	862	828	847	788	909	526	935	1193	-259
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	6	2	2	7	-	-	-	-	-	-	-	-
Other Middle East	1	-	3	-	-	16	9	-	22	6	-	-
West Africa[2]	960	1115	1140	1134	1317	876	1133	1152	1180	1067	1308	-241
Other Africa	1045	1161	1180	1204	599	485	431	501	403	387	1291	-904
Asia	2	-	-	-	-	-	1	-	-	4	-	-
Other	5	9	13	12	10	17	128	24	191	170	-	-
Total	**9903**	**9816**	**9863**	**9590**	**9287**	**7897**	**8178**	**8176**	**7842**	**8527**	**10037**	**-1510**
of which Non-OECD	**9436**	**9088**	**8913**	**8397**	**8026**	**6794**	**6975**	**7051**	**6696**	**7185**	**9235**	**-2050**
OECD Asia Oceania												
Canada	-	3	5	12	-	-	6	-	-	17	18	-1
Mexico + USA	199	344	613	705	674	457	336	294	284	433	603	-170
Venezuela	8	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	35	35	48	23	79	96	75	77	69	81	20	60
North Sea	97	100	10	8	8	42	79	-	169	69	-	-
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	413	435	435	392	402	218	278	158	378	298	456	-158
Saudi Arabia	2166	2040	1878	1751	1844	1790	1858	2171	1768	1629	1692	-62
Kuwait	671	672	666	615	668	704	459	400	462	515	795	-280
Iran	543	274	137	-	-	-	-	-	-	-	-	-
Iraq	402	435	364	381	267	201	226	125	372	180	199	-19
Oman	42	56	59	46	35	-	35	49	-	57	68	-11
United Arab Emirates	1147	1098	1256	1416	1434	1018	962	1093	892	900	1037	-137
Other Middle East	390	450	449	463	454	345	374	403	370	350	531	-181
West Africa[2]	66	95	56	45	96	46	70	31	91	89	15	74
Other Africa	92	105	90	108	79	26	40	51	48	21	64	-43
Non-OECD Asia	325	319	220	230	198	109	121	96	116	151	179	-28
Other	253	235	255	325	134	245	297	344	231	317	111	207
Total	**6849**	**6697**	**6542**	**6520**	**6372**	**5298**	**5216**	**5291**	**5248**	**5106**	**5787**	**-681**
of which Non-OECD	**6553**	**6249**	**5914**	**5795**	**5690**	**4799**	**4796**	**4997**	**4795**	**4587**	**5166**	**-579**
Total OECD Trade	**21113**	**20271**	**19103**	**18402**	**17757**	**15329**	**15065**	**15332**	**14583**	**15289**	**18443**	**-3154**
of which Non-OECD	**20224**	**18943**	**17380**	**16395**	**15764**	**13640**	**13413**	**13885**	**12940**	**13415**	**16823**	**-3408**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes, and converted to barrels at 7.37 barrels per tonne. Data will differ from Table 6 which is based on submissions in barrels.
2 West Africa includes Angola, Nigeria, Gabon, Equatorial Guniea, Congo and Democratic Republic of Congo.

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Table 9
REGIONAL OECD GASOLINE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
OECD Americas												
Venezuela	18	23	4	-	-	-	-	-	-	-	-	-
Other Central & South America	42	64	83	61	28	65	44	52	42	37	84	-47
ARA (Belgium Germany Netherlands)	178	167	189	155	119	126	199	155	202	242	232	10
Other Europe	326	323	293	267	201	131	255	248	208	311	253	59
FSU	84	80	100	119	57	49	71	53	96	65	118	-53
Saudi Arabia	1	11	7	-	4	6	16	36	-	11	-	-
Algeria	-	1	-	-	10	2	5	4	10	-	-	-
Other Middle East & Africa	24	19	14	8	9	8	15	5	29	10	26	-16
Singapore	10	8	5	-	-	2	3	-	10	-	-	-
OECD Asia Oceania	10	13	28	14	21	30	15	1	24	20	19	1
Non-OECD Asia (excl. Singapore)	63	84	116	77	63	88	84	100	81	70	106	-35
Other	3	0	0	0	-	-	-	-	-	-	-	-
Total[2]	**759**	**794**	**838**	**701**	**512**	**508**	**707**	**654**	**703**	**767**	**838**	**-71**
of which Non-OECD	**213**	**271**	**308**	**234**	**168**	**213**	**226**	**250**	**247**	**180**	**308**	**-128**
OECD Europe												
OECD Americas	4	4	3	3	2	4	5	7	9	0	3	-3
Venezuela	-	0	0	-	-	1	-	-	-	-	-	-
Other Central & South America	3	5	3	4	7	1	0	-	1	-	-	-
Non-OECD Europe	15	11	18	18	21	15	23	31	19	18	41	-23
FSU	89	70	62	60	57	51	27	37	24	18	45	-27
Saudi Arabia	0	2	0	-	-	7	-	-	-	-	-	-
Algeria	1	0	0	1	-	3	-	-	-	-	-	-
Other Middle East & Africa	5	4	8	17	3	5	5	5	7	4	7	-3
Singapore	2	2	3	2	2	1	2	2	2	2	3	0
OECD Asia Oceania	1	1	1	0	1	1	1	1	1	1	0	1
Non-OECD Asia (excl. Singapore)	3	2	0	0	0	0	-	-	-	-	-	-
Other	41	20	21	-5	28	46	20	4	32	23	21	2
Total[2]	**163**	**122**	**121**	**101**	**122**	**134**	**84**	**88**	**95**	**67**	**120**	**-52**
of which Non-OECD	**149**	**105**	**108**	**87**	**108**	**118**	**63**	**63**	**75**	**52**	**109**	**-57**
OECD Asia Oceania												
OECD Americas	-	4	6	1	8	8	0	0	0	0	15	-14
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	0	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	13	14	9	9	1	6	14	4	-	-	-
Other Europe	-	7	5	-	1	22	17	25	25	-	-	-
FSU	-	1	0	-	1	7	-	-	-	-	-	-
Saudi Arabia	0	0	1	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	5	1	-	-	-	-	3	-	10	-	-	-
Singapore	52	49	46	63	49	40	68	122	57	25	71	-46
Non-OECD Asia (excl. Singapore)	30	19	21	17	18	21	56	74	37	57	40	17
Other	15	20	21	21	20	20	30	19	19	53	26	27
Total[2]	**102**	**114**	**114**	**110**	**104**	**118**	**181**	**254**	**151**	**135**	**152**	**-17**
of which Non-OECD	**102**	**90**	**88**	**101**	**86**	**81**	**159**	**218**	**123**	**136**	**137**	**-1**
Total OECD Trade[2]	**1024**	**1029**	**1073**	**912**	**738**	**760**	**972**	**997**	**949**	**970**	**1110**	**-140**
of which Non-OECD	**464**	**466**	**504**	**421**	**362**	**412**	**449**	**532**	**444**	**369**	**555**	**-186**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

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Table 10
REGIONAL OECD GASOIL/DIESEL IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
OECD Americas												
Venezuela	2	4	1	-	-	-	-	-	-	-	-	-
Other Central and South America	13	30	38	41	25	34	40	25	38	56	35	21
ARA (Belgium Germany Netherlands)	7	6	5	18	7	-	2	-	-	5	5	0
Other Europe	3	3	2	1	1	11	2	3	-	3	2	0
FSU	6	16	6	11	1	22	-	-	-	-	-	-
Saudi Arabia	2	17	3	-	3	-	10	15	10	5	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	4	8	2	-	4	-	4	-	-	11	-	-
Singapore	0	1	0	-	-	-	-	-	-	-	-	-
OECD Asia Oceania	18	15	24	16	8	11	18	16	34	5	1	4
Non-OECD Asia (excl. Singapore)	22	23	30	30	28	31	13	13	13	14	-	-
Other	0	-	7	-	-	6	3	-	5	2	-	-
Total[2]	**77**	**124**	**118**	**117**	**77**	**115**	**91**	**72**	**101**	**102**	**44**	**58**
of which Non-OECD	**50**	**100**	**86**	**82**	**61**	**92**	**69**	**53**	**66**	**89**	**35**	**54**
OECD Europe												
OECD Americas	222	154	138	54	89	84	153	138	208	112	211	-98
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	3	4	0	-	2	1	7	3	16	2	-	-
Non-OECD Europe	48	39	41	48	27	27	34	42	37	22	34	-11
FSU	732	714	685	670	816	629	562	605	568	511	628	-116
Saudi Arabia	160	225	205	203	113	222	192	181	188	207	184	22
Algeria	-	-	0	0	-	7	-	-	-	-	-	-
Other Middle East and Africa	72	76	83	77	79	65	67	57	41	103	62	40
Singapore	15	14	27	34	16	29	10	15	7	7	38	-31
OECD Asia Oceania	28	25	36	31	27	32	33	21	40	38	40	-2
Non-OECD Asia (excl. Singapore)	125	151	152	199	150	95	78	93	64	76	103	-28
Other	21	12	10	8	-21	61	87	42	138	80	1	79
Total[2]	**1427**	**1413**	**1378**	**1324**	**1297**	**1252**	**1222**	**1197**	**1307**	**1158**	**1300**	**-143**
of which Non-OECD	**1086**	**1160**	**1126**	**1168**	**1148**	**1100**	**1008**	**1016**	**1028**	**980**	**1000**	**-21**
OECD Asia Oceania												
OECD Americas	1	-	1	-	-	6	7	20	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	0	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	0	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	5	4	4	3	3	3	1	2	2	-	4	-
Saudi Arabia	-	3	-	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	1	8	7	11	0	22	23	19	50	-	-	-
Singapore	87	141	111	133	78	96	100	95	116	89	96	-7
Non-OECD Asia (excl. Singapore)	96	91	133	134	194	209	214	242	193	207	124	83
Other	7	5	5	5	6	10	34	22	22	60	8	52
Total[2]	**196**	**253**	**262**	**286**	**281**	**346**	**380**	**400**	**382**	**356**	**232**	**125**
of which Non-OECD	**195**	**253**	**261**	**286**	**281**	**340**	**373**	**380**	**382**	**356**	**232**	**125**
Total OECD Trade[2]	**1701**	**1790**	**1758**	**1727**	**1655**	**1713**	**1692**	**1669**	**1790**	**1616**	**1576**	**40**
of which Non-OECD	**1331**	**1513**	**1473**	**1537**	**1490**	**1533**	**1451**	**1449**	**1477**	**1425**	**1267**	**158**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

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Table 11
REGIONAL OECD JET AND KEROSENE IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
OECD Americas												
Venezuela	16	6	0	-	-	-	-	-	-	-	-	-
Other Central and South America	1	2	7	11	5	5	7	4	2	16	11	6
ARA (Belgium Germany Netherlands)	-	0	-	-	-	-	-	-	-	-	-	-
Other Europe	0	0	0	-	3	0	8	8	6	9	-	-
FSU	1	0	-	-	-	-	1	-	-	3	-	-
Saudi Arabia	2	1	2	-	3	7	1	-	2	-	-	-
Algeria	0	-	-	-	1	1	3	-	-	10	-	-
Other Middle East and Africa	3	2	10	11	11	4	13	17	-	22	10	12
Singapore	2	6	3	-	13	1	3	-	10	-	-	-
OECD Asia Oceania	104	84	136	137	103	87	115	112	122	111	170	-58
Non-OECD Asia (excl. Singapore)	30	27	14	11	21	31	24	16	40	17	17	0
Other	13	11	3	-	4	11	-	-	-	-	-	-
Total[2]	**171**	**140**	**175**	**170**	**164**	**146**	**175**	**157**	**181**	**188**	**208**	**-20**
of which Non-OECD	**67**	**56**	**39**	**34**	**58**	**60**	**53**	**37**	**54**	**68**	**38**	**30**
OECD Europe												
OECD Americas	20	32	20	16	35	14	3	8	1	-	38	-
Venezuela	5	1	-	-	-	-	-	-	-	-	-	-
Other Central and South America	2	2	1	0	0	-	-	-	-	-	-	-
Non-OECD Europe	3	6	2	-	-	-	1	3	-	-	-	-
FSU	33	40	45	32	33	17	18	20	25	10	49	-39
Saudi Arabia	94	98	105	115	54	47	31	15	56	20	84	-64
Algeria	12	9	11	14	12	13	6	10	8	-	26	-
Other Middle East and Africa	207	197	199	196	174	128	153	135	116	210	164	46
Singapore	28	25	29	34	21	6	26	32	41	3	38	-35
OECD Asia Oceania	48	32	36	34	31	23	46	21	43	74	63	11
Non-OECD Asia (excl. Singapore)	53	69	73	51	67	40	31	33	32	28	82	-53
Other	1	1	2	5	-2	38	-4	-30	28	-9	7	-16
Total[2]	**508**	**512**	**523**	**497**	**423**	**326**	**311**	**246**	**350**	**337**	**552**	**-214**
of which Non-OECD	**436**	**445**	**464**	**446**	**356**	**288**	**261**	**216**	**305**	**262**	**447**	**-185**
OECD Asia Oceania												
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	1	-	-	-	-	-	-	-	-	-	-
Singapore	23	28	21	20	25	5	17	10	31	9	22	-13
Non-OECD Asia (excl. Singapore)	34	26	29	39	52	15	16	24	20	3	22	-19
Other	22	33	26	35	42	16	9	10	8	9	19	-9
Total[2]	**80**	**89**	**76**	**94**	**119**	**35**	**42**	**44**	**59**	**22**	**62**	**-41**
of which Non-OECD	**80**	**89**	**76**	**94**	**119**	**35**	**42**	**44**	**59**	**22**	**62**	**-41**
Total OECD Trade[2]	**758**	**741**	**774**	**761**	**705**	**507**	**528**	**448**	**590**	**547**	**822**	**-275**
of which Non-OECD	**583**	**590**	**579**	**573**	**533**	**383**	**356**	**297**	**417**	**352**	**547**	**-195**

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes.
2 Total figure excludes intra-regional trade.

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Table 12
REGIONAL OECD RESIDUAL FUEL OIL IMPORTS BY SOURCE[1]
(thousand barrels per day)

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jul 20	Aug 20	Sep 20	Year Earlier Sep 19	Year Earlier change
OECD Americas												
Venezuela	16	42	7	-	-	-	-	-	-	-	-	-
Other Central and South America	71	72	50	53	71	67	34	27	48	26	29	-2
ARA (Belgium Germany Netherlands)	5	7	6	9	6	16	9	0	8	18	-	-
Other Europe	3	7	8	11	25	30	13	4	25	11	1	10
FSU	24	23	30	27	49	33	43	18	68	43	42	2
Saudi Arabia	-	-	2	-	-	-	7	21	-	-	-	-
Algeria	1	-	8	17	8	0	0	-	-	0	2	-1
Other Middle East and Africa	9	7	5	14	1	3	30	18	36	37	-	-
Singapore	3	-	1	-	-	3	-	-	-	-	-	-
OECD Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Asia (excl. Singapore)	1	0	0	-	-	-	-	-	-	-	-	-
Other	0	2	-	-	-	-	-	-	-	-	-	-
Total[2]	**131**	**161**	**117**	**131**	**161**	**153**	**136**	**87**	**185**	**136**	**73**	**63**
of which Non-OECD	**123**	**147**	**102**	**107**	**124**	**107**	**113**	**83**	**151**	**106**	**72**	**34**
OECD Europe												
OECD Americas	6	4	7	4	9	10	13	14	5	22	15	7
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	2	3	5	4	5	-	7	2	6	13	4	9
Non-OECD Europe	17	17	21	20	5	11	15	15	15	15	11	4
FSU	195	154	154	145	152	145	141	201	102	119	182	-63
Saudi Arabia	0	1	-	-	-	7	-	-	-	-	-	-
Algeria	1	1	0	-	1	7	-	-	-	-	-	-
Other Middle East and Africa	23	15	19	17	14	13	9	8	5	13	13	0
Singapore	-	-	1	2	1	4	1	2	-	1	-	-
OECD Asia Oceania	9	8	14	11	7	5	3	2	1	6	7	0
Non-OECD Asia (excl. Singapore)	1	0	3	0	-	-	-	-	-	-	-	-
Other	-8	5	8	4	91	66	145	177	165	91	4	86
Total[2]	**246**	**208**	**232**	**208**	**285**	**268**	**333**	**421**	**298**	**279**	**235**	**44**
of which Non-OECD	**218**	**185**	**202**	**191**	**268**	**253**	**327**	**416**	**305**	**257**	**188**	**68**
OECD Asia Oceania												
OECD Americas	0	0	1	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	9	16	6	14	11	9	2	5	-	-	-	-
Saudi Arabia	-	-	1	-	-	-	3	-	-	9	10	-2
Algeria	1	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	18	23	27	24	42	14	61	75	26	81	59	23
Singapore	58	37	25	16	25	10	23	29	-	41	19	22
Non-OECD Asia (excl. Singapore)	59	85	40	26	30	13	29	31	25	32	31	1
Other	0	0	1	-	-	-	0	-	-	1	-	-
Total[2]	**146**	**162**	**101**	**80**	**108**	**46**	**118**	**139**	**52**	**164**	**119**	**44**
of which Non-OECD	**146**	**162**	**100**	**80**	**108**	**46**	**118**	**139**	**52**	**164**	**119**	**44**
Total OECD Trade[2]	**523**	**531**	**450**	**419**	**553**	**467**	**587**	**647**	**534**	**579**	**428**	**151**
of which Non-OECD	**487**	**493**	**404**	**378**	**500**	**406**	**558**	**638**	**508**	**526**	**380**	**146**

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

2 Total figure excludes intra-regional trade.

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

	2017	2018	2019	4Q19	1Q20	2Q20	3Q20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20
CRUDE OIL PRICES													
IEA CIF Average Import[1]													
IEA Americas	48.58	60.02	56.93	54.71	44.57	24.30	39.34	33.37	38.64	40.75	38.61		
IEA Europe	53.26	70.52	64.25	63.40	53.74	28.35	43.35	38.33	42.65	45.16	42.20		
IEA Asia Oceania	54.13	72.46	66.38	65.68	64.01	30.10	42.99	29.23	38.81	44.91	45.29		
IEA Total	**52.05**	**67.77**	**62.75**	**61.66**	**53.85**	**27.60**	**42.13**	**34.63**	**40.54**	**43.86**	**42.00**		
FOB Spot													
North Sea Dated	54.16	71.27	64.12	63.06	50.02	29.57	42.82	40.08	43.27	44.78	40.58	40.01	42.54
Brent (Asia) Mth 1	54.86	72.23	64.86	62.49	52.63	36.46	44.20	43.65	44.35	45.44	42.92	42.12	44.70
WTI (Cushing) Mth 1	50.78	65.20	57.03	56.88	45.57	27.95	40.90	38.30	40.76	42.36	39.60	39.53	41.10
Urals (Mediterranean)	53.26	70.17	64.31	63.40	48.97	30.29	43.39	42.36	44.28	45.01	40.98	40.26	43.35
Dubai (1st month)	53.15	69.65	63.49	62.00	50.41	31.17	42.80	40.71	43.18	43.90	41.45	40.70	43.33
Tapis (Dated)	65.74	73.69	69.16	70.08	56.06	28.66	43.69	40.78	45.61	46.30	39.48	39.15	42.54
PRODUCT PRICES													
Rotterdam, Barges FOB													
Premium Unl 10 ppm	65.80	78.78	71.35	69.21	53.77	30.56	46.58	41.59	45.95	47.41	46.48	45.30	44.97
Naphtha	54.19	68.70	56.27	57.90	45.86	26.52	41.90	38.01	42.51	42.42	40.78	41.72	41.13
Jet/Kerosene	65.92	86.39	79.24	78.51	60.06	29.76	41.92	39.90	43.50	43.37	38.95	41.45	45.33
ULSD 10ppm	66.28	86.22	79.45	78.96	62.85	37.55	47.49	44.56	49.53	49.70	43.36	44.17	47.45
Gasoil 0.1 %	64.68	84.28	77.73	76.91	61.41	36.43	45.99	43.92	47.76	48.12	42.19	43.34	46.66
LSFO 1%	48.72	63.22	62.21	62.83	52.84	30.10	41.34	37.67	40.99	43.09	40.11	42.48	45.74
HSFO 3.5%	45.63	61.13	50.31	33.35	33.39	24.05	38.33	33.55	37.06	40.86	37.37	38.25	41.12
Mediterranean, FOB Cargoes													
Premium Unl 10 ppm	65.83	79.41	71.31	70.45	54.91	31.91	47.45	42.98	46.72	48.29	47.44	45.56	45.45
Naphtha	52.74	66.08	54.43	55.36	43.27	23.72	40.74	36.60	41.56	41.49	39.21	41.07	40.34
Jet Aviation Fuel	65.04	85.37	77.76	76.48	58.08	27.43	40.88	38.62	42.64	42.56	37.51	40.89	44.62
ULSD 10ppm	66.20	86.03	79.05	78.23	61.86	36.15	47.45	44.84	49.73	49.58	43.14	44.47	47.47
Gasoil 0.1 %	64.60	84.74	77.70	76.72	60.94	34.06	46.32	43.78	48.49	48.26	42.28	43.78	46.96
LSFO 1%	49.91	64.31	63.90	65.32	54.94	31.39	42.26	38.68	42.02	44.03	40.89	43.63	46.55
HSFO 3.5%	47.22	62.06	52.17	37.35	35.67	24.32	37.23	33.44	37.03	39.10	35.74	36.95	39.15
US Gulf, FOB Pipeline													
Super Unleaded	73.82	85.71	79.24	75.52	60.05	39.80	52.55	49.85	51.99	53.59	51.53	50.83	49.81
Unleaded	67.98	80.10	72.28	68.37	54.57	34.95	49.24	46.05	48.51	50.50	48.10	47.68	47.25
Jet/Kerosene	65.40	85.12	78.81	77.90	58.25	32.58	45.02	41.64	45.65	46.86	42.52	44.21	47.51
ULSD 10 ppm	67.93	85.94	79.09	78.46	61.81	38.27	48.59	45.70	50.07	50.06	45.57	46.64	51.00
No. 6 3%[2]	46.03	60.20	52.57	39.32	35.91	24.69	37.70	32.77	37.06	40.08	35.99	37.37	39.44
Singapore, FOB Cargoes													
Premium Unleaded	67.96	80.21	72.55	75.03	56.85	33.23	47.32	45.21	46.56	48.18	47.27	45.96	46.67
Naphtha	53.99	67.50	57.15	60.13	47.72	28.05	43.29	39.06	43.60	43.08	43.19	41.88	40.71
Jet/Kerosene	65.28	85.05	77.26	75.99	58.88	30.73	42.13	41.16	43.92	43.28	39.37	41.65	45.64
Gasoil 0.05%	65.65	84.33	77.23	76.32	61.38	36.58	47.00	46.05	49.82	48.10	43.30	43.43	47.15
HSFO 180 CST	50.84	67.04	58.62	43.51	43.14	29.24	40.35	36.91	39.36	42.20	39.61	41.19	43.64
HSFO 380 CST 4%	50.01	66.01	57.57	42.63	41.71	27.95	39.59	35.22	39.06	41.26	38.59	39.53	43.41

1 IEA CIF Average Import price for September 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.
2 Waterborne
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Table 14
MONTHLY AVERAGE END-USER PRICES FOR PETROLEUM PRODUCTS

November 2020

	NATIONAL CURRENCY *						US DOLLARS					
	Total Price	% change from Oct-20	% change from Nov-19	Ex-Tax Price	% change from Oct-20	% change from Nov-19	Total Price	% change from Oct-20	% change from Nov-19	Ex-Tax Price	% change from Oct-20	% change from Nov-19
GASOLINE [1] (per litre)												
France	1.327	- 0.5	- 11.9	0.415	-1.2	-26.5	1.570	0.1	-5.7	0.491	-0.7	-21.3
Germany	1.255	- 2.2	- 10.2	0.427	-5.3	-17.7	1.485	-1.7	-3.8	0.505	-4.8	-11.9
Italy	1.388	-	- 11.8	0.410	-	-27.0	1.642	0.5	-5.6	0.485	0.5	-21.9
Spain	1.153	- 0.6	- 11.2	0.480	-1.2	-20.0	1.364	-0.1	-4.9	0.568	-0.7	-14.3
United Kingdom	1.127	- 0.5	- 10.2	0.359	-1.4	-23.0	1.489	1.2	-7.9	0.474	0.3	-21.0
Japan	133.1	- 0.8	- 9.4	64.4	-1.5	-16.3	1.275	-0.1	-5.6	0.617	-0.8	-12.7
Canada	1.038	- 0.4	- 12.2	0.613	-0.5	-19.3	0.794	0.7	-11.0	0.469	0.6	-18.3
United States	0.557	- 2.3	- 18.8	0.430	-2.9	-23.1	0.557	-2.3	-18.8	0.430	-2.9	-23.1
AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)												
France	1.214	1.1	- 15.8	0.403	2.8	-31.9	1.436	1.6	-9.8	0.477	3.4	-27.1
Germany	1.057	1.1	- 15.5	0.441	2.1	-24.1	1.251	1.6	-9.5	0.522	2.6	-18.7
Italy	1.259	- 0.1	- 14.3	0.415	-0.2	-29.3	1.490	0.5	-8.2	0.491	0.3	-24.3
Spain	1.026	- 0.3	- 15.6	0.469	-0.4	-25.0	1.214	0.2	-9.6	0.555	0.1	-19.6
United Kingdom	1.175	- 0.6	- 9.8	0.399	-1.5	-21.1	1.552	1.1	-7.5	0.527	0.2	-19.2
Japan	113.9	- 0.9	- 10.7	71.6	-1.2	-14.7	1.091	-0.1	-6.9	0.686	-0.5	-11.1
Canada	1.022	3.5	- 20.3	0.646	5.0	-28.7	0.782	4.7	-19.3	0.494	6.2	-27.8
United States	0.643	1.9	- 20.7	0.495	2.5	-25.3	0.643	1.9	-20.7	0.495	2.5	-25.3
DOMESTIC HEATING OIL (per litre)												
France	0.703	1.5	- 24.2	0.430	2.0	-30.4	0.832	2.0	-18.9	0.509	2.5	-25.4
Germany	0.463	3.6	- 33.4	0.338	4.3	-35.4	0.548	4.2	-28.7	0.400	4.9	-30.8
Italy	1.089	0.2	- 17.1	0.490	0.3	-27.4	1.289	0.7	-11.3	0.579	0.8	-22.2
Spain	0.523	1.4	- 31.9	0.336	1.8	-37.6	0.619	1.9	-27.0	0.397	2.3	-33.2
United Kingdom	0.433	0.3	- 25.4	0.301	0.4	-31.8	0.572	2.0	-23.5	0.398	2.1	-30.1
Japan [2]	79.1	- 1.6	- 12.9	69.1	-1.7	-13.3	0.757	-0.8	-9.2	0.662	-0.9	-9.6
Canada	0.898	3.2	- 22.6	0.791	3.9	-22.5	0.687	4.4	-21.6	0.606	5.1	-21.5
United States	-	-	-	-	-	-	-	-	-	-	-	-
LOW SULPHUR FUEL OIL FOR INDUSTRY [3] (per kg)												
France	0.465	2.0	- 18.0	0.325	2.9	-23.9	0.550	2.5	-12.2	0.385	3.4	-18.5
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.374	2.6	- 22.1	0.343	2.8	-23.7	0.443	3.1	-16.6	0.406	3.3	-18.3
Spain	0.317	4.0	- 27.0	0.300	4.2	-28.1	0.375	4.5	-21.8	0.355	4.8	-23.0
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

1 Unleaded premium (95 RON) for France, Germany, Italy, Spain, UK; regular unleaded for Canada, Japan and the United States.
2 Kerosene for Japan.
3 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.

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Table 15
IEA/KBC Global Indicator Refining Margins[1]
($/bbl)

	Monthly Average					Change	Average for week ending:				
	Aug 20	Sep 20	Oct 20	Nov 20		Nov-Oct	13 Nov	20 Nov	27 Nov	04 Dec	11 Dec
NW Europe											
Brent (Cracking)	-0.57	0.42	1.70	0.85	↓	-0.85	1.02	0.39	0.50	-0.31	-0.24
Urals (Cracking)	0.13	0.52	1.38	0.69	↓	-0.69	0.91	0.20	0.28	-0.53	-0.18
Brent (Hydroskimming)	-1.33	-0.52	1.21	0.86	↓	-0.34	1.09	0.46	0.45	-0.41	-0.53
Urals (Hydroskimming)	-1.42	-1.21	-0.15	-0.39	↓	-0.24	-0.07	-0.86	-1.04	-2.03	-1.96
Mediterranean											
Es Sider (Cracking)	0.41	1.01	2.35	3.33	↑	0.98	3.77	3.21	2.46	1.07	1.07
Urals (Cracking)	-0.54	-0.28	1.22	0.21	↓	-1.00	0.44	-0.18	-0.33	-0.82	-0.38
Es Sider (Hydroskimming)	-0.22	0.54	2.24	3.34	↑	1.11	3.89	3.22	2.30	0.72	0.42
Urals (Hydroskimming)	-2.55	-2.09	-0.50	-1.55	↓	-1.04	-1.18	-1.99	-2.46	-3.29	-3.11
US Gulf Coast											
Mars (Cracking)	0.36	0.90	1.61	1.37	↓	-0.24	1.57	1.10	1.48	0.19	0.13
50/50 HLS/LLS (Coking)	4.61	5.21	5.19	4.92	↓	-0.27	5.02	4.71	5.17	4.65	5.06
50/50 Maya/Mars (Coking)	1.54	2.34	3.00	2.62	↓	-0.38	2.89	2.17	2.36	1.52	2.09
ASCI (Coking)	2.20	2.81	3.15	3.14	↓	-0.02	3.30	2.89	3.30	2.26	2.73
US Midwest											
30/70 WCS/Bakken (Cracking)	7.24	6.13	6.18	6.12	↓	-0.06	5.94	5.09	5.37	4.64	4.86
Bakken (Cracking)	7.58	7.27	6.88	6.89	↑	0.01	7.02	5.52	5.67	5.18	5.42
WTI (Coking)	7.65	6.47	5.91	5.50	↓	-0.41	5.55	4.08	4.18	3.15	3.44
30/70 WCS/Bakken (Coking)	8.17	7.29	7.20	7.23	↑	0.03	7.09	6.05	6.16	5.77	6.16
Singapore											
Dubai (Hydroskimming)	-2.17	-2.58	-1.30	-0.77	↑	0.53	-0.47	-0.80	-1.24	-1.63	-2.17
Tapis (Hydroskimming)	-0.81	3.02	3.82	3.22	↓	-0.60	3.85	3.34	2.03	1.64	1.46
Dubai (Hydrocracking)	1.06	0.42	1.44	1.59	↑	0.16	1.84	1.40	1.41	1.56	1.66
Tapis (Hydrocracking)	-1.24	2.59	3.03	2.28	↓	-0.75	2.94	2.26	1.08	0.86	0.87

1 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)

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

	Jul-20	Aug-20	Sep-20	Sep-19	Sep 20 vs Previous Month	Sep 20 vs Previous Year	Sep 20 vs 5 Year Average	5 Year Average
OECD Americas								
Naphtha	1.4	1.3	1.3	1.4	0.0	-0.1	-0.3	1.6
Motor gasoline	45.8	45.9	47.3	45.3	1.4	2.0	1.1	46.3
Jet/kerosene	5.1	5.3	5.1	9.6	-0.2	-4.5	-4.2	9.3
Gasoil/diesel oil	30.2	30.3	29.4	28.3	-0.9	1.1	1.1	28.4
Residual fuel oil	2.4	2.7	2.8	3.1	0.1	-0.4	-0.7	3.5
Petroleum coke	4.5	4.4	4.4	4.2	0.0	0.2	-0.1	4.5
Other products	13.9	13.4	13.1	12.4	-0.3	0.7	1.4	11.7
OECD Europe								
Naphtha	8.6	8.6	8.6	7.7	0.1	0.9	1.2	7.4
Motor gasoline	20.3	21.0	21.6	20.2	0.6	1.4	0.5	21.1
Jet/kerosene	4.4	4.9	4.7	9.8	-0.3	-5.2	-4.4	9.0
Gasoil/diesel oil	44.1	43.2	42.6	39.2	-0.6	3.4	3.2	39.4
Residual fuel oil	6.8	6.9	7.0	8.4	0.1	-1.4	-2.3	9.3
Petroleum coke	1.5	1.4	1.5	1.5	0.0	0.0	0.2	1.3
Other products	16.8	16.7	16.7	15.5	-0.1	1.2	1.8	14.8
OECD Asia Oceania								
Naphtha	16.3	16.5	16.7	15.9	0.2	0.8	1.5	15.2
Motor gasoline	21.4	22.4	22.1	21.6	-0.4	0.5	-0.3	22.4
Jet/kerosene	12.3	12.2	10.7	15.0	-1.4	-4.3	-4.5	15.2
Gasoil/diesel oil	31.9	31.3	31.2	30.2	-0.1	1.0	1.3	29.9
Residual fuel oil	7.1	6.0	7.1	6.4	1.1	0.7	0.3	6.8
Petroleum coke	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
Other products	13.3	14.1	13.5	11.8	-0.6	1.6	1.0	12.4
OECD Total								
Naphtha	6.3	6.3	6.4	6.0	0.1	0.4	0.5	5.9
Motor gasoline	33.4	33.6	34.4	33.0	0.8	1.4	0.7	33.7
Jet/kerosene	6.1	6.4	5.9	10.7	-0.4	-4.7	-4.3	10.3
Gasoil/diesel oil	35.0	34.7	34.1	32.1	-0.7	1.9	1.8	32.3
Residual fuel oil	4.7	4.7	4.9	5.4	0.3	-0.5	-1.1	6.0
Petroleum coke	2.8	2.7	2.7	2.7	0.0	0.1	0.0	2.7
Other products	14.7	14.6	14.3	13.3	-0.3	1.0	1.5	12.9

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

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Table 17
WORLD BIOFUELS PRODUCTION
(thousand barrels per day)

	2018	2019	2020	1Q20	2Q20	3Q20	Sep 20	Oct 20	Nov 20
ETHANOL									
OECD Americas[1]	**1078**	**1060**	**932**	**1050**	**729**	**948**	**951**	**972**	**997**
United States	1048	1029	907	1025	703	923	926	946	971
Other	31	31	25	25	25	25			
OECD Europe[2]	**96**	**96**	**85**	**98**	**69**	**101**	**97**	**74**	**74**
France	21	20	14	16	10	22	21	9	9
Germany	14	12	10	14	11	16	14	0	0
Spain	9	9	7	8	5	6	6	10	10
United Kingdom	9	4	4	8	2	5	6	0	0
Other	43	50	50	52	41	51			
OECD Asia Oceania[3]	**4**	**5**	**4**	**5**	**3**	**4**	**4**	**5**	**5**
Australia	4	4	3	4	3	3	3	3	3
Other	0	1	1	1	1	1			
Total OECD Ethanol	**1178**	**1161**	**1022**	**1153**	**801**	**1053**	**1052**	**1051**	**1076**
Total Non-OECD Ethanol	**729**	**813**	**764**	**274**	**894**	**1151**	**1174**	**1004**	**734**
Brazil	557	621	576	105	707	959	983	803	533
China	56	67	70	52	70	74			
Argentina	19	19	16	16	16	16			
Other	96	106	102	102	102	102	192	201	201
TOTAL ETHANOL	**1907**	**1974**	**1786**	**1427**	**1695**	**2204**	**2226**	**2054**	**1810**
BIODIESEL									
OECD Americas[1]	**126**	**119**	**120**	**114**	**122**	**130**	**131**	**114**	**114**
United States	121	113	113	109	117	125	126	102	102
Other	5	7	6	5	5	5			
OECD Europe[2]	**275**	**280**	**243**	**237**	**225**	**281**	**295**	**229**	**229**
France	52	42	41	41	37	50	56	34	34
Germany	65	66	55	52	53	64	63	51	51
Italy	15	18	26	25	25	27			
Spain	33	38	26	23	22	29	31	29	29
Other	110	115	96	95	89	111	121	88	88
OECD Asia Oceania[3]	**14**	**14**	**15**	**9**	**18**	**18**	**17**	**17**	**17**
Australia	1	1	1	1	1	1	1	2	2
Other	13	13	14	8	17	17			
Total OECD Biodiesel	**415**	**413**	**378**	**360**	**365**	**428**	**443**	**359**	**359**
Total Non-OECD Biodiesel	**345**	**388**	**408**	**405**	**409**	**409**	**409**	**409**	**409**
Brazil	92	102	108	104	100	124	124	104	104
Argentina*	47	42	24	24	24	24			
Other	205	245	276	277	285	261			
TOTAL BIODIESEL	**759**	**801**	**786**	**765**	**774**	**838**	**852**	**768**	**768**
GLOBAL BIOFUELS	**2666**	**2776**	**2572**	**2192**	**2469**	**3041**	**3078**	**2823**	**2578**

* monthly data not available.

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