

# Oil Market Report

## 12 July 2019

- Global demand growth is set to accelerate from an exceptionally weak 310 kb/d in 1Q19 and 800 kb/d in 2Q19 to reach 1.8 mb/d in the second half of the year as economic activity improves and petrochemical plants ramp up. For 2020, the pace of growth will average 1.4 mb/d compared to 1.2 mb/d this year.
- Our balances show the potential for oversupply next year, with a 2.1 mb/d expansion of non-OPEC supply, led by the US, versus 2 mb/d in 2019. That will lower the requirement for OPEC crude, with the call on OPEC plunging to 28 mb/d in 1Q20. OPEC has not produced at such a low level since 3Q03.
- Global refining throughput in 2Q19 dropped 0.7 mb/d y-o-y, the largest annual decline in 10 years. Our estimate for 2019 growth is revised down to 300 kb/d, but refined products stocks build nevertheless. East of Suez refiners are more exposed to products oversupply, while Atlantic Basin runs have fallen back to 2014 levels.
- OECD commercial stocks increased by 22.8 mb in May to 2 906 mb, and stood 6.7 mb above the five-year average. Preliminary data for June show inventories rising in US and Japan while stocks draws in Europe.
- Concerns that global oil demand is slowing caused ICE Brent to decline by 10% in June, despite supportive geopolitical factors. Gasoline cracks picked up following a refinery fire on the US Atlantic Coast.



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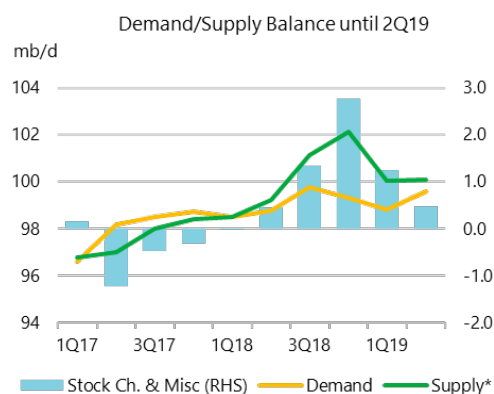
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# Re-balancing slows down

The main message of this *Report* is that in 1H19 oil supply has exceeded demand by 0.9 mb/d. Our latest data show a global surplus in 2Q19 of 0.5 mb/d versus previous expectations of a 0.5 mb/d deficit. This surplus adds to the huge stock builds seen in the second half of 2018 when oil production surged just as demand growth started to falter. Clearly, market tightness is not an issue for the time being and any re-balancing seems to have moved further into the future.

In the meantime, the widely-anticipated decision by OPEC+ ministers to extend their output agreement to March 2020 provides guidance but it does not change the fundamental outlook of an oversupplied market. On our balances, assuming constant OPEC output at the current level of around 30 mb/d, by the end of 1Q20 stocks could increase by a net 136 mb. The call on OPEC crude in early 2020 could fall to only 28 mb/d.



Clearly, this presents a major challenge to those who have taken on the task of market management. The picture will evolve as 2019 progresses, but in the near term the main area of focus remains demand growth. While the GDP estimates behind our forecast are unchanged from last month's *Report*, there are indications of deteriorating trade and manufacturing activity. Recent data show that global manufacturing output in 2Q19 fell for the first time since late 2012 and new orders have declined at a fast pace. On the positive side, the mood surrounding the US/China trade dispute appears to have improved and the resolution of outstanding issues would be a massive boost to economic confidence.

The outlook for oil demand growth in 2019 is little changed from our last *Report* at 1.2 mb/d. On the basis that the economic outlook in 2020 is better, there will be a rebound to 1.4 mb/d. This is despite the fact that we have downgraded our estimate for global oil demand growth in 2Q19 by 0.45 mb/d. There are many reasons for this: European demand is sluggish; growth in India vanished in April and May due to a slowdown in LPG deliveries and weakness in the aviation sector; and in the US demand for both gasoline and diesel in the first half of 2019 is lower year-on-year. Unless the economic backdrop and the trade disputes worsen, global growth is nevertheless expected to be higher in 2H19. There will be support from oil prices, which, if they stay roughly where they are today, will be about 8% below the levels seen last year.

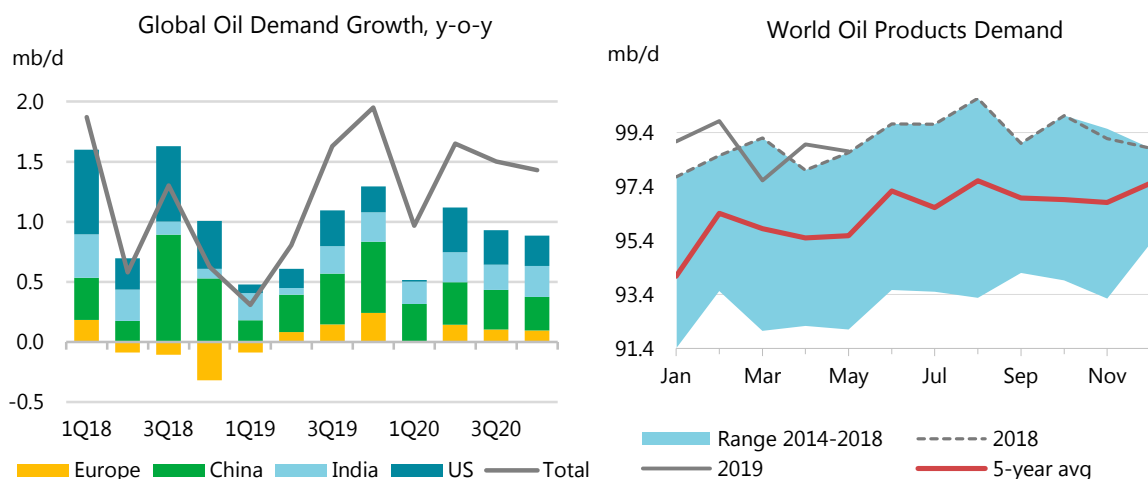
Geopolitical tensions remain high in the Middle East Gulf and we recently saw the interception of an Iranian tanker in the Mediterranean. Even so, the oil price impact has been minimal with no real security of supply premium. This is not the case for shipping costs with reports of Gulf insurance rates rising sharply. For now, maritime operations in the region are close to normal and markets remain calm due to economic weakness, high oil stocks and a significant spare production capacity cushion. As always, the IEA continues to closely monitor the security of supply situation and is in regular contact with its members and partners.

# Demand

## Overview

Our growth forecasts for 2019 and 2020 are largely unchanged at 1.2 mb/d year-on-year (y-o-y) and 1.4 mb/d y-o-y, respectively. However, the historical 2018 consumption growth estimate has been reduced by 90 kb/d following the release of lower OECD annual figures. World oil demand was revised up by 65 kb/d in 2017 and down by 40 kb/d in 2018. Oil demand growth for 2018 was therefore revised down to 1.1 mb/d, the lowest figure since 2011.

One major adjustment we have made is to our 2Q19 growth estimate which was revised down 450 kb/d to +800 kb/d y-o-y. This is due to lower demand data for Italy, India, Saudi Arabia, Singapore and Russia, amongst others. The impact was partially offset by slightly revised 1Q19 data from Canada, Indonesia, Iran and the United Arab Emirates. There is also a small upward adjustment for 4Q19. We raised our estimate for 2019 naphtha demand in Malaysia as the RAPID petrochemical facility ramps up, as well as our LPG/demand figure for China. We kept our gross domestic product (GDP) forecasts unchanged and our oil price forward curve is moderately higher than last month, which had a small downward impact on our forecasts.



We now estimate that global oil demand growth slumped to 310 kb/d in 1Q19, the lowest figure recorded since the end of 2011, on warm weather in the OECD and a slowdown in economic activity, including in the petrochemical industry which has been a key pillar of demand in recent years. Consumption growth recovered to 810 kb/d in 2Q19, as OECD economies boosted LPG/ethane and jet/kerosene use, and is set to accelerate in the second half of 2019.

## 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	4.3	4.2	4.3	4.3	4.4	4.4	4.3	4.4	4.3	4.4	4.4	4.3	4.5	4.4
Americas	31.5	31.7	32.2	32.0	31.9	31.5	32.0	32.6	32.3	32.1	31.5	32.3	32.9	32.6	32.3
Asia/Pacific	35.2	34.8	34.4	35.1	34.9	35.5	35.0	35.3	36.3	35.5	36.3	35.9	36.0	37.2	36.3
Europe	14.7	14.9	15.4	14.8	15.0	14.6	15.0	15.5	15.1	15.1	14.6	15.1	15.6	15.1	15.1
FSU	4.5	4.6	4.9	4.8	4.7	4.6	4.7	5.0	5.0	4.8	4.7	4.8	5.1	5.0	4.9
Middle East	8.2	8.5	8.8	8.2	8.4	8.2	8.5	8.8	8.3	8.5	8.2	8.7	9.0	8.3	8.5
<b>World</b>	<b>98.5</b>	<b>98.8</b>	<b>99.8</b>	<b>99.3</b>	<b>99.1</b>	<b>98.8</b>	<b>99.6</b>	<b>101.4</b>	<b>101.3</b>	<b>100.3</b>	<b>99.8</b>	<b>101.2</b>	<b>102.9</b>	<b>102.7</b>	<b>101.7</b>
Annual Chg (%)	1.9	0.6	1.3	0.6	1.1	0.3	0.8	1.6	2.0	1.2	1.0	1.7	1.5	1.4	1.4
Annual Chg (mb/d)	1.9	0.6	1.3	0.6	1.1	0.3	0.8	1.6	2.0	1.2	1.0	1.7	1.5	1.4	1.4
Changes from last OMR (mb/d)	0.0	-0.1	-0.1	-0.1	0.0	0.1	-0.4	0.0	0.1	0.0	0.0	-0.3	0.0	0.0	-0.1

\* Including biofuels

Our forecasts take into account the expected stronger economic growth in the OECD in the second half of 2019, as well as the fact oil prices remain lower than last year. The forecast assumes that the trade standoff between China and the US does not deteriorate over the coming months. Petrochemical capacity expansions in China, Malaysia and the US also feature prominently with the expected commissioning of several plants in 2H19. Finally, the International Maritime Organisation's new rules on sulphur in bunker fuel start to have an impact from the end of 2019 onwards. As gasoil is less dense than fuel oil, more volumes will need to be consumed to produce the same amount of energy. Therefore, this indirectly boosts bunker fuel demand and our total oil consumption estimates.

## Global Demand by Product

	(thousand barrels per day)						
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q18	4Q18	1Q19	4Q18	1Q19	4Q18	1Q19
LPG & Ethane	12,169	12,503	13,122	295	208	2.4	1.6
Naphtha	6,286	6,421	6,597	-113	42	-1.7	0.6
Motor Gasoline	26,636	26,277	25,642	396	53	1.5	0.2
Jet Fuel & Kerosene	8,006	7,715	7,918	62	152	0.8	2.0
Gas/Diesel Oil	28,147	28,719	28,102	121	248	0.4	0.9
Residual Fuel Oil	6,913	6,668	6,716	-187	-189	-2.7	-2.7
Other Products	11,639	11,039	10,708	51	-205	0.5	-1.9
<b>Total Products</b>	<b>99,796</b>	<b>99,342</b>	<b>98,805</b>	<b>625</b>	<b>308</b>	<b>0.6</b>	<b>0.3</b>

## Fundamentals

In this *Report*, our macroeconomic assumptions are unchanged. Trade tensions remain elevated, although a truce between China and the US was announced at the recent G20 summit. Trade talks have resumed, with no deadline imposed, and a new round of retaliatory tariffs were put on hold. An improvement in relations between China and the US would be welcome, as trade tensions have taken a very significant toll on world economic activity. The dramatic increase in the trade of sub-components in recent years thanks to the globalisation of manufacturing processes has exposed participants to disruptions to trade and cost increases.

The US is nevertheless officially experiencing its longest expansion in history, 121 consecutive months of growth according to the National Bureau of Economic Research. While prompt indicators have weakened in recent months, and several "nowcast" indicators point to a slowdown in growth from 3.2% in 1Q19 to 1.5% currently, the latest job data remained positive. The unemployment rate is the lowest in almost 50 years, close to 3.7%. Not all

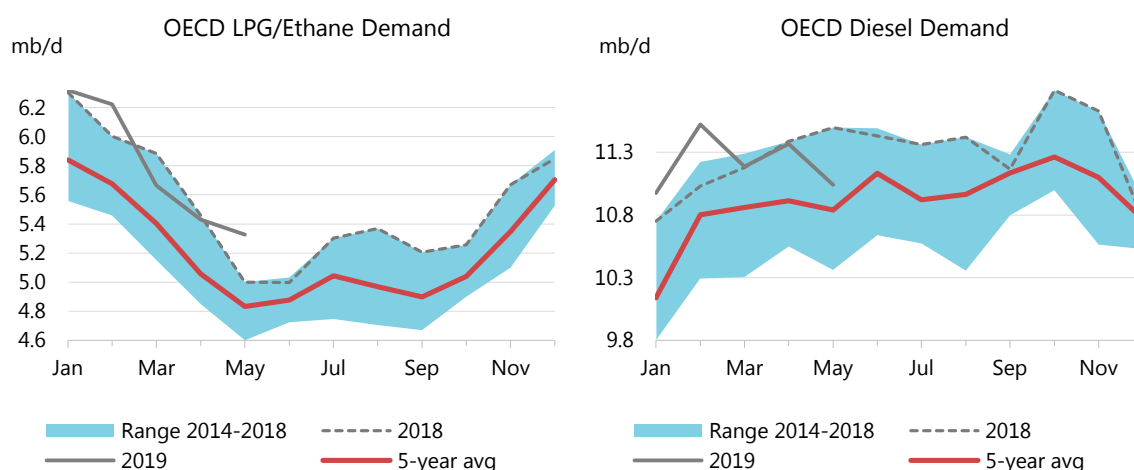
indicators are positive, however, as the ISM Manufacturing Managers Index was at its lowest level since October 2016 in June. The new order component, in particular, dropped to 50 from 52.7.

Europe started the year close to recession, with German growth particularly weak. The German slowdown was initially attributed to several factors, such as new environmental tests on cars and perturbations in German auto production (worth 5% of GDP) and low water levels on the Rhine river, which affected product deliveries. Industrial orders fell by more than 2% on the month in May and were down 8.6% y-o-y. In the UK, Brexit uncertainty is taking its toll on economic activity. British manufacturers suffered the largest drop in activity in more than six years in June.

US/China tensions are having the strongest impact on Asian economies, which are largely dependent on trade. China's official manufacturing PMI (NBS) came out at 49.4 in June, pointing to a second consecutive month of contraction in manufacturing activity. New orders declined from 49.8 in May to 49.6 in June. Japan's manufacturing PMI also fell to 49.3 in June, a three-month low, as producers suffered from slowing trade volume and weak external demand. South Korea's manufacturing PMI dropped to 47.5 in June from 48.4 in May. New export orders have contracted for 11 straight months. Activity also fell in Malaysia and Thailand. Vietnam has been a rare beneficiary of trade tensions, as its manufacturing PMI rose to 52.5 in June, close to 52 for the fourth consecutive month. Some manufacturers reportedly moved part of their operations from China to Vietnam to avoid US tariffs. Better trade relationships and the freezing or cancellation of tariff increases would bring some relief for the world economy. The economic projections we are using in this *Report* do not assume further increases in trade tensions or the implementation of new tariffs.

The forward curve suggests that oil prices are 6% higher than in last month's *Report* for 2H19 and 7% higher for 2020. However, average prices in 2019 remain below last year's level, which should provide some support to y-o-y growth.

## OECD



OECD historical data were revised with the submission by member countries of annual data for 2017 and new IEA annual estimates for 2018. Annual data are used to re-base monthly estimates. OECD Europe demand was revised down by 90 kb/d for 2018 and Asia Oceania demand was revised up by 120 kb/d. Mexico was revised down by 80 kb/d in 2018. Changes in

the annual adjustment factor and several revisions to monthly figures impacted the start of 2019. Canadian oil demand was revised up by 170 kb/d for the first three months of the year, reducing the y-o-y fall in OECD oil demand in 1Q19 to 430 kb/d.

Oil demand growth is set to slow to 170 kb/d in the OECD in 2019, from 200 kb/d in 2018. Growth should accelerate to 320 kb/d in 2020, on higher economic activity and capacity additions in the petrochemical industry supporting feedstock demand.

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

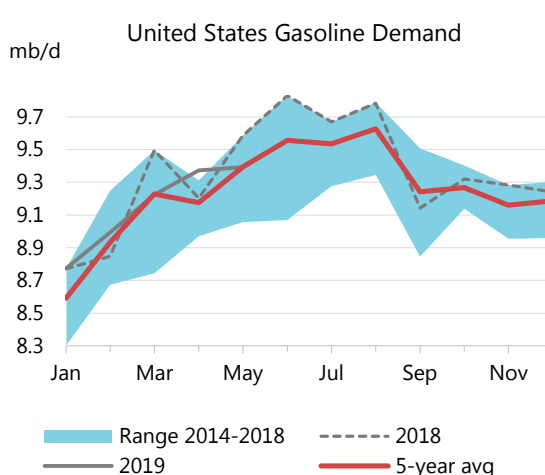
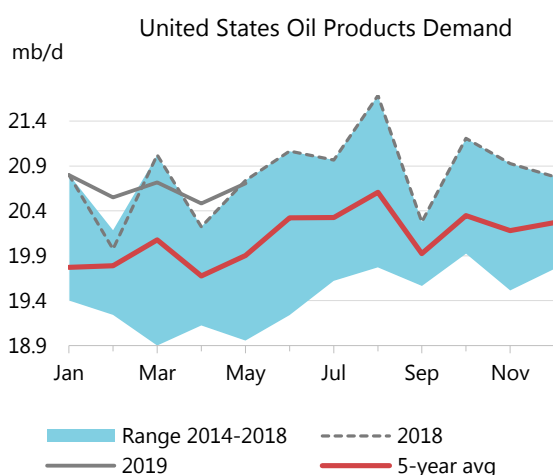
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		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>11.13</b>	<b>-1.8</b>	<b>2.10</b>	<b>3.6</b>	<b>4.71</b>	<b>-6.5</b>	<b>0.51</b>	<b>14.7</b>	<b>0.62</b>	<b>-3.9</b>	<b>6.27</b>	<b>5.7</b>	<b>25.34</b>	<b>-0.3</b>
US50	9.36	-2.0	1.79	4.3	3.93	-6.2	0.10	9.6	0.33	4.4	4.83	7.2	20.32	-0.2
Canada	0.86	-2.3	0.16	-0.4	0.26	2.1	0.28	-5.0	0.05	-14.6	0.76	-1.4	2.38	-2.1
Mexico	0.77	1.1	0.08	-1.2	0.30	-20.3	0.11	187.3	0.13	-18.6	0.54	3.6	1.93	-0.4
<b>OECD Europe</b>	<b>2.02</b>	<b>-0.9</b>	<b>1.52</b>	<b>0.0</b>	<b>4.96</b>	<b>-1.2</b>	<b>1.23</b>	<b>6.3</b>	<b>0.89</b>	<b>3.7</b>	<b>3.41</b>	<b>0.8</b>	<b>14.02</b>	<b>0.4</b>
Germany	0.51	-0.5	0.23	0.0	0.74	-2.0	0.24	-0.1	0.07	7.4	0.52	0.1	2.30	-0.5
United Kingdom	0.29	2.2	0.30	0.8	0.50	1.9	0.15	7.9	0.03	-9.0	0.29	-3.1	1.55	1.1
France	0.20	1.5	0.18	2.6	0.68	-4.0	0.19	0.4	0.05	-5.0	0.38	3.9	1.68	-0.5
Italy	0.16	-5.9	0.12	3.1	0.44	-4.4	0.06	-10.1	0.08	4.0	0.34	-8.5	1.20	-4.9
Spain	0.12	-0.3	0.15	3.3	0.48	-0.9	0.14	-0.6	0.16	3.1	0.26	-0.9	1.31	0.1
<b>OECD Asia &amp; Oceania</b>	<b>1.44</b>	<b>-4.6</b>	<b>0.75</b>	<b>-3.0</b>	<b>1.33</b>	<b>-4.7</b>	<b>0.41</b>	<b>-5.4</b>	<b>0.42</b>	<b>-12.6</b>	<b>2.94</b>	<b>-7.2</b>	<b>7.29</b>	<b>-6.1</b>
Japan	0.80	-5.5	0.35	-8.9	0.44	2.4	0.24	-9.0	0.22	-7.8	1.23	-5.5	3.28	-5.3
Korea	0.19	-8.9	0.18	6.8	0.34	-7.7	0.11	0.2	0.16	-21.6	1.45	-9.1	2.43	-8.5
Australia	0.31	-1.4	0.16	-0.1	0.49	-8.9	0.00	0.0	0.01	18.1	0.18	-5.6	1.16	-4.7
<b>OECD Total</b>	<b>14.59</b>	<b>-2.0</b>	<b>4.36</b>	<b>1.1</b>	<b>11.00</b>	<b>-4.0</b>	<b>2.16</b>	<b>5.7</b>	<b>1.93</b>	<b>-2.7</b>	<b>12.62</b>	<b>1.1</b>	<b>46.66</b>	<b>-1.1</b>

\* Including US territories

## OECD Americas

Oil demand in the OECD Americas rose by 50 kb/d y-o-y in 1Q19, accelerating to 620 kb/d in April. Gasoline demand, in particular, rose by 350 kb/d y-o-y in April. Oil consumption in the Americas has been revised up by 115 kb/d in 1Q19 on the back of higher data from Canada, partially offset by downward revisions in Mexico.



After an expansion of 70 kb/d y-o-y in 1Q19, **US** oil demand growth accelerated to 260 kb/d y-o-y in April, supported by a rebound in gasoline deliveries (up 170 kb/d y-o-y). The US Department of Transportation reported growth of 2.5% in travel on all roads and streets

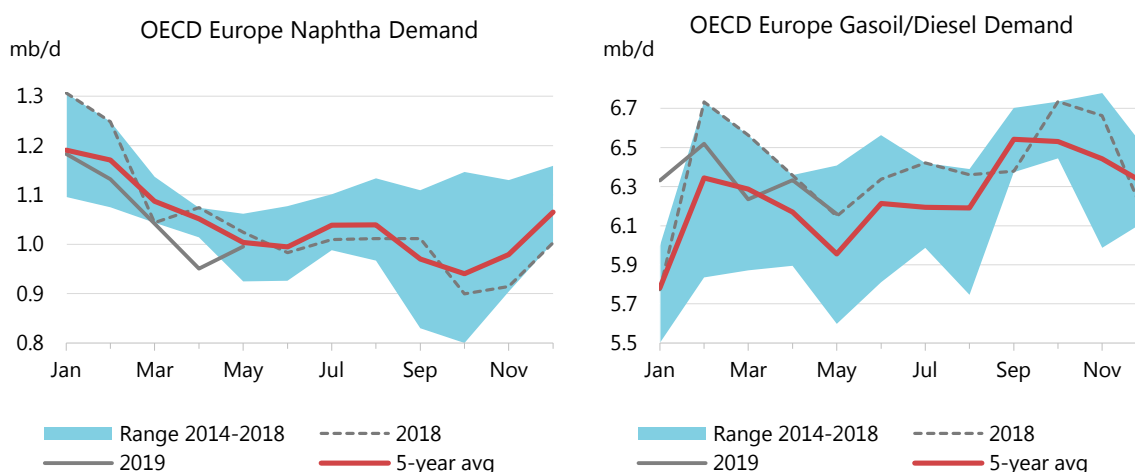
(vehicle miles travelled) in April, after mediocre growth in 1Q19. Gasoil/diesel consumption fell by 175 kb/d y-o-y in April on reduced agricultural demand. The planting season has been delayed by exceptional weather conditions in the Northern Plains and upper Midwest. LPG/ethane consumption fell by 35 kb/d y-o-y and jet fuel demand grew by 120 kb/d. US air traffic (as measured by domestic revenue passenger kilometre, RPK) grew by a strong 4.6% y-o-y in May and 4.1% y-o-y in April, supported by a more positive economic environment.

**Canada's** oil consumption expanded by 30 kb/d y-o-y in 1Q19, with growth accelerating to 145 kb/d in April when most fuels appeared relatively strong. Canadian data have been frequently revised in the past few months due to a new reporting system, but should stabilise in the future.

We forecast oil demand in the Americas to accelerate in 2Q19 and to remain relatively high during the rest of 2019 on the back of new petrochemical industry demand in the US. Gasoline demand should also be supported by low unemployment in the US (3.7% in June). Overall, growth of 235 kb/d is expected in 2019. In 2020, growth will remain at 225 kb/d thanks to petrochemical capacity additions, which will boost ethane use. Gasoil/diesel demand will rise a significant 115 kb/d benefitting from the International Maritime Organisation's new sulphur rules, whereas fuel oil demand will drop 90 kb/d.

## OECD Europe

European oil demand fell 40 kb/d y-o-y in April, after a drop of 150 kb/d in 1Q19. LPG and naphtha demand have been particularly weak in the first four months of the year, declining by 115 kb/d and 90 kb/d y-o-y, respectively. Gasoline demand improved in April, gaining 40 kb/d y-o-y and jet/kerosene rose by 95 kb/d. Gasoil/diesel demand rose by only 5 kb/d y-o-y during 1Q19. In April, gasoil demand dropped by 25 kb/d y-o-y. Warm weather in 1Q19 and consumers' disaffection for diesel cars explains the contraction in gasoil demand.



**German** oil demand rose by 60 kb/d y-o-y in 1Q19, supported by higher gasoil deliveries at the start of the quarter. In April, gasoil demand declined by 20 kb/d. Strong gasoil consumption at the start of the year followed the return to normal of water levels on the Rhine, easing deliveries by barge from Amsterdam-Rotterdam-Antwerp. Navigation difficulties on the Rhine are likely to occur again this summer.



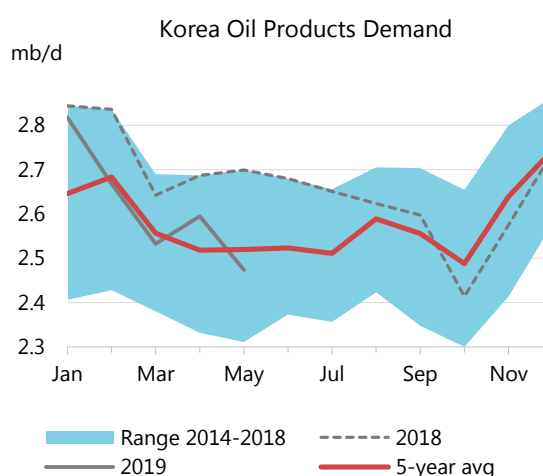
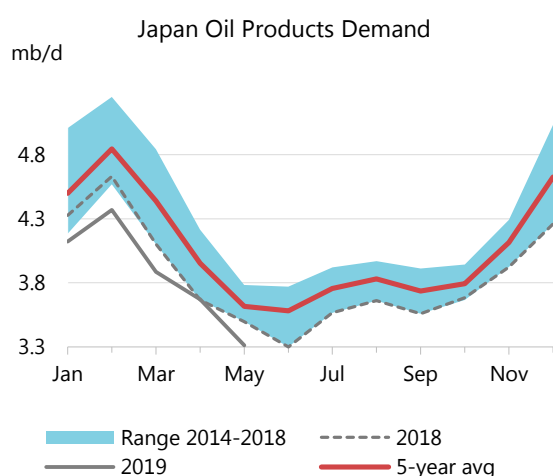
Oil demand in **France** dropped by 25 kb/d in 1Q19 but rose 35 kb/d y-o-y in April on higher gasoline and jet fuel deliveries. In May, according to provisional data, French oil demand dropped by 10 kb/d y-o-y, as diesel deliveries were particularly weak. Gasoline demand growth has increased almost continuously while diesel demand has fallen since the government started reducing the tax differential between diesel and gasoline at the pump in 2015.

European oil demand is expected to pick up during the rest of the year, helped by lower oil prices and higher economic activity. Gasoil/diesel will provide most of the growth, increasing by 95 kb/d in 2019 and 230 kb/d in 2020 as shipping operators switch away from high sulphur fuel oil due to the International Maritime Organisation's new sulphur rules. OECD European oil demand is set to increase by 55 kb/d in 2019 and 65 kb/d in 2020.

## OECD Asia Oceania

Oil demand in Asia Oceania fell 95 kb/d y-o-y in April, after a drop of 325 kb/d in 1Q19. Large decreases were seen in fuel oil (140 kb/d), other products (130 kb/d), jet/kerosene (50 kb/d) and gasoline (25 kb/d). Warm weather reduced demand for heating fuels in 1Q19.

**Japan's** oil demand rose by 5 kb/d y-o-y in April after a fall of 230 kb/d in 1Q19. Demand was penalised by warmer weather and slowing economic activity. In April, there was a strong rebound in kerosene and gasoil demand. The latest Japanese RPK numbers show relatively high growth in air traffic demand of 4.1% in April and 6.6% in May. In May, however, Japanese oil demand fell by 185 kb/d y-o-y.

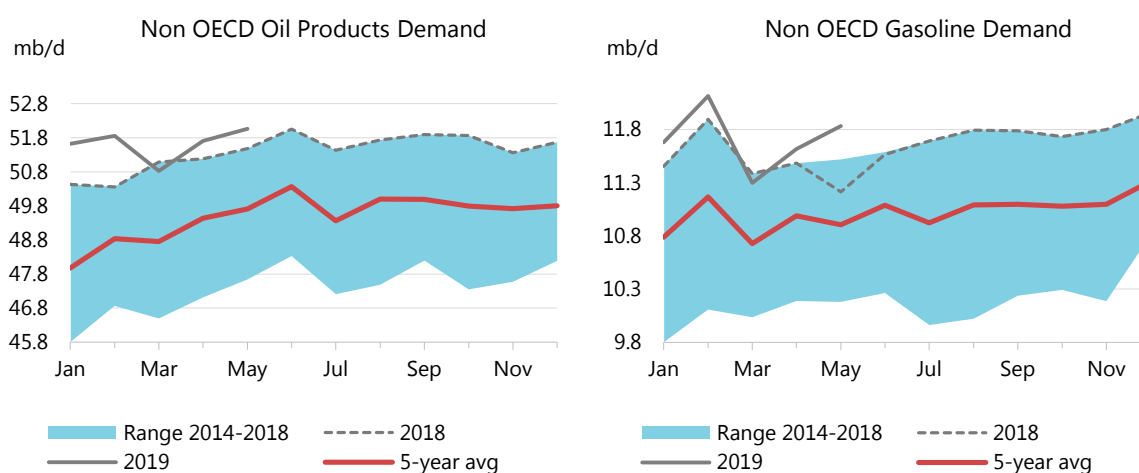


**Korean** demand decreased 90 kb/d y-o-y in April, on a poor economic environment which saw GDP contract by 0.4% in 1Q19. The economy remains weak due to international trade tensions, and in April total new orders (domestic and from abroad) shrunk for the eighth consecutive month on reduced demand from the auto and electronic sectors. Naphtha and fuel oil consumption fell sharply. In May, Korea's oil demand fell by 225 kb/d, as deliveries of all products was particularly weak. **Australian** oil demand was down 15 kb/d y-o-y in April.

We expect demand in the region to fall by 120 kb/d, in 2019. Other products will show the largest fall, followed by fuel oil and gasoline. In 2020, we forecast growth in demand of 35 kb/d, boosted by better economic activity.

## Non-OECD

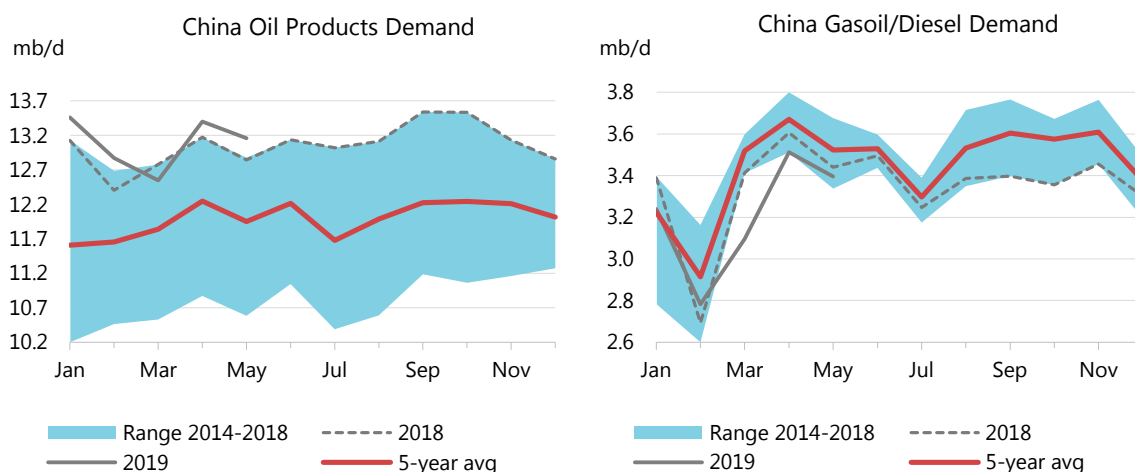
This month, we have revised down our oil demand estimates for non-OECD countries by 70 kb/d in 1Q19 and 330 kb/d in 2Q19, following the receipt of lower figures for India, Russia, Saudi-Arabia and Singapore. We now estimate that non-OECD oil demand grew by 710 kb/d y-o-y on average during the first half of 2019. This marks a slowdown from the rate of 1 mb/d registered in the second half of 2018 but is roughly in line with annual growth in 1H18. On a product basis, gasoline (+230 kb/d y-o-y) grew the most in 1H19, helped by the rapid takeup of gasoline cars and motorcycles in China and the rest of Asia, despite the recent falls in car sales registered in these countries. There was also growth of 160 kb/d y-o-y in gasoil/diesel and 90 kb/d y-o-y in jet/kerosene, also thanks to Asia, while petrochemical fuels such as LPG (+140 kb/d) and naphtha (+80 kb/d) contributed amid rising cracker capacity.



Non-OECD oil demand growth is expected to pick up significantly to 1.2 mb/d y-o-y in 3Q19 and 1.4 mb/d y-o-y in 4Q19, contributing nearly three-quarters of the global growth total during that period. Gasoil/diesel consumption is likely to rise sizeably, by 320 kb/d y-o-y in 3Q19 and 830 kb/d in 4Q19, helped first by improving economic prospects and second by the International Maritime Organisation's new sulphur rules for bunker fuel. We expect to see growth in all major other fuels, bar residual fuel.

## China

Chinese apparent oil demand, an estimate based on refinery output, trade flows and oil stocks in the absence of recorded deliveries, rose 320 kb/d y-o-y in May, the last month for which figures are available. This marks a recovery from the y-o-y drop recorded in March and growth of just 230 kb/d y-o-y in April. We now estimate that China's oil demand grew by 310 kb/d y-o-y in 2Q19, a quicker pace than the 180 kb/d registered at the same time last year. Gasoline demand, which had fallen in 1Q19, grew by 200 kb/d in 2Q19, while gasoil/diesel demand continued to decline, but at a slower pace than in recent months. However, jet/kerosene consumption was slightly lower during the quarter, the first such occurrence in eight years, during which demand rose steadily on the back of rising transport demand from the middle class. Chinese tourists spent 10% less outside the country in 1Q19 compared with 1Q18, according to official data, due to the yuan's depreciation and slower economic growth.



This month, we adjusted China's gasoil/diesel and gasoline consumption up by 330 kb/d and 70 kb/d, respectively, during January-April (see *China adjustment clarifies "other product" demand*). We estimate that underreporting of gasoil/diesel and gasoline output is likely to have occurred in recent months. Therefore, in our model we have decided to fix gasoil/diesel and gasoline yields at the December 2018 level in the absence of better data. This has the effect of boosting gasoil/diesel and gasoline output (and thus the apparent demand of both products) versus what has been reported by China's National Bureau of Statistics. This has had no impact on our *overall* oil demand forecast, as the consumption of other products is reduced by a comparable amount. We believe it better reflects the country's product mix.

China's oil demand is forecast to rise by 510 kb/d y-o-y during the second half of 2019, helped by the commissioning of new propane dehydrogenation plants, which will boost LPG demand by 120 kb/d y-o-y, as well as higher gasoil/diesel (+130 kb/d), gasoline (+100 kb/d), jet/kerosene (+70 kb/d) and naphtha deliveries (+70 kb/d). This assumes that economic activity recovers from the tepid growth registered in 1H19. China's manufacturing Purchasing Managers Index (PMI) was 49.4 in June, indicating a slowdown in factory activity. It has been hovering between 48.3 and 50.8 since late 2018. Meanwhile, industrial output grew by just 5% y-o-y in May, the lowest growth figure recorded in 17 years, data from the National Bureau of Statistics showed.

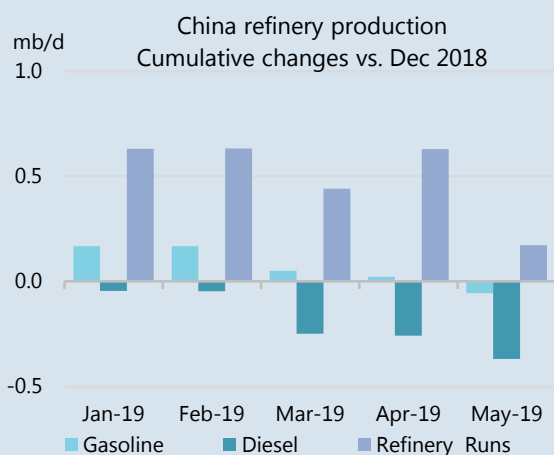
### China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2018	2019	2020	2019	2020	2019	2020
LPG & Ethane	1,616	1,699	1,793	82	94	5.1	5.5
Naphtha	1,243	1,305	1,351	62	46	5.0	3.5
Motor Gasoline	2,954	3,049	3,122	96	73	3.2	2.4
Jet Fuel & Kerosene	800	858	919	58	61	7.2	7.2
Gas/Diesel Oil	3,377	3,401	3,486	25	84	0.7	2.5
Residual Fuel Oil	452	415	365	-37	-50	-8.2	-12.2
Other Products	2,624	2,716	2,726	92	10	3.5	0.4
<b>Total Products</b>	<b>13,065</b>	<b>13,443</b>	<b>13,761</b>	<b>377</b>	<b>318</b>	<b>2.9</b>	<b>2.4</b>

### Box 1. China adjustment clarifies “other product” demand

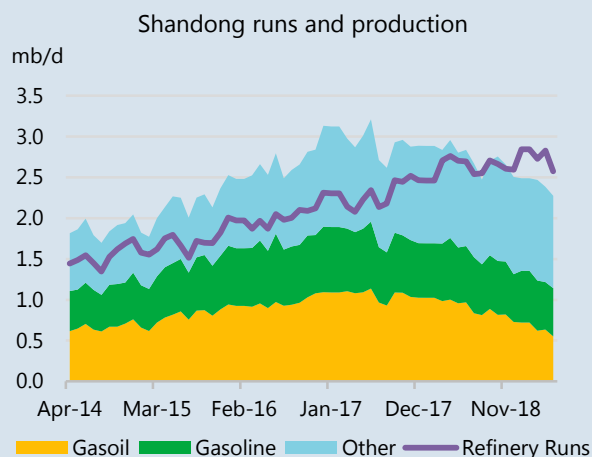
In this report, the estimate for Chinese oil demand by product has been modified in the light of anomalies in the official National Bureau of Statistics refinery output data. Apparent demand for the main products is calculated as refinery production plus net imports minus stock changes when



available. Demand for ‘other products’ is calculated as refinery runs minus the sum of main product production plus net imports. Discrepancies between runs and main product production can therefore have a strong impact on these ‘other products’.

Since the start of 2019, discrepancies between runs and identified production have risen strongly. While Chinese runs have increased steadily, the reported production of gasoil and gasoline has been declining or stagnant, while no product

appears to benefit from this evolution (no yield shift). As a result, the category ‘other products’ in our reporting started to dramatically increase from January 2019.



Looking at provincial data, it appears that the main source of discrepancies is, once again, oil reporting in Shandong. While identified product production in Shandong was significantly higher than runs before March 2018, possibly reflecting some underreporting of crude runs and production from blenders importing light cycle oil or mixed aromatics, the opposite is true in 2019. While runs continued to increase, the production of main products started to post significant declines.

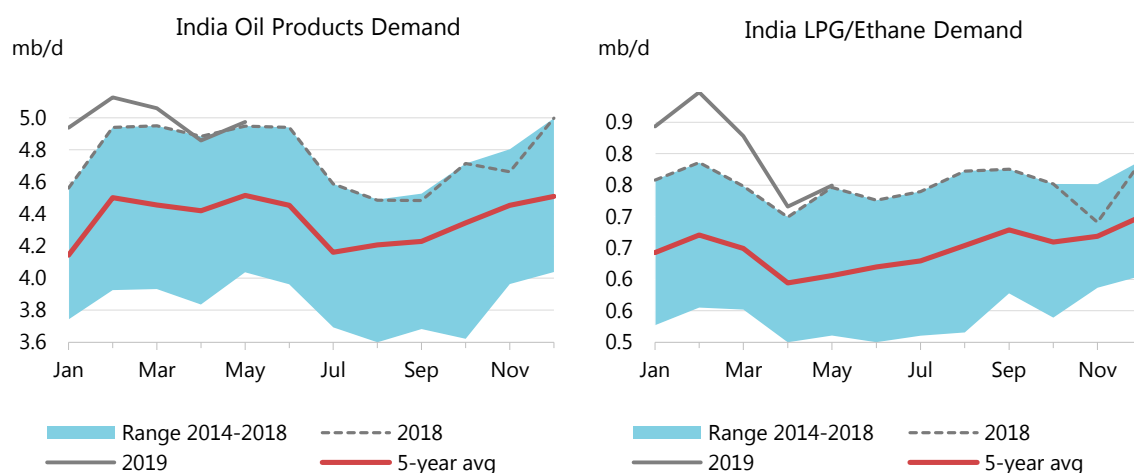
This likely distortion does not impact the global calculation of total Chinese demand, as runs are believed to be reported largely correctly, but leads to an overestimation of ‘other products’ and lower gasoline and gasoil demand. We therefore adjusted our apparent demand calculation, using gasoil and gasoline yields at the end of 2018 applied to reported runs, to better estimate Chinese demand.

## India

Indian oil demand figures for May came in 240 kb/d below expectations. At just 30 kb/d y-o-y growth, this was the second straight month of low or negative growth. ‘Other products’ were largely responsible, as demand fell 120 kb/d y-o-y. Residual fuel oil consumption also declined, while jet/kerosene demand growth came to a standstill. The Indian aviation industry has

struggled in recent months with reduced demand for travel, even if domestic airlines have benefitted from the bankruptcy of Jet Airways earlier this year.

Gasoline demand grew 80 kb/d in May y-o-y and gasoil/diesel was up 50 kb/d, thus still showing rapid growth, despite the recent reduction in passenger vehicle and two-wheeler sales. In May, car sales fell by a significant 26% y-o-y to their lowest level in 18 years, according to industry figures. It was also noticeable that LPG/ethane consumption growth went to zero in May, the lowest annual growth recorded in several months, despite the government's decision to extend the Pradhan Mantri Ujjwala Yojana LPG subsidy to all poor households at the end of 2018. New LPG connections went up 45%, or 40 million, during April 2018-March 2019 versus the previous fiscal year. It is estimated that 90% of Indian households now use LPG for cooking.



All this means that Indian oil demand increased by just 60 kb/d y-o-y in 2Q19, the lowest quarterly growth since the beginning of 2017, and by an average of 140 kb/d over 1H19. We expect growth to accelerate to 240 kb/d during 2H19. LPG demand is seen expanding by 50 kb/d y-o-y in 2019, a slightly faster pace than in 2018, whereas motor fuels such as gasoline and gasoil/diesel will grow by 40 kb/d and 70 kb/d, respectively, less than in 2018.

### India: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2018	2019	2020	2019	2020	2019	2020
LPG & Ethane	781	830	867	49	36	6.3	4.4
Naphtha	315	321	335	6	14	1.7	4.5
Motor Gasoline	668	711	745	43	34	6.4	4.8
Jet Fuel & Kerosene	246	255	272	9	17	3.5	6.8
Gas/Diesel Oil	1,676	1,744	1,821	69	76	4.1	4.4
Residual Fuel Oil	143	142	140	-2	-1	-1.1	-0.8
Other Products	939	956	1,006	16	50	1.7	5.2
<b>Total Products</b>	<b>4,769</b>	<b>4,958</b>	<b>5,186</b>	<b>190</b>	<b>227</b>	<b>4.0</b>	<b>4.6</b>

## Other Non-OECD

Saudi Arabia's oil demand in April was down 30 kb/d y-o-y and was 290 kb/d below our forecast. There was a significant drop in 'other products' consumption, a category which

encompasses crude oil burned for power generation. We forecast other products demand (i.e. crude burn) to fall by between 70-80 kb/d y-o-y during the summer months, as Saudi Arabia ramps up natural gas-fired power plants. By contrast, fuel oil demand is likely to increase by around 110 kb/d as more residual fuel makes its way into the power sector. Gasoline demand will remain stagnant y-o-y, as a consequence of the 2018 increase in retail pump prices.

**Pakistan's** oil consumption in April fell 50 kb/d y-o-y and was 40 kb/d below expectations. Gasoil/diesel demand was down 30 kb/d y-o-y amid low economic growth. The International Monetary Fund approved at the end of June a bailout package of \$6 billion to shore up the economy. Fuel oil consumption fell 20 kb/d y-o-y as the country increasingly relies on natural gas for power supplies. We expect Pakistan's oil demand to fall 10 kb/d y-o-y in 2019.

### Non-OECD: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	3Q18	4Q18	1Q19	4Q18	1Q19	4Q18	1Q19
LPG & Ethane	6,829	6,864	7,011	152	210	2.3	3.1
Naphtha	2,928	3,073	3,067	158	108	5.4	3.6
Motor Gasoline	11,716	11,790	11,642	430	115	3.8	1.0
Jet Fuel & Kerosene	3,462	3,247	3,405	81	143	2.6	4.4
Gas/Diesel Oil	14,661	14,869	14,351	101	92	0.7	0.6
Residual Fuel Oil	4,874	4,724	4,726	-17	-108	-0.4	-2.2
Other Products	7,207	7,045	7,186	144	176	2.1	2.5
<b>Total Products</b>	<b>51,677</b>	<b>51,611</b>	<b>51,387</b>	<b>1,049</b>	<b>736</b>	<b>2.1</b>	<b>1.5</b>

**Singapore's** fuel oil demand appears weak since the start of 2018 as a result of slowing trade in Southeast Asia. This month, we have incorporated figures from the country's Maritime and Port Authority and this has resulted in a downward adjustment to our oil demand figures.

We have also reduced our oil demand figures for **South Africa** following the release of new fuel delivery statistics by the Department of Energy. Oil demand was down 30 kb/d y-o-y in 1Q19, with falling deliveries of gasoline (-20 kb/d y-o-y) and jet/kerosene (-10 kb/d). We expect oil demand to remain more or less unchanged in 2019.

**Russian** oil demand figures were revised lower. However, demand grew by a strong 130 kb/d y-o-y in 1Q19 and 100 kb/d in 2Q19. We expect it to increase by 90 kb/d on average in 2019.

**Brazilian** oil demand came in 50 kb/d above expectations in April with much stronger gasoline consumption than estimated (+70 kb/d y-o-y). The underlying economic situation remains challenging, with the government deciding in early July to reduce its 2019 GDP growth forecast.

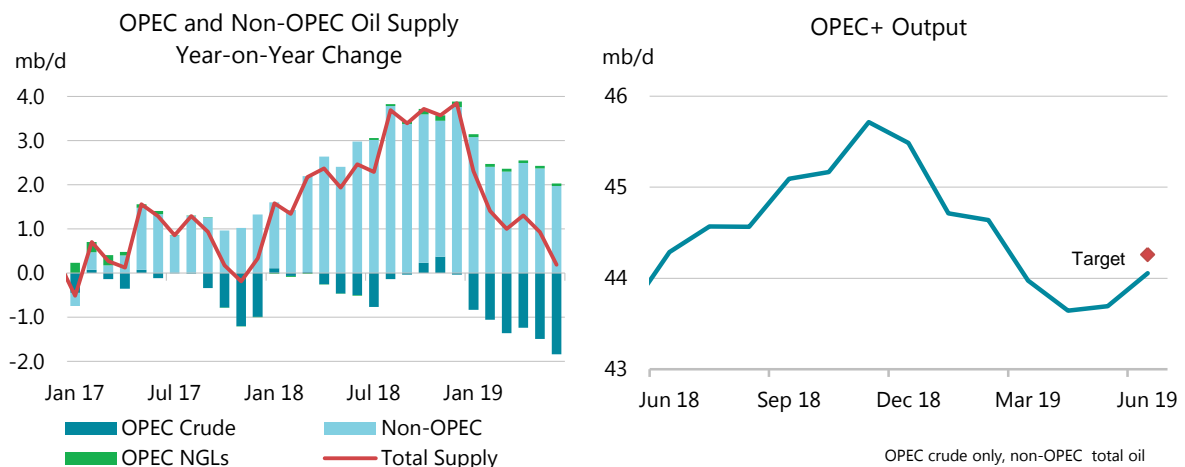
# Supply

## Overview

Seeking to prevent a build-up of global oil inventories, OPEC+ producers agreed in early July to maintain their supply cut through the first quarter of next year (see *OPEC+ extends cuts to drain inventories*). Our balances show the potential for oversupply next year as the pace of non-OPEC's expansion quickens to 2.1 mb/d compared to 2 mb/d this year. For the past four months, OPEC+ has cut by more than its agreed 1.2 mb/d while Iran lost a further 0.5 mb/d due to US sanctions. Even so, global oil production rose 0.5 mb/d during this period on increasing supplies from the US, Brazil and biofuels.

In June, world oil supply topped the 100 mb/d mark for the first time since January, rising 300 kb/d month-on-month (m-o-m). The bulk of the increase stemmed from Kazakhstan, where output surged to a new high after the completion of maintenance work. Higher flows from the US, Brazil, Nigeria and Russia also contributed. By contrast, Norwegian supply dropped close to a 30-year low. Iran, too, saw its output hover at the lowest in three decades as sanctions took a further toll.

Crude supply from OPEC was down 90 kb/d m-o-m, to 29.9 mb/d, led by losses from Iran, Iraq and Angola. Apart from Nigeria, Saudi Arabia also increased supply. As for non-OPEC, oil supply rose by 390 kb/d to 64.8 mb/d.

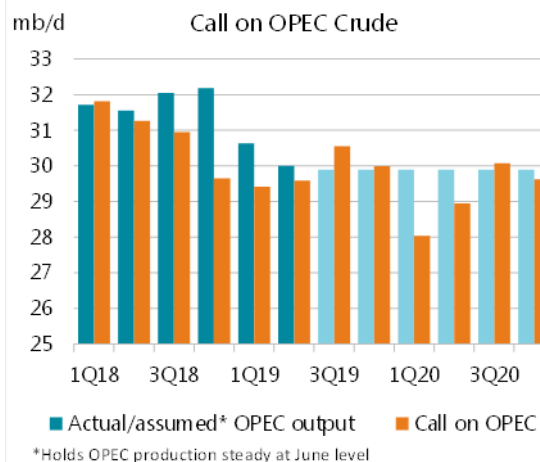


Compared to a year ago, global supply in June was up 200 kb/d. Fuelled by the US, non-OPEC production was nearly 2 mb/d higher, while OPEC oil output was down 1.8 mb/d because of planned supply cuts and sanctions.

The call on OPEC crude has been reduced by roughly 0.2 mb/d since last month's *Report*, partly due to revisions in historical data. A new survey introduced by Statistics Canada and NRCan

now includes output of fuels from the country's upgraders previously not captured in national statistics.

That revision along with downward adjustments to demand growth means that there is expected to be even less need for OPEC crude next year. The call on OPEC tumbles to 28 mb/d in 1Q20. The 14 members have not produced at such a low level since 3Q03. For 2020 as a whole, the call averages 29.1 mb/d, down from 30.3 mb/d during 2H19.



OPEC / Non-OPEC Output<sup>1</sup>  
(million barrels per day)

	May 2019 Supply	Jun 2019 Supply	Supply Baseline <sup>2</sup>	Agreed Cut	New Target	June Compliance	Sustainable Production Capacity <sup>5</sup>	Spare Capacity vs June Supply <sup>6</sup>
Algeria	1.03	1.01	1.06	0.032	1.03	147%	1.05	0.04
Angola	1.45	1.40	1.53	0.047	1.48	272%	1.50	0.10
Congo	0.36	0.35	0.33	0.010	0.32	-250%	0.35	0.00
Ecuador	0.53	0.53	0.52	0.016	0.51	-38%	0.54	0.01
Equatorial Guinea	0.11	0.11	0.13	0.004	0.12	425%	0.12	0.01
Gabon	0.20	0.22	0.19	0.006	0.18	-550%	0.20	-0.02
Iraq	4.78	4.72	4.65	0.141	4.51	-48%	4.90	0.18
Kuwait	2.71	2.68	2.81	0.085	2.72	152%	2.93	0.25
Nigeria <sup>3</sup>	1.66	1.77	1.65	0.053	1.60	-226%	1.79	0.02
Saudi Arabia	9.70	9.77	10.63	0.322	10.31	268%	12.02	2.25
UAE	3.05	3.06	3.17	0.096	3.07	113%	3.39	0.33
<b>Total OPEC 11</b>	<b>25.58</b>	<b>25.62</b>	<b>26.66</b>	<b>0.812</b>	<b>25.85</b>	<b>128%</b>		
Iran <sup>4</sup>	2.40	2.28					3.85	-
Libya <sup>4</sup>	1.16	1.13					1.10	-0.03
Venezuela <sup>4</sup>	0.86	0.88					0.88	0.00
<b>Total OPEC</b>	<b>30.00</b>	<b>29.91</b>					<b>34.62</b>	<b>3.19</b>
Azerbaijan	0.78	0.77	0.80	0.020	0.78	140%		
Bahrain	0.21	0.21	0.22	0.005	0.21	120%		
Brunei	0.12	0.12	0.12	0.003	0.11	-1%		
Kazakhstan	1.75	2.03	2.03	0.040	1.99	-3%		
Malaysia	0.71	0.70	0.70	0.015	0.68	-41%		
Mexico	1.91	1.90	1.99	0.040	1.95	222%		
Oman	0.98	0.98	1.00	0.025	0.98	99%		
Russia	11.44	11.49	11.75	0.230	11.52	114%		
Sudan	0.07	0.07	0.07	0.002	0.07	95%		
South Sudan	0.15	0.15	0.12	0.003	0.12	-985%		
<b>Total Non-OPEC</b>	<b>18.11</b>	<b>18.42</b>	<b>18.80</b>	<b>0.383</b>	<b>18.41</b>	<b>98%</b>		

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

<sup>2</sup> Based on Oct-2018 production, except for Azerbaijan and Kuwait based on Sept-2018 and Kazakhstan Nov-2018. Non-OPEC supply baseline based on IEA estimates

<sup>3</sup> Nigeria supply baseline based on IEA estimates, which exclude Akpo and Agbami condensates.

<sup>4</sup> Iran, Libya, Venezuela exempt from cuts

<sup>5</sup> Capacity that can be reached in 90 days and sustained for an extended period.

<sup>6</sup> Spare capacity excludes Iranian crude supply that is offline due to sanctions.

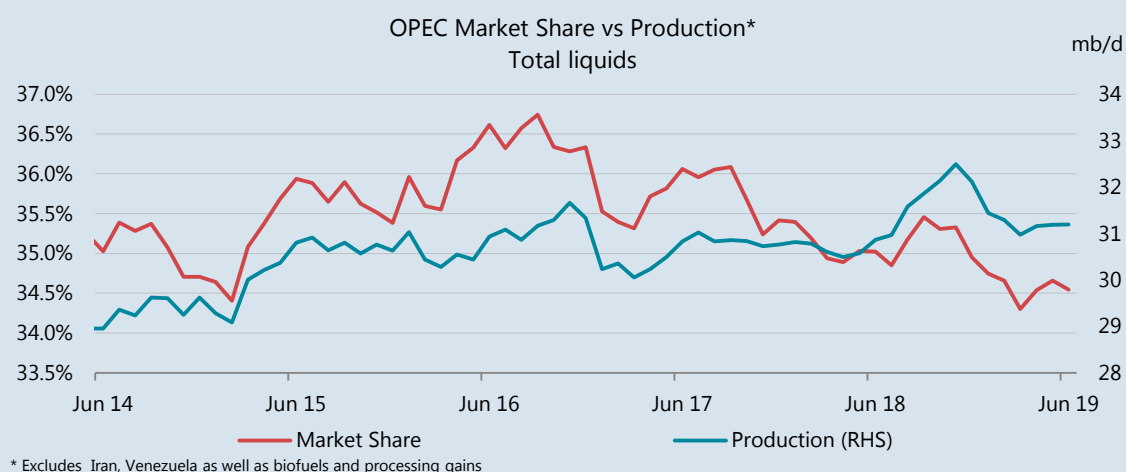


## Box 2. OPEC+ extends cuts to drain inventories

OPEC and its non-OPEC allies led by Russia agreed on 2 July to extend their existing supply curbs for nine months through March 2020 in a bid to lower oil stocks amid surging US supply. Of the 1.2 mb/d total cut, OPEC will shoulder 0.8 mb/d and non-OPEC the remainder. The group also signed a long term charter of cooperation and reappointed Mohammad Barkindo as Secretary General for another three years.

"It's fair to say that over the last few months, inventories did build in a manner that we would have liked to avoid. What's important is that going forward we are going to bring inventories down," said Saudi Energy Minister Khalid al-Falih. "The nine-month (extension) is a recognition that the first quarter is likely to see soft demand and exiting in December would have been unwise." OPEC is scheduled to meet again on 5 December.

In any case, the decision to extend the OPEC+ cuts was widely expected. On 29 June in Osaka, Russian President Vladimir Putin announced that he and Saudi Crown Prince Mohammed bin Salman had agreed to keep the output curbs in place at least until the end of this year.



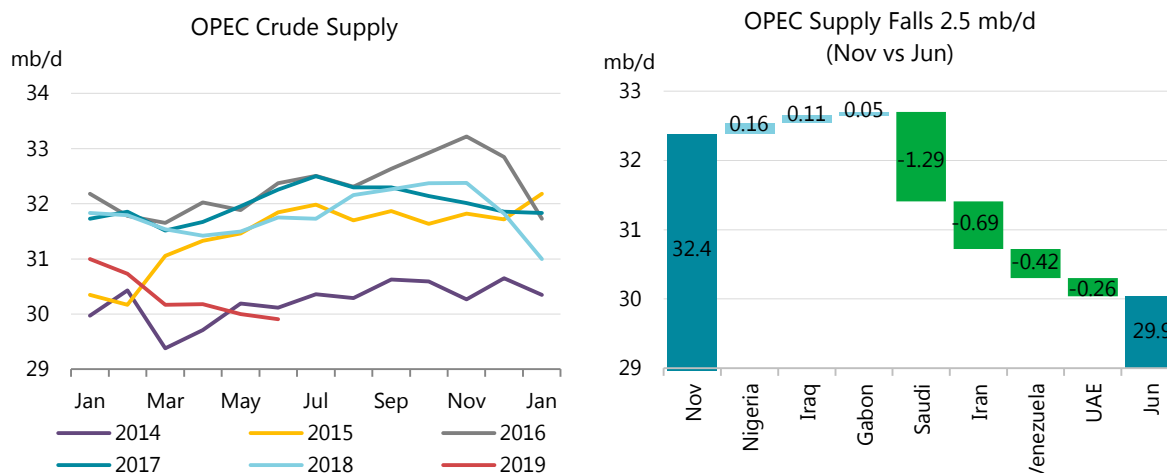
Very high compliance with the OPEC+ pact is helping to rebalance the oil market and extending the deal will continue that effort. Looking ahead, however, IEA balances show the potential for an oversupplied market in 2020 due to strong non-OPEC output growth, driven by the US.

It is the relentless growth of US shale and its challenge to market management that has led to a closer Saudi-Russian alliance and three years of coordinated OPEC/non-OPEC supply cuts. The cooperation has come at the price of lost OPEC market share. Excluding Venezuela and Iran, hit by sanctions and economic turmoil, OPEC's market share has fallen from a recent peak of 36.7% in September 2016 to 34.5% currently.

OPEC ministers also decided to evaluate new metrics to gauge the success of the agreement. One proposed measure is to use 2010-14 OECD inventory levels rather than the current five-year average. Based on the 2010-2014 period, OECD stocks are 220 mb above the average compared with a marginal surplus under the five-year average.

# OPEC crude oil supply

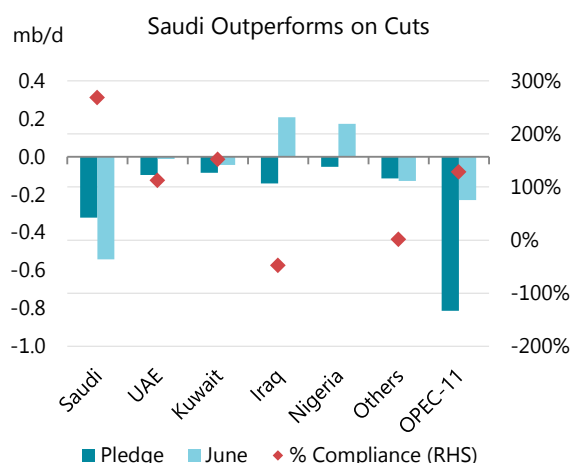
OPEC crude production fell during June, hovering at a five-year low, led by losses in Iran, Iraq and Angola. Nigerian output recovered to a three-year high and Saudi Arabia pumped slightly more. At 29.91 mb/d, supply was down 90 kb/d m-o-m and more than 1.8 mb/d lower than a year ago. For the past four months, OPEC members taking part in the OPEC+ supply pact have delivered more than required. To continue that rebalancing process, OPEC agreed on 1 July to extend its 800 kb/d supply cut through the first quarter of next year.



OPEC crude supply has declined by 2.5 mb/d since November when Saudi Arabia, the UAE and Iraq were producing at or near their highest ever levels. Saudi Arabia has lowered output by nearly 1.3 mb/d, while sanctions have cut more than 1.1 mb/d from Iran and Venezuela. Nigeria and Iraq have both ramped up versus November, meaning they are exceeding their supply targets. Compliance in June from OPEC members taking part in cuts eased to 128% versus 133% the previous month. OPEC's effective spare capacity in June was 3.2 mb/d, with Saudi Arabia holding about 2.3 mb/d, or 71 %.

Although **Saudi** output edged up 70 kb/d in June to 9.77 mb/d, its supply was still 540 kb/d below its OPEC+ target. Energy Minister Khalid al Falih said the kingdom would pump below its quota during the second half of the year, but would ensure that all customer requirements were met. Shipments to world markets eased by 70 kb/d to just under 7.1 mb/d during June, according to *Kpler* data.

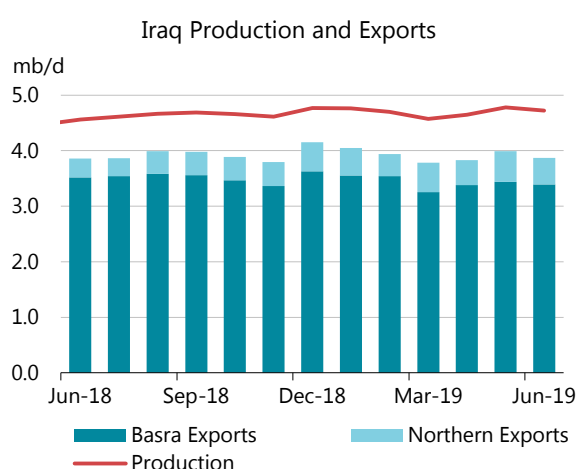
Saudi Aramco lowered the August price of Arab Light crude for customers in Asia by \$0.25/bbl to a premium of \$2.45/bbl over the Oman/Dubai average.



To sustain its maximum production capacity of 12 mb/d, Saudi Aramco has awarded \$18 billion worth of contracts to boost the offshore Marjan and Berri fields by a combined 550 kb/d to make up for natural declines elsewhere.

Elsewhere in the Gulf, supply from **Kuwait** dipped 30 kb/d to 2.68 mb/d, while output in the **UAE** inched up to 3.06 mb/d. The UAE continues to build up capacity even while cuts are in place. The Haliba field recently started up and is expected to reach 40 kb/d by the end of this year. Located along the Abu Dhabi-Oman border, it is operated by Al-Dhafra Petroleum, a joint venture between Abu Dhabi National Oil Co, Korea National Oil Corp and GS Energy.

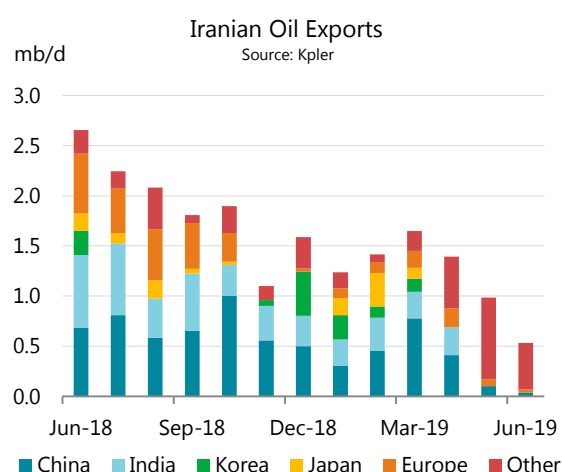
Output in **Iraq** fell 60 kb/d in June after exports slowed. Production of 4.72 mb/d, including the Kurdistan Regional Government (KRG), was up 160 kb/d on a year ago. As for exports, total shipments to world markets declined by 120 kb/d to roughly 3.9 mb/d. Bad weather in the Gulf saw southern exports decline by 50 kb/d to 3.39 mb/d. Oil sales from the north fell 70 kb/d to around 480 kb/d.



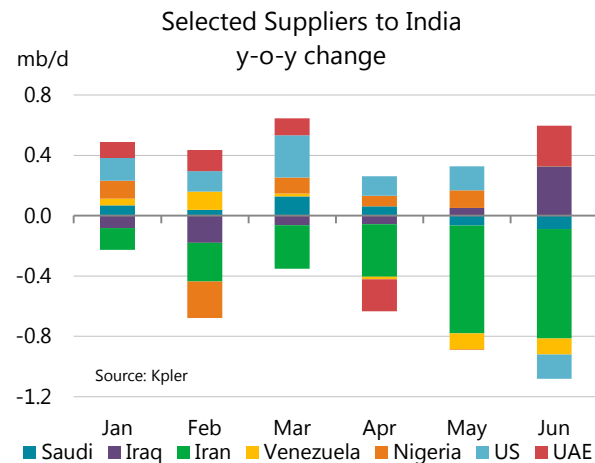
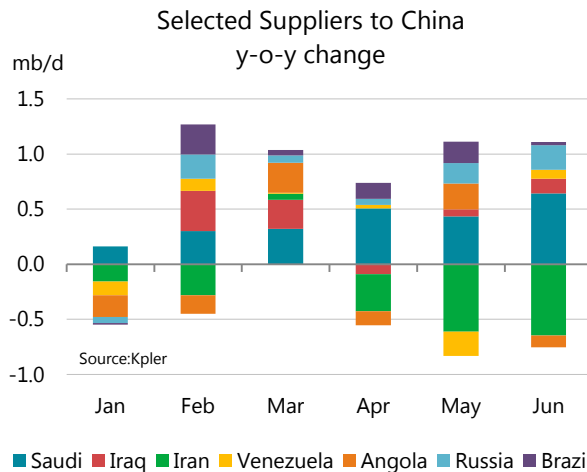
On the upstream front, Baghdad reportedly intends to sign an initial agreement for the \$53 billion South Iraq Integrated Project (SIIP), crucial to sustaining and expanding capacity in the giant fields in and around the Basra oil hub. The Exxon Mobil/PetroChina project includes a 5 mb/d water injection scheme and a plan to raise export capacity from 4 mb/d to 6.5 mb/d. It also aims to boost output at the fields of Nahr bin Umar and Ratawi from 100 kb/d to around 500 kb/d.

Crude production in **Iran** declined by 120 kb/d in June to 2.28 mb/d, hovering at a three-decade low as the US seeks to eliminate Iranian exports. Shipments of oil fell harder, tumbling 450 kb/d m-o-m to 530 kb/d although stocks of crude oil appear to have increased. By contrast, Iran exported 2.6 mb/d on average in the year to May 2018, when Washington announced its exit from the JCPOA.

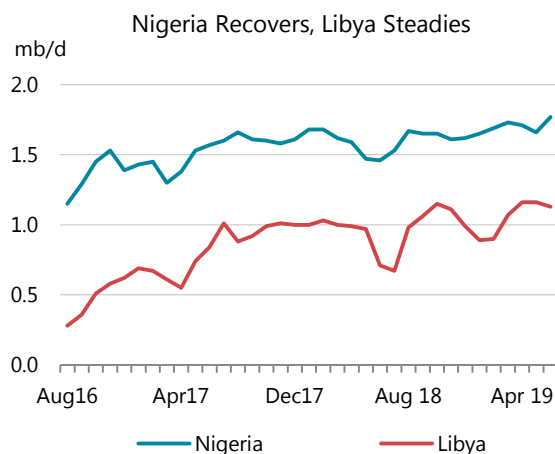
The US ended waivers to Iran's major customers at the end of May. Of the eight jurisdictions that had been awarded waivers, Turkey appears to have lifted 30 kb/d in June versus 70 kb/d in May, while China loaded 40 kb/d in June compared to 100 kb/d in May. Apart from 40 kb/d lifted by Syria, which was not granted a waiver, all other June liftings were tagged with "unknown" destinations.



Iran's two largest buyers, China and India, appear to be turning to other sources for replacement barrels. So far this year, Saudi Arabia, Iraq and Russia have stepped up sales to China, while India is lifting significantly more from the US and the UAE.



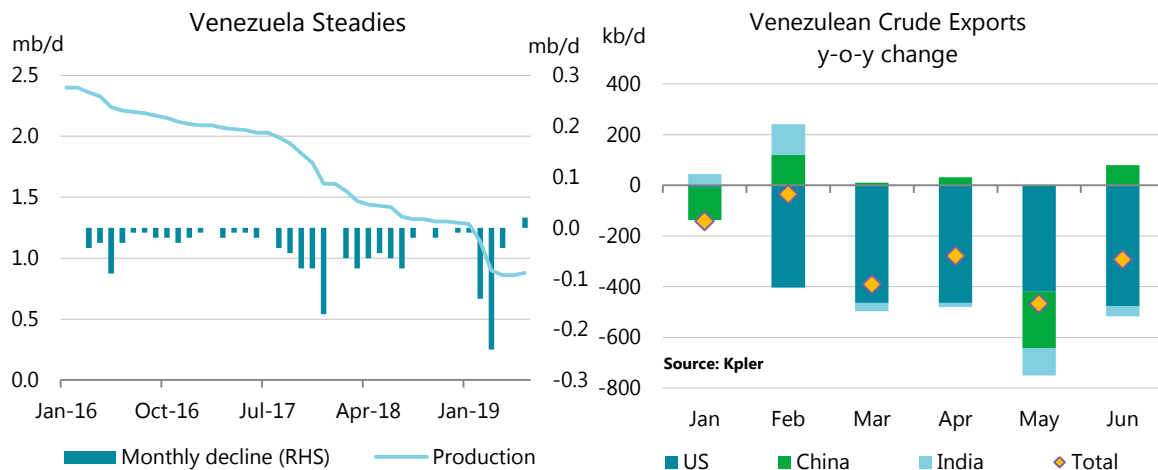
Output in **Nigeria** rose by 110 kb/d during June, pushing supply to a three-year high and offsetting combined losses elsewhere in Africa. As the offshore Egina field ramped up close to capacity, production rose to 1.77 mb/d, up 310 kb/d on a year ago. Crude supply in **Libya** dipped 30 kb/d to 1.13 mb/d due to maintenance work, but was still up 420 kb/d on last June.



Supply in **Angola** fell 50 kb/d in June to 1.4 mb/d, down 50 kb/d on a year ago. Output has declined because of operational issues and a lack of investment. Production in **Algeria** inched down to 1.01 mb/d due to a short-lived technical issue at the Hassi Berkine field during June. Supply in **Congo** dipped to 350 kb/d while production in **Gabon** edged up 20 kb/d to 220 kb/d. Output in **Equatorial Guinea** was flat versus May at 110 kb/d. ExxonMobil reportedly has completed work to maintain output at the Zafiro field that accounts for more than half the output in OPEC's smallest producer.

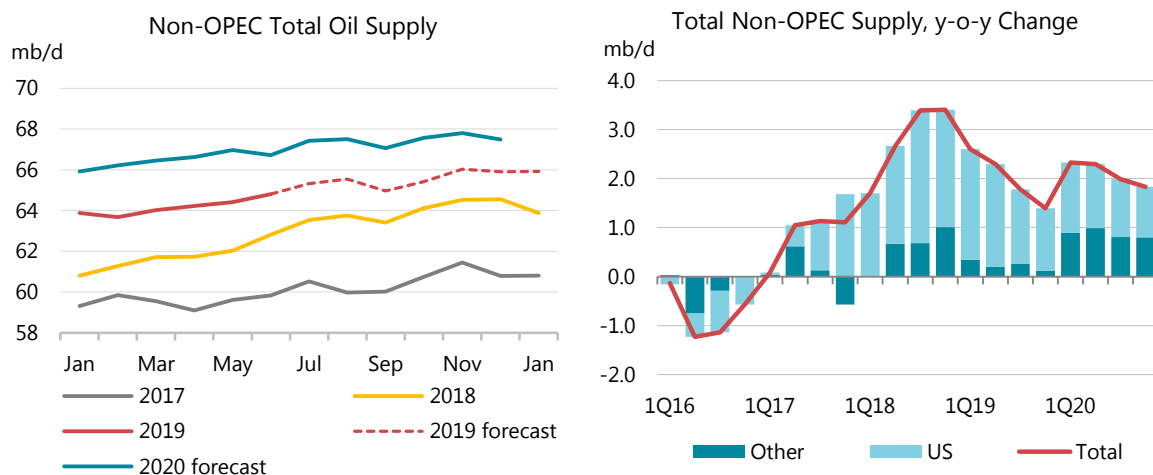
Supply in **Venezuela** crept up 20 kb/d in June to 880 kb/d. Though output has held broadly steady since March, it was down 540 kb/d on June 2018. Operating conditions remain fragile with much of the oil infrastructure in poor condition. The three heavy crude upgraders run by Petroleos de Venezuela (PDVSA) and its foreign partners reportedly are barely running, while a fourth that is run solely by PDVSA is said to be entirely out of action.

During June, exports rose 80 kb/d to 960 kb/d as PDVSA maximised shipments of grades that refiners in Asia prefer. Loadings for China were more than 400 kb/d, up 80 kb/d on a year ago while exports to India eased to 270 kb/d, down 40 kb/d on June 2018. As repayment for oil-for-loan deals with China and Russia, PDVSA must ship the largest chunk of its exports to China National Petroleum Corp and Rosneft. Total crude oil sales continued to be supported by barrels drawn from stocks. Production in **Ecuador** was steady versus May at 530 kb/d.



## Non-OPEC supply

Non-OPEC oil supply rose by 390 kb/d in June, to 64.8 mb/d, on higher output from Kazakhstan, the US and Brazil. Russian production also rebounded marginally following May's sharp drop. In contrast, maintenance curbed the availability of North Sea crudes, with Norwegian oil production dropping to its lowest level in nearly three decades.



Annual growth slowed to 2 mb/d from 2.6 mb/d in 1Q19 and 3.4 mb/d during the second half of 2018. The US accounted for most of June's increase, rising 2 mb/d y-o-y. Brazil, Canada, Russia, Kazakhstan and Australia posted smaller gains, while Norway and Mexico saw the biggest losses. For the year as a whole, non-OPEC output growth has been revised marginally higher, to 2 mb/d, on a slightly more robust outlook for the US and the UK.

In contrast, the forecast for 2020 has been reduced to 2.1 mb/d following the decision by OPEC+ countries to extend output cuts through 1Q20. In particular, estimates for Russia and Oman has been lowered, with output now assumed to be steady at around their respective quotas through 2020.

Historical data has been revised higher by 150-175 kb/d following a more comprehensive coverage of Canadian upgrader output. Previously, only synthetic crude oil production was

captured by Statistics Canada and subsequently provided to the IEA by NRCan. In a new survey, supplies of diesel, refinery gas and petroleum coke from upgraders, previously not accounted for in national supply statistics have been added. Only the amount of petroleum coke used by the upgraders as fuel has been added, with the remainder excluded both from supply and inventory data. While the new statistics only cover the January-April 2019 period, we have estimated historical volumes to avoid statistical distortions. For April, the adjustments amounted to 90 kb/d of refinery gas, 49 kb/d of diesel and 48 kb/d of petroleum coke.

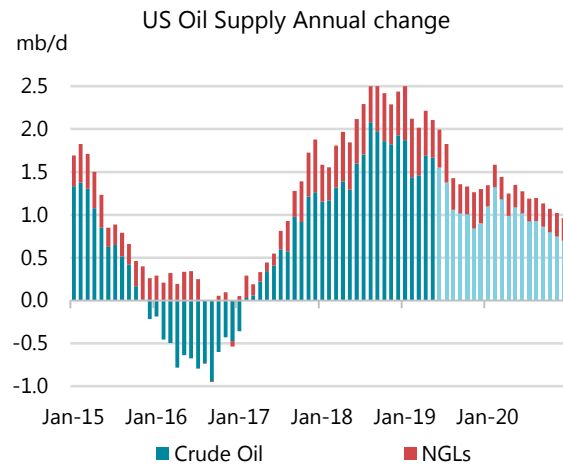
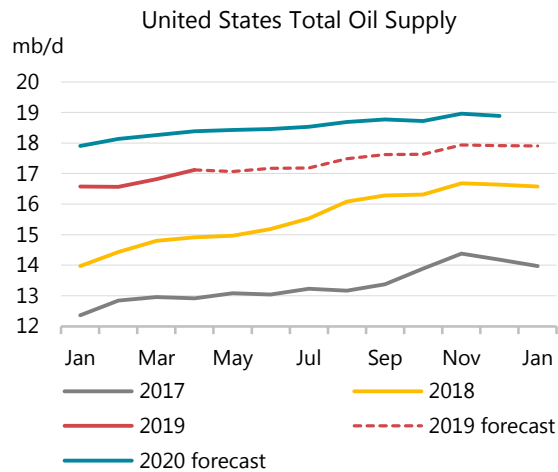
**Non-OPEC Supply**  
(million barrels per day)

	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
Americas	<b>23.0</b>	24.0	24.4	24.8	25.3	<b>24.6</b>	25.6	25.7	26.1	26.3	<b>25.9</b>
Europe	<b>3.5</b>	3.5	3.2	3.3	3.5	<b>3.4</b>	3.6	3.5	3.6	3.9	<b>3.7</b>
Asia Oceania	<b>0.4</b>	0.4	0.5	0.5	0.5	<b>0.5</b>	0.5	0.6	0.6	0.6	<b>0.6</b>
<b>Total OECD</b>	<b>26.8</b>	27.9	28.1	28.6	29.3	<b>28.5</b>	29.7	29.8	30.3	30.8	<b>30.2</b>
Former USSR	<b>14.6</b>	14.8	14.4	14.5	14.6	<b>14.6</b>	14.7	14.6	14.5	14.6	<b>14.6</b>
Europe	<b>0.1</b>	0.1	0.1	0.1	0.1	<b>0.1</b>	0.1	0.1	0.1	0.1	<b>0.1</b>
China	<b>3.8</b>	3.9	3.9	3.9	3.9	<b>3.9</b>	3.9	3.9	3.8	3.9	<b>3.9</b>
Other Asia	<b>3.3</b>	3.3	3.2	3.2	3.2	<b>3.2</b>	3.2	3.2	3.1	3.1	<b>3.2</b>
Latin America	<b>4.5</b>	4.5	4.6	4.9	5.0	<b>4.8</b>	5.1	5.1	5.1	5.1	<b>5.1</b>
Middle East	<b>3.3</b>	3.3	3.3	3.3	3.3	<b>3.3</b>	3.3	3.3	3.3	3.3	<b>3.3</b>
Africa	<b>1.4</b>	1.5	1.5	1.5	1.5	<b>1.5</b>	1.5	1.5	1.5	1.5	<b>1.5</b>
<b>Total Non-OECD</b>	<b>31.1</b>	31.4	31.1	31.3	31.5	<b>31.3</b>	31.7	31.7	31.5	31.6	<b>31.6</b>
Processing Gains	<b>2.3</b>	2.3	2.3	2.3	2.3	<b>2.3</b>	2.4	2.4	2.4	2.4	<b>2.4</b>
Global Biofuels	<b>2.6</b>	2.2	2.9	3.1	2.6	<b>2.7</b>	2.4	2.9	3.2	2.8	<b>2.8</b>
<b>Total Non-OPEC</b>	<b>62.9</b>	63.9	64.5	65.3	65.8	<b>64.9</b>	66.2	66.8	67.3	67.6	<b>67.0</b>
Annual Chg (mb/d)	<b>2.8</b>	2.6	2.3	1.7	1.4	<b>2.0</b>	2.3	2.3	2.1	1.8	<b>2.1</b>
Changes from last OMR (mb/d)	<b>0.2</b>	0.2	0.5	0.3	0.1	<b>0.3</b>	0.1	0.2	0.1	0.2	<b>0.2</b>

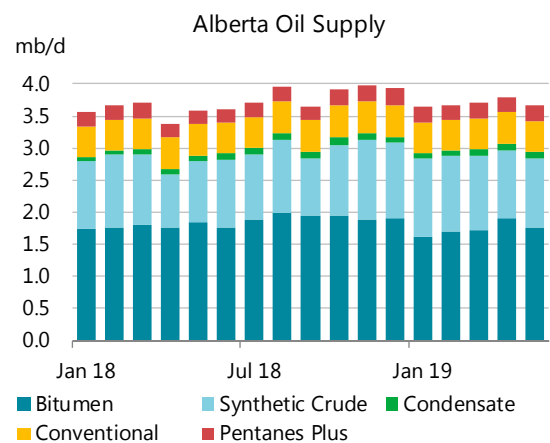
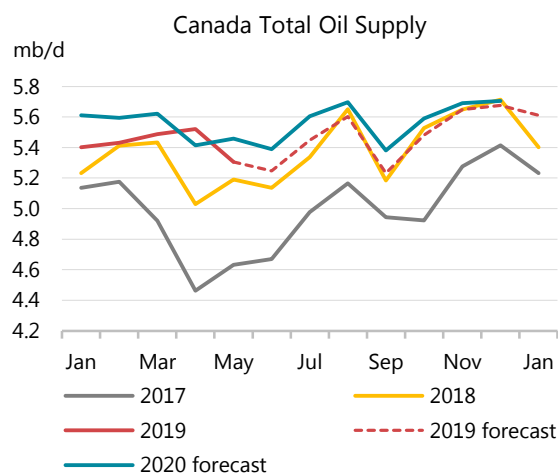
US crude and condensate production rose to a new record high of 12.2 mb/d in April. Monthly gains of 240 kb/d were underpinned by higher offshore production as well as continued growth in the shale patch. Gulf of Mexico output increased by 77 kb/d to 1.98 mb/d, a new record and nearly 400 kb/d higher than a year ago. Offshore production likely eased in July, as major oil companies evacuated platforms and shut in production due to the arrival of bad weather. Chevron, Shell, BP and BHP all announced they were removing staff and shutting in output from 15 offshore installations, including amongst others Big Foot, Blind Faith, Appomattox, Thunder Horse and Atlantis.

As for the onshore, production in Texas was up 107 kb/d m-o-m in April to 4.97 mb/d, also a record high and up by 745 kb/d in a year driven by robust activity in the Permian. Oklahoma and Colorado gained 32 kb/d and 14 kb/d, respectively. In North Dakota, home to most of the Bakken shale formation, production was roughly flat at around 1.36 mb/d. Total crude oil production was 1.7 mb/d higher than a year ago, while NGL production, at 4.8 mb/d was up 530 kb/d y-o-y.

For the year as whole, US oil supplies are expected to grow by 1.8 mb/d, 1.3 mb/d of which is crude and condensates. Growth is expected to slow to 1.3 mb/d in 2020, with crude oil making up 80%.



**Canadian** oil supplies dropped by 195 kb/d in May, to 5.3 mb/d, as seasonal maintenance at oil sands operations added to mandatory production curtailments in Alberta. Albertan oil output fell 140 kb/d, on lower raw bitumen output. Synthetic crude oil production inched 15 kb/d higher to 1.08 mb/d. While Albertan production was 270 kb/d lower than in December, it was 80 kb/d above a year ago. Offshore output inched up to 272 kb/d, as a continued ramp-up of the Hebron field (to 120 kb/d) and a recovery at the White Rose field more than offset lower volumes from the Hibernia and Terra Nova fields.



Source: Alberta Energy Regulator

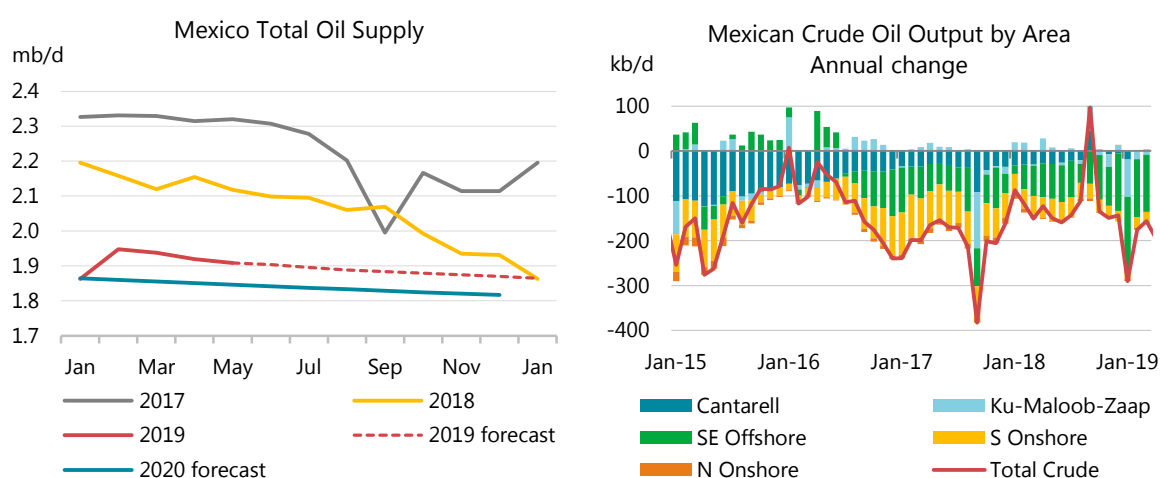
**Mexican** oil output eased another 10 kb/d in May, to 1.9 mb/d, and was 210 kb/d below a year earlier. Data from the hydrocarbon regulator, CNH, showed that the shallow water Xanab field accounted for more than half of the annual decline, with production falling from 137 kb/d a year ago to only 26 kb/d in May. Production at the Ku-Maloob-Zaap (KMZ) complex fell to 772 kb/d, down 72 kb/d on a year ago.

In early July, Eni reported it had started the early production phase from the Mizton field in Area 1, located in the shallow waters in the Bay of Campeche. Output had been scheduled to come online at 8 kb/d, rising to 15 kb/d. Bringing Mizton online is the first step in the development of Area 1, estimated to hold 2.1 billion of oil equivalent in place in the Amoca, Mizton and Tecoailli fields, which will produce from a floating production, storage and offloading unit (FPSO) to come online later. That second phase of the project is targeting peak

production of about 100 kboe/d by early 2021. The plan of development for Area 1 also includes two additional platforms on the Amoca field and one on the Tecoalli field.

Eni is the first international company to start offshore production in Mexico after the energy reform was enacted in 2013. Eni won the rights to develop fields discovered by Pemex in Area 1 in Mexico's Round 1.2 in 2015.

Pemex, meanwhile, reported that the platforms for the 20 new fields that it intends to bring on line this year to reverse output declines are on track. The Xikin-A platform is expected to be commissioned by the end of August, while Xikin and Esah will follow in November and December, respectively. The company forecast production from these fields to rise to around 70 kb/d by the end of December. Output from the 20 new fields and the two developments of existing fields is expected to rise gradually to reach 267 kb/d by 2020 and 320 kb/d by the end of 2021.



Production declines and field maintenance saw **Norway's** total oil production slip 120 kb/d m-o-m to 1.6 mb/d in May, the lowest in over five years. In June, when the Ekofisk field was shut for maintenance, it is estimated that output fell a further 110 kb/d to an almost 30 year low. The Ekofisk maintenance appears to have lasted around 20 days, less than the full month originally envisioned, with the resumption of loadings from 21 June. For 2019 as a whole, Norway's supplies are expected to fall by 130 kb/d.

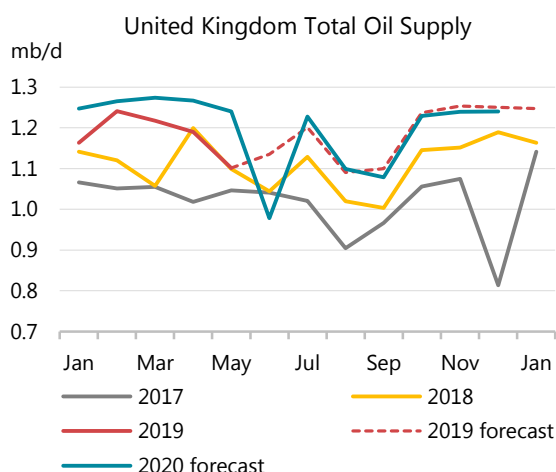
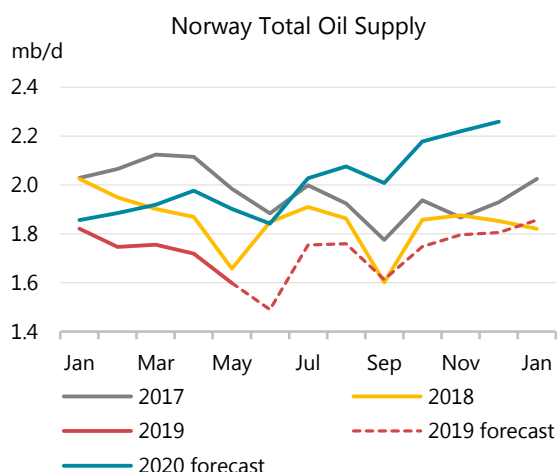
In 2020, growth of 300 kb/d is expected thanks largely to the Johan Sverdrup project, but smaller developments such as Trestakk and Oda also contribute. Adding to this, the authorities recently approved development plans for the Duva-Gjoa P1 and Solveig field tie-back projects, operated by Neptune Energy and Lundin Norway, respectively. These are expected online late in 2020 and could add a combined 50 kb/d. In addition, ConocoPhillips approved the Tor redevelopment project and this has been submitted for government approval.

At 1.1 mb/d, **UK** oil production was flat y-o-y in May. A pipeline leak caused the Flotta Terminal, and several fields that feed into it, to be shut in for almost two weeks. However, the disruptions had eased by the end of the month. Operator Repsol-Sinopec announced that further maintenance will take place in July. In June, production is estimated to have gained 90 kb/d y-o-y. Hurricane Energy started flows from the Lancaster field located West of Shetlands and first gas from Total's Culzean field, which has modest amounts of condensate and NGLs,

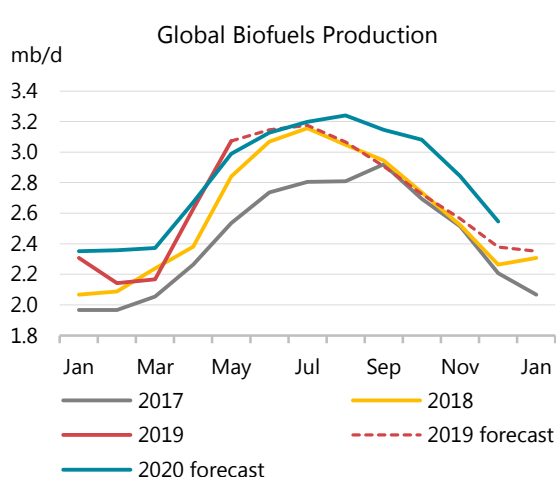
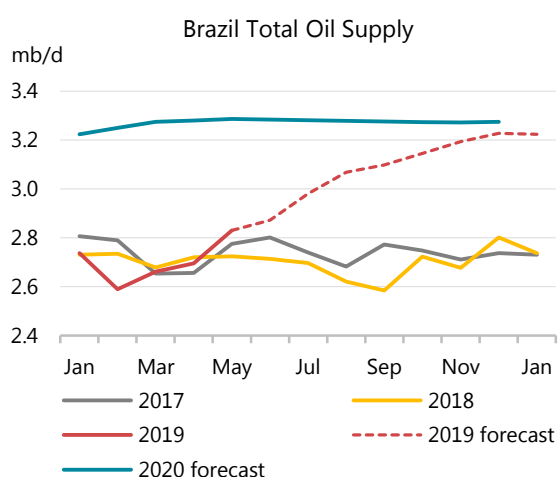


was achieved. Production is expected to move in line with the seasonal trend for the remainder of 2019, and achieve growth of 70 kb/d y-o-y as projects that started in 2018 continue to ramp up.

Preliminary programmes show that North Sea loadings will dip by 40 kb/d m-o-m in August, due to fewer Oseberg and Ekofisk cargoes.



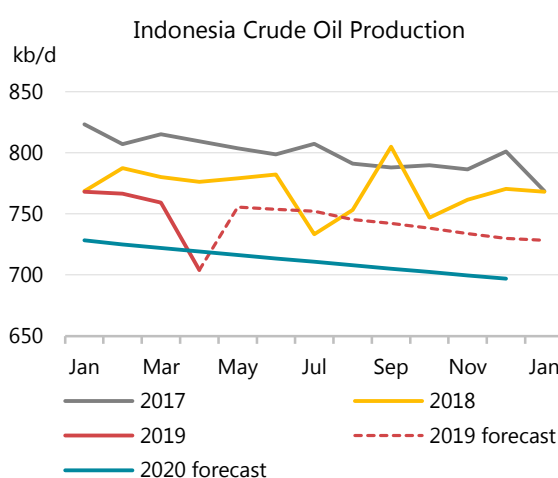
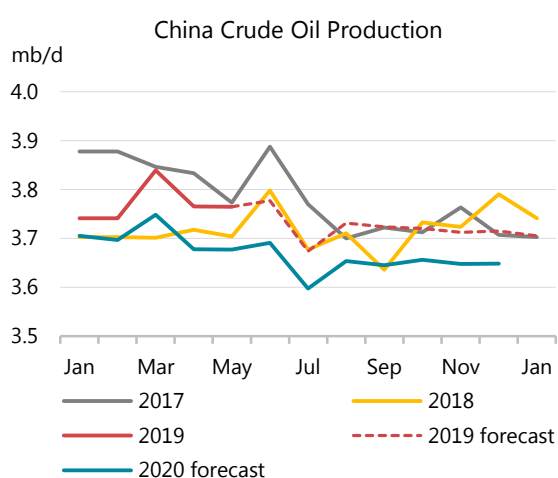
**Brazil's** oil production rose by 135 kb/d in May, to a record 2.83 mb/d, as maintenance shutdowns eased further and new units continued to ramp up. Production in the Santos Basin was 240 kb/d higher than a year ago, with the newly commissioned Búzios field contributing 195 kb/d of the annual gain. The field, which now boasts four 150 kb/d FPSOs, produced 230 kb/d in May and will be the key contributor to growth over 2019 and 2020. Campos basin production also recovered, rising 30 kb/d m-o-m, with declines moderating to 8%, compared with annual losses of 13% over the previous 12 months of the year. Most notably, there was a 67 kb/d recovery in Jubarte output, which rose to a two year high of 220 kb/d. The Marlim cluster of fields saw output rise by 30 kb/d, to 290 kb/d, but remained 40 kb/d below a year ago.



Despite the higher output, crude oil exports eased m-o-m to 1.2 mb/d, from a record 1.64 mb/d in April. Crude oil exports were nevertheless 265 kb/d higher than a year ago.

Brazilian biofuel supplies are also rising. Following April's 380 kb/d increase, Brazilian ethanol production surged by a further 400 kb/d in May. Output of 890 kb/d was 120 kb/d higher than a year ago, supported by weak sugar prices and increased demand for fuel. Global biofuel production is expected to increase by 80 kb/d in 2019 and 135 kb/d next year.

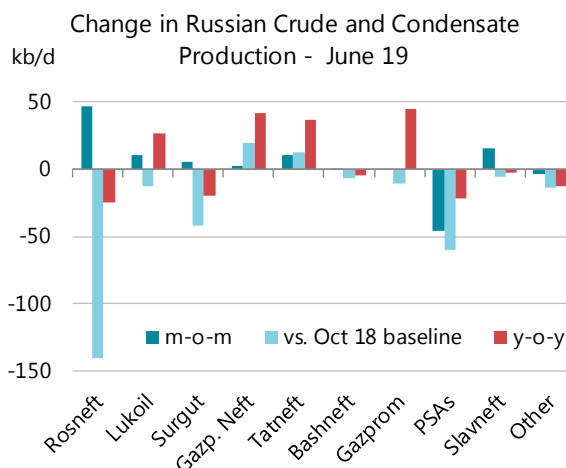
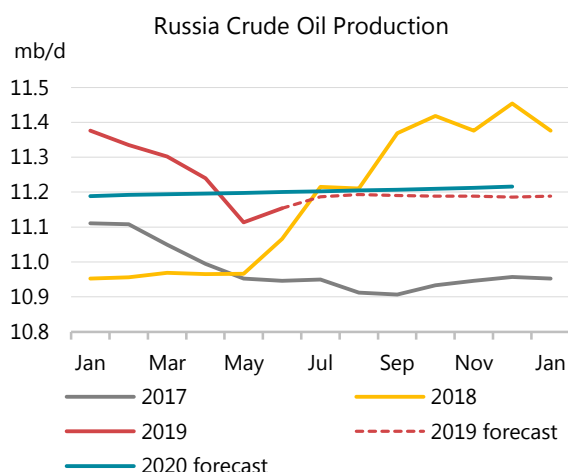
**China's** crude oil output held steady at around 3.76 mb/d in May, some 60 kb/d above a year earlier. Following April's 70 kb/d drop, production in the Guangdong province and Tianjin that include supplies from the South China Sea and Bohai Bay, respectively, declined by an additional 30 kb/d combined. In contrast, output in the Shaanxi province rose by 17 kb/d to a one-year high of 720 kb/d. Production in the Heilongjiang province that hosts the Daqing field held steady at around 620 kb/d, but was down 20 kb/d compared with a year ago. For the year as a whole, China is on track to post its first annual increase since 2015. Production will rise by 30 kb/d to 3.75 mb/d before natural declines resume next year. Including coal to liquids, Chinese oil supply is expected to average 3.9 mb/d in 2019 and 3.86 kb/d next year.



**Indonesian** crude and condensate production dropped to a new low of 704 kb/d in April. According to data submitted to JODI, production was 72 kb/d below a year earlier, compared with annual losses of 25 kb/d over the past 12 months. The latest drop was probably due to maintenance and output is expected to recover through the remainder of the year. Output is expected to decline by roughly 25 and 30 kb/d in 2019 and 2020, respectively. Elsewhere in the region, **Indian** oil supplies eased by 8 kb/d to 804 kb/d in May, 5% lower than a year earlier, while **Vietnam's** output dropped 10 kb/d to 240 kb/d. No new data has been reported for Malaysia since last month's *Report*.

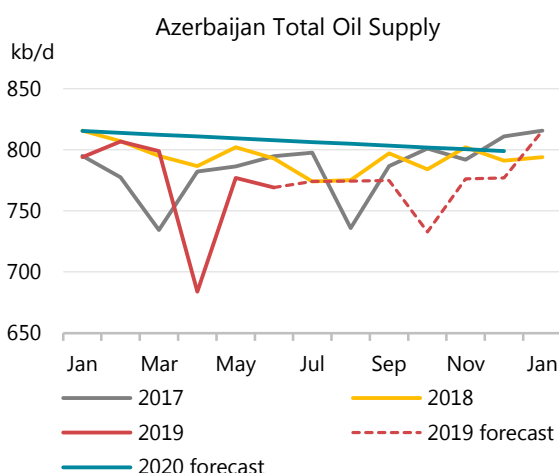
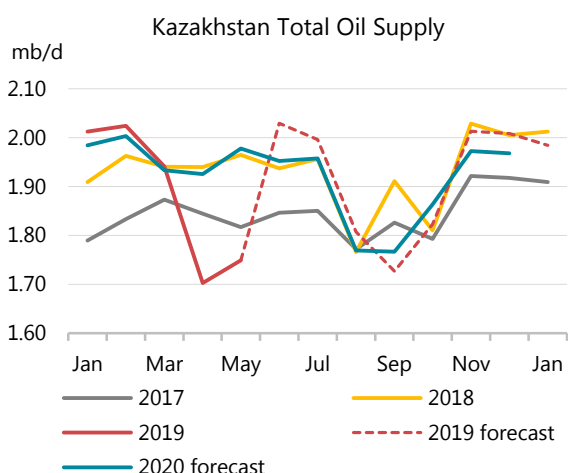
**Russian** crude and condensate production rebounded by 40 kb/d in June, to 11.15 mb/d, supported by the partial restart of the Druzhba pipeline. The biggest m-o-m increase came from Rosneft, which saw its output rise by 47 kb/d to 3.8 mb/d (excluding its Bashneft subsidiary). Rosneft's output was 25 kb/d lower than a year ago and 140 kb/d below the October baseline for OPEC+ output cuts. Lukoil raised production by 10 kb/d, as did Tatneft, while Slavneft increased by 16 kb/d. In contrast, output from production sharing agreement companies fell another 46 kb/d m-o-m. At 11.5 mb/d, total oil supply was 30 kb/d below the target set under the OPEC+ deal, but still up 90 kb/d on a year ago.

Following the decision to extend OPEC+ output cuts through March of next year we have curtailed our forecast for Russian supply. We now hold Russian crude oil output steady, at around 11.2 mb/d through to the end of 2020.



**Kazakhstan's** crude oil and condensate production rose by 45 kb/d in May, to 1.7 mb/d, according to the latest data. The increase stemmed from higher flows from Tengiz, Kazakhstan's largest field, which rose to 660 kb/d compared with 608 kb/d in April. While maintenance works at the Kashagan field ended 10 days ahead of schedule, on 19 May, output averaged only 90 kb/d for the month. This was 220 kb/d below a year earlier and 280 kb/d lower than the November 2018 supply baseline used to calculate compliance with OPEC+ output cuts.

According to Energy Minister Kanat Bozumbayev, Kashagan production briefly rose to a record high of 400 kb/d in early June and averaged 370 kb/d for the month as a whole. Output could reach 420 kb/d by year-end. In June, total crude and condensate production in Kazakhstan is estimated to have risen by nearly 300 kb/d to a new record of more than 2 mb/d. CPC loadings show that Kashagan shipments surged by 335 kb/d to 375 kb/d on average. Karachaganak flows rose by 20 kb/d and Tengiz shipments dropped by 95 kb/d from May's 750 kb/d high.



**Azerbaijan's** oil production eased by 8 kb/d in June, to 768 kb/d, or 24 kb/d below a year earlier. Compliance with agreed cuts was 140% in June. For the January to June period, Azeri production averaged 771 kb/d, compared with its pledge of 776 kb/d. It is possible that Azeri production will drop again in August. Scheduled loadings of Azeri BTC crude from Ceyhan was set at 580 kb/d compared with 670 kb/d in July. BP has announced that maintenance on the ACG Western Chirag platform will take place in October.

# REFINING

## Overview

The extent of the global refining slowdown in May exceeded our expectations. Data updates resulted in further downward revisions to May and 2Q19 estimates, by 0.5 mb/d each. Activity declined year-on-year (y-o-y) in every region except China and the Middle East. Our estimate for refined product balances in 2Q19 did not change, however, due to downward revisions to demand. It shows a draw of 1.1 mb/d. The draw comes after three consecutive quarters of strong builds. Margins in Europe and the US made modest gains quarter-on-quarter (q-o-q), but in Asia refining margins failed to register any significant increase.

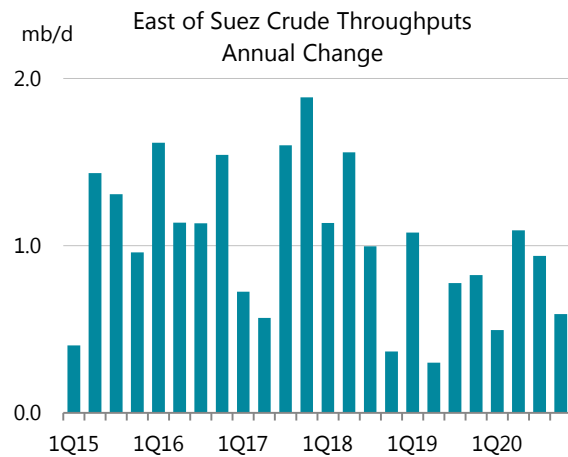
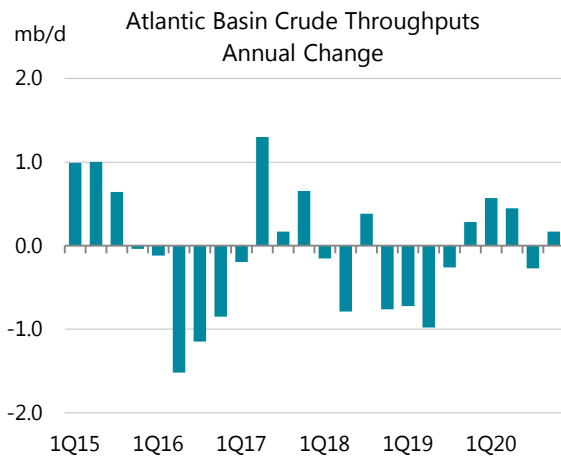
In 2019, Asia's demand growth is expected to account for more than half of the global total. Current weakness in Asian refining margins is not due to weak demand. Rather, it can be attributed to an oversupply of refined products. Between 2014-18, demand for refined products East of Suez has increased by about 2.9 mb/d, while refining throughput has increased by 4.8 mb/d. Dubai cracking margins in Singapore are at their weakest in several years (see *Margins*).

In the Atlantic Basin, margins have benefitted not from stronger demand, which has been weak in 2019, but from refining underperformance. Throughput has fallen back to 2014 levels, while demand for refined products has increased by 1.1 mb/d. While refining activity is expected to pick up in both hemispheres in 2H19, our forecast of 0.3 mb/d annual throughput growth this year is the lowest since 2009.

Global Refinery Crude Throughput<sup>1</sup>  
(million barrels per day)

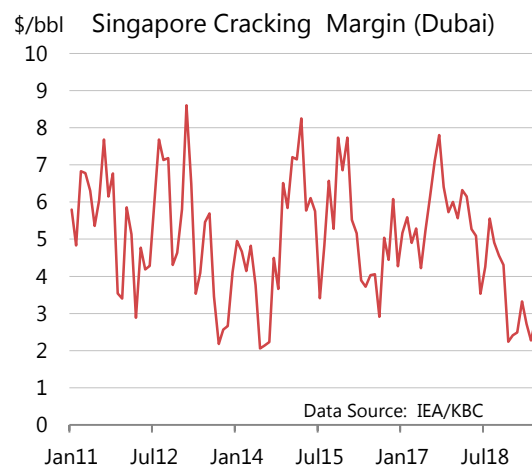
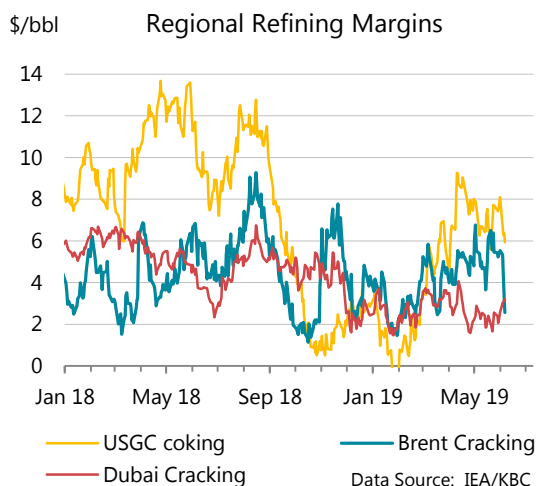
	2018	Mar 19	1Q19	Apr 19	May 19	Jun 19	2Q19	3Q19	4Q19	2019	2020
Americas	19.4	18.4	18.7	18.7	19.1	19.8	19.2	19.9	19.6	19.4	19.6
Europe	12.0	11.9	12.1	12.0	11.5	11.6	11.7	12.5	12.1	12.1	12.1
Asia Oceania	7.0	7.0	7.1	7.1	6.4	6.6	6.7	7.1	6.9	6.9	6.9
<b>Total OECD</b>	<b>38.4</b>	<b>37.3</b>	<b>37.9</b>	<b>37.8</b>	<b>37.0</b>	<b>37.9</b>	<b>37.6</b>	<b>39.6</b>	<b>38.6</b>	<b>38.4</b>	<b>38.7</b>
FSU	7.0	6.8	7.0	6.6	6.4	6.9	6.6	6.9	6.9	6.9	6.9
Non-OECD Europe	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China	12.1	12.4	12.6	12.6	12.3	12.5	12.4	12.6	12.7	12.6	12.6
Other Asia	10.6	10.7	10.8	10.4	10.4	10.7	10.5	10.7	10.9	10.7	11.2
Latin America	3.6	3.1	3.1	3.2	3.2	3.4	3.2	3.4	3.3	3.3	3.2
Middle East	7.8	7.7	7.9	7.8	7.9	8.1	7.9	8.1	8.3	8.1	8.4
Africa	2.1	2.2	2.0	2.1	2.0	1.9	2.0	2.1	2.0	2.0	2.0
<b>Total Non-OECD</b>	<b>43.8</b>	<b>43.4</b>	<b>44.0</b>	<b>43.2</b>	<b>42.8</b>	<b>44.0</b>	<b>43.3</b>	<b>44.4</b>	<b>44.8</b>	<b>44.1</b>	<b>44.9</b>
<b>Total</b>	<b>82.2</b>	<b>80.7</b>	<b>81.8</b>	<b>81.0</b>	<b>79.8</b>	<b>82.0</b>	<b>80.9</b>	<b>84.0</b>	<b>83.5</b>	<b>82.5</b>	<b>83.6</b>
<i>Year-on-year change</i>	<i>0.7</i>	<i>0.0</i>	<i>0.4</i>	<i>0.3</i>	<i>-1.4</i>	<i>-0.9</i>	<i>-0.7</i>	<i>0.5</i>	<i>1.1</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



## Margins

Refining margins were largely a mixed bag in June, driven mostly by specific regional movements in crude differentials and product cracks rather than a common global theme. The explosion at the Philadelphia refinery in the second half of June boosted light distillates cracks across all regions. Stronger low-sulphur fuel oil cracks in North West Europe helped Brent hydroskimming margins finish the month with a nominal gain, while lower middle distillates cracks negatively affected cracking margins. Sour margins in the Mediterranean strengthened mostly thanks to lower crude differentials. In the US Gulf Coast, margin movement was mostly defined by crude differentials: weaker sweet grades saw margins strengthen; stronger heavy sour grades saw margins for those grades deteriorate. US Midwest margins fell month-on-month (m-o-m) as significantly higher refining activity resulted in lower product cracks.



Since the start of the year, Singapore margins have been the worst performers. Indicative sweet cracking margins (based on Tapis) remained negative for the second consecutive month, for the first time since 2014. Dubai cracking fell below \$4/bbl in December and has not recovered. Refining economics in Singapore have started to resemble the situation in Europe in 2009-11, when Brent cracking margin were usually under \$4/bbl, and sour crude margins were also weaker due to a lack of hydrosulphurisation capacity. About 1 mb/d of capacity was permanently closed in Europe during this period.

IEA/KBC Global Indicator Refining Margins<sup>1</sup>

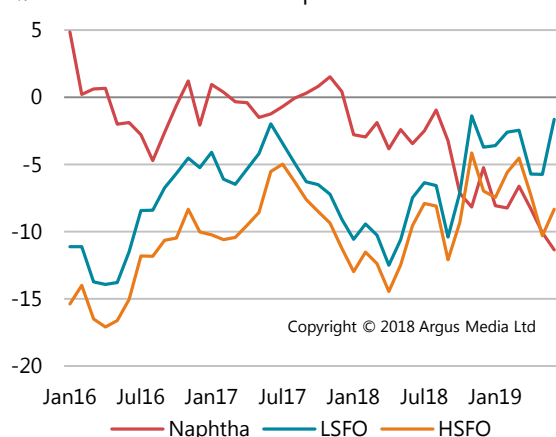
(\$/bbl)

	Monthly Average				Change	Average for week ending:				
	Mar 19	Apr 19	May 19	Jun 19	Jun 19-May 19	07 Jun	14 Jun	21 Jun	28 Jun	05 Jul
<b>NW Europe</b>										
Brent (Cracking)	4.27	4.76	5.38	3.78	↓ -1.60	3.56	3.40	3.41	4.76	6.05
Urals (Cracking)	4.95	4.08	4.50	4.67	↑ 0.17	4.11	4.30	4.47	5.78	7.01
Brent (Hydroskimming)	2.02	1.09	1.41	1.52	↑ 0.11	1.42	1.12	1.03	2.51	3.58
Urals (Hydroskimming)	2.15	-0.06	-0.70	0.81	↑ 1.51	0.47	0.42	0.47	1.88	3.07
<b>Mediterranean</b>										
Es Sider (Cracking)	7.16	5.03	4.54	4.58	↑ 0.04	4.06	4.20	4.38	5.70	7.04
Urals (Cracking)	6.57	3.99	3.18	4.97	↑ 1.79	3.69	4.66	5.24	6.30	6.40
Es Sider (Hydroskimming)	4.35	1.76	1.28	2.44	↑ 1.17	2.16	2.00	2.00	3.62	4.91
Urals (Hydroskimming)	2.57	-0.35	-1.94	0.69	↑ 2.63	-0.18	0.27	0.61	2.06	2.34
<b>US Gulf Coast</b>										
Mars (Cracking)	3.92	5.24	4.11	4.65	↑ 0.54	4.81	4.10	3.12	6.59	9.09
50/50 HLS/LLS (Coking)	10.27	11.47	10.61	11.11	↑ 0.49	10.60	10.50	10.15	13.19	14.74
50/50 Maya/Mars (Coking)	5.27	7.60	7.09	6.20	↓ -0.88	6.22	6.26	5.40	6.93	8.53
ASCI (Coking)	6.39	8.16	7.95	8.32	↑ 0.37	8.38	7.92	7.02	9.93	11.85
<b>US Midwest</b>										
30/70 WCS/Bakken (Cracking)	16.54	19.72	23.27	18.87	↓ -4.40	19.44	18.39	19.22	18.43	19.46
Bakken (Cracking)	18.00	22.32	25.34	20.50	↓ -4.83	21.08	20.23	20.70	20.00	20.13
WTI (Coking)	18.64	22.03	24.98	21.13	↓ -3.85	21.24	21.18	22.09	20.01	20.45
30/70 WCS/Bakken (Coking)	18.21	21.87	26.24	21.10	↓ -5.13	21.71	20.47	21.83	20.41	20.76
<b>Singapore</b>										
Dubai (Hydroskimming)	0.76	-0.78	-1.57	-0.07	↑ 1.50	0.38	-0.12	-0.72	0.26	2.79
Tapis (Hydroskimming)	2.24	0.00	-0.93	-0.62	↑ 0.31	-1.68	-1.16	-0.65	0.80	2.95
Dubai (Hydrocracking)	3.33	2.72	2.28	2.87	↑ 0.60	3.03	2.87	2.47	3.15	5.08
Tapis (Hydrocracking)	3.75	2.15	0.60	-0.55	↓ -1.15	-1.78	-1.00	-0.35	0.70	2.51

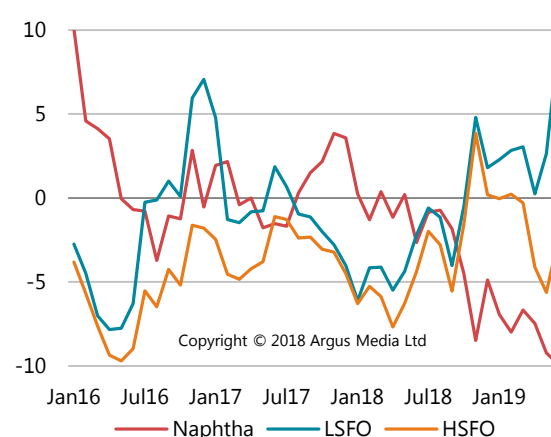
1. Global Indicator Refining Margins are calculated for various complexity configurations, each optimised for processing the specific crude(s) in a specific refining centre. Margins include energy cost, but exclude other variable costs, depreciation and amortisation. Consequently, reported margins should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

Source: IEA, KBC Advanced Technologies (KBC)

\$/bbl North West Europe Cracks to Brent



\$/bbl Singapore Cracks to Brent



At the same time, for some of the developments in product markets it is hard to find precedence in recent history. Naphtha cracks are close to historically low levels. While the seasonal weakness in the first half of the year is normal and due to cracker maintenance, it is rare to see naphtha price below -\$10/bbl for such an extended period of time. Naphtha cracks have also mostly traded below high sulphur fuel oil since November, in Europe as well as in Singapore, as

refinery upgrades and a lightening crude slate have tightened fuel oil markets well in advance of demand declines expected with the implementation of the new IMO fuel emission regulations in 2020.

## OECD refinery throughput

OECD refining throughput in May fell to their lowest in three years. Runs plunged 810 kb/d m-o-m on underperformance in all regions. European activity was slightly more resilient compared to other regions, remaining flat y-o-y despite the continuing fallout from the Druzhba pipeline contamination.

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

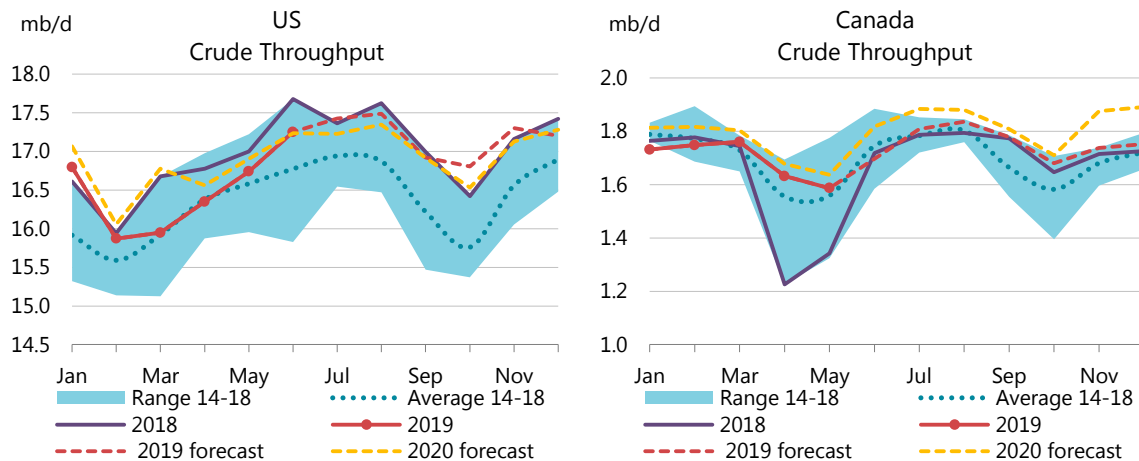
	Dec 18	Jan 19	Feb 19	Mar 19	Apr 19	May 19	Change from		Utilisation rate <sup>1</sup>	
							Apr 19	May 18	May 19	May 18
US <sup>2</sup>	17.41	16.79	15.86	15.94	16.34	16.73	0.39	-0.26	88%	90%
Canada	1.72	1.72	1.74	1.75	1.62	1.58	-0.05	0.24	78%	66%
Chile	0.20	0.21	0.20	0.19	0.20	0.19	-0.01	0.03	85%	71%
Mexico	0.50	0.49	0.59	0.55	0.58	0.59	0.01	-0.10	36%	42%
<b>OECD Americas<sup>3</sup></b>	<b>19.82</b>	<b>19.20</b>	<b>18.40</b>	<b>18.43</b>	<b>18.74</b>	<b>19.09</b>	<b>0.35</b>	<b>-0.09</b>	<b>83%</b>	<b>84%</b>
France	1.13	1.15	1.17	1.04	1.04	0.99	-0.05	0.21	80%	63%
Germany	1.75	1.82	1.73	1.72	1.71	1.60	-0.11	-0.22	79%	90%
Italy	1.38	1.28	1.20	1.24	1.30	1.34	0.04	0.01	77%	77%
Netherlands	1.17	1.19	1.12	1.16	1.09	1.03	-0.06	-0.06	80%	84%
Spain	1.35	1.39	1.29	1.37	1.38	1.29	-0.09	-0.06	91%	96%
United Kingdom	1.15	1.13	1.09	1.02	1.08	1.04	-0.04	0.06	82%	77%
Other OECD Europe	4.43	4.30	4.44	4.37	4.39	4.24	-0.15	0.06	84%	86%
<b>OECD Europe</b>	<b>12.36</b>	<b>12.26</b>	<b>12.03</b>	<b>11.92</b>	<b>11.99</b>	<b>11.53</b>	<b>-0.46</b>	<b>0.00</b>	<b>82%</b>	<b>84%</b>
Japan	3.21	3.24	3.19	3.14	3.08	2.73	-0.36	-0.10	77%	79%
South Korea	3.05	3.04	3.20	2.97	3.15	2.82	-0.33	-0.32	83%	95%
Other Asia Oceania	0.91	0.85	0.86	0.86	0.82	0.82	-0.01	0.08	94%	84%
<b>OECD Asia Oceania</b>	<b>7.17</b>	<b>7.13</b>	<b>7.25</b>	<b>6.98</b>	<b>7.06</b>	<b>6.36</b>	<b>-0.70</b>	<b>-0.33</b>	<b>81%</b>	<b>87%</b>
<b>OECD Total</b>	<b>39.35</b>	<b>38.59</b>	<b>37.68</b>	<b>37.33</b>	<b>37.78</b>	<b>36.97</b>	<b>-0.81</b>	<b>-0.42</b>	<b>83%</b>	<b>84%</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

US refining throughput in June climbed 0.5 mb/d m-o-m. Runs, however, remained 0.4 mb/d lower y-o-y. While PADD 2 and PADD 3 runs were ramping up in the second half of June, a fire and subsequent closure of the 335 kb/d refinery in Philadelphia on 21 June affected PADD 1 runs. The owner, Philadelphia Energy Solutions, is in the process of mothballing the plant, seeking a sale or an eventual shutdown. A closure would further stretch the product supply situation in PADD 1, which is the least endowed with petroleum resources (see *Not all PADDs are created equal*). Meanwhile, the PADD 2 refining system, profiting from supplies of Canadian and US grades, might see some of its geographical advantage fade as the state of Michigan is seeking to close Enbridge's Line 5 underwater crossing in the Great Lakes. The 540 kb/d pipeline transports light and synthetic crudes from Canada and the Bakken area to a refinery in Ontario and several refineries in Michigan and Ohio. The line also transports NGL mixtures, which are fractionated in Michigan and sold to the local market for heating oil use. If it happens, the closure will force refineries to revert to rail and truck deliveries to make up for lost volumes.



The closure of Enbridge Line 5 could extend the logistical constraints faced by **Canadian** heavy oil producers to the light and synthetic crude producers. Refineries in Eastern Canada and Ontario partially rely on imports from the US and overseas, due to lack of connections with Western Canada. Despite an 80 kb/d addition to capacity last year, Canadian refining throughput declined by 110 kb/d in 2018. May and June estimates for Canadian throughput were revised down on weaker monthly and weekly submissions. In theory, the Philadelphia refinery closure should boost refining margins in the US and Canadian Atlantic coast, but crude logistics developments may have the opposite effect.

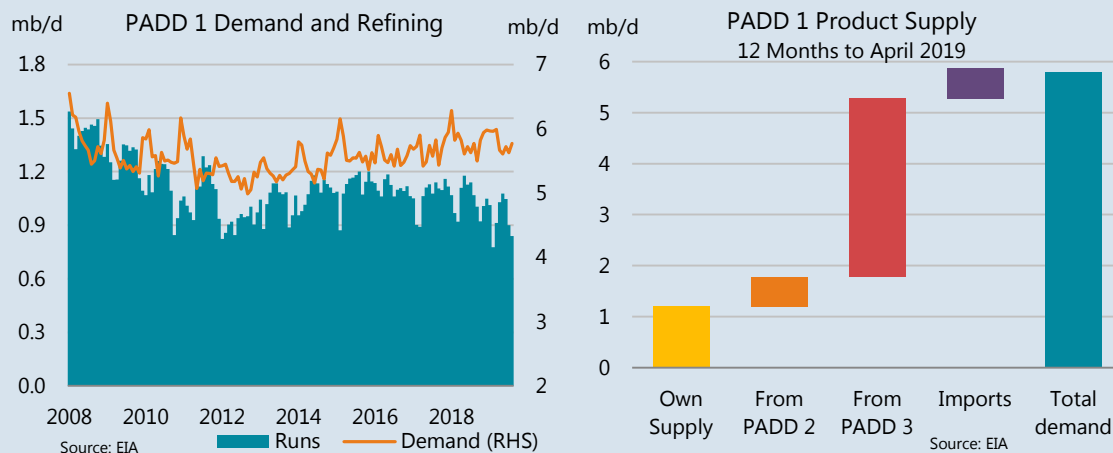
### Box 3. Not all PADDs are created equal

The 50 US states and the District of Columbia are aggregated into five Petroleum Administration for Defence Districts (PADD), which are frequently used in the regional analysis of the US market. PADD 1 is a peculiar grouping. Stretching across the Atlantic Coast from Maine to Florida, it includes 17 states with a combined population in excess of 120 million, or 38% of the US total. Its per capita oil use is slightly less than the US average, but total consumption still amounts to about 5.8 mb/d, or about 30% of the US total, according to the *US Energy Information Administration*. In terms of population, this region is similar to Japan and Mexico, but on the spectrum of oil resources, it is closer to the former rather than the latter: crude oil production is just 60 kb/d, while natural gas liquids output hovers around 500 kb/d, almost half of which is ethane used only in the petrochemicals industry. In terms of refining developments, however, the Mexican experience is more applicable: a relatively small and declining industry.

Like Europe, PADD 1 mostly relies on imported crude oil, and suffered from the deteriorating refinery economics in the north of the Atlantic Basin in the 2000s and early 2010s, during periods of strong increases in international crude prices. This led to capacity closures. Since the start of the millennium several refineries have closed down, reducing total capacity by 500 kb/d to 1.2 mb/d. Philadelphia Energy Solutions, owner of the 335 kb/d refinery, damaged by fire in June, has said it may close the plant if it does not find a buyer. PADD 1 capacity and refining throughput would subsequently fall below 1 mb/d. The region already relies on flows from other US regions and imports from overseas to cover almost 80% of its product needs. If it was a separate country, it would be the third largest oil consumer and the largest importer of oil products. PADD 3 (Gulf Coast) is its largest supplier, sending about 3.5 mb/d of products on average, including 2 mb/d of gasoline



and 1.4 mb/d of middle distillates. Most of the product is shipped through two long-distance pipelines. The Colonial pipeline, the largest product pipeline system in the world, has 2.5 mb/d of capacity and runs from Houston to New York. Demand for transshipment can exceed available space at peak season, switching on the allocation mode. The smaller Plantation pipeline ships around 0.7 mb/d of products. PADD 2 supplies another 0.6 mb/d of products, including most of the ethanol and renewable diesel used in PADD 1. International imports, from Canada and Europe, provide for another 0.6 mb/d of products.



The closure of the Philadelphia refinery would result in additional import requirements, most of which will likely be sourced from overseas, due to logistical constraints. With pipeline space regularly overbooked, trucking and shipping from the Gulf Coast can be very expensive (due to Jones Act rules). For European and Eastern Canada refiners the closure is good news. It not only offers an additional market for their excess gasoline, but also frees up seaborne crude volumes, which can be diverted to Canada or Europe. It is unlikely that pipeline infrastructure will be put in place, either from the Permian or Bakken producing areas to supply PADD 1 refiners, due to hefty costs, as well as environmental restrictions. Expansion of product pipelines is also unlikely, given that PADD 1 is more densely populated. Thus, while PADD 3 has become a net crude exporter, and is also the largest product exporter in the world, the combination of geographical and regulatory constraints means that PADD 1 will have to continue relying on crude and product imports.

However, this does not imply that the US oil independence is a false concept, as suggested by several observers recently, who note the ongoing crude oil imports into the US. Outside the supplies of landlocked Canadian crude, mostly to a similarly landlocked PADD 2 (US Midwest), crude imports into other PADDs are largely due to logistical reasons: PADD 1 and PADD 5 (US West coast) cannot receive US crudes in an economically meaningful way. In PADD 3, supplies of Canadian, Mexican and Colombian crudes account for more than half of imports, while imports of OPEC crude have halved since the start of the year. Imports from Saudi Arabia, in particular, have fallen below the capacity of the Saudi-owned refinery in Texas, the 600 kb/d Motiva plant.

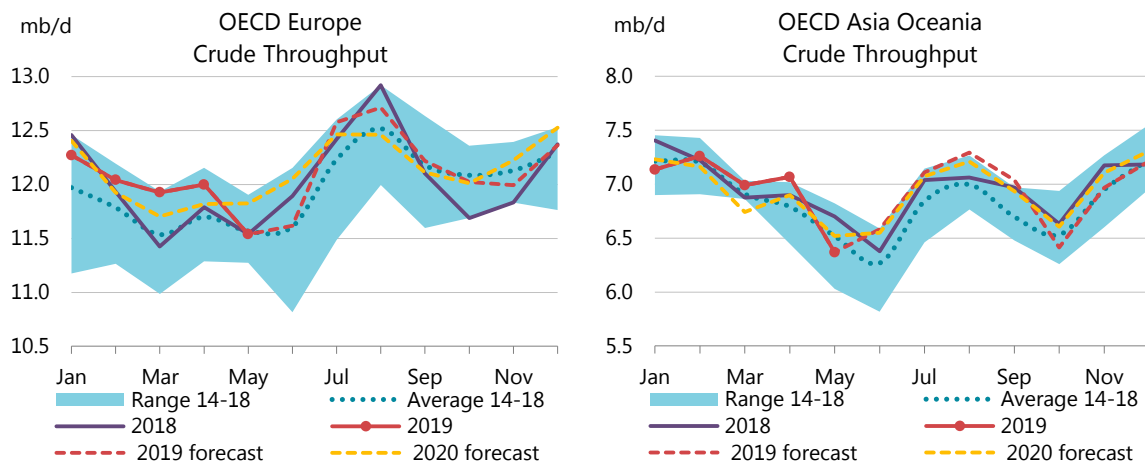
Canada's situation offers a useful analogy: oil production is more than double the demand, but it is also the largest importer of US crude. Again, largely due to logistical constraints, US crude is supplied to Eastern Canada refineries, but also, condensates are shipped to Alberta to dilute bitumen for transportation.

In **Mexico**, refining throughput registered a second consecutive month of minor gains in May, although runs remain lower y-o-y. Data is expected to confirm that runs reached 600 kb/d in June, but a significant ramp-up is not expected before the second half of next year.

In Europe, while April runs were finalised slightly lower, May preliminary numbers from a combination of sources point at a better than expected performance, particularly in Italy and the Netherlands. May data, while subject to revisions, offer a glimpse of the impact of the Druzhba disruption on affected countries. The **Czech Republic** and **Hungary** were practically not affected, while the **Slovak Republic's** throughput was down 70 kb/d m-o-m on planned maintenance. In **Poland**, throughput was only down 30 kb/d m-o-m, due to maintenance of a small CDU at the Plock refinery. The largest impact, as expected, was in **Germany**, with runs down 110 kb/d m-o-m to 1.6 mb/d, but some 60 kb/d higher than our estimate. Russia reported that on 1 July Druzhba shipments had been restored to normal volumes, but at the time of writing Germany, the last destination on the northern branch of the system, was not receiving full deliveries. The Polish pipeline operator said Druzhba flows may be subject to temporary stoppages to deal with the contaminated crude still remaining in the network.

In a rare development in European refining, the owner of Poland's largest refinery, PKN Orlen, that also owns or operates refineries in Lithuania and Czech Republic, filed an official request with the European Union to acquire the country's only other refinery, Lotos Group's 210 kb/d Gdansk facility. Sceptics largely outnumber optimists when it comes to the long-term perspectives of European refining, where 2.6 mb/d of capacity has been shut since 2005. With declining demand and increasing competition from other regions, the question is not if, but when the next wave of shutdowns will come. Recently, Total re-opened its La Mede site in southern **France**, as a 500 ktpa (10 kb/d) bio refinery, hydroprocessing vegetable oil and waste oil into biodiesel and bio jet. Prior to its closure in 2016, it was a 160 kb/d refinery.

OECD Europe throughput is expected to increase by 0.8 mb/d in 3Q19, but will remain flat y-o-y.



According to preliminary May data, OECD Asia saw the sharpest decline m-o-m since 2009, close to 700 kb/d. This is far beyond the usual seasonal slowdown, due to a combination of regional maintenance and announced run cuts in **Korea**. After four years of gains, totalling 570 kb/d, Korean activity growth came to a halt last year, and is expected to remain essentially flat in 2019. In **Japan**, after declines throughout 2018 and in 1Q19, refining activity stabilised in 2Q19. Regional throughput is expected to climb by 480 kb/d in 3Q19.

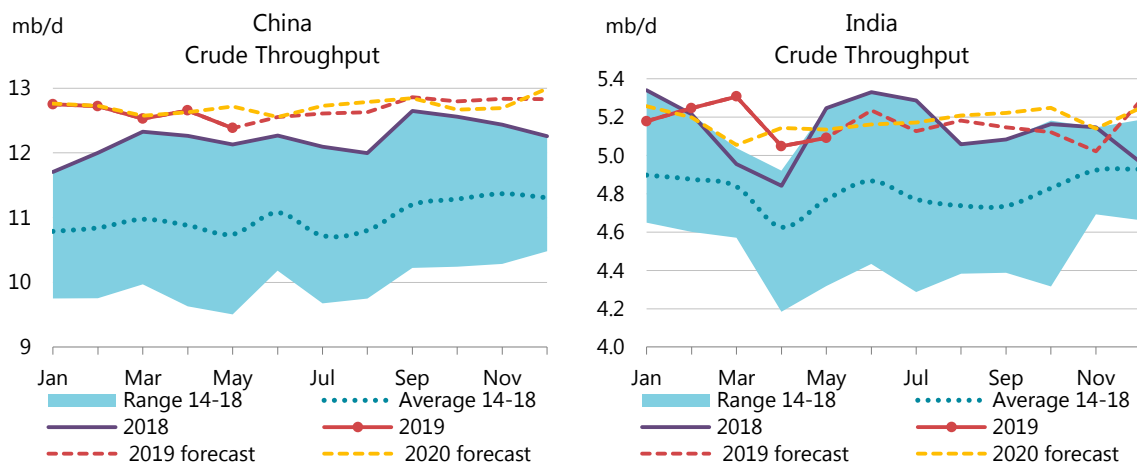
# Non-OECD refinery throughput

Our estimate for 2Q19 non-OECD throughput is revised down by 230 kb/d on lower throughput in Russia and Brazil. May throughput was 960 kb/d lower y-o-y, the largest annual decline since 2009. Runs are expected to ramp up by 1.5 mb/d by from 2Q19 to 4Q19, almost equally distributed among the four major regions: China, the rest of Asia, the FSU and the Middle East.

**Chinese** refinery throughput fell 270 kb/d in May from April's record levels on extensive maintenance works. Half of the impact was from the Shandong province where several independent refineries shut down for maintenance, and others reportedly cut runs due to product oversupply. Our estimate, based on Sublime China Information (SCI) surveys, indicated a rebound in June to 12.45 mb/d.

In recent years, independent refiners posed serious competition to the state-owned enterprises. Their economics are based on fiscal optimisation rather than operational advantages. The most popular strategy seems to be the underreporting of final production of transport fuels, as they are subject to hefty consumption taxes, which are levied on the refineries, not the wholesalers. Instead, diesel and gasoline are reported as unfinished products. This means that official statistics on diesel and gasoline may be significantly underestimating diesel and gasoline yields. While official data provided by the National Bureau of Statistics (NBS) show diesel and gasoline yields down to 27% each for the first five months of this year, SCI estimates diesel yields at 37% and gasoline yields at 31%.

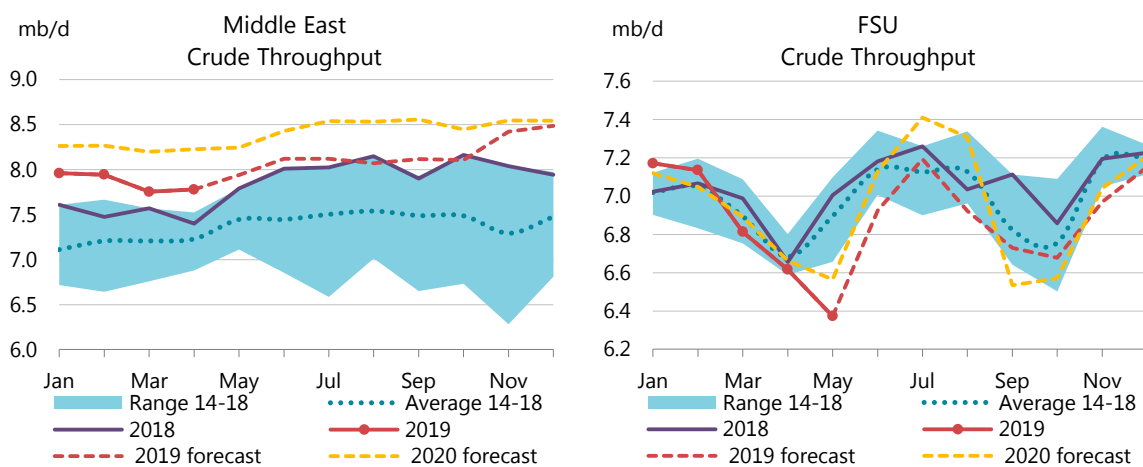
Nevertheless, independent refineries were granted an increase of 1.1 mb/d to their crude oil imports quota for this year, bringing the total to just under 3 mb/d. However, in the absence of product exports quotas, the independents' refinery margins are struggling, and are now challenged by the arrival of a new type of independent refinery player – the large petrochemical refineries. Following the startup of the Hengli refinery late last year, Zhejiang Petrochemical reportedly started trial runs at one of its 200 kb/d CDUs in June.



**Indian** throughput marginally increased in May, but fell 160 kb/d y-o-y. **Indonesia** reported data from November through April, which were 60 kb/d higher on average than our estimate. **Singapore** runs estimates for March through May were revised down by 150 kb/d on average. Oil trading firm Vitol is building a 30 kb/d hydroskimming refinery in one of **Malaysia's** ports to produce fuel compliant with the new IMO regulations from low sulphur crude oil. Malaysia is an

emerging competitor to Singapore's bunkering hub, and hosts a rapidly expanding oil storage and blending industry. Malaysia's new 300 kb/d RAPID refinery, where a residue desulphurisation unit caught fire in April, is expected to resume trial runs and process low-sulphur crude grades until the unit is brought back online. US crude oil exports to Asia have doubled in the last year (see *The bearable lightness of US crudes*).

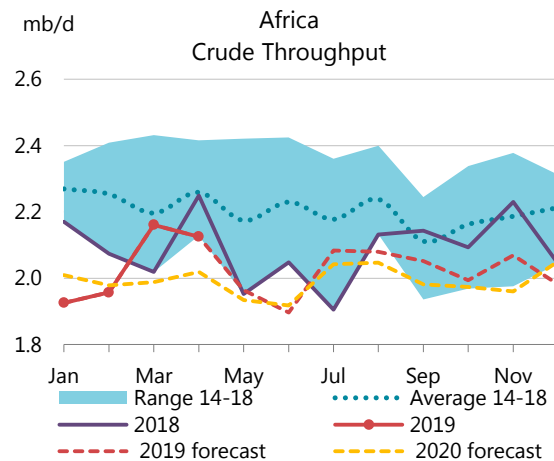
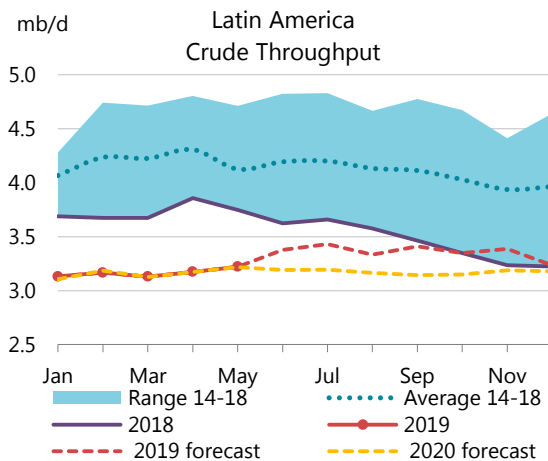
April data updates for the Middle East, again, were restricted to just four reporting countries. **Saudi** throughput was lower than expected, but at 2.6 mb/d was nevertheless up 400 kb/d y-o-y and 110 kb/d m-o-m. **Iran** stopped reporting refinery intake data in July 2018. The CIO of National Iranian Oil Refining and Distribution company said in a recent statement that Iran consumed 850 kb/d of condensate domestically due to export restrictions under sanctions. We estimate that there is a 400 kb/d of condensate splitting capacity and a 120 kb/d aromatics complex in Iran.



**Russian** refining activity in May was even weaker than suggested by the preliminary throughput data. Runs were finalised 160 kb/d lower to 5.2 mb/d, the lowest in six years. June preliminary data showed runs rebounding by 460 kb/d. Oil producer Tatneft put a new 120 kb/d CDU into operation at its Taneco refinery. In **Belarus**, the Druzhba pipeline branch that feeds the 235 kb/d Naftan refinery was cleaned of contaminated crude in early July and the refinery started receiving on-specification crude via the normal supply route. The Naftan refinery had been undersupplied since the contamination crisis broke out in April, while the Mozyr plant was reported running at normal rates at the end of May. April throughput data for Belarus are not available in JODI.

**Brazil** throughput dipped again to 1.7 mb/d in May, while **Argentinian** runs were slightly higher m-o-m. Petrobras announced the start of its downstream assets divestment programme by releasing disclosure documents on four refineries, including the newest refinery among the operating sites: the 115 kb/d Abreu e Lima (RNEST) that started up at the end of 2014.

**South Africa** provided full 2018 data for the first time, resulting in a 30 kb/d increase in our estimate, although runs were flat y-o-y. There is some cautiously optimistic news about a possible restart of **Morocco's** SAMIR refinery, idled for four years, with the interested party targeting the IMO 2020 market thanks to the plant being relatively new and well-equipped. We have not included this development in our forecast yet. If it materialises, this would be rare positive news for Africa's struggling and lacklustre refining scene.

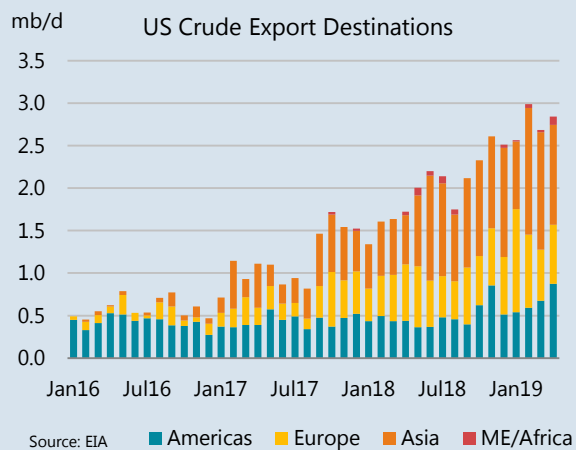


#### Box 4. The bearable lightness of US crudes

There remains lingering and unfounded scepticism in some quarters about the suitability of US crude grades for domestic and international refineries. Despite this, the US has recently become the world's fifth largest crude oil exporter behind Saudi Arabia, Russia, Iraq and Canada. So far this year, the US has supplied 2.8 mb/d to global markets, up by 1.2 mb/d y-o-y. Canada was the first country to receive significant volumes of US crude and condensates, even before the global export ban was lifted at the end of 2015. After it was lifted, China was among the first importers of US crude, and in the summer of 2018 it overtook Canada in volume terms. Chinese imports ceased in October amidst the US-China tariff dispute, although they resumed in April. This pause did not cut total deliveries to Asia, but helped US crudes find new markets in this oil-hungry region. Nowadays, Asia is the largest regional market for US crudes, importing about 1.2 mb/d. Korea and India each import between 300-400 kb/d. Chinese Taipei and Thailand import about 150-200 kb/d each, with Japan and Singapore also regularly taking smaller volumes.

Europe imported about 0.8 mb/d of US crude in January-April, with the UK and Netherlands the principal consumers. In the Mediterranean, competition is higher from local light grades from Libya, Algeria, and CPC and Azeri light crude. Also, due to lack of deepwater ports in the region, VLCC shipping economics are less favourable.

In the Americas, several Caribbean countries regularly import US grades, although these could partially be for storage and subsequent re-export. The most surprising destination for US crudes so far has been the United Arab Emirates that imported 45 kb/d in recent months to feed a condensate splitter, previously supplied by Iran.



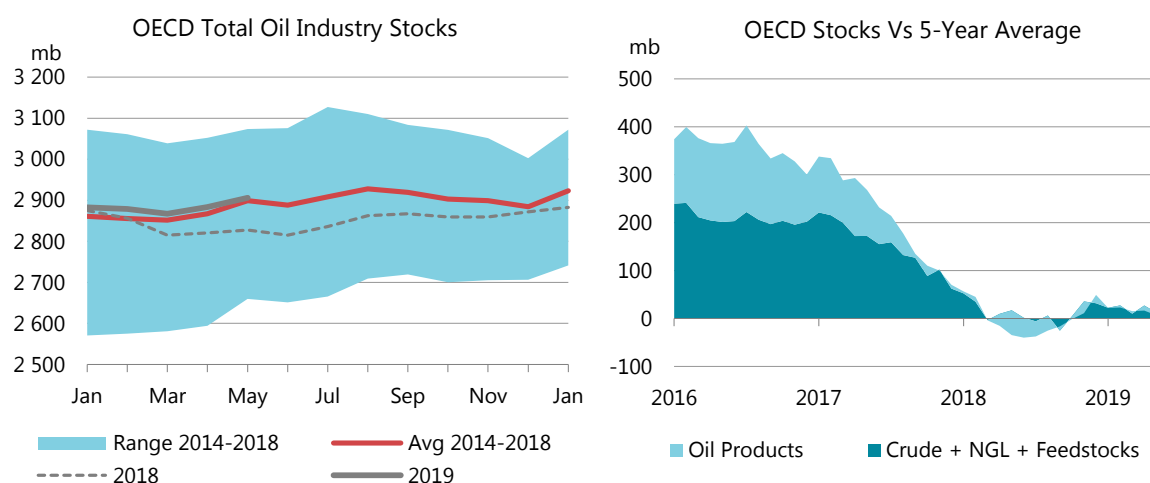
# STOCKS

## Overview

OECD industry stocks increased by 22.8 mb month-on-month (m-o-m) in May to 2 906 mb. The gain was less than the usual monthly increase of 32.6 mb. Total inventories stood 6.7 mb above the five-year average. However, on a forward demand basis, they were 1.4 days lower than the average of 61.4 days.

Crude inventories rose by 7.4 mb in May, less than the usual gains of 11.7 mb, to 1 141 mb, and reached their highest level since November 2017. The OECD Americas region gained counter-seasonally by 7.3 mb, particularly the US owing to higher crude imports. Crude stocks in OECD Asia Oceania increased by 2.3 mb m-o-m, lower than the usual gains due to large draws in Korea (-5.7 mb). OECD European crude stocks drew counter-seasonally by 2.1 mb.

Stocks of oil products rose by 18.2 mb, more than the usual gain, to 1 434 mb. Gasoline inventories increased counter-seasonally by 2.3 mb due to relatively large gains in the US. Middle distillates stocks fell by 5.8 mb compared with a normal increase of 1.7 mb. The other products category showed a large increase of 21 mb owing to builds in OECD Americas.



Preliminary data for June showed stocks falling in the US and Japan, while inventories gained in Europe. US oil stocks decreased by 1.7 mb as a large decrease in crude oil and feedstocks inventories (-19.7 mb) was partly offset by increases in oil products (+18.1 mb, mainly attributable to LPGs). In Japan, total inventories decreased by 2 mb: crude oil holdings fell by 4.1 mb m-o-m, gasoline stocks and residual fuel oil also decreased by 0.6 mb and 0.5 mb, respectively. European inventories, by contrast, increased by 1.5 mb in total. Crude stocks rose by 1.1 mb and middle distillates stocks also gained by 3.2 mb. Other refined product stockpiles decreased: gasoline (-0.6 mb), fuel oil (-1.8 mb) and other products (-0.4 mb).

**Preliminary Industry Stock Change in May 2019 and First Quarter 2019**

	May 2019 (preliminary)								First 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>7.3</b>	<b>-2.1</b>	<b>2.3</b>	<b>7.4</b>	<b>0.2</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.3</b>	<b>0.0</b>	<b>0.4</b>
Gasoline	4.1	-2.6	0.7	2.3	0.1	-0.1	0.0	0.1	-0.1	0.1	0.0	-0.1
Middle Distillates	-1.6	-6.6	2.4	-5.8	-0.1	-0.2	0.1	-0.2	-0.1	0.1	-0.1	-0.1
Residual Fuel Oil	-0.1	0.6	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Products	18.3	-1.6	4.3	21.0	0.6	-0.1	0.1	0.7	-0.1	0.0	-0.1	-0.2
<b>Total Products</b>	<b>20.8</b>	<b>-10.2</b>	<b>7.5</b>	<b>18.2</b>	<b>0.7</b>	<b>-0.3</b>	<b>0.2</b>	<b>0.6</b>	<b>-0.4</b>	<b>0.2</b>	<b>-0.2</b>	<b>-0.4</b>
Other Oils <sup>1</sup>	0.6	-2.5	-1.0	-2.8	0.0	-0.1	0.0	-0.1	-0.1	0.0	-0.1	-0.1
<b>Total Oil</b>	<b>28.7</b>	<b>-14.8</b>	<b>8.9</b>	<b>22.8</b>	<b>0.9</b>	<b>-0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>-0.3</b>	<b>0.5</b>	<b>-0.2</b>	<b>0.0</b>

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

OECD stocks were revised up by 0.2 mb in April. The biggest adjustment was in the Americas region, where oil products stocks decreased by 6.2 mb (mainly in the other products category). In Europe, middle distillates and residual fuel oil inventories were revised up by 7 mb and 4.6 mb, respectively, while gasoline (-4.7 mb) and other products (-2.6 mb) were revised down. March stock figures were reduced slightly by 0.3 mb.

**Revisions versus June 2019 Oil Market Report**

	(million barrels)							
	Americas		Europe		Asia Oceania		OECD	
	Mar-19	Apr-19	Mar-19	Apr-19	Mar-19	Apr-19	Mar-19	Apr-19
<b>Crude Oil</b>	<b>0.0</b>	<b>-1.0</b>	<b>0.0</b>	<b>-0.6</b>	<b>-0.1</b>	<b>0.4</b>	<b>-0.2</b>	<b>-1.2</b>
Gasoline	0.0	1.5	0.7	-4.7	0.1	0.5	0.7	-2.6
Middle Distillates	-0.7	-1.8	0.0	7.0	0.0	1.2	-0.7	6.4
Residual Fuel Oil	0.0	-0.1	0.0	4.6	0.0	0.3	0.0	4.8
Other Products	0.0	-5.7	-0.3	-2.6	0.2	-0.9	-0.2	-9.2
<b>Total Products</b>	<b>-0.8</b>	<b>-6.2</b>	<b>0.4</b>	<b>4.4</b>	<b>0.2</b>	<b>1.1</b>	<b>-0.2</b>	<b>-0.7</b>
Other Oils <sup>1</sup>	0.0	4.8	0.0	-2.4	0.0	-0.2	0.0	2.2
<b>Total Oil</b>	<b>-0.8</b>	<b>-2.4</b>	<b>0.4</b>	<b>1.3</b>	<b>0.1</b>	<b>1.3</b>	<b>-0.3</b>	<b>0.2</b>

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

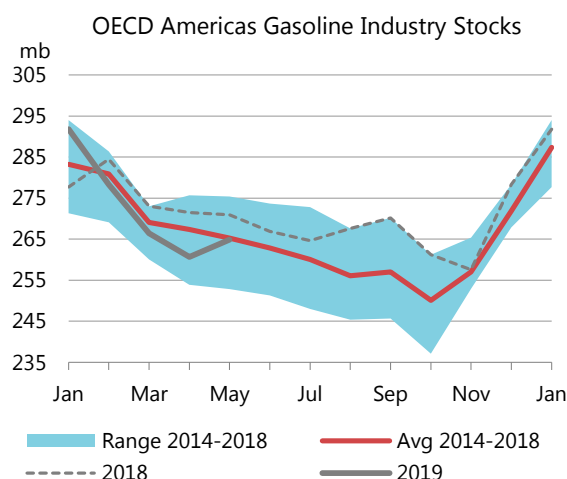
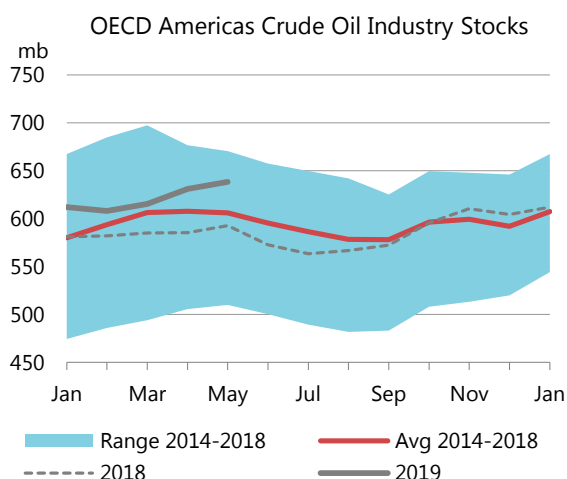
## Recent OECD industry stock changes

### OECD Americas

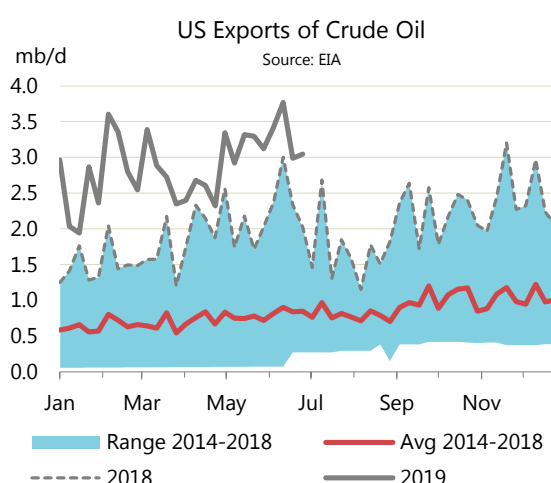
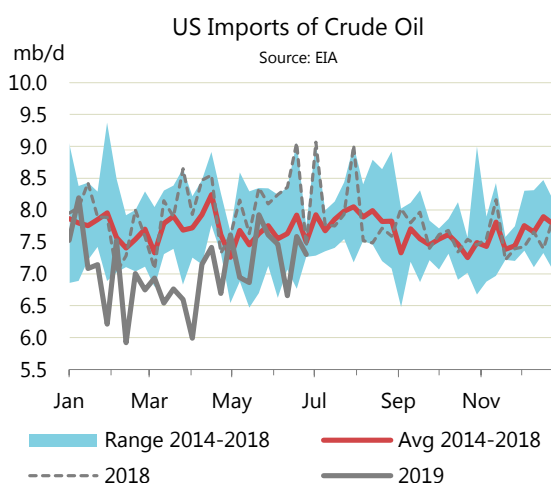
Commercial stocks in OECD Americas increased in May by 28.7 mb m-o-m to 1 563 mb, which is 53.2 mb above the five-year average. By the forward demand metric, they were 0.4 days below the average. The gain was nearly twice as much as the five-year average increase of 15 mb for the month due to counter-seasonal crude and gasoline stock builds.

Crude stockpiles gained counter-seasonally by 7.3 mb and stood at 638 mb, which is the highest since July 2017. Crude imports in May reached 7.2 mb/d on average, 420 kb/d higher m-o-m, and it helped boost crude inventories.

For oil products, total stocks increased by 20.8 mb, larger than the usual gains of 11.3 mb. Gasoline stocks built by 4.1 mb, led by counter-seasonal US inventory builds of 5.1 mb amid higher gasoline prices in US. In the other products category, stocks gained by more than usual by 18.3 mb which is attributable to increased US LPG production in May (+180 kb/d year-on-year). In contrast, middle distillate and fuel oil stocks fell largely in line with the average by 1.6 mb and 0.1 mb, respectively.



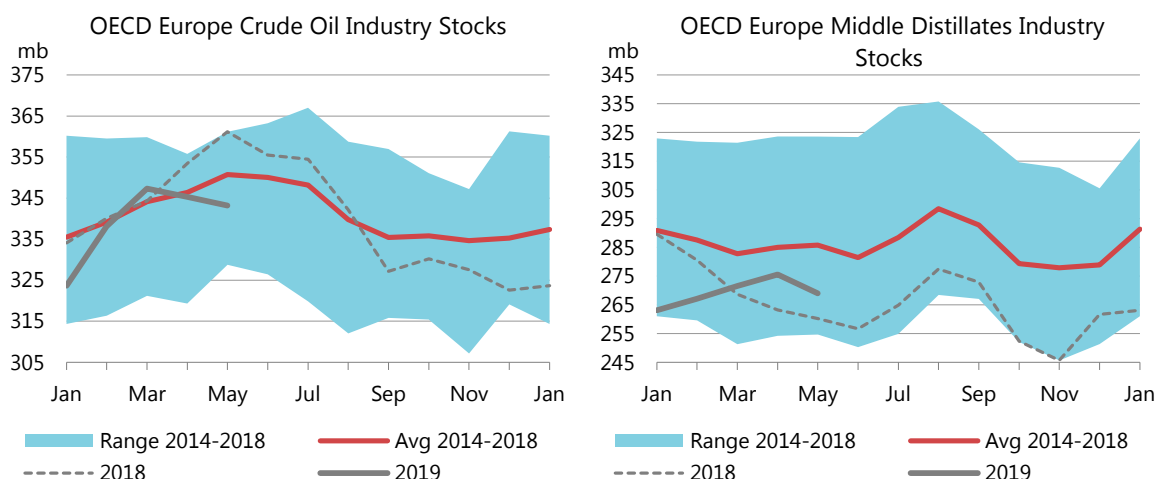
Preliminary June data from the *Energy Information Administration* show a large crude stocks decrease of 17.5 mb due to high crude exports, which reached a record of 3.8 mb/d in late June and averaged 3.3 mb/d in the month. Total oil product stocks, on the other hand, increased by 18.1 mb. Other products gained significantly by 22.2 mb (mainly LPG) while gasoline (-3.9 mb) and middle distillates (-0.4 mb) declined. Fuel oil increased by a mere 0.2 mb.



## OECD Europe

In May, total commercial stocks in OECD Europe fell counter-seasonally by 14.8 mb m-o-m to 955 mb. Stocks stood 16.6 mb below the five-year average. Crude stockpiles decreased by 2.1 mb (usually they gain by 4.3 mb during the month) due to counter-seasonal or larger than usual draws in some countries: United Kingdom (-1.8 mb), Netherlands (-1.5 mb) and Italy (-0.7 mb). Middle distillates also fell by 6.6 mb amid lower m-o-m refinery throughput in Europe (-460 kb/d in May). Gasoline and other products decreased in line with the usual movements by 2.6 mb and 1.6 mb, respectively. Fuel oil gained by 0.6 mb.

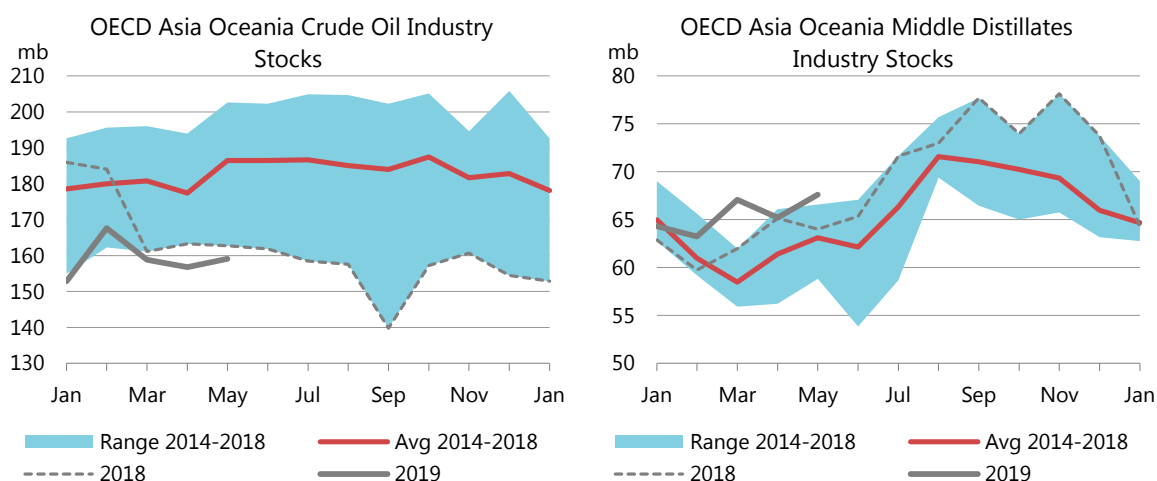




Preliminary data from Euroilstock showed inventories gaining by 1.5 mb m-o-m in June owing to increases in crude stocks (+1.1 mb) and middle distillates (+3.2 mb). Lower gasoline inventories (-0.6 mb), residual fuel oil (-1.8 mb) and other products (-0.4 mb) partly offset the increases.

## OECD Asia Oceania

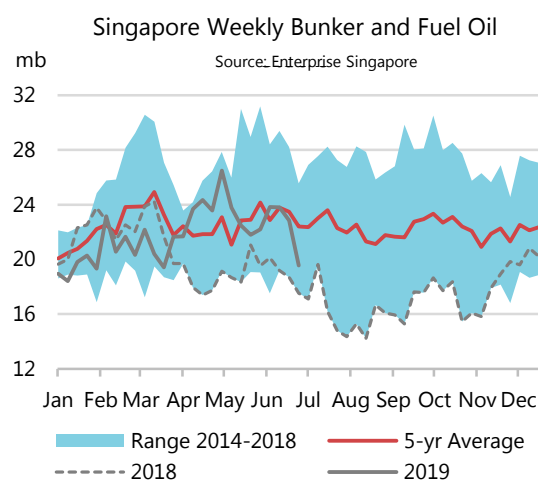
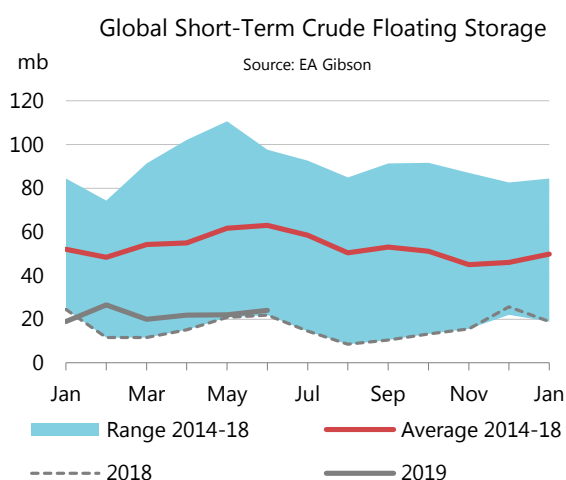
Total commercial stocks in the OECD Asia Oceania region increased by 8.8 mb in May to 389 mb and were 29.9 mb below the five-year average. The gain was lower than the usual of 16.3 mb due to a small crude inventories increase of 2.3 mb, less than one-third of the usual gain. Korean crude inventories drew counter-seasonally by 5.7 mb. Oil product stockpiles gained by 7.5 mb: gasoline (0.7 mb), middle distillates (2.4 mb), fuel oil (0.1 mb) and other products (4.3 mb).



Preliminary data for June from the *Petroleum Association of Japan* show total stocks decreasing by 2 mb m-o-m, largely in line with the five-year average of -2.4 mb. Crude inventories fell counter-seasonally by 4.1 mb. Total products also decreased by 0.7 mb with draws in gasoline (-0.6 mb), residual fuel oil (-0.5 mb) and other products (-0.1 mb). Middle distillates stocks gained by 0.3 mb.

## Other stock developments

Short-term crude floating storage increased by 2 mb in June to 24 mb according to *EA Gibson* data. The Middle East Gulf region increased by 3.1 mb to 20 mb. On the contrary, Asia Pacific and North West Europe fell by 0.9 mb and 0.2 mb, respectively. Based on data from *Kpler* for ships idled over the past 12 days, total floating storage (including crude and condensate) from Iran reached 17.6 mb at the end of May and fell to 11.3 mb in June.



Seaborne oil in transit volumes fell in May by 30.8 mb, figures based on the latest *Refinitiv* data and IEA calculations showed, due to lower crude exports from Saudi Arabia, Russia and other signatories to the OPEC+ agreement. Oil on water data from *Kpler* showed a large m-o-m contraction in May in Iran and Libya by 15.6 mb and 6.7mb, respectively.

Oil inventories in major bunkering hubs fell in June. Stocks at Fujairah decreased by 5.4 mb m-o-m owing to large draws in light distillates (-2.9 mb) according to data from *FEDCom* and *S&P Global Platts*. Middle and heavy distillates also declined by 0.7 mb and 1.8 mb, respectively. Lower refinery runs in the East of Suez region led to a tightening of products supply. Total bunker and fuel oil stocks in Singapore drew by 1.3 mb on the month, according to the data from *Enterprise Singapore*. Middle distillates (-0.8 mb) and residues (-0.9 mb) fell while light distillates gained by 0.5 mb. Lower net product imports in June contributed.

Stockpiles in the 15 non-OECD countries covered by *JODI* database fell 10.5 mb m-o-m in April to 565 mb. Crude stocks in Saudi Arabia and Thailand declined by 7.5 mb and 2.6 mb, respectively. By contrast, Nigerian crude inventories gained 2.7 mb. For oil products, Saudi Arabia increased its stocks by 2.4 mb while Brazil decreased by 1.9 mb.

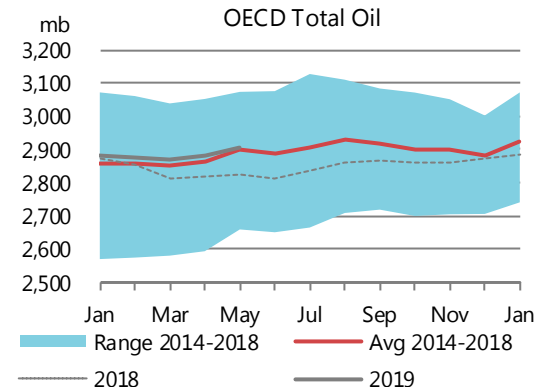
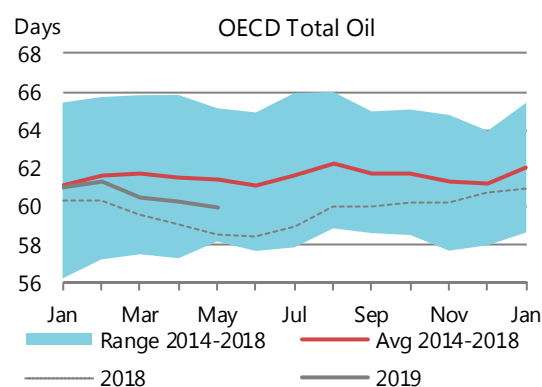
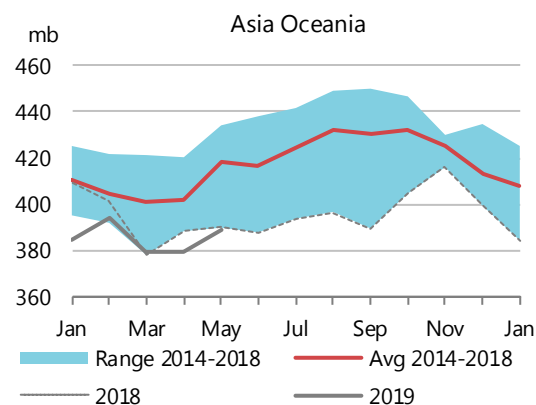
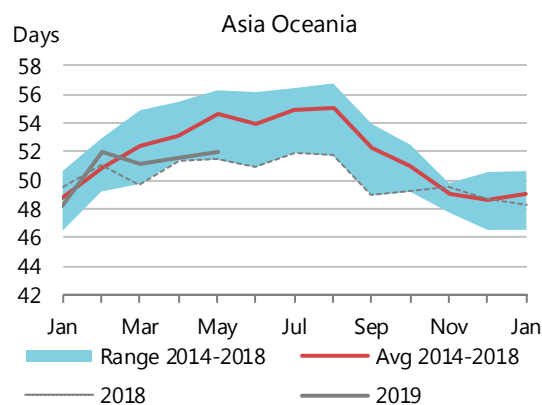
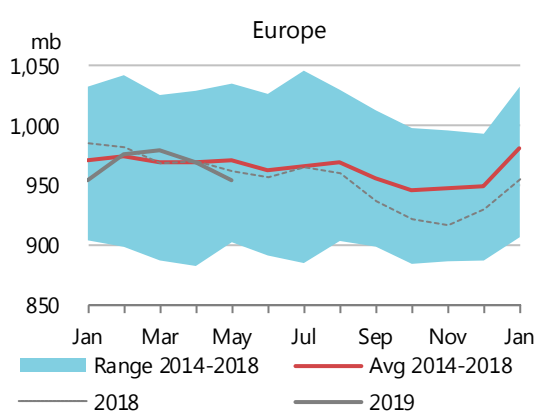
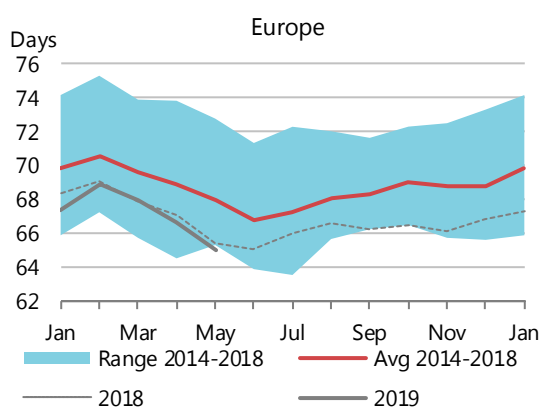
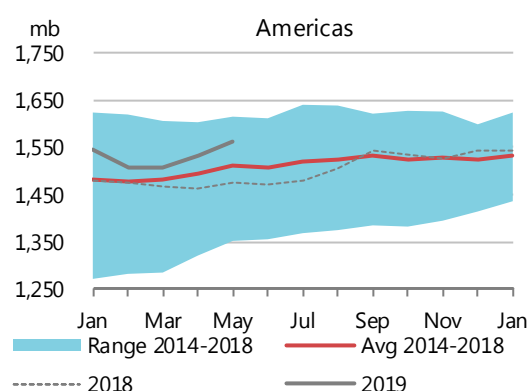
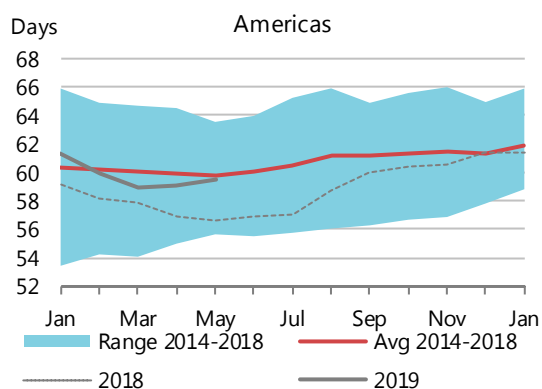
Chinese implied crude stock changes are not included in this month's *Report* since preliminary data is not available at the time of writing.

## Regional OECD End-of-Month Industry Stocks

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

**Days<sup>1</sup>**

**Million Barrels**

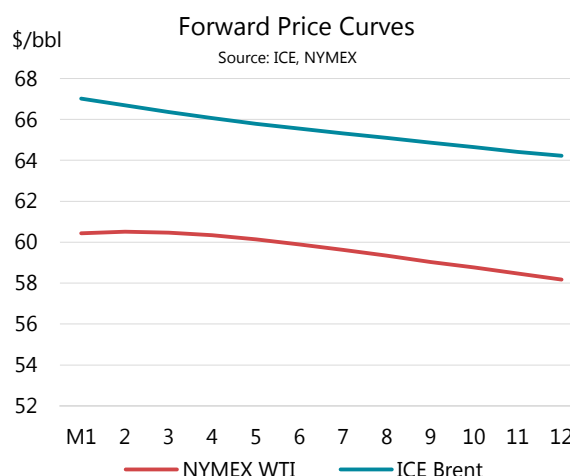
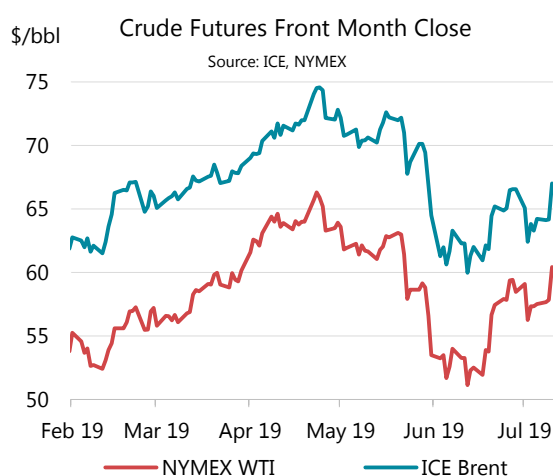


1 Days of forward demand are based on average demand over the next three months

# PRICES

## Overview

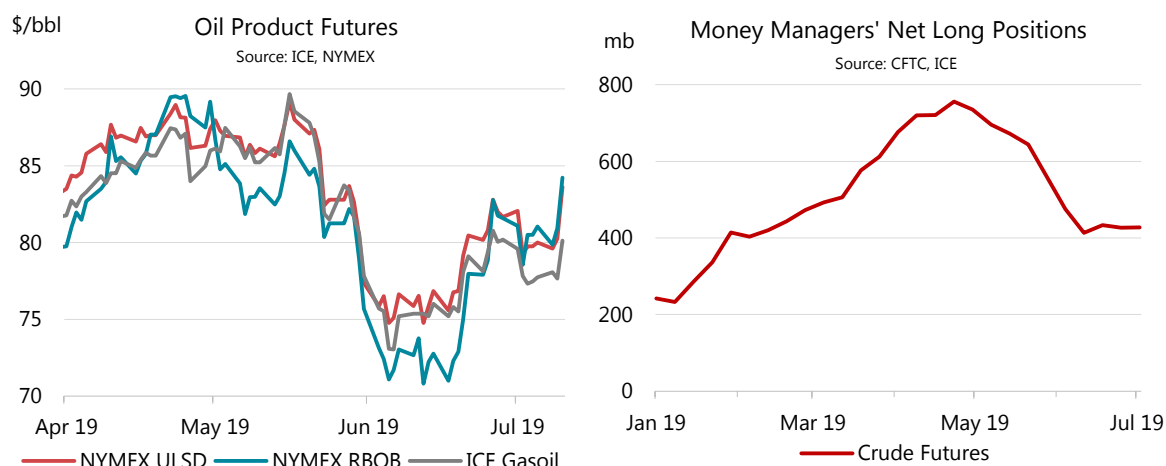
Prices fell close to a five-month low on 12 June, when Brent settled below \$60/bbl, on fears that oil demand growth is faltering. Towards the end of June, prices rallied on renewed tension in the Middle East Gulf and positive news regarding trade discussions between China and the US. Markets struggled to maintain momentum but on 10 July, the news that some production in the US Gulf of Mexico was being shut in ahead of a tropical storm pushed crude and product futures sharply higher.



## Futures markets

ICE Brent and NYMEX WTI prices declined month-on-month (m-o-m) in June, by \$7.26/bbl and \$6.16/bbl, respectively. Since then prices have ticked up and currently Brent and WTI are at \$67/bbl and \$61/bbl, respectively. The announcement on 2 July that OPEC+ countries would continue to cut supplies had only a small impact on prices as this outcome had been anticipated. The US benchmark was given an additional boost due to the expected permanent closure of Philadelphia Energy Solutions' 335 kb/d refinery following a fire and explosion on 21 June. WTI's discount to Brent narrowed by \$1.10/bbl over the month to \$8.33/bbl. This will weigh on the attractiveness of US exports but the spread remains relatively wide and covers the cost of shipping.

The Brent forward curve remains in backwardation although this has flattened with less prompt market tightness. Crude delivered in September 2019 was priced at a \$0.64/bbl premium over crude delivered three months later. One month ago the three-month spread was more than double this at \$1.79/bbl. Following the refinery fire, the WTI curve flipped to narrow backwardation, but has since returned to contango for the first three months. The Dubai forward curve backwardation has flattened as weaker refining margins have weighed on Asia Pacific demand for crude from the Middle East.



US product futures gained as the refinery outage in Philadelphia removed supplies from the market. NYMEX RBOB jumped by almost \$4/bbl in the immediate aftermath of the fire and prices have remained elevated so far. NYMEX ultra-low sulphur diesel (ULSD) gained by \$2.01/bbl on the day of the fire. The price impact is expected to be relatively short-lived with additional supplies delivered to the region from the US Gulf Coast via the Colonial Pipeline, and Europe.

#### Prompt Month Oil Futures Prices

(monthly and weekly averages, \$/bbl)

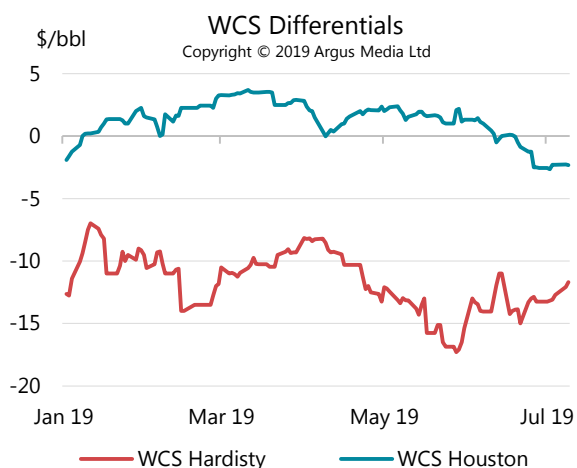
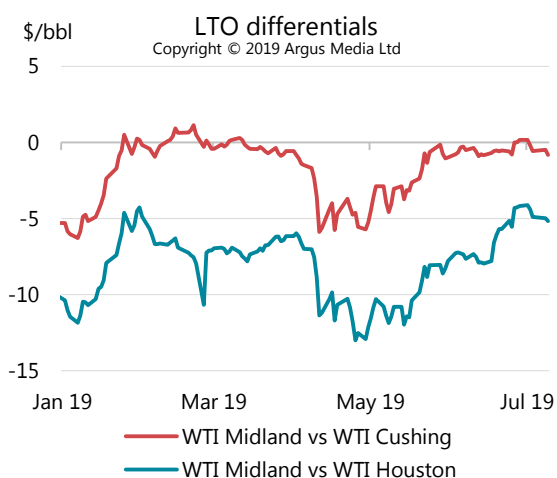
	Apr	May	Jun	Jun-May Avg Chg	% Chg	Week Commencing:				
						03 Jun	10 Jun	17 Jun	24 Jun	01 Jul
<b>NYMEX</b>										
Light Sweet Crude Oil	63.87	60.87	54.71	-6.16	-10.1	53.00	52.49	54.73	58.60	57.55
RBOB	85.59	83.06	74.78	-8.27	-10.0	72.28	72.45	73.84	80.57	80.29
ULSD	86.55	85.44	77.75	-7.69	-9.0	75.78	75.97	77.76	81.49	80.26
ULSD (\$/mmbtu)	15.27	15.07	13.71	-1.36	-9.0	13.36	13.40	13.71	14.37	14.16
Henry Hub Natural Gas (\$/mmbtu)	2.60	2.59	2.33	-0.26	-10.1	2.37	2.37	2.27	2.31	2.30
<b>ICE</b>										
Brent	71.63	70.30	63.04	-7.26	-10.3	61.77	61.57	62.91	65.90	63.76
Gasoil	84.47	84.70	76.30	-8.41	-9.9	74.21	75.16	76.44	79.38	77.67
<b>Prompt Month Differentials</b>										
NYMEX WTI - ICE Brent	-7.76	-9.43	-8.33	1.10		-8.77	-9.08	-8.18	-7.30	-6.21
NYMEX ULSD - WTI	22.68	24.57	23.04	-1.53		22.78	23.48	23.03	22.89	22.71
NYMEX RBOB - WTI	21.72	22.19	20.07	-2.11		19.28	19.96	19.11	21.97	22.74
NYMEX 3-2-1 Crack (RBOB)	22.04	22.98	21.06	-1.92		20.45	21.13	20.41	22.27	22.73
NYMEX ULSD - Natural Gas (\$/mmbtu)	12.66	12.48	11.38	-1.09		10.99	11.03	11.44	12.06	11.85
ICE Gasoil - ICE Brent	12.84	14.40	13.26	-1.15		12.44	13.59	13.53	13.48	13.91

Source: ICE, NYMEX.

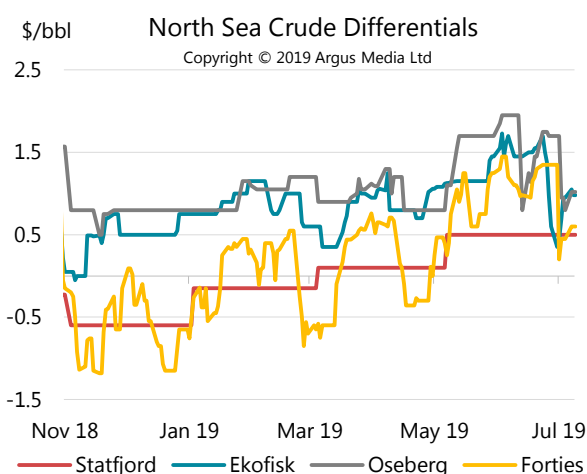
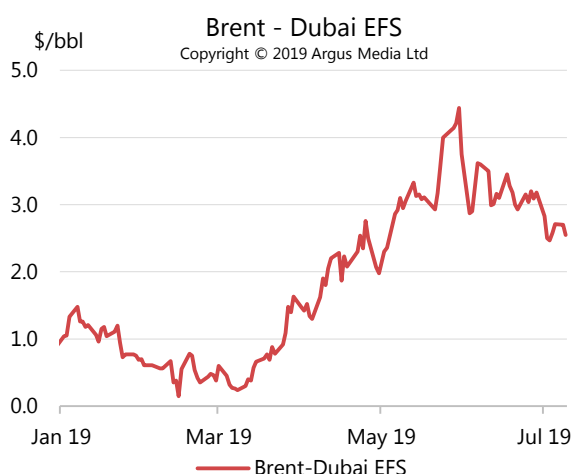
Having declined for seven consecutive weeks, money managers' net length in crude oil futures stabilised in mid-June. Net length is currently 427 mb, down 42% since the end of April. The long-short ratio is 4.3:1, well below the long term average of 6.4:1. Hedge funds have also reduced their bets that product futures prices will increase. Combined net long positions in ICE low sulphur gasoil futures, NYMEX ULSD futures and NYMEX RBOB futures fell to 93 mb in mid-June, half the level at the start of the month. Having ticked up following the Philadelphia refinery fire, net length in product futures is currently 127 mb.

# Spot crude oil prices

In the US, an additional 2 mb/d of pipeline capacity is due to come online in 2H19 to transport crude from the Permian Basin to the US Gulf Coast. In June, WTI Midland rose by \$3.55/bbl m-o-m as two pipelines began line-fill. This additional infrastructure will support growing US exports which have been flowing to Europe and Asia. Mars fell by \$0.49/bbl m-o-m against WTI Houston even as Gulf of Mexico projects ramped up and boosted flows. Bakken rose by \$1.38/bbl m-o-m against WTI and, despite being a crude supplied to the Philadelphia refinery, its differential was not impacted by the outage. The refinery also sourced crude from the North Sea and Canada.

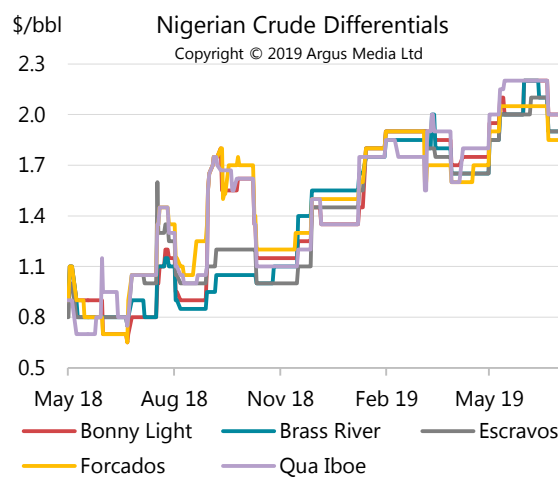
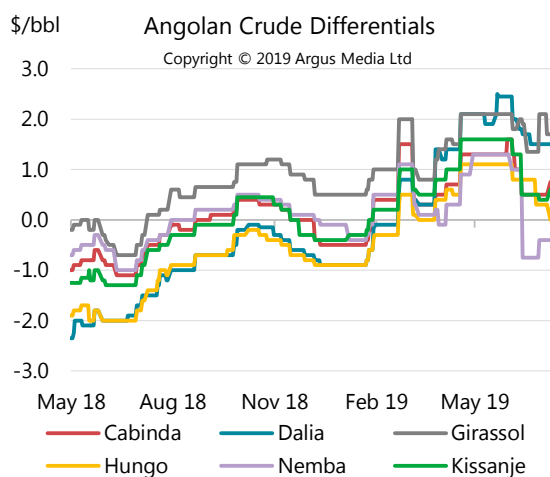


The government of Alberta announced a further relaxation of production cuts for August and this, along with higher rail supplies, caused the price of Western Canada Select (WCS) in Houston to fall by \$1.96/bbl m-o-m against WTI. The temporary shut-in of an oil sands project due to wildfires gave a short-term boost to WCS priced in Hardisty which rose by \$1.30/bbl m-o-m against WTI.

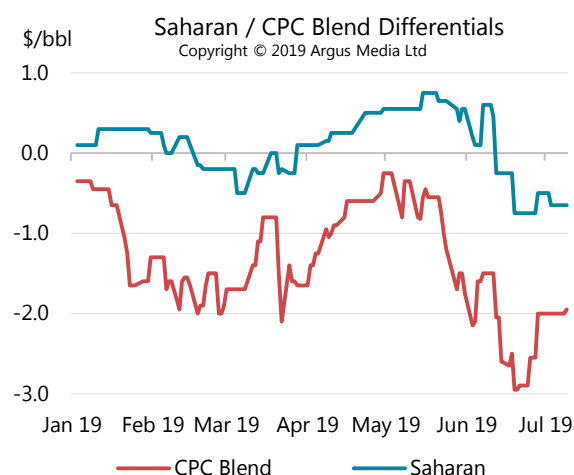
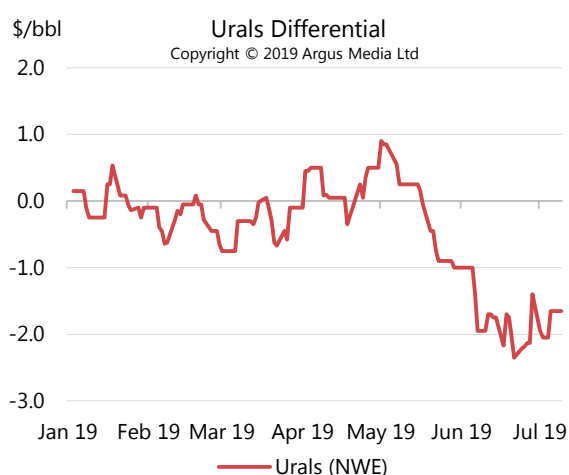


Healthy demand from Asia Pacific refiners and the anticipation of reduced loadings due to upcoming field maintenance caused the price of North Sea crudes, Forties, Brent, Ekofisk, Oseberg and Troll, to increase by between \$0.50/bbl and \$0.24/bbl m-o-m against North Sea

Dated. Flows of Forties to Korea have picked up following the signing of a preliminary agreement to continue the free trade arrangement between the UK and Korea following Brexit. Furthermore, the Korean government has extended a scheme to grant freight incentives for refiners sourcing crude from non-Middle East suppliers. As well as benefiting North Sea supplies, this has encouraged US exports.



In the past few months, differentials for Angolan crude have strengthened on demand from Asia Pacific refiners looking to replace supplies from Iran and Venezuela. In June, however, demand slowed as weak margins prompted several refiners to cut, or consider cutting, runs. Prices for key grades such as Nemba (-\$1.29/bbl m-o-m), Cabinda (-\$0.54/bbl m-o-m) and Girassol (-\$0.41/bbl m-o-m) fell against North Sea Dated. Differentials for Nigerian crude rose modestly against North Sea Dated in June as demand from Europe to replace contaminated Urals offset the expectation of higher loadings in August. Qua Iboe and Forcados were flat m-o-m, while Bonny Light and Brass River gained by \$0.15/bbl and \$0.13/bbl m-o-m, respectively.



Urals in North West Europe continued to weaken against North Sea Dated in June and the discount reached \$2.35/bbl on 21 June, the widest in eight months. Disruptions to flows along the Druzhba pipeline have eased and weak refining margins have pressured demand. Urals prices jumped by \$0.73/bbl after a tanker collided with a loading berth at Novorossiysk on fears that this could disrupt supplies. Prices have since subsided with loading programmes indicating higher Russian exports in July. Increased availability of Libyan crude due to a domestic refinery

outage pressured competing crudes in the Mediterranean. BTC and Azeri Light fell by \$0.95/bbl and \$1.04/bbl m-o-m to North Sea Dated, respectively. CPC Blend was also affected by higher Libyan availabilities and by increased supply of Kashagan crude as the field returned from maintenance. Prices fell by \$1.51/bbl m-o-m against North Sea Dated. At \$2.95/bbl on 19 June, the discount was the widest in seven years. Concurrently, Saharan Blend hit a nine month low of \$0.75/bbl below North Sea Dated.

In June, crude prices in the Middle East were dragged down with several Asia Pacific refiners cutting or considering cutting runs in response to low margins. Upper Zakum and Murban both declined by \$0.29/bbl against Dubai. Despite a seasonal pickup in demand for Basra Heavy to produce bitumen, its differential fell \$0.50/bbl m-o-m. The Brent-Dubai Exchange of Futures for Swaps (EFS) fell to \$2.55/bbl in the first week of July, having peaked at \$4.44/bbl at the end of May, meaning that crude from the Middle East is less competitive in Asia Pacific markets.

Spot crude oil prices and differentials

## Table Unavailable

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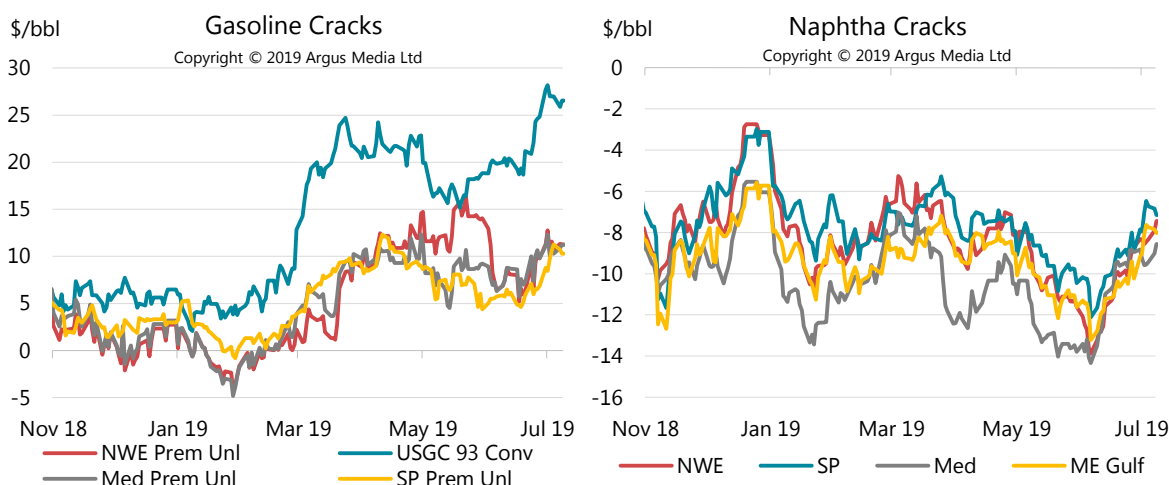
## Spot product prices

Persistently weak cracks, particularly for gasoline and naphtha, have led some refiners to reduce runs or extend maintenance. In Asia, supplies of products are abundant as new refineries ramp up in China where the government has issued more gasoline export quotas. In Europe, logistical issues have hampered the transport of products and margins have been squeezed as stocks build up in ports.

Rotterdam barge quotes for premium unleaded gasoline fell by \$12.08/bbl m-o-m and, in the Mediterranean, FOB cargoes were down \$9.60/bbl m-o-m. In North West Europe, cracks have declined by over \$5/bbl since they peaked at \$16.31/bbl in May as imports from China keep the market well supplied and German refineries increased runs. European markets got a boost following the Philadelphia refinery fire as the US imported more gasoline to make up for the outage. On the US Gulf Coast, cracks for super unleaded and unleaded rose by \$3.10/bbl and \$0.70/bbl m-o-m, respectively. It is currently the peak demand season and prices jumped in the aftermath of the refinery fire. In Singapore, premium unleaded FOB cargoes fell by \$1.04/bbl against Dubai, as China increased exports and this is expected to continue. In early July, demand

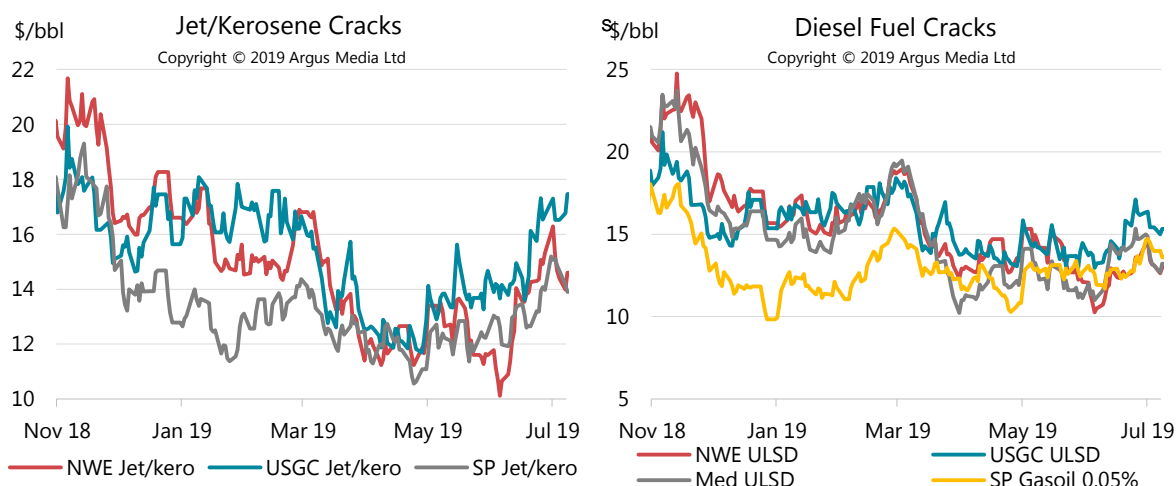


emerged from the Philippines where a turnaround has been extended and buyers from Pakistan and Sri Lanka also provided some support.



Naphtha cracks fell to multi-year lows in early June with a variety of factors putting pressure on prices in recent months. Demand has been reduced as petrochemical plants in Europe and Asia undergo or extend maintenance, while the weakness in gasoline markets has translated into low blending demand. Furthermore, propane, a rival petrochemical feedstock, has been competitively priced thanks to higher supplies from the US while European demand for heating is low. The US naphtha market has been well supplied as sanctions have prevented Venezuela from making its usual purchases. However, in the later part of June the restart of petrochemical facilities in Germany, Korea, Taiwan and Malaysia gave a boost to markets and cracks in Europe and Singapore gained around \$5/bbl.

Global jet markets continued to rally in June as the peak demand season gets underway. In North West Europe and the Mediterranean, cracks rose by \$0.32/bbl and \$2.85/bbl m-o-m, respectively. Strong demand to export to Europe and from Japan and India supported the Asia Pacific market and cracks in Singapore rose by \$0.84/bbl m-o-m. A tighter prompt market caused the Singapore jet curve to flip into backwardation on 28 June.



In North West Europe, cracks for ultra-low sulphur diesel declined by \$1.86/bbl m-o-m with the market well supplied and higher Russian exports expected when refinery turnarounds are completed. In the US, cracks gained by \$0.27/bbl m-o-m but the market is relatively depressed

on continued weak agricultural demand. In Singapore, cracks for gasoil increased slightly, by \$0.53/bbl over the month, and in early July they received a further boost following a refinery outage in Vietnam.

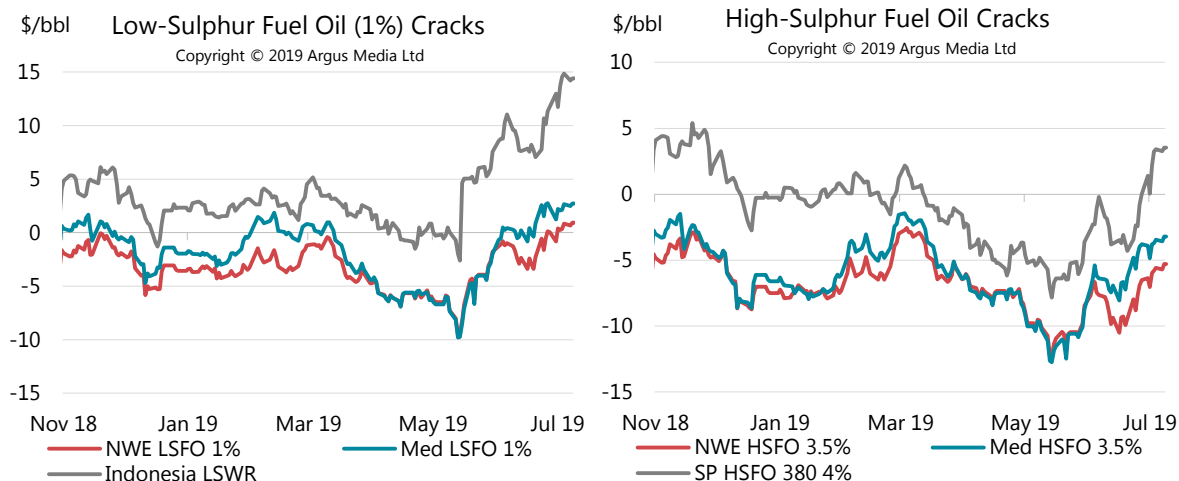
Globally, fuel oil demand is increasing seasonally, particularly from the Middle East where increased power generation is needed to meet higher air conditioning use. This year supplies have been hampered by Iranian sanctions and lower refinery output related to the Druzhba pipeline contamination. High sulphur fuel oil (HSFO) cracks in North West Europe and Singapore increased by \$1.99/bbl and \$2.59/bbl m-o-m, respectively. Furthermore, the premium of prompt HSFO to supplies delivered one month later have soared. On 5 July, the one-month spread for 180 centistoke and 380 centistoke HSFO was \$3.06/bbl and \$3.14/bbl, respectively, up from \$0.54/bbl and \$0.70/bbl, respectively, on 5 June.

#### Spot product prices

## Table Unavailable

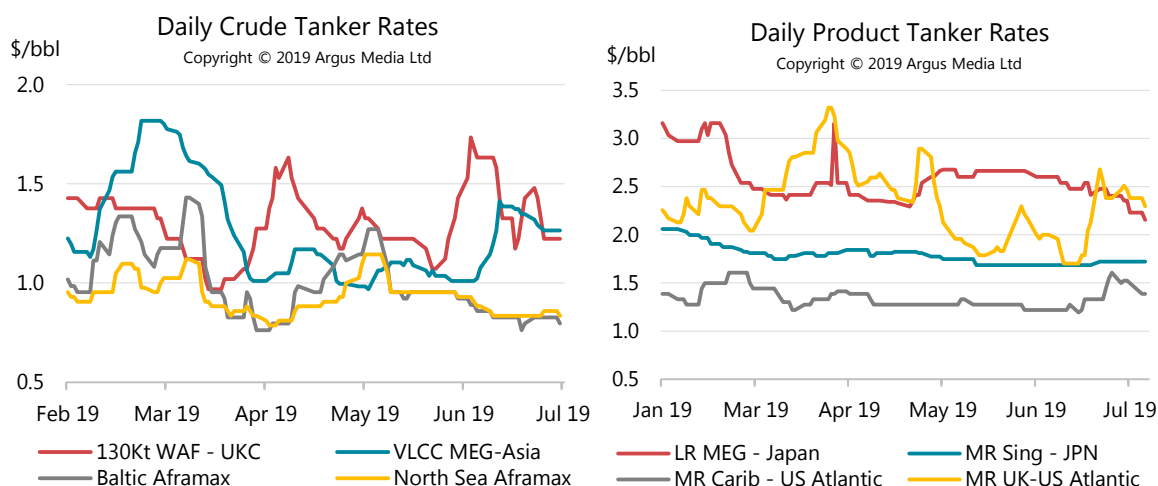
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## Freight

In the wake of attacks on two tankers in the Middle East Gulf rates to ship crude on Very Large Crude Carriers (VLCC) between the region and Asia surged by \$0.40/bbl. Relatively speaking, rates remain depressed as high ship availability continues to be a dominating factor. Currently, the largest impact is that insurance rates have increased 20-fold, from around 0.02% of a vessel's value to between 0.1% and 0.4% according to *S&P Global Platts*. Suezmax rates increased by \$0.21/bbl m-o-m, to the highest since January, on increased demand to ship between the UK-Continent and US Atlantic coast. Meanwhile, Baltic Aframax rates declined \$0.20/bbl m-o-m on weaker demand.



Rates to ship products on clean tankers between Europe and the US Atlantic jumped by over \$1/bbl after the Philadelphia refinery fire as more products were imported. Rates for Long Range (LR) ships travelling between Asia and the Middle East Gulf were flat m-o-m, with steady demand, although this is picking up heading into the season of higher fuel oil demand.

**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	25.2	25.3	25.8	25.6	25.5	25.2	25.6	26.1	25.9	25.7	25.3	25.9	26.4	26.1	25.9
Europe	14.0	14.3	14.0	14.2	14.6	14.0	14.2	13.9	14.2	14.7	14.2	14.3	13.8	14.4	14.8	14.3	14.3
Asia Oceania	8.1	8.1	8.6	7.7	7.7	8.1	8.0	8.3	7.5	7.7	8.2	7.9	8.3	7.5	7.7	8.2	8.0
Total OECD	47.0	47.5	47.8	47.2	48.1	47.7	47.7	47.4	47.3	48.5	48.3	47.9	47.4	47.8	49.0	48.7	48.2
<b>NON-OECD DEMAND</b>																	
FSU	4.5	4.5	4.5	4.6	4.9	4.8	4.7	4.6	4.7	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	12.6	12.8	13.1	13.2	13.2	13.1	13.0	13.4	13.6	13.8	13.4	13.3	13.7	14.0	14.1	13.8
Other Asia	13.1	13.4	13.8	14.0	13.4	13.9	13.8	14.2	14.2	13.9	14.4	14.1	14.6	14.7	14.3	14.9	14.6
Americas	6.4	6.4	6.3	6.4	6.5	6.4	6.4	6.3	6.4	6.5	6.4	6.4	6.3	6.4	6.5	6.5	6.4
Middle East	8.5	8.5	8.2	8.5	8.8	8.2	8.4	8.2	8.5	8.8	8.3	8.5	8.2	8.7	9.0	8.3	8.5
Africa	4.3	4.3	4.3	4.3	4.2	4.3	4.3	4.4	4.4	4.3	4.4	4.3	4.4	4.4	4.3	4.5	4.4
Total Non-OECD	49.5	50.5	50.7	51.6	51.7	51.6	51.4	51.4	52.3	52.9	53.0	52.4	52.3	53.5	54.0	54.1	53.5
<b>Total Demand<sup>1</sup></b>	<b>96.4</b>	<b>98.0</b>	<b>98.5</b>	<b>98.8</b>	<b>99.8</b>	<b>99.3</b>	<b>99.1</b>	<b>98.8</b>	<b>99.6</b>	<b>101.4</b>	<b>101.3</b>	<b>100.3</b>	<b>99.8</b>	<b>101.2</b>	<b>102.9</b>	<b>102.7</b>	<b>101.7</b>
<b>OECD SUPPLY</b>																	
Americas	19.6	20.5	21.9	22.3	23.4	24.1	23.0	24.0	24.4	24.8	25.3	24.6	25.6	25.7	26.1	26.3	25.9
Europe	3.5	3.5	3.6	3.4	3.3	3.5	3.5	3.5	3.2	3.3	3.5	3.4	3.6	3.5	3.6	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	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Total OECD <sup>4</sup>	23.5	24.4	25.9	26.1	27.2	28.1	26.8	27.9	28.1	28.6	29.3	28.5	29.7	29.8	30.3	30.8	30.2
<b>NON-OECD SUPPLY</b>																	
FSU	14.2	14.3	14.4	14.4	14.6	14.8	14.6	14.8	14.4	14.5	14.6	14.6	14.7	14.6	14.5	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	3.9	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.9	3.9
Other Asia	3.6	3.5	3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.2
Americas	4.5	4.5	4.5	4.5	4.4	4.6	4.5	4.5	4.6	4.9	5.0	4.8	5.1	5.1	5.1	5.1	5.1
Middle East	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	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	1.5	1.5	1.5	1.5	1.5
Total Non-OECD <sup>4</sup>	31.0	30.9	30.9	31.0	31.0	31.4	31.1	31.4	31.1	31.3	31.5	31.3	31.7	31.7	31.5	31.6	31.6
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	3.1	2.6	2.7	2.4	2.9	3.2	2.8	2.8
Total Non-OPEC Supply	59.2	60.1	61.3	62.2	63.6	64.4	62.9	63.9	64.5	65.3	65.8	64.9	66.2	66.8	67.3	67.6	67.0
<b>OPEC<sup>2</sup></b>																	
Crude	32.4	32.0	31.7	31.6	32.0	32.2	31.9	30.6	30.0								
NGLs	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6	5.6	5.6	5.6	5.6
Total OPEC	37.8	37.5	37.2	37.1	37.6	37.7	37.4	36.2	35.6								
<b>Total Supply</b>	<b>97.0</b>	<b>97.6</b>	<b>98.5</b>	<b>99.3</b>	<b>101.1</b>	<b>102.1</b>	<b>100.3</b>	<b>100.1</b>	<b>100.1</b>								
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>Reported OECD</b>																	
Industry	0.0	-0.4	-0.5	0.0	0.6	0.1	0.0	0.0									
Government	0.0	-0.1	0.1	-0.1	0.0	-0.2	-0.1	0.0									
Total	0.0	-0.5	-0.4	-0.1	0.5	-0.1	0.0	0.0									
Floating storage/Oil in transit	0.2	0.4	-1.0	0.3	-0.3	0.6	0.0	-0.3									
Miscellaneous to balance <sup>5</sup>	0.4	-0.3	1.4	0.3	1.1	2.3	1.2	1.6									
<b>Total Stock Ch. &amp; Misc</b>	<b>0.6</b>	<b>-0.5</b>	<b>0.0</b>	<b>0.5</b>	<b>1.3</b>	<b>2.8</b>	<b>1.2</b>	<b>1.3</b>	<b>0.5</b>								
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch. <sup>6</sup>	31.8	32.5	31.7	31.1	30.7	29.4	30.7	29.4	29.5	30.6	30.0	29.9	28.0	28.9	30.0	29.5	29.1

<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	-0.1	-0.1	-0.1	-0.1	0.1	-	-	-0.1	-	-0.1	-0.2	-0.2	-0.1	-0.1
Europe	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Asia Oceania	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	-	0.1	0.1	0.1
Total OECD	-	0.1	-	-	-	-	-	0.2	-0.1	0.1	-	-	-0.1	-0.3	-0.1	-0.1	-0.2
<b>NON-OECD DEMAND</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	0.1	-	-0.1	-0.1	-	0.2	0.1	-0.1	-0.1	-
Other Asia	-	-	-	-	-0.1	-0.1	-	-0.1	-0.2	-	0.1	-	-	-0.1	0.1	0.1	-
Americas	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	0.1	0.1	-
Africa	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-0.1	-	-	-0.1	-0.3	-	0.1	-0.1	0.1	-	0.1	0.1	0.1
<b>Total Demand</b>	-	<b>0.1</b>	-	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	-	<b>0.1</b>	<b>-0.4</b>	-	<b>0.1</b>	-	-	<b>-0.3</b>	-	-	<b>-0.1</b>
<b>OECD SUPPLY</b>																	
Americas	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Europe	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2
<b>NON-OECD SUPPLY</b>																	
FSU	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.2	-0.2	-0.2	-0.2	-0.2
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Americas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1	-0.1
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Global Biofuels	-	-	-	-	-	-	-	-	0.1	-	-0.2	-	-	-	-	-	-
Total Non-OPEC Supply	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.5	0.3	0.1	0.3	0.1	0.2	0.1	0.2	0.2
<b>OPEC</b>																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Supply</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>									
<b>STOCK CHANGES AND MISCELLANEOUS</b>																	
<b>REPORTED OECD</b>																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floating storage/Oil in transit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous to balance	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2									
<b>Total Stock Ch. &amp; Misc</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>									
<b>Memo items:</b>																	
Call on OPEC crude + Stock ch.	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.9	-0.2	-	-0.3	-0.1	-0.5	-0.1	-0.1	-0.2

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	25.20	25.31	25.78	25.61	25.48	25.25	25.59	26.12	25.88	25.71	25.26	25.91	26.42	26.14	25.93
Europe	14.32	14.00	14.18	14.61	14.04	14.21	13.85	14.23	14.72	14.24	14.26	13.84	14.35	14.80	14.31	14.33
Asia Oceania	8.14	8.64	7.72	7.74	8.08	8.04	8.32	7.51	7.70	8.17	7.92	8.34	7.53	7.74	8.22	7.96
<b>Total OECD</b>	<b>47.53</b>	<b>47.85</b>	<b>47.21</b>	<b>48.12</b>	<b>47.73</b>	<b>47.73</b>	<b>47.42</b>	<b>47.33</b>	<b>48.54</b>	<b>48.28</b>	<b>47.90</b>	<b>47.44</b>	<b>47.79</b>	<b>48.96</b>	<b>48.67</b>	<b>48.22</b>
Asia	26.00	26.60	27.06	26.63	27.06	26.84	27.14	27.52	27.55	28.14	27.59	27.91	28.37	28.31	28.97	28.39
Middle East	8.48	8.18	8.52	8.76	8.21	8.42	8.20	8.49	8.85	8.28	8.45	8.22	8.65	8.97	8.32	8.54
Americas	6.45	6.33	6.35	6.46	6.42	6.39	6.27	6.40	6.46	6.41	6.39	6.27	6.41	6.51	6.47	6.41
FSU	4.54	4.48	4.62	4.89	4.82	4.71	4.63	4.73	4.96	4.97	4.83	4.71	4.81	5.05	5.00	4.89
Africa	4.28	4.34	4.29	4.16	4.31	4.27	4.35	4.37	4.27	4.40	4.35	4.44	4.44	4.33	4.47	4.42
Europe	0.75	0.73	0.74	0.77	0.79	0.76	0.78	0.76	0.79	0.81	0.79	0.78	0.77	0.80	0.83	0.79
<b>Total Non-OECD</b>	<b>50.49</b>	<b>50.65</b>	<b>51.58</b>	<b>51.68</b>	<b>51.61</b>	<b>51.38</b>	<b>51.39</b>	<b>52.27</b>	<b>52.89</b>	<b>53.01</b>	<b>52.39</b>	<b>52.33</b>	<b>53.45</b>	<b>53.96</b>	<b>54.05</b>	<b>53.45</b>
<b>World</b>	<b>98.02</b>	<b>98.50</b>	<b>98.79</b>	<b>99.80</b>	<b>99.34</b>	<b>99.11</b>	<b>98.81</b>	<b>99.60</b>	<b>101.42</b>	<b>101.29</b>	<b>100.29</b>	<b>99.77</b>	<b>101.25</b>	<b>102.93</b>	<b>102.72</b>	<b>101.67</b>
of which: US50	19.96	20.24	20.33	20.63	20.60	20.45	20.31	20.49	20.93	20.81	20.64	20.32	20.86	21.21	21.06	20.86
Europe 5*	8.32	8.23	8.28	8.37	8.19	8.27	8.12	8.18	8.41	8.26	8.24	8.04	8.22	8.44	8.27	8.24
China	12.58	12.79	13.06	13.23	13.18	13.07	12.97	13.37	13.65	13.78	13.44	13.29	13.72	13.98	14.06	13.76
Japan	3.92	4.31	3.46	3.56	3.92	3.81	4.09	3.40	3.53	3.91	3.73	4.02	3.35	3.48	3.87	3.68
India	4.57	4.82	4.93	4.53	4.80	4.77	5.05	4.99	4.76	5.05	4.96	5.23	5.24	4.97	5.30	5.19
Russia	3.32	3.29	3.37	3.61	3.54	3.45	3.42	3.46	3.66	3.62	3.54	3.46	3.50	3.71	3.62	3.58
Brazil	3.00	2.95	2.91	3.07	3.08	3.00	2.98	3.04	3.14	3.13	3.07	3.01	3.08	3.18	3.17	3.11
Saudi Arabia	3.27	2.93	3.18	3.32	2.96	3.10	2.93	3.16	3.40	3.08	3.14	2.85	3.20	3.37	2.97	3.10
Canada	2.42	2.34	2.37	2.58	2.51	2.45	2.37	2.42	2.59	2.51	2.47	2.37	2.40	2.59	2.50	2.47
Korea	2.63	2.73	2.64	2.58	2.53	2.62	2.63	2.52	2.58	2.64	2.59	2.71	2.56	2.64	2.70	2.65
Mexico	2.02	1.91	1.94	1.89	1.80	1.89	1.86	2.00	1.91	1.85	1.91	1.86	1.96	1.93	1.87	1.90
Iran	2.02	2.07	2.07	2.08	2.08	2.07	2.06	2.02	2.00	1.98	2.01	2.10	2.05	2.04	2.02	2.05
<b>Total</b>	<b>68.04</b>	<b>68.62</b>	<b>68.55</b>	<b>69.45</b>	<b>69.20</b>	<b>68.96</b>	<b>68.78</b>	<b>69.05</b>	<b>70.56</b>	<b>70.60</b>	<b>69.75</b>	<b>69.25</b>	<b>70.13</b>	<b>71.53</b>	<b>71.41</b>	<b>70.59</b>
% of World	69.4%	69.7%	69.4%	69.6%	69.7%	69.6%	69.6%	69.3%	69.6%	69.7%	69.6%	69.4%	69.3%	69.5%	69.5%	69.4%
<b>Annual Change (% per annum)</b>																
Americas	0.7	2.3	0.7	2.4	1.0	1.6	0.2	1.1	1.3	1.1	0.9	0.0	1.3	1.2	1.0	0.9
Europe	2.5	1.1	-0.7	-0.8	-2.5	-0.8	-1.1	0.4	0.8	1.4	0.4	-0.1	0.8	0.5	0.5	0.4
Asia Oceania	0.2	1.1	-0.5	-1.7	-3.7	-1.2	-3.8	-2.7	-0.5	1.0	-1.5	0.3	0.3	0.5	0.7	0.5
<b>Total OECD</b>	<b>1.2</b>	<b>1.8</b>	<b>0.1</b>	<b>0.7</b>	<b>-0.9</b>	<b>0.4</b>	<b>-0.9</b>	<b>0.2</b>	<b>0.9</b>	<b>1.2</b>	<b>0.4</b>	<b>0.0</b>	<b>1.0</b>	<b>0.9</b>	<b>0.8</b>	<b>0.7</b>
Asia	3.8	3.6	2.6	3.9	2.8	3.2	2.1	1.7	3.5	4.0	2.8	2.8	3.1	2.7	2.9	2.9
Middle East	0.1	-0.5	-1.4	-1.0	0.2	-0.7	0.2	-0.4	1.0	0.8	0.4	0.3	1.9	1.4	0.5	1.0
Americas	0.1	-0.1	-1.6	-1.5	-0.4	-0.9	-0.8	0.8	0.0	-0.1	0.0	-0.1	0.2	0.7	0.9	0.4
FSU	0.7	4.2	2.2	3.0	5.2	3.7	3.3	2.5	1.4	3.1	2.6	1.8	1.7	1.8	0.4	1.4
Africa	0.6	-0.6	-0.2	-0.8	0.9	-0.2	0.4	1.8	2.7	2.1	1.7	1.9	1.6	1.3	1.7	1.6
Europe	2.9	2.4	-1.0	1.3	5.3	2.0	7.3	3.0	2.6	2.1	3.7	-0.8	1.0	0.8	2.3	0.8
<b>Total Non-OECD</b>	<b>2.1</b>	<b>2.1</b>	<b>1.1</b>	<b>1.9</b>	<b>2.1</b>	<b>1.8</b>	<b>1.5</b>	<b>1.3</b>	<b>2.3</b>	<b>2.7</b>	<b>2.0</b>	<b>1.8</b>	<b>2.3</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
<b>World</b>	<b>1.6</b>	<b>1.9</b>	<b>0.6</b>	<b>1.3</b>	<b>0.6</b>	<b>1.1</b>	<b>0.3</b>	<b>0.8</b>	<b>1.6</b>	<b>2.0</b>	<b>1.2</b>	<b>1.0</b>	<b>1.7</b>	<b>1.5</b>	<b>1.4</b>	<b>1.4</b>
<b>Annual Change (mb/d)</b>																
Americas	0.18	0.58	0.18	0.61	0.25	0.41	0.05	0.28	0.34	0.27	0.23	0.01	0.32	0.30	0.26	0.22
Europe	0.35	0.16	-0.11	-0.12	-0.37	-0.11	-0.15	0.05	0.12	0.20	0.05	-0.01	0.12	0.08	0.07	0.06
Asia Oceania	0.02	0.09	-0.04	-0.13	-0.31	-0.10	-0.32	-0.21	-0.04	0.08	-0.12	0.02	0.02	0.04	0.05	0.04
<b>Total OECD</b>	<b>0.54</b>	<b>0.83</b>	<b>0.04</b>	<b>0.36</b>	<b>-0.42</b>	<b>0.20</b>	<b>-0.43</b>	<b>0.12</b>	<b>0.42</b>	<b>0.55</b>	<b>0.17</b>	<b>0.02</b>	<b>0.46</b>	<b>0.42</b>	<b>0.39</b>	<b>0.32</b>
Asia	0.94	0.92	0.69	1.01	0.74	0.84	0.55	0.46	0.92	1.08	0.75	0.77	0.86	0.75	0.83	0.80
Middle East	0.01	-0.04	-0.12	-0.09	0.01	-0.06	0.02	-0.04	0.09	0.06	0.03	0.02	0.16	0.13	0.04	0.09
Americas	0.01	-0.01	-0.10	-0.10	-0.03	-0.06	-0.05	0.05	0.00	-0.01	0.00	-0.01	0.01	0.05	0.06	0.03
FSU	0.03	0.18	0.10	0.14	0.24	0.17	0.15	0.12	0.07	0.15	0.12	0.08	0.08	0.09	0.02	0.07
Africa	0.03	-0.03	-0.01	-0.03	0.04	-0.01	0.02	0.08	0.11	0.09	0.07	0.08	0.07	0.06	0.07	0.07
Europe	0.02	0.02	-0.01	0.01	0.04	0.01	0.05	0.02	0.02	0.02	0.03	-0.01	0.01	0.01	0.02	0.01
<b>Total Non-OECD</b>	<b>1.04</b>	<b>1.05</b>	<b>0.54</b>	<b>0.95</b>	<b>1.05</b>	<b>0.90</b>	<b>0.74</b>	<b>0.69</b>	<b>1.21</b>	<b>1.40</b>	<b>1.01</b>	<b>0.95</b>	<b>1.19</b>	<b>1.08</b>	<b>1.04</b>	<b>1.06</b>
<b>World</b>	<b>1.58</b>	<b>1.87</b>	<b>0.58</b>	<b>1.30</b>	<b>0.63</b>	<b>1.09</b>	<b>0.31</b>	<b>0.81</b>	<b>1.63</b>	<b>1.95</b>	<b>1.18</b>	<b>0.97</b>	<b>1.65</b>	<b>1.50</b>	<b>1.43</b>	<b>1.38</b>
<b>Revisions to Oil Demand from Last Month's Report (mb/d)</b>																
Americas	0.01	-0.06	-0.06	-0.06	-0.06	-0.06	0.12	-0.02	-0.04	-0.06	0.00	-0.08	-0.21	-0.15	-0.11	-0.14
Europe	-0.01	-0.09	-0.09	-0.09	-0.09	-0.09	-0.08	-0.18	-0.06	-0.09	-0.10	-0.13	-0.15	-0.08	-0.08	-0.11
Asia Oceania	0.08	0.13	0.12	0.12	0.12	0.12	0.12	0.08	0.17	0.16	0.13	0.08	0.03	0.12	0.11	0.09
<b>Total OECD</b>	<b>0.08</b>	<b>-0.02</b>	<b>-0.03</b>	<b>-0.03</b>	<b>-0.03</b>	<b>-0.03</b>	<b>0.15</b>	<b>-0.12</b>	<b>0.08</b>	<b>0.01</b>	<b>0.03</b>	<b>-0.12</b>	<b>-0.33</b>	<b>-0.11</b>	<b>-0.08</b>	<b>-0.16</b>
Asia	0.00	0.06	0.01	-0.05	-0.05	-0.01	-0.01	-0.21	-0.07	0.05	-0.06	0.20	0.01	-0.01	0.04	0.06
Middle East	-0.02	-0.02	-0.01	0.01	0.02	0.00	0.03	-0.15	-0.01	0.02	-0.03	0.00	0.01	0.09	0.06	0.04
Americas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.04	0.04	0.00	0.03	0.02	0.02	0.02
FSU	0.00	0.00	-0.02	-0.02	-0.01	-0.01	-0.03	-0.02	-0.02	-0.03	-0.03	-0.04	-0.04	-0.02	-0.03	-0.03
Africa	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.01	0.02	0.02	0.00	-0.04	0.00	0.03	0.03	0.01
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>-0.02</b>	<b>0.04</b>	<b>-0.03</b>	<b>-0.06</b>	<b>-0.03</b>	<b>-0.02</b>	<b>-0.07</b>	<b>-0.33</b>	<b>-0.03</b>	<b>0.10</b>	<b>-0.08</b>	<b>0.12</b>	<b>0.02</b>	<b>0.12</b>	<b>0.12</b>	<b>0.10</b>
<b>World</b>	<b>0.07</b>	<b>0.02</b>	<b>-0.06</b>	<b>-0.09</b>	<b>-0.06</b>	<b>-0.05</b>	<b>0.08</b>	<b>-0.45</b>	<b>0.05</b>	<b>0.12</b>	<b>-0.05</b>	<b>0.00</b>	<b>-0.31</b>	<b>0.02</b>	<b>0.04</b>	<b>-0.06</b>
<b>Revisions to Oil Demand Growth from Last Month's Report (mb/d)</b>																
World	0.05	-0.04	-0.15	-0.16	-0.10	-0.11	0.06	-0.39	0.14	0.17	0.00	-0.09	0.14	-0.03	-0.08	-0.02

\* France, Germany, Italy, Spain and UK

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

										Latest month vs.	
	2017	2018	2Q18	3Q18	4Q18	1Q19	Feb 19	Mar 19	Apr 19 <sup>2</sup>	Mar 19	Apr 18
<b>Americas</b>											
LPG and ethane	3.39	3.67	3.33	3.51	3.81	4.15	4.24	3.86	3.62	-0.24	0.05
Naphtha	0.31	0.30	0.28	0.32	0.33	0.30	0.31	0.29	0.30	0.01	0.01
Motor gasoline	11.08	11.08	11.28	11.28	11.03	10.69	10.77	10.85	11.22	0.38	0.35
Jet and kerosene	1.98	2.03	2.04	2.12	2.01	1.97	1.92	2.02	2.07	0.04	0.14
Gasoil/diesel oil	5.15	5.31	5.30	5.23	5.39	5.43	5.51	5.30	5.16	-0.14	-0.08
Residual fuel oil	0.66	0.62	0.62	0.66	0.61	0.62	0.64	0.62	0.60	-0.02	-0.08
Other products	2.51	2.47	2.46	2.66	2.43	2.10	1.87	2.21	2.40	0.19	0.24
<b>Total</b>	<b>25.07</b>	<b>25.48</b>	<b>25.31</b>	<b>25.78</b>	<b>25.61</b>	<b>25.25</b>	<b>25.26</b>	<b>25.15</b>	<b>25.36</b>	<b>0.22</b>	<b>0.62</b>
<b>Europe</b>											
LPG and ethane	1.14	1.15	1.12	1.14	1.10	1.12	1.14	1.07	1.10	0.03	-0.08
Naphtha	1.13	1.05	1.04	1.02	0.95	1.13	1.14	1.05	0.96	-0.09	-0.12
Motor gasoline	1.99	1.97	2.04	2.05	1.94	1.84	1.86	1.87	2.02	0.15	0.04
Jet and kerosene	1.45	1.50	1.52	1.69	1.44	1.39	1.38	1.43	1.56	0.12	0.10
Gasoil/diesel oil	6.45	6.41	6.31	6.42	6.54	6.39	6.55	6.27	6.36	0.10	-0.02
Residual fuel oil	0.89	0.86	0.87	0.88	0.82	0.88	0.90	0.86	0.89	0.04	0.02
Other products	1.28	1.26	1.28	1.40	1.25	1.11	1.15	1.19	1.26	0.07	0.03
<b>Total</b>	<b>14.32</b>	<b>14.21</b>	<b>14.18</b>	<b>14.61</b>	<b>14.04</b>	<b>13.85</b>	<b>14.13</b>	<b>13.74</b>	<b>14.15</b>	<b>0.41</b>	<b>-0.04</b>
<b>Asia Oceania</b>											
LPG and ethane	0.76	0.75	0.75	0.68	0.73	0.85	0.88	0.78	0.76	-0.02	0.01
Naphtha	2.08	2.04	1.97	2.02	2.07	2.10	2.18	1.99	1.94	-0.05	-0.14
Motor gasoline	1.54	1.53	1.50	1.59	1.52	1.47	1.51	1.48	1.51	0.03	0.02
Jet and kerosene	0.93	0.93	0.75	0.74	1.02	1.15	1.24	0.98	0.89	-0.09	0.10
Gasoil/diesel oil	1.89	1.89	1.87	1.84	1.92	1.94	1.97	1.93	1.95	0.02	0.08
Residual fuel oil	0.55	0.53	0.47	0.49	0.51	0.50	0.52	0.47	0.44	-0.03	-0.07
Other products	0.39	0.38	0.40	0.38	0.31	0.31	0.32	0.31	0.29	-0.01	-0.09
<b>Total</b>	<b>8.14</b>	<b>8.04</b>	<b>7.72</b>	<b>7.74</b>	<b>8.08</b>	<b>8.32</b>	<b>8.62</b>	<b>7.94</b>	<b>7.78</b>	<b>-0.16</b>	<b>-0.10</b>
<b>OECD</b>											
LPG and ethane	5.30	5.57	5.20	5.34	5.64	6.11	6.27	5.71	5.48	-0.24	-0.03
Naphtha	3.52	3.40	3.29	3.36	3.35	3.53	3.63	3.34	3.20	-0.14	-0.26
Motor gasoline	14.61	14.58	14.83	14.92	14.49	14.00	14.13	14.20	14.75	0.56	0.41
Jet and kerosene	4.35	4.46	4.32	4.54	4.47	4.51	4.54	4.44	4.51	0.07	0.33
Gasoil/diesel oil	13.49	13.60	13.48	13.49	13.85	13.75	14.03	13.49	13.47	-0.02	-0.03
Residual fuel oil	2.09	2.00	1.96	2.04	1.94	1.99	2.06	1.94	1.93	-0.02	-0.13
Other products	4.18	4.12	4.14	4.43	3.99	3.52	3.34	3.71	3.96	0.25	0.19
<b>Total</b>	<b>47.53</b>	<b>47.73</b>	<b>47.21</b>	<b>48.12</b>	<b>47.73</b>	<b>47.42</b>	<b>48.00</b>	<b>46.83</b>	<b>47.30</b>	<b>0.46</b>	<b>0.48</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	2Q18	3Q18	4Q18	1Q19	Feb 19	Mar 19	Apr 19 <sup>2</sup>	Latest month vs.	
										Mar 19	Apr 18
<b>United States<sup>3</sup></b>											
LPG and ethane	2.54	2.85	2.58	2.68	3.04	3.29	3.39	3.03	2.71	-0.32	-0.04
Naphtha	0.23	0.23	0.20	0.24	0.24	0.21	0.21	0.21	0.22	0.01	0.01
Motor gasoline	9.33	9.32	9.51	9.51	9.25	8.96	8.96	9.17	9.36	0.18	0.17
Jet and kerosene	1.69	1.72	1.73	1.78	1.70	1.66	1.62	1.71	1.75	0.04	0.12
Gasoil/diesel oil	3.93	4.13	4.13	4.05	4.18	4.28	4.33	4.16	3.98	-0.18	-0.17
Residual fuel oil	0.34	0.32	0.32	0.34	0.34	0.29	0.30	0.28	0.26	-0.02	-0.15
Other products	1.90	1.88	1.86	2.04	1.85	1.62	1.38	1.71	1.92	0.21	0.32
<b>Total</b>	<b>19.96</b>	<b>20.45</b>	<b>20.33</b>	<b>20.63</b>	<b>20.60</b>	<b>20.31</b>	<b>20.19</b>	<b>20.27</b>	<b>20.20</b>	<b>-0.07</b>	<b>0.26</b>
<b>Japan</b>											
LPG and ethane	0.41	0.40	0.39	0.34	0.39	0.47	0.51	0.43	0.39	-0.04	-0.03
Naphtha	0.78	0.74	0.66	0.70	0.80	0.80	0.83	0.77	0.72	-0.05	-0.03
Motor gasoline	0.87	0.86	0.85	0.92	0.85	0.81	0.83	0.82	0.84	0.02	0.00
Jet and kerosene	0.52	0.50	0.37	0.33	0.57	0.69	0.77	0.56	0.46	-0.09	0.07
Diesel	0.44	0.46	0.45	0.47	0.49	0.47	0.49	0.49	0.46	-0.03	0.01
Other gasoil	0.34	0.32	0.28	0.27	0.32	0.35	0.36	0.32	0.32	-0.01	0.02
Residual fuel oil	0.28	0.28	0.23	0.26	0.27	0.26	0.29	0.24	0.22	-0.01	-0.02
Other products	0.28	0.26	0.23	0.26	0.23	0.25	0.24	0.23	0.23	0.00	-0.01
<b>Total</b>	<b>3.92</b>	<b>3.81</b>	<b>3.46</b>	<b>3.56</b>	<b>3.92</b>	<b>4.09</b>	<b>4.34</b>	<b>3.85</b>	<b>3.64</b>	<b>-0.21</b>	<b>0.01</b>
<b>Germany</b>											
LPG and ethane	0.13	0.11	0.13	0.11	0.09	0.12	0.13	0.11	0.13	0.02	0.00
Naphtha	0.30	0.27	0.28	0.24	0.23	0.33	0.35	0.29	0.23	-0.06	-0.08
Motor gasoline	0.50	0.49	0.51	0.50	0.48	0.47	0.47	0.48	0.48	0.00	-0.01
Jet and kerosene	0.22	0.22	0.23	0.25	0.22	0.22	0.23	0.24	0.28	0.04	0.07
Diesel	0.78	0.76	0.78	0.79	0.77	0.75	0.78	0.74	0.79	0.04	0.00
Other gasoil	0.35	0.32	0.25	0.28	0.35	0.41	0.42	0.34	0.30	-0.04	-0.02
Residual fuel oil	0.07	0.06	0.07	0.06	0.05	0.06	0.06	0.06	0.06	0.00	0.00
Other products	0.10	0.11	0.10	0.14	0.13	0.07	0.08	0.07	0.09	0.02	-0.01
<b>Total</b>	<b>2.45</b>	<b>2.35</b>	<b>2.35</b>	<b>2.37</b>	<b>2.32</b>	<b>2.44</b>	<b>2.54</b>	<b>2.34</b>	<b>2.36</b>	<b>0.02</b>	<b>-0.06</b>
<b>Italy</b>											
LPG and ethane	0.10	0.10	0.09	0.08	0.10	0.09	0.10	0.07	0.08	0.01	-0.02
Naphtha	0.12	0.13	0.12	0.13	0.11	0.08	0.07	0.08	0.08	0.00	-0.06
Motor gasoline	0.17	0.17	0.17	0.18	0.16	0.12	0.11	0.13	0.15	0.02	-0.02
Jet and kerosene	0.10	0.11	0.11	0.13	0.10	0.08	0.08	0.08	0.10	0.02	-0.01
Diesel	0.45	0.46	0.46	0.46	0.47	0.45	0.44	0.45	0.46	0.01	0.01
Other gasoil	0.08	0.08	0.07	0.08	0.08	0.06	0.06	0.06	0.06	0.00	-0.01
Residual fuel oil	0.07	0.07	0.08	0.07	0.07	0.06	0.06	0.06	0.07	0.01	-0.01
Other products	0.15	0.16	0.16	0.17	0.17	0.14	0.16	0.14	0.15	0.01	-0.01
<b>Total</b>	<b>1.24</b>	<b>1.27</b>	<b>1.28</b>	<b>1.30</b>	<b>1.26</b>	<b>1.08</b>	<b>1.08</b>	<b>1.06</b>	<b>1.13</b>	<b>0.07</b>	<b>-0.14</b>
<b>France</b>											
LPG and ethane	0.12	0.13	0.12	0.11	0.12	0.15	0.16	0.13	0.13	-0.01	-0.01
Naphtha	0.12	0.12	0.14	0.13	0.09	0.14	0.14	0.13	0.13	0.00	-0.01
Motor gasoline	0.18	0.19	0.20	0.20	0.19	0.18	0.18	0.18	0.21	0.03	0.02
Jet and kerosene	0.16	0.17	0.17	0.19	0.16	0.16	0.16	0.16	0.18	0.02	0.02
Diesel	0.72	0.71	0.72	0.71	0.72	0.68	0.70	0.68	0.74	0.05	0.02
Other gasoil	0.25	0.24	0.20	0.24	0.26	0.26	0.28	0.22	0.22	0.00	0.00
Residual fuel oil	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.06	0.01	0.01
Other products	0.12	0.13	0.13	0.14	0.13	0.10	0.09	0.11	0.12	0.00	-0.01
<b>Total</b>	<b>1.74</b>	<b>1.74</b>	<b>1.72</b>	<b>1.77</b>	<b>1.71</b>	<b>1.72</b>	<b>1.76</b>	<b>1.67</b>	<b>1.77</b>	<b>0.09</b>	<b>0.04</b>
<b>United Kingdom</b>											
LPG and ethane	0.14	0.14	0.15	0.13	0.14	0.14	0.16	0.13	0.14	0.01	-0.02
Naphtha	0.03	0.03	0.03	0.02	0.03	0.02	0.03	0.01	0.03	0.02	0.01
Motor gasoline	0.29	0.28	0.29	0.29	0.28	0.29	0.30	0.28	0.32	0.03	0.02
Jet and kerosene	0.32	0.32	0.31	0.33	0.31	0.33	0.33	0.33	0.32	0.00	-0.02
Diesel	0.52	0.52	0.53	0.52	0.52	0.51	0.54	0.52	0.51	-0.01	-0.04
Other gasoil	0.14	0.14	0.15	0.16	0.14	0.12	0.14	0.12	0.12	0.00	-0.03
Residual fuel oil	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.00	0.00
Other products	0.12	0.11	0.12	0.12	0.11	0.11	0.12	0.11	0.12	0.01	0.01
<b>Total</b>	<b>1.60</b>	<b>1.57</b>	<b>1.60</b>	<b>1.60</b>	<b>1.56</b>	<b>1.55</b>	<b>1.64</b>	<b>1.52</b>	<b>1.58</b>	<b>0.06</b>	<b>-0.07</b>
<b>Canada</b>											
LPG and ethane	0.40	0.39	0.33	0.41	0.35	0.42	0.42	0.40	0.46	0.05	0.06
Naphtha	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.04	0.05	0.00	-0.01
Motor gasoline	0.84	0.88	0.87	0.92	0.91	0.85	0.90	0.83	0.87	0.04	0.03
Jet and kerosene	0.14	0.16	0.16	0.19	0.16	0.16	0.16	0.15	0.17	0.02	0.02
Diesel	0.29	0.26	0.27	0.26	0.26	0.27	0.29	0.26	0.27	0.01	-0.01
Other gasoil	0.27	0.29	0.25	0.31	0.33	0.29	0.26	0.29	0.25	-0.04	0.07
Residual fuel oil	0.05	0.05	0.06	0.04	0.06	0.07	0.10	0.07	0.09	0.02	0.05
Other products	0.37	0.38	0.38	0.40	0.38	0.26	0.27	0.27	0.27	0.00	-0.07
<b>Total</b>	<b>2.42</b>	<b>2.45</b>	<b>2.37</b>	<b>2.58</b>	<b>2.51</b>	<b>2.37</b>	<b>2.45</b>	<b>2.31</b>	<b>2.42</b>	<b>0.11</b>	<b>0.15</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	1Q19	2Q19	3Q19	4Q19	1Q20	Apr 19	May 19	Jun 19
<b>OPEC</b>											
Crude Oil											
Saudi Arabia	10.33			10.06	9.76				9.81	9.70	9.77
Iran	3.58			2.73	2.43				2.61	2.40	2.28
Iraq	4.57			4.68	4.72				4.65	4.78	4.72
UAE	3.00			3.06	3.05				3.05	3.05	3.06
Kuwait	2.75			2.71	2.69				2.69	2.71	2.68
Neutral Zone	0.00			0.00	0.00				0.00	0.00	0.00
Angola	1.49			1.43	1.42				1.41	1.45	1.40
Nigeria	1.60			1.69	1.71				1.71	1.66	1.77
Libya	0.97			0.96	1.15				1.16	1.16	1.13
Algeria	1.04			1.03	1.02				1.02	1.03	1.01
Congo	0.32			0.34	0.36				0.36	0.36	0.35
Gabon	0.19			0.21	0.21				0.21	0.20	0.22
Equatorial Guinea	0.12			0.11	0.11				0.11	0.11	0.11
Ecuador	0.52			0.53	0.53				0.53	0.53	0.53
Venezuela	1.40			1.11	0.87				0.86	0.86	0.88
Total Crude Oil	31.88			30.63	30.03				30.18	30.00	29.91
Total NGLs <sup>1</sup>	5.53	5.56	5.59	5.58	5.57	5.54	5.53	5.59	5.57	5.57	5.57
<b>Total OPEC<sup>2</sup></b>	<b>37.40</b>			<b>36.21</b>	<b>35.60</b>				<b>35.75</b>	<b>35.57</b>	<b>35.48</b>
<b>NON-OPEC<sup>3</sup></b>											
<b>OECD</b>											
<b>Americas</b>	22.95	24.63	25.93	24.02	24.40	24.76	25.31	25.58	24.57	24.29	24.33
United States	15.49	17.26	18.51	16.65	17.12	17.43	17.83	18.10	17.12	17.06	17.17
Mexico	2.08	1.90	1.84	1.92	1.91	1.89	1.87	1.86	1.92	1.91	1.90
Canada	5.38	5.46	5.56	5.44	5.36	5.43	5.60	5.61	5.52	5.30	5.25
Chile	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Europe</b>	3.47	3.37	3.69	3.46	3.21	3.31	3.50	3.62	3.37	3.17	3.10
UK	1.11	1.18	1.20	1.21	1.14	1.13	1.25	1.26	1.19	1.10	1.14
Norway	1.85	1.72	2.01	1.77	1.60	1.71	1.78	1.89	1.72	1.60	1.49
Others	0.51	0.47	0.47	0.48	0.47	0.47	0.47	0.47	0.46	0.47	0.47
<b>Asia Oceania</b>	0.41	0.49	0.56	0.43	0.48	0.50	0.52	0.54	0.48	0.48	0.49
Australia	0.34	0.41	0.49	0.37	0.41	0.43	0.45	0.47	0.40	0.41	0.41
Others	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
<b>Total OECD</b>	<b>26.83</b>	<b>28.48</b>	<b>30.17</b>	<b>27.92</b>	<b>28.09</b>	<b>28.57</b>	<b>29.34</b>	<b>29.74</b>	<b>28.42</b>	<b>27.94</b>	<b>27.91</b>
<b>NON-OECD</b>											
<b>Former USSR</b>	14.56	14.56	14.61	14.80	14.41	14.48	14.56	14.65	14.30	14.31	14.62
Russia	11.49	11.55	11.54	11.67	11.50	11.52	11.52	11.53	11.57	11.44	11.49
Others	3.07	3.01	3.07	3.13	2.91	2.96	3.04	3.13	2.73	2.86	3.14
<b>Asia</b>	7.19	7.15	7.01	7.23	7.17	7.09	7.10	7.10	7.12	7.20	7.20
China	3.85	3.90	3.86	3.92	3.92	3.87	3.88	3.89	3.92	3.92	3.93
Malaysia	0.72	0.69	0.70	0.71	0.70	0.67	0.70	0.71	0.68	0.71	0.70
India	0.84	0.81	0.80	0.82	0.81	0.81	0.80	0.80	0.81	0.80	0.81
Indonesia	0.80	0.78	0.74	0.80	0.77	0.78	0.76	0.76	0.74	0.79	0.79
Others	0.98	0.97	0.92	0.98	0.97	0.96	0.95	0.94	0.97	0.98	0.97
<b>Europe</b>	0.12	0.12	0.11	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12
<b>Americas</b>	4.50	4.76	5.11	4.50	4.64	4.89	5.02	5.08	4.53	4.67	4.71
Brazil	2.70	2.93	3.27	2.66	2.80	3.05	3.19	3.25	2.69	2.83	2.87
Argentina	0.58	0.60	0.60	0.59	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Colombia	0.87	0.90	0.88	0.90	0.90	0.89	0.89	0.89	0.90	0.90	0.90
Others	0.35	0.34	0.35	0.35	0.34	0.35	0.34	0.34	0.34	0.34	0.34
<b>Middle East</b>	3.27	3.26	3.27	3.26	3.27	3.26	3.26	3.27	3.26	3.28	3.26
Oman	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Qatar	2.01	2.01	2.01	2.02	2.01	2.01	2.01	2.01	2.00	2.03	2.01
Syria	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Yemen	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Others	0.21	0.21	0.21	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21
<b>Africa</b>	1.45	1.47	1.49	1.46	1.48	1.47	1.47	1.49	1.50	1.47	1.48
Egypt	0.65	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Others	0.80	0.83	0.86	0.82	0.84	0.83	0.83	0.86	0.86	0.83	0.84
<b>Total Non-OECD</b>	<b>31.09</b>	<b>31.33</b>	<b>31.60</b>	<b>31.38</b>	<b>31.09</b>	<b>31.31</b>	<b>31.53</b>	<b>31.71</b>	<b>30.82</b>	<b>31.05</b>	<b>31.39</b>
Processing gains <sup>4</sup>	2.32	2.35	2.38	2.35	2.35	2.35	2.35	2.38	2.35	2.35	2.35
Global Biofuels	2.62	2.69	2.83	2.21	2.95	3.05	2.56	2.36	2.63	3.07	3.15
<b>TOTAL NON-OPEC</b>	<b>62.86</b>	<b>64.85</b>	<b>66.98</b>	<b>63.86</b>	<b>64.48</b>	<b>65.28</b>	<b>65.77</b>	<b>66.19</b>	<b>64.22</b>	<b>64.41</b>	<b>64.80</b>
<b>TOTAL SUPPLY</b>	<b>100.26</b>			<b>100.07</b>	<b>100.08</b>				<b>99.97</b>	<b>99.98</b>	<b>100.28</b>

<sup>1</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>2</sup> OPEC data based on today's membership throughout the time series.

<sup>3</sup> Comprises crude oil, condensates, NGLs and oil from non-conventional sources

<sup>4</sup> Net volumetric gains and losses in refining and marine transportation losses.

**Table 4**  
**OECD INDUSTRY STOCKS<sup>1</sup> 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			
	Jan2019	Feb2019	Mar2019	Apr2019	May2019*	May2016	May2017	May2018	2Q2018	3Q2018	4Q2018	1Q2019
<b>OECD Americas</b>												
Crude	611.9	608.1	615.2	631.1	638.4	658.5	670.5	592.7	-0.14	0.00	0.35	0.12
Motor Gasoline	291.8	278.3	266.4	260.7	264.8	271.9	275.4	270.9	-0.07	0.04	0.09	-0.13
Middle Distillate	213.1	207.2	205.1	199.8	198.2	229.7	230.8	185.8	-0.16	0.27	0.01	-0.12
Residual Fuel Oil	37.5	33.5	34.1	33.5	33.4	47.2	43.0	37.6	-0.06	0.00	-0.01	-0.01
Total Products <sup>3</sup>	745.7	715.5	709.5	710.7	731.4	764.3	756.0	698.7	0.06	0.61	-0.17	-0.41
Total <sup>4</sup>	1543.7	1508.9	1508.2	1534.0	1562.7	1604.3	1614.6	1476.8	0.03	0.76	0.01	-0.34
<b>OECD Europe</b>												
Crude	323.6	338.2	347.3	345.3	343.2	360.8	359.3	361.2	0.12	-0.31	-0.05	0.27
Motor Gasoline	107.8	106.7	100.2	90.5	87.8	99.4	94.3	85.4	-0.14	0.01	0.11	0.05
Middle Distillate	263.1	267.1	271.6	275.6	269.0	323.6	308.2	260.2	-0.13	0.18	-0.12	0.11
Residual Fuel Oil	60.5	61.7	59.0	61.7	62.4	79.2	65.0	61.2	-0.01	-0.03	-0.01	0.03
Total Products <sup>3</sup>	549.2	555.3	548.9	543.0	532.9	604.1	574.6	516.9	-0.29	0.16	-0.05	0.23
Total <sup>4</sup>	954.8	975.3	979.0	969.6	954.8	1035.1	1007.9	961.2	-0.14	-0.22	-0.06	0.54
<b>OECD Asia Oceania</b>												
Crude	152.8	167.6	158.9	156.8	159.0	202.6	198.4	162.7	0.01	-0.24	0.16	0.05
Motor Gasoline	26.3	25.6	25.9	25.1	25.8	25.3	26.2	26.4	0.00	0.00	0.00	0.02
Middle Distillate	64.3	63.2	67.1	65.2	67.6	64.7	66.6	64.0	0.04	0.13	-0.04	-0.07
Residual Fuel Oil	20.8	21.2	19.7	20.5	20.6	19.0	20.6	19.7	0.03	-0.01	0.01	-0.01
Total Products <sup>3</sup>	169.2	168.2	164.4	161.6	169.2	171.2	169.6	164.8	0.04	0.22	-0.04	-0.18
Total <sup>4</sup>	384.4	394.5	379.7	379.7	388.6	434.1	432.5	389.8	0.11	0.02	0.11	-0.22
<b>Total OECD</b>												
Crude	1088.4	1113.8	1121.4	1133.1	1140.6	1221.9	1228.1	1116.6	0.00	-0.55	0.46	0.45
Motor Gasoline	425.9	410.6	392.5	376.2	378.5	396.5	395.8	382.7	-0.20	0.05	0.20	-0.06
Middle Distillate	540.5	537.6	543.7	540.6	534.9	618.0	605.6	510.0	-0.25	0.58	-0.15	-0.08
Residual Fuel Oil	118.8	116.3	112.8	115.7	116.3	145.4	128.6	118.5	-0.04	-0.04	-0.01	0.01
Total Products <sup>3</sup>	1464.1	1439.0	1422.9	1415.3	1433.5	1539.6	1500.2	1380.4	-0.19	0.98	-0.26	-0.36
Total <sup>4</sup>	2882.8	2878.6	2867.0	2883.3	2906.1	3073.5	3054.9	2827.7	0.00	0.56	0.05	-0.02

**OECD GOVERNMENT-CONTROLLED STOCKS<sup>5</sup> 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			
	Jan2019	Feb2019	Mar2019	Apr2019	May2019*	May2016	May2017	May2018	2Q2018	3Q2018	4Q2018	1Q2019
<b>OECD Americas</b>												
Crude	649.1	649.1	649.1	648.6	645.4	695.1	684.5	660.2	-0.06	0.00	-0.12	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	205.5	206.2	206.7	206.5	205.3	206.0	206.2	209.3	0.01	0.01	-0.01	-0.02
Products	269.8	272.9	273.4	274.7	274.0	265.9	273.0	272.0	-0.01	-0.04	-0.03	0.08
<b>OECD Asia Oceania</b>												
Crude	380.6	379.9	378.6	378.6	378.6	385.4	385.0	383.4	0.00	0.00	-0.02	-0.03
Products	38.8	38.8	38.8	38.8	38.8	35.2	38.0	38.7	0.00	0.00	0.00	0.00
<b>Total OECD</b>												
Crude	1235.2	1235.2	1234.4	1233.6	1229.3	1286.6	1275.7	1252.9	-0.05	0.01	-0.15	-0.04
Products	310.6	313.6	314.2	315.4	314.7	303.1	313.0	312.7	-0.01	-0.04	-0.03	0.08
Total <sup>4</sup>	1548.9	1551.8	1551.6	1551.3	1546.2	1592.4	1592.6	1569.1	-0.06	-0.05	-0.19	0.05

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

	End March 2018		End June 2018		End September 2018		End December 2018		End March 2019 <sup>3</sup>	
	Stock	Days Fwd <sup>2</sup>	Stock	Days Fwd	Stock	Days Fwd	Stock	Days Fwd	Stock	Days Fwd
	Level	Demand	Level	Demand	Level	Demand	Level	Demand	Level	Demand
<b>OECD Americas</b>										
Canada	191.9	81	190.3	74	195.5	78	192.3	81	186.0	-
Chile	10.8	29	12.3	34	11.6	32	10.4	28	10.5	-
Mexico	47.3	24	39.1	21	40.6	22	54.7	29	40.5	-
United States <sup>4</sup>	1863.8	92	1869.2	91	1933.6	94	1913.5	94	1900.2	-
Total <sup>4</sup>	2135.9	84	2133.1	83	2203.3	86	2193.0	87	2159.4	84
<b>OECD Asia Oceania</b>										
Australia	40.3	33	42.4	36	42.6	35	40.7	35	44.0	-
Israel	-	-	-	-	-	-	-	-	-	-
Japan	538.6	156	549.4	154	561.2	143	564.8	138	539.7	-
Korea	213.0	81	209.6	81	200.0	79	205.8	78	205.1	-
New Zealand	8.0	47	8.4	48	7.8	41	7.9	41	8.2	-
Total	800.0	104	809.8	105	811.6	100	819.2	98	797.0	106
<b>OECD Europe<sup>5</sup></b>										
Austria	23.0	83	21.2	73	20.2	73	20.9	80	23.0	-
Belgium	46.0	75	43.3	69	44.0	68	42.0	63	45.8	-
Czech Republic	22.7	102	21.4	96	21.5	97	22.8	110	23.0	-
Denmark	22.1	135	22.8	142	20.6	126	20.3	133	22.1	-
Estonia	2.5	75	2.6	82	2.6	84	2.9	87	2.6	-
Finland	41.0	201	40.8	193	40.0	196	39.9	198	38.5	-
France	166.0	96	168.5	95	164.6	96	160.8	94	169.0	-
Germany	280.0	119	278.3	118	272.6	118	271.0	111	270.5	-
Greece	33.3	115	32.1	99	34.4	113	32.1	110	35.3	-
Hungary	26.1	152	25.2	142	25.6	147	25.6	158	25.8	-
Ireland	11.4	73	10.0	65	9.9	61	10.2	65	10.8	-
Italy	125.8	99	125.4	97	124.5	99	125.1	116	130.5	-
Latvia	3.1	84	3.6	91	2.3	70	2.4	67	4.0	-
Luxembourg	0.6	9	0.4	7	0.5	8	0.5	8	0.5	-
Netherlands	147.8	166	142.4	157	143.8	165	139.2	154	155.0	-
Norway	27.2	136	26.4	105	24.1	121	26.7	161	23.9	-
Poland	75.0	111	75.7	105	74.1	108	76.8	118	77.8	-
Portugal	24.8	111	23.8	97	23.5	102	24.6	107	26.4	-
Slovak Republic	12.1	125	11.6	127	12.0	124	11.8	135	12.0	-
Slovenia	5.1	92	4.9	85	4.8	89	5.0	107	4.9	-
Spain	124.7	94	117.9	88	119.7	89	115.9	87	124.2	-
Sweden	38.7	116	37.7	119	34.5	108	35.8	118	38.3	-
Switzerland	33.1	157	33.6	158	33.0	141	30.8	137	31.6	-
Turkey	84.1	88	90.1	81	87.0	102	87.6	101	87.7	-
United Kingdom	77.9	49	82.1	51	77.5	50	76.4	49	79.0	-
Total	1454.0	103	1441.8	99	1417.1	101	1407.0	102	1462.1	103
<b>Total OECD</b>	<b>4389.9</b>	<b>93</b>	<b>4384.7</b>	<b>91</b>	<b>4432.0</b>	<b>93</b>	<b>4419.2</b>	<b>93</b>	<b>4418.5</b>	<b>93</b>
<b>DAYS OF IEA Net Imports<sup>6</sup> -</b>	<b>186</b>	<b>-</b>	<b>190</b>	<b>-</b>	<b>191</b>	<b>-</b>	<b>190</b>	<b>-</b>	<b>192</b>	<b>-</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 entropot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.

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

<sup>3</sup> End March 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 <i>Millions of Barrels</i>	Industry	Total	Government <sup>1</sup> controlled <i>Days of Fwd. Demand<sup>2</sup></i>	Industry
1Q2016	4633	1595	3039	100	35	66
2Q2016	4668	1592	3076	98	34	65
3Q2016	4679	1596	3084	99	34	65
4Q2016	4602	1600	3002	98	34	64
1Q2017	4630	1600	3031	98	34	64
2Q2017	4608	1588	3019	96	33	63
3Q2017	4547	1578	2969	94	33	62
4Q2017	4421	1568	2854	92	33	60
1Q2018	4390	1575	2815	93	33	60
2Q2018	4385	1570	2815	91	33	59
3Q2018	4432	1565	2867	93	33	60
4Q2018	4419	1547	2872	93	33	61
1Q2019	4419	1552	2867	93	33	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 1Q2019 (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	2Q18	3Q18	4Q18	1Q19	Feb 19	Mar 19	Apr 19	Year Earlier	
											Apr 18	change
<b>Saudi Light &amp; Extra Light</b>												
Americas	0.69	0.59	0.66	0.79	0.64	0.66	0.35	0.33	0.34	0.29	0.76	-0.47
Europe	0.79	0.69	0.69	0.70	0.76	0.73	0.70	0.69	0.64	0.70	0.56	0.14
Asia Oceania	1.40	1.56	1.45	1.42	1.36	1.50	1.62	1.62	1.58	1.50	1.52	-0.01
<b>Saudi Medium</b>												
Americas	0.44	0.33	0.30	0.28	0.37	0.33	0.13	-	0.36	0.28	0.28	0.00
Europe	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	0.01	-	-
Asia Oceania	0.41	0.37	0.41	0.42	0.41	0.39	0.24	0.34	0.13	0.24	0.41	-0.17
<b>Canada Heavy</b>												
Americas	2.04	2.23	2.41	2.48	2.39	2.43	2.27	2.07	2.40	2.09	2.45	-0.36
Europe	0.01	0.02	0.04	0.04	0.05	0.02	0.03	0.04	0.00	0.03	0.08	-0.06
Asia Oceania	-	-	0.00	0.00	-	0.01	-	-	-	-	-	-
<b>Iraqi Basrah Light<sup>2</sup></b>												
Americas	0.42	0.63	0.50	0.63	0.41	0.32	0.46	0.38	0.45	0.14	0.88	-0.74
Europe	0.81	0.76	0.76	0.61	0.87	0.92	0.89	0.85	0.92	0.74	0.52	0.22
Asia Oceania	0.46	0.40	0.43	0.48	0.42	0.42	0.45	0.41	0.43	0.53	0.36	0.17
<b>Kuwait Blend</b>												
Americas	0.14	0.11	0.02	0.04	-	-	-	-	-	-	-	-
Europe	0.19	0.20	0.13	0.08	0.17	0.13	0.04	0.02	0.00	0.08	0.06	0.02
Asia Oceania	0.66	0.68	0.66	0.66	0.67	0.62	0.63	0.69	0.54	0.67	0.78	-0.12
<b>Iranian Light</b>												
Americas	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.21	0.27	0.16	0.26	0.13	0.03	0.01	-	-	-	0.19	-
Asia Oceania	0.01	0.01	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	0.44	0.41	0.11	0.09	0.09	0.12	0.10	0.52	-0.41
Asia Oceania	0.52	0.57	0.28	0.36	0.24	0.02	0.36	0.44	0.60	0.56	0.36	0.19
<b>BFOE</b>												
Americas	0.02	0.02	0.00	0.00	0.00	-	-	-	-	-	0.01	-
Europe	0.44	0.45	0.35	0.25	0.43	0.31	0.39	0.29	0.30	0.29	0.20	0.09
Asia Oceania	0.05	0.10	0.09	0.09	0.07	0.10	-	-	-	-	-	-
<b>Kazakhstan</b>												
Americas	0.01	-	-	-	-	-	-	-	-	-	-	-
Europe	0.70	0.75	0.75	0.73	0.70	0.71	0.86	0.92	0.90	0.82	0.83	0.00
Asia Oceania	0.03	0.10	0.19	0.19	0.21	0.22	0.17	0.15	0.21	0.11	0.14	-0.04
<b>Venezuelan 22 API and heavier</b>												
Americas	0.63	0.48	0.44	0.47	0.45	0.45	0.19	0.10	-	-	0.48	-
Europe	0.05	0.04	0.03	0.02	0.03	0.06	0.10	0.08	0.09	0.07	0.02	0.05
Asia Oceania	-	-	-	-	-	-	-	-	-	-	-	-
<b>Mexican Maya</b>												
Americas	0.53	0.58	0.63	0.63	0.75	0.51	0.54	0.59	0.56	0.58	0.54	0.04
Europe	0.17	0.20	0.21	0.22	0.17	0.17	0.21	0.25	0.21	0.24	0.25	-0.01
Asia Oceania	0.05	0.07	0.08	0.10	0.08	0.09	0.12	0.10	0.13	0.20	0.09	0.10
<b>Russian Urals</b>												
Americas	-	0.01	0.01	-	-	0.02	0.04	0.03	-	-	-	-
Europe	1.72	1.64	1.40	1.46	1.37	1.38	1.38	1.19	1.62	1.54	1.48	0.06
Asia Oceania	-	0.01	0.00	0.01	-	-	-	-	-	-	0.03	-
<b>Cabinda and Other Angola</b>												
North America	0.16	0.07	0.06	0.10	0.11	0.02	-	-	-	-	0.16	-
Europe	0.27	0.11	0.14	0.11	0.22	0.08	0.17	0.20	0.18	0.09	0.19	-0.09
Pacific	0.01	0.01	0.01	0.00	-	0.03	-	-	-	-	-	-
<b>Nigerian Light<sup>4</sup></b>												
Americas	0.07	0.04	0.01	0.01	-	-	-	-	-	-	-	-
Europe	0.39	0.39	0.53	0.49	0.54	0.63	0.47	0.51	0.47	0.42	0.59	-0.16
Asia Oceania	0.01	0.02	0.02	0.03	0.01	0.02	0.03	0.04	0.03	0.01	0.01	0.00
<b>Libya Light and Medium</b>												
Americas	-	0.02	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.54	0.62	0.64	0.55	0.65	0.54	0.45	0.54	0.72	0.72	0.00
Asia Oceania	0.02	0.03	0.02	0.01	0.02	0.02	0.04	0.03	0.03	-	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	2Q18	3Q18	4Q18	1Q19	Feb 19	Mar 19	Apr 19	Year Earlier	
											Apr 18	% change
Crude Oil												
Americas	4542	4361	3759	4085	3905	3223	2891	2592	2663	2691	4387	-39%
Europe	9253	9712	9536	9463	9728	9452	9819	9939	9661	9808	9381	5%
Asia Oceania	6659	6843	6698	6571	6513	6861	6901	7511	6532	6804	6850	-1%
Total OECD	20455	20916	19992	20120	20146	19535	19611	20042	18855	19303	20618	-6%
LPG												
Americas	20	20	22	14	17	24	35	30	22	24	19	29%
Europe	445	437	473	468	429	502	459	506	427	432	440	-2%
Asia Oceania	567	549	555	567	503	555	586	674	415	502	678	-26%
Total OECD	1032	1006	1050	1049	949	1082	1080	1211	864	959	1137	-16%
Naphtha												
Americas	10	19	8	5	6	11	5	5	5	6	6	-9%
Europe	348	369	379	389	346	358	382	414	255	397	374	6%
Asia Oceania	908	981	1021	958	1007	1088	921	921	882	980	937	5%
Total OECD	1266	1369	1409	1352	1360	1458	1307	1339	1142	1383	1317	5%
Gasoline <sup>3</sup>												
Americas	735	727	773	1060	968	504	595	521	650	1036	1008	3%
Europe	100	162	102	67	85	104	112	91	107	164	68	143%
Asia Oceania	87	102	108	123	92	95	109	68	129	124	106	17%
Total OECD	922	990	983	1250	1144	703	816	680	886	1324	1182	12%
Jet & Kerosene												
Americas	169	171	140	136	178	115	138	162	150	198	81	145%
Europe	504	506	516	539	611	479	459	439	471	550	562	-2%
Asia Oceania	73	77	85	60	53	118	78	107	78	70	63	10%
Total OECD	745	754	742	734	842	712	675	708	699	818	706	16%
Gasoil/Diesel												
Americas	67	77	124	63	130	125	204	286	60	69	79	-13%
Europe	1340	1381	1378	1382	1453	1274	1446	1568	1328	1335	1311	2%
Asia Oceania	196	194	254	256	232	313	231	168	273	298	266	12%
Total OECD	1602	1653	1755	1701	1815	1712	1880	2022	1661	1702	1657	3%
Heavy Fuel Oil												
Americas	149	131	161	161	195	130	149	172	120	116	138	-16%
Europe	477	240	231	227	249	211	186	234	185	206	226	-9%
Asia Oceania	153	146	162	156	151	149	103	121	62	52	150	-65%
Total OECD	779	517	554	544	595	490	438	527	367	374	513	-27%
Other Products												
Americas	652	717	679	658	699	637	520	373	539	798	649	23%
Europe	774	1009	1036	975	1130	981	1019	1003	963	937	971	-4%
Asia Oceania	348	255	265	250	255	279	258	254	253	245	268	-8%
Total OECD	1774	1981	1980	1883	2085	1897	1797	1631	1756	1980	1888	5%
Total Products												
Americas	1802	1862	1908	2095	2194	1547	1645	1549	1546	2246	1979	13%
Europe	3988	4104	4115	4047	4304	3909	4064	4256	3737	4022	3952	2%
Asia Oceania	2331	2304	2450	2371	2292	2597	2285	2313	2091	2272	2469	-8%
Total OECD	8121	8270	8473	8513	8790	8053	7994	8118	7375	8539	8400	2%
Total Oil												
Americas	6344	6223	5666	6180	6100	4770	4536	4141	4209	4936	6366	-22%
Europe	13241	13815	13650	13511	14031	13361	13883	14196	13397	13830	13332	4%
Asia Oceania	8991	9147	9148	8942	8805	9458	9186	9824	8624	9076	9319	-3%
Total OECD	28575	29186	28465	28633	28936	27589	27605	28160	26230	27842	29017	-4%

<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.

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