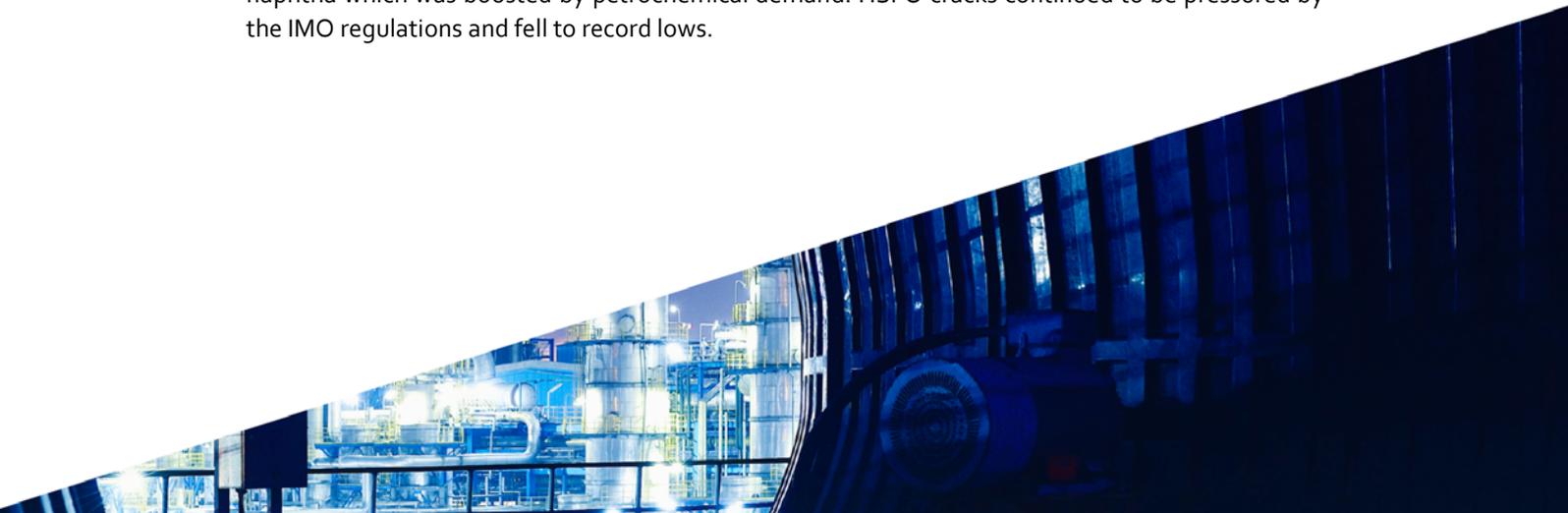


# Oil Market Report

12 December 2019

- Global oil demand increased by 900 kb/d y-o-y in 3Q19, the strongest annual growth in a year. Nearly three-quarters of the growth occurred in China. Indian demand rose 135 kb/d, but OECD deliveries fell for the fourth straight quarter and are expected to decline 75 kb/d overall in 2019. For 2019 and 2020 we have left unchanged our global oil demand growth forecasts at 1 mb/d and 1.2 mb/d, respectively.
- Faced with potential oversupply in early 2020, OPEC+ countries agreed to deepen existing cuts to 2.1 mb/d in 1Q20. This implies a reduction in supply of 500 kb/d from current levels. Despite the additional curbs and a reduction in our forecast of 2020 non-OPEC supply growth to 2.1 mb/d, global oil inventories could build by 0.7 mb/d in 1Q20. In November, global oil supplies held steady at 101.36 mb/d, down 1.2 mb/d y-o-y.
- The sharp drop in refining margins in November in all markets revealed the delicate balancing act between global crude oil and product markets. Labour strikes in November in several countries were factors in the downward revision to our 4Q19 throughput forecast, now expected to be flat y-o-y. In 2020, refining throughput growth is also revised down to 1 mb/d, after a 0.2 mb/d decline in 2019.
- OECD commercial stocks drew 32.5 mb in October to 2 904 mb. They were 2.9 mb below the five-year average and covered 60.6 days, one day below the average. Preliminary data for November showed total inventories falling in all regions, by 23.5 mb. Short-term floating storage of crude oil fell 2.1 mb in November to 62 mb. The number of Iranian VLCCs used for floating storage decreased by one to 26.
- ICE Brent futures rose above \$64/bbl following the OPEC+ meetings. Physical markets appear to have tightened with steeper backwardation for both North Sea Dated and Dubai, and rising differentials for many crudes, particularly sweet grades. Product cracks eased, with the exception of naphtha which was boosted by petrochemical demand. HSFO cracks continued to be pressured by the IMO regulations and fell to record lows.



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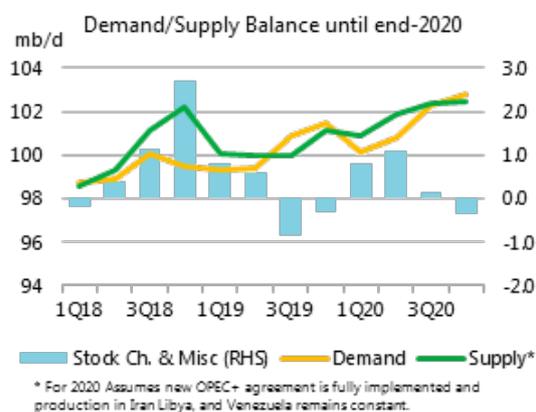
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# Oil's new deal

For the last several months in this *Report* we have suggested that in early 2020 the oil market is likely to see a significant surplus of supply over demand. On 6 December, countries participating in the OPEC+ agreement took a step to address this imbalance by deepening their cuts from 1.2 mb/d to 1.7 mb/d. Saudi Arabia once again showed its willingness to shoulder a greater burden by volunteering an additional reduction of 0.4 mb/d to take the total cut to 2.1 mb/d, effective 1 January. The voluntary cut by the Saudis has already been partially delivered but the overall effectiveness of the OPEC+ agreement depends on the willingness of all its parties to fully comply, including those whose compliance so far has been less rigorous. This revised deal excludes from the production ceiling 1.5 mb/d of condensate output by non-OPEC producers. Russia, in particular, now has 0.8 mb/d of supply that can legitimately be increased.

If all the countries comply with their new allocations and Saudi Arabia delivers the rest of its voluntary cut of 0.4 mb/d, the fall in production volume versus today will be about 0.5 mb/d. In this *Report* we have reduced our forecast for non-OPEC production growth next year from 2.3 mb/d to 2.1 mb/d to take account of lower output from participants in the OPEC+ deal and a weaker growth outlook for Brazil, Ghana and the United States. Even so, with our demand outlook unchanged, there could still be a surplus of 0.7 mb/d in the market in 1Q20.



In the meantime, the market has done its own sums and the reaction to oil's new deal has so far been muted: Brent crude oil was priced at \$63/bbl on the eve of the OPEC+ meetings and as we publish this *Report* the price is \$64/bbl.

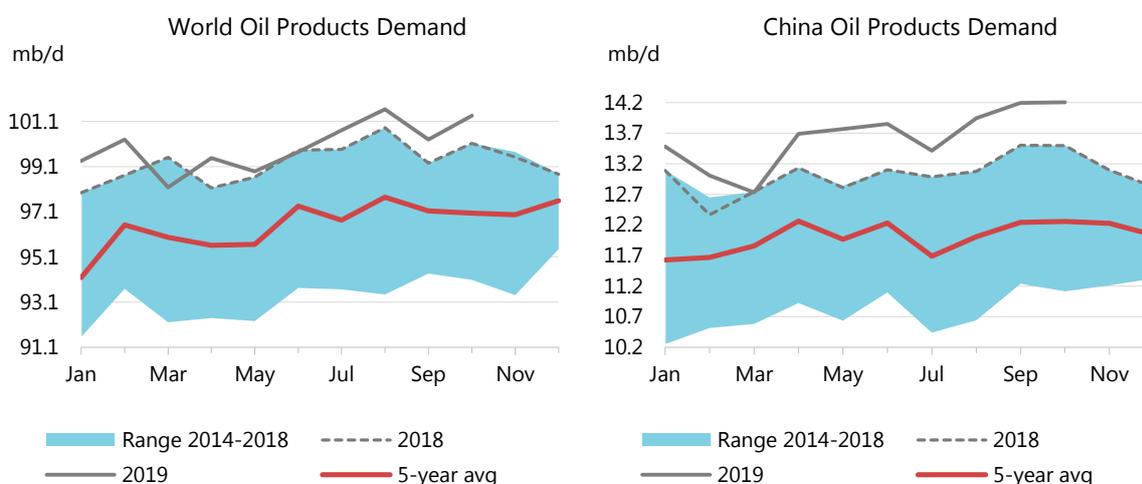
On a historic note, in September, the United States momentarily became a net oil exporter to the tune of 89 kb/d. This is a major milestone on its path to becoming a sustained net exporter, which is likely to be late in 2020 or early in 2021. However, this does not mean that energy independence has been achieved: the United States remains a major crude oil importer. In September, it received 6.5 mb/d of crude oil, with the largest volume coming from Canada and, with exports of 3.1 mb/d, it remained a significant net importer of 3.4 mb/d. Quality issues and greater market competition indicate that the United States will remain a major crude importer. This exposure to international markets highlights the need to insure against disruptions by maintaining emergency stocks, as reconfirmed in the communique issued at the conclusion of the biannual IEA Ministerial Meeting held last week in Paris.

Finally, to all our readers, a happy holiday season and we look forward to seeing you again in 2020.

# Demand

## Overview

Global oil consumption increased 900 kb/d year-on-year (y-o-y) in 3Q19, the strongest annual growth in a year. Nearly three-quarters of the growth occurred in just one country: China. Based on our apparent demand calculation, Chinese demand grew by 665 kb/d, boosted by motor fuels such as diesel and gasoline. Indian demand rose 135 kb/d y-o-y, marking a rebound from a dismal 2Q19, when growth was just 35 kb/d. However, the country's growth rate remained lower than last year due to disruptive flooding linked to the monsoon and sluggish economic activity. By contrast, reduced economic momentum undermined consumption in the OECD, which fell by 190 kb/d, the fourth straight quarterly fall. OECD oil demand is now expected to decline by 75 kb/d in 2019, the first annual fall since 2014. Consequently, all of the growth in world oil demand this year will come from non-OECD countries, particularly China.



In September, the latest month for which complete OECD data is available, we estimate that global oil demand grew 1.1 mb/d y-o-y, up from 810 kb/d in August and 845 kb/d in July. Consumption in the OECD was up by only 75 kb/d and demand in non-OECD countries increased by 980 kb/d.

Global Demand by Product							
(thousand barrels per day)							
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2018	2019	2020	2019	2020	2019	2020
LPG & Ethane	12 372	12 598	13 086	226	487	1.8	3.9
Naphtha	6 569	6 493	6 678	- 76	186	-1.2	2.9
Motor Gasoline	26 179	26 479	26 521	300	43	1.1	0.2
Jet Fuel & Kerosene	7 871	8 025	8 222	153	197	1.9	2.5
Gas/Diesel Oil	28 451	28 928	29 582	477	654	1.7	2.3
Residual Fuel Oil	6 669	6 444	6 148	- 225	- 296	-3.4	-4.6
Other Products	11 177	11 284	11 259	107	- 24	1.0	-0.2
<b>Total Products</b>	<b>99 288</b>	<b>100 250</b>	<b>101 497</b>	<b>962</b>	<b>1 247</b>	<b>1.0</b>	<b>1.2</b>

Our oil demand figures for the January-July period were revised up 85 kb/d on average due to changes in Canada, Indonesia, Italy and Mexico, among other countries. However, we revised down August and September consumption after receiving OECD data showing lower-than-expected deliveries. The largest downward revisions occurred in Germany, Italy, Japan, the Netherlands and the US. Overall, our 2019 oil demand forecast is 40 kb/d lower than last month, at 960 kb/d (rounded to 1 mb/d), while 2020 is up 25 kb/d to 1.2 mb/d.

Global Oil Demand (2018-2020)															
(million barrels per day)*															
	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
Africa	4.3	4.2	4.1	4.3	4.2	4.3	4.3	4.2	4.3	4.3	4.4	4.4	4.2	4.4	4.3
Americas	31.6	31.7	32.3	32.0	31.9	31.6	31.7	32.3	32.4	32.0	31.6	31.9	32.7	32.6	32.2
Asia/Pacific	35.4	35.0	34.6	35.3	35.1	35.9	35.5	35.3	36.5	35.8	36.7	36.4	36.1	37.4	36.7
Europe	14.8	14.9	15.4	14.9	15.0	14.7	14.8	15.4	15.0	15.0	14.7	15.0	15.4	15.2	15.1
FSU	4.5	4.6	4.9	4.8	4.7	4.6	4.8	5.0	5.0	4.8	4.7	4.8	5.1	5.0	4.9
Middle East	8.1	8.4	8.7	8.2	8.3	8.1	8.2	8.8	8.2	8.3	8.0	8.2	8.7	8.2	8.3
<b>World</b>	<b>98.7</b>	<b>98.9</b>	<b>100.0</b>	<b>99.5</b>	<b>99.3</b>	<b>99.3</b>	<b>99.4</b>	<b>100.9</b>	<b>101.4</b>	<b>100.2</b>	<b>100.1</b>	<b>100.8</b>	<b>102.3</b>	<b>102.8</b>	<b>101.5</b>
Annual Chg (%)	2.1	0.5	1.3	0.6	1.1	0.5	0.5	0.9	1.9	1.0	0.8	1.4	1.4	1.4	1.2
Annual Chg (mb/d)	2.0	0.5	1.3	0.6	1.1	0.5	0.5	0.9	1.9	1.0	0.8	1.4	1.4	1.4	1.2
Changes from last OMR (mb/d)	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-0.4	0.0	0.0	0.1	0.0	-0.3	0.1	0.0

\* Including biofuels

For 4Q19, we expect oil demand to rise by 1.9 mb/d y-o-y. This significant acceleration in growth versus the more sluggish performance seen earlier is based on three factors. First, demand in 4Q19 is compared against a low base in 4Q18 when demand fell versus the previous quarter. Normally, demand rises from 3Q to 4Q, but in 2018 this did not happen for only the second time this decade (2015 was the other occurrence). Second, we see continued momentum in China. Lastly, we expect higher petrochemical output in the OECD with new petrochemical capacity coming online. Demand for LPG/ethane was up 425 kb/d in October and it is expected to rise 445 kb/d in November and 730 kb/d in December.

## Fundamentals

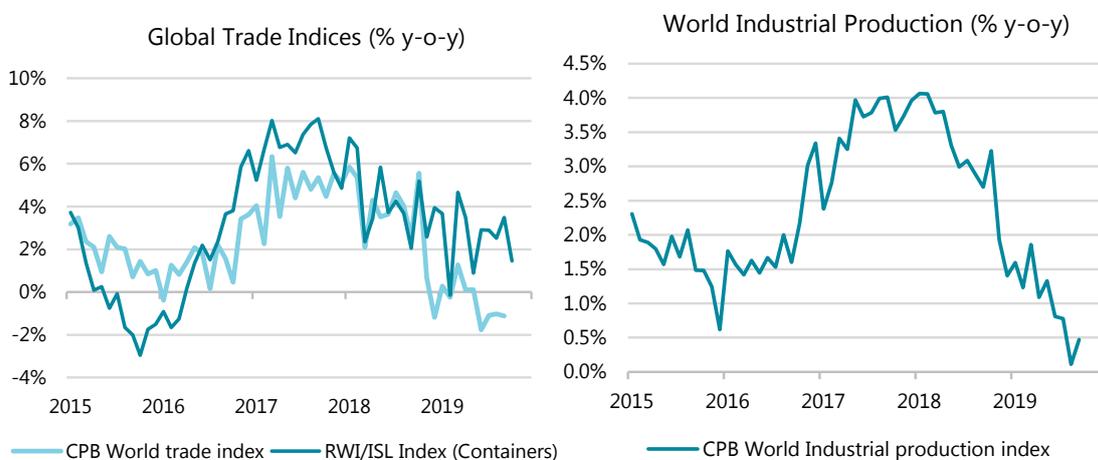
The economic projections underpinning our oil demand forecast are unchanged from last month and our price assumption, based on the Brent forward curve, remains the same. Based on the latest IMF outlook, we assume economic growth of 3% in 2019, with acceleration to 3.4% in 2020. The economic indicators published since the last *Report* generally point to some recent stabilisation or even improvement in world economic activity. The deterioration in trade and industrial activity seen in recent months may have come to an end at the start of 4Q19.

Global trade, tracked by the CPB Netherlands Bureau for Economic Policy Analysis, has stayed around 1% below last year's level but has not deteriorated further since July 2019. World industrial production growth also posted a modest rebound in September, the first since mid-2018, while container trade continued to grow.

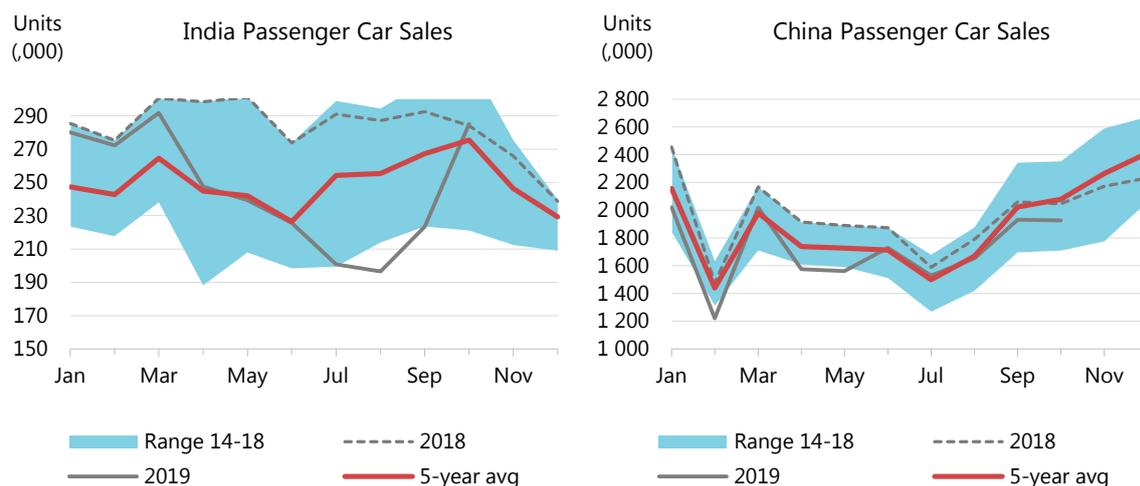
The latest indicators for the US have generally been positive. US GDP growth in 3Q19 was revised up to 2.1% on an annualised basis, from 1.9%. In October, durable goods orders rebounded and capital goods orders rose 1.2%. The non-farm payroll employment surged by 266 000 in November, pushing down the unemployment rate to 3.5% from 3.6%. This is the lowest unemployment rate since 1969.

China's prompt indicators also reflect an improvement in economic activity. The Caixin-Markit PMI rose to 51.8 in November while the official PMI from the National Bureau of Statistics

returned above 50 (50.2 in November from 49.3 in October) for the first time in seven months. The NBS PMI survey encompasses large state-owned companies while the Caixin PMI focuses more on smaller, private companies. The Chinese government has lowered capital requirements for investment in infrastructure and freed some project financing for provinces. This may in time boost the economic environment. The Indian PMI also rose in November to 51.2 from a two-year low of 50.6 in October.



Car sales recovered in both India and China. Indian car sales rose to 285 000 in October, a strong increase from 223 000 in September. Provisional numbers indicate that sales in India were 263 000 in November, close to last year's level of 266 000. While car sales in China remain below last year, the y-o-y difference is easing. Sales declined 4.2% y-o-y in November.

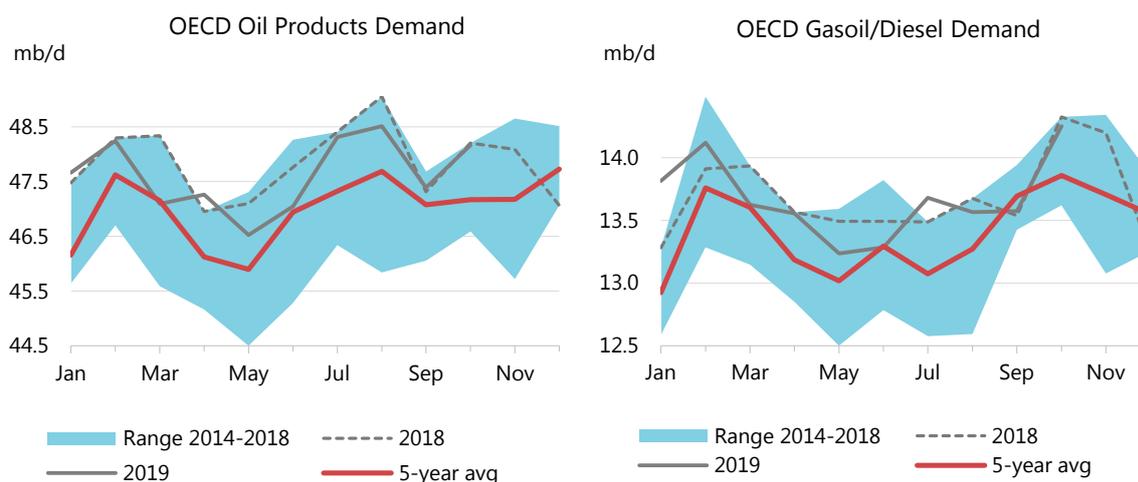


The economic environment has also recently stabilised in the OECD Asia region. Japan's GDP grew at a revised annualised rate of 1.8% q-o-q in 3Q19, much faster than the initial reading of 0.2%. Investment and private consumption rose strongly ahead of the 1 October consumption tax increase from 8% to 10%. This strong growth could be followed by much weaker expansion in 4Q19 with the fallout from the higher tax. Part of the negative impact of the higher consumption tax in 2020 could be offset by a \$121bn stimulus package recently announced by the government. This stimulus spending will focus on infrastructure, new technologies and the repair of typhoon damage. Korea is also implementing a large package of stimulus measures in 2020, increasing public spending by 8% to a record \$424 bn. The Korean economy, very dependent on exports, is currently penalised by trade disputes and slowing imports from China.

However, the European economic situation remains fragile. In particular, the largest economy, Germany, avoided a technical recession, with 3Q19 annualised GDP growth of just 0.5%. Falling world investment demand and the ongoing crisis in the automotive industry explain the recent poor performance. The latest industrial production numbers are worrisome, showing a drop of 5.3% y-o-y in manufacturing activity in October. Vehicle production declined by 14.4% y-o-y in October. Recent prompt indicators (the manufacturing PMI) improved in October and November, but continue to point to a contraction in industrial activity.

## OECD

OECD oil consumption fell by 190 kb/d y-o-y in 3Q19 but should grow by 590kb/d in 4Q19. Final data are available for all countries up to September and provisional October figures are available for France, Germany, Italy, Japan, Korea and the US. In addition, US weekly statistics are available for most of November.



OECD demand contracted for the fourth straight quarter in 3Q19, by 190 kb/d y-o-y, after shrinking 360 kb/d y-o-y in 1H19. Naphtha and fuel oil were the products that declined the most. Naphtha consumption dropped by 130 kb/d y-o-y on lower use of naphtha crackers while fuel oil demand dropped by 140 kb/d as bunker retailers emptied their inventories ahead of the IMO 2020 specification changes.

In 4Q19, naphtha demand is expected to remain weak, as competition from LPG and the economic slowdown will continue to take their toll, but fuel oil demand should rebound with increasing demand for very low sulphur fuel (VLSFO) in the bunker market (notably for reconstituting tertiary stocks). By contrast, most other fuels should benefit from lower y-o-y prices and the comparison with a weak 4Q18.

LPG/ethane has been boosted by an increase in ethane cracker demand in the US and returning demand in the UK after unplanned cracker outages during the summer. OECD gasoline demand will be supported by lower prices, increasing by 120 kb/d y-o-y. Jet and kerosene will see higher demand in OECD Asia, where warm temperatures reduced heating fuel demand in 4Q18. Gasoil demand will also benefit from a base effect, as demand posted a sharp decline in 4Q18.

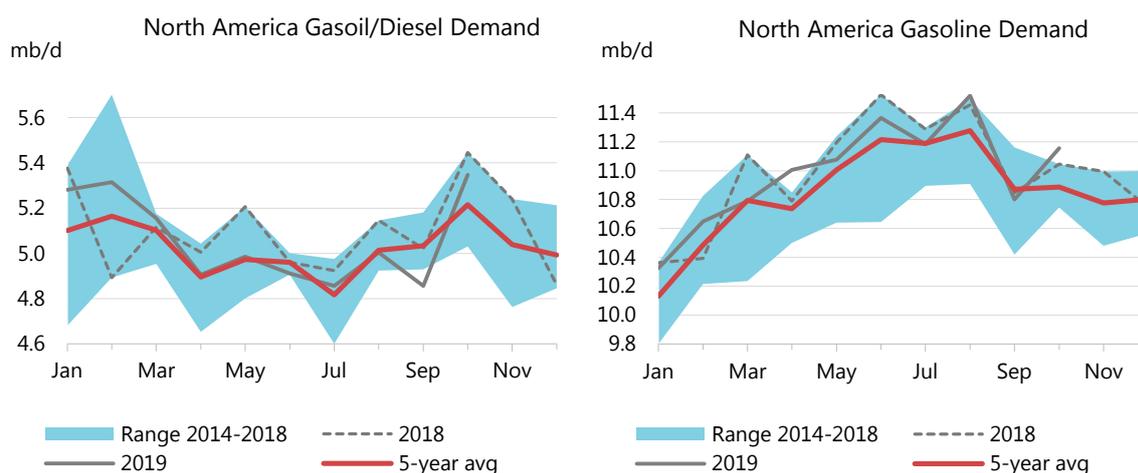
## OECD Demand based on Adjusted Preliminary Submissions - October 2019

	(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
<b>OECD Americas</b>	<b>11.26</b>	<b>1.0</b>	<b>2.08</b>	<b>5.0</b>	<b>4.99</b>	<b>-1.5</b>	<b>3.77</b>	<b>5.4</b>	<b>0.63</b>	<b>10.5</b>	<b>3.27</b>	<b>-7.6</b>	<b>26.13</b>	<b>0.5</b>
US*	9.51	1.5	1.81	4.9	4.22	-2.0	2.94	5.7	0.42	10.0	2.26	-8.3	21.25	0.6
Canada	0.94	-3.4	0.17	7.2	0.26	3.6	0.42	9.1	0.04	-9.7	0.77	-8.7	2.60	-2.1
Mexico	0.74	0.4	0.08	3.7	0.33	1.1	0.37	0.1	0.15	21.3	0.21	6.3	1.91	3.2
<b>OECD Europe</b>	<b>2.00</b>	<b>2.6</b>	<b>1.58</b>	<b>0.3</b>	<b>5.25</b>	<b>0.6</b>	<b>1.08</b>	<b>1.1</b>	<b>0.82</b>	<b>-3.7</b>	<b>3.46</b>	<b>-6.5</b>	<b>14.42</b>	<b>-0.9</b>
Germany	0.48	2.6	0.22	-3.9	0.79	-1.0	0.10	15.8	0.04	-14.7	0.66	-9.7	2.31	-2.9
United Kingdom	0.28	6.0	0.32	-0.5	0.51	4.2	0.09	-30.8	0.03	1.5	0.26	4.5	1.51	0.9
France	0.21	4.7	0.17	-3.2	0.73	-3.5	0.12	3.9	0.05	-8.4	0.45	-15.2	1.73	-5.6
Italy	0.17	-0.1	0.12	5.5	0.49	-0.2	0.10	7.3	0.07	-5.7	0.34	-7.3	1.30	-1.3
Spain	0.13	1.3	0.16	1.1	0.49	-0.2	0.74	-16.0	0.15	-1.4	0.32	-2.7	1.35	-0.9
<b>OECD Asia &amp; Oceania</b>	<b>1.48</b>	<b>2.3</b>	<b>0.82</b>	<b>-4.8</b>	<b>1.44</b>	<b>5.0</b>	<b>0.74</b>	<b>12.1</b>	<b>0.44</b>	<b>-16.3</b>	<b>2.66</b>	<b>-3.7</b>	<b>7.62</b>	<b>-0.6</b>
Japan	0.80	-2.0	0.38	-10.0	0.47	-2.6	0.31	-10.0	0.26	-8.5	1.21	-5.6	3.45	-5.5
Korea	0.23	24.6	0.20	-0.8	0.39	23.0	0.35	48.5	0.14	-30.5	1.18	-2.0	2.52	6.3
Australia	0.32	1.4	0.17	1.0	0.52	1.0	0.06	-3.1	0.02	12.9	0.14	-1.2	1.22	0.7
<b>OECD Total</b>	<b>14.74</b>	<b>1.3</b>	<b>4.48</b>	<b>1.4</b>	<b>11.68</b>	<b>0.2</b>	<b>5.59</b>	<b>5.4</b>	<b>1.88</b>	<b>-2.9</b>	<b>9.39</b>	<b>-6.1</b>	<b>48.17</b>	<b>-0.1</b>

\* Including US territories

## OECD Americas

Oil demand in the OECD Americas remained stagnant y-o-y in 3Q19 after very modest growth in 1H19. In 4Q19, the region's oil demand should increase by 350 kb/d y-o-y. LPG/ethane demand, in particular, should rise by 230 kb/d. Ethane demand was impacted in August by steam cracker outages in the US and rebounded in September, showing growth of 150 kb/d y-o-y. Ethane demand should further improve in 4Q19, as new steam crackers increase their utilisation rates. Jet/kerosene and gasoline demand should increase y-o-y by 90 kb/d and 70 kb/d, respectively.



US oil deliveries grew 140 kb/d y-o-y in September and preliminary data point to a rise of 130 kb/d in October, driven by gasoline and LPG/ethane. Ethane demand recovered in September, following a drop of 115 kb/d m-o-m in August, in part due to a fire at ExxonMobil's Baytown, Texas, petrochemical plant, which is expected to keep part of the facility off-line until year-end. The ramp up of several new ethane crackers should support 4Q19 ethane demand.

Jet fuel demand should also post strong growth of close to 80 kb/d in 4Q19. Domestic air traffic rose by 5.9% y-o-y in September and 4.1% in October. Weekly data for October and November point to strong growth in jet/kerosene demand. Gasoline consumption, benefitting from lower

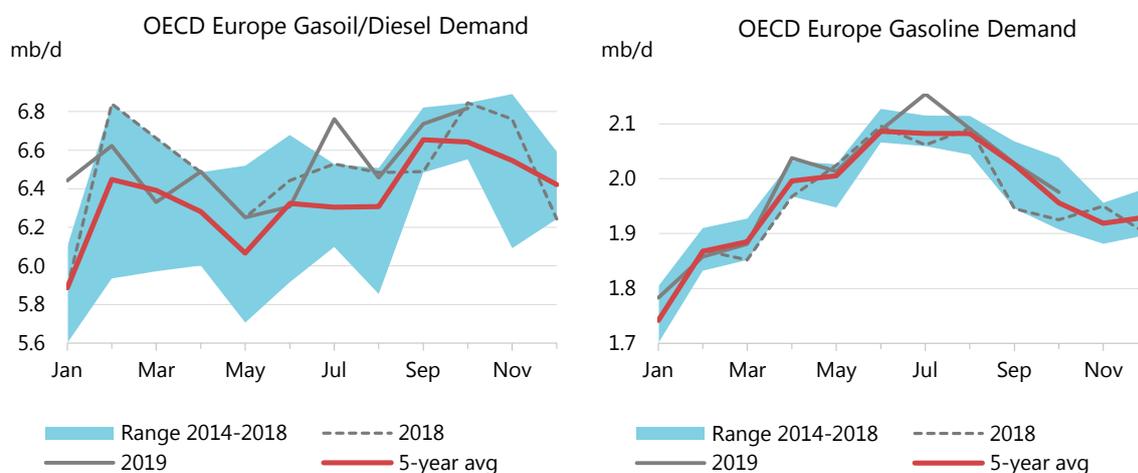
y-o-y prices and unemployment at record low levels, should increase by 60 kb/d y-o-y in 4Q19. Diesel demand is expected to remain slightly below last year.

Overall, US oil demand growth is expected to accelerate to 130 kb/d in 2020, after growing by 35 kb/d in 2019. LPG/ethane will be responsible for 200 kb/d of growth in 2020, offsetting declines in other fuels. Gasoline, for example, is expected to fall by 80 kb/d on efficiency improvements.

**Mexican** oil demand declined by 40 kb/d y-o-y in September, based on data reported by Pemex. We expect oil demand to rise by around 20 kb/d overall in 2019 and then 5 kb/d in 2020. **OECD Americas** oil demand is expected to grow by 130 kb/d in 2019 and 140 kb/d in 2020. LPG/ethane will be responsible for 100 kb/d of this growth in 2019 and 210kb/d in 2020.

## OECD Europe

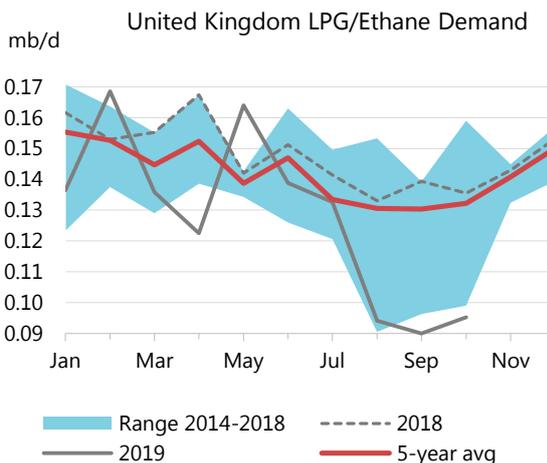
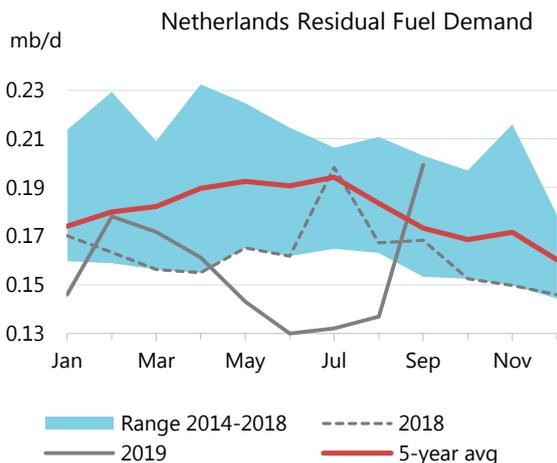
Oil consumption in OECD Europe fell 100 kb/d y-o-y in 3Q19, the sixth straight quarterly decline, with continuing falls in LPG and naphtha deliveries. The European petrochemical industry has suffered from a slowdown in global economic activity and from US competition. Ethane demand has also been impacted by unplanned cracker maintenance. On the contrary, demand for gasoil, gasoline and jet fuel has continued to grow.



**German** oil demand fell 30 kb/d in September and 70 kb/d in October, according to provisional data. Naphtha and jet/kerosene demand were particularly weak. German oil demand has been severely impacted by current economic difficulties and is expected to increase by only 5 kb/d in 2019 and to decline by 20 kb/d in 2020.

In the **UK**, LPG/ethane deliveries fell by 40 kb/d y-o-y in August and 50 kb/d in September on steam cracker incidents. One incident that occurred in early August is now resolved (at the Wilton Sabic petrochemical plant) but another unexpected shutdown is likely to continue until December (at the Fife Exxon/Shell cracker), reducing ethane demand in 4Q19.

Fuel demand in the **Netherlands** likely reflected the behaviour of bunker retailers, who emptied their high sulphur fuel oil inventories ahead of the IMO specification change. After getting rid of the high sulphur material, bunker sellers started to refill their tanks with very low sulphur fuel oil in September. These changes affect tertiary storage facilities, not recorded in primary oil stocks.

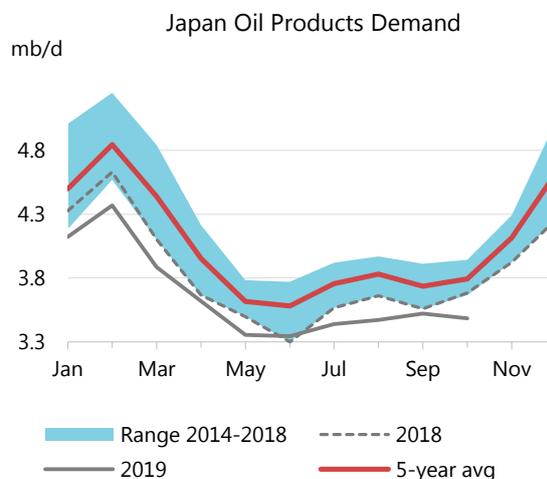
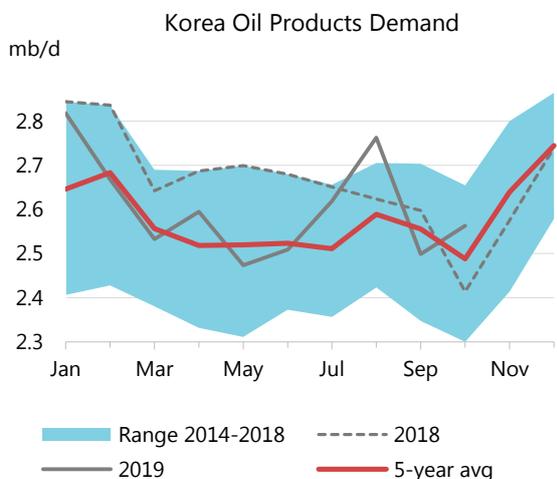


**French** oil demand rose by a strong 70 kb/d y-o-y in September, before posting a drop of 100 kb/d in October, according to provisional data. Heating oil deliveries, in particular, were 55 kb/d lower than last year in October. We expect French oil demand to grow by 10 kb/d in 2019 and to remain stagnant in 2020. **Italian** oil demand fell by a significant 50 kb/d y-o-y in September. Preliminary data point to a decline of 15 kb/d in October. Italian deliveries fell by 150 kb/d in 1Q19, 110 kb/d in 2Q19 and 80 kb/d in 3Q19. They are expected to remain stagnant y-o-y in 4Q19 in comparison with weak deliveries in 4Q18.

After falling 130 kb/d in 2018 and 70 kb/d in 2019, **OECD Europe's** oil demand should post growth of 90 kb/d in 2020, supported by relatively low oil prices and a comparison with a very weak start in 2019.

## OECD Asia Oceania

Oil demand in OECD Asia Oceania fell by 110 kb/d in 3Q19. Over 4Q19, consumption should rise by 120 kb/d. We expect the region's oil demand to fall 140 kb/d overall in 2019, followed by an increase of 60 kb/d in 2020.



In **Korea**, after a sharp increase in August and a sharp drop in September due a change in taxation, October saw a return to growth. Korea reduced fuel taxes by about 15% in October 2018 in order to boost consumer spending and this tax break ended at the end of August 2019.

As a result, August consumption rose by 140 kb/d and September demand declined by 100 kb/d y-o-y. September consumption fell 70 kb/d y-o-y for diesel and 35 kb/d for gasoline. In October, however, demand growth was strong (up 150 kb/d y-o-y) due to very weak 2018 deliveries. Overall, we expect Korean deliveries to drop by 35 kb/d in 2019 and to increase by 70 kb/d in 2020.

**Japanese** oil demand was down 40 kb/d y-o-y in September. Reduced demand for petrochemical feedstocks such as LPG (-65 kb/d) and naphtha (-20 kb/d) were factors. In October, preliminary data point to an acceleration of the y-o-y fall to 200 kb/d as all products posted strong negative growth. The sharp y-o-y drop in October is likely due to the implementation of higher consumption taxes from 1 October and disruptions associated with Typhoon Hagibis. We forecast Japanese oil consumption to contract by 105 kb/d y-o-y in 2019 but by only 35 kb/d in 2020.

**Australian** oil demand rose by 20 kb/d y-o-y in September. Consumption was supported by stronger gasoil deliveries. Overall, consumption is expected to decline by 5 kb/d in 2019 and to increase by 15 kb/d in 2020. After a drop of 140 kb/d in 2019, **OECD Asia Oceania** oil demand is projected to increase by 60 kb/d in 2020.

## Non-OECD

Non-OECD oil demand increased 1.3 mb/d y-o-y in October, one of the largest annual gains for 2019, according to preliminary data. This was stronger than the 980 kb/d rate of growth registered in September. In October, the most significant gains were seen in China, which grew 710 kb/d y-o-y, helped by solid growth in gasoil/diesel (+395 kb/d) and jet fuel/kerosene (+100 kb/d). As in recent months, demand also increased sharply in Russia (+85 kb/d). However, it stalled in India. Oil consumption growth in non-OECD countries has remained solid this year, despite some signs of weakness e.g. in India and Latin America. Demand was up 950 kb/d y-o-y during the January-September period, more than the 805 kb/d seen for the same period in 2018. We expect even stronger annual growth of 1.3 mb/d in 4Q19, followed by a more moderate 735 kb/d in 1Q20 and an average of 930 kb/d throughout 2020.

## China

China's oil demand continued to surprise to the upside in October, as it grew 710 kb/d y-o-y, even faster than the rate of 585 kb/d seen in the first nine months of the year. Gasoil/diesel demand gained by 395 kb/d, more than any other product category, despite the ongoing slowdown in activity in the manufacturing sector. Jet/kerosene was up 100 kb/d y-o-y, marking a recovery from the second and third quarters when it barely grew due to sluggish air passenger numbers. Gasoline consumption increased by just 65 kb/d, a slower rate of growth than seen since the start of the year. Industrial profits fell for the third straight month by 9.9% y-o-y to 427.56 billion yuan in October, according to data published by the National Bureau of Statistics. Exports and product prices were also both lower, thus underscoring the continued difficulties faced by the country's manufacturing sector, a big energy consumer. However, public support for infrastructure projects may be supporting demand growth, notably for gasoil.

### China: Demand by Product

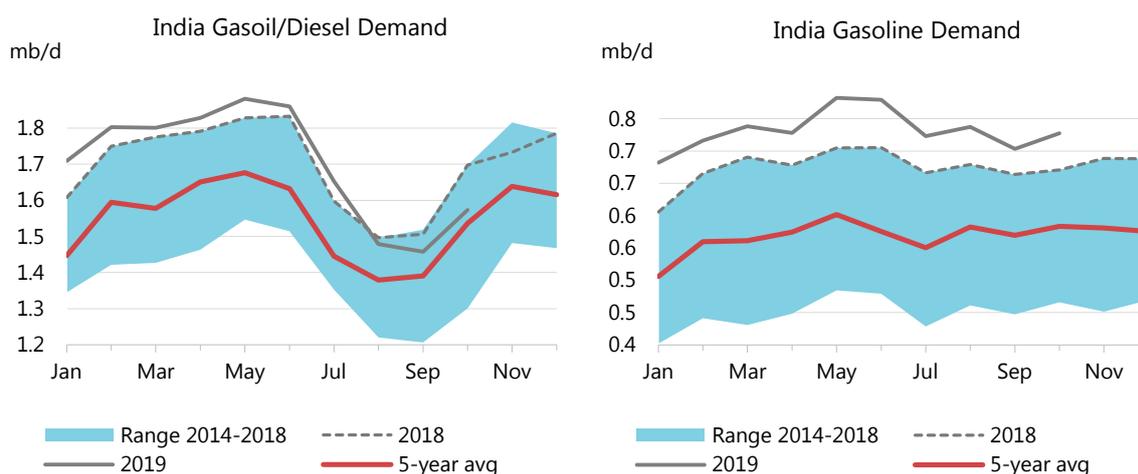
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2018	2019	2020	2019	2020	2019	2020
LPG & Ethane	1 620	1 706	1 830	86	124	5.3	7.3
Naphtha	1 268	1 310	1 398	42	88	3.3	6.7
Motor Gasoline	2 984	3 137	3 179	153	42	5.1	1.3
Jet Fuel & Kerosene	812	860	920	48	60	5.9	7.0
Gas/Diesel Oil	3 355	3 526	3 600	171	74	5.1	2.1
Residual Fuel Oil	432	401	407	- 31	6	-7.1	1.4
Other Products	2 503	2 660	2 672	156	12	6.2	0.5
<b>Total Products</b>	<b>12 975</b>	<b>13 601</b>	<b>14 006</b>	<b>626</b>	<b>405</b>	<b>4.8</b>	<b>3.0</b>

Overall, in the January-October period, demand in China has risen 600 kb/d y-o-y, driven largely by transport fuels such as gasoil/diesel and gasoline, as well as by growth in the petrochemical sector. Other products demand increased by 155 kb/d during this period. We forecast China's oil consumption to rise by 750 kb/d in 4Q19, before slowing down to 400 kb/d in 1Q20 and 405 kb/d overall in 2020, due to slower GDP growth than in 2019.

## India

India's oil consumption was roughly unchanged (up by just 5 kb/d y-o-y) in October for the second month in a row as a result of record monsoon rains, which hit demand for transport fuels, and slower economic growth. Gasoil/diesel deliveries fell 125 kb/d y-o-y, the largest annual fall in more than three years, as flooding persisted until the middle of the month, hampering transport.



Gasoline consumption grew at a rate of 55 kb/d, in line with the growth seen since the start of the year, while jet fuel and kerosene consumption declined 25 kb/d. Demand for naphtha was also down by 45 kb/d, whereas deliveries of LPG rose by a significant 110 kb/d during the month. Indian industrial output fell 4.3% y-o-y in September, the latest month for which data is available. This was the largest annual fall recorded since February 2013. Domestic passenger air traffic rose 4% y-o-y in October to 12.3 million passengers, data from the country's Directorate General of Civil Aviation showed. Growth slowed sharply at the end of 2018 and has been around 3% on average since the start of the year, the same data showed. Meanwhile, car sales are stabilising after falling precipitously earlier in the year.

Indian oil demand has increased 120 kb/d y-o-y in the first ten months of 2019, compared with 230 kb/d for the same period in 2018. Sales of naphtha and jet/kerosene fell, gasoil/diesel deliveries were more or less unchanged and gasoline demand showed growth of 60 kb/d, a slightly faster pace than registered in 2018 as gasoline vehicles have become more popular than diesel cars. We forecast India's oil demand to rise by 160 kb/d in 4Q19 and also 160 kb/d in 1Q20. Oil demand growth in 2020 is likely to be higher than in 2019, assuming that economic growth accelerates, but it will remain below the 200 kb/d+ levels reached in 2015-18.

India: Demand by Product							
(thousand barrels per day)							
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2018	2019	2020	2019	2020	2019	2020
LPG & Ethane	782	847	875	65	28	8.3	3.3
Naphtha	324	314	328	- 10	14	-3.1	4.3
Motor Gasoline	676	734	761	57	27	8.4	3.7
Jet Fuel & Kerosene	252	237	258	- 15	21	-6.0	8.8
Gas/Diesel Oil	1 728	1 747	1 786	19	39	1.1	2.3
Residual Fuel Oil	150	144	145	- 6	1	-4.0	0.6
Other Products	949	978	1 027	29	49	3.1	5.0
<b>Total Products</b>	<b>4 863</b>	<b>5 001</b>	<b>5 180</b>	<b>138</b>	<b>179</b>	<b>2.8</b>	<b>3.6</b>

## Other Non-OECD

Oil demand in **Saudi Arabia** gained 155 kb/d y-o-y in September, the second straight month of strong annual growth following the declines seen in the first half of 2019. The largest growth by volume was seen in fuel oil (+105 kb/d), reflecting its use to substitute away from crude oil in the power sector, followed by gasoil/diesel (+50 kb/d) and jet fuel (+30 kb/d). Gasoline consumption fell 35 kb/d. We forecast demand to rise by 30 kb/d in 2019; however it is likely to fall by 40 kb/d in 2020, with reduced crude burning for power generation in favour of natural gas.

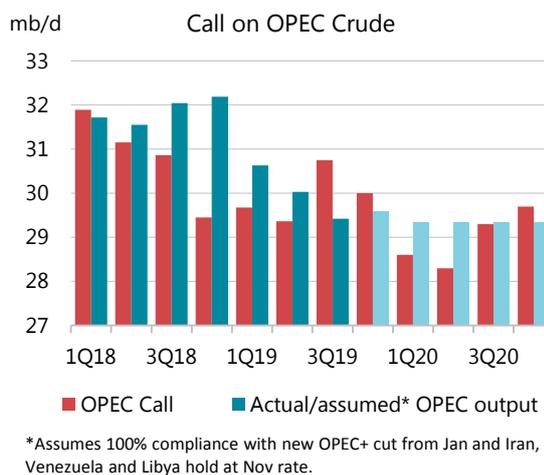
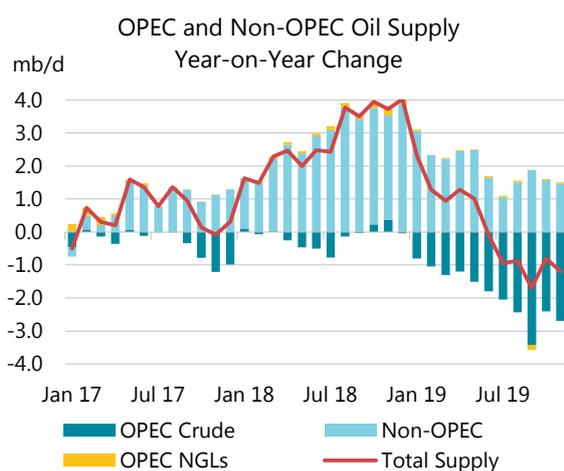
In **Russia**, oil consumption increased by 85 kb/d y-o-y in October, driven by LPG/ethane (+50 kb/d), naphtha (+25 kb/d), gasoline (+25 kb/d) and jet/kerosene (+15 kb/d). Demand rose by 110 kb/d in the first ten months of the year. It is forecast to grow 105 kb/d overall in 2019 and by a further 45 kb/d in 2020.

**Brazilian** oil demand increased 125 kb/d in October, thanks to gains in gasoline (+55 kb/d) and gasoil/diesel (+70 kb/d). Deliveries rose 75 kb/d on average during the January-October period. Demand is expected to increase by 70 kb/d in 2019, the strongest rate of growth since 2014. We forecast slower growth in 2020 of 40 kb/d y-o-y.

# Supply

## Overview

Global oil supply held steady in November versus the previous month as higher production from the US, Canada and the North Sea offset seasonally lower biofuels output and a substantial reduction by Saudi Arabia. At 101.36 mb/d, production was down 1.2 mb/d year-on-year (y-o-y).



OPEC oil supply was 2.69 mb/d lower than a year ago as Saudi Arabia withheld large volumes to rebalance the market and Venezuela and Iran lost a combined 1.4 mb/d mostly due to sanctions. Non-OPEC production, fuelled by the US, was up 1.5 mb/d versus November 2018.

Forecast non-OPEC supply growth for 2020 has been revised lower by 0.2 mb/d, on a continued slowdown in the US, reduced expectations for Brazil and Ghana as well as additional cuts by OPEC+. That still leaves supply growth of 2.1 mb/d next year, compared with 1.9 mb/d in 2019.

The new wave of supply from the US, Norway, Canada, Brazil and Guyana was duly noted by OPEC+ oil ministers who gathered in Vienna on 5-6 December to assess the market. In the end, they agreed a reduction of 2.1 mb/d, deepening their existing curbs by 900 kb/d (see *Will new OPEC+ cut go deep enough?*).

Even if they adhere strictly to the cut, there is still likely to be a strong build in inventories during the first half of next year. OPEC pumped 29.66 mb/d of crude during November, down 300 kb/d month-on-month (m-o-m) and that rate would fall to around 29.3 mb/d in January based on full compliance and steady output from Libya, Iran and Venezuela. That is still 700 kb/d above the 1Q20 call on OPEC crude and 1 mb/d above the second quarter call.

### Box 1. Will new OPEC+ cut go deep enough?

Faced with an over-supplied market in early 2020, Saudi Arabia steered through a 2.1 mb/d OPEC+ cut at the group's meeting on 5-6 December. The new pact adds an extra 500 kb/d of cuts to existing curbs of 1.2 mb/d, plus a further 400 kb/d voluntary reduction by Saudi Arabia. However, even if OPEC+ were to strictly comply with the new deal, only 530 kb/d of crude would be withdrawn from the market (versus November).

Saudi Arabia remains the driving force behind the OPEC+ deal. With its 322 kb/d share of the old cut, its 167 kb/d share of the new cut plus its 400 kb/d voluntary cut, Saudi Arabia will be withholding nearly 900 kb/d overall. So it will aim to produce 9.74 mb/d. In November its output was only 160 kb/d more than this.

The Kingdom has already pumped an average 500 kb/d below its supply target this year. That has subsidised those OPEC+ countries who have failed to meet their commitments, mainly Iraq and Russia which together have produced 300 kb/d more than agreed. Riyadh insisted in Vienna that all producers comply with supply targets.

Based on November output, OPEC would have to cut an extra 320 kb/d to comply with the new supply target. Iraq, which has lagged behind on compliance, has agreed to cut an extra 50 kb/d, taking its new target to 4.46 mb/d. In November, Iraq pumped about 190 kb/d more than this.

Russia, along with the rest of non-OPEC, agreed to cut crude supplies by an additional 130 kb/d. However, to fully comply with the new target, non-OPEC producers would have to curb output by 210 kb/d due to current under compliance. That cut might be partly offset by rising condensate supplies. From January, condensates, already excluded from OPEC production, will also be removed from non-OPEC supply targets. In all, non-OPEC participants covered by the agreement produce nearly 1.5 mb/d of oil classified as condensate which is now free from output restrictions.

This gives Russia scope to further ramp up condensate output from around 830 kb/d currently. Oman, too, will benefit. Under the existing deal, it has had to restrict crude output to counter growing condensate supply. In October, Oman's condensate output was 157 kb/d, up 44 kb/d from October 2018. Small increases have also come from Azerbaijan, where BP is boosting Shah Deniz supplies. Azerbaijan produced 89 kb/d of condensate in November, up 20 kb/d on a year ago. Kazakhstan produces roughly 300 kb/d of condensate, mostly from the Karachaganak field. Mexico produces roughly 30 kb/d and Malaysia around 65 kb/d.

New OPEC+ Production Cuts <sup>1</sup> (million barrels per day)				
	New Cut	Total Cut	New Target	Cut vs Nov Output
Algeria	0.012	0.04	1.013	-0.017
Angola	0.000	0.05	1.481	0.201
Congo	0.004	0.01	0.311	-0.039
Equatorial Guinea	0.001	0.01	0.122	0.002
Gabon	0.002	0.01	0.179	-0.011
Iraq	0.050	0.19	4.462	-0.188
Kuwait	0.055	0.14	2.669	-0.021
Nigeria	0.021	0.08	1.753	-0.017
Saudi Arabia	0.167	0.49	10.144	0.244
UAE	0.060	0.16	3.012	-0.078
<b>Total OPEC 10</b>	<b>0.372</b>	<b>1.17</b>	<b>25.146</b>	<b>0.076</b>
<b>Extra Saudi cut</b>	<b>0.772</b>	<b>1.57</b>	<b>24.746</b>	<b>-0.324</b>
Azerbaijan	0.007	0.03	0.698	0.014
Kazakhstan	0.017	0.06	1.632	-0.054
Mexico	0.018	0.06	1.686	-0.039
Oman	0.009	0.03	0.849	0.042
Russia	0.070	0.30	10.325	-0.092
Others <sup>2</sup>	0.010	0.04	1.039	-0.078
<b>Total Non-OPEC<sup>3</sup></b>	<b>0.131</b>	<b>0.51</b>	<b>16.228</b>	<b>-0.208</b>
<b>Total OPEC+</b>	<b>0.503</b>	<b>1.68</b>	<b>41.374</b>	<b>-0.132</b>
<b>Total OPEC+ (extra Saudi cut)</b>	<b>0.903</b>	<b>2.08</b>	<b>40.974</b>	<b>-0.532</b>

<sup>1</sup> Effective 1 January 2020.

<sup>2</sup> Bahrain, Brunei, Malaysia, Sudan and South Sudan.

<sup>3</sup> Production target and November output exclude condensate and NGLs.

OPEC / Non-OPEC Output <sup>1</sup>								
(million barrels per day)								
	Oct 2019 Supply	Nov 2019 Supply	Supply Baseline <sup>2</sup>	Agreed Cut	November Compliance	Average Compliance	Sustainable Production Capacity <sup>5</sup>	Spare Capacity vs Nov Supply <sup>6</sup>
Algeria	1.02	1.03	1.057	0.032	84%	105%	1.05	0.02
Angola	1.37	1.28	1.528	0.047	528%	268%	1.45	0.17
Congo	0.35	0.35	0.325	0.010	-250%	-161%	0.35	0.00
Ecuador <sup>3</sup>	0.47	0.52	0.531	0.016	69%	-31%	0.55	0.03
Equatorial Guinea	0.12	0.12	0.127	0.004	175%	453%	0.12	0.00
Gabon	0.21	0.19	0.187	0.006	-50%	-457%	0.22	0.03
Iraq	4.69	4.65	4.653	0.141	2%	-60%	4.90	0.25
Kuwait	2.63	2.69	2.809	0.085	140%	148%	2.86	0.17
Nigeria <sup>3</sup>	1.80	1.77	1.829	0.055	107%	-24%	1.80	0.03
Saudi Arabia	10.20	9.90	10.633	0.322	228%	268%	12.00	2.10
UAE	3.09	3.09	3.168	0.096	81%	99%	3.40	0.31
<b>Total OPEC 11</b>	<b>25.95</b>	<b>25.59</b>	<b>26.847</b>	<b>0.814</b>	<b>154%</b>	<b>150%</b>		
Iran <sup>4</sup>	2.15	2.13					3.80	-
Libya <sup>4</sup>	1.16	1.16					1.17	0.01
Venezuela <sup>4</sup>	0.70	0.78					0.78	0.00
<b>Total OPEC</b>	<b>29.96</b>	<b>29.66</b>					<b>34.45</b>	<b>3.12</b>
Azerbaijan	0.72	0.78	0.797	0.020	102%	143%		
Kazakhstan	1.95	2.01	2.028	0.040	37%	285%		
Mexico	1.93	1.98	2.017	0.040	100%	240%		
Oman	0.97	0.97	0.995	0.025	92%	66%		
Russia	11.57	11.58	11.747	0.230	74%	72%		
Others <sup>7</sup>	1.26	1.25	1.221	0.028	-121%	47%		
<b>Total Non-OPEC</b>	<b>18.40</b>	<b>18.57</b>	<b>18.81</b>	<b>0.383</b>	<b>61%</b>	<b>114%</b>		
<b>Total OPEC+</b>	<b>44.35</b>	<b>44.16</b>	<b>45.65</b>	<b>1.197</b>	<b>125%</b>	<b>138%</b>		

1 OPEC figures are crude oil only, Non-OPEC figures are total oil supply (including NGLs).

2 Based on Oct-2018, except for Azerbaijan and Kuwait based on Sept-2018 and Kazakhstan Nov-2018. Non-OPEC supply baseline for Kazakhstan and Russia use IEA estimates.

3 Nigeria assigned new target from June 2019, Ecuador, Malaysia, Brunei from March 2019.

4 Iran, Libya, Venezuela exempt from cuts.

5 Capacity can be reached in 90 days and sustained for extended period.

6 Spare capacity excludes Iranian crude offline due to sanctions.

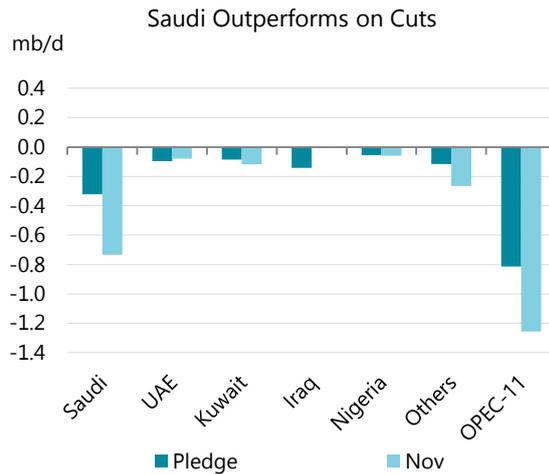
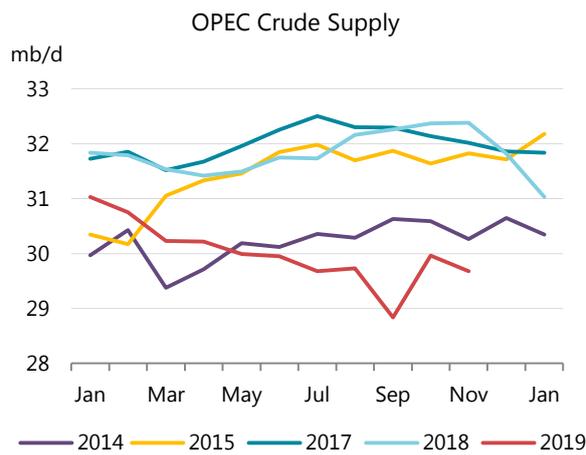
7 Bahrain, Brunei, Malaysia, Sudan and South Sudan

## OPEC crude oil supply

OPEC crude output fell during November as Saudi Arabia throttled back ahead of the Aramco IPO and Angola declined to a 13-year low due to maintenance. At 29.66 mb/d, production from the 14-member group slid 300 kb/d month-on-month (m-o-m) and was down 2.7 mb/d y-o-y. In the run-up to the OPEC+ meeting, Saudi Arabia leaned hard on those not toeing the line on compliance with the existing supply cuts.

Iraq, whose compliance has been the weakest amongst major producers, took heed and lowered output although it still pumped 140 kb/d above its target. Nigeria, which had also come in for criticism, saw compliance top 100% in November after its production eased. Venezuela posted a substantial output rebound in November, while supply also picked up in Kuwait and Ecuador, which is due to withdraw from OPEC in January.

Taken altogether, the 11 members restricting supply pumped 440 kb/d below their target during November, putting compliance with the deal at 154%. That robust rate was due mostly to Saudi Arabia, which continued to produce far below its commitment. For Iran and Venezuela, excluded from cuts, sanctions have taken a toll with supply down 840 kb/d and 520 kb/d y-o-y, respectively. In contrast, output from Libya, also spared from cuts, was up 50 kb/d y-o-y.



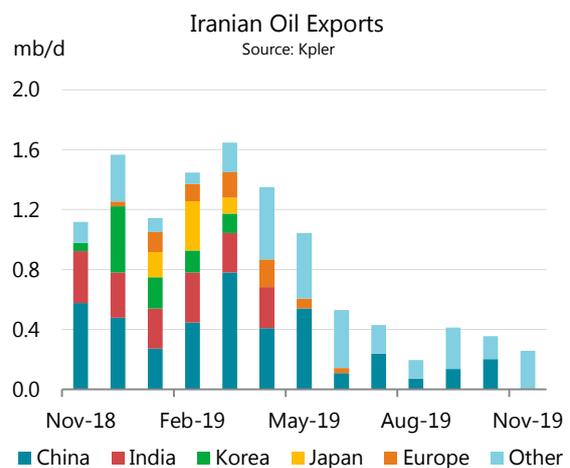
**Saudi Arabia** lowered output by 300 kb/d in November after filling up domestic crude stocks following the Abqaiq incident in September. Production of 9.9 mb/d was 410 kb/d below its supply quota and 1.16 mb/d lower than the record high seen in November 2018. Tanker tracking from Kpler showed exports in November of 7.2 mb/d up 85 kb/d m-o-m.

The Kingdom is also keen to achieve the highest possible valuation for Saudi Aramco following the recent sale of 1.5% of the company to local investors. Immediately after the sale, Aramco was valued at \$1.7 trillion, not quite hitting the initial \$2 trillion target set by Saudi Crown Prince Mohammed bin Salman. Trading in Aramco shares started on 11 December on the Kingdom’s Tadawul stock exchange.

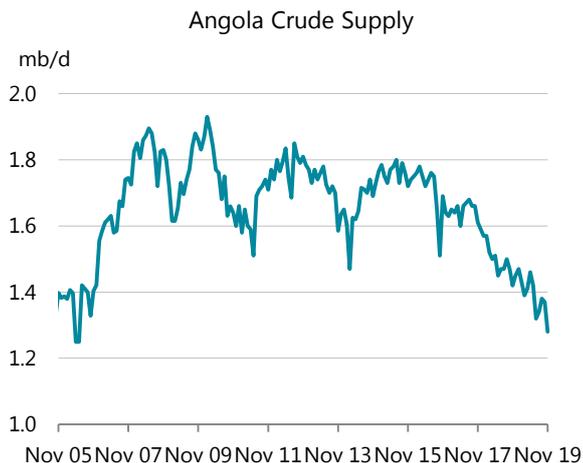
Production in **Kuwait** climbed 60 kb/d to 2.69 mb/d during November while supply from the **UAE** was unchanged at 3.09 mb/d.

To boost its OPEC+ compliance, **Iraq** shut in some output from state-controlled oil fields in November, but kept up shipments to world markets by drawing inventories. Production, including the Kurdistan Regional Government (KRG), eased 40 kb/d to 4.65 mb/d, but was still up 40 kb/d y-o-y. Most of the cutbacks are from fields operated by the Basra Oil Co such as Majnoon, bin Umar, Luhais, Ratawi and Tuba. A third month of anti-government protests has yet to have a material impact on operations although oil fields and terminals could become vulnerable as violence escalates.

**Iran**, too, is in the grip of wide-spread unrest which began in mid-November after the government unexpectedly increased gasoline prices by as much as 300%. Its economy has suffered since the US enforced tough sanctions that have caused exports to fall to 260 kb/d in November. That compares to 1.1 mb/d in November 2018. Production of crude oil slipped to 2.13 mb/d in November, the lowest since June 1988. The National Iranian Oil Co was holding oil on 26 VLCCs and three Suezmax tankers, according to *EA Gibson* data.



**Angola** saw a major production decline in November as maintenance at the Girassol oil field and losses at ageing fields pushed output down 90 kb/d to 1.28 mb/d, the lowest since June 2006. Underinvestment has seen production fall for the past few years. Even the start up of Total’s Kaombo project last year has failed to offset declines from elsewhere. Angolan output has been running far below its OPEC supply target and it was spared a further cut under the new OPEC+ deal.



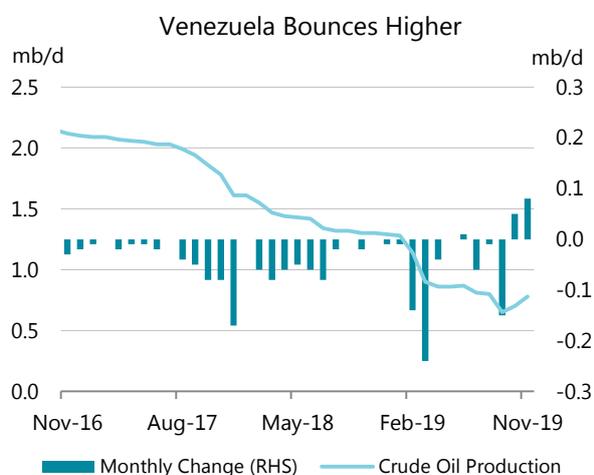
**Libya** managed to hold production steady at 1.16 mb/d in November, despite a flare-up of violence. The 70 kb/d El Feel oilfield was shut down on 5 December after a brief disruption at the end of November by air strikes.

The southwestern field is the latest target for two rivals: forces that support the UN-backed Government of National Accord and the Libyan National Army (LNA). Crude from El Feel and the neighbouring El Sharara is delivered to the Zawiyah refinery and export terminal on the west coast. Despite the ongoing unrest, production has risen and exports have been broadly stable as most essential infrastructure remains under the control of the LNA. Oil revenue, however, is managed by the central bank in Tripoli.

In a bid to breathe new life into its ailing upstream sector, **Algeria** has approved a new energy law. The hope is that improved commercial terms and tax rates will lure foreign investment. Production in November crept up to 1.03 mb/d. The new legislation comes at a time of political upheaval, where mass demonstrations have shaken the government. Sonatrach meanwhile appointed Kamel Edine Chikhi as CEO, replacing Rachid Hachichi who had been on the job for less than a year. Production in **Nigeria** dipped 30 kb/d to 1.77 mb/d in November, but was up 160 kb/d y-o-y. **Gabon** named Vincent de Paul Massassa as oil minister after dismissing Noel Mboumba and a number of other officials amid a corruption probe into the state oil company. Its production inched down to 190 kb/d.

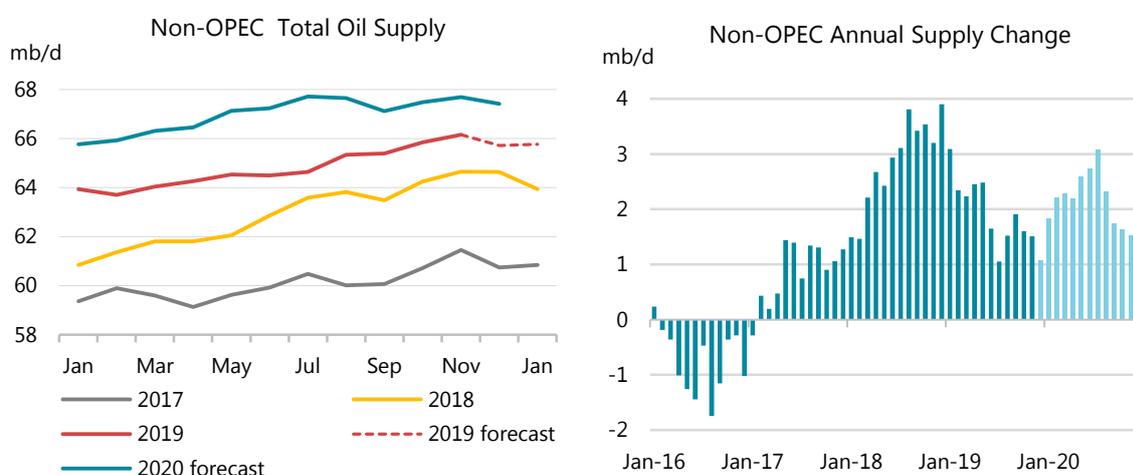
**Venezuela**, which is battling against a long-term drop in production and US sanctions managed to raise output by 80 kb/d in November to 780 kb/d. Exports rose, supplemented by stock draws. The recovery in production could prove fleeting given chronic underinvestment, mismanagement and sanctions.

**Ecuador** saw production rise 50 kb/d in November after protests disrupted operations the month before. It appointed a new energy minister, Jose Augusto, who previously served as an adviser to President Lenin Moreno and to the energy ministry.



# Non-OPEC supply

Forecast non-OPEC supply growth for 2020 has been lowered on a weaker outlook for the US, Brazil and Ghana, and as countries participating in the OPEC+ deal agreed to reduce output by an additional 130 kb/d from January (see *Will new OPEC+ cut go deep enough?*). Non-OPEC oil supply is now expected to expand by 2.1 mb/d next year, compared with gains of 1.9 mb/d in 2019.



The largest adjustment has been to US onshore output, where operators continue to scale back activity to generate free cash flow and improve investor returns. US total oil production growth is expected to slow from 1.6 mb/d this year to 1.1 mb/d in 2020, of which crude and condensates account for 760 kb/d. The outlook for Brazil and Ghana has also been reduced since last month's *Report* following lower guidance from Petrobras and Tullow Oil, respectively.

Non-OPEC Supply											
(million barrels per day)											
	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
Americas	23.03	24.05	24.52	24.64	25.21	24.61	25.43	25.77	26.18	26.37	25.94
Europe	3.47	3.47	3.17	3.16	3.51	3.33	3.73	3.73	3.67	3.86	3.75
Asia Oceania	0.41	0.43	0.48	0.51	0.57	0.50	0.59	0.60	0.61	0.61	0.60
<b>Total OECD</b>	<b>26.9</b>	<b>28.0</b>	<b>28.2</b>	<b>28.3</b>	<b>29.3</b>	<b>28.4</b>	<b>29.8</b>	<b>30.1</b>	<b>30.5</b>	<b>30.8</b>	<b>30.3</b>
Former USSR	14.56	14.81	14.42	14.62	14.66	14.62	14.59	14.59	14.58	14.65	14.60
Europe	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11
China	3.81	3.88	3.91	3.88	3.86	3.88	3.87	3.88	3.86	3.86	3.87
Other Asia	3.36	3.33	3.24	3.11	3.19	3.22	3.15	3.12	3.10	3.07	3.11
Latin America	4.52	4.51	4.58	4.85	4.93	4.72	5.03	5.09	5.10	5.10	5.08
Middle East	3.26	3.25	3.24	3.24	3.23	3.24	3.28	3.28	3.28	3.27	3.28
Africa	1.45	1.48	1.49	1.46	1.47	1.47	1.43	1.41	1.40	1.38	1.40
<b>Total Non-OECD</b>	<b>31.1</b>	<b>31.4</b>	<b>31.0</b>	<b>31.3</b>	<b>31.4</b>	<b>31.3</b>	<b>31.5</b>	<b>31.5</b>	<b>31.4</b>	<b>31.4</b>	<b>31.5</b>
Processing Gains	2.32	2.35	2.35	2.35	2.35	2.35	2.38	2.38	2.38	2.38	2.38
Global Biofuels	2.62	2.21	2.90	3.16	2.79	2.77	2.36	2.93	3.20	2.82	2.83
<b>Total Non-OPEC</b>	<b>62.9</b>	<b>63.9</b>	<b>64.4</b>	<b>65.1</b>	<b>65.9</b>	<b>64.8</b>	<b>66.0</b>	<b>66.9</b>	<b>67.5</b>	<b>67.5</b>	<b>67.0</b>
Annual Chg (mb/d)	2.84	2.55	2.20	1.48	1.36	1.89	2.08	2.48	2.35	1.59	2.12
Changes from last OMR (mb/d)	0.00	-0.06	-0.07	-0.03	0.19	0.03	-0.28	-0.21	-0.04	-0.15	-0.17

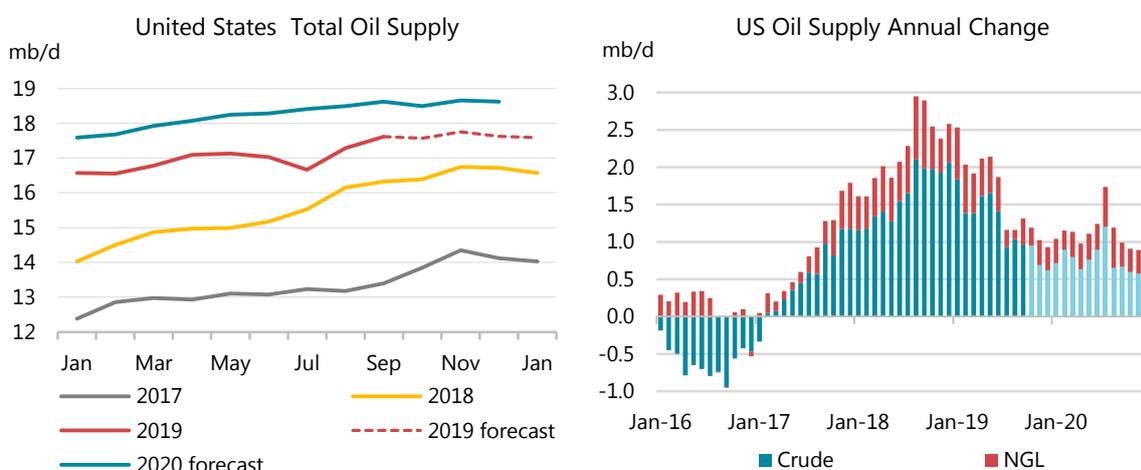
As for the countries participating in the OPEC+ output deal, we have reduced supply estimates for next year to reflect new targets. To reach full compliance with the new deal, non-OPEC countries will have to curb crude oil production by 210 kb/d compared with November. Rising

condensate output from Russia, Oman, Kazakhstan and Azerbaijan could offset the reduction to some extent.

In November, non-OPEC oil supply rose by an estimated 315 kb/d, to 66.1 mb/d. The US, Canada, North Sea and Caspian producers accounted for most of the gains, while a 375 kb/d seasonal decline in global biofuels output provided a partial offset. Annual gains stood at 1.5 mb/d, down from 2.4 mb/d during 1H19 and 2.8 mb/d in 2018.

Forecast **US** oil supply growth for 2020 has been reduced by 110 kb/d since last month's *Report* as operators continue to scale back activity. In November, oil companies laid off another 21 rigs so that at the start of December there were 663 rigs in operation, 214 fewer than one year ago. Moreover, several companies that have already provided guidance for 2020 point to further declines in spending compared with 2019. Many independent players have slashed their original ambitions and are now expecting a slower pace of growth.

However, not all companies are scaling back. Pioneer and EOG are still planning for strong US oil supply growth in 2020. ExxonMobil and Chevron continue to step up activity in the Permian Basin. As such, US crude oil production is expected to increase by 760 kb/d. NGLs will add another 360 kb/d for a total increase of 1.1 mb/d.

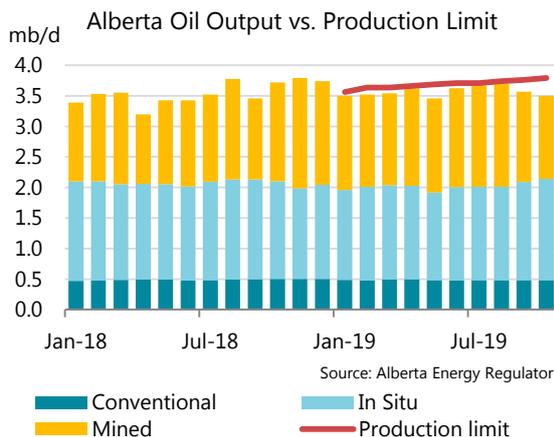
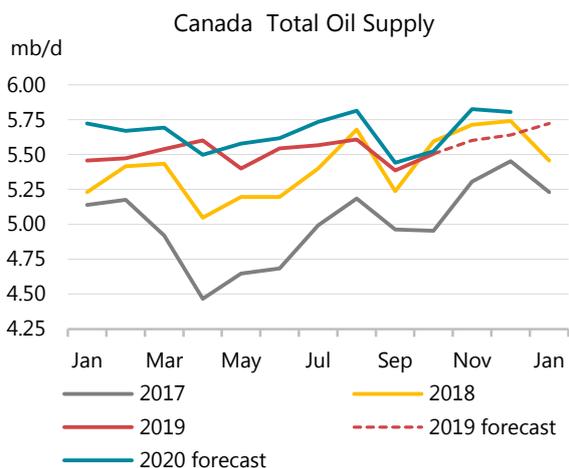


In September, US total oil supply rose by 330 kb/d m-o-m, to 17.6 mb/d, led by a sharp recovery in ethane production from a month earlier. Crude oil output rose by 65 kb/d, to 12.5 mb/d. A seasonal increase in Alaskan production (+67 kb/d), and healthy gains from Texas (+72 kb/d), Oklahoma (+43 kb/d) and New Mexico (+21 kb/d) more than offset a 114 kb/d decline in offshore output and lower production in North Dakota (-41 kb/d).

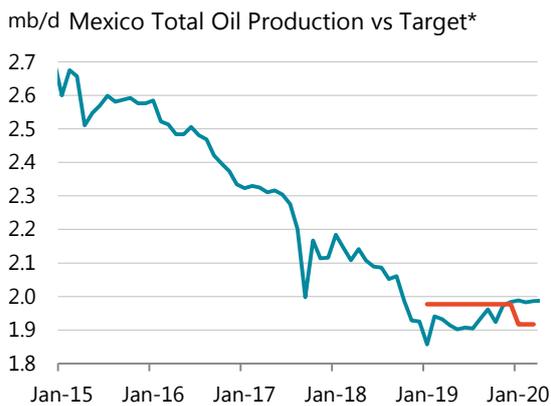
**Canadian** oil supply rose by 140 kb/d in October, as higher offshore production more than offset a decline in oil sands output. Offshore production rose by 143 kb/d m-o-m as the Hibernia field restarted following an oil spill and maintenance was completed at the Hebron field. Production at Hibernia rose by 120 kb/d to 135 kb/d, Hebron was up by 50 kb/d, to 135 kb/d, while Terra Nova slipped by 28 kb/d to 13 kb/d.

In contrast, oil supplies from Alberta inched 25 kb/d lower m-o-m with output of synthetic crude oil falling by 65 kb/d. Alberta's production was 190 kb/d lower than a year ago. In addition to regular seasonal maintenance, the Syncrude oil sands project cut October sales by 1.4 million barrels as planned maintenance was extended. At 5.5 mb/d, total Canadian oil supply was 85 kb/d lower than a year ago, and 230 kb/d below the peak reached at end-2018 before

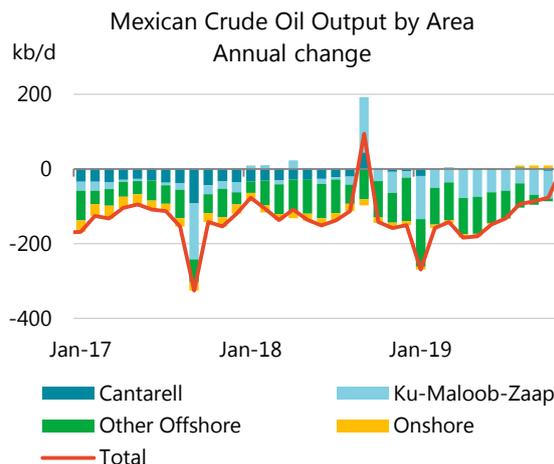
mandatory production curtailments took effect. In October, Alberta's oil production was nearly 300 kb/d below the allowed level.



Following four months of flat or rising production, **Mexican** oil supply dropped by 40 kb/d in October as maintenance at Ku-Maloob-Zaap more than offset gains from the Xanab field. At 1.93 mb/d, total oil output nevertheless posted its lowest year-on-year decline this year, of 60 kb/d. According to the CEO of Pemex, Octavio Romero, crude oil production will reach 1.778 mb/d at the end of the year and 1.819 mb/d in January, compared with 1.69 mb/d in October. Under the new OPEC+ pact, Mexico's crude oil output target for January is 1.686 mb/d.



\*Applied to total oil supply for entire period



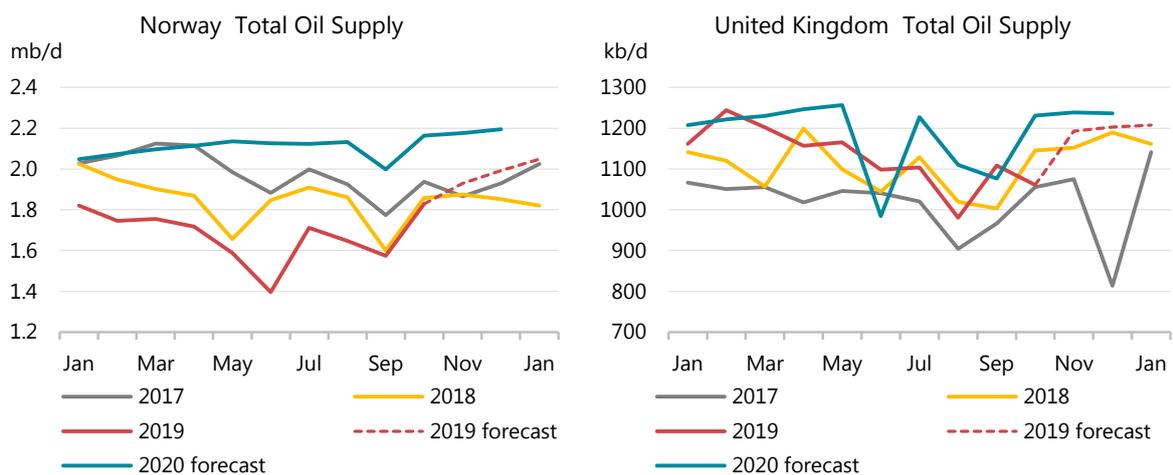
The impressive ramp up in production from Equinor's Johan Sverdrup field saw **Norwegian** oil output rise by 100 kb/d m-o-m and 54 kb/d y-o-y in November to reach 1.9 mb/d. This is the first time in a year that production has been above year ago levels. Equinor announced that in early December the field was already producing 350 kb/d and is on track to reach Phase 1 capacity of 440 kb/d by mid-2020. Thanks largely to Johan Sverdrup, Norwegian output is set to grow by 390 kb/d in 2020, having been in decline since 2016.

Aker BP has sanctioned Phase 2 of the Ærfugl field development with an accelerated date for first oil of 1H20, three years ahead of the original schedule and even before Phase 1 of the project is due to start up in 4Q20. Both Phase 1 and Phase 2 involve the subsea tieback of three

wells to the Skarv FPSO where processing capacity has been increased. Production from Ærfugl is expected to add 30 kb/d by the end of 2021.

ConocoPhillips announced that it will redevelop the Tor field, which has been shut in since 2015. Production is due online by the end of 2020 and will be tied in to Ekofisk infrastructure. First oil from Tor was seen in 1978, and flows quickly reached almost 100 kb/d before steep declines saw output down to around 15 kb/d within five years. The redevelopment project aims to extend the life of the field by another 20 years.

Meanwhile, Equinor announced a further delay and cost increase for the Martin Linge project which is now expected to start production in 3Q20. The company also announced higher costs for the Njord Future project, although there is no change to the date for first oil of 4Q20. Martin Linge and Njord Future will add around 40 kb/d and 10 kb/d, respectively, to Norwegian production at plateau levels.



Official data show that **UK** production bucked the seasonal trend in September, by rising 130 kb/d m-o-m, as maintenance on fields that feed the Forties pipeline system was lighter than expected. However, production slid in October when unforeseen outages shut-in Buzzard, the UK's largest producing field, for most of the month. By November, the issues were resolved and it is thought that flows rebounded to 1.2 mb/d, 40 kb/d above year ago levels.

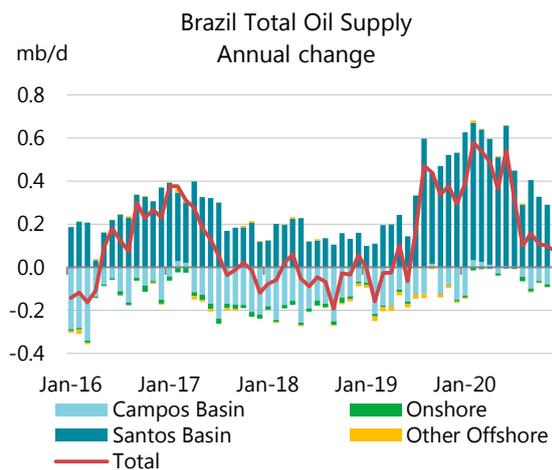
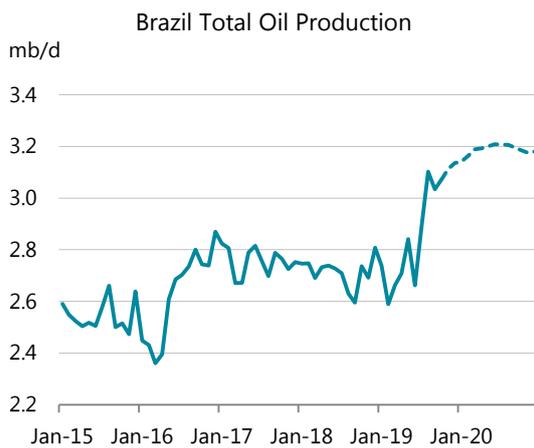
EnQuest announced that it would be unable to restart production through the Thistle platform until early 2020 as urgent platform repairs were needed. Production from the Thistle and Deveron fields of around 5 kb/d has been shut-in since October. EnQuest's Heather field was also taken offline in October following a fire and is not expected to return until next year. These outages are relatively minor and the operator re-confirmed its overall production guidance with improved flows from the Kraken and Crathes fields sufficient to offset the losses.

Some smaller projects helping to underpin UK production are thought to have come online in November, including Apache's Storr field and the second well at its Garten project. These will add a combined 30 kb/d. Further to this, Equinor is expected to start flows from Barnacle in December, having already commissioned Mariner and Utgard (which straddles the Norwegian border) this year. These three combined will boost UK production by almost 70 kb/d, with Mariner accounting for 55 kb/d of this.

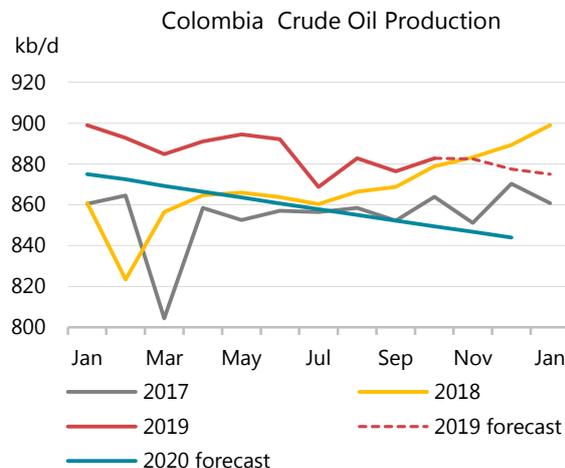
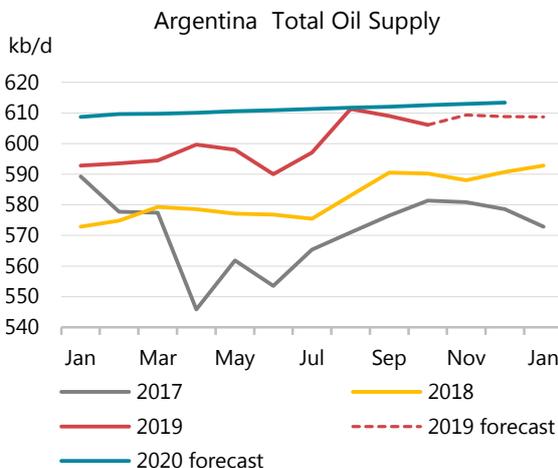
Overall, the UK is growing modestly this year by 30 kb/d and the small fields starting up have led us to boost our growth outlook for 2020 to 50 kb/d.

Expectations for **Brazilian** output growth for 2020 have been marginally revised following updated production guidance from Petrobras. In its new Business plan published in early December, Brazil's state oil company lowered its production target for 2020 by 0.1 mb/d to 2.2 mb/d, reflecting natural production declines in mature fields and maintenance stoppages.

Production is nevertheless expected to see further gains in the coming months. In October, the latest month for which statistics are available, Brazilian oil production rose by 40 kb/d, to 3.07 mb/d, up 335 kb/d on a year ago. In November, Petrobras and its international partners, Shell, Total and Petrogal Brazil launched production at the Sururu and Berbigao fields. One more FPSO is expected during 2020: the P-70, will have capacity of 150 kb/d and be installed at the Atapu 1 field. In November, Petrobras said the unit was 97% complete, with 10 wells drilled and two already completed. Brazilian output growth is now forecast at 310 kb/d in 2020, up from 160 kb/d on average this year.



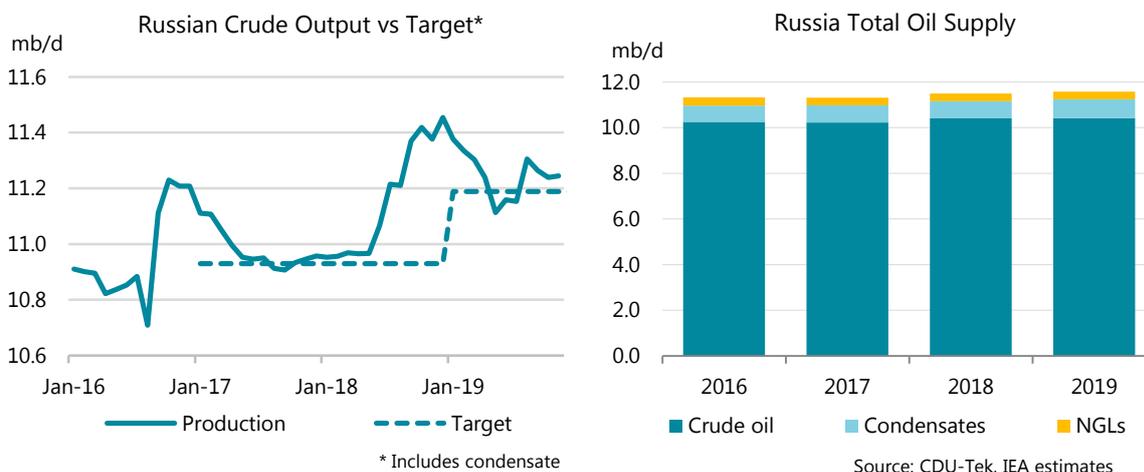
**Argentina's** crude and condensate supply rose 16 kb/d y-o-y to around 515 kb/d in October. The increase stemmed mostly from light tight oil (LTO) production that has risen to around 75 kb/d. While LTO oil is expected to continue to support growth, price controls reinstated this summer to moderate inflation could impede growth. Including NGLs, Argentinian oil supply is expected to grow by 20 kb/d this year and a further 10 kb/d in 2020, to 610 kb/d.



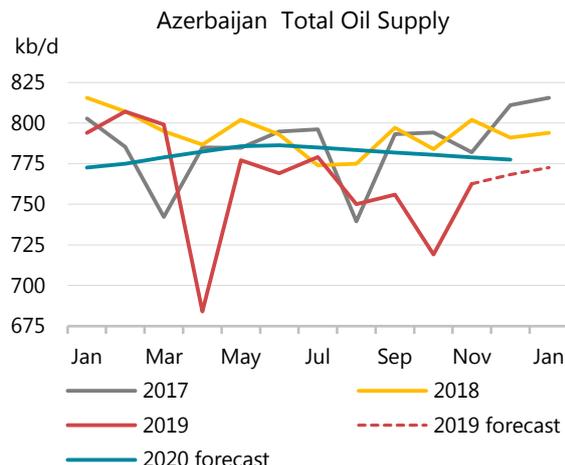
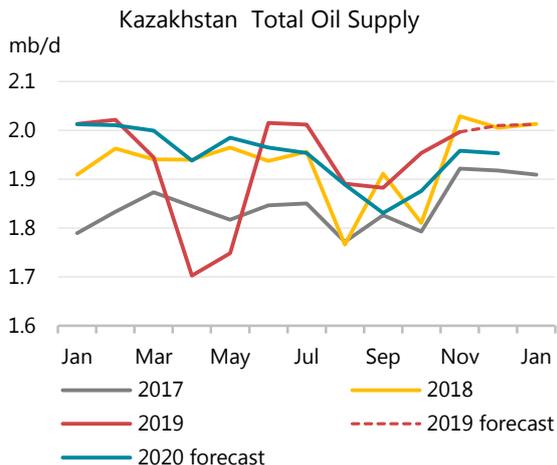
**Colombian** crude oil production in October was largely unchanged from both the previous month and a year ago, at 883 kb/d. Following a sharp increase in upstream investment and drilling activity, production rose from a low of just 820 kb/d in early 2018 to 900 kb/d at the start of this year. Since then, output has declined, however, with further losses expected next year. In an attempt to return to growth, Colombia's largest producer, Ecopetrol, plans to boost upstream spending for 2020 to \$4.5-\$5.5 billion, from a projected level of \$3.5- \$4 billion this year. Out of the total 2020 capital budget, 78% will be directed toward projects in Colombia, versus 90% in 2019. More funds will likely be dedicated to operations in Mexico, Brazil and the United States.

In **Ghana**, technical problems at the Jubilee field and a delay in completing a new well at the TEN field led Tullow to sharply cut 2020 guidance, resulting in a 50 kb/d downgrade to our overall Ghana forecast. Ghana's oil production is now forecast to decline by 15 kb/d in 2020 to 185 kb/d.

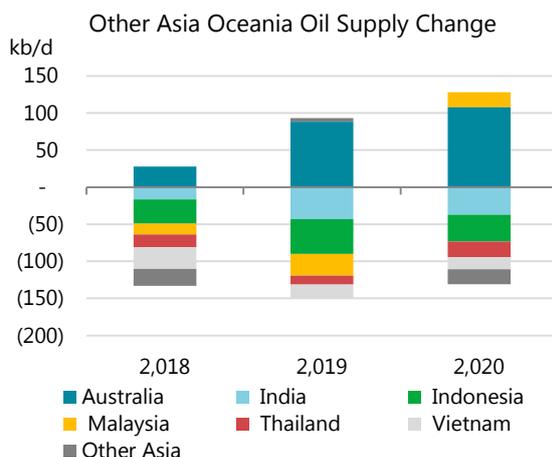
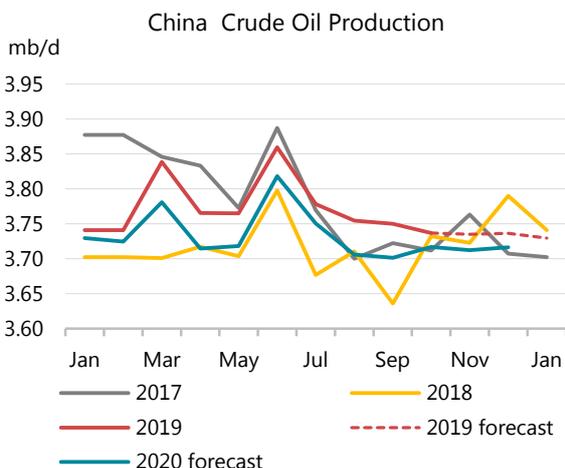
**Russian** crude and condensate production held steady at 11.24 mb/d in November, 130 kb/d below a year ago and 55 kb/d above its OPEC+ target. Russia agreed to cut production by an additional 70 kb/d from January, but successfully lobbied or excluding condensates from targets for non-OPEC countries as they are for OPEC countries. Gas condensate production is expected to rise in 2020 as Novatek's Yamal LNG plant ramps up. Russia's largest oil producer Rosneft announced that first oil from its Russkoye field had been delivered to the Zapolyarye-Purpe pipeline system. Rosneft had postponed the launch of the 200 kb/d Arctic field in the Yamal peninsula due to the restrictions of the OPEC+ agreement.



Following October's 70 kb/d gain, **Kazakhstan's** oil production rose by an additional 60 kb/d last month, to 2 mb/d. A recovery of flows from the Karachaganak gas condensate field following the completion of maintenance underpinned the gain. CPC loadings data show flows from the gas condensate field rose by 100 kb/d on the month to 265 kb/d. Shipments from the Tengiz and Kashagan fields held largely steady at around 660 kb/d and 360 kb/d, respectively, even as production at Kashagan was impacted by unplanned maintenance. According to news reports, output from the field more than halved from early November levels although it is expected to recover by mid-December. **Azeri** oil output increased by 60 kb/d m-o-m to 780 kb/d as maintenance at the BP-operated Azeri-Chirag-Guneshli complex ended. BP closed the West Chirag platform in October for scheduled work.



China's crude oil production eased by 13 kb/d in October to 3.74 mb/d. An increase in production from the Tianjin and Guangdong provinces, by 37 kb/d and 19 kb/d respectively, largely offset a 62 kb/d decline in production from the Shaanxi province. Oil production in Tianjin and Guangdong is mostly offshore, while the biggest fields in the Shaanxi province are Changqing and Yangchang. Following nine months of relatively robust year-on-year gains, averaging about 70 kb/d, total crude oil production in October was largely in line with last year's output. For 2019 as a whole, crude production is expected to increase by 50 kb/d, followed by a drop of 35 kb/d in 2020.



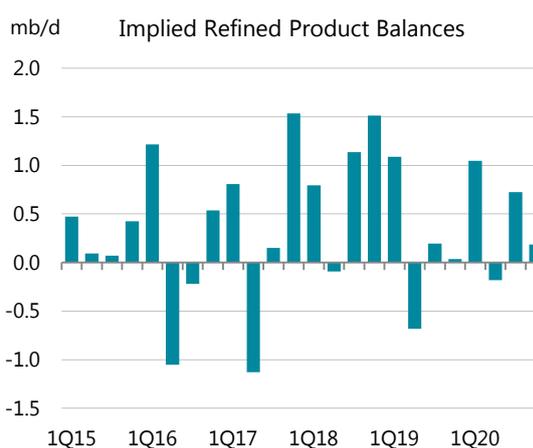
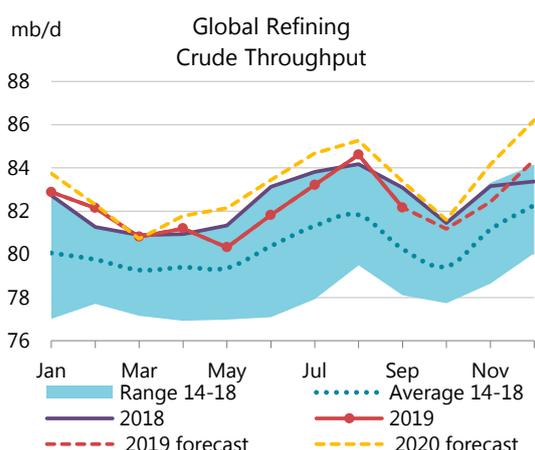
In 2019, the only significant contributor to growth in the Asia Pacific region is **Australia** where condensate and NGL output has been rising sharply as new LNG facilities come on stream. Crude oil production is also rising, as the Greater Enfield project was commissioned. Australian production is expected to increase by 90 kb/d in 2019 and a further 110 kb/d in 2020.

In contrast, production has been falling steeply elsewhere. Excluding China and Australia, regional oil output looks on track to decline by 145 kb/d on average in 2019, compared with a drop of 130 kb/d last year. The biggest drop is accounted for by **Indonesia** (-47 kb/d), **India** (-43 kb/d), **Malaysia** (-29 kb/d) and **Viet Nam** (-20 kb/d). An additional decline of 110 kb/d is expected in 2020.

# Refining

## Overview

With only a short time remaining before the implementation of the International Maritime Organisation's new rules for bunker fuel emissions, we have downgraded our 4Q19 and 1Q20 throughput forecast that previously anticipated a boost from the switch. Revisions come almost entirely from OECD countries, reflecting a higher impact from maintenance and strike-related outages in 4Q19 and a less likely recovery from 2019's 0.2 mb/d year-on-year (y-o-y) decline in throughput.



In November, refinery margins fell sharply month-on-month (m-o-m) as product markets failed to absorb the crude price increase seen during the month. With additional OPEC+ supply cuts announced on 6 December, the crude market is likely to remain tight. Crude intake in 2019 looks on track to contract by almost 0.2 mb/d, while our 2020 estimate for growth has been cut to 1 mb/d.

Global Refinery Crude Throughput <sup>1</sup>											
(million barrels per day)											
	1Q19	2Q19	Sep 19	3Q19	Oct 19	Nov 19	Dec 19	4Q19	2019	1Q20	2020
Americas	18.7	19.2	19.1	19.8	18.4	18.9	19.6	19.0	19.2	18.8	19.4
Europe	12.3	11.9	11.9	12.5	12.1	11.9	12.3	12.1	12.2	11.9	12.1
Asia Oceania	7.1	6.6	6.7	6.8	6.4	6.7	7.1	6.7	6.8	6.8	6.7
<b>Total OECD</b>	<b>38.1</b>	<b>37.7</b>	<b>37.8</b>	<b>39.1</b>	<b>36.9</b>	<b>37.6</b>	<b>38.9</b>	<b>37.8</b>	<b>38.2</b>	<b>37.5</b>	<b>38.1</b>
FSU	6.9	6.5	6.8	7.1	6.7	7.1	7.2	7.0	6.9	6.9	6.8
Non-OECD Europe	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China	12.7	12.8	13.4	12.8	13.5	13.4	13.2	13.4	12.9	13.3	13.4
Other Asia	10.8	10.4	10.2	10.5	10.6	10.4	10.7	10.6	10.6	10.8	10.9
Latin America	3.1	3.2	3.3	3.3	3.0	3.2	3.2	3.1	3.2	3.2	3.2
Middle East	7.9	7.8	7.9	7.9	7.7	7.9	8.3	8.0	7.9	7.9	8.1
Africa	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0
<b>Total Non-OECD</b>	<b>43.8</b>	<b>43.3</b>	<b>44.3</b>	<b>44.1</b>	<b>44.2</b>	<b>44.7</b>	<b>45.3</b>	<b>44.8</b>	<b>44.0</b>	<b>44.7</b>	<b>45.1</b>
<b>Total</b>	<b>81.8</b>	<b>81.0</b>	<b>82.1</b>	<b>83.2</b>	<b>81.1</b>	<b>82.3</b>	<b>84.3</b>	<b>82.6</b>	<b>82.2</b>	<b>82.2</b>	<b>83.2</b>
<i>Year-on-year change</i>	<i>0.3</i>	<i>-0.7</i>	<i>-0.9</i>	<i>-0.4</i>	<i>-0.3</i>	<i>-0.7</i>	<i>1.0</i>	<i>0.0</i>	<i>-0.2</i>	<i>0.3</i>	<i>1.0</i>

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

## Box 2. Global crude oil and product balances

Our revised data for 3Q19 supply and demand fundamentals show a global oil deficit of 0.9 mb/d, following five quarters of stock builds. This is the largest quarterly draw since 2Q17. In addition to our headline supply and demand numbers presented in Table 1, here we break down global balances by segment, such as crude oil (including condensates), refined products and non-refined products. In this *Report*, we have improved our non-refined product analysis by including Brazil's ethanol stock changes, which are comparable to OECD LPG stock changes in volume and have a similar seasonality. For 2Q-3Q19 non-refined product balances showed a build of 1.1 mb/d, which will be largely offset by draws in the northern hemisphere winter months due to the use of LPG as heating fuel in the US and North Asia, and post-harvest ethanol stock draws in Brazil in the same period.

Refined product balances built in 3Q19, even as refinery runs fell y-o-y. With OECD observed refined product stocks accounting for all the build, non-OECD product stocks are likely to have remained flat from 2Q19 levels, but the lack of comprehensive data for all non-OECD countries does not allow us to verify this result.

**Crude Oil and Product Balances**  
(million barrels per day)

	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019
World total demand	<b>98.2</b>	98.7	98.9	100.0	99.5	<b>99.3</b>	99.3	99.4	100.9	101.4	<b>100.2</b>
World total supply	<b>97.5</b>	98.5	99.3	101.2	102.2	<b>100.3</b>	100.1	100.0	100.0	101.1	<b>100.3</b>
<b>World balance<sup>1</sup></b>	<b>-0.7</b>	-0.2	0.4	1.2	2.7	<b>1.0</b>	0.8	0.6	-0.9	-0.3	<b>0.1</b>
Crude oil demand	<b>82.9</b>	82.6	82.8	84.9	83.6	<b>83.5</b>	82.9	82.1	84.5	83.5	<b>83.2</b>
Crude and condensate supply <sup>1</sup>	<b>81.7</b>	82.6	82.5	83.8	85.4	<b>83.6</b>	83.3	82.4	82.3	83.7	<b>82.9</b>
<b>Crude oil balance</b>	<b>-1.2</b>	0.0	-0.3	-1.0	1.8	<b>0.1</b>	0.4	0.3	-2.2	0.2	<b>-0.3</b>
<i>of which</i>											
<i>OECD crude oil observed stock change</i>	<b>-0.3</b>	0.1	-0.1	-0.5	0.3	<b>0.0</b>	0.4	-0.1	-0.6		
<i>Crude oil in transit</i>	<b>0.1</b>	-0.5	0.3	-0.1	0.2	<b>0.0</b>	-0.3	-0.2	-0.1		
<i>China implied crude oil balance</i>	<b>0.3</b>	0.4	0.2	-0.1	0.9	<b>0.4</b>	0.6	0.7	0.6		
<i>Other Non-OECD implied crude oil stock change</i>	<b>-1.3</b>	0.0	-0.8	-0.3	0.3	<b>-0.2</b>	-0.3	0.0	-2.0		
Refined product demand	<b>83.6</b>	83.1	84.1	84.8	83.4	<b>83.8</b>	83.1	84.0	85.4	84.9	<b>84.4</b>
Refined product supply	<b>83.9</b>	83.9	84.0	85.9	84.9	<b>84.7</b>	84.2	83.4	85.6	84.9	<b>84.6</b>
<b>Refined product balance</b>	<b>0.3</b>	0.8	-0.1	1.1	1.5	<b>0.8</b>	1.1	-0.7	0.2	0.0	<b>0.1</b>
<i>of which</i>											
<i>OECD refined product observed stock change<sup>2</sup></i>	<b>-0.2</b>	0.0	-0.5	0.5	0.0	<b>0.0</b>	-0.1	-0.1	0.2		
<i>Non-OECD refined product implied stock change</i>	<b>0.6</b>	0.8	0.4	0.6	1.5	<b>0.8</b>	1.2	-0.6	0.0		
<b>Non-refined product balance</b>	<b>0.1</b>	-1.0	0.8	1.1	-0.5	<b>0.1</b>	-0.7	1.0	1.1	-0.5	<b>0.2</b>
<i>of which</i>											
<i>OECD LPG/ethane observed stock change<sup>3</sup></i>	<b>0.0</b>	-0.6	0.6	0.5	-0.5	<b>0.0</b>	-0.4	0.7	0.5	-0.6	<b>0.1</b>
<i>Brazil ethanol stock change<sup>3</sup></i>		-0.4	0.3	0.4	-0.2	<b>0.0</b>	-0.5	0.2	0.4	-0.2	<b>0.0</b>
<i>Other non-refined product implied stock change</i>	<b>0.1</b>	0.0	0.0	0.2	0.1	<b>0.1</b>	0.1	0.2	0.1	0.3	<b>0.2</b>

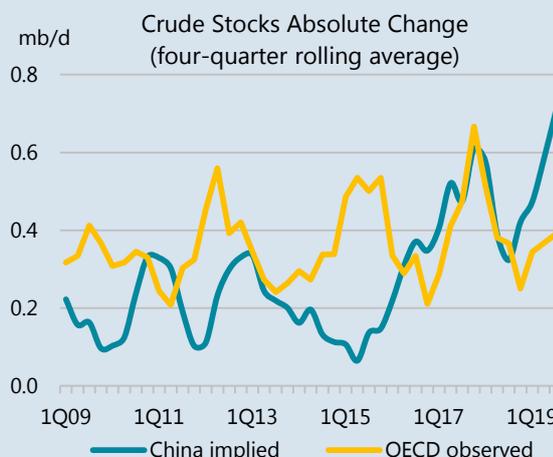
<sup>1</sup> OPEC throughput assumed flat from November 2019 level

<sup>2</sup> Refined product inventories include gasoline, middle distillates and fuel oil. See *Stocks* for detailed discussion of observed stock changes

<sup>3</sup> Based on actual stock changes until September 2019, and a seasonal average stock change expectation for the forecast period

Developments in crude oil stocks in 3Q19 were less intuitive, given the lack of significant price action in the quarter. Global balances based on crude and condensate production and refining intake and direct use imply 2.2 mb/d of stock draw. OECD crude inventories fell by 0.6 mb/d, which was offset by an implied build in Chinese stocks of a similar magnitude, meaning that the rest of the non-OECD accounted for a 2.0 mb/d draw. JODI data cover only a limited number of countries

and show 0.4 mb/d of stock draws, almost entirely in Saudi Arabia. Half of global crude oil production (around 40 mb/d) is in countries that do not routinely provide inventory data. By deduction, these countries should have drawn 1.6 mb/d in 3Q19. However, global crude oil balance calculations are complicated by supply adjustments, applied by the Energy Information Administration (EIA) to balance US crude oil supply and dispositions. The US is the largest crude producer and refiner, and now also the fifth largest exporter. As a statistical tool, the EIA's supply adjustment for crude oil offsets either overstated demand for crude oil, or understated supply (or both). If we add 3Q19's 0.4 mb/d positive adjustment to global crude balances, then the level of unaccounted stock draws diminishes to 1.2 mb/d. However, this remains a considerable area of uncertainty in assessing global markets.

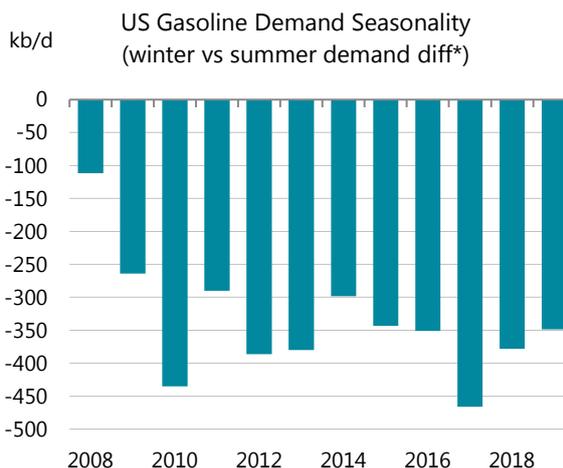
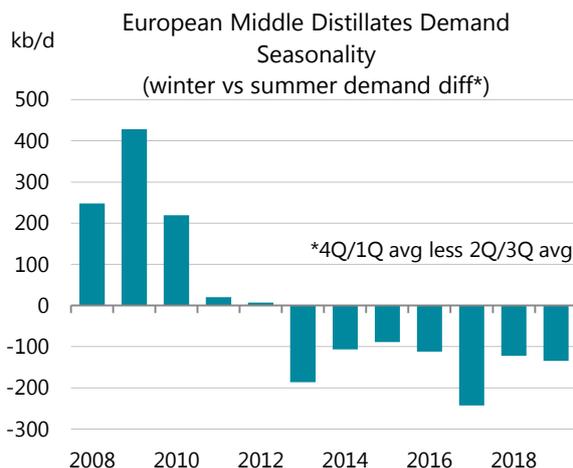


Overall, global crude oil balances have stayed flat over the last two years, when looked at in terms of annual averages. The stabilisation came after a large 1.2 mb/d draw in 2017. The breakdown of crude balances into observable components shows that the OECD stock changes have accounted for a smaller proportion over this period, while implied crude stock builds in China have been largely counterbalanced by draws in the rest of non-OECD.

## Margins

In November, refining margins fell sharply across all regions, though USGC margins held up better than Europe or Singapore. Higher crude prices compressed light product cracks while exaggerating high-sulphur fuel oil (HSFO) discounts (with HSFO pressured by the IMO regulations), which fell close to historical lows.

Contrary to common perceptions, the fourth quarter usually sees demand for refined products falling. In 4Q19, refined product demand is estimated 0.5 mb/d lower q-o-q (see Box 2 *Global crude and product balances*). The heating season in the northern hemisphere does not start in earnest until well into the quarter, while the end of summer in the Northern Hemisphere sees road fuel demand slump. In addition to seasonally lower demand, gasoline cracks continued to be negatively affected by the switch to winter specifications in the US and Europe, which allows the blending of cheaper components. LPG plays an increasing role in meeting winter heating requirements, with most of its incremental winter supply coming from stock draws rather than prompt refinery output.

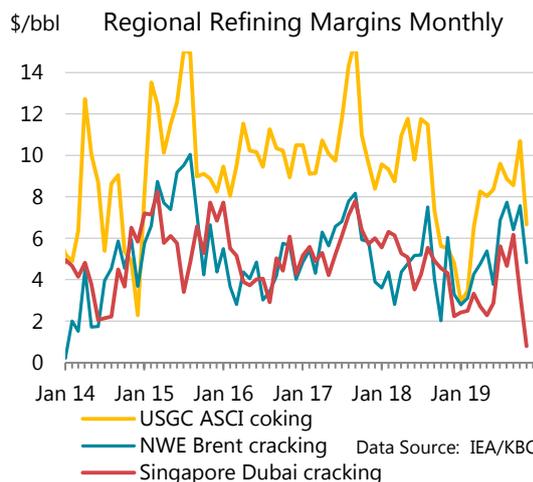
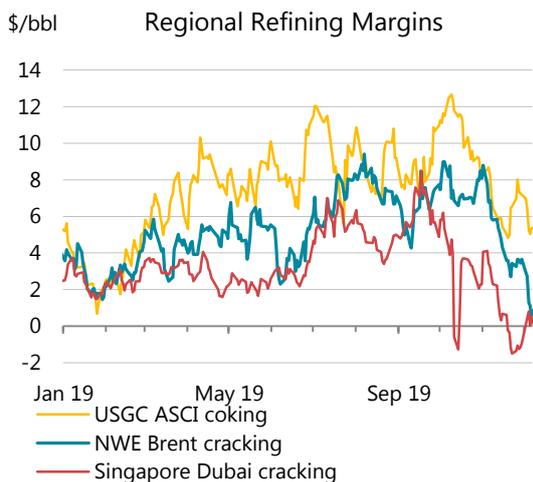


Sour crude hydroskimming margins tested new historical lows in November, hitting double-digit negative values. Our indicative sour cracking margins also fell steeply m-o-m, with Urals cracking margins in Europe at barely positive levels.

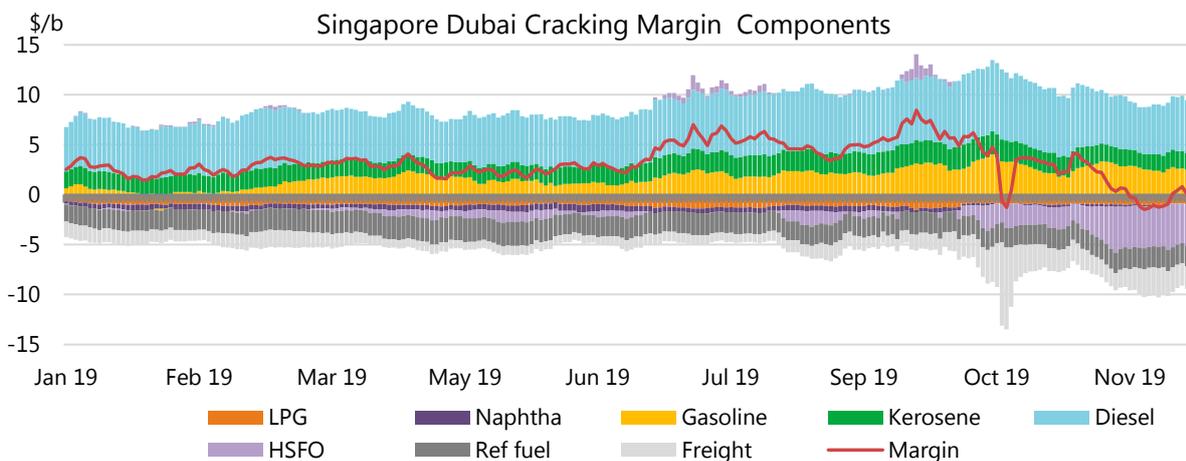
IEA/KBC Global Indicator Refining Margins <sup>1</sup>											
(\$/bbl)											
	Monthly Average				Change	Average for week ending:					
	Aug 19	Sep 19	Oct 19	Nov 19		Nov 19-Oct 19	08 Nov	15 Nov	22 Nov	29 Nov	06 Dec
<b>NW Europe</b>											
Brent (Cracking)	7.75	6.42	7.57	4.82	↓ -2.75	6.62	5.06	3.30	3.52	1.72	
Urals (Cracking)	5.64	6.61	5.61	0.11	↓ -5.51	1.06	-0.20	-1.46	0.32	-0.64	
Brent (Hydroskimming)	4.52	4.33	5.29	2.23	↓ -3.05	3.86	2.84	0.78	0.56	0.24	
Urals (Hydroskimming)	-0.60	1.38	-2.64	-9.92	↓ -7.27	-8.51	-9.77	-11.63	-10.70	-10.22	
<b>Mediterranean</b>											
Es Sider (Cracking)	8.26	7.63	9.24	5.40	↓ -3.84	7.57	5.62	3.76	3.70	2.92	
Urals (Cracking)	5.00	7.24	7.39	0.63	↓ -6.76	2.10	0.52	-0.79	-0.07	-1.45	
Es Sider (Hydroskimming)	5.35	5.22	6.68	2.82	↓ -3.85	4.84	3.22	1.27	0.90	1.26	
Urals (Hydroskimming)	-1.65	1.24	-1.06	-10.83	↓ -9.77	-8.81	-10.63	-12.42	-12.57	-12.56	
<b>US Gulf Coast</b>											
Mars (Cracking)	2.50	2.65	3.25	-2.36	↓ -5.61	0.21	-4.27	-4.11	-1.71	-3.62	
50/50 HLS/LLS (Coking)	11.61	10.22	12.87	7.90	↓ -4.98	9.19	7.14	6.43	8.56	7.19	
50/50 Maya/Mars (Coking)	9.16	5.30	9.37	6.87	↓ -2.50	7.22	6.65	6.44	7.27	4.74	
ASCI (Coking)	8.87	8.56	10.70	6.67	↓ -4.03	7.80	5.80	5.57	7.44	5.80	
<b>US Midwest</b>											
30/70 WCS/Bakken (Cracking)	11.05	12.11	10.42	7.98	↓ -2.44	9.86	5.10	6.83	9.45	6.72	
Bakken (Cracking)	13.98	14.85	13.20	11.31	↓ -1.89	11.54	9.92	10.99	13.05	10.03	
WTI (Coking)	14.39	13.37	13.46	10.88	↓ -2.58	10.92	9.58	10.65	13.08	9.95	
30/70 WCS/Bakken (Coking)	14.79	15.24	14.88	14.05	↓ -0.83	14.92	11.82	13.39	15.92	13.06	
<b>Singapore</b>											
Dubai (Hydroskimming)	0.29	3.07	-3.81	-8.55	↓ -4.74	-4.57	-9.15	-10.61	-11.11	-9.75	
Tapis (Hydroskimming)	2.10	1.27	0.22	-3.98	↓ -4.20	-2.77	-3.78	-5.01	-4.72	-6.04	
Dubai (Hydrocracking)	4.66	6.18	3.31	0.79	↓ -2.53	3.15	1.03	-0.54	-1.16	0.38	
Tapis (Hydrocracking)	4.70	3.64	4.80	0.78	↓ -4.03	1.70	1.47	-0.28	0.04	-1.30	

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

Source: IEA, KBC Advanced Technologies (KBC)



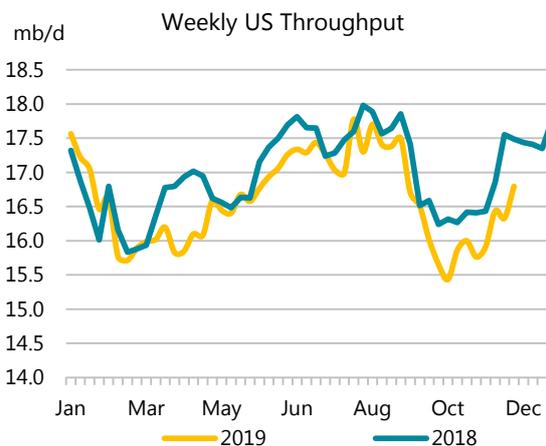
Singapore Dubai margins fell into negative territory during the second half of the month as lower cracks for premium fuels (diesel, gasoline and kerosene) could not offset even stronger declines in HSFO cracks. In September, HSFO was contributing up to \$1/bbl to the refining margin, but by November it cost refiners \$4/bbl. Singapore margins still carry a freight penalty, as tanker rates remain at higher than usual levels. November dirty freight rates are still around double the historical average. The US Midwest remained the most resilient region, with Canadian crude-based sour margins showing relatively modest declines, helped by larger discounts for Canadian grades.



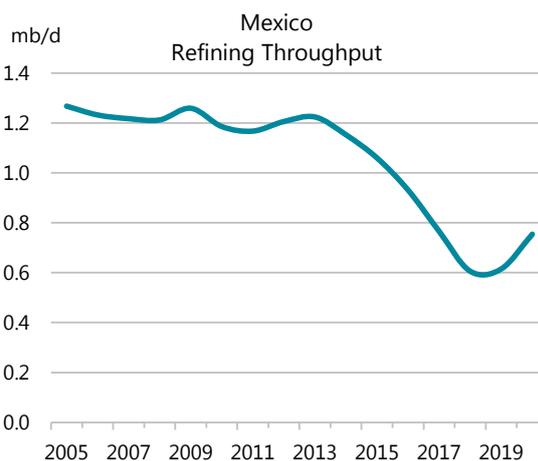
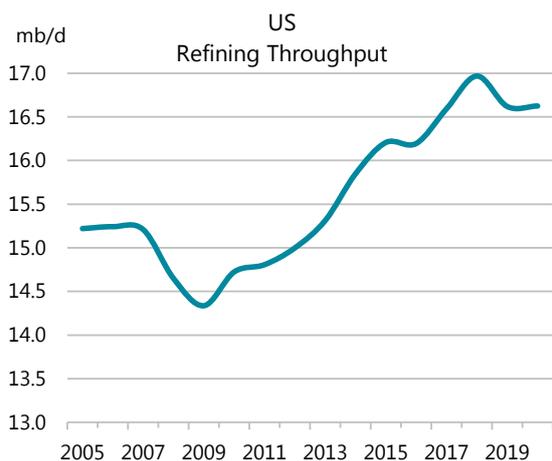
Globally, sweet margins were also not immune to crude price increases. Low sulphur fuel oil cracks fell slightly, too. This, however, is 1% sulphur fuel oil and is not an indicator for the new on-spec marine bunker fuel oil. The assessments for 0.5% sulphur bunker fuel quotes published by several agencies indicate wide premiums to HSFO, with cracks closer to middle distillates. Over the next few months, our refining margins methodology will be improved to include the impact of the IMO regulations, by modifying the fuel oil components. At the same time, we expect the 0.5% sulphur fuel market to mature and refiners' role in providing blendable streams for the fuel to become more visible.

# OECD refinery throughput

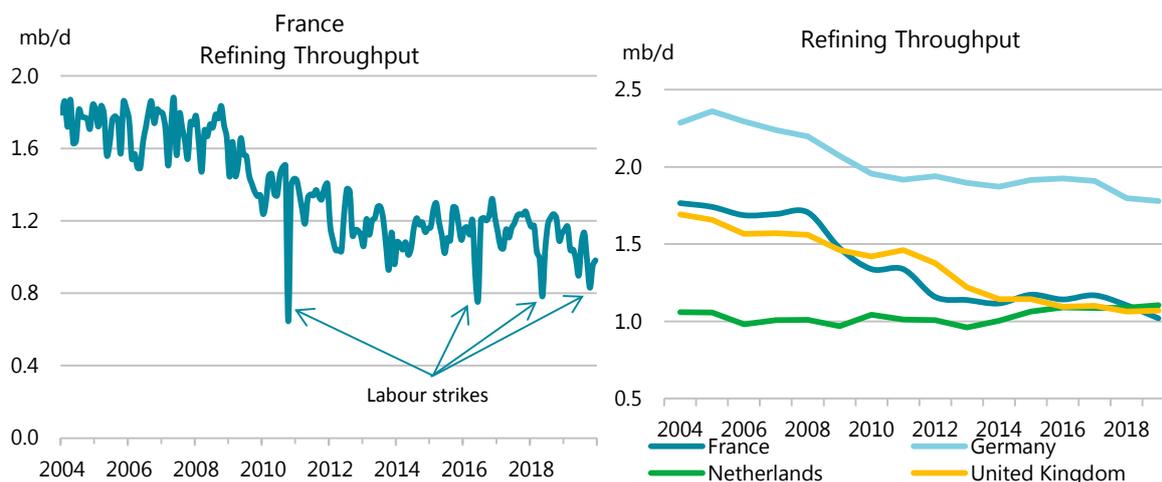
The US is on course to register the first annual decline in crude runs since 2009. In November, throughput fell 790kb/d y-o-y, the largest decline in any month since the impact of Hurricane Harvey in September 2017. Runs were nevertheless up 615 kb/d m-o-m, and the momentum is expected to lift December runs by another 670 kb/d before a maintenance-driven slowdown in 1Q20. If our forecast for a small gain in 2020 materialises, 2018 is likely to remain the historical peak in the US refinery runs, with annual average runs just below 17 mb/d. So far in 2019, runs exceeded 17 mb/d in only 16 weeks out of 48 reported.



**Canadian** runs in September fell 180 kb/d m-o-m due to refinery maintenance. **Mexico** refining throughput data for October were not provided at the time of writing, but total product output reported by Pemex declined by 90 kb/d m-o-m. Our October estimate is consequently lowered by 70 kb/d to 630 kb/d. In 2020, we forecast an increase of 140 kb/d in 2020 Mexican refinery runs, after a cumulative 620 kb/d decline since 2013 and relatively stable activity in 2019. Political unrest in **Chile** affected operations in one of the country's two refineries, leading us to revise down our November and December estimates by 30 kb/d and 50 kb/d, respectively.



In Europe, as most refineries are wrapping up seasonal maintenance, **French** labour strikes intensified. French refinery throughputs fell 385 kb/d y-o-y in October to just 830 kb/d. Workers at the 110 kb/d Feyzin refinery near Lyon walked out in early October. In early December, seven out of eight refineries in the country joined the general strike against the government's proposed pension reform. France was the second largest refiner in North West Europe in 2018, after Germany, but fell to fourth spot this year, below the Netherlands and the UK. In the **Netherlands**, commodities trader Gunvor shut one of the CDUs at its 90 kb/d Rotterdam refinery citing poor economics. The unit is expected to remain idle for several months while the operator contemplates its future.



In the Mediterranean region, growth slowed in October as **Spanish** activity fell 130 kb/d y-o-y due to heavy maintenance. After a strong 3Q19, runs in **Italy** also slid in October, 140 kb/d m-o-m, but remained above year ago levels. **Turkey** has driven all the growth in the Mediterranean region this year, not only thanks to the ramp-up of the 200 kb/d Star refinery, but also thanks to a low base effect as several refineries underwent protracted maintenance in 2018 which cut runs by 65 kb/d.

### Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

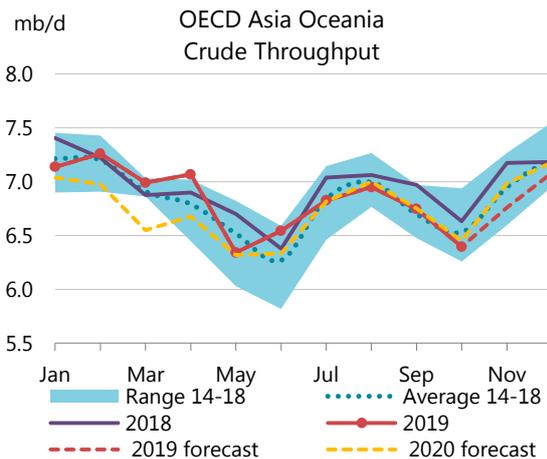
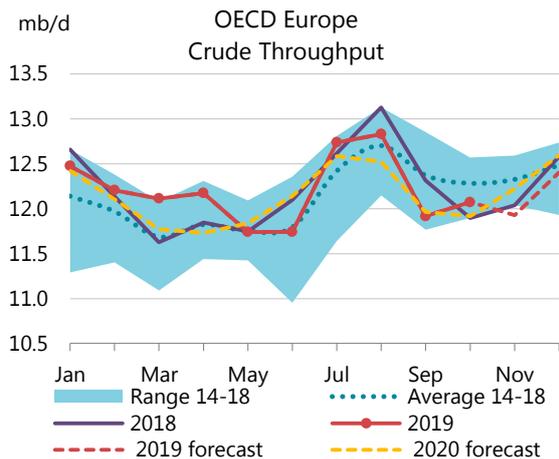
	May 19	Jun 19	Jul 19	Aug 19	Sep 19	Oct 19	Change from		Utilisation rate <sup>1</sup>	
							Sep 19	Oct 18	Oct 19	Oct 18
US <sup>2</sup>	16.71	17.25	17.26	17.47	16.55	15.75	-0.80	-0.66	83%	86%
Canada	1.63	1.77	1.83	1.89	1.72	1.84	0.13	0.21	92%	81%
Chile	0.22	0.20	0.20	0.21	0.21	0.20	0.00	0.01	89%	84%
Mexico	0.59	0.68	0.57	0.74	0.66	0.63	-0.03	0.15	38%	29%
<b>OECD Americas<sup>3</sup></b>	<b>19.15</b>	<b>19.90</b>	<b>19.87</b>	<b>20.31</b>	<b>19.14</b>	<b>18.43</b>	<b>-0.71</b>	<b>-0.29</b>	<b>80%</b>	<b>82%</b>
France	0.99	0.90	1.08	1.13	0.98	0.83	-0.15	-0.39	67%	98%
Germany	1.65	1.75	1.88	1.81	1.80	1.85	0.05	0.32	91%	75%
Italy	1.33	1.37	1.46	1.51	1.49	1.35	-0.14	0.06	78%	74%
Netherlands	1.04	0.96	1.15	1.16	1.00	1.18	0.18	0.20	91%	76%
Spain	1.29	1.21	1.30	1.41	1.28	1.29	0.01	-0.13	92%	101%
United Kingdom	1.03	0.98	1.07	1.11	1.05	1.12	0.08	-0.02	89%	91%
Other OECD Europe	4.40	4.50	4.79	4.69	4.32	4.44	0.13	0.13	81%	86%
<b>OECD Europe</b>	<b>11.73</b>	<b>11.67</b>	<b>12.73</b>	<b>12.82</b>	<b>11.91</b>	<b>12.06</b>	<b>0.15</b>	<b>0.17</b>	<b>84%</b>	<b>83%</b>
Japan	2.72	2.87	2.98	3.17	2.95	2.83	-0.12	0.24	80%	73%
South Korea	2.82	2.82	2.93	2.93	2.91	2.64	-0.27	-0.48	77%	92%
Other Asia Oceania	0.79	0.85	0.90	0.84	0.87	0.91	0.04	0.00	104%	104%
<b>OECD Asia Oceania</b>	<b>6.33</b>	<b>6.53</b>	<b>6.82</b>	<b>6.94</b>	<b>6.74</b>	<b>6.38</b>	<b>-0.35</b>	<b>-0.24</b>	<b>81%</b>	<b>85%</b>
<b>OECD Total</b>	<b>37.21</b>	<b>38.10</b>	<b>39.41</b>	<b>40.06</b>	<b>37.78</b>	<b>36.87</b>	<b>-0.91</b>	<b>-0.36</b>	<b>82%</b>	<b>83%</b>

<sup>1</sup> Expressed as a percentage, based on crude throughput and current operable refining capacity

<sup>2</sup> US\$0

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

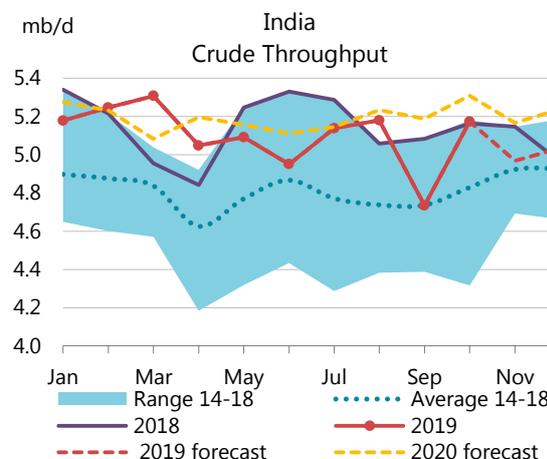
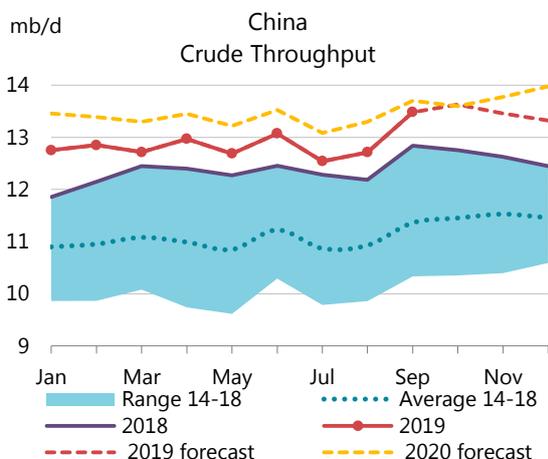
Refining activity in OECD Asia continued to decline seasonally in October. **Korean** throughput fell to 2.6 mb/d, the lowest level in four years, and 475 kb/d down y-o-y. Stronger **Japanese** runs, up 235 kb/d y-o-y, only partially offset the declines in Korea.



## Non-OECD refinery throughput

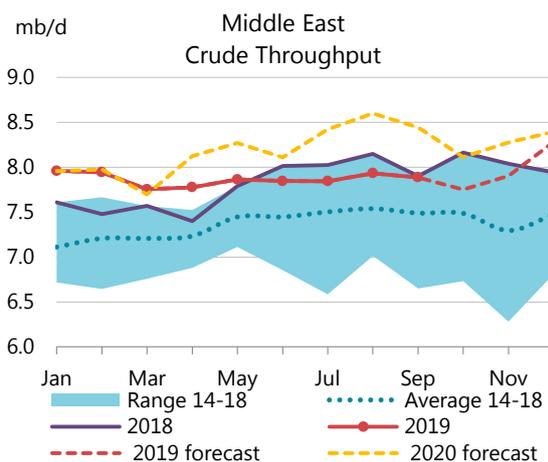
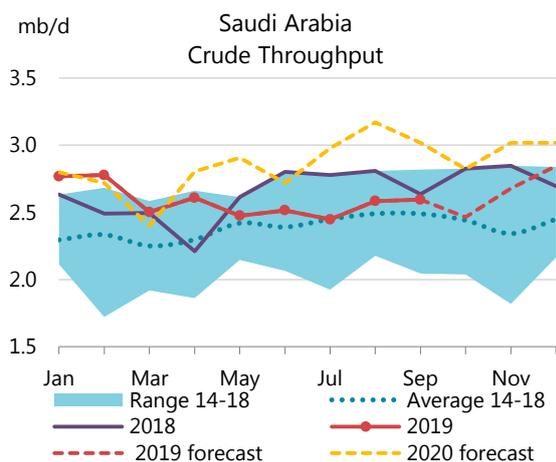
No new monthly data were reported for **Chinese** refinery intake, but we have adjusted our September assessment lower, following a rare downward revision in the National Bureau of Statistics' accumulated intake number for January-October. The number was revised down by about 1 million tonnes, and was largely attributed to the Shandong province, which has the largest concentration of independent refineries. We revised our September intake number down by 270 kb/d, but our forecast remains unchanged.

**Indian** activity bounced back in October, up by 440 kb/d m-o-m, but remaining flat y-o-y. More maintenance is planned for November and December, and runs are estimated to have fallen since the last reported month. The government plans to sell its controlling stake in India's third largest refiner Bharat Petroleum Corporation, which operates about 800 kb/d of capacity. **Brunei's** new Chinese-owned refinery has yet to appear in the official statistics submitted to JODI as the September update only included the country's 2 kb/d mini-refinery operation.



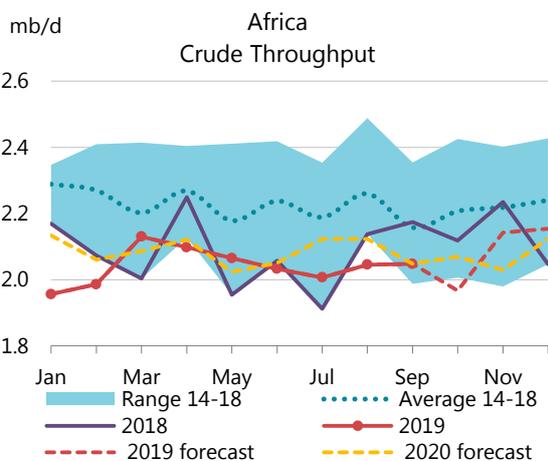
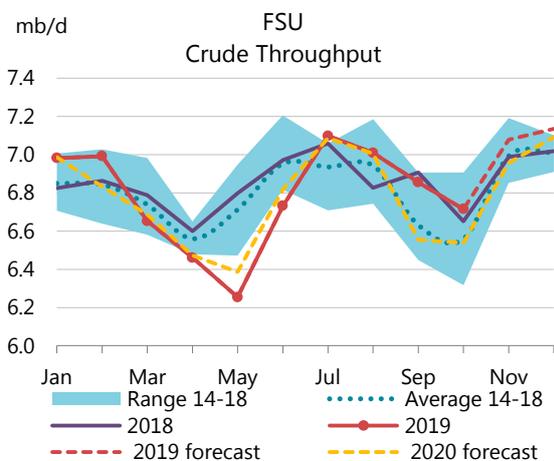
For **Saudi Arabia**, September data updates show little impact from the attacks on the Abqaiq processing facility. Runs were reported at 2.6 mb/d, the same as in August, and came in 180 kb/d higher than our expectations. Even so, 3Q19 Saudi throughput was down 200 kb/d

y-o-y. **Bahrain's** crude runs in September were 30 kb/d lower m-o-m. Overall, the regional refining intake is expected to be largely flat this year.



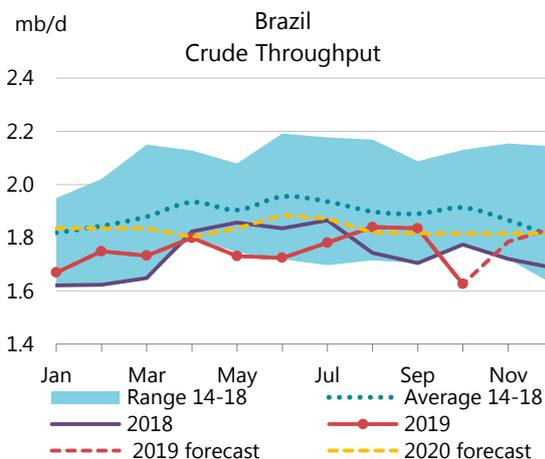
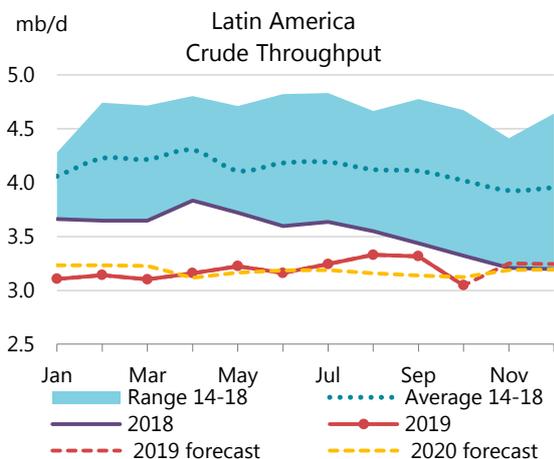
**Russian** runs increased 250 kb/d m-o-m in November to just under 6 mb/d, up a strong 125 kb/d y-o-y. Upgrades at **Kazakh** refineries have increased transport fuel supplies and turned the country into a net exporter of refined products. **Belarus** reported relatively strong throughput in August, at 420 kb/d, despite problems in sourcing crude oil after a change to the Russian tax system, which remains its dominant supplier. Belarus is negotiating a deal with Kazakhstan for crude oil and product supplies.

African refining activity sees good news often offset by negative developments. **Ghana's** sole refinery is planning to increase operating rates. At the same time, Cameroon's only refinery that was partially destroyed in an explosion in June 2018 is now not expected to come back online before 2021. In November, **Nigeria's** Lekki refinery received its CDU column that was shipped from China. The refinery is expected to be operational by 2022. Meanwhile, **Angola** cancelled a contract with a Chinese company to build one of the country's proposed new refineries.



Refining intake in Latin America fell steeply in October after ramping up for several months as the recovery in the continent's largest refining system, **Brazil**, suddenly reversed. Brazil refinery intake fell 210 kb/d m-o-m to just above 1.6 mb/d, the lowest level observed since early last year. Activity suffered from accidents during maintenance, but also from strike action directed against the proposed divestment of Petrobras's stakes in several refineries. Four companies

that submitted non-binding bids last month were allowed to progress to the second round. These were Sinopec, Abu Dhabi's Mubadala (which owns Spain's second-largest refiner CEPSA), and two local energy companies including a large biofuel player, Raizen. Binding bids are expected in January.

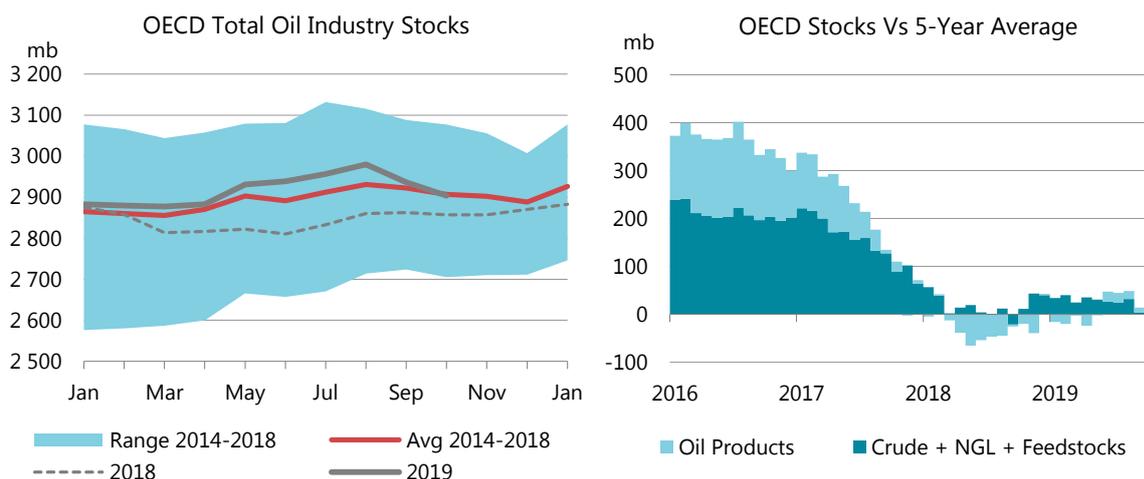


Elsewhere in Latin America, **Argentina's** runs in October reached 500 kb/d for the first time since February 2018. **Venezuela's** PDVSA signed another one-year lease for the **Curaçao** refinery, which has remained idle for over a year. The site will likely be used primarily for blending and storage rather than restoring the refinery to operation. On the other hand, with domestic Venezuelan refineries suffering from equipment upsets and severe damage due to cannibalisation for spare parts, Curaçao might be the only viable refining site that PDVSA currently operates. The refinery is not forecast to come back online in 2020. We have also excluded from our forecast the Limetree Bay project aiming to restart a crude unit at the St Croix refinery in the US **Virgin Islands**.

# Stocks

## Overview

In October, OECD commercial stocks drew 32.5 mb (1.05 mb/d) month-on-month (m-o-m) to 2 904 mb. The fall was more than double the five-year average of 15.7 mb, led by oil products for which inventories drew by 63.6 mb, or 2.05 mb/d. At end-month, total stocks stood 2.9 mb below the average, for the first time since December 2018. Based on a forward OECD demand metric, they were one day lower than the five-year average of 61.6 days.



OECD crude oil inventories rose 24.6 mb (795 kb/d) to 1 099 mb. The build was largely in line with the usual trend for the month in the Americas and Europe, but the Asia Oceania region showed counter-seasonal draws. Crude stocks in the Americas rose 22.5 mb in October as US crude oil production rose m-o-m (12.6 mb/d on average) and refinery runs fell (-805 kb/d). European crude stocks also rose, by 2.7 mb. On the contrary, Asia Oceania's crude stocks eased lower counter-seasonally by 0.6 mb led by Japan.

Oil product stocks drew 63.6 mb to 1 435 mb, considerably more than the usual fall of 37.9 mb for the month. Motor gasoline drew by 12 mb, more than double the normal decline owing to a larger fall in the Americas due to refinery maintenance. Middle distillates and fuel oil inventories fell in line with the seasonal trend by 28.8 mb and 2.1 mb, respectively. For other oil stocks, all regions showed more than the usual draws and fell by 20.8 mb as a whole.

Preliminary data for November showed total inventories falling in all regions, by 23.5 mb. US crude stocks rose 1.4 mb as crude oil production rose m-o-m to 12.8 mb/d on average in November. Total US oil product inventories drew 11.9 mb, more than offsetting the build in crude oil. Crude stocks in Europe fell 1.4 mb, notably in Portugal (-1.8 mb) and Italy (-1.1 mb), while European product stocks drew 2.5 mb owing to draws in middle distillates and naphtha stocks. Japanese crude inventories drew counter-seasonally by 4.5 mb, while oil product stocks rose by 1.4 mb due to builds in middle distillate stocks.

Preliminary Industry Stock Change in October 2019 and Third Quarter 2019												
	October 2019 (preliminary)				Third Quarter 2019							
	(million barrels)				(million barrels per day)				(million barrels per day)			
	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total	Am	Europe	As.Ocean	Total
<b>Crude Oil</b>	<b>22.5</b>	<b>2.7</b>	<b>-0.6</b>	<b>24.6</b>	<b>0.7</b>	<b>0.1</b>	<b>0.0</b>	<b>0.8</b>	<b>-0.4</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.6</b>
Gasoline	-12.1	0.2	-0.1	-12.0	-0.4	0.0	0.0	-0.4	0.0	0.0	0.0	0.0
Middle Distillates	-14.8	-9.6	-4.3	-28.8	-0.5	-0.3	-0.1	-0.9	0.0	0.0	0.1	0.2
Residual Fuel Oil	-0.9	-0.7	-0.4	-2.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1
Other Products	-11.5	-6.7	-2.5	-20.8	-0.4	-0.2	-0.1	-0.7	0.2	0.0	0.1	0.3
<b>Total Products</b>	<b>-39.4</b>	<b>-16.9</b>	<b>-7.3</b>	<b>-63.6</b>	<b>-1.3</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-2.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>	<b>0.4</b>
Other Oils <sup>1</sup>	4.5	-0.4	2.4	6.5	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.1
<b>Total Oil</b>	<b>-12.4</b>	<b>-14.5</b>	<b>-5.5</b>	<b>-32.5</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-1.0</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.0</b>

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

In this *Report*, we have recalculated our estimate for 3Q19 stock changes on revised OECD data for September. In 3Q19, OECD commercial stocks fell by 2.8 mb (30 kb/d) from 2Q19. OECD government stocks also fell by 4.4 mb. Stock draws were reported in some countries in Europe and Asia Oceania, notably in Austria (-1.8 mb) and Japan (-1.8 mb). Elsewhere, crude oil stocks plus NGLs in 14 non-OECD countries (excluding China) fell by 36.3 mb (395 kb/d) according to *JODI* data. The implied crude stock build in China in 3Q19 was 52.1 mb (565 kb/d), lower than in 2Q19 due to increased refinery runs in September. Seaborne oil in transit fell by 7.4 mb in 3Q19 due to lower exports by OPEC countries, North Sea platform maintenance, and the increasing impact of sanctions against Iran and Venezuela.

3Q19 v 2Q19 Stock Estimate		
	mb	mb/d
OECD Americas	-6.4	-0.07
OECD Europe	-6.4	-0.07
OECD Asia Oceania	10.0	0.11
<b>Total OECD Commercial Stocks</b>	<b>-2.8</b>	<b>-0.03</b>
OECD Government Stocks	-4.4	-0.05
Oil in Transit incl. Floating Storage (Refinitiv)	-7.4	-0.08
Non-OECD Crude + NGL (JODI, 14 countries)	-36.3	-0.39
Non-OECD Products (JODI, 14 countries)	-5.8	-0.06
Fujairah (FEDCom/S&P Global Platts)	1.3	0.01
Singapore (Enterprise Singapore)	-1.3	-0.01
<b>Total excl. China Balance</b>	<b>-56.6</b>	<b>-0.62</b>
China Crude Balance	52.1	0.57
<b>Total</b>	<b>-4.5</b>	<b>-0.05</b>

Revisions versus November 2019 Oil Market Report								
	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Aug-19	Sep-19	Aug-19	Sep-19	Aug-19	Sep-19	Aug-19	Sep-19
<b>Crude Oil</b>	<b>1.9</b>	<b>-8.5</b>	<b>1.4</b>	<b>-7.0</b>	<b>-2.6</b>	<b>-6.3</b>	<b>0.7</b>	<b>-21.8</b>
Gasoline	0.0	1.3	-2.2	0.5	0.1	1.0	-2.2	2.7
Middle Distillates	-0.4	0.2	0.1	2.4	0.0	0.1	-0.3	2.7
Residual Fuel Oil	0.0	1.7	-0.1	-1.0	0.0	0.0	-0.1	0.7
Other Products	-0.1	5.1	-0.5	-0.5	0.0	-0.9	-0.5	3.7
<b>Total Products</b>	<b>-0.4</b>	<b>8.3</b>	<b>-2.8</b>	<b>1.4</b>	<b>0.1</b>	<b>0.2</b>	<b>-3.2</b>	<b>9.9</b>
Other Oils <sup>1</sup>	0.0	3.9	-0.4	0.7	0.0	-0.3	-0.4	4.3
<b>Total Oil</b>	<b>1.5</b>	<b>3.8</b>	<b>-1.8</b>	<b>-5.0</b>	<b>-2.6</b>	<b>-6.5</b>	<b>-2.8</b>	<b>-7.7</b>

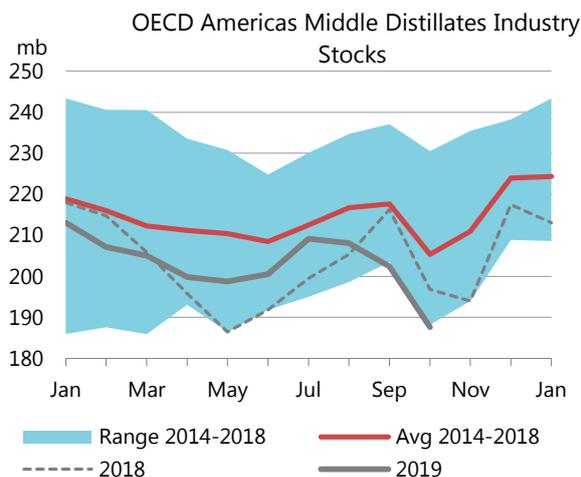
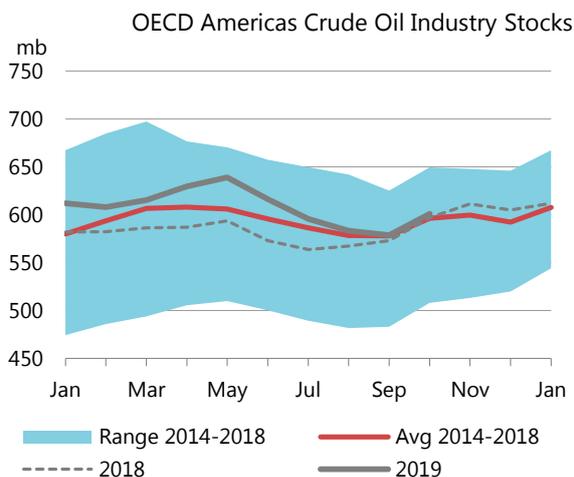
<sup>1</sup> Other oils includes NGLs, feedstocks and other hydrocarbons.

Data for September show that OECD stocks were revised down by 7.7 mb. The largest adjustment was for crude oil, which fell by 21.8 mb. US product stocks were revised up by 8.3 mb due to a large change in the other oil category. August stock figures were also revised down by 2.8 mb, notably in Asia Oceania (-2.6 mb).

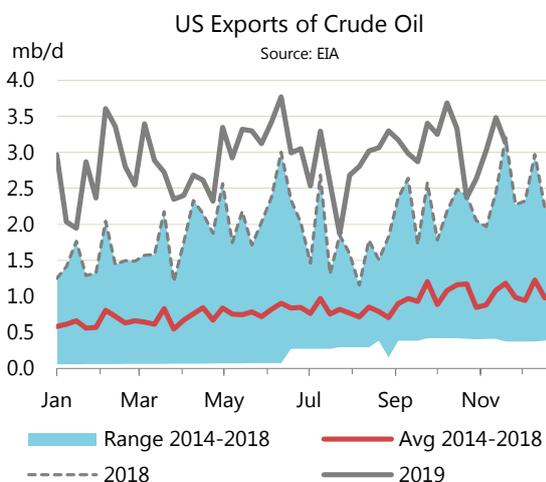
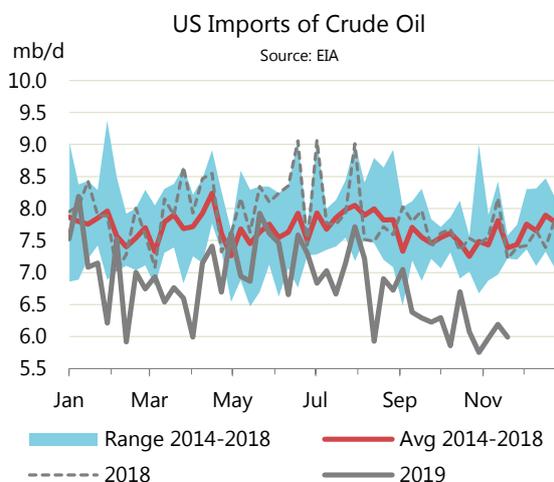
# Recent OECD industry stock changes

## OECD Americas

Commercial stocks in the OECD Americas region fell by 12.4 mb m-o-m in October to 1 546 mb, 20 mb above the five-year average. On a forward demand metric, inventories stood at 60.4 days, 0.8 days below the average. The fall was more than the usual 6.4 mb for the month and was due to draws in oil products.



Crude oil inventories built 22.5 mb m-o-m and stood at 601 mb, 4.6 mb above the five-year average. Stocks rose seasonally even though US crude exports increased by 290 kb/d m-o-m to reach a new record high of 3.4 mb/d, according to the *US Census Bureau*. Lower refinery runs in the US, down 805 kb/d m-o-m, and higher crude production (reaching 12.6 mb/d on average) were a major offset.

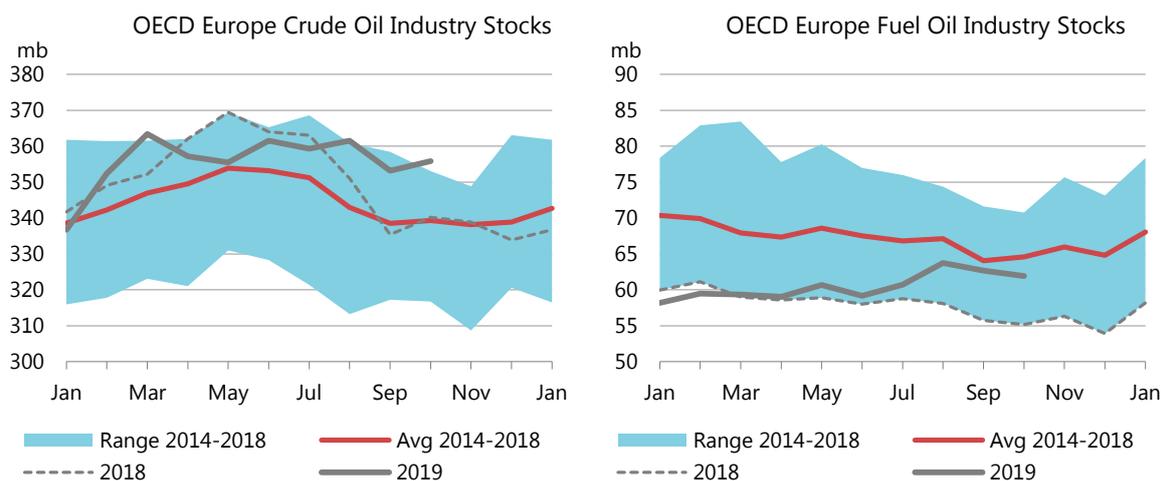


Oil product stocks showed more than usual falls in all categories and drew 39.4 mb overall. Middle distillates and fuel oil fell 14.8 mb and 0.9 mb, respectively, largely in line with the seasonal movements. Motor gasoline drew 12.1 mb, which is possibly attributable to lower refinery runs during the maintenance season. Other oil stocks fell by 11.5 mb.

Preliminary data for the US from the *Energy Information Administration* showed a crude oil inventory build of 1.4 mb m-o-m in November in line with the five-year average. Crude exports fell by 135 kb/d m-o-m, but higher crude production (12.8 mb/d on average in November) pushed up inventories. Total oil product stocks drew by 11.9 mb. Middle distillates fell 0.9 mb, gasoline stocks built 11.7 mb, fuel oil stocks rose 0.8 mb, but other refined products drew 23.6 mb.

## OECD Europe

Total industry stocks in OECD Europe fell in October by 14.5 mb to 964 mb, 15.1 mb above the five-year average. The fall was more than the usual 10.5 mb due to stock draws for oil products.



Crude oil inventories in Europe built 2.7 mb possibly due to lower refinery runs m-o-m in some countries. For the region as a whole, refinery throughput rose by 155 kb/d in October. However, runs in France fell by 150 kb/d, causing crude stocks to build counter-seasonally by 5.9 mb.

Product inventories drew 16.9 mb, more than the usual fall of 12.2 mb for the month. Middle distillates fell by 9.6 mb, fuel oil inventories drew counter-seasonally by 0.7 mb, motor gasoline stocks rose just 0.2 mb, and other oils drew 6.7 mb.

Preliminary November data from *Euroilstock* showed overall inventories falling by 3.9 mb. Crude stocks drew 1.4 mb, notably in Portugal (-1.8 mb) and Italy (-1.1 mb). On the contrary, crude stocks in France and the Netherlands rose 2.2 mb and 1.1 mb, respectively. For product stocks, middle distillate inventories fell 2.8 mb and naphtha stocks drew 0.9 mb, while fuel oil stocks rose 1.2 mb. Gasoline inventories were unchanged.

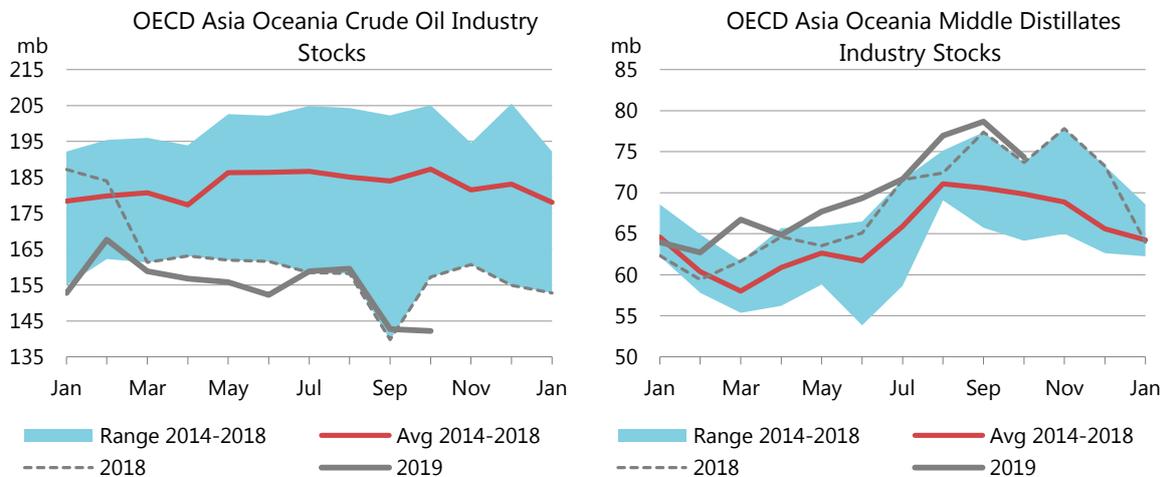
## OECD Asia Oceania

In October, total industry stocks in the Asia Oceania region fell counter-seasonally by 5.5 mb to 393 mb. The end-month stock level stood 38.1 mb below the five-year average. The fall was attributable to a counter-seasonal crude stock draw and more than the usual draw on product inventory.

Crude oil stocks in Japan drew counter-seasonally by 1.1 mb, versus the usual 6.1 mb build for the month. By contrast, Korean crude inventories rose 0.5 mb due to lower refinery runs

(-475 kb/d year-on-year and -270 kb/d m-o-m). In the region as a whole, crude stocks fell 0.6 mb to 142 mb.

Oil product stocks in the region fell by 7.3 mb. The biggest draw was in middle distillates, -4.3 mb, owing to a large fall in Korea (-6 mb). Other oil inventories in the region also fell 2.5 mb. Gasoline and fuel oil stocks fell by a modest 0.1 mb and 0.4 mb, respectively.



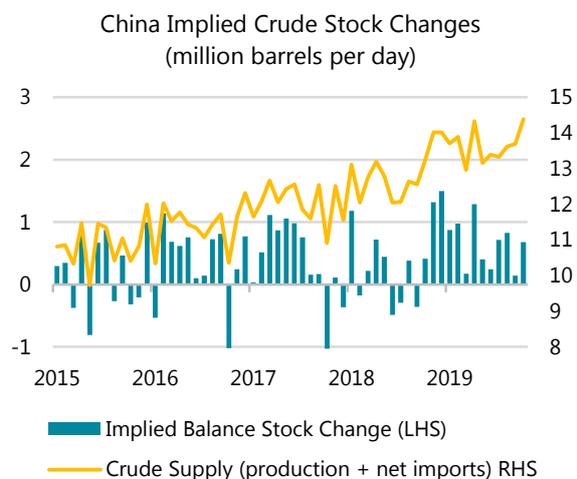
Preliminary data for November from the *Petroleum Association of Japan* showed total stocks falling counter-seasonally by 4.6 mb m-o-m. Usually they build by 0.7 mb. Crude oil inventories, which seasonally rise by 0.8 mb, fell by 4.5 mb due to higher refinery runs (+105 kb/d). Total product stocks rose 1.4 mb owing to stock builds in middle distillates (1.3 mb) and residual fuel oil (0.4 mb). Other product stocks fell 0.4 mb. Gasoline inventories were unchanged.

## Other stock developments

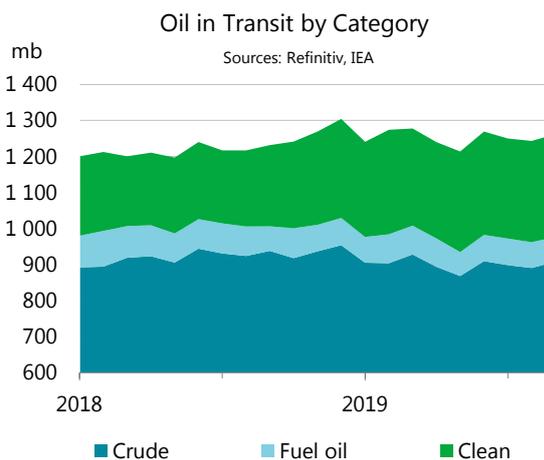
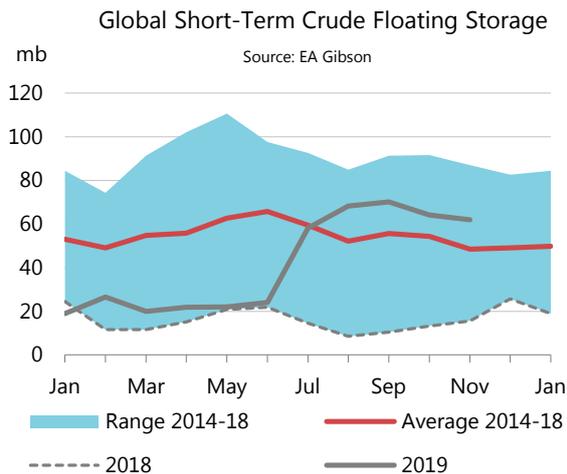
Chinese implied crude stocks built by 21.1 mb (680 kb/d) in October according to data derived from reported crude production, refinery runs and crude imports. Refinery runs rose by 145 kb/d m-o-m to 13.5 mb/d amid steady refining margins. However, record high crude imports of 10.7 mb/d, up 11.5% from a year earlier, helped build stocks.

Short-term floating storage of crude oil fell 2.1 mb in November to 62 mb, according to data from *EA Gibson*. Storage in the Middle East Gulf fell 2.1 mb to 59.7 mb as the number of Iranian VLCCs used for floating storage decreased by one to 26. The total number of vessels thought to hold Iranian crude oil is 29, including three Suezmax ships.

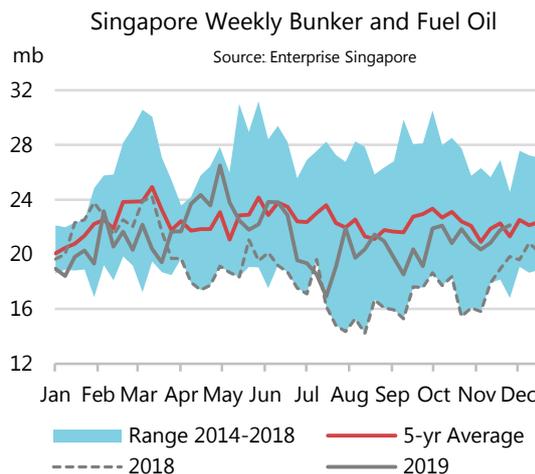
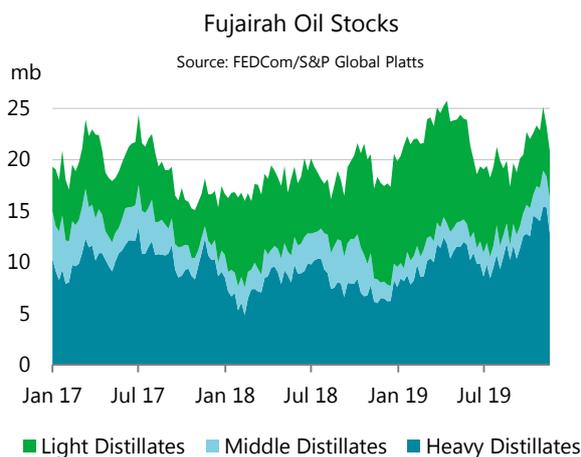
Seaborne oil in transit volumes, based on data from *Refinitiv*, rose 7.5 mb in October due to a m-o-m increase in crude oil (23.1 mb). Clean products and fuel oil on-the-water fell by 11.1 mb



and 4.5 mb, respectively. In 3Q19, total volumes of oil on-the-water fell by 7.4 mb amid lower crude exports from OPEC+ producers and the impact of sanctions against Iran and Venezuela.



Oil stocks in major bunkering hubs fell in November. In Fujairah, stocks drew by 1.4 mb m-o-m according to data from *FEDCom and S&P Global Platts*. Light distillate and residual fuel stocks fell 1.3 mb and 0.9 mb, respectively, while middle distillates rose 0.8 mb. Light distillate inventories stood at 4.7 mb, the lowest level since November 2017. Fuel inventories in Singapore, the world’s largest bunkering hub, also fell 0.6 mb during the month based on data from *Enterprise Singapore*. Light and middle distillate stocks fell 0.5 mb and 0.3 mb, respectively. Fuel oil stocks, on the contrary, built by 0.2 mb.



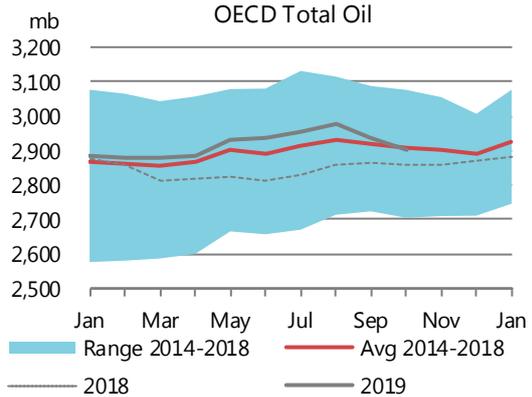
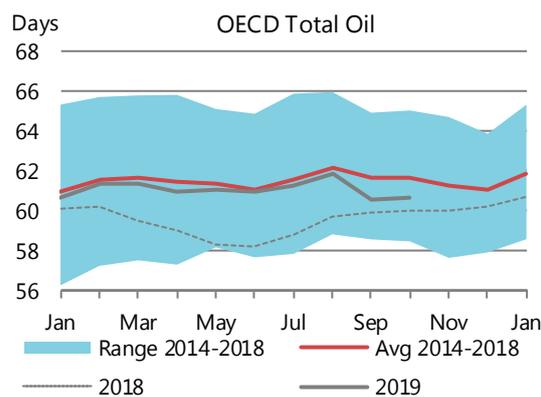
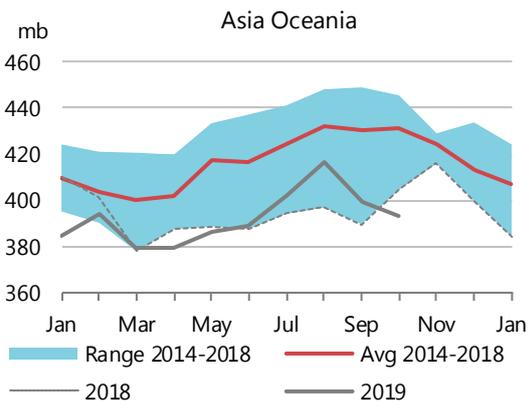
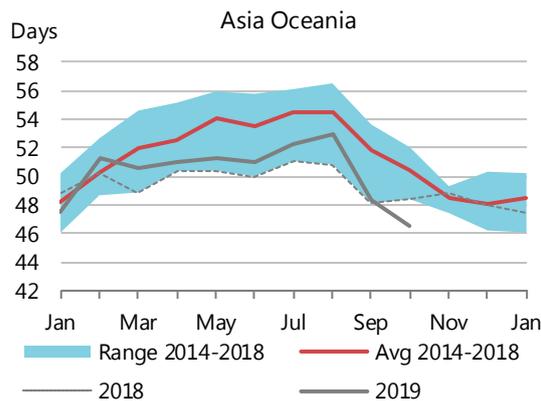
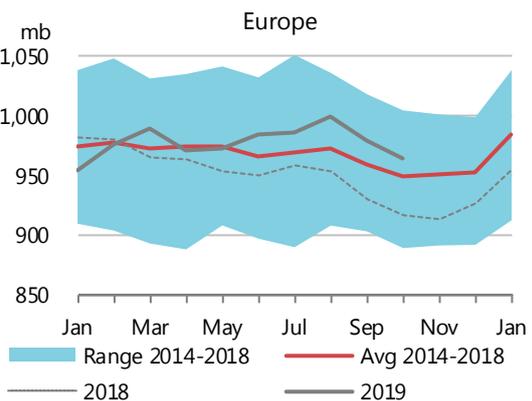
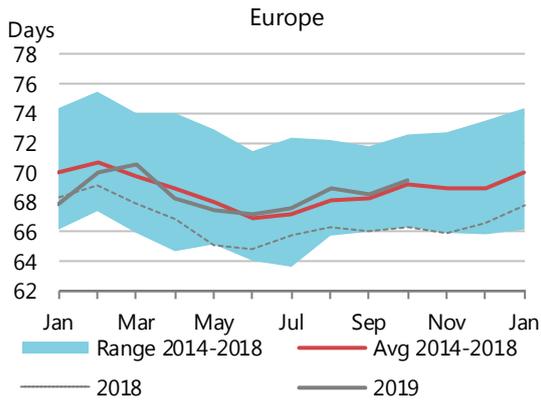
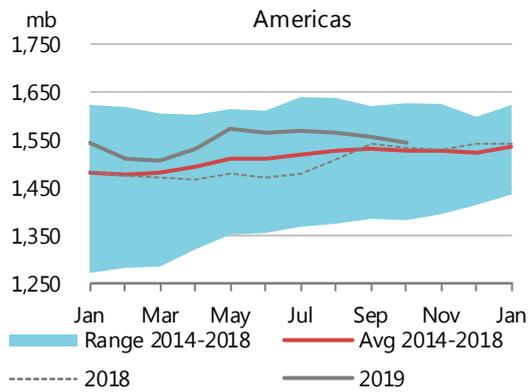
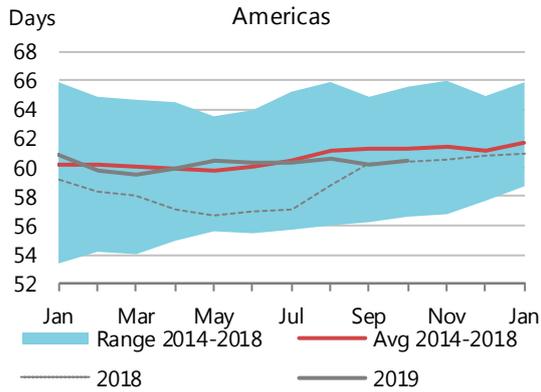
Stockpiles in 14 non-OECD countries reporting to the *JODI* database fell 23.5 mb m-o-m in September to 409 mb. Crude stocks in Saudi Arabia drew by 20.3 mb, at an average rate of 675 kb/d, to cover production outages after the attacks on 13 September. Nigerian and Iraqi crude stocks fell by 3 mb and 1.9 mb, respectively. By contrast, crude inventories in Brazil rose by 1.9 mb. For oil products, Saudi Arabia’s stocks fell by 4.1 mb, again probably reflecting the impact of the attacks. Nigerian product stocks increased by 3.3 mb and Brazil’s by 1.6 mb.

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

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

Days<sup>1</sup>

Million Barrels

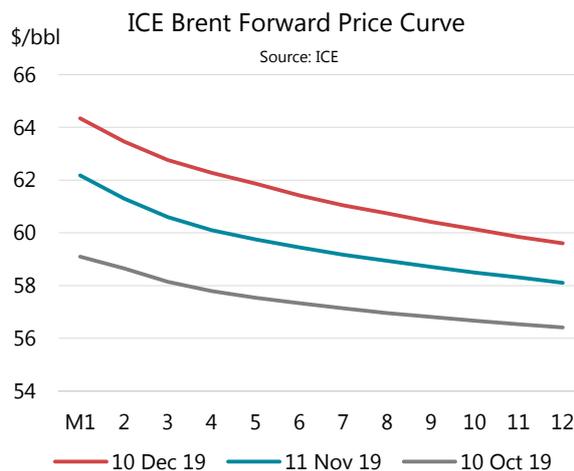
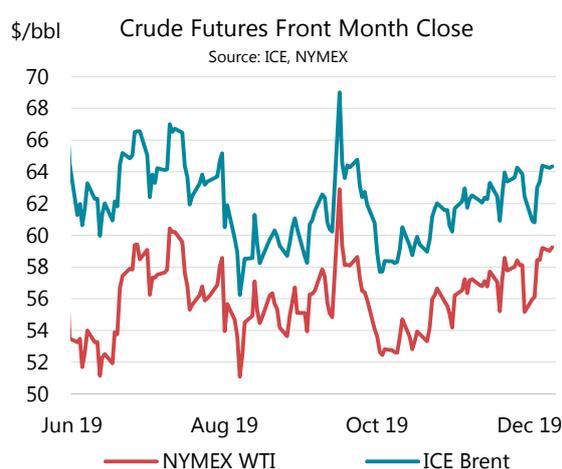


1 Days of forward demand are based on average OECD demand over the next three months.

# Prices

## Overview

November oil prices trends reflect on-going reports on the progress of US-China trade negotiations as well as rumours and speculation about the early-December OPEC+ meetings. There were some positive indicators of global economic activity, particularly for China. Nevertheless, uncertainty over the strength of oil demand growth persisted. Following the announcement on 6 December that the OPEC+ countries would deepen their output cuts, crude prices rose to their highest level since late-July (excluding the price spike following the attacks on Saudi Arabia). Front-month Brent futures were trading at \$64/bbl at the time of writing.



Crude markets appear to have tightened. Backwardation on global benchmarks WTI, Dubai, and particularly Brent, all steepened. The differentials for many crudes rose to multi-year highs in November thanks to healthy refinery demand ahead of the International Maritime Organisation’s (IMO) tightening of marine fuel sulphur specifications.

Product prices did not generally keep pace with rising crude and product cracks weakened in all regions. The exception was naphtha which benefited from increased demand from Asia Pacific petrochemical facilities. With only weeks to go ahead of the IMO regulatory change, prices for high sulphur fuel oil in Europe crashed to record discounts of almost \$40/bbl below crude prices.

## Futures markets

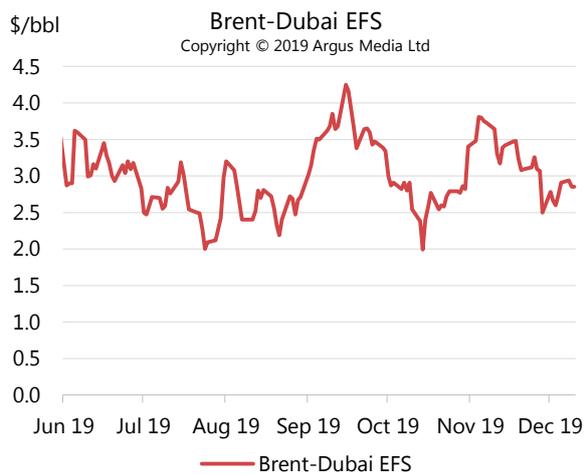
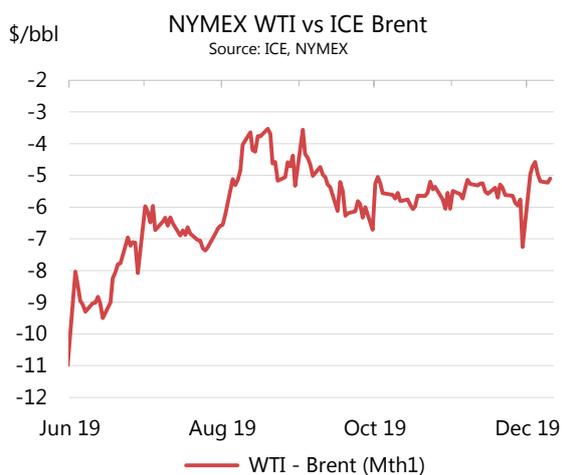
Benchmark crude futures rose in November month-on-month (m-o-m) on optimism over a possible US-China trade deal and on talk of deeper OPEC+ production cuts. On 26 November, ICE Brent exceeded \$64/bbl for the first time since end-July, excluding the price spike following attacks on Saudi Arabia in September. The price then dipped to below \$61/bbl before receiving a fresh boost on 6 December when OPEC+ members agreed to withhold additional oil supplies from the market.

The ICE Brent forward curve is in backwardation, with the prompt (February) contract priced \$1.58/bbl above the contract for delivery in April 2020 (M3). The M1-M3 time spread averaged \$1.62/bbl in November, almost double the level seen in October, reflecting the perception that markets have tightened. The WTI futures curve is in shallow backwardation, with the M1-M3 price spread averaging \$0.17/bbl in November.

Prompt Month Oil Futures Prices										
(monthly and weekly averages, \$/bbl)										
	Sep	Oct	Nov	Nov-Oct	%	Week Commencing:				
				Avg Chg	Chg	04 Nov	11 Nov	18 Nov	25 Nov	02 Dec
<b>NYMEX</b>										
Light Sweet Crude Oil	56.97	54.01	57.07	3.06	5.7	56.90	57.05	57.14	57.43	57.62
RBOB	67.87	67.94	69.12	1.19	1.7	69.16	68.14	69.38	69.89	67.27
ULSD	81.39	80.97	80.73	-0.23	-0.3	81.17	80.56	80.04	81.17	80.42
ULSD (\$/mmbtu)	14.35	14.28	14.24	-0.04	-0.3	14.32	14.21	14.12	14.32	14.18
Henry Hub Natural Gas (\$/mmbtu)	2.52	2.34	2.63	0.29	12.5	2.81	2.64	2.57	2.45	2.39
<b>ICE</b>										
Brent	62.29	59.63	62.71	3.08	5.2	62.33	62.44	62.62	63.66	62.50
Gasoil	79.85	78.60	78.04	-0.55	-0.7	78.66	78.13	77.15	78.34	77.71
<b>Prompt Month Differentials</b>										
NYMEX WTI - ICE Brent	-5.32	-5.62	-5.64	-0.02		-5.43	-5.39	-5.48	-6.23	-4.88
NYMEX ULSD - WTI	24.42	26.96	23.66	-3.29		24.27	23.51	22.90	23.74	22.80
NYMEX RBOB - WTI	10.90	13.93	12.05	-1.87		12.26	11.09	12.24	12.46	9.65
NYMEX 3-2-1 Crack (RBOB)	15.41	18.27	15.92	-2.35		16.27	15.23	15.79	16.22	14.04
NYMEX ULSD - Natural Gas (\$/mmbtu)	11.83	11.94	11.61	-0.33		11.50	11.57	11.54	11.87	11.80
ICE Gasoil - ICE Brent	17.56	18.97	15.33	-3.63		16.33	15.69	14.53	14.68	15.21

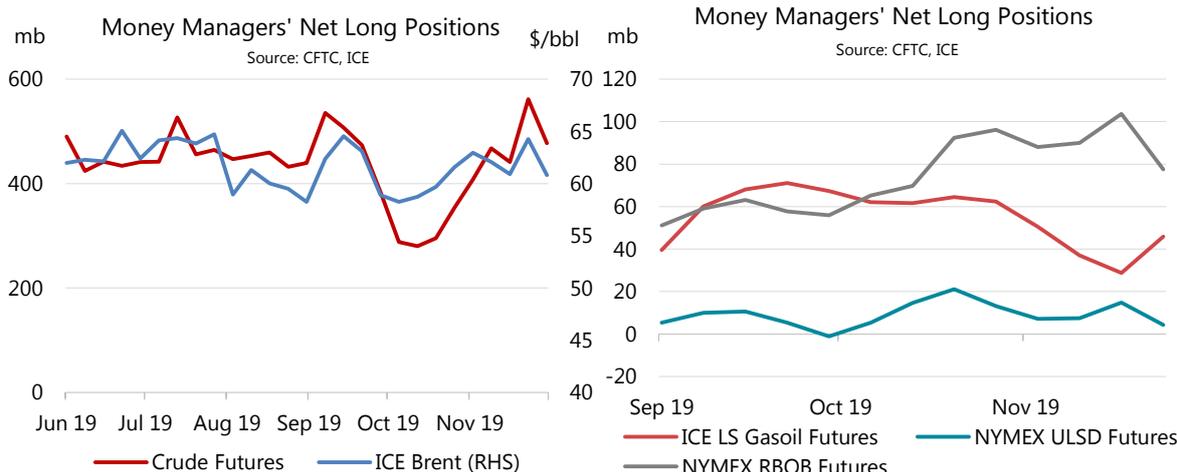
Source: ICE, NYMEX.

The Brent-WTI spread held steady in November with the US benchmark priced at a discount of \$5.64/bbl. The Brent-Dubai Exchange of Futures for Swaps (EFS) fell to \$2.50/bbl in late November, the lowest in six weeks reflecting stronger demand for sour crudes as complex refiners in Asia Pacific returned from maintenance.



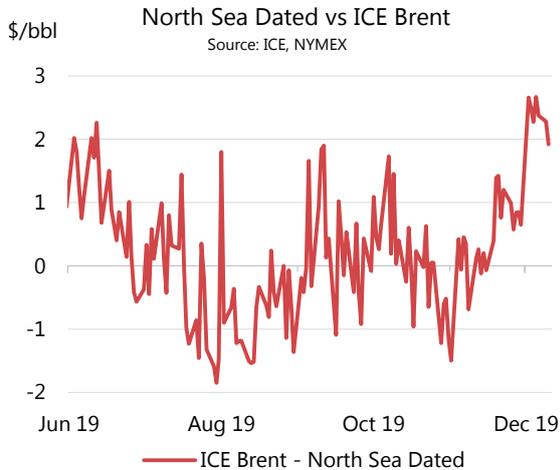
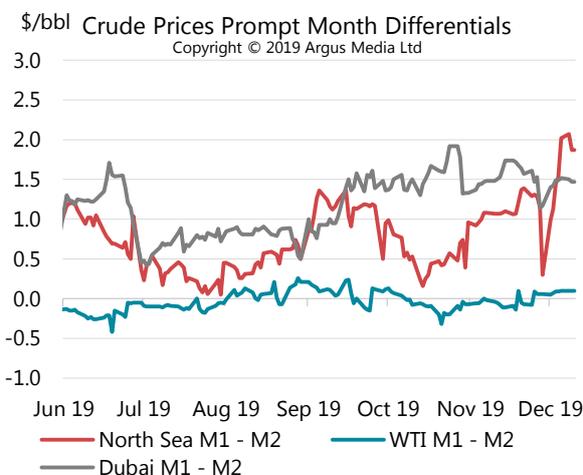
By late November, hedge funds had increased their net length in crude oil futures by 207 mb to reach 561 mb, the highest since May. With a gradually improving economic picture, money managers have doubled their bets that crude prices will rise since net length bottomed out in mid-October. Conversely, combined net length in oil product futures fell 17% in November. Hedge funds reduced speculative positions that diesel prices will rise (ICE LS Gasoil -55%, NYMEX ULSD -30%), as prompt markets appear well supplied with ample refinery availability and no significant tensions have yet arisen due to IMO regulations boosting demand for marine

gasoil (MGO). The trend reversed at the end of the month. Net length in NYMEX RBOB futures rose for the third consecutive month to 103 mb, but also reversed at end-month.



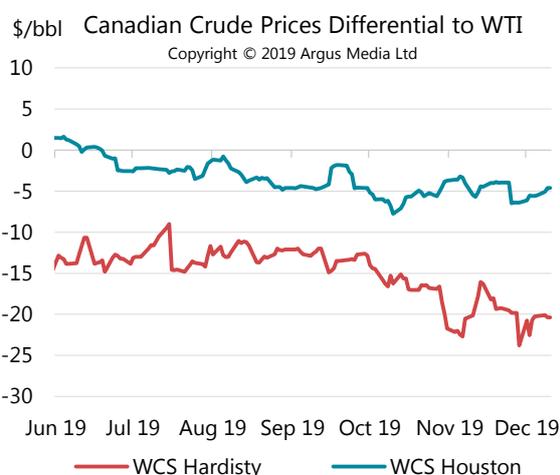
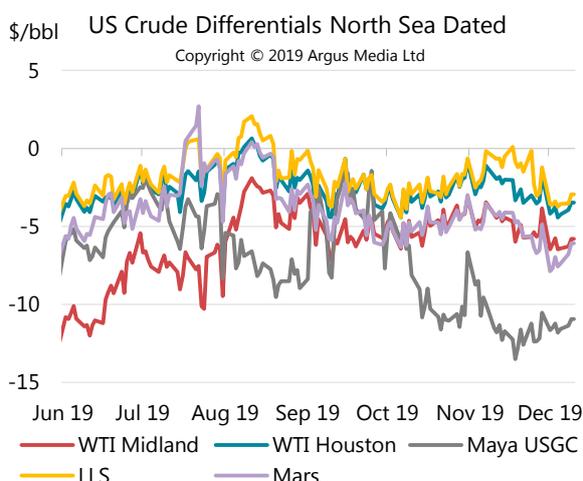
## Spot crude oil prices

In November, there were stronger indications of a tight market for both sweet and sour crudes. Backwardation steepened on the forward curves for both North Sea Dated and Dubai, with prompt swap prices \$1.09/bbl and \$1.51/bbl above second month contracts on average, respectively. For Dubai, this is similar to the level seen in October, but for North Sea Dated the backwardation (M1-M2) has doubled. In early December, North Sea Dated rose to a premium of \$2.66/bbl over ICE Brent highlighting the relative tightness in the physical market. Furthermore, the differentials for many key grades, in particular light sweet crudes that are well suited to produce IMO-compliant fuels, rose to multi-year highs. The differentials for sour crudes are also healthy as supplies continue to be tight while complex refinery capacity additions ramp up in China.



Crude freight rates were significantly lower in November and this improved the attractiveness of US exports. WTI priced in Houston rose by \$0.42/bbl and \$1.24/bbl m-o-m against North Sea Dated and Dubai, respectively. WTI Midland increased by \$0.31/bbl vs. WTI Cushing m-o-m as Phillips 66 began operations on the Gray Oak pipeline. When fully operational, the line will be

able to transport 900 kb/d of oil from the Permian to Corpus Christi. WTI Midland's discount to WTI Cushing has flipped to a premium since new pipeline infrastructure started up in mid-2019. The premium of Light Louisiana Sweet (LLS) vs. Mars has trended higher in recent months as sweet crudes benefitted from strong refinery demand ahead of the IMO regulatory change. On 25 November, the premium spiked to \$5.46/bbl, the highest since June 2018.

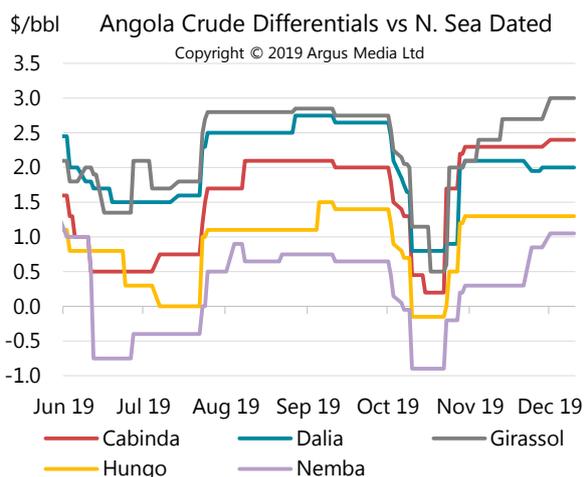
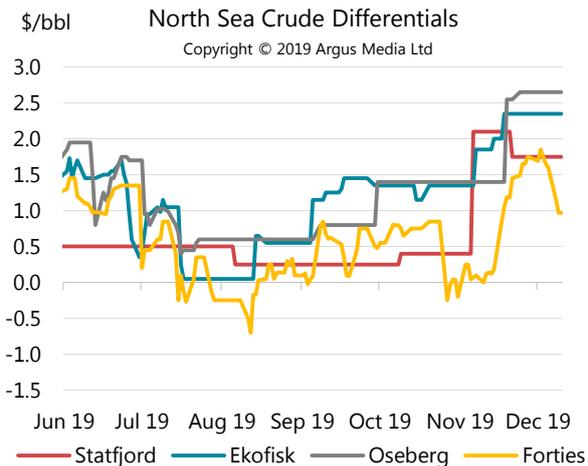


Western Canadian Select (WCS) priced in Alberta fell to a discount of \$23.78/bbl to WTI in late November, the widest since production curbs were introduced one year ago to ease pressure on export pipelines. The Keystone pipeline reportedly cut flows on one of its main routes to US markets while repairs took place following a leak in October. Furthermore, rail exports, which reached record levels this year, were halted for one week in November due to strike action.

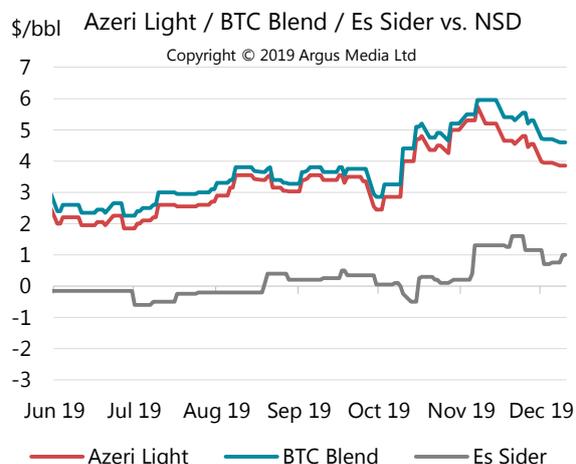
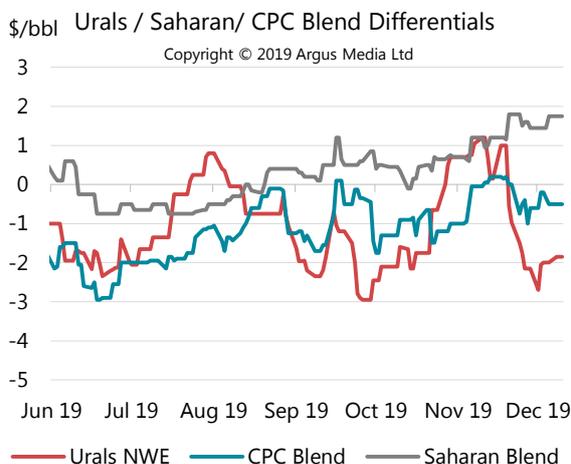
Spot Crude Oil Prices and Differentials										
(monthly and weekly averages, \$/bbl)										
	Sep	Oct	Nov	Nov-Oct	%	Week Commencing:				
				Avg Chg	Chg	04 Nov	11 Nov	18 Nov	25 Nov	02 Dec
<b>Crudes</b>										
North Sea Dated	62.57	59.73	63.11	3.38	5.7	62.42	62.52	63.65	64.44	65.00
Brent (Asia) Mth 1	61.08	59.36	62.48	3.11	5.2	61.97	62.17	62.32	64.03	62.62
WTI (Cushing) Mth 1	56.95	53.98	57.16	3.18	5.9	56.90	57.05	57.12	58.15	57.62
Urals (Mediterranean)	61.65	59.28	64.44	5.16	8.7	63.88	64.34	65.20	64.89	65.65
Dubai	61.11	59.36	61.91	2.56	4.3	60.95	61.69	62.16	63.53	61.66
Tapis (Dated)	67.68	66.01	70.21	4.20	6.4	69.52	69.62	70.75	71.54	72.10
<b>Differential to North Sea Dated</b>										
WTI (Cushing)	-5.63	-5.75	-5.95	-0.20		-5.52	-5.46	-6.53	-6.29	-7.37
Urals (Mediterranean)	-0.92	-0.45	1.33	1.78		1.46	1.82	1.55	0.45	0.65
Dubai	-1.46	-0.37	-1.20	-0.82		-1.47	-0.82	-1.49	-0.90	-3.34
Tapis (Dated)	5.11	6.27	7.10	0.83		7.10	7.10	7.10	7.10	7.10
<b>Prompt Month Differential</b>										
Forward Cash Brent Mth1-Mth2	1.11	0.55	1.09	0.54		1.01	1.08	1.22	1.07	1.42
Forward WTI Cushing Mth1-Mth2	0.07	-0.07	-0.04	0.02		-0.03	-0.08	-0.05	0.02	0.08
Forward Dubai Mth1-Mth2	1.21	1.51	1.51	0.00		1.44	1.58	1.67	1.38	1.46

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The prices of crudes underpinning the North Sea Dated benchmark were boosted in November by robust Asia Pacific demand for light sweet supplies. In particular, Chinese buying saw Forties rise to a premium of \$1.85/bbl vs. North Sea Dated in early December, the highest since 2012. Ekofisk's differential also reached a multi-year high of \$2.35/bbl in mid-November.

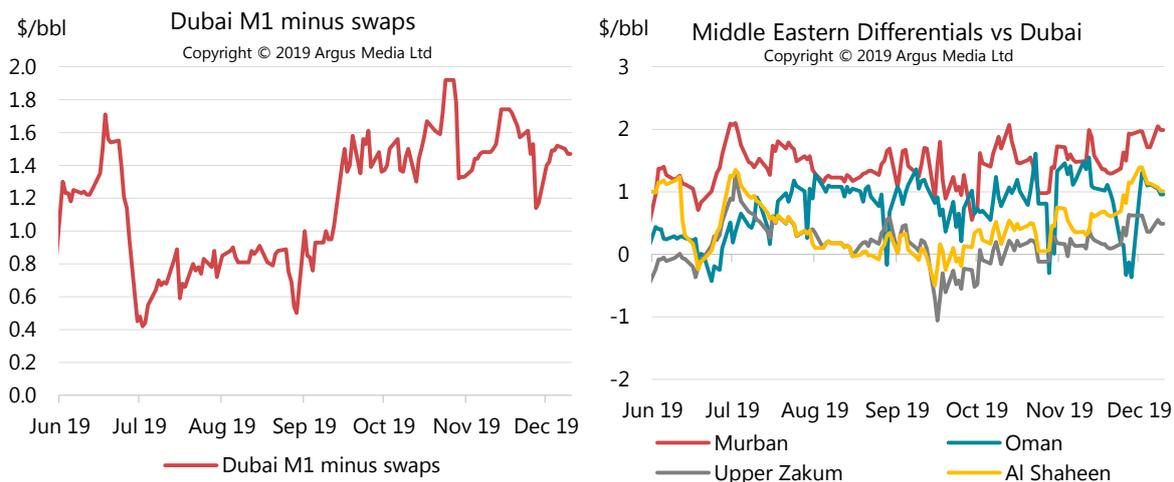


Seasonal demand and the upcoming IMO regulations caused differentials for key grades from West Africa to increase in November, from already exceptionally high levels. Qua Iboe and Bonny Light, which are low sulphur and middle distillate-rich grades, rose by \$1.60/bbl and \$1.28/bbl m-o-m vs. North Sea Dated, respectively. Refiners have also actively sought Angolan crude, often heavier and also low in sulphur content, which adapts well to low sulphur bunker production. Dalia and Hungo rose m-o-m vs. North Sea Dated but their premia remained shy of the record levels seen in August.



Loading programmes showed Urals exports falling to multi-year lows in November and December. With strong demand, prices in North West Europe and the Mediterranean reached record premia to North Sea Dated of \$1.20/bbl and \$2.00/bbl, respectively, on 11 November. This was short-lived and by the end of the month Urals in both North West Europe and the Mediterranean had slid to six week lows vs. North Sea Dated with weaker fuel oil margins, particularly in North West Europe, weighing on sour crude prices. An unplanned outage at the Kashagan field led to a downward revision to December's export schedule, supporting premia vs. North Sea Dated in November for both CPC (+\$0.90/bbl m-o-m) and Azeri Light (+\$1.09/bbl m-o-m). Saharan Blend was boosted by IMO-related demand thanks to its particularly low sulphur content; its differential to North Sea Dated rose by \$0.77/bbl m-o-m to a six year high. BTC Blend, rich in VGO and also low sulphur, rose to a record premium to North Sea Dated of \$5.95/bbl thanks to strong demand and tighter export availability. When global freight rates spiked in October, demand for ESPO picked up due to its proximity to customers in Asia Pacific;

but in November, its differential fell by \$1.26/bbl vs. North Sea Dated as shipping rates eased and Chinese demand slowed.

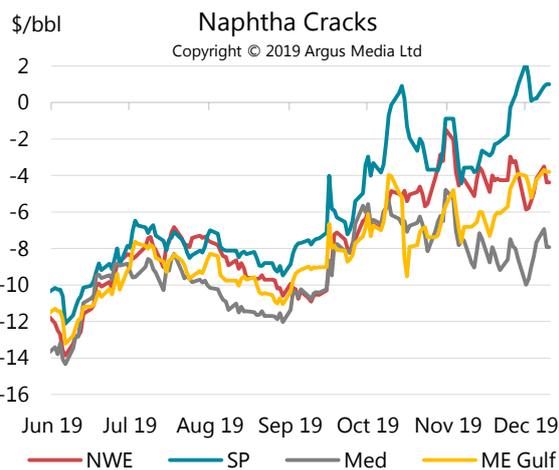
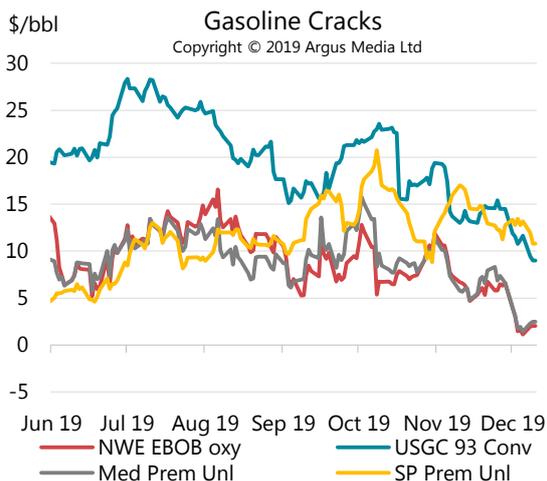


The market for crude from the Middle East appeared to be tight with steep backwardation of the Dubai curve and the prompt Dubai price averaging \$1.51/bbl above forward price swaps. The premium of prompt supplies has remained around this level since the attacks on Saudi Arabia in September. Although the supply disruption was short-lived, demand from Asia Pacific refiners, particularly those with the ability to process sour crude, has ticked up following maintenance. Furthermore, OPEC+ cuts and sanctions continue to hamper market supplies. Murban's premium to Dubai rose \$0.54/bbl during November (being sweeter and less residue-rich) and Upper Zakum rose \$0.19/bbl m-o-m on healthy demand from Thailand and Taiwan. Conversely, Basra Light and Basra Heavy fell by \$0.38/bbl and \$0.15/bbl vs. Dubai m-o-m, due to weakening fuel oil cracks.

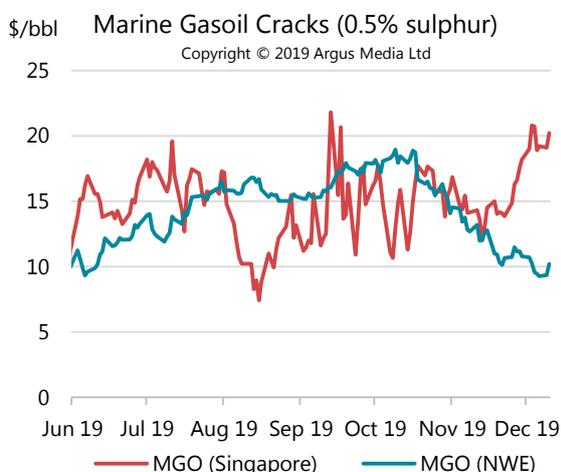
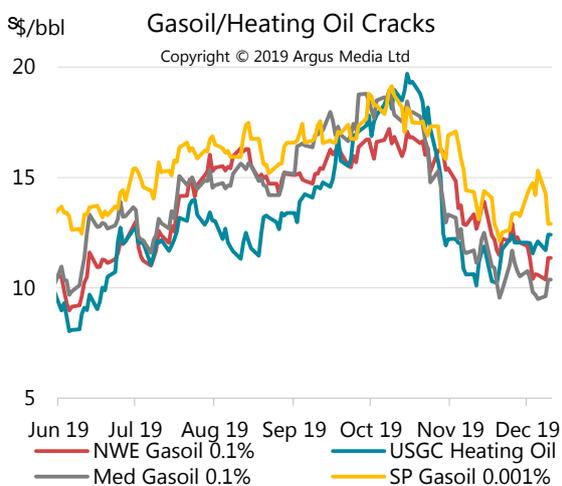
## Spot product prices

Global gasoline prices weakened in November. In Europe, market tightness eased on seasonally lower demand and as refineries returned from maintenance. In Northwest Europe and the Mediterranean gasoline cracks fell by \$1.46/bbl and \$2.79/bbl m-o-m, respectively. In Singapore the price of gasoline was supported by healthy regional demand, in particular from Indonesia and India where refinery maintenance was on-going. However, higher supplies from China were more than sufficient to meet this and cracks for premium unleaded vs. Dubai in Singapore fell by \$0.63/bbl m-o-m. On the US Gulf Coast, the price of super unleaded and unleaded gasoline declined by \$5.13/bbl and \$3.68/bbl vs. WTI Houston m-o-m, respectively, as refineries returned from heavy autumn maintenance. The increase in supplies was more than enough to meet healthy export demand, lacklustre domestic buying, and strong octane requirements.

Expanding demand from Asia Pacific petrochemical facilities, partly linked to seasonal trends, caused naphtha cracks in Singapore to rise by \$3.62/bbl during November, into positive territory. The flow of supplies to Asia Pacific caused markets to tighten in North West Europe where cracks rose by \$1.34/bbl m-o-m. In the Mediterranean, cracks slid by \$1.33/bbl vs. sharply rising Urals.



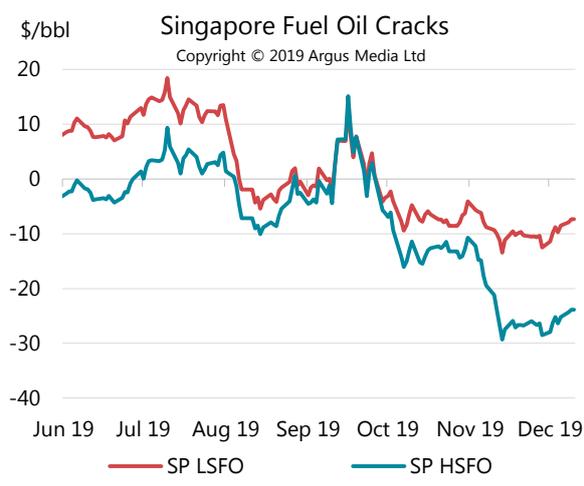
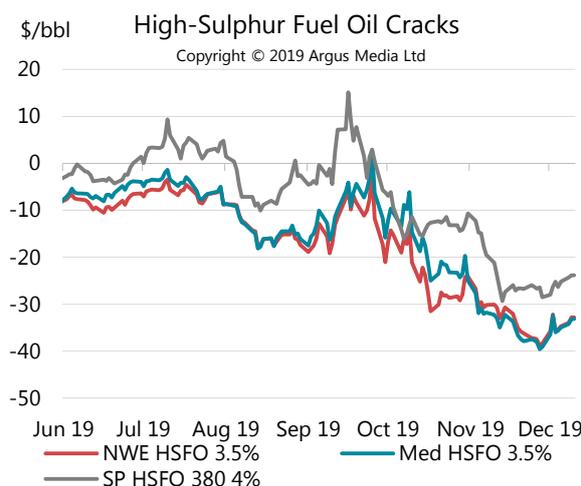
Rotterdam barge quotes for jet/kerosene dropped by \$4.45/bbl vs. North Sea Dated in November, due to limited regional demand and plentiful arrivals from East of Suez. Ongoing weak demand for jet fuel from India pressured prices in Singapore which fell by \$3.04/bbl m-o-m vs. Dubai. Furthermore, heating demand from Japan was unseasonably low and higher Chinese exports kept markets well supplied.



Global diesel cracks fell to their lowest level in several months in November. There have been concerns that cracks for middle distillates would soar in the run up to the new IMO regulations but this has not yet happened as ship operators wait until the last possible moment to switch to more expensive fuels. In North West Europe, ultra-low sulphur diesel (ULSD) prices fell by \$3.70/bbl vs. North Sea Dated m-o-m, as Russia upped exports to the region. On the US Gulf Coast, ULSD fell by \$5.40/bbl vs. WTI Houston m-o-m, as tepid domestic demand pressured prices. In Asia Pacific, stalling economic activity, along with weak Indian demand due to heavy monsoon rains, has squeezed cracks for diesel. These declined by \$3.65/bbl vs. Dubai, m-o-m. In November, prices for IMO-compliant MGO fell by \$0.38/bbl in Singapore vs. Dubai and \$5.15/bbl in North West Europe vs. North Sea Dated. It has been reported that, so far, ship operators have shown a preference for very low sulphur fuel oil over MGO based on bunker sales in key global ports.

Spot Product Prices														
(monthly and weekly averages, \$/bbl)														
	Sep	Oct	Nov	Nov-Oct		Week Commencing:					Sep	Oct	Nov	Chg
				Chg	%	04 Nov	11 Nov	18 Nov	25 Nov	02 Dec				
<b>Rotterdam, Barges FOB</b>														
											Differential to North Sea Dated			
Gasoline EBOB oxy	70.61	68.25	70.17	1.92	2.8	71.57	68.56	69.52	70.64	67.25	8.04	8.52	7.06	-1.46
Naphtha	53.42	54.53	59.25	4.72	8.7	58.65	58.21	59.34	60.91	59.77	-9.15	-5.20	-3.86	1.34
Jet/Kerosene	80.30	78.74	77.67	-1.07	-1.4	78.61	77.97	76.84	77.25	76.46	17.72	19.01	14.56	-4.45
ULSD 10ppm	79.71	78.47	78.14	-0.32	-0.4	78.74	78.13	77.36	78.47	77.68	17.14	18.73	15.03	-3.70
Gasoil 0.1%	78.19	76.15	76.04	-0.11	-0.1	76.01	75.84	75.64	76.74	75.95	15.62	16.41	12.93	-3.48
LSFO 1%	63.24	60.94	60.71	-0.23	-0.4	60.82	61.45	60.47	59.52	63.58	0.67	1.20	-2.40	-3.60
HSFO 3.5%	50.31	36.40	30.22	-6.18	-17.0	32.88	31.21	29.03	26.58	30.24	-12.27	-23.34	-32.89	-9.55
<b>Mediterranean, FOB Cargoes</b>														
											Differential to Urals			
Premium Uhl 10 ppm	70.95	69.38	71.75	2.36	3.4	72.58	69.99	72.06	72.11	68.07	9.30	10.10	7.31	-2.79
Naphtha	52.40	52.79	56.62	3.83	7.3	56.84	56.22	56.61	56.77	56.70	-9.25	-6.49	-7.82	-1.33
Jet Aviation fuel	79.45	77.45	75.46	-2.00	-2.6	77.12	76.24	74.56	73.72	73.95	17.80	18.17	11.02	-7.15
ULSD 10ppm	79.58	78.17	77.35	-0.82	-1.0	78.40	77.59	76.36	77.03	76.91	17.93	18.89	12.91	-5.98
Gasoil 0.1%	78.70	76.42	75.87	-0.55	-0.7	76.15	76.11	75.51	75.91	75.68	17.05	17.14	11.44	-5.71
LSFO 1%	64.37	62.98	63.16	0.18	0.3	63.02	63.65	63.01	62.40	66.39	2.72	3.70	-1.28	-4.98
HSFO 3.5%	52.24	41.86	30.22	-11.64	-27.8	33.01	31.11	28.98	26.51	30.53	-9.41	-17.42	-34.22	-16.79
<b>US Gulf, FOB Pipeline</b>														
											Differential to WTI Houston			
Super Unleaded	77.56	76.96	75.62	-1.34	-1.7	76.94	74.01	74.87	76.35	72.28	17.62	20.15	15.02	-5.13
Unleaded	70.02	68.31	68.42	0.11	0.2	68.85	67.29	68.15	69.61	65.56	10.07	11.50	7.82	-3.68
Jet/Kerosene	78.67	77.81	76.38	-1.43	-1.8	77.14	75.90	75.14	77.97	76.25	18.72	21.00	15.78	-5.22
ULSD 10ppm	79.81	78.61	77.00	-1.61	-2.0	77.52	76.44	76.17	78.38	76.67	19.86	21.80	16.40	-5.40
Heating Oil	75.21	74.37	71.94	-2.43	-3.3	71.76	71.63	71.44	73.72	72.80	15.26	17.56	11.34	-6.22
No. 6 3%*	49.01	42.32	35.94	-6.38	-15.1	41.51	31.79	33.05	36.42	33.74	-10.94	-14.48	-24.66	-10.18
<b>Singapore, FOB Cargoes</b>														
											Differential to Dubai			
Premium Unleaded	74.40	74.19	76.11	1.92	2.6	75.66	77.82	76.29	75.78	74.75	13.29	14.83	14.20	-0.63
Naphtha	54.21	57.14	59.76	2.61	4.6	58.03	58.31	59.70	63.42	62.48	-6.90	-2.22	-2.16	0.06
Jet/Kerosene	77.75	75.38	74.89	-0.48	-0.6	75.55	74.46	74.08	75.74	74.43	16.64	16.02	12.98	-3.04
Gasoil 0.001%	78.05	77.10	76.00	-1.10	-1.4	76.81	75.58	75.01	76.73	76.28	16.94	17.74	14.09	-3.65
LSWR Cracked	63.35	52.85	52.49	-0.36	-0.7	54.05	50.67	52.22	52.64	52.02	2.24	-6.51	-9.42	-2.91
HSFO 180 CST	62.73	47.75	39.34	-8.41	-17.6	45.20	36.32	36.98	37.14	36.70	1.62	-11.61	-22.57	-10.97
HSFO 380 CST 4%	62.33	47.00	38.81	-8.19	-17.4	45.16	35.96	35.54	36.77	35.47	1.22	-12.36	-23.11	-10.75

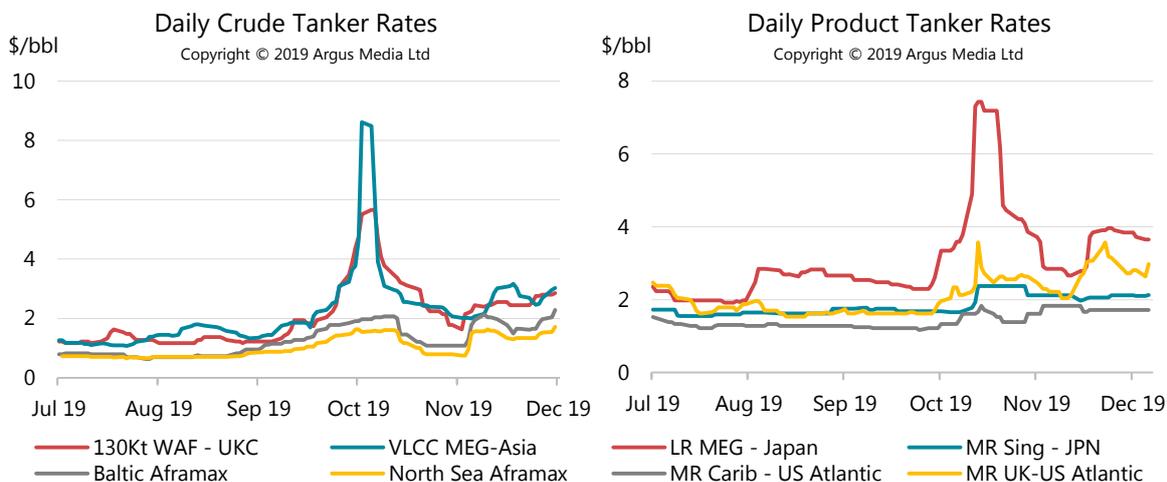
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Prices for high sulphur fuel oil (HSFO) continued to plummet as demand dries up ahead of the IMO regulatory change. In North West Europe and the Mediterranean, prices were almost \$40/bbl below benchmark crude. At these low prices, HSFO may compete with other fuels for power generation in some circumstances. In Singapore, cracks fell to almost -\$30/bbl vs. Dubai, having been in positive territory as recently as September. Meanwhile, the spread between low sulphur and high sulphur fuel has widened to record levels in North West Europe (\$33.92/bbl) and Singapore (\$16.97/bbl).

# Freight

Freight rates have remained elevated since the US levied sanctions against certain Chinese-owned ships and a tanker attack in the Red Sea in October caused a spike in rates on some routes. There was further clarity regarding US sanctions which impact two COSCO entities and this eased charterers concerns that they would be penalised. Reportedly, this has led to a modest increase in demand for vessels (not subject to sanctions) owned by parent company CSET.



Demand to ship crude on Very Large Crude Carriers (VLCCs) from the Middle East Gulf (MEG) to Asia was steady in November. Rates averaged \$2.47/bbl in November, a 17% increase y-o-y. Suezmaxes travelling between West Africa and Northwest Europe were pressured by weak demand and a healthy supply of ships early in November but rates had recovered by the end of the month. Tighter supply in the North Sea Aframax market caused rates to rise by \$0.54/bbl during November.

In clean tanker markets, rising demand to ship naphtha to Asia Pacific was supportive for Long Range (LR) vessel rates. These rose to \$3.96/bbl on the MEG to Japan route, the highest in almost one year (excluding the spike in October). LR rates were also underpinned by rising shipments of gasoil from the MEG. On the UK-US Atlantic route, rates for Medium Range (MR) vessels rose \$0.25/bbl m-o-m thanks to demand to ship gasoline to the US, West Africa and Latin America.

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

	2016	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
<b>OECD DEMAND</b>																	
Americas	24.9	25.1	25.3	25.3	25.9	25.6	25.5	25.4	25.4	25.9	25.9	25.7	25.3	25.6	26.2	26.1	25.8
Europe	14.0	14.4	14.1	14.2	14.7	14.1	14.3	13.9	14.1	14.6	14.2	14.2	14.0	14.2	14.6	14.4	14.3
Asia Oceania	8.1	8.2	8.7	7.7	7.8	8.1	8.1	8.3	7.5	7.6	8.2	7.9	8.4	7.5	7.7	8.3	8.0
<b>Total OECD</b>	<b>47.1</b>	<b>47.6</b>	<b>48.0</b>	<b>47.3</b>	<b>48.3</b>	<b>47.8</b>	<b>47.8</b>	<b>47.7</b>	<b>46.9</b>	<b>48.1</b>	<b>48.4</b>	<b>47.8</b>	<b>47.7</b>	<b>47.3</b>	<b>48.4</b>	<b>48.8</b>	<b>48.1</b>
<b>NON-OECD DEMAND</b>																	
FSU	4.4	4.5	4.5	4.6	4.9	4.8	4.7	4.6	4.8	5.0	5.0	4.8	4.7	4.8	5.1	5.0	4.9
Europe	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
China	12.0	12.5	12.7	13.0	13.1	13.1	13.0	13.0	13.7	13.8	13.8	13.6	13.4	14.1	14.2	14.2	14.0
Other Asia	13.2	13.7	14.1	14.3	13.7	14.1	14.0	14.5	14.3	13.8	14.5	14.3	14.9	14.7	14.2	14.9	14.7
Americas	6.5	6.4	6.3	6.3	6.5	6.4	6.4	6.2	6.3	6.4	6.4	6.4	6.3	6.4	6.5	6.5	6.4
Middle East	8.4	8.4	8.1	8.4	8.7	8.2	8.3	8.1	8.2	8.8	8.2	8.3	8.0	8.2	8.7	8.2	8.3
Africa	4.2	4.2	4.3	4.2	4.1	4.3	4.2	4.3	4.3	4.2	4.3	4.3	4.4	4.4	4.2	4.4	4.3
<b>Total Non-OECD</b>	<b>49.3</b>	<b>50.6</b>	<b>50.7</b>	<b>51.6</b>	<b>51.7</b>	<b>51.7</b>	<b>51.4</b>	<b>51.6</b>	<b>52.4</b>	<b>52.8</b>	<b>53.0</b>	<b>52.5</b>	<b>52.4</b>	<b>53.5</b>	<b>53.8</b>	<b>54.0</b>	<b>53.4</b>
<b>Total Demand<sup>1</sup></b>	<b>96.4</b>	<b>98.2</b>	<b>98.7</b>	<b>98.9</b>	<b>100.0</b>	<b>99.5</b>	<b>99.3</b>	<b>99.3</b>	<b>99.4</b>	<b>100.9</b>	<b>101.4</b>	<b>100.2</b>	<b>100.1</b>	<b>100.8</b>	<b>102.2</b>	<b>102.8</b>	<b>101.5</b>
<b>OECD SUPPLY</b>																	
Americas	19.6	20.5	22.0	22.3	23.5	24.3	23.0	24.1	24.5	24.6	25.2	24.6	25.4	25.8	26.2	26.4	25.9
Europe	3.5	3.5	3.6	3.4	3.3	3.5	3.5	3.5	3.2	3.2	3.5	3.3	3.7	3.7	3.7	3.9	3.7
Asia Oceania	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6
<b>Total OECD<sup>4</sup></b>	<b>23.5</b>	<b>24.4</b>	<b>26.0</b>	<b>26.1</b>	<b>27.3</b>	<b>28.2</b>	<b>26.9</b>	<b>28.0</b>	<b>28.2</b>	<b>28.3</b>	<b>29.3</b>	<b>28.4</b>	<b>29.8</b>	<b>30.1</b>	<b>30.5</b>	<b>30.8</b>	<b>30.3</b>
<b>NON-OECD SUPPLY</b>																	
FSU	14.2	14.3	14.4	14.4	14.6	14.8	14.6	14.8	14.4	14.6	14.7	14.6	14.6	14.6	14.6	14.6	14.6
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	4.0	3.9	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Other Asia	3.6	3.5	3.4	3.4	3.3	3.3	3.4	3.3	3.2	3.1	3.2	3.2	3.2	3.1	3.1	3.1	3.1
Americas	4.5	4.6	4.5	4.6	4.4	4.6	4.5	4.5	4.6	4.8	4.9	4.7	5.0	5.1	5.1	5.1	5.1
Middle East	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3
Africa	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4
<b>Total Non-OECD<sup>4</sup></b>	<b>31.0</b>	<b>30.9</b>	<b>30.9</b>	<b>31.0</b>	<b>31.0</b>	<b>31.5</b>	<b>31.1</b>	<b>31.4</b>	<b>31.0</b>	<b>31.3</b>	<b>31.4</b>	<b>31.3</b>	<b>31.5</b>	<b>31.5</b>	<b>31.4</b>	<b>31.4</b>	<b>31.5</b>
Processing gains <sup>3</sup>	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4
Global Biofuels	2.4	2.5	2.1	2.8	3.1	2.5	2.6	2.2	2.9	3.2	2.8	2.8	2.4	2.9	3.2	2.8	2.8
<b>Total Non-OPEC Supply</b>	<b>59.2</b>	<b>60.1</b>	<b>61.3</b>	<b>62.2</b>	<b>63.6</b>	<b>64.5</b>	<b>62.9</b>	<b>63.9</b>	<b>64.4</b>	<b>65.1</b>	<b>65.9</b>	<b>64.8</b>	<b>66.0</b>	<b>66.9</b>	<b>67.5</b>	<b>67.5</b>	<b>67.0</b>
<b>OPEC<sup>2</sup></b>																	
Crude	32.4	32.0	31.7	31.6	32.0	32.2	31.9	30.7	30.1	29.4							
NGLs	5.3	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.6	5.6
<b>Total OPEC</b>	<b>37.7</b>	<b>37.4</b>	<b>37.2</b>	<b>37.1</b>	<b>37.5</b>	<b>37.7</b>	<b>37.4</b>	<b>36.2</b>	<b>35.6</b>	<b>34.9</b>							
<b>Total Supply</b>	<b>96.9</b>	<b>97.5</b>	<b>98.5</b>	<b>99.3</b>	<b>101.2</b>	<b>102.2</b>	<b>100.3</b>	<b>100.1</b>	<b>100.0</b>	<b>100.0</b>							
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>Reported OECD</b>																	
Industry	0.0	-0.4	-0.3	0.0	0.6	0.1	0.1	0.1	0.7	0.0							
Government	0.0	-0.1	0.0	0.0	0.0	-0.2	-0.1	0.1	-0.1	0.0							
<b>Total</b>	<b>0.0</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-0.1</b>	<b>0.5</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.6</b>	<b>-0.1</b>							
Floating storage/Oil in transit	0.2	0.4	-1.0	0.3	-0.3	0.6	0.0	-0.3	-0.5	0.0							
Miscellaneous to balance <sup>5</sup>	0.3	-0.6	1.0	0.2	0.9	2.2	1.0	0.9	0.5	-0.8							
<b>Total Stock Ch. &amp; Misc</b>	<b>0.5</b>	<b>-0.7</b>	<b>-0.2</b>	<b>0.4</b>	<b>1.2</b>	<b>2.7</b>	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>-0.9</b>							
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch. <sup>6</sup>	31.9	32.7	31.9	31.2	30.9	29.5	30.8	29.9	29.4	30.3	30.0	29.9	28.5	28.3	29.2	29.7	29.0

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

<sup>2</sup> OPEC data based on today's membership throughout the time series.

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

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

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

<sup>6</sup> Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.

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

	2016	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
<b>OECD DEMAND</b>																	
Americas	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.2	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-	-	-0.1	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total OECD</b>	-	-	-	-	-	-	-	-	<b>0.1</b>	<b>-0.1</b>	<b>-0.1</b>	-	-	<b>0.1</b>	<b>-0.3</b>	<b>-0.1</b>	<b>-0.1</b>
<b>NON-OECD DEMAND</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.1	0.1	0.1	0.1
Other Asia	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-0.1	-0.1	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-OECD</b>	-	-	-	-	-	-	-	-	-	<b>-0.1</b>	<b>0.1</b>	-	-	-	-	-	-
<b>Total Demand</b>	-	-	-	-	-	-	-	-	<b>0.1</b>	<b>-0.2</b>	-	-	-	-	<b>-0.2</b>	-	<b>-0.1</b>
<b>OECD SUPPLY</b>																	
Americas	-	-	-	-	-	-	-	-	-	0.1	-	-	-0.2	-0.1	0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total OECD</b>	-	-	-	-	-	-	-	-	-	<b>0.1</b>	-	-	<b>-0.1</b>	<b>-0.1</b>	<b>0.1</b>	-	-
<b>NON-OECD SUPPLY</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1
<b>Total Non-OECD</b>	-	-	-	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	-	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	-	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-
<b>Total Non-OPEC Supply</b>	-	-	-	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	-	<b>-0.1</b>	<b>-0.1</b>	-	<b>0.2</b>	-	<b>-0.3</b>	<b>-0.2</b>	-	<b>-0.1</b>	<b>-0.2</b>
<b>OPEC</b>																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-
<b>Total OPEC</b>	-	-	-	-	-	-	-	-	-	<b>0.1</b>	-	-	-	-	-	-	-
<b>Total Supply</b>	-	-	-	-	-	-	-	<b>-0.1</b>	<b>-0.1</b>	-	-	-	-	-	-	-	-
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-	-	-	-	<b>-0.1</b>	-	-	-	-	-	-	-
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-
Miscellaneous to balance	-	-	-	-	-	-	-	-0.1	-0.2	0.2	-	-	-	-	-	-	-
<b>Total Stock Ch. &amp; Misc</b>	-	-	-	-	-	-	-	<b>-0.1</b>	<b>-0.1</b>	<b>0.2</b>	-	-	-	-	-	-	-
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	0.1	0.1	-0.2	-0.2	-0.1	0.3	0.2	-0.2	0.1	0.1

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

**Table 2**  
**SUMMARY OF GLOBAL OIL DEMAND**

	2017	1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
<b>Demand (mb/d)</b>																
Americas	25.07	25.31	25.33	25.86	25.60	25.53	25.40	25.40	25.88	25.95	25.66	25.33	25.57	26.16	26.12	25.79
Europe	14.38	14.06	14.20	14.66	14.09	14.25	13.91	14.05	14.56	14.22	14.19	13.97	14.17	14.59	14.37	14.28
Asia Oceania	8.15	8.66	7.74	7.76	8.10	8.06	8.34	7.50	7.65	8.22	7.92	8.42	7.54	7.69	8.28	7.98
<b>Total OECD</b>	<b>47.61</b>	<b>48.03</b>	<b>47.27</b>	<b>48.27</b>	<b>47.79</b>	<b>47.84</b>	<b>47.65</b>	<b>46.94</b>	<b>48.08</b>	<b>48.38</b>	<b>47.77</b>	<b>47.71</b>	<b>47.29</b>	<b>48.44</b>	<b>48.77</b>	<b>48.06</b>
Asia	26.21	26.79	27.25	26.80	27.24	27.02	27.57	28.02	27.62	28.29	27.88	28.30	28.84	28.43	29.16	28.68
Middle East	8.40	8.09	8.43	8.69	8.17	8.35	8.12	8.19	8.76	8.21	8.32	7.96	8.24	8.73	8.17	8.28
Americas	6.45	6.31	6.33	6.47	6.43	6.39	6.24	6.35	6.44	6.43	6.37	6.25	6.38	6.47	6.45	6.39
FSU	4.54	4.49	4.61	4.89	4.82	4.70	4.62	4.75	5.02	4.96	4.84	4.72	4.85	5.11	5.00	4.92
Africa	4.23	4.29	4.25	4.11	4.26	4.23	4.30	4.34	4.18	4.32	4.28	4.37	4.39	4.24	4.39	4.35
Europe	0.75	0.73	0.74	0.77	0.79	0.76	0.76	0.79	0.80	0.80	0.79	0.77	0.80	0.81	0.82	0.80
<b>Total Non-OECD</b>	<b>50.58</b>	<b>50.71</b>	<b>51.62</b>	<b>51.74</b>	<b>51.70</b>	<b>51.45</b>	<b>51.62</b>	<b>52.44</b>	<b>52.83</b>	<b>53.02</b>	<b>52.48</b>	<b>52.35</b>	<b>53.50</b>	<b>53.79</b>	<b>54.00</b>	<b>53.41</b>
<b>World</b>	<b>98.19</b>	<b>98.74</b>	<b>98.89</b>	<b>100.01</b>	<b>99.49</b>	<b>99.29</b>	<b>99.27</b>	<b>99.39</b>	<b>100.91</b>	<b>101.40</b>	<b>100.25</b>	<b>100.07</b>	<b>100.78</b>	<b>102.23</b>	<b>102.77</b>	<b>101.47</b>
of which: US50	19.96	20.35	20.36	20.71	20.59	20.50	20.31	20.35	20.68	20.80	20.54	20.25	20.54	20.94	20.90	20.66
Europe 5*	8.32	8.22	8.24	8.34	8.17	8.24	8.12	8.09	8.27	8.14	8.16	8.09	8.09	8.24	8.21	8.15
China	12.49	12.70	12.96	13.14	13.09	12.97	13.03	13.72	13.80	13.84	13.60	13.43	14.12	14.24	14.23	14.01
Japan	3.92	4.31	3.46	3.56	3.92	3.81	4.09	3.41	3.44	3.90	3.71	4.04	3.35	3.42	3.89	3.68
India	4.66	4.91	5.03	4.62	4.89	4.86	5.14	5.06	4.75	5.05	5.00	5.30	5.27	4.90	5.25	5.18
Russia	3.39	3.36	3.43	3.68	3.60	3.52	3.47	3.55	3.80	3.67	3.62	3.52	3.61	3.84	3.70	3.67
Brazil	3.03	2.97	2.94	3.10	3.11	3.03	3.01	3.05	3.16	3.18	3.10	3.05	3.11	3.19	3.21	3.14
Saudi Arabia	3.30	2.96	3.21	3.35	2.99	3.13	2.96	3.05	3.48	3.13	3.16	2.85	3.11	3.44	3.07	3.12
Canada	2.42	2.34	2.37	2.58	2.51	2.45	2.45	2.44	2.60	2.59	2.52	2.44	2.40	2.60	2.64	2.52
Korea	2.63	2.73	2.64	2.58	2.53	2.62	2.63	2.48	2.58	2.64	2.58	2.73	2.54	2.63	2.70	2.65
Mexico	2.02	1.91	1.94	1.89	1.80	1.89	1.93	1.93	1.92	1.86	1.91	1.92	1.95	1.93	1.87	1.91
Iran	1.92	1.98	1.98	1.98	1.98	1.98	1.99	1.94	1.94	1.92	1.95	1.97	1.91	1.90	1.88	1.92
<b>Total</b>	<b>68.07</b>	<b>68.74</b>	<b>68.56</b>	<b>69.54</b>	<b>69.20</b>	<b>69.01</b>	<b>69.11</b>	<b>69.08</b>	<b>70.43</b>	<b>70.73</b>	<b>69.84</b>	<b>69.58</b>	<b>70.00</b>	<b>71.28</b>	<b>71.56</b>	<b>70.61</b>
<b>% of World</b>	<b>69.3%</b>	<b>69.6%</b>	<b>69.3%</b>	<b>69.5%</b>	<b>69.6%</b>	<b>69.5%</b>	<b>69.6%</b>	<b>69.5%</b>	<b>69.8%</b>	<b>69.8%</b>	<b>69.7%</b>	<b>69.5%</b>	<b>69.5%</b>	<b>69.7%</b>	<b>69.6%</b>	<b>69.6%</b>
<b>Annual Change (% per annum)</b>																
Americas	0.7	2.8	0.8	2.8	1.0	1.8	0.4	0.2	0.1	1.4	0.5	-0.3	0.7	1.1	0.7	0.5
Europe	2.5	1.2	-1.0	-1.0	-2.7	-0.9	-1.1	-1.1	-0.7	0.9	-0.5	0.4	0.9	0.2	1.1	0.6
Asia Oceania	0.2	1.2	-0.4	-1.6	-3.7	-1.1	-3.7	-3.1	-1.4	1.5	-1.7	1.0	0.6	0.6	0.8	0.8
<b>Total OECD</b>	<b>1.2</b>	<b>2.0</b>	<b>0.1</b>	<b>0.9</b>	<b>-0.9</b>	<b>0.5</b>	<b>-0.8</b>	<b>-0.7</b>	<b>-0.4</b>	<b>1.2</b>	<b>-0.2</b>	<b>0.1</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.6</b>
Asia	4.2	3.4	2.5	3.8	2.7	3.1	2.9	2.8	3.1	3.9	3.2	2.6	2.9	2.9	3.1	2.9
Middle East	0.3	-0.3	-1.5	-0.8	0.4	-0.6	0.3	-2.8	0.8	0.5	-0.3	-2.0	0.6	-0.4	-0.5	-0.6
Americas	-0.3	0.0	-1.5	-1.6	-0.6	-1.0	-1.0	0.2	-0.4	0.0	-0.3	0.1	0.5	0.5	0.4	0.4
FSU	2.5	4.1	2.1	2.9	5.0	3.5	2.9	3.0	2.8	3.0	2.9	2.0	2.0	1.7	0.8	1.6
Africa	1.5	-0.6	-0.2	-0.8	1.0	-0.1	0.3	2.1	1.5	1.3	1.3	1.5	1.3	1.5	1.6	1.5
Europe	3.2	2.4	-1.0	1.3	4.5	1.8	3.2	6.2	3.6	1.3	3.5	1.1	0.6	1.6	2.1	1.4
<b>Total Non-OECD</b>	<b>2.5</b>	<b>2.1</b>	<b>1.0</b>	<b>1.8</b>	<b>2.0</b>	<b>1.7</b>	<b>1.8</b>	<b>1.6</b>	<b>2.1</b>	<b>2.5</b>	<b>2.0</b>	<b>1.4</b>	<b>2.0</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>
<b>World</b>	<b>1.9</b>	<b>2.1</b>	<b>0.5</b>	<b>1.4</b>	<b>0.6</b>	<b>1.1</b>	<b>0.5</b>	<b>0.5</b>	<b>0.9</b>	<b>1.9</b>	<b>1.0</b>	<b>0.8</b>	<b>1.4</b>	<b>1.3</b>	<b>1.4</b>	<b>1.2</b>
<b>Annual Change (mb/d)</b>																
Americas	0.18	0.69	0.20	0.70	0.25	0.46	0.09	0.06	0.02	0.35	0.13	-0.08	0.17	0.28	0.17	0.14
Europe	0.35	0.16	-0.15	-0.14	-0.39	-0.13	-0.15	-0.15	-0.10	0.13	-0.07	0.05	0.12	0.03	0.16	0.09
Asia Oceania	0.01	0.10	-0.03	-0.12	-0.31	-0.09	-0.32	-0.24	-0.11	0.12	-0.14	0.08	0.05	0.04	0.06	0.06
<b>Total OECD</b>	<b>0.54</b>	<b>0.95</b>	<b>0.03</b>	<b>0.43</b>	<b>-0.45</b>	<b>0.24</b>	<b>-0.38</b>	<b>-0.33</b>	<b>-0.19</b>	<b>0.59</b>	<b>-0.07</b>	<b>0.06</b>	<b>0.34</b>	<b>0.36</b>	<b>0.39</b>	<b>0.29</b>
Asia	1.05	0.89	0.66	0.97	0.71	0.81	0.79	0.77	0.82	1.06	0.86	0.73	0.82	0.81	0.87	0.80
Middle East	0.03	-0.03	-0.13	-0.07	0.03	-0.05	0.02	-0.24	0.07	0.04	-0.03	-0.16	0.05	-0.04	-0.04	-0.05
Americas	-0.02	0.00	-0.10	-0.11	-0.04	-0.06	-0.06	0.02	-0.03	0.00	-0.02	0.01	0.03	0.03	0.03	0.02
FSU	0.11	0.18	0.09	0.14	0.23	0.16	0.13	0.14	0.14	0.15	0.14	0.09	0.10	0.08	0.04	0.08
Africa	0.06	-0.02	-0.01	-0.03	0.04	-0.01	0.01	0.09	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.06
Europe	0.02	0.02	-0.01	0.01	0.03	0.01	0.02	0.05	0.03	0.01	0.03	0.01	0.00	0.01	0.02	0.01
<b>Total Non-OECD</b>	<b>1.24</b>	<b>1.04</b>	<b>0.51</b>	<b>0.90</b>	<b>1.00</b>	<b>0.86</b>	<b>0.91</b>	<b>0.83</b>	<b>1.09</b>	<b>1.31</b>	<b>1.04</b>	<b>0.74</b>	<b>1.05</b>	<b>0.97</b>	<b>0.98</b>	<b>0.93</b>
<b>World</b>	<b>1.79</b>	<b>1.99</b>	<b>0.54</b>	<b>1.33</b>	<b>0.56</b>	<b>1.10</b>	<b>0.53</b>	<b>0.50</b>	<b>0.90</b>	<b>1.91</b>	<b>0.96</b>	<b>0.80</b>	<b>1.39</b>	<b>1.32</b>	<b>1.37</b>	<b>1.22</b>
<b>Revisions to Oil Demand from Last Month's Report (mb/d)</b>																
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	-0.06	0.00	0.00	-0.02	0.00	-0.18	-0.08	-0.07
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.11	-0.06	-0.04	0.04	0.03	-0.10	0.02	0.00
Asia Oceania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.02	0.00	0.02	0.03	0.03	0.00	0.02
<b>Total OECD</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.06</b>	<b>-0.15</b>	<b>-0.08</b>	<b>-0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>-0.25</b>	<b>-0.06</b>	<b>-0.06</b>
Asia	0.01	-0.01	-0.01	-0.02	-0.02	-0.01	0.01	0.01	-0.02	0.07	0.01	0.02	0.04	0.04	0.05	0.04
Middle East	0.00	0.00	0.00	-0.01	-0.01	0.00	-0.01	-0.01	0.02	0.02	0.00	-0.03	-0.03	-0.01	-0.01	-0.02
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	0.00	-0.01	0.00	-0.01	-0.02	0.01	-0.01
Africa	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	-0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Non-OECD</b>	<b>0.01</b>	<b>-0.01</b>	<b>-0.01</b>	<b>-0.03</b>	<b>-0.03</b>	<b>-0.02</b>	<b>-0.00</b>	<b>-0.01</b>	<b>-0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>-0.02</b>	<b>-0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>
<b>World</b>	<b>0.01</b>	<b>-0.00</b>	<b>-0.00</b>	<b>-0.02</b>	<b>-0.02</b>	<b>-0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>-0.21</b>	<b>0.01</b>	<b>-0.03</b>	<b>0.02</b>	<b>0.05</b>	<b>-0.25</b>	<b>-0.02</b>	<b>-0.05</b>
<b>Revisions to Oil Demand Growth from Last Month's Report (mb/d)</b>																
World	0.01	-0.01	-0.01	-0.03	-0.03	-0.02	0.01	0.06	-0.18	0.03	-0.02	0.01	-0.01	-0.04	-0.0	

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

	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19 <sup>2</sup>	Latest month vs.	
										Aug 19	Sep 19
<b>Americas</b>											
LPG and ethane	3.39	3.69	3.78	4.17	3.40	3.56	3.59	3.40	3.70	0.30	0.12
Naphtha	0.31	0.31	0.33	0.30	0.28	0.27	0.26	0.27	0.28	0.01	-0.05
Motor gasoline	11.08	11.09	11.04	10.71	11.26	11.28	11.29	11.63	10.91	-0.72	-0.04
Jet and kerosene	1.98	2.03	2.01	1.97	2.10	2.17	2.22	2.24	2.05	-0.20	0.02
Gasoil/diesel oil	5.15	5.32	5.40	5.46	5.15	5.12	5.07	5.22	5.07	-0.15	-0.15
Residual fuel oil	0.66	0.61	0.60	0.62	0.60	0.64	0.68	0.70	0.55	-0.14	-0.08
Other products	2.51	2.48	2.44	2.18	2.61	2.83	2.80	2.93	2.76	-0.17	0.29
<b>Total</b>	<b>25.07</b>	<b>25.53</b>	<b>25.60</b>	<b>25.40</b>	<b>25.40</b>	<b>25.88</b>	<b>25.91</b>	<b>26.38</b>	<b>25.32</b>	<b>-1.06</b>	<b>0.11</b>
<b>Europe</b>											
LPG and ethane	1.15	1.16	1.11	1.12	1.09	1.08	1.12	1.08	1.03	-0.05	-0.05
Naphtha	1.13	1.03	0.93	1.13	0.88	0.92	0.95	0.96	0.84	-0.12	-0.15
Motor gasoline	1.99	1.97	1.94	1.86	2.07	2.11	2.17	2.11	2.05	-0.06	0.08
Jet and kerosene	1.45	1.51	1.44	1.38	1.58	1.71	1.69	1.73	1.71	-0.03	0.01
Gasoil/diesel oil	6.48	6.44	6.57	6.41	6.30	6.60	6.71	6.41	6.69	0.28	0.25
Residual fuel oil	0.89	0.86	0.84	0.88	0.85	0.85	0.83	0.84	0.87	0.03	0.02
Other products	1.29	1.28	1.26	1.13	1.28	1.29	1.32	1.24	1.31	0.08	-0.11
<b>Total</b>	<b>14.38</b>	<b>14.25</b>	<b>14.09</b>	<b>13.91</b>	<b>14.05</b>	<b>14.56</b>	<b>14.80</b>	<b>14.37</b>	<b>14.50</b>	<b>0.13</b>	<b>0.05</b>
<b>Asia Oceania</b>											
LPG and ethane	0.76	0.75	0.73	0.85	0.72	0.71	0.73	0.70	0.69	-0.02	0.03
Naphtha	2.08	2.04	2.07	2.10	1.91	2.03	2.02	2.06	2.00	-0.06	-0.06
Motor gasoline	1.54	1.53	1.52	1.47	1.47	1.57	1.51	1.67	1.52	-0.15	0.00
Jet and kerosene	0.93	0.93	1.02	1.15	0.78	0.75	0.72	0.72	0.80	0.08	0.02
Gasoil/diesel oil	1.90	1.89	1.93	1.94	1.88	1.85	1.87	1.91	1.79	-0.12	-0.06
Residual fuel oil	0.54	0.53	0.51	0.50	0.41	0.40	0.41	0.41	0.39	-0.02	-0.07
Other products	0.40	0.40	0.33	0.32	0.34	0.34	0.35	0.29	0.39	0.10	0.05
<b>Total</b>	<b>8.15</b>	<b>8.06</b>	<b>8.10</b>	<b>8.34</b>	<b>7.50</b>	<b>7.65</b>	<b>7.61</b>	<b>7.76</b>	<b>7.57</b>	<b>-0.19</b>	<b>-0.08</b>
<b>OECD</b>											
LPG and ethane	5.30	5.60	5.62	6.14	5.21	5.35	5.44	5.18	5.42	0.23	0.10
Naphtha	3.52	3.39	3.33	3.54	3.07	3.22	3.23	3.29	3.12	-0.17	-0.25
Motor gasoline	14.62	14.59	14.50	14.04	14.79	14.96	14.97	15.41	14.48	-0.93	0.04
Jet and kerosene	4.35	4.46	4.47	4.50	4.45	4.63	4.63	4.70	4.56	-0.14	0.05
Gasoil/diesel oil	13.53	13.65	13.90	13.82	13.33	13.58	13.66	13.54	13.55	0.01	0.04
Residual fuel oil	2.09	2.00	1.94	1.99	1.86	1.89	1.92	1.95	1.81	-0.14	-0.12
Other products	4.20	4.16	4.03	3.63	4.23	4.46	4.47	4.45	4.46	0.01	0.23
<b>Total</b>	<b>47.61</b>	<b>47.84</b>	<b>47.79</b>	<b>47.65</b>	<b>46.94</b>	<b>48.08</b>	<b>48.32</b>	<b>48.52</b>	<b>47.39</b>	<b>-1.13</b>	<b>0.07</b>

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

North America comprises US 50 states, US territories, Mexico and Canada.

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

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

	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19 <sup>2</sup>	Latest month vs.	
										Aug 19	Sep 18
<b>United States<sup>3</sup></b>											
LPG and ethane	2.54	2.87	3.02	3.29	2.60	2.71	2.77	2.54	2.83	0.28	0.10
Naphtha	0.23	0.23	0.24	0.21	0.21	0.22	0.21	0.23	0.23	0.00	-0.03
Motor gasoline	9.33	9.33	9.25	8.96	9.48	9.49	9.48	9.82	9.17	-0.65	0.02
Jet and kerosene	1.69	1.71	1.70	1.66	1.78	1.80	1.84	1.85	1.70	-0.15	-0.01
Gasoil/diesel oil	3.93	4.15	4.19	4.28	4.01	3.94	3.91	4.00	3.92	-0.09	-0.11
Residual fuel oil	0.34	0.32	0.33	0.29	0.26	0.32	0.34	0.34	0.27	-0.07	-0.08
Other products	1.90	1.89	1.86	1.62	2.02	2.20	2.19	2.28	2.12	-0.16	0.24
<b>Total</b>	<b>19.96</b>	<b>20.50</b>	<b>20.59</b>	<b>20.31</b>	<b>20.35</b>	<b>20.68</b>	<b>20.74</b>	<b>21.06</b>	<b>20.22</b>	<b>-0.84</b>	<b>0.14</b>
<b>Japan</b>											
LPG and ethane	0.41	0.40	0.39	0.47	0.35	0.29	0.32	0.28	0.27	-0.01	-0.06
Naphtha	0.78	0.74	0.80	0.80	0.69	0.71	0.70	0.73	0.69	-0.03	-0.02
Motor gasoline	0.87	0.86	0.85	0.81	0.81	0.90	0.86	0.96	0.90	-0.06	0.04
Jet and kerosene	0.52	0.50	0.57	0.69	0.37	0.34	0.32	0.32	0.38	0.06	0.02
Diesel	0.44	0.46	0.49	0.47	0.45	0.47	0.47	0.46	0.48	0.02	0.00
Other gasoil	0.34	0.32	0.32	0.35	0.28	0.27	0.28	0.26	0.27	0.01	-0.01
Residual fuel oil	0.28	0.28	0.27	0.26	0.21	0.23	0.23	0.23	0.24	0.01	0.00
Other products	0.28	0.26	0.23	0.25	0.23	0.24	0.24	0.21	0.26	0.05	0.01
<b>Total</b>	<b>3.92</b>	<b>3.81</b>	<b>3.92</b>	<b>4.09</b>	<b>3.41</b>	<b>3.44</b>	<b>3.41</b>	<b>3.44</b>	<b>3.49</b>	<b>0.05</b>	<b>-0.04</b>
<b>Germany</b>											
LPG and ethane	0.13	0.11	0.09	0.12	0.13	0.13	0.15	0.13	0.11	-0.01	0.01
Naphtha	0.30	0.27	0.23	0.33	0.22	0.22	0.25	0.24	0.18	-0.06	-0.04
Motor gasoline	0.50	0.49	0.48	0.47	0.50	0.51	0.52	0.52	0.50	-0.02	0.01
Jet and kerosene	0.22	0.22	0.22	0.20	0.23	0.23	0.22	0.24	0.24	-0.01	-0.02
Diesel	0.78	0.76	0.77	0.74	0.78	0.79	0.82	0.78	0.78	0.00	0.00
Other gasoil	0.36	0.32	0.35	0.41	0.29	0.35	0.36	0.35	0.35	0.00	0.02
Residual fuel oil	0.07	0.06	0.05	0.06	0.05	0.05	0.06	0.06	0.04	-0.02	-0.01
Other products	0.10	0.11	0.13	0.08	0.10	0.12	0.12	0.11	0.12	0.01	-0.01
<b>Total</b>	<b>2.45</b>	<b>2.35</b>	<b>2.32</b>	<b>2.42</b>	<b>2.31</b>	<b>2.41</b>	<b>2.49</b>	<b>2.42</b>	<b>2.32</b>	<b>-0.10</b>	<b>-0.03</b>
<b>Italy</b>											
LPG and ethane	0.10	0.10	0.10	0.09	0.07	0.07	0.07	0.06	0.07	0.01	-0.01
Naphtha	0.12	0.13	0.11	0.08	0.08	0.09	0.09	0.09	0.09	-0.01	-0.07
Motor gasoline	0.17	0.17	0.16	0.14	0.16	0.16	0.18	0.14	0.17	0.02	0.01
Jet and kerosene	0.10	0.11	0.10	0.08	0.11	0.13	0.13	0.14	0.13	-0.01	0.01
Diesel	0.45	0.46	0.47	0.45	0.45	0.45	0.48	0.42	0.46	0.04	0.01
Other gasoil	0.08	0.08	0.08	0.06	0.06	0.07	0.08	0.06	0.08	0.02	0.00
Residual fuel oil	0.07	0.07	0.07	0.06	0.07	0.07	0.08	0.07	0.07	0.00	0.00
Other products	0.15	0.16	0.17	0.14	0.16	0.16	0.18	0.14	0.17	0.03	0.00
<b>Total</b>	<b>1.24</b>	<b>1.27</b>	<b>1.26</b>	<b>1.10</b>	<b>1.17</b>	<b>1.21</b>	<b>1.28</b>	<b>1.13</b>	<b>1.24</b>	<b>0.11</b>	<b>-0.05</b>
<b>France</b>											
LPG and ethane	0.12	0.13	0.12	0.15	0.12	0.11	0.11	0.12	0.11	-0.01	0.00
Naphtha	0.12	0.10	0.07	0.14	0.11	0.11	0.11	0.12	0.09	-0.03	0.00
Motor gasoline	0.18	0.19	0.19	0.18	0.21	0.22	0.23	0.22	0.21	-0.01	0.02
Jet and kerosene	0.16	0.17	0.16	0.16	0.18	0.19	0.20	0.19	0.19	0.00	0.01
Diesel	0.72	0.71	0.72	0.68	0.71	0.71	0.77	0.66	0.70	0.04	0.01
Other gasoil	0.25	0.24	0.25	0.26	0.20	0.24	0.23	0.21	0.29	0.08	0.03
Residual fuel oil	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Other products	0.12	0.12	0.13	0.10	0.12	0.14	0.16	0.12	0.14	0.02	0.00
<b>Total</b>	<b>1.74</b>	<b>1.71</b>	<b>1.69</b>	<b>1.72</b>	<b>1.71</b>	<b>1.78</b>	<b>1.87</b>	<b>1.69</b>	<b>1.78</b>	<b>0.09</b>	<b>0.07</b>
<b>United Kingdom</b>											
LPG and ethane	0.14	0.14	0.14	0.14	0.14	0.10	0.13	0.09	0.09	0.00	-0.05
Naphtha	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.00	0.00
Motor gasoline	0.29	0.28	0.28	0.29	0.29	0.29	0.27	0.29	0.29	0.00	0.00
Jet and kerosene	0.32	0.32	0.31	0.33	0.32	0.33	0.32	0.33	0.33	0.00	-0.02
Diesel	0.52	0.52	0.52	0.51	0.52	0.52	0.49	0.52	0.54	0.02	0.00
Other gasoil	0.14	0.14	0.14	0.12	0.13	0.15	0.14	0.15	0.16	0.00	0.00
Residual fuel oil	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.00	-0.01
Other products	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.01	0.00
<b>Total</b>	<b>1.60</b>	<b>1.57</b>	<b>1.56</b>	<b>1.55</b>	<b>1.57</b>	<b>1.54</b>	<b>1.52</b>	<b>1.53</b>	<b>1.56</b>	<b>0.03</b>	<b>-0.09</b>
<b>Canada</b>											
LPG and ethane	0.40	0.39	0.35	0.42	0.42	0.45	0.43	0.44	0.47	0.02	0.04
Naphtha	0.05	0.05	0.05	0.05	0.03	0.01	0.01	0.01	0.01	0.00	-0.04
Motor gasoline	0.84	0.88	0.91	0.85	0.89	0.91	0.92	0.92	0.90	-0.02	-0.04
Jet and kerosene	0.14	0.16	0.16	0.16	0.17	0.23	0.22	0.25	0.23	-0.02	0.04
Diesel	0.29	0.26	0.25	0.26	0.26	0.26	0.25	0.25	0.26	0.01	0.00
Other gasoil	0.27	0.29	0.34	0.29	0.25	0.30	0.28	0.32	0.30	-0.03	-0.03
Residual fuel oil	0.05	0.05	0.06	0.07	0.06	0.05	0.04	0.07	0.03	-0.04	-0.01
Other products	0.37	0.38	0.38	0.34	0.37	0.39	0.36	0.40	0.41	0.01	0.03
<b>Total</b>	<b>2.42</b>	<b>2.45</b>	<b>2.51</b>	<b>2.45</b>	<b>2.44</b>	<b>2.60</b>	<b>2.52</b>	<b>2.67</b>	<b>2.60</b>	<b>-0.06</b>	<b>-0.01</b>

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

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

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

**Table 3**  
**WORLD OIL PRODUCTION**

(million barrels per day)

	2018	2019	2020	2Q19	3Q19	4Q19	1Q20	2Q20	Sep 19	Oct 19	Nov 19
<b>OPEC</b>											
<b>Crude Oil</b>											
Saudi Arabia	10.33			9.76	9.49				9.02	10.20	9.90
Iran	3.58			2.41	2.19				2.18	2.15	2.13
Iraq	4.57			4.73	4.79				4.77	4.69	4.65
UAE	3.00			3.07	3.08				3.07	3.09	3.09
Kuwait	2.75			2.69	2.65				2.65	2.63	2.69
Neutral Zone <sup>1</sup>	0.00			0.00	0.00				0.00	0.00	0.00
Angola	1.49			1.43	1.35				1.38	1.37	1.28
Nigeria	1.60			1.72	1.81				1.80	1.80	1.77
Libya	0.97			1.15	1.09				1.12	1.16	1.16
Algeria	1.04			1.02	1.02				1.02	1.02	1.03
Congo	0.32			0.35	0.34				0.33	0.35	0.35
Gabon	0.19			0.22	0.21				0.19	0.21	0.19
Equatorial Guinea	0.12			0.11	0.11				0.11	0.12	0.12
Ecuador	0.52			0.53	0.55				0.55	0.47	0.52
Venezuela	1.40			0.86	0.75				0.65	0.70	0.78
<b>Total Crude Oil</b>	<b>31.88</b>			<b>30.05</b>	<b>29.42</b>				<b>28.84</b>	<b>29.96</b>	<b>29.66</b>
<b>Total NGLs<sup>2</sup></b>	<b>5.50</b>	<b>5.52</b>	<b>5.56</b>	<b>5.54</b>	<b>5.49</b>	<b>5.55</b>	<b>5.56</b>	<b>5.56</b>	<b>5.35</b>	<b>5.55</b>	<b>5.55</b>
<b>Total OPEC<sup>3</sup></b>	<b>37.38</b>			<b>35.59</b>	<b>34.91</b>				<b>34.19</b>	<b>35.51</b>	<b>35.21</b>
<b>NON-OPEC<sup>4</sup></b>											
<b>OECD</b>											
<b>Americas</b>											
United States	15.54	17.14	18.26	17.08	17.19	17.65	17.73	18.20	17.62	17.57	17.75
Mexico	2.07	1.93	1.99	1.91	1.94	1.96	1.99	1.99	1.97	1.93	1.98
Canada	5.41	5.52	5.68	5.51	5.51	5.59	5.70	5.57	5.37	5.51	5.61
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Europe</b>											
UK	1.11	1.14	1.19	1.14	1.06	1.15	1.22	1.16	1.11	1.06	1.19
Norway	1.85	1.73	2.12	1.57	1.65	1.92	2.07	2.13	1.57	1.83	1.93
Others	0.51	0.46	0.44	0.46	0.45	0.44	0.44	0.44	0.42	0.45	0.44
<b>Asia Oceania</b>											
Australia	0.34	0.43	0.54	0.41	0.44	0.51	0.52	0.54	0.44	0.51	0.51
Others	0.07	0.07	0.06	0.07	0.08	0.06	0.06	0.06	0.07	0.06	0.07
<b>Total OECD</b>	<b>26.91</b>	<b>28.44</b>	<b>30.29</b>	<b>28.17</b>	<b>28.32</b>	<b>29.29</b>	<b>29.75</b>	<b>30.11</b>	<b>28.58</b>	<b>28.92</b>	<b>29.49</b>
<b>NON-OECD</b>											
<b>Former USSR</b>											
Russia	11.49	11.58	11.53	11.50	11.57	11.57	11.52	11.53	11.60	11.57	11.58
Others	3.07	3.05	3.07	2.92	3.04	3.08	3.08	3.06	2.99	3.03	3.14
<b>Asia</b>											
China	3.81	3.88	3.87	3.91	3.88	3.86	3.87	3.88	3.87	3.86	3.86
Malaysia	0.71	0.69	0.71	0.69	0.63	0.72	0.71	0.71	0.71	0.72	0.72
India	0.84	0.80	0.76	0.81	0.79	0.78	0.77	0.77	0.77	0.79	0.78
Indonesia	0.80	0.75	0.72	0.75	0.73	0.73	0.73	0.72	0.74	0.74	0.74
Others	1.01	0.98	0.93	1.00	0.97	0.96	0.95	0.93	0.95	0.96	0.96
<b>Europe</b>											
Others	0.12	0.12	0.11	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.12
<b>Americas</b>											
Brazil	2.71	2.87	3.19	2.74	3.01	3.08	3.17	3.20	3.03	3.07	3.07
Argentina	0.58	0.60	0.61	0.60	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Colombia	0.87	0.89	0.87	0.90	0.88	0.89	0.88	0.87	0.88	0.89	0.89
Others	0.36	0.35	0.42	0.35	0.35	0.36	0.38	0.40	0.36	0.35	0.36
<b>Middle East</b>											
Oman	0.99	0.98	1.00	0.98	0.98	0.97	1.00	1.00	0.98	0.97	0.97
Qatar	1.97	1.96	1.97	1.96	1.96	1.96	1.97	1.97	1.96	1.96	1.96
Syria	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Yemen	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Others	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.21	0.21
<b>Africa</b>											
Egypt	1.45	1.47	1.40	1.49	1.46	1.47	1.43	1.41	1.47	1.47	1.46
Others	0.65	0.63	0.60	0.64	0.63	0.62	0.62	0.61	0.64	0.62	0.62
Others	0.80	0.84	0.80	0.85	0.83	0.84	0.82	0.81	0.83	0.84	0.84
<b>Total Non-OECD</b>	<b>31.09</b>	<b>31.27</b>	<b>31.46</b>	<b>31.00</b>	<b>31.27</b>	<b>31.45</b>	<b>31.48</b>	<b>31.49</b>	<b>31.35</b>	<b>31.39</b>	<b>31.51</b>
Processing gains <sup>5</sup>	2.32	2.35	2.38	2.35	2.35	2.35	2.38	2.38	2.35	2.35	2.35
Global Biofuels	2.62	2.77	2.83	2.90	3.16	2.79	2.36	2.93	3.09	3.18	2.80
<b>TOTAL NON-OPEC</b>	<b>62.94</b>	<b>64.83</b>	<b>66.95</b>	<b>64.42</b>	<b>65.10</b>	<b>65.89</b>	<b>65.97</b>	<b>66.91</b>	<b>65.37</b>	<b>65.83</b>	<b>66.15</b>
<b>TOTAL SUPPLY</b>	<b>100.32</b>			<b>100.01</b>	<b>100.01</b>				<b>99.56</b>	<b>101.34</b>	<b>101.36</b>

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

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

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

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

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

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

	2018	2019	2020	2Q19	3Q19	4Q19	1Q20	2Q20	Sep 19	Oct 19	Nov 19
<b>United States</b>											
Alaska	479	465	446	468	426	477	474	453	449	470	482
California	477	457	440	461	454	450	446	442	456	451	450
Texas	4408	5057	5511	4963	5153	5256	5297	5449	5228	5267	5259
Federal Gulf of Mexico <sup>2</sup>	1758	1882	2003	1928	1814	1940	1980	2016	1895	1903	1966
Other US Lower 48	3869	4334	4553	4278	4378	4519	4413	4505	4435	4489	4535
NGLs <sup>3</sup>	4369	4775	5132	4806	4796	4839	4966	5149	4989	4827	4894
Other Hydrocarbons	178	169	174	178	164	167	156	186	166	162	168
<b>Total</b>	<b>15537</b>	<b>17141</b>	<b>18258</b>	<b>17083</b>	<b>17185</b>	<b>17648</b>	<b>17731</b>	<b>18200</b>	<b>17618</b>	<b>17569</b>	<b>17754</b>
<b>Canada</b>											
Alberta Light/Medium/Heavy	489	484	481	486	480	482	481	481	480	484	481
Alberta Bitumen	1856	1823	1938	1833	1856	1918	1902	1868	1976	1989	1865
Saskatchewan	488	478	454	480	472	468	462	457	475	468	468
Other Crude	449	463	487	509	430	436	466	538	404	521	365
NGLs	904	970	997	948	944	995	1021	976	915	971	991
Other Upgraders	164	178	178	174	181	182	184	167	149	172	193
Synthetic Crudes	1056	1129	1142	1084	1144	1104	1183	1084	968	902	1243
<b>Total</b>	<b>5408</b>	<b>5525</b>	<b>5677</b>	<b>5514</b>	<b>5508</b>	<b>5586</b>	<b>5700</b>	<b>5571</b>	<b>5366</b>	<b>5508</b>	<b>5605</b>
<b>Mexico</b>											
Crude	1831	1708	1779	1689	1719	1735	1768	1775	1739	1690	1753
NGLs	236	219	209	218	214	224	218	212	222	233	220
<b>Total</b>	<b>2073</b>	<b>1932</b>	<b>1993</b>	<b>1911</b>	<b>1938</b>	<b>1964</b>	<b>1990</b>	<b>1992</b>	<b>1965</b>	<b>1928</b>	<b>1977</b>
<b>UK</b>											
Brent Fields	45	42	36	47	41	35	36	40	43	31	37
Forties Fields	355	321	290	345	273	301	326	252	311	229	343
Ninian Fields	34	37	37	36	39	38	39	38	46	33	41
Flotta Fields	65	56	54	52	53	55	55	51	62	53	57
Other Fields	519	587	684	563	565	630	674	693	549	621	625
NGLs	89	96	89	97	91	92	91	90	97	94	90
<b>Total</b>	<b>1108</b>	<b>1139</b>	<b>1189</b>	<b>1140</b>	<b>1064</b>	<b>1152</b>	<b>1220</b>	<b>1164</b>	<b>1108</b>	<b>1061</b>	<b>1193</b>
<b>Norway<sup>5</sup></b>											
Ekofisk-Ula Area	145	140	159	106	160	149	157	157	152	158	156
Oseberg-Troll Area	251	261	281	251	263	271	276	281	270	269	271
Stattfjord-Gullfaks Area	306	239	227	203	240	237	234	230	236	238	238
Haltenbanken Area	331	286	321	271	275	306	320	320	246	306	307
Sleipner-Frigg Area	403	417	770	355	347	578	723	779	344	452	590
Other Fields	79	83	85	73	81	95	82	82	82	127	83
NGLs	335	300	271	309	279	281	281	277	244	279	285
<b>Total</b>	<b>1850</b>	<b>1726</b>	<b>2115</b>	<b>1568</b>	<b>1645</b>	<b>1916</b>	<b>2072</b>	<b>2126</b>	<b>1574</b>	<b>1828</b>	<b>1929</b>
<b>Other OECD Europe</b>											
Denmark	114	102	78	114	96	83	81	79	88	83	83
Italy	89	78	93	78	74	74	81	89	71	74	73
Turkey	55	58	59	58	59	59	59	59	59	59	59
Other	117	104	99	97	93	104	102	100	99	106	105
NGLs	11	8	6	8	6	6	6	6	5	6	6
Non-Conventional Oils	128	114	108	110	121	117	108	108	102	119	118
<b>Total</b>	<b>515</b>	<b>462</b>	<b>442</b>	<b>465</b>	<b>451</b>	<b>444</b>	<b>436</b>	<b>440</b>	<b>424</b>	<b>447</b>	<b>444</b>
<b>Australia</b>											
Gippsland Basin	13	8	7	8	8	8	8	7	8	8	8
Cooper-Eromanga Basin	30	34	32	34	33	33	32	32	33	33	33
Carnarvon Basin	60	70	105	57	72	95	100	107	86	96	92
Other Crude	180	258	304	249	261	298	298	302	248	297	298
NGLs	59	62	91	59	64	75	87	90	63	73	74
<b>Total</b>	<b>342</b>	<b>431</b>	<b>539</b>	<b>407</b>	<b>439</b>	<b>508</b>	<b>525</b>	<b>539</b>	<b>438</b>	<b>507</b>	<b>505</b>
<b>Other OECD Asia Oceania</b>											
New Zealand	24	24	21	25	26	22	22	21	23	22	22
Japan	3	4	4	4	4	4	4	4	4	4	4
NGLs	13	12	11	12	12	11	11	11	12	11	11
Non-Conventional Oils	29	29	28	31	34	27	28	28	32	23	30
<b>Total</b>	<b>69</b>	<b>69</b>	<b>64</b>	<b>73</b>	<b>76</b>	<b>65</b>	<b>65</b>	<b>64</b>	<b>71</b>	<b>61</b>	<b>68</b>
<b>OECD</b>											
Crude Oil	19328	20364	21840	20125	20253	21160	21399	21711	20602	21035	21152
NGLs	6023	6450	6815	6466	6415	6532	6689	6818	6554	6503	6579
Non-Conventional Oils <sup>4</sup>	1560	1623	1634	1581	1649	1602	1663	1577	1420	1382	1757
<b>Total</b>	<b>26912</b>	<b>28437</b>	<b>30289</b>	<b>28173</b>	<b>28317</b>	<b>29294</b>	<b>29751</b>	<b>30106</b>	<b>28576</b>	<b>28920</b>	<b>29488</b>

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.

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

	RECENT MONTHLY STOCKS <sup>2</sup>					PRIOR YEARS' STOCKS <sup>2</sup>			STOCK CHANGES			
	in Million Barrels					in Million Barrels			in mb/d			
	Jun2019	Jul2019	Aug2019	Sep2019	Oct2019*	Oct2016	Oct2017	Oct2018	4Q2018	1Q2019	2Q2019	3Q2019
<b>OECD INDUSTRY-CONTROLLED STOCKS<sup>1</sup></b>												
<b>OECD Americas</b>												
Crude	616.4	595.7	583.5	578.6	601.1	649.6	617.1	597.1	0.35	0.11	0.01	-0.41
Motor Gasoline	259.9	261.0	258.5	257.8	245.7	257.6	247.3	261.8	0.09	-0.14	-0.07	-0.02
Middle Distillate	200.5	209.2	208.1	202.4	187.6	230.5	200.9	196.8	0.01	-0.12	-0.05	0.02
Residual Fuel Oil	35.5	36.3	34.2	35.7	34.8	45.6	35.8	34.9	-0.01	-0.01	0.02	0.00
Total Products <sup>3</sup>	743.7	762.6	767.3	765.0	725.6	782.3	722.6	734.7	-0.17	-0.41	0.37	0.23
<b>Total<sup>4</sup></b>	<b>1564.8</b>	<b>1568.5</b>	<b>1564.4</b>	<b>1558.3</b>	<b>1545.9</b>	<b>1626.9</b>	<b>1540.0</b>	<b>1535.3</b>	<b>0.01</b>	<b>-0.35</b>	<b>0.62</b>	<b>-0.07</b>
<b>OECD Europe</b>												
Crude	361.5	359.3	361.5	353.1	355.9	353.1	336.6	340.2	-0.02	0.33	-0.02	-0.09
Motor Gasoline	89.8	87.7	85.1	86.9	87.1	92.9	90.7	85.6	0.10	0.06	-0.10	-0.03
Middle Distillate	276.2	278.1	289.9	280.0	270.4	316.3	277.7	246.1	-0.11	0.13	0.09	0.04
Residual Fuel Oil	59.1	60.7	63.7	62.7	61.9	70.7	63.3	55.2	-0.02	0.06	0.00	0.04
Total Products <sup>3</sup>	541.6	540.4	552.9	541.4	524.5	578.9	543.7	500.5	-0.06	0.28	0.00	0.00
<b>Total<sup>4</sup></b>	<b>985.1</b>	<b>986.2</b>	<b>998.9</b>	<b>978.8</b>	<b>964.2</b>	<b>1004.5</b>	<b>954.2</b>	<b>917.3</b>	<b>-0.03</b>	<b>0.66</b>	<b>-0.05</b>	<b>-0.07</b>
<b>OECD Asia Oceania</b>												
Crude	152.3	158.8	159.6	142.8	142.2	201.6	188.4	157.2	0.16	0.04	-0.07	-0.10
Motor Gasoline	24.4	26.6	24.4	25.5	25.4	23.8	22.9	25.9	0.00	0.02	-0.01	0.01
Middle Distillate	69.3	71.7	77.0	78.7	74.3	71.1	72.5	73.7	-0.04	-0.07	0.03	0.10
Residual Fuel Oil	19.7	18.9	19.8	20.9	20.5	18.6	20.4	18.0	0.01	-0.01	0.00	0.01
Total Products <sup>3</sup>	173.2	179.1	190.7	191.8	184.4	180.8	182.6	182.4	-0.04	-0.18	0.10	0.20
<b>Total<sup>4</sup></b>	<b>388.9</b>	<b>401.7</b>	<b>416.5</b>	<b>398.9</b>	<b>393.4</b>	<b>445.5</b>	<b>435.1</b>	<b>404.6</b>	<b>0.11</b>	<b>-0.23</b>	<b>0.10</b>	<b>0.11</b>
<b>Total OECD</b>												
Crude	1130.2	1113.8	1104.6	1074.5	1099.2	1204.2	1142.1	1094.5	0.50	0.48	-0.08	-0.60
Motor Gasoline	374.1	375.2	368.1	370.2	358.2	374.3	360.9	373.2	0.19	-0.06	-0.19	-0.04
Middle Distillate	546.1	558.9	574.9	561.0	532.3	617.9	551.1	516.6	-0.14	-0.06	0.07	0.16
Residual Fuel Oil	114.4	115.9	117.7	119.3	117.2	134.9	119.5	108.0	-0.02	0.04	0.02	0.05
Total Products <sup>3</sup>	1458.5	1482.1	1511.0	1498.2	1434.6	1541.9	1448.9	1417.5	-0.27	-0.31	0.47	0.43
<b>Total<sup>4</sup></b>	<b>2938.8</b>	<b>2956.4</b>	<b>2979.8</b>	<b>2936.0</b>	<b>2903.6</b>	<b>3077.0</b>	<b>2929.2</b>	<b>2857.2</b>	<b>0.08</b>	<b>0.08</b>	<b>0.68</b>	<b>-0.03</b>
<b>OECD GOVERNMENT-CONTROLLED STOCKS<sup>5</sup></b>												
<b>OECD Americas</b>												
Crude	644.8	644.8	644.8	644.8	641.1	695.1	669.0	654.8	-0.12	0.00	-0.05	0.00
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
<b>OECD Europe</b>												
Crude	207.0	205.8	205.8	206.2	207.2	204.9	207.4	213.1	-0.01	-0.02	-0.02	-0.01
Products	275.8	274.1	275.3	274.3	274.6	269.8	266.3	268.1	-0.04	0.10	-0.01	-0.02
<b>OECD Asia Oceania</b>												
Crude	378.6	378.6	378.6	377.0	377.3	385.7	385.0	382.7	-0.02	-0.03	0.00	-0.02
Products	38.8	38.9	38.9	38.9	38.9	36.5	38.3	38.7	0.00	0.00	0.00	0.00
<b>Total OECD</b>												
Crude	1230.4	1229.2	1229.2	1228.0	1225.7	1285.7	1261.4	1250.7	-0.16	-0.05	-0.07	-0.03
Products	316.5	315.0	316.2	315.1	315.5	308.2	306.6	308.8	-0.04	0.10	-0.01	-0.02
<b>Total<sup>4</sup></b>	<b>1548.8</b>	<b>1546.0</b>	<b>1547.7</b>	<b>1544.4</b>	<b>1542.8</b>	<b>1596.2</b>	<b>1571.5</b>	<b>1562.3</b>	<b>-0.20</b>	<b>0.06</b>	<b>-0.09</b>	<b>-0.05</b>

\* 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.

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

(million barrels)

	May			June			July			August			September		
	2018	2019	%	2018	2019	%	2018	2019	%	2018	2019	%	2018	2019	%
<b>United States<sup>2</sup></b>															
Crude	434.2	480.2	10.6	415.2	464.0	11.8	409.6	442.1	7.9	407.6	430.8	5.7	416.7	426.5	2.4
Motor Gasoline	242.9	235.7	-3.0	240.7	229.7	-4.6	234.3	235.2	0.4	236.3	230.4	-2.5	240.0	231.9	-3.4
Middle Distillate	158.5	171.4	8.1	162.9	173.2	6.3	169.7	183.2	8.0	175.9	181.0	2.9	186.6	178.1	-4.6
Residual Fuel Oil	31.9	30.0	-6.0	30.0	30.3	1.0	29.3	30.6	4.4	27.8	28.6	2.9	28.7	29.9	4.2
Other Products	181.5	214.0	17.9	194.2	229.0	17.9	204.2	235.7	15.4	214.3	246.8	15.2	222.6	249.5	12.1
Total Products	614.8	651.1	5.9	627.8	662.2	5.5	637.5	684.7	7.4	654.3	686.8	5.0	677.9	689.4	1.7
Other <sup>3</sup>	163.9	181.0	10.4	166.2	183.8	10.6	167.4	187.9	12.2	171.8	189.5	10.3	178.7	188.7	5.6
<b>Total</b>	<b>1212.9</b>	<b>1312.3</b>	<b>8.2</b>	<b>1209.2</b>	<b>1310.0</b>	<b>8.3</b>	<b>1214.5</b>	<b>1314.7</b>	<b>8.3</b>	<b>1233.7</b>	<b>1307.1</b>	<b>5.9</b>	<b>1273.3</b>	<b>1304.6</b>	<b>2.5</b>
<b>Japan</b>															
Crude	97.5	97.2	-0.3	92.6	91.9	-0.8	97.1	102.6	5.7	97.0	96.5	-0.5	84.5	86.3	2.1
Motor Gasoline	11.5	9.8	-14.8	9.9	9.5	-4.0	9.3	9.6	3.2	9.9	10.0	1.0	10.3	9.5	-7.8
Middle Distillate	29.4	27.4	-6.8	28.4	28.2	-0.7	30.0	31.0	3.3	34.2	35.8	4.7	35.9	34.6	-3.6
Residual Fuel Oil	8.3	8.0	-3.6	8.0	7.8	-2.5	7.4	7.7	4.1	7.9	7.5	-5.1	8.1	7.9	-2.5
Other Products	33.1	33.8	2.1	32.5	35.8	10.2	33.4	37.0	10.8	35.0	42.0	20.0	39.6	39.4	-0.5
Total Products	82.3	79.0	-4.0	78.8	81.3	3.2	80.1	85.3	6.5	87.0	95.3	9.5	93.9	91.4	-2.7
Other <sup>3</sup>	52.9	50.8	-4.0	51.7	53.1	2.7	53.6	53.8	0.4	56.6	56.7	0.2	56.5	54.2	-4.1
<b>Total</b>	<b>232.7</b>	<b>227.0</b>	<b>-2.4</b>	<b>223.1</b>	<b>226.3</b>	<b>1.4</b>	<b>230.8</b>	<b>241.7</b>	<b>4.7</b>	<b>240.6</b>	<b>248.5</b>	<b>3.3</b>	<b>234.9</b>	<b>231.9</b>	<b>-1.3</b>
<b>Germany</b>															
Crude	48.9	48.6	-0.6	49.4	47.7	-3.4	48.3	49.7	2.9	47.4	48.5	2.3	46.5	47.1	1.3
Motor Gasoline	9.5	10.0	5.3	9.4	11.9	26.6	9.8	11.7	19.4	10.1	10.1	0.0	9.8	10.6	8.2
Middle Distillate	25.6	22.7	-11.3	25.2	24.8	-1.6	25.1	23.8	-5.2	25.1	24.4	-2.8	23.4	24.1	3.0
Residual Fuel Oil	8.3	7.0	-15.7	7.8	6.8	-12.8	7.9	6.6	-16.5	7.6	7.2	-5.3	7.1	7.4	4.2
Other Products	10.6	10.1	-4.7	10.8	10.4	-3.7	10.6	10.5	-0.9	10.9	10.5	-3.7	10.8	10.3	-4.6
Total Products	54.0	49.8	-7.8	53.2	53.9	1.3	53.4	52.6	-1.5	53.7	52.2	-2.8	51.1	52.4	2.5
Other <sup>3</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>102.9</b>	<b>98.4</b>	<b>-4.4</b>	<b>102.6</b>	<b>101.6</b>	<b>-1.0</b>	<b>101.7</b>	<b>102.3</b>	<b>0.6</b>	<b>101.1</b>	<b>100.7</b>	<b>-0.4</b>	<b>97.6</b>	<b>99.5</b>	<b>1.9</b>
<b>Italy</b>															
Crude	40.9	40.4	-1.2	39.7	45.0	13.4	46.8	42.2	-9.8	44.3	41.6	-6.1	39.6	42.7	7.8
Motor Gasoline	10.3	11.0	6.8	10.9	11.3	3.7	11.8	11.5	-2.5	12.2	11.5	-5.7	11.6	12.5	7.8
Middle Distillate	28.2	29.3	3.9	27.4	28.0	2.2	27.2	28.0	2.9	28.6	30.9	8.0	27.8	31.1	11.9
Residual Fuel Oil	10.4	8.6	-17.3	9.8	8.7	-11.2	10.2	8.9	-12.7	9.5	9.4	-1.1	8.8	8.8	0.0
Other Products	13.4	11.7	-12.7	12.9	12.4	-3.9	12.7	12.0	-5.5	13.0	12.8	-1.5	12.4	13.8	11.3
Total Products	62.3	60.6	-2.7	61.0	60.4	-1.0	61.9	60.4	-2.4	63.3	64.6	2.1	60.6	66.2	9.2
Other <sup>3</sup>	16.1	16.2	0.6	15.6	13.8	-11.5	14.6	15.1	3.4	15.8	15.1	-4.4	15.3	15.7	2.6
<b>Total</b>	<b>119.3</b>	<b>117.2</b>	<b>-1.8</b>	<b>116.3</b>	<b>119.2</b>	<b>2.5</b>	<b>123.3</b>	<b>117.7</b>	<b>-4.5</b>	<b>123.4</b>	<b>121.3</b>	<b>-1.7</b>	<b>115.5</b>	<b>124.6</b>	<b>7.9</b>
<b>France</b>															
Crude	15.2	13.7	-9.9	15.8	15.8	0.0	13.7	13.5	-1.5	11.0	14.0	27.3	10.8	11.0	1.9
Motor Gasoline	3.3	4.5	36.4	4.1	5.9	43.9	3.2	5.7	78.1	4.2	5.5	31.0	4.7	4.9	4.3
Middle Distillate	18.9	21.7	14.8	18.1	21.1	16.6	19.6	19.6	0.0	20.0	22.1	10.5	19.6	20.1	2.6
Residual Fuel Oil	0.9	0.8	-11.1	0.8	0.9	12.5	0.8	1.2	50.0	1.0	1.6	60.0	1.2	0.6	-50.0
Other Products	3.4	3.9	14.7	3.4	4.3	26.5	3.7	4.4	18.9	3.9	4.4	12.8	4.2	4.1	-2.4
Total Products	26.5	30.9	16.6	26.4	32.2	22.0	27.3	30.9	13.2	29.1	33.6	15.5	29.7	29.7	0.0
Other <sup>3</sup>	9.0	7.6	-15.6	9.3	8.5	-8.6	9.1	8.0	-12.1	8.3	8.4	1.2	7.9	7.5	-5.1
<b>Total</b>	<b>50.7</b>	<b>52.2</b>	<b>3.0</b>	<b>51.5</b>	<b>56.5</b>	<b>9.7</b>	<b>50.1</b>	<b>52.4</b>	<b>4.6</b>	<b>48.4</b>	<b>56.0</b>	<b>15.7</b>	<b>48.4</b>	<b>48.2</b>	<b>-0.4</b>
<b>United Kingdom</b>															
Crude	32.7	29.1	-11.0	34.2	34.1	-0.3	33.0	28.8	-12.7	31.1	29.2	-6.1	28.6	27.5	-3.8
Motor Gasoline	9.4	9.0	-4.3	9.9	8.7	-12.1	10.3	9.2	-10.7	9.6	8.9	-7.3	9.6	9.3	-3.1
Middle Distillate	23.8	24.9	4.6	23.0	24.3	5.7	24.8	26.6	7.3	25.0	27.5	10.0	24.8	25.3	2.0
Residual Fuel Oil	1.2	1.3	8.3	1.3	1.4	7.7	1.3	1.1	-15.4	1.3	1.3	0.0	1.2	1.4	16.7
Other Products	4.7	6.1	29.8	5.2	6.6	26.9	5.7	6.4	12.3	5.5	7.2	30.9	5.2	7.0	34.6
Total Products	39.1	41.3	5.6	39.4	41.0	4.1	42.1	43.3	2.9	41.4	44.9	8.5	40.8	43.0	5.4
Other <sup>3</sup>	8.5	8.8	3.5	8.4	8.9	6.0	7.7	9.5	23.4	7.8	9.7	24.4	8.3	9.0	8.4
<b>Total</b>	<b>80.3</b>	<b>79.2</b>	<b>-1.4</b>	<b>82.0</b>	<b>84.0</b>	<b>2.4</b>	<b>82.8</b>	<b>81.6</b>	<b>-1.4</b>	<b>80.3</b>	<b>83.8</b>	<b>4.4</b>	<b>77.7</b>	<b>79.5</b>	<b>2.3</b>
<b>Canada<sup>4</sup></b>															
Crude	123.6	126.2	2.1	120.9	121.0	0.1	116.9	120.5	3.1	126.0	122.3	-2.9	120.6	118.9	-1.4
Motor Gasoline	14.0	14.4	2.9	14.3	13.9	-2.8	15.8	14.2	-10.1	15.1	14.7	-2.6	16.5	14.5	-12.1
Middle Distillate	16.1	15.5	-3.7	17.0	14.9	-12.4	18.3	15.9	-13.1	18.4	15.8	-14.1	18.3	14.4	-21.3
Residual Fuel Oil	2.1	1.6	-23.8	2.3	2.0	-13.0	2.2	2.0	-9.1	2.4	1.5	-37.5	2.3	1.8	-21.7
Other Products	13.7	11.2	-18.2	12.8	9.6	-25.0	12.2	10.6	-13.1	12.3	10.0	-18.7	12.5	9.8	-21.6
Total Products	45.9	42.7	-7.0	46.4	40.4	-12.9	48.5	42.7	-12.0	48.2	42.0	-12.9	49.6	40.5	-18.3
Other <sup>3</sup>	20.6	18.5	-10.2	23.0	20.5	-10.9	24.0	22.0	-8.3	25.8	23.8	-7.8	25.3	25.7	1.6
<b>Total</b>	<b>190.1</b>	<b>187.4</b>	<b>-1.4</b>	<b>190.3</b>	<b>181.9</b>	<b>-4.4</b>	<b>189.4</b>	<b>185.2</b>	<b>-2.2</b>	<b>200.0</b>	<b>188.1</b>	<b>-6.0</b>	<b>195.5</b>	<b>185.1</b>	<b>-5.3</b>

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

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

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

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

**Table 5**  
**TOTAL STOCKS ON LAND IN OECD COUNTRIES<sup>1</sup>**  
(millions of barrels<sup>2</sup> and days<sup>3</sup>)

	End September 2018		End December 2018		End March 2019		End June 2019		End September 2019 <sup>3</sup>	
	Stock Level	Days Fwd <sup>2</sup> Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
<b>OECD Americas</b>										
Canada	195.5	78	192.3	81	186.1	78	182.0	69	185.1	-
Chile	11.6	32	10.4	28	10.5	28	11.0	31	12.3	-
Mexico	40.6	22	54.7	29	40.5	21	39.6	24	34.3	-
United States <sup>4</sup>	1935.2	94	1915.3	94	1900.2	93	1956.9	95	1951.4	-
<b>Total<sup>4</sup></b>	<b>2204.9</b>	<b>86</b>	<b>2194.7</b>	<b>87</b>	<b>2159.4</b>	<b>85</b>	<b>2211.6</b>	<b>86</b>	<b>2205.2</b>	<b>85</b>
<b>OECD Asia Oceania</b>										
Australia	42.6	35	40.7	35	44.0	37	45.8	39	44.8	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	561.2	143	564.8	138	539.7	158	547.7	159	551.6	-
Korea	200.0	79	205.8	78	205.1	83	204.4	79	210.2	-
New Zealand	7.9	42	8.3	43	8.0	46	8.4	47	8.2	-
<b>Total</b>	<b>811.8</b>	<b>100</b>	<b>819.6</b>	<b>98</b>	<b>796.8</b>	<b>106</b>	<b>806.3</b>	<b>105</b>	<b>814.7</b>	<b>99</b>
<b>OECD Europe<sup>5</sup></b>										
Austria	20.2	73	20.9	80	23.0	80	21.4	72	20.9	-
Belgium	44.0	68	42.0	63	45.8	78	49.1	81	47.5	-
Czech Republic	21.5	97	22.8	110	23.0	100	20.4	86	21.4	-
Denmark	20.6	126	20.3	133	22.1	135	24.4	144	27.2	-
Estonia	2.6	84	2.9	87	2.6	88	2.7	87	2.7	-
Finland	40.0	196	39.9	198	38.5	197	38.9	191	39.2	-
France	164.6	97	160.8	94	169.0	99	169.2	95	160.4	-
Germany	272.6	118	271.0	112	274.5	119	278.7	116	276.6	-
Greece	34.4	113	32.1	110	35.3	116	29.0	85	32.0	-
Hungary	25.6	147	25.6	158	25.8	147	23.8	134	24.9	-
Ireland	9.9	61	10.2	65	10.8	68	9.8	62	8.8	-
Italy	124.5	99	125.1	114	130.5	112	129.4	107	134.9	-
Latvia	2.3	70	2.4	67	4.0	98	3.9	90	3.6	-
Lithuania	6.8	103	6.6	113	7.5	107	6.2	85	8.0	-
Luxembourg	0.5	8	0.5	8	0.5	8	0.6	10	0.6	-
Netherlands	136.0	156	133.3	147	151.2	183	147.0	181	140.4	-
Norway	24.1	121	26.7	161	27.2	165	26.6	151	26.2	-
Poland	74.1	108	76.8	118	80.6	116	77.8	107	79.2	-
Portugal	23.5	102	24.6	107	26.4	105	24.8	99	24.1	-
Slovak Republic	12.0	124	11.8	135	12.0	141	11.2	125	11.7	-
Slovenia	4.8	89	5.0	107	4.9	93	5.1	90	4.8	-
Spain	119.7	89	115.9	87	124.2	93	126.0	95	123.1	-
Sweden	34.5	108	35.8	118	38.3	114	41.9	116	42.8	-
Switzerland	33.0	141	30.8	137	31.6	148	30.7	136	32.1	-
Turkey	87.0	102	87.6	101	87.7	90	87.0	78	88.0	-
United Kingdom	77.5	50	76.4	49	80.7	51	84.0	55	79.6	-
<b>Total</b>	<b>1416.2</b>	<b>101</b>	<b>1407.8</b>	<b>101</b>	<b>1477.7</b>	<b>105</b>	<b>1469.7</b>	<b>101</b>	<b>1460.6</b>	<b>103</b>
<b>Total OECD</b>	<b>4432.8</b>	<b>93</b>	<b>4422.2</b>	<b>93</b>	<b>4434.0</b>	<b>95</b>	<b>4487.6</b>	<b>94</b>	<b>4480.5</b>	<b>93</b>
<b>DAYS OF IEA Net Imports<sup>6</sup> -</b>		<b>190</b>		<b>189</b>		<b>191</b>		<b>215</b>		<b>214</b>

<sup>1</sup> 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.

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

<sup>3</sup> End September 2019 forward demand figures are IEA Secretariat forecasts.

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

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

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

### TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government <sup>1</sup> controlled Millions of Barrels		Industry	Total	Government <sup>1</sup> controlled Days of Fwd. Demand <sup>2</sup>	
3Q2016	4685	1597	3088		99	34	65
4Q2016	4608	1601	3007		98	34	64
1Q2017	4636	1601	3035		98	34	64
2Q2017	4614	1590	3024		96	33	63
3Q2017	4553	1579	2974		94	33	62
4Q2017	4428	1569	2860		92	33	60
1Q2018	4390	1577	2814		93	33	60
2Q2018	4385	1575	2810		91	33	58
3Q2018	4433	1570	2863		93	33	60
4Q2018	4422	1552	2870		93	33	60
1Q2019	4434	1557	2877		95	33	61
2Q2019	4488	1549	2939		94	32	62
3Q2019	4480	1544	2936		93	32	61

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

<sup>2</sup> Days of forward demand calculated using actual demand except in 3Q2019 (when latest forecasts are used).

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>Saudi Light &amp; Extra Light</b>												
Americas	0.69	0.59	0.66	0.66	0.35	0.15	0.08	-	-	0.25	0.69	-0.43
Europe	0.79	0.69	0.69	0.73	0.70	0.75	0.71	0.83	0.74	0.57	0.79	-0.23
Asia Oceania	1.40	1.56	1.45	1.50	1.62	1.41	1.33	1.33	1.35	1.32	1.26	0.06
<b>Saudi Medium</b>												
Americas	0.44	0.33	0.30	0.33	0.13	0.21	0.10	0.04	0.05	0.21	0.34	-0.14
Europe	0.01	0.01	0.01	0.01	-	0.01	0.04	-	0.06	0.05	-	-
Asia Oceania	0.41	0.37	0.41	0.39	0.24	0.23	0.24	0.25	0.30	0.16	0.43	-0.27
<b>Canada Heavy</b>												
Americas	2.04	2.23	2.41	2.43	2.29	2.19	2.27	2.35	2.23	2.23	2.33	-0.10
Europe	0.01	0.02	0.04	0.02	0.03	0.05	0.05	0.04	0.07	0.03	0.07	-0.04
Asia Oceania	-	-	0.00	0.01	-	-	0.01	-	-	0.02	-	-
<b>Iraqi Basrah Light<sup>2</sup></b>												
Americas	0.42	0.63	0.50	0.32	0.46	0.24	0.32	0.30	0.27	0.40	0.42	-0.02
Europe	0.81	0.76	0.76	0.92	0.89	0.96	0.96	0.92	1.02	0.93	0.89	0.04
Asia Oceania	0.46	0.40	0.43	0.42	0.45	0.39	0.24	0.25	0.28	0.20	0.38	-0.18
<b>Kuwait Blend</b>												
Americas	0.14	0.11	0.02	-	-	-	-	-	-	-	-	-
Europe	0.19	0.20	0.13	0.13	0.04	0.11	0.17	0.15	0.16	0.21	0.18	0.03
Asia Oceania	0.66	0.68	0.66	0.62	0.63	0.62	0.64	0.55	0.70	0.68	0.71	-0.03
<b>Iranian Light</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.21	0.27	0.16	0.03	0.01	-	-	-	-	-	0.11	-
Asia Oceania	0.01	0.01	0.01	-	0.01	-	-	-	-	-	0.03	-
<b>Iranian Heavy<sup>3</sup></b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.21	0.52	0.35	0.11	0.09	0.07	-	-	-	-	0.29	-
Asia Oceania	0.52	0.57	0.28	0.02	0.36	0.18	-	-	-	-	0.12	-
<b>BFOE</b>												
Americas	0.02	0.02	0.00	-	-	-	0.01	-	-	0.02	-	-
Europe	0.44	0.45	0.35	0.31	0.39	0.31	0.33	0.29	0.33	0.35	0.38	-0.02
Asia Oceania	0.05	0.10	0.09	0.10	-	0.01	0.02	-	0.07	-	-	-
<b>Kazakhstan</b>												
Americas	0.01	-	-	-	-	-	-	-	-	-	-	-
Europe	0.70	0.75	0.75	0.71	0.86	0.78	0.75	0.89	0.78	0.59	0.50	0.09
Asia Oceania	0.03	0.10	0.19	0.22	0.17	0.17	0.22	0.24	0.20	0.21	0.14	0.07
<b>Venezuelan 22 API and heavier</b>												
Americas	0.63	0.48	0.44	0.45	0.19	-	-	-	-	-	0.34	-
Europe	0.05	0.04	0.03	0.06	0.10	0.06	0.09	0.06	0.08	0.13	0.04	0.09
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>Mexican Maya</b>												
Americas	0.53	0.58	0.63	0.51	0.54	0.51	0.52	0.51	0.64	0.41	0.69	-0.28
Europe	0.17	0.20	0.21	0.17	0.21	0.21	0.17	0.20	0.18	0.13	0.17	-0.03
Asia Oceania	0.05	0.07	0.08	0.09	0.12	0.14	0.13	0.13	0.13	0.13	0.07	0.06
<b>Russian Urals</b>												
Americas	-	0.01	0.01	0.02	0.04	-	0.02	-	0.02	0.02	-	-
Europe	1.72	1.64	1.40	1.38	1.38	1.38	1.49	1.66	1.41	1.39	1.27	0.12
Asia Oceania	-	0.01	0.00	-	-	-	-	-	-	-	-	-
<b>Cabinda and Other Angola</b>												
North America	0.16	0.07	0.06	0.02	-	0.04	-	-	-	-	0.08	-
Europe	0.27	0.11	0.14	0.08	0.17	0.10	0.20	0.22	0.17	0.19	0.22	-0.03
Pacific	0.01	0.01	0.01	0.03	-	-	-	-	-	-	-	-
<b>Nigerian Light<sup>4</sup></b>												
Americas	0.07	0.04	0.01	-	-	0.07	0.05	-	0.16	-	-	-
Europe	0.39	0.39	0.53	0.63	0.47	0.58	0.48	0.26	0.63	0.55	0.60	-0.05
Asia Oceania	0.01	0.02	0.02	0.02	0.03	0.00	0.03	0.03	0.02	0.03	0.01	0.02
<b>Libya Light and Medium</b>												
Americas	-	0.02	-	-	-	0.01	-	-	-	-	-	-
Europe	0.20	0.54	0.62	0.65	0.54	0.72	0.72	0.72	0.73	0.70	0.78	-0.08
Asia Oceania	0.02	0.03	0.02	0.02	0.04	0.03	0.04	0.04	0.06	-	0.02	-

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

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

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	% change
<b>Crude Oil</b>												
Americas	4542	4361	3759	3223	2891	2961	2654	2490	2854	2618	3744	-30%
Europe	9437	9902	9814	9664	10014	9574	10226	10463	10420	9781	9864	-1%
Asia Oceania	6659	6849	6657	6834	6852	6304	6321	6579	6632	5733	5836	-2%
<b>Total OECD</b>	<b>20638</b>	<b>21112</b>	<b>20230</b>	<b>19720</b>	<b>19758</b>	<b>18839</b>	<b>19202</b>	<b>19531</b>	<b>19907</b>	<b>18132</b>	<b>19444</b>	<b>-7%</b>
<b>LPG</b>												
Americas	20	20	22	24	35	21	21	22	18	22	25	-12%
Europe	441	432	457	470	482	408	408	394	465	363	395	-8%
Asia Oceania	567	551	556	557	587	554	612	586	644	606	526	15%
<b>Total OECD</b>	<b>1028</b>	<b>1003</b>	<b>1035</b>	<b>1050</b>	<b>1105</b>	<b>983</b>	<b>1041</b>	<b>1002</b>	<b>1128</b>	<b>992</b>	<b>946</b>	<b>5%</b>
<b>Naphtha</b>												
Americas	10	19	8	11	5	4	5	3	5	9	5	72%
Europe	348	369	391	364	348	334	308	255	386	282	340	-17%
Asia Oceania	908	978	1018	1085	918	955	1029	1014	1127	942	1054	-11%
<b>Total OECD</b>	<b>1266</b>	<b>1366</b>	<b>1417</b>	<b>1461</b>	<b>1271</b>	<b>1293</b>	<b>1342</b>	<b>1271</b>	<b>1518</b>	<b>1233</b>	<b>1399</b>	<b>-12%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	735	727	773	504	595	1045	957	1101	952	812	876	-7%
Europe	91	153	110	77	118	148	93	64	99	115	90	28%
Asia Oceania	87	102	108	95	110	110	111	83	109	143	59	141%
<b>Total OECD</b>	<b>913</b>	<b>983</b>	<b>992</b>	<b>676</b>	<b>822</b>	<b>1304</b>	<b>1161</b>	<b>1248</b>	<b>1160</b>	<b>1071</b>	<b>1025</b>	<b>4%</b>
<b>Jet &amp; Kerosene</b>												
Americas	169	171	140	115	138	185	206	212	199	208	179	16%
Europe	502	504	509	476	455	571	558	543	582	548	537	2%
Asia Oceania	73	80	89	121	82	60	69	75	68	64	57	11%
<b>Total OECD</b>	<b>744</b>	<b>755</b>	<b>738</b>	<b>711</b>	<b>675</b>	<b>816</b>	<b>833</b>	<b>831</b>	<b>849</b>	<b>819</b>	<b>774</b>	<b>6%</b>
<b>Gasoil/Diesel</b>												
Americas	67	77	124	125	204	81	72	107	65	44	137	-68%
Europe	1304	1337	1339	1224	1396	1289	1306	1280	1319	1320	1298	2%
Asia Oceania	196	196	253	313	233	259	272	265	312	237	225	6%
<b>Total OECD</b>	<b>1566</b>	<b>1610</b>	<b>1717</b>	<b>1663</b>	<b>1833</b>	<b>1629</b>	<b>1650</b>	<b>1652</b>	<b>1696</b>	<b>1601</b>	<b>1660</b>	<b>-4%</b>
<b>Heavy Fuel Oil</b>												
Americas	149	131	161	130	149	104	85	96	87	73	204	-64%
Europe	461	233	197	208	217	224	227	249	253	177	155	15%
Asia Oceania	153	146	162	149	103	106	116	90	138	120	190	-37%
<b>Total OECD</b>	<b>762</b>	<b>510</b>	<b>520</b>	<b>488</b>	<b>469</b>	<b>434</b>	<b>428</b>	<b>435</b>	<b>478</b>	<b>370</b>	<b>549</b>	<b>-33%</b>
<b>Other Products</b>												
Americas	652	717	679	637	520	730	792	877	799	695	721	-3%
Europe	783	1012	1008	937	1006	901	856	778	856	938	980	-4%
Asia Oceania	348	259	282	296	273	292	273	286	236	297	266	12%
<b>Total OECD</b>	<b>1783</b>	<b>1987</b>	<b>1969</b>	<b>1870</b>	<b>1799</b>	<b>1923</b>	<b>1921</b>	<b>1942</b>	<b>1890</b>	<b>1930</b>	<b>1966</b>	<b>-2%</b>
<b>Total Products</b>												
Americas	1802	1862	1908	1547	1645	2171	2138	2418	2125	1863	2147	-13%
Europe	3930	4040	4011	3756	4022	3874	3756	3564	3960	3744	3795	-1%
Asia Oceania	2331	2312	2470	2616	2306	2337	2481	2399	2632	2410	2377	1%
<b>Total OECD</b>	<b>8063</b>	<b>8214</b>	<b>8388</b>	<b>7920</b>	<b>7973</b>	<b>8382</b>	<b>8375</b>	<b>8381</b>	<b>8718</b>	<b>8016</b>	<b>8319</b>	<b>-4%</b>
<b>Total Oil</b>												
Americas	6344	6223	5666	4770	4536	5131	4793	4907	4979	4481	5891	-24%
Europe	13367	13942	13825	13420	14036	13449	13982	14027	14380	13524	13659	-1%
Asia Oceania	8990	9160	9127	9450	9158	8641	8802	8978	9264	8143	8213	-1%
<b>Total OECD</b>	<b>28701</b>	<b>29326</b>	<b>28618</b>	<b>27640</b>	<b>27731</b>	<b>27221</b>	<b>27577</b>	<b>27912</b>	<b>28624</b>	<b>26149</b>	<b>27763</b>	<b>-6%</b>

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

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

<sup>3</sup> Includes additives.

**Table 7a**  
**REGIONAL OECD IMPORTS FROM NON-OECD COUNTRIES<sup>1,2</sup>**  
(thousand barrels per day)

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	% change
<b>Crude Oil</b>												
Americas	4428	4235	3606	3051	2790	2707	2519	2388	2744	2422	3529	-31%
Europe	9051	9436	9088	8912	9100	8773	9300	9396	9514	8980	9101	-1%
Asia Oceania	6429	6553	6210	6188	6311	5734	5651	5857	5967	5112	5461	-6%
<b>Total OECD</b>	<b>19908</b>	<b>20224</b>	<b>18904</b>	<b>18151</b>	<b>18201</b>	<b>17214</b>	<b>17470</b>	<b>17641</b>	<b>18225</b>	<b>16514</b>	<b>18090</b>	<b>-9%</b>
<b>LPG</b>												
Americas	16	16	15	16	27	21	21	22	18	22	21	4%
Europe	329	337	350	349	354	303	274	258	318	244	322	-24%
Asia Oceania	342	205	161	143	85	99	69	66	82	57	79	-27%
<b>Total OECD</b>	<b>687</b>	<b>557</b>	<b>527</b>	<b>509</b>	<b>466</b>	<b>423</b>	<b>363</b>	<b>346</b>	<b>418</b>	<b>323</b>	<b>422</b>	<b>-23%</b>
<b>Naphtha</b>												
Americas	5	16	4	8	1	1	3	1	1	6	1	400%
Europe	329	350	360	305	328	322	282	225	355	265	328	-19%
Asia Oceania	856	931	921	1002	801	865	972	962	1086	864	948	-9%
<b>Total OECD</b>	<b>1189</b>	<b>1297</b>	<b>1286</b>	<b>1315</b>	<b>1130</b>	<b>1188</b>	<b>1256</b>	<b>1187</b>	<b>1443</b>	<b>1134</b>	<b>1277</b>	<b>-11%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	246	213	271	210	244	367	386	445	402	308	345	-11%
Europe	89	149	105	73	114	142	90	64	96	112	86	30%
Asia Oceania	86	102	85	85	91	55	93	82	64	133	59	125%
<b>Total OECD</b>	<b>422</b>	<b>464</b>	<b>461</b>	<b>368</b>	<b>449</b>	<b>564</b>	<b>569</b>	<b>591</b>	<b>561</b>	<b>553</b>	<b>491</b>	<b>13%</b>
<b>Jet &amp; Kerosene</b>												
Americas	72	67	56	37	45	24	55	67	59	38	38	-1%
Europe	409	436	445	425	414	521	473	493	480	447	474	-6%
Asia Oceania	73	80	89	121	82	60	69	75	68	64	57	11%
<b>Total OECD</b>	<b>554</b>	<b>583</b>	<b>590</b>	<b>582</b>	<b>541</b>	<b>605</b>	<b>597</b>	<b>635</b>	<b>606</b>	<b>548</b>	<b>569</b>	<b>-4%</b>
<b>Gasoi/Diesel</b>												
Americas	37	50	100	114	167	40	58	94	45	35	115	-69%
Europe	988	1086	1160	1070	1228	1095	1053	1041	1058	1059	1103	-4%
Asia Oceania	194	195	253	313	233	259	267	249	312	237	225	6%
<b>Total OECD</b>	<b>1220</b>	<b>1331</b>	<b>1513</b>	<b>1497</b>	<b>1629</b>	<b>1394</b>	<b>1378</b>	<b>1384</b>	<b>1415</b>	<b>1331</b>	<b>1444</b>	<b>-8%</b>
<b>Heavy Fuel Oil</b>												
Americas	130	123	147	117	123	97	81	96	76	72	197	-63%
Europe	436	218	185	190	206	196	197	216	217	156	140	11%
Asia Oceania	152	146	162	148	101	106	114	90	132	120	190	-37%
<b>Total OECD</b>	<b>718</b>	<b>487</b>	<b>493</b>	<b>454</b>	<b>430</b>	<b>400</b>	<b>392</b>	<b>403</b>	<b>425</b>	<b>348</b>	<b>527</b>	<b>-34%</b>
<b>Other Products</b>												
Americas	526	542	522	481	345	560	615	651	652	539	583	-8%
Europe	516	731	702	625	736	655	638	609	600	707	747	-5%
Asia Oceania	269	182	201	206	191	200	189	191	178	197	178	11%
<b>Total OECD</b>	<b>1311</b>	<b>1455</b>	<b>1425</b>	<b>1312</b>	<b>1272</b>	<b>1415</b>	<b>1441</b>	<b>1451</b>	<b>1431</b>	<b>1443</b>	<b>1508</b>	<b>-4%</b>
<b>Total Products</b>												
Americas	1031	1026	1115	982	952	1110	1219	1375	1254	1020	1302	-22%
Europe	3097	3307	3307	3037	3382	3235	3006	2907	3123	2989	3201	-7%
Asia Oceania	1971	1841	1873	2018	1584	1644	1771	1716	1922	1672	1736	-4%
<b>Total OECD</b>	<b>6100</b>	<b>6175</b>	<b>6295</b>	<b>6037</b>	<b>5918</b>	<b>5989</b>	<b>5996</b>	<b>5998</b>	<b>6299</b>	<b>5681</b>	<b>6238</b>	<b>-9%</b>
<b>Total Oil</b>												
Americas	5460	5261	4721	4033	3742	3818	3738	3764	3998	3442	4830	-29%
Europe	12149	12744	12395	11949	12482	12007	12306	12303	12637	11969	12301	-3%
Asia Oceania	8400	8394	8082	8206	7895	7377	7422	7573	7889	6784	7197	-6%
<b>Total OECD</b>	<b>26008</b>	<b>26399</b>	<b>25199</b>	<b>24188</b>	<b>24119</b>	<b>23202</b>	<b>23466</b>	<b>23639</b>	<b>24524</b>	<b>22195</b>	<b>24329</b>	<b>-9%</b>

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

2 Excludes intra-regional trade

3 Includes additives

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	% change
<b>Crude Oil</b>												
Americas	114	126	153	172	101	253	135	101	110	197	215	-9%
Europe	386	466	726	752	914	802	926	1067	907	801	764	5%
Asia Oceania	230	296	448	645	542	570	670	722	665	622	375	66%
<b>Total OECD</b>	<b>730</b>	<b>888</b>	<b>1326</b>	<b>1569</b>	<b>1557</b>	<b>1625</b>	<b>1731</b>	<b>1890</b>	<b>1682</b>	<b>1619</b>	<b>1354</b>	<b>20%</b>
<b>LPG</b>												
Americas	4	4	7	8	8	0	0	0	0	0	4	-100%
Europe	112	95	107	120	128	104	135	136	148	119	73	64%
Asia Oceania	225	346	395	413	502	455	543	519	562	549	447	23%
<b>Total OECD</b>	<b>342</b>	<b>445</b>	<b>508</b>	<b>542</b>	<b>639</b>	<b>560</b>	<b>678</b>	<b>656</b>	<b>709</b>	<b>668</b>	<b>524</b>	<b>28%</b>
<b>Naphtha</b>												
Americas	5	3	4	4	4	3	3	2	4	3	4	-21%
Europe	19	19	31	58	20	12	26	30	31	17	13	35%
Asia Oceania	52	47	97	83	117	90	57	52	40	78	106	-26%
<b>Total OECD</b>	<b>77</b>	<b>69</b>	<b>132</b>	<b>145</b>	<b>140</b>	<b>105</b>	<b>86</b>	<b>84</b>	<b>75</b>	<b>99</b>	<b>122</b>	<b>-19%</b>
<b>Gasoline<sup>3</sup></b>												
Americas	489	514	502	294	351	678	571	656	551	504	530	-5%
Europe	2	5	5	4	4	6	2	0	4	4	4	-7%
Asia Oceania	0	0	23	10	19	56	19	1	45	10	0	na
<b>Total OECD</b>	<b>491</b>	<b>519</b>	<b>530</b>	<b>308</b>	<b>373</b>	<b>740</b>	<b>592</b>	<b>657</b>	<b>599</b>	<b>518</b>	<b>534</b>	<b>-3%</b>
<b>Jet &amp; Kerosene</b>												
Americas	97	104	84	78	93	161	151	145	140	170	141	20%
Europe	93	68	64	51	40	50	85	50	103	101	63	60%
Asia Oceania	0	0	0	0	0	0	0	0	0	0	0	na
<b>Total OECD</b>	<b>190</b>	<b>172</b>	<b>148</b>	<b>129</b>	<b>134</b>	<b>211</b>	<b>236</b>	<b>196</b>	<b>242</b>	<b>271</b>	<b>205</b>	<b>32%</b>
<b>Gasoil/Diesel</b>												
Americas	30	28	25	12	37	42	14	13	20	8	22	-62%
Europe	315	250	179	155	167	193	253	239	260	261	194	34%
Asia Oceania	2	1	0	0	0	0	5	16	0	0	0	na
<b>Total OECD</b>	<b>347</b>	<b>279</b>	<b>204</b>	<b>166</b>	<b>204</b>	<b>235</b>	<b>273</b>	<b>267</b>	<b>280</b>	<b>270</b>	<b>216</b>	<b>25%</b>
<b>Heavy Fuel Oil</b>												
Americas	19	8	15	14	26	6	4	0	11	1	7	-84%
Europe	25	15	12	18	10	28	30	33	36	21	14	46%
Asia Oceania	1	0	0	2	2	0	2	0	6	0	0	na
<b>Total OECD</b>	<b>45</b>	<b>23</b>	<b>27</b>	<b>33</b>	<b>39</b>	<b>35</b>	<b>36</b>	<b>33</b>	<b>53</b>	<b>22</b>	<b>21</b>	<b>4%</b>
<b>Other Products</b>												
Americas	126	175	157	156	174	170	177	227	146	157	137	14%
Europe	266	280	305	312	270	246	218	169	256	231	233	-1%
Asia Oceania	80	77	81	90	82	92	84	95	57	100	88	14%
<b>Total OECD</b>	<b>472</b>	<b>532</b>	<b>544</b>	<b>559</b>	<b>526</b>	<b>508</b>	<b>479</b>	<b>491</b>	<b>459</b>	<b>488</b>	<b>458</b>	<b>7%</b>
<b>Total Products</b>												
Americas	770	836	793	565	693	1060	920	1042	871	843	846	0%
Europe	833	733	704	719	640	639	750	657	837	755	594	27%
Asia Oceania	360	470	597	598	722	693	710	683	710	738	641	15%
<b>Total OECD</b>	<b>1963</b>	<b>2039</b>	<b>2093</b>	<b>1883</b>	<b>2055</b>	<b>2393</b>	<b>2379</b>	<b>2383</b>	<b>2418</b>	<b>2335</b>	<b>2081</b>	<b>12%</b>
<b>Total Oil</b>												
Americas	884	962	945	737	794	1314	1055	1143	981	1039	1061	-2%
Europe	1219	1199	1429	1470	1554	1441	1676	1724	1744	1555	1358	15%
Asia Oceania	590	766	1044	1244	1264	1264	1380	1405	1375	1359	1016	34%
<b>Total OECD</b>	<b>2693</b>	<b>2927</b>	<b>3419</b>	<b>3452</b>	<b>3612</b>	<b>4019</b>	<b>4111</b>	<b>4273</b>	<b>4100</b>	<b>3954</b>	<b>3435</b>	<b>15%</b>

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

2 Excludes intra-regional trade

3 Includes additives

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>OECD Americas</b>												
Venezuela	741	618	506	506	285	41	-	-	-	-	650	-
Other Central & South America	1023	928	795	655	850	882	888	992	995	670	556	114
North Sea	109	124	150	172	101	246	135	101	110	197	215	-19
Other OECD Europe	1	-	1	-	-	7	-	-	-	-	-	-
Non-OECD Europe	7	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	75	121	145	94	151	253	209	179	240	209	211	-3
Saudi Arabia	1185	1043	983	1037	745	607	555	524	548	593	1080	-487
Kuwait	209	144	78	38	84	48	22	20	46	-	33	-
Iran	-	-	-	-	-	-	-	-	-	-	-	-
Iraq	418	605	519	331	374	329	332	350	249	400	473	-73
Oman	30	14	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	11	20	5	-	-	-	11	-	-	34	32	3
Other Middle East	-	2	-	-	-	-	-	-	-	-	-	-
West Africa <sup>2</sup>	451	497	317	222	165	324	332	229	454	313	189	125
Other Africa	223	214	196	134	121	208	127	62	182	135	188	-53
Asia	46	26	61	34	16	16	43	32	31	68	117	-49
Other	13	4	3	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>4542</b>	<b>4361</b>	<b>3759</b>	<b>3223</b>	<b>2891</b>	<b>2961</b>	<b>2654</b>	<b>2490</b>	<b>2854</b>	<b>2618</b>	<b>3744</b>	<b>-1125</b>
<b>of which Non-OECD</b>	<b>4428</b>	<b>4235</b>	<b>3606</b>	<b>3051</b>	<b>2790</b>	<b>2707</b>	<b>2519</b>	<b>2388</b>	<b>2744</b>	<b>2422</b>	<b>3529</b>	<b>-1107</b>
<b>OECD Europe</b>												
Canada	32	45	81	44	66	34	73	45	146	26	82	-56
Mexico + USA	354	419	645	708	848	768	853	1022	760	775	682	93
Venezuela	74	67	57	92	145	73	102	73	88	147	61	85
Other Central & South America	170	160	132	134	117	76	123	85	126	158	119	40
Non-OECD Europe	11	9	12	11	11	11	11	9	9	14	10	5
Former Soviet Union	4427	4437	4154	4084	4347	4018	4377	4764	4359	3995	3531	463
Saudi Arabia	861	750	818	883	825	852	858	878	891	803	1058	-255
Kuwait	194	201	137	116	85	105	135	165	121	120	108	13
Iran	436	801	536	159	148	77	37	50	25	37	445	-409
Iraq	1000	995	962	1060	1180	1269	1170	1206	1169	1135	1140	-5
Oman	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates	12	6	2	10	-	-	-	-	-	-	-	-
Other Middle East	12	1	-	-	2	8	2	7	-	-	-	-
West Africa <sup>2</sup>	1095	960	1115	1143	1146	1099	1172	967	1266	1288	1314	-27
Other Africa	738	1045	1161	1234	1074	1160	1313	1194	1459	1284	1335	-51
Asia	-	2	-	-	-	-	-	-	-	-	-	-
Other	21	5	9	-	18	24	0	-	0	-	-	-
<b>Total</b>	<b>9438</b>	<b>9903</b>	<b>9821</b>	<b>9679</b>	<b>10015</b>	<b>9575</b>	<b>10227</b>	<b>10464</b>	<b>10420</b>	<b>9782</b>	<b>9885</b>	<b>-103</b>
<b>of which Non-OECD</b>	<b>9051</b>	<b>9436</b>	<b>9088</b>	<b>8912</b>	<b>9100</b>	<b>8773</b>	<b>9300</b>	<b>9396</b>	<b>9514</b>	<b>8980</b>	<b>9101</b>	<b>-121</b>
<b>OECD Asia Oceania</b>												
Canada	-	-	3	7	-	-	6	-	-	18	-	-
Mexico + USA	179	199	344	522	542	559	642	722	600	603	353	250
Venezuela	3	8	-	-	-	-	-	-	-	-	-	-
Other Central & South America	27	35	35	42	51	67	51	76	54	20	65	-45
North Sea	51	97	100	117	-	11	22	-	65	-	22	-
Other OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Europe	-	-	-	-	-	-	-	-	-	-	-	-
Former Soviet Union	341	413	435	459	458	402	485	490	518	445	326	118
Saudi Arabia	2078	2166	2040	2151	2108	1868	1790	1762	1920	1685	1829	-144
Kuwait	661	671	672	671	680	665	705	574	748	795	739	56
Iran	469	543	274	11	368	184	-	-	-	-	133	-
Iraq	456	402	435	422	446	388	244	248	284	199	378	-179
Oman	88	42	56	43	54	66	70	95	48	68	84	-16
United Arab Emirates	1154	1147	1098	1135	1108	1223	1246	1295	1462	973	1018	-45
Other Middle East	472	390	450	454	430	387	516	448	571	531	502	29
West Africa <sup>2</sup>	74	66	95	99	73	77	29	34	37	15	106	-91
Other Africa	62	92	105	122	85	72	96	148	76	64	35	29
Non-OECD Asia	339	325	319	322	264	202	188	199	172	193	328	-135
Other	205	253	196	257	185	133	230	486	76	125	-83	208
<b>Total</b>	<b>6659</b>	<b>6849</b>	<b>6657</b>	<b>6834</b>	<b>6852</b>	<b>6304</b>	<b>6321</b>	<b>6579</b>	<b>6632</b>	<b>5733</b>	<b>5836</b>	<b>-102</b>
<b>of which Non-OECD</b>	<b>6429</b>	<b>6553</b>	<b>6210</b>	<b>6188</b>	<b>6311</b>	<b>5734</b>	<b>5651</b>	<b>5857</b>	<b>5967</b>	<b>5112</b>	<b>5461</b>	<b>-349</b>
<b>Total OECD Trade</b>	<b>20639</b>	<b>21113</b>	<b>20237</b>	<b>19735</b>	<b>19759</b>	<b>18840</b>	<b>19203</b>	<b>19533</b>	<b>19907</b>	<b>18134</b>	<b>19464</b>	<b>-1330</b>
<b>of which Non-OECD</b>	<b>19908</b>	<b>20224</b>	<b>18904</b>	<b>18151</b>	<b>18201</b>	<b>17214</b>	<b>17470</b>	<b>17641</b>	<b>18225</b>	<b>16514</b>	<b>18090</b>	<b>-1576</b>

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>OECD Americas</b>												
Venezuela	15	18	23	23	15	-	-	-	-	-	34	-
Other Central & South America	69	42	64	58	81	86	105	122	109	84	100	-16
ARA (Belgium Germany Netherlands)	155	178	167	91	95	270	233	229	238	232	125	107
Other Europe	328	326	323	203	232	365	309	386	285	253	401	-148
FSU	90	84	80	52	66	88	125	148	109	118	62	56
Saudi Arabia	-	1	11	28	19	7	4	-	10	-	32	-
Algeria	1	-	1	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	32	24	19	12	10	11	25	32	17	26	18	8
Singapore	6	10	8	4	-	6	12	17	19	-	34	-
OECD Asia Oceania	6	10	13	-	26	42	29	40	28	19	4	15
Non-OECD Asia (excl. Singapore)	64	63	84	48	71	180	135	155	142	106	81	25
Other	3	3	0	0	-	-	0	-	1	-	-	-
<b>Total<sup>2</sup></b>	<b>769</b>	<b>759</b>	<b>794</b>	<b>518</b>	<b>614</b>	<b>1056</b>	<b>978</b>	<b>1130</b>	<b>960</b>	<b>838</b>	<b>892</b>	<b>-54</b>
<b>of which Non-OECD</b>	<b>246</b>	<b>213</b>	<b>271</b>	<b>210</b>	<b>244</b>	<b>367</b>	<b>386</b>	<b>445</b>	<b>402</b>	<b>308</b>	<b>345</b>	<b>-37</b>
<b>OECD Europe</b>												
OECD Americas	1	4	4	4	3	5	1	-	1	3	3	0
Venezuela	0	-	0	-	-	-	0	0	-	-	-	-
Other Central & South America	1	3	5	9	6	2	2	5	0	-	-	-
Non-OECD Europe	15	15	11	9	11	21	23	7	21	41	15	25
FSU	84	89	70	64	67	76	49	40	57	50	58	-8
Saudi Arabia	0	0	2	0	1	-	1	1	3	-	1	-
Algeria	1	1	0	1	0	0	-	-	-	-	-	-
Other Middle East & Africa	2	5	4	5	6	4	4	4	2	7	2	6
Singapore	1	2	2	2	2	4	2	2	2	3	3	-1
OECD Asia Oceania	1	1	1	-	1	1	1	-	3	0	1	0
Non-OECD Asia (excl. Singapore)	1	3	2	6	0	-	0	0	0	0	0	0
Other	-3	41	20	-9	30	43	16	12	18	18	16	2
<b>Total<sup>2</sup></b>	<b>104</b>	<b>163</b>	<b>122</b>	<b>90</b>	<b>126</b>	<b>157</b>	<b>101</b>	<b>72</b>	<b>107</b>	<b>123</b>	<b>100</b>	<b>23</b>
<b>of which Non-OECD</b>	<b>89</b>	<b>149</b>	<b>105</b>	<b>73</b>	<b>114</b>	<b>142</b>	<b>90</b>	<b>64</b>	<b>96</b>	<b>112</b>	<b>86</b>	<b>26</b>
<b>OECD Asia Oceania</b>												
OECD Americas	0	-	4	-	5	-	19	1	45	10	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central & South America	-	0	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	13	10	8	40	-	-	-	-	-	-
Other Europe	-	-	7	-	6	15	-	-	-	-	-	-
FSU	-	-	1	-	-	1	-	-	-	-	-	-
Saudi Arabia	0	0	0	2	3	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East & Africa	-	5	1	-	-	-	-	-	-	-	-	-
Singapore	44	52	49	48	43	27	45	39	38	57	33	24
Non-OECD Asia (excl. Singapore)	27	30	19	21	29	11	26	28	11	40	11	29
Other	16	15	15	15	17	15	22	15	15	36	15	21
<b>Total<sup>2</sup></b>	<b>87</b>	<b>102</b>	<b>109</b>	<b>95</b>	<b>110</b>	<b>110</b>	<b>111</b>	<b>83</b>	<b>109</b>	<b>143</b>	<b>59</b>	<b>84</b>
<b>of which Non-OECD</b>	<b>86</b>	<b>102</b>	<b>85</b>	<b>85</b>	<b>91</b>	<b>55</b>	<b>93</b>	<b>82</b>	<b>64</b>	<b>133</b>	<b>59</b>	<b>74</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>960</b>	<b>1024</b>	<b>1025</b>	<b>703</b>	<b>850</b>	<b>1323</b>	<b>1189</b>	<b>1286</b>	<b>1175</b>	<b>1105</b>	<b>1051</b>	<b>54</b>
<b>of which Non-OECD</b>	<b>422</b>	<b>464</b>	<b>461</b>	<b>368</b>	<b>449</b>	<b>564</b>	<b>569</b>	<b>591</b>	<b>561</b>	<b>553</b>	<b>491</b>	<b>62</b>

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>OECD Americas</b>												
Venezuela	0	2	4	7	3	-	-	-	-	-	13	-
Other Central and South America	10	13	30	46	29	35	47	59	45	35	37	-1
ARA (Belgium Germany Netherlands)	3	7	6	-	-	1	2	-	-	5	8	-3
Other Europe	9	3	3	-	2	4	2	3	-	2	-	-
FSU	15	6	16	7	7	2	3	10	-	-	23	-
Saudi Arabia	1	2	17	24	13	-	-	-	-	-	25	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	3	4	8	4	8	-	-	-	-	-	3	-
Singapore	1	0	1	3	0	-	-	-	-	-	-	-
OECD Asia Oceania	18	18	15	12	35	36	10	10	20	1	14	-13
Non-OECD Asia (excl. Singapore)	9	22	23	22	78	3	8	25	-	-	15	-
Other	0	0	-	-	28	-	-	-	-	-	-	-
<b>Total<sup>2</sup></b>	<b>68</b>	<b>77</b>	<b>124</b>	<b>125</b>	<b>204</b>	<b>81</b>	<b>72</b>	<b>107</b>	<b>65</b>	<b>44</b>	<b>137</b>	<b>-93</b>
<b>of which Non-OECD</b>	<b>37</b>	<b>50</b>	<b>100</b>	<b>114</b>	<b>167</b>	<b>40</b>	<b>58</b>	<b>94</b>	<b>45</b>	<b>35</b>	<b>115</b>	<b>-80</b>
<b>OECD Europe</b>												
OECD Americas	276	222	154	128	126	159	217	201	230	222	176	46
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	3	3	4	1	-	0	-	-	-	-	-	-
Non-OECD Europe	48	48	39	41	41	37	38	55	26	34	38	-4
FSU	663	732	714	641	770	657	656	615	707	647	639	7
Saudi Arabia	130	160	225	196	208	222	192	179	202	195	188	7
Algeria	1	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	70	72	76	94	94	90	75	63	86	77	122	-45
Singapore	20	15	14	20	8	27	40	38	42	41	19	22
OECD Asia Oceania	40	28	25	27	41	34	36	38	30	40	19	21
Non-OECD Asia (excl. Singapore)	172	125	151	128	188	137	105	132	71	114	129	-15
Other	-18	21	12	16	6	8	16	28	19	1	8	-7
<b>Total<sup>2</sup></b>	<b>1404</b>	<b>1427</b>	<b>1414</b>	<b>1293</b>	<b>1482</b>	<b>1372</b>	<b>1377</b>	<b>1348</b>	<b>1414</b>	<b>1370</b>	<b>1338</b>	<b>31</b>
<b>of which Non-OECD</b>	<b>988</b>	<b>1086</b>	<b>1160</b>	<b>1070</b>	<b>1228</b>	<b>1095</b>	<b>1053</b>	<b>1041</b>	<b>1058</b>	<b>1059</b>	<b>1103</b>	<b>-45</b>
<b>OECD Asia Oceania</b>												
OECD Americas	2	1	-	-	-	-	5	16	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	0	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	5	5	4	5	5	4	4	5	4	4	4	0
Saudi Arabia	1	-	3	9	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	2	1	8	32	10	9	-	-	-	-	3	-
Singapore	86	87	141	174	93	121	92	89	104	82	87	-5
Non-OECD Asia (excl. Singapore)	95	96	91	88	119	121	158	151	198	124	125	-1
Other	6	7	6	6	6	6	13	6	6	28	6	22
<b>Total<sup>2</sup></b>	<b>196</b>	<b>196</b>	<b>253</b>	<b>313</b>	<b>233</b>	<b>259</b>	<b>272</b>	<b>265</b>	<b>312</b>	<b>237</b>	<b>225</b>	<b>12</b>
<b>of which Non-OECD</b>	<b>194</b>	<b>195</b>	<b>253</b>	<b>313</b>	<b>233</b>	<b>259</b>	<b>267</b>	<b>249</b>	<b>312</b>	<b>237</b>	<b>225</b>	<b>12</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>1669</b>	<b>1701</b>	<b>1791</b>	<b>1731</b>	<b>1919</b>	<b>1713</b>	<b>1722</b>	<b>1720</b>	<b>1791</b>	<b>1651</b>	<b>1700</b>	<b>-50</b>
<b>of which Non-OECD</b>	<b>1220</b>	<b>1331</b>	<b>1513</b>	<b>1497</b>	<b>1629</b>	<b>1394</b>	<b>1378</b>	<b>1384</b>	<b>1415</b>	<b>1331</b>	<b>1444</b>	<b>-112</b>

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>OECD Americas</b>												
Venezuela	11	16	6	1	1	0	-	-	-	-	-	-
Other Central and South America	0	1	2	7	6	1	8	14	-	11	-	-
ARA (Belgium Germany Netherlands)	0	-	0	-	-	-	-	-	-	-	-	-
Other Europe	-	0	0	-	-	-	1	-	2	-	-	-
FSU	0	1	0	-	-	-	-	-	-	-	-	-
Saudi Arabia	1	2	1	2	9	1	-	-	-	-	-	-
Algeria	-	0	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	1	3	2	0	4	9	15	29	4	10	1	10
Singapore	0	2	6	8	3	6	4	1	10	-	-	-
OECD Asia Oceania	97	104	84	78	93	161	151	145	137	170	141	28
Non-OECD Asia (excl. Singapore)	55	30	27	9	12	6	28	23	44	17	29	-12
Other	3	13	11	11	11	-	-	-	-	-	8	-
<b>Total<sup>2</sup></b>	<b>169</b>	<b>171</b>	<b>140</b>	<b>115</b>	<b>138</b>	<b>185</b>	<b>206</b>	<b>212</b>	<b>199</b>	<b>208</b>	<b>179</b>	<b>28</b>
<b>of which Non-OECD</b>	<b>72</b>	<b>67</b>	<b>56</b>	<b>37</b>	<b>45</b>	<b>24</b>	<b>55</b>	<b>67</b>	<b>59</b>	<b>38</b>	<b>38</b>	<b>0</b>
<b>OECD Europe</b>												
OECD Americas	38	20	32	30	19	13	32	24	33	38	24	14
Venezuela	6	5	1	0	-	-	-	-	-	-	0	-
Other Central and South America	1	2	2	1	3	-	-	-	-	-	-	-
Non-OECD Europe	4	3	6	6	-	6	1	2	-	-	-	-
FSU	44	33	40	37	38	56	53	57	52	49	58	-9
Saudi Arabia	112	94	98	102	88	112	106	121	112	84	61	24
Algeria	14	12	9	8	12	-	17	8	16	26	16	10
Other Middle East and Africa	178	207	197	172	193	237	172	230	122	164	211	-46
Singapore	14	28	25	27	11	33	36	19	51	38	38	0
OECD Asia Oceania	55	48	32	21	21	37	53	26	70	63	39	24
Non-OECD Asia (excl. Singapore)	51	53	69	73	74	80	89	55	130	82	89	-8
Other	-7	1	1	0	0	0	4	5	-	7	5	2
<b>Total<sup>2</sup></b>	<b>509</b>	<b>508</b>	<b>512</b>	<b>478</b>	<b>459</b>	<b>574</b>	<b>561</b>	<b>546</b>	<b>586</b>	<b>552</b>	<b>541</b>	<b>11</b>
<b>of which Non-OECD</b>	<b>409</b>	<b>436</b>	<b>445</b>	<b>425</b>	<b>414</b>	<b>521</b>	<b>473</b>	<b>493</b>	<b>480</b>	<b>447</b>	<b>474</b>	<b>-27</b>
<b>OECD Asia Oceania</b>												
OECD Americas	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-
FSU	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	1	-	-	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	-	1	1	5	-	-	-	-	-	-	-	-
Singapore	24	23	28	19	22	19	24	20	32	20	24	-4
Non-OECD Asia (excl. Singapore)	36	34	26	42	27	21	27	48	11	22	11	10
Other	13	22	33	54	33	19	18	8	24	22	23	-1
<b>Total<sup>2</sup></b>	<b>73</b>	<b>80</b>	<b>89</b>	<b>121</b>	<b>82</b>	<b>60</b>	<b>69</b>	<b>75</b>	<b>68</b>	<b>64</b>	<b>57</b>	<b>6</b>
<b>of which Non-OECD</b>	<b>73</b>	<b>80</b>	<b>89</b>	<b>121</b>	<b>82</b>	<b>60</b>	<b>69</b>	<b>75</b>	<b>68</b>	<b>64</b>	<b>57</b>	<b>6</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>751</b>	<b>758</b>	<b>741</b>	<b>713</b>	<b>679</b>	<b>819</b>	<b>836</b>	<b>834</b>	<b>852</b>	<b>823</b>	<b>778</b>	<b>45</b>
<b>of which Non-OECD</b>	<b>554</b>	<b>583</b>	<b>590</b>	<b>582</b>	<b>541</b>	<b>605</b>	<b>597</b>	<b>635</b>	<b>606</b>	<b>548</b>	<b>569</b>	<b>-21</b>

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jul 19	Aug 19	Sep 19	Year Earlier	
											Sep 18	change
<b>OECD Americas</b>												
Venezuela	17	16	42	27	27	-	-	-	-	-	9	-
Other Central and South America	49	71	72	63	56	51	38	53	32	29	122	-93
ARA (Belgium Germany Netherlands)	12	5	7	12	12	1	1	-	4	-	3	-
Other Europe	7	3	7	2	14	5	3	-	7	1	4	-3
FSU	49	24	23	15	16	39	40	36	44	42	46	-4
Saudi Arabia	0	-	-	-	8	-	-	-	-	-	-	-
Algeria	4	1	-	-	10	5	1	2	-	2	-	-
Other Middle East and Africa	10	9	7	11	3	2	2	5	-	-	23	-
Singapore	1	3	-	-	4	-	-	-	-	-	-	-
OECD Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
Non-OECD Asia (excl. Singapore)	-	1	0	1	-	0	-	-	-	-	-	-
Other	0	0	2	-	-	-	-	-	-	-	-	-
<b>Total<sup>2</sup></b>	<b>149</b>	<b>131</b>	<b>161</b>	<b>130</b>	<b>149</b>	<b>104</b>	<b>85</b>	<b>96</b>	<b>87</b>	<b>73</b>	<b>207</b>	<b>-134</b>
<b>of which Non-OECD</b>	<b>130</b>	<b>123</b>	<b>147</b>	<b>117</b>	<b>123</b>	<b>97</b>	<b>81</b>	<b>96</b>	<b>76</b>	<b>72</b>	<b>197</b>	<b>-125</b>
<b>OECD Europe</b>												
OECD Americas	15	6	4	5	1	8	14	13	16	14	7	7
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	5	2	3	-	6	4	4	5	2	4	-	-
Non-OECD Europe	15	17	17	16	16	29	17	21	20	11	19	-8
FSU	448	195	154	155	158	146	154	156	162	144	119	25
Saudi Arabia	-	0	1	-	-	-	-	-	-	-	-	-
Algeria	3	1	1	-	1	-	-	-	-	-	7	-
Other Middle East and Africa	16	23	15	19	12	17	26	38	31	10	9	0
Singapore	0	-	-	-	-	-	2	-	5	-	-	-
OECD Asia Oceania	10	9	8	12	10	21	16	20	20	7	7	0
Non-OECD Asia (excl. Singapore)	0	1	0	0	7	1	4	-	10	-	-	-
Other	-18	-8	5	4	14	10	6	10	4	4	3	1
<b>Total<sup>2</sup></b>	<b>496</b>	<b>246</b>	<b>208</b>	<b>212</b>	<b>223</b>	<b>235</b>	<b>243</b>	<b>262</b>	<b>270</b>	<b>194</b>	<b>173</b>	<b>22</b>
<b>of which Non-OECD</b>	<b>436</b>	<b>218</b>	<b>185</b>	<b>190</b>	<b>206</b>	<b>196</b>	<b>197</b>	<b>216</b>	<b>217</b>	<b>156</b>	<b>140</b>	<b>16</b>
<b>OECD Asia Oceania</b>												
OECD Americas	-	0	0	2	2	-	2	-	6	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Central and South America	-	-	-	-	-	-	-	-	-	-	-	-
ARA (Belgium Germany Netherlands)	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	1	-	-	-	-	-	-	-	-	-	-	-
FSU	4	9	16	19	7	0	3	9	-	-	27	-
Saudi Arabia	-	-	-	-	-	-	3	-	-	10	-	-
Algeria	-	1	-	-	-	-	-	-	-	-	-	-
Other Middle East and Africa	5	18	23	16	9	27	49	27	61	59	46	12
Singapore	73	58	37	24	36	21	26	47	11	19	13	6
Non-OECD Asia (excl. Singapore)	69	59	85	88	48	53	33	8	60	32	103	-72
Other	1	0	0	1	0	5	0	-	0	-	-	-
<b>Total<sup>2</sup></b>	<b>153</b>	<b>146</b>	<b>162</b>	<b>149</b>	<b>103</b>	<b>106</b>	<b>116</b>	<b>90</b>	<b>138</b>	<b>120</b>	<b>190</b>	<b>-70</b>
<b>of which Non-OECD</b>	<b>152</b>	<b>146</b>	<b>162</b>	<b>148</b>	<b>101</b>	<b>106</b>	<b>114</b>	<b>90</b>	<b>132</b>	<b>120</b>	<b>190</b>	<b>-70</b>
<b>Total OECD Trade<sup>2</sup></b>	<b>798</b>	<b>523</b>	<b>531</b>	<b>492</b>	<b>475</b>	<b>445</b>	<b>444</b>	<b>448</b>	<b>494</b>	<b>387</b>	<b>570</b>	<b>-183</b>
<b>of which Non-OECD</b>	<b>718</b>	<b>487</b>	<b>493</b>	<b>454</b>	<b>430</b>	<b>400</b>	<b>392</b>	<b>403</b>	<b>425</b>	<b>348</b>	<b>527</b>	<b>-179</b>

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

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

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

	2016	2017	2018	4Q18	1Q19	2Q19	3Q19	Jun 19	Jul 19	Aug 19	Sep 19	Oct 19	Nov 19
<b>CRUDE OIL PRICES</b>													
<b>IEA CIF Average Import<sup>1</sup></b>													
IEA Americas	38.28	48.58	60.02	52.96	53.65	62.53	56.59	59.11	57.81	55.70	56.26		
IEA Europe	42.18	53.26	70.52	68.77	62.42	69.11	62.31	65.59	64.61	60.13	62.13		
IEA Asia Oceania	41.75	54.13	72.46	75.32	63.83	70.75	65.40	70.17	66.29	65.85	63.86		
<b>IEA Total</b>	<b>40.86</b>	<b>52.05</b>	<b>67.77</b>	<b>65.88</b>	<b>60.34</b>	<b>67.62</b>	<b>61.49</b>	<b>64.78</b>	<b>63.15</b>	<b>60.43</b>	<b>60.87</b>		
<b>FOB Spot</b>													
North Sea Dated	43.72	54.16	71.27	68.75	63.08	68.74	61.84	64.03	63.91	58.84	62.57	59.73	63.11
Brent (Asia) Mth 1	44.65	54.86	72.23	69.87	64.65	70.17	62.38	64.54	65.21	60.47	61.08	59.36	62.48
WTI (Cushing) Mth 1	43.33	50.78	65.20	59.97	54.87	59.89	56.40	54.68	57.53	54.84	56.95	53.98	57.16
Urals (Mediterranean)	42.11	53.26	70.17	68.36	63.46	68.77	61.84	62.47	63.73	59.96	61.65	59.28	64.44
Dubai (1st month)	41.46	53.15	69.65	68.28	63.40	67.52	61.23	61.68	63.21	59.09	61.11	59.36	61.91
Tapis (Dated)	51.84	56.37	73.69	72.15	67.08	72.91	66.63	68.44	68.28	63.64	67.68	66.01	70.21
<b>PRODUCT PRICES</b>													
<b>Rotterdam, Barges FOB</b>													
Premium Unl 10 ppm	54.24	65.80	78.78	69.87	64.09	79.58	72.78	72.16	76.12	71.30	70.61	68.25	70.17
Naphtha	42.90	54.19	64.48	61.61	55.36	58.79	53.18	52.67	56.11	49.75	53.42	54.53	59.25
Jet/Kerosene	53.00	65.92	86.39	86.16	78.30	81.19	79.03	76.94	80.42	76.23	80.30	78.74	77.67
ULSD 10ppm	53.33	66.28	86.22	87.14	79.18	81.87	77.92	76.13	78.54	75.44	79.71	78.47	78.14
Gasoil 0.1 %	52.37	64.68	84.28	84.54	77.46	80.14	76.53	74.71	77.10	74.23	78.19	76.15	76.04
LSFO 1%	34.24	48.72	63.22	64.54	60.18	64.33	61.60	62.38	64.31	56.98	63.24	60.94	60.71
HSFO 3.5%	30.62	45.63	61.13	61.92	57.19	60.06	51.20	55.68	57.91	44.74	50.31	36.40	30.22
<b>Mediterranean, FOB Cargoes</b>													
Premium Unl 10 ppm	55.34	65.83	79.41	70.60	65.29	77.58	72.12	70.57	75.45	69.64	70.95	69.38	71.75
Naphtha	41.55	52.74	66.08	59.96	53.48	57.08	51.94	51.15	54.42	48.74	52.40	52.79	56.62
Jet Aviation Fuel	51.96	65.04	85.37	84.93	76.90	79.75	77.97	75.61	78.97	75.41	79.45	77.45	75.46
ULSD 10ppm	53.39	66.20	86.03	86.25	79.13	81.24	77.73	75.71	78.19	75.39	79.58	78.17	77.35
Gasoil 0.1 %	52.09	64.60	84.74	85.20	77.51	79.68	76.99	74.46	77.35	74.87	78.70	76.42	75.87
LSFO 1%	34.96	49.91	64.31	65.87	62.56	65.04	62.73	63.05	65.31	58.26	64.37	62.98	63.16
HSFO 3.5%	32.94	47.22	62.06	62.61	58.47	60.65	52.70	56.28	59.19	46.04	52.24	41.86	30.22
<b>US Gulf, FOB Pipeline</b>													
Super Unleaded	62.75	73.82	85.71	74.91	72.72	87.04	81.48	81.94	88.02	78.81	77.56	76.96	75.62
Unleaded	56.84	67.98	80.10	69.39	65.69	80.84	74.00	74.70	79.86	72.03	70.02	68.31	68.42
Jet/Kerosene	52.43	65.40	85.12	83.74	78.34	80.80	78.19	76.13	80.49	75.56	78.67	77.81	76.38
ULSD 10 ppm	55.40	67.93	85.94	84.38	78.77	81.32	77.78	75.80	78.72	75.06	79.81	78.61	77.00
No. 6 3% <sup>3</sup>	32.12	46.03	60.20	61.00	60.09	60.32	50.83	54.82	58.27	45.04	49.01	42.32	35.94
<b>Singapore, FOB Cargoes</b>													
Premium Unleaded	56.20	67.96	80.21	73.19	67.20	75.06	72.76	67.49	73.61	70.08	74.40	74.19	76.11
Naphtha	42.81	53.99	67.50	62.23	56.16	58.68	53.64	51.79	55.68	50.70	54.21	57.14	59.76
Jet/Kerosene	53.00	65.28	85.05	84.07	76.35	79.77	77.00	74.67	78.43	74.57	77.75	75.38	74.89
Gasoil 0.05%	52.24	65.65	84.33	83.29	76.13	79.92	76.61	74.35	78.10	74.37	77.11	75.55	75.22
LSWR Cracked	39.64	52.47	67.44	70.22	66.11	71.34	66.74	70.74	76.47	59.11	63.35	52.85	52.49
HSFO 180 CST	36.47	50.84	67.04	69.65	63.96	65.23	62.33	60.86	67.67	55.75	62.73	47.75	39.34
HSFO 380 CST 4%	35.63	50.01	66.01	69.07	63.36	63.40	61.43	59.19	66.56	54.57	62.33	47.00	38.81

<sup>1</sup> 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.

<sup>3</sup> Waterborne

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

November 2019

	NATIONAL CURRENCY *						US DOLLARS					
	Total Price	% change from		Ex-Tax Price	% change from		Total Price	% change from		Ex-Tax Price	% change from	
		Oct-19	Nov-18		Oct-19	Nov-18		Oct-19	Nov-18		Oct-19	Nov-18
<b>GASOLINE <sup>1</sup> (per litre)</b>												
France	1.507	0.5	1.8	0.565	1.1	4.1	1.665	0.4	-1.1	0.624	1.0	1.2
Germany	1.397	-	-9.3	0.519	-	-18.9	1.544	-0.0	-11.9	0.573	-0.0	-21.2
Italy	1.574	-0.2	-3.1	0.562	-0.5	-7.0	1.739	-0.2	-5.8	0.621	-0.6	-9.5
Spain	1.298	-0.6	-0.5	0.600	-1.0	-2.8	1.434	-0.7	-3.2	0.663	-1.0	-5.4
United Kingdom	1.255	-0.9	-2.1	0.466	-1.9	-4.5	1.617	1.0	-2.2	0.600	-0.0	-4.6
Japan	146.9	-0.2	-6.1	79.4	-0.4	-10.1	1.350	-0.8	-2.2	0.730	-1.0	-6.3
Canada	1.181	-2.1	1.5	0.788	-3.0	2.1	0.892	-2.4	1.2	0.595	-3.3	1.8
United States	0.686	-1.2	-2.0	0.559	-1.4	-3.0	0.686	-1.2	-2.0	0.559	-1.4	-3.0
<b>AUTOMOTIVE DIESEL FOR NON COMMERCIAL USE (per litre)</b>												
France	1.441	-	-2.7	0.592	-	-5.1	1.592	-0.0	-5.4	0.654	-0.0	-7.8
Germany	1.251	-0.5	-12.1	0.581	-0.9	-20.0	1.382	-0.5	-14.5	0.642	-0.9	-22.2
Italy	1.469	-0.3	-5.0	0.587	-0.5	-9.7	1.623	-0.3	-7.6	0.649	-0.5	-12.2
Spain	1.215	-	-3.0	0.625	-	-6.4	1.343	-0.0	-5.6	0.691	-0.0	-9.0
United Kingdom	1.303	-0.8	-4.5	0.506	-1.9	-9.3	1.679	1.1	-4.6	0.652	-0.1	-9.4
Japan	127.5	-0.2	-6.0	85.5	-0.2	-8.1	1.172	-0.8	-2.1	0.786	-0.9	-4.2
Canada	1.283	2.9	-2.6	0.970	3.6	-3.2	0.969	2.5	-2.9	0.733	3.3	-3.5
United States	0.811	0.5	-7.0	0.663	0.6	-8.9	0.811	0.5	-7.0	0.663	0.6	-8.9
<b>DOMESTIC HEATING OIL (per litre)</b>												
France	0.929	0.1	-5.6	0.618	0.1	-6.9	1.026	0.0	-8.2	0.682	0.1	-9.5
Germany	0.696	-1.7	-20.7	0.523	-1.9	-22.6	0.769	-1.7	-22.9	0.578	-1.9	-24.8
Italy	1.315	0.4	1.0	0.674	0.7	1.7	1.453	0.4	-1.7	0.745	0.6	-1.1
Spain	0.768	-0.1	-6.2	0.538	-0.2	-8.2	0.849	-0.2	-8.8	0.594	-0.2	-10.8
United Kingdom	0.581	-1.2	-8.8	0.442	-1.5	-10.8	0.748	0.7	-8.9	0.569	0.4	-10.9
Japan <sup>2</sup>	91.7	-0.3	-6.0	82.1	-0.3	-6.2	0.843	-0.9	-2.1	0.755	-0.9	-2.3
Canada	1.160	1.2	-2.0	1.044	1.3	-2.1	0.876	0.9	-2.3	0.788	0.9	-2.4
United States	-	-	-	-	-	-	-	-	-	-	-	-
<b>LOW SULPHUR FUEL OIL FOR INDUSTRY <sup>3</sup> (per kg)</b>												
France	0.567	0.3	-4.3	0.428	0.4	-5.6	0.627	0.2	-6.9	0.473	0.3	-8.2
Germany	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.481	1.0	2.6	0.449	1.0	2.8	0.531	0.9	-0.2	0.496	1.0	-0.1
Spain	0.434	1.3	-7.3	0.417	1.3	-7.7	0.480	1.2	-9.8	0.461	1.3	-10.2
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	-	-	-	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

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

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

	Monthly Average				Change Nov 19-Oct 19	Average for week ending:				
	Aug 19	Sep 19	Oct 19	Nov 19		08 Nov	15 Nov	22 Nov	29 Nov	06 Dec
<b>NW Europe</b>										
Brent (Cracking)	7.75	6.42	7.57	4.82	↓ -2.75	6.62	5.06	3.30	3.52	1.72
Urals (Cracking)	5.64	6.61	5.61	0.11	↓ -5.51	1.06	-0.20	-1.46	0.32	-0.64
Brent (Hydroskimming)	4.52	4.33	5.29	2.23	↓ -3.05	3.86	2.84	0.78	0.56	0.24
Urals (Hydroskimming)	-0.60	1.38	-2.64	-9.92	↓ -7.27	-8.51	-9.77	-11.63	-10.70	-10.22
<b>Mediterranean</b>										
Es Sider (Cracking)	8.26	7.63	9.24	5.40	↓ -3.84	7.57	5.62	3.76	3.70	2.92
Urals (Cracking)	5.00	7.24	7.39	0.63	↓ -6.76	2.10	0.52	-0.79	-0.07	-1.45
Es Sider (Hydroskimming)	5.35	5.22	6.68	2.82	↓ -3.85	4.84	3.22	1.27	0.90	1.26
Urals (Hydroskimming)	-1.65	1.24	-1.06	-10.83	↓ -9.77	-8.81	-10.63	-12.42	-12.57	-12.56
<b>US Gulf Coast</b>										
Mars (Cracking)	2.50	2.65	3.25	-2.36	↓ -5.61	0.21	-4.27	-4.11	-1.71	-3.62
50/50 HLS/LLS (Coking)	11.61	10.22	12.87	7.90	↓ -4.98	9.19	7.14	6.43	8.56	7.19
50/50 Maya/Mars (Coking)	9.16	5.30	9.37	6.87	↓ -2.50	7.22	6.65	6.44	7.27	4.74
ASCI (Coking)	8.87	8.56	10.70	6.67	↓ -4.03	7.80	5.80	5.57	7.44	5.80
<b>US Midwest</b>										
30/70 WCS/Bakken (Cracking)	11.05	12.11	10.42	7.98	↓ -2.44	9.86	5.10	6.83	9.45	6.72
Bakken (Cracking)	13.98	14.85	13.20	11.31	↓ -1.89	11.54	9.92	10.99	13.05	10.03
WTI (Coking)	14.39	13.37	13.46	10.88	↓ -2.58	10.92	9.58	10.65	13.08	9.95
30/70 WCS/Bakken (Coking)	14.79	15.24	14.88	14.05	↓ -0.83	14.92	11.82	13.39	15.92	13.06
<b>Singapore</b>										
Dubai (Hydroskimming)	0.29	3.07	-3.81	-8.55	↓ -4.74	-4.57	-9.15	-10.61	-11.11	-9.75
Tapis (Hydroskimming)	2.10	1.27	0.22	-3.98	↓ -4.20	-2.77	-3.78	-5.01	-4.72	-6.04
Dubai (Hydrocracking)	4.66	6.18	3.31	0.79	↓ -2.53	3.15	1.03	-0.54	-1.16	0.38
Tapis (Hydrocracking)	4.70	3.64	4.80	0.78	↓ -4.03	1.70	1.47	-0.28	0.04	-1.30

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

Source: IEA, KBC Advanced Technologies (KBC)

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

	Jul-19	Aug-19	Sep-19	Sep-18	Sep 19 vs Previous Month	Sep 19 vs Previous Year	Sep 19 vs 5 Year Average	5 Year Average
<b>OECD Americas</b>								
Naphtha	1.3	1.4	1.4	1.6	0.0	-0.2	-0.3	1.7
Motor gasoline	44.3	43.9	45.5	45.5	1.5	-0.1	-0.8	46.3
Jet fuel	10.0	9.9	9.7	9.8	-0.2	-0.1	0.5	9.2
Other kerosene	0.1	0.0	0.1	0.2	0.0	-0.1	-0.1	0.2
Gasoil/diesel oil	27.7	28.1	28.2	28.3	0.2	-0.1	-0.2	28.4
Residual fuel oil	3.0	3.1	3.2	3.4	0.1	-0.3	-0.6	3.7
Petroleum coke	4.4	4.3	4.2	4.4	-0.1	-0.2	-0.3	4.6
Other products	13.8	13.4	12.4	11.6	-0.9	0.8	0.6	11.8
<b>OECD Europe</b>								
Naphtha	8.0	7.7	7.4	7.9	-0.3	-0.5	0.2	7.2
Motor gasoline	20.4	20.1	20.5	21.4	0.4	-0.9	-0.6	21.2
Jet fuel	9.8	10.1	9.6	9.6	-0.5	0.0	0.9	8.7
Other kerosene	2.0	2.1	2.2	2.3	0.2	-0.1	0.1	2.1
Gasoil/diesel oil	39.7	39.7	39.2	38.8	-0.5	0.4	-0.5	39.7
Residual fuel oil	8.2	8.8	8.8	9.5	0.1	-0.7	-0.6	9.4
Petroleum coke	1.4	1.4	1.5	1.3	0.1	0.2	0.3	1.2
Other products	15.6	15.3	15.0	14.2	-0.3	0.8	0.3	14.7
<b>OECD Asia Oceania</b>								
Naphtha	15.8	15.6	15.9	15.3	0.3	0.6	1.2	14.7
Motor gasoline	21.6	22.1	21.5	22.8	-0.6	-1.3	-1.3	22.8
Jet fuel	14.9	15.5	15.0	15.0	-0.5	0.1	-0.4	15.4
Other kerosene	2.8	2.8	3.1	3.3	0.3	-0.2	-0.7	3.8
Gasoil/diesel oil	30.6	29.0	30.2	30.4	1.2	-0.2	0.3	29.9
Residual fuel oil	6.0	6.5	6.4	6.2	-0.1	0.1	-0.4	6.8
Petroleum coke	0.5	0.4	0.4	0.3	0.0	0.1	0.0	0.4
Other products	12.5	12.2	11.8	12.5	-0.4	-0.8	-0.8	12.6
<b>OECD Total</b>								
Naphtha	6.0	5.9	5.9	6.1	0.0	-0.1	0.1	5.8
Motor gasoline	32.7	32.5	33.2	33.7	0.7	-0.5	-0.6	33.9
Jet fuel	10.8	10.9	10.6	10.7	-0.3	0.0	0.5	10.1
Other kerosene	1.2	1.2	1.3	1.4	0.1	-0.1	-0.1	1.4
Gasoil/diesel oil	32.0	32.0	32.1	32.1	0.1	0.0	-0.3	32.4
Residual fuel oil	5.2	5.5	5.5	5.9	0.1	-0.3	-0.6	6.2
Petroleum coke	2.7	2.7	2.7	2.7	0.0	0.0	-0.1	2.7
Other products	14.2	13.8	13.1	12.6	-0.6	0.5	0.2	12.9

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

**Table 17**  
**WORLD BIOFUELS PRODUCTION**  
(thousand barrels per day)

	2017	2018	2019	1Q19	2Q19	3Q19	Sep 19	Oct 19	Nov 19
<b>ETHANOL</b>									
<b>OECD Americas<sup>1</sup></b>	<b>1062</b>	<b>1081</b>	<b>1063</b>	<b>1048</b>	<b>1083</b>	<b>1054</b>	<b>1010</b>	<b>1068</b>	<b>1068</b>
United States	1032	1048	1027	1012	1047	1018	974	1031	1031
Other	30	33	36	36	36	36			
<b>OECD Europe<sup>2</sup></b>	<b>88</b>	<b>93</b>	<b>93</b>	<b>91</b>	<b>97</b>	<b>102</b>	<b>100</b>	<b>84</b>	<b>84</b>
France	13	16	15	13	17	18	17	10	10
Germany	14	16	16	16	19	19	19	10	10
Spain	7	9	9	8	8	8	8	12	12
United Kingdom	11	9	8	10	8	10	10	3	3
Other	42	43	46	43	45	47			
<b>OECD Asia Oceania<sup>3</sup></b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>
Australia	3	4	4	5	4	4	4	4	4
Other	0	1	1	1	1	1			
<b>Total OECD Ethanol</b>	<b>1153</b>	<b>1179</b>	<b>1162</b>	<b>1144</b>	<b>1185</b>	<b>1161</b>	<b>1115</b>	<b>1157</b>	<b>1157</b>
<b>Total Non-OECD Ethanol</b>	<b>627</b>	<b>713</b>	<b>825</b>	<b>331</b>	<b>943</b>	<b>1226</b>	<b>1206</b>	<b>1172</b>	<b>797</b>
Brazil	478	547	631	138	751	1035	1014	975	600
China	56	52	69	69	67	67			
Argentina	19	19	18	18	18	18			
Other	74	95	106	106	106	106	192	197	197
<b>TOTAL ETHANOL</b>	<b>1780</b>	<b>1892</b>	<b>1986</b>	<b>1475</b>	<b>2127</b>	<b>2387</b>	<b>2321</b>	<b>2329</b>	<b>1954</b>
<b>BIODIESEL</b>									
<b>OECD Americas<sup>1</sup></b>	<b>111</b>	<b>128</b>	<b>134</b>	<b>116</b>	<b>123</b>	<b>124</b>	<b>119</b>	<b>172</b>	<b>172</b>
United States	104	121	126	110	117	118	113	159	159
Other	7	7	8	6	6	6			
<b>OECD Europe<sup>2</sup></b>	<b>265</b>	<b>257</b>	<b>275</b>	<b>252</b>	<b>276</b>	<b>270</b>	<b>277</b>	<b>300</b>	<b>300</b>
France	47	48	51	49	54	53	58	50	50
Germany	62	58	58	51	58	58	57	65	65
Italy	13	14	26	31	27	19			
Spain	34	36	35	32	33	32	32	43	43
Other	108	101	104	89	105	108	111	115	115
<b>OECD Asia Oceania<sup>3</sup></b>	<b>12</b>	<b>14</b>	<b>15</b>	<b>10</b>	<b>17</b>	<b>17</b>	<b>14</b>	<b>16</b>	<b>16</b>
Australia	1	1	1	1	1	1	1	1	1
Other	11	13	14	9	17	16			
<b>Total OECD Biodiesel</b>	<b>388</b>	<b>399</b>	<b>424</b>	<b>378</b>	<b>417</b>	<b>411</b>	<b>410</b>	<b>488</b>	<b>488</b>
<b>Total Non-OECD Biodiesel</b>	<b>293</b>	<b>325</b>	<b>360</b>	<b>360</b>	<b>359</b>	<b>360</b>	<b>360</b>	<b>360</b>	<b>360</b>
Brazil	74	92	99	93	95	106	117	118	93
Argentina*	56	47	43	43	43	43			
Other	163	186	219	225	221	211			
<b>TOTAL BIODIESEL</b>	<b>680</b>	<b>725</b>	<b>784</b>	<b>739</b>	<b>776</b>	<b>772</b>	<b>771</b>	<b>849</b>	<b>849</b>
<b>GLOBAL BIOFUELS</b>	<b>2460</b>	<b>2616</b>	<b>2770</b>	<b>2214</b>	<b>2903</b>	<b>3159</b>	<b>3092</b>	<b>3178</b>	<b>2803</b>

1 As of August 2012 OMR, OECD Americas includes Chile.

2 As of August 2012 OMR, OECD Europe includes Estonia and Slovenia.

3 As of August 2012 OMR, OECD Asia Oceania includes Israel.

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