



# Statistical Review of World Energy

2020 | 69<sup>th</sup> edition





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### Methodology

This year we have made the following two methodological changes: first, energy units have been changed from million tonnes of oil equivalent to exajoules. Second, the method for estimating primary energy consumption of non-fossil sources of electricity, has been revised. This is still based on an 'input-equivalence' method, i.e. on the amount of fuel that would be required by a standard thermal power station to generate the reported electricity output. However the thermal efficiency assumed for that standard power plant is no longer fixed. The efficiency assumption rises each year to better reflect real world improvements in the average power station thermal efficiency. For more details see the appendix, or visit: [www.bp.com/statisticalreview](http://www.bp.com/statisticalreview).

# Chief executive officer's introduction



The COVID-19 pandemic may well turn out to be the most tragic and disruptive event that many of us will ever live through. As I write this – in the middle of June – over 400 thousand people globally have lost their lives to the infection. Millions more might have done so without the widespread lockdown of economies across the world, which came at huge economic and social cost.

This combined health and economic shock is bound to reshape the global economic, political and social environment in which we all live and work. It has the potential to accelerate emerging trends and create opportunities to shift the world onto a more sustainable path. But it also risks slowing progress if the short-term, domestic issues raised by COVID-19 are prioritized over long-term, global challenges, such as climate change. It feels like the world is at a pivotal moment: it needs to address these short-term concerns but in a way that builds back better.

“  
The technologies required to reach net zero exist today – the challenge is to use them at pace and scale, and I remain optimistic that we can make this happen.”

In that context, this year's edition of bp's Statistical Review of World Energy provides a timely reminder of global energy trends prior to the crisis.

Some aspects are encouraging – particularly the continuing strong growth of renewable energy. Led by wind and solar power, renewable energy increased by a record amount, accounting for over 40% of the growth in primary energy in 2019. At the same time, coal consumption fell for the fourth time in the past six years, with its share in the global energy mix falling to its lowest level for 16 years.

But other aspects of the energy system continued to give cause for concern. Despite last year's decline, coal was still the single largest source of power generation, accounting for over 36% of global power.

That compares with just 10% provided by renewable energy. Renewables will need to grow even more strongly over the next three decades to decarbonize the power sector.

More worrying is the trend for carbon emissions. The slowing in the growth of carbon emissions to 0.5% in 2019 may suggest some grounds for optimism. But this deceleration needs to be seen in the context of the big increase in carbon emissions in 2018 of 2.1%. The hope was that as the one-off factors boosting carbon emissions in 2018 unwound, carbon emissions would fall significantly. That fall did not happen. The average annual growth in carbon emissions over 2018 and 2019 was greater than its 10-year average. As the world emerges from the COVID-19 crisis it needs to make decisive changes to move to a more sustainable path.

The disruption to our everyday lives caused by the lockdowns has provided a glimpse of a cleaner, lower carbon world: air quality in many of the world's most polluted cities has improved; skies have become clearer. The IEA (International Energy Agency) estimate that global CO<sub>2</sub> emissions may fall by as much as 2.6 gigatonnes this year. That has come at considerable cost and as economies restart and our lives return to normal there is a risk that these gains will be lost.

But to get to net zero by 2050, the world requires similar-sized reductions in carbon emissions every other year for the next 25 years. This can be achieved only by a radical shift in all our behaviours. By using resources and energy more efficiently. And by implementing the full range of zero and low carbon energies and technologies at our disposal – including renewable energies, electrification, hydrogen, CCUS (carbon capture use and storage), bioenergy and many more. These technologies exist today – the challenge is to use them at pace and scale.

At bp, we are committed to playing our part. In February, we adopted a new purpose – to reimagine energy for people and our planet. And we announced a new ambition, to be a net zero company by 2050 or sooner and to help the world get to net zero. The experience of COVID-19 has only reinforced our commitment to this purpose and ambition, by highlighting both the fragility of our planet and the opportunities it provides to truly build back better.

As bp along with the rest of the world navigate the energy transition, we will need timely, objective and comprehensive data on the global energy system. That is the role that the Statistical Review has been playing for the past 69 years and will continue to play in the future.

I hope this year's Statistical Review is useful to everyone else seeking ways to get to net zero and build back better. And I would like to thank the very many people who help our economics team in compiling it, including the governments and statistical agencies around the world who have contributed their official data again this year. The Statistical Review would not be possible without your generous co-operation and transparency. Thank you.

A handwritten signature in black ink, reading "Bernard Looney". The signature is stylized and written in a cursive-like font.

**Bernard Looney**  
Chief executive officer  
June 2020

# 2019 at a glance

Growth in carbon emissions in 2019 slowed from the sharp increase seen in the previous year, as primary energy consumption decelerated and renewables and natural gas displaced coal from the energy mix.

## Energy developments

- Primary energy consumption growth slowed to 1.3% last year, less than half the rate of growth in 2018 (2.8%).
- The increase in energy consumption was driven by renewables and natural gas, which together contributed three quarters of the expansion. All fuels grew at a slower rate than their 10-year averages, apart from nuclear.
- By country, China was by far the biggest driver of energy, accounting for more than three quarters of net global growth. India and Indonesia were the next largest contributors to growth, while the US and Germany posted the largest declines.

## Carbon emissions

- Carbon emissions from energy use grew by 0.5%, less than half 10-year average growth of 1.1% per year, partially reversing some of the unusually strong increase in 2018 (2.1%).

## Oil

- Oil consumption grew by a below average 0.9 million barrels per day (b/d), or 0.9%. Demand for all liquid fuels (including biofuels) rose by 1.1 million b/d and topped 100 million b/d for the first time.
- Oil consumption growth was led by China (680,000 b/d) and other emerging economies, while demand fell in the OECD (-290,000 b/d).
- Global oil production fell by 60,000 b/d as strong growth in US output (1.7 million b/d) was more than offset by a decline in OPEC production (-2 million b/d), with sharp declines in Iran (-1.3 million b/d) Venezuela (-560,000 b/d) and Saudi Arabia (-430,000 b/d).
- Refinery utilization fell sharply by 1.2 percentage points as capacity rose by 1.5 million b/d and throughput remained relatively unchanged.

# +1.3%

Growth of global primary energy consumption, less than half the growth rate in 2018.



## Natural gas

- Natural gas consumption increased by 78 billion cubic metres (bcm), or 2%, well below the exceptional growth seen in 2018 (5.3%). Nevertheless, the share of gas in primary energy rose to a record high of 24.2%.
- Increases in gas demand were driven by the US (27 bcm) and China (24 bcm), while Russia and Japan saw the largest declines (10 and 8 bcm respectively).
- Gas production grew by 132 bcm (3.4%), with the US accounting for almost two-thirds of this increase (85 bcm). Australia (23 bcm) and China (16 bcm) were also key contributors to growth.
- Inter-regional gas trade expanded at a rate of 4.9%, more than double its 10-year average, driven by a record increase in liquefied natural gas (LNG) of 54 bcm (12.7%).
- LNG supply growth was led by the US (19 bcm) and Russia (14 bcm), with most incremental supplies heading to Europe: European LNG imports (+49 bcm) rose by more than two-thirds.

## Coal

- Coal consumption declined by 0.6% and its share in primary energy fell to its lowest level in 16 years (27%).
- Increases in coal consumption were driven by the emerging economies, particularly China (1.8 EJ) and Indonesia (0.6 EJ). However, this was outweighed by a sharp fall in OECD demand which fell to its lowest level in our data series (which starts in 1965).
- Global coal production rose by 1.5%, with China and Indonesia providing the only significant increases (3.2 EJ and 1.3 EJ respectively). The largest declines came from the US (-1.1 EJ) and Germany (-0.3 EJ).

## Renewables, hydro and nuclear

- Renewable energy (including biofuels) posted a record increase in consumption in energy terms (3.2 EJ). This was also the largest increment for any source of energy in 2019.
- Wind provided the largest contribution to renewables growth (1.4 EJ) followed closely by solar (1.2 EJ).
- By country, China was the largest contributor to renewables growth (0.8 EJ), followed by the US (0.3 EJ) and Japan (0.2 EJ).
- Hydroelectric consumption rose by a below average 0.8%, with growth led by China (0.6 EJ), Turkey (0.3 EJ) and India (0.2 EJ).
- Nuclear consumption rose by 3.2% (0.8 EJ), its fastest growth since 2004. China (0.5 EJ) and Japan (0.1 EJ) provided the largest increments.

## Electricity

- Electricity generation grew by only 1.3% – around half its 10-year average. China accounted for more than 90% of net global growth.
- Renewables provided the largest increment to power generation, followed by natural gas while coal generation fell.
- The share of renewables in power generation increased from 9.3% to 10.4%, surpassing nuclear for the first time. Coal's share of generation fell 1.5 percentage points to 36.4% – the lowest in our data set (which starts in 1985).

## Key minerals

- Prices for cobalt and lithium carbonate fell sharply, by 54% and 31% respectively.
- Cobalt production was down 21.2%, largely due to a decline in the Democratic Republic of Congo. Lithium production fell 19.2%, driven mainly by lower Australian output.



# The year in review

## Introduction

Growth in energy markets slowed in 2019 in line with weaker economic growth and a partial unwinding of some of the one-off factors that boosted energy demand in 2018. This slowdown was particularly evident in the US, Russia and India, each of which exhibited unusually strong growth in 2018.

China was the exception, with its energy consumption accelerating in 2019. As a result, China dominated the expansion in global energy markets – contributing the largest increment to demand for each individual source of energy other than natural gas, where it was only narrowly surpassed by the US.

Despite the support from China, all fuels (other than nuclear) grew at a slower rate than their 10-year averages, with coal consumption declining for the fourth time in six years. Nevertheless, renewables still grew by a record increment and provided the largest contribution (41%) to growth in primary energy, with the level of renewable power generation exceeding nuclear power for the first time.

The slowdown in energy demand growth, combined with a shift in the fuel mix away from coal and toward natural gas and renewables, led to a significant slowing in the growth of carbon emissions, although only partially unwinding the unusually strong increase seen in 2018.

Energy prices fell on the whole, particularly for coal and gas where growth in production outpaced consumption leading to a build up of inventories. Oil prices were a little lower.



## Primary energy and carbon emissions

Primary energy consumption rose by 1.3% last year, below its 10-year average rate of 1.6% per year, and much weaker than the 2.8% growth seen in 2018. By region, consumption fell in North America, Europe and CIS and growth was below average in South & Central America. Demand growth in Africa, Middle East and Asia was roughly in line with historical averages.

China was by far the biggest individual driver of primary energy growth, accounting for more than three quarters of net global growth. India and Indonesia were the next largest contributors, while the US and Germany posted the largest declines in energy terms.

Looking at energy by fuel, 2019 growth was driven by renewables, followed by natural gas, which together contributed over three quarters of the net increase. The share of both renewables and natural gas in primary energy increased to record highs. Meanwhile, coal consumption declined, with its share in the energy mix falling to its lowest level since 2003.

The combination of slower growth in energy demand and a shift in the fuel mix away from coal and toward natural gas and renewables led to a significant slowdown in the growth of carbon emissions. Emissions rose by 0.5%, although slower than their 10-year average, it only partially unwound the unusually strong growth of 2.1% seen in 2018.

**Table 1:** Fuel shares of primary energy and contributions to growth in 2019

Energy source	Consumption (exajoules)	Annual change (exajoules)	Share of primary energy	Percentage point change in share from 2018
Oil	193.0	1.6	33.1%	-0.2%
Gas	141.5	2.8	24.2%	0.2%
Coal	157.9	-0.9	27.0%	-0.5%
Renewables*	29.0	3.2	5.0%	0.5%
Hydro	37.6	0.3	6.4%	-0.0%
Nuclear	24.9	0.8	4.3%	0.1%
<b>Total</b>	<b>583.9</b>	<b>7.7</b>		

\*Renewable power (excluding hydro) plus biofuels

# 41%

Renewables' contribution to the increase in energy demand, the largest of any energy source



## Oil

Oil consumption grew by 0.9 million barrels per day (b/d), or 0.9% slightly lower than the 10-year average of 1.3% p.a.. Growth was led by China, where demand rose by 680,000 b/d, the largest increase in the country's demand since 2015. Elsewhere in the developing world, growth was below average, with Iran (180,000 b/d) the only major exception. OECD demand fell by 290,000 b/d, the first decline since 2014.

By product, consumption growth was led by ethane and LPG (380,000 b/d), helped by the substitution of naphtha in petrochemicals, with naphtha demand down slightly (-15,000 b/d). Diesel grew a little above average (360,000 b/d) as preparations for the International Maritime Organisation's bunker fuel sulphur specification change in 2020 lifted marine diesel demand. In contrast, this shift reduced demand for high sulphur fuel oil, contributing to a 320,000 b/d decline in fuel oil consumption.

Oil production fell slightly by 60,000 b/d in 2019 as strong non-OPEC production growth, led by the US, was offset by a sharp decline in OPEC production.

The US posted the largest increase of any country for the third consecutive year, with its output rising by a massive 1.7 million b/d, although this was down from the record increase in 2018 (2.2 million b/d). There was also significant growth from Brazil (200,000 b/d) and Canada (150,000 b/d), although in the latter's case, this was a pronounced slowdown in growth compared to 2017 and 2018.

OPEC production fell by 2 million b/d, the group's steepest decline since 2009. Much of this decline was driven by a combination of sanctions and economic difficulties in Iran (-1.3 million b/d) and Venezuela (-560,000 b/d). In addition, a renewed OPEC+ production cut agreement reduced other countries' output levels, with Saudi Arabia's production falling (430,000 b/d). Despite this agreement, the production of some OPEC members increased, notably Iraq and Nigeria, which increased their production by 150,000 and 100,000 b/d respectively.

Looking at oil production by type, declines were concentrated in crude oil and condensate, which together fell by 580,000 b/d. Natural gas liquids (NGLs) continued to grow robustly, by 520,000 b/d (4.5%), in line with its



long-run trend. As has been the case in the last few years, NGLs output growth was driven primarily by the US (440,000 b/d), which has doubled its production between 2012 and 2019 to 4.8 million b/d.

Oil prices edged a little lower last year, with Dated Brent averaging \$64.21/bbl compared with \$71.31/bbl in 2018.

### Refining and trade

Refinery throughput barely grew at the global level (30,000 b/d), held back by a slowing in oil consumption growth and robust growth in NGLs supplies. China was again the exception, with its crude runs growing by a record high of 950,000 b/d as new refineries ramped up. Throughput declined in most other regions, in particular the US (-400,000 b/d) and South & Central America (-300,000 b/d), with the latter region posting its sixth consecutive annual decline.

Refining capacity rose by 1.5 million b/d, the largest increase since 2009. Growth was driven by additions in China (540,000 b/d) the Middle East (310,000 b/d) and the US (210,000 b/d) as well as by a record low level of refinery closures. Global refinery utilization fell sharply, dropping by 1.2 percentage points to 82.5%, the largest annual decline since 2009.

Refining margins were slightly lower, with the average of the three region margins tracked in this book (US Gulf Coast, Northwest Europe and Singapore) falling from \$5.4/bbl in 2018 to \$4.7/bbl.

Oil trade fell by 230,000 b/d (0.3%) – the first decline since the financial crisis in 2009. Most of this decline was concentrated in crude oil trade: a sharp fall in Middle East crude exports (-1.4 million b/d), mainly due to Iranian sanctions, was only partially offset by continued growth in US crude exports (0.9 million b/d), while falling US crude imports (-1 million b/d) broadly offset strong growth in Chinese purchases (0.9 million b/d). Overall, net oil imports into the US (including products) fell by 1.8 million b/d to only 1.1 million b/d, down from net imports of 9.5 million b/d ten years earlier.

**Table 2:** Top five increases and decreases in oil consumption and production

Oil consumption	Annual change (thousand b/d)	Oil production	Annual change (thousand b/d)
<b>Increases</b>		<b>Increases</b>	
China	681	US	1685
Iran	183	Brazil	198
India	159	Canada	150
Algeria	37	Iraq	148
Russia	35	Australia	135
<b>Decreases</b>		<b>Decreases</b>	
Mexico	-88	Iran	-1266
Italy	-59	Venezuela	-556
Pakistan	-52	Saudi Arabia	-429
Taiwan	-52	Mexico	-150
Venezuela	-47	Norway	-115

# 2 million b/d

Decline in OPEC oil production, the largest decline since 2009



**Table 3:** Top increases and decreases in LNG exports and imports

LNG exports	Annual change (bcm)	LNG imports	Annual change (bcm)
<b>Increases</b>		<b>Increases</b>	
US	18.9	China	11.3
Russia	14.4	United Kingdom	10.9
Australia	12.9	France	10.1
Algeria	3.5	Spain	6.9
Egypt	2.6	Italy	5.3
<b>Decreases</b>		<b>Decreases</b>	
Indonesia	-4.3	Japan	-7.5
		South Korea	-4.6
		Egypt	-3.2
		Argentina	-1.9
		Chile	-1.0

## Natural gas

### Consumption and production

Global natural gas consumption growth averaged 2% in 2019, below its 10-year average and down sharply from the exceptional growth seen in 2018 (5.3%). In volume terms, demand grew by 78 billion cubic metres (bcm), led by the US (27 bcm) and China (24 bcm).

The growth in US and Chinese gas consumption was much slower than in 2018, as the boost from weather effects and policy driven coal-to-gas switching in China faded. A reduction in the number of unusually hot and cold days also contributed to a fall in Russia's gas consumption (10 bcm) – the largest decline of any country last year.

Gas production grew by 132 bcm (3.4%) outpacing growth in consumption. The US accounted for almost two thirds of net global growth, with the volumetric increase of 85 bcm just shy of 2018's record increment (90 bcm). Supply was also boosted by strong growth in Australia (23 bcm) and China (16 bcm).

### Trade

Much of last year's increase in gas production was used to feed additional exports of liquefied natural gas (LNG). LNG exports grew by 54 bcm (12.7%) last year, the largest annual increase ever, driven by record increases from the US (19 bcm) and Russia (14 bcm) as well as continued growth from Australia (13 bcm).

On the LNG import side, nearly all incremental supplies headed to Europe, in contrast to 2018 when Asia drove import growth. European LNG imports rose by 49 bcm, representing an unprecedented 68% increase. Growth was widespread, with the UK (11 bcm), France (10 bcm) and Spain (7 bcm) the largest individual contributors.

The rapid growth in LNG led to a 4.9% increase in overall inter-regional gas trade, a rate more than double its 10-year average. This is despite a 1.7% decline in pipeline trade (-9 bcm) as pipeline imports into Europe from Russia and North Africa were partially crowded out by the abundance of LNG supplies.

### Prices

With production growth outpacing growth in consumption by a considerable margin, storage levels rose in most regions and prices fell sharply. US Henry Hub prices dropped almost 20% to average \$2.53/mmBtu, while European and Asian prices, as measured by the UK NBP index and the Japan Korea Marker, fell by more than 40% (averaging \$4.47/mmBtu and \$5.49/mmBtu respectively). Prices in Europe, the region most affected by LNG oversupply, fell to their lowest levels since 2004.

## Coal

### Consumption and production

World coal consumption fell by 0.6% (-0.9 exajoules, or EJ), its fourth decline in six years, displaced by natural gas and renewables, particularly in the power sector (see electricity section). As a result, coal's share in the energy mix fell to 27.0%, its lowest level in 16 years.

Coal consumption continued to increase in some emerging economies, particularly in China (1.8 EJ), Indonesia (0.6 EJ) and Vietnam (0.5 EJ), with the latter posting a record increase in part related to a sharp drop in hydroelectric power. Growth in India, usually a key driver of coal consumption, was only 0.3% (0.1 EJ) – its lowest since 2001. These increases in coal consumption were more than offset by falls in demand in the developed world, led by the US (-1.9 EJ) and Germany (-0.6 EJ), with OECD coal consumption falling to its lowest level in our data series (which goes back to 1965).

Global coal production rose by 1.5%, with China and Indonesia providing the only significant increases (3.2 EJ and 1.3 EJ respectively). As with consumption, the largest declines in production came from the US (-1.1 EJ) and Germany (-0.3 EJ).

Coal prices fell last year, with the Northwest Europe and Chinese marker prices declining by 34% and 14% respectively (to \$60.86/t and \$85.89/t).

# 54 bcm

Increase in liquefied natural gas supplies, the largest increase on record





## Coal trade

Coal trade decreased by 1.3%, the first decline since 2015. Notable declines in exports came from the US (-0.5 EJ), Australia (-0.4 EJ) and Colombia (-0.3 EJ) with strong growth in exports seen only in Indonesia (0.6 EJ). On the import side, falling imports in Europe (-1.2 EJ) and Japan & South Korea (-0.3 EJ combined) outweighed growth in the rest of Asia (1.3 EJ).

## Renewables, hydroelectricity and nuclear

### Renewables

Renewables energy consumption (which includes biofuels and all traded renewable electricity apart from hydro) continued to grow strongly, contributing its largest increase in energy terms (3.2 EJ) on record. This accounted for over 40% of the global growth in primary energy last year, which is larger than any other fuel. As a result, renewables increased its share in the energy mix from 4.5% in 2018 to 5%.

By energy source, wind generation provided the largest contribution to growth (1.4 EJ) followed closely by solar (1.2 EJ). Other sources of renewable electricity (such as biomass and geothermal) grew by 0.3 EJ, while biofuels consumption increased by 0.2 EJ, or 100,000 barrels of oil equivalent per day.

China's use of renewables grew by more than any other country, although its increase of 0.8 EJ was below the strong rate of growth seen in 2017 and 2018 (1.2 EJ both years). Solar provided half of China's growth, followed by wind (around 40%). The US (0.3 EJ) and Japan (0.2 EJ) were the next largest individual contributors to growth.

### Hydroelectricity and nuclear

Hydroelectric consumption rose by 0.8%, below its 10-year average of 1.9% p.a.. Growth was led by China (0.6 EJ), Turkey (0.3 EJ) and India (0.2 EJ). The US and Vietnam saw the biggest declines (both -0.2 EJ).

Nuclear consumption increased by 3.2%, its fastest growth since 2004 and well above the 10-year average of -0.7% p.a.. As in 2018, China recorded the largest increment of any country and, last year, it was also its biggest increase ever (0.5 EJ). Japan also posted notable growth of 0.15 EJ (33%) as it continued to recover from the impact of the Fukushima incident in 2011.

**Table 4:** Renewables share of primary energy in key countries and regions

Renewables share of primary energy	Share in 2019	Percentage point change from 2018
US	6.2%	0.4%
Other North America	4.0%	0.7%
Brazil	16.3%	1.2%
Other S. & Cent. America	4.3%	0.7%
EU	11.0%	1.0%
Other Europe	4.3%	0.7%
CIS	0.1%	0.0%
Middle East	0.3%	0.1%
Africa	2.0%	0.5%
OECD Asia	5.0%	0.9%
China	4.7%	0.4%
Other Asia	2.9%	0.4%
World	5.0%	0.5%

# 10.4%

Share of renewables in electricity generation, higher than nuclear for the first time



## Electricity

Generation of electricity grew by only 1.3% last year, around half of its 10-year average. Growth was weak or negative in most regions, other than in China which increased by 340 TWh (4.7%), accounting for 95% of net global growth (360 TWh).

Renewables provided the largest increment to power generation (340 TWh), followed by natural gas (220 TWh). These gains came partially at the expense of coal generation which fell sharply (-270 TWh), causing the share of coal in power generation to fall by 1.5 percentage points to 36.4% – the lowest in our dataset (which goes back to 1985). Despite this, coal remained the single largest source of power generation in 2019. Meanwhile, the share of renewables in generation increased from 9.3% to 10.4%, surpassing nuclear generation for the first time.

## Key minerals

After steep rises in prices for cobalt and lithium in 2017 and 2018, prices fell back sharply last year. Cobalt prices declined by over 50% while lithium carbonate prices slipped 31%. Production responded quickly to the drop in prices, with cobalt production down 21.2%, largely due to a decline in the Democratic Republic of Congo. Lithium production fell 19.2%, driven mainly by lower Australian output.

Production of graphite and rare earth metals continued to ramp up, both growing around 12%. Graphite growth was driven largely by China and Mozambique, while rare earth output was lifted by China and the US, with the latter increasing output by 44% and leapfrogging Australia to become the world's number two producer behind China.

### In detail

As well as the change to reported energy units (from million tonnes of oil equivalent to exajoules) there have been the following changes in the tables: biofuels consumption has been broken out of oil consumption and is now included in renewables consumption (as well as reported separately in its own table). Oil consumption as defined in previous Statistical Reviews (i.e. including biofuels) has been renamed 'liquids' consumption and a table is still included on this original basis. In addition, more granularity has been included on the product split of both oil products and biofuels (breaking out ethane & LPG and naphtha in oil products and the ethanol/biodiesel split of biofuels).

### Acknowledgements

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# ① Primary energy

## Consumption\*

Exajoules	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	12.74	13.01	13.61	13.47	13.88	14.03	13.99	13.94	14.11	14.35	14.21	-0.9%	0.6%	2.4%
Mexico	7.10	7.31	7.66	7.71	7.74	7.70	7.69	7.79	7.90	7.83	7.72	-1.4%	0.9%	1.3%
US	89.92	92.97	92.09	89.69	92.10	93.05	92.15	92.02	92.33	95.60	94.65	-1.0%	0.1%	16.2%
<b>Total North America</b>	<b>109.76</b>	<b>113.29</b>	<b>113.35</b>	<b>110.86</b>	<b>113.72</b>	<b>114.78</b>	<b>113.83</b>	<b>113.74</b>	<b>114.34</b>	<b>117.79</b>	<b>116.58</b>	<b>-1.0%</b>	<b>0.2%</b>	<b>20.0%</b>
Argentina	3.07	3.23	3.29	3.38	3.52	3.51	3.59	3.58	3.57	3.54	3.46	-2.2%	1.3%	0.6%
Brazil	9.98	10.98	11.48	11.69	12.13	12.40	12.23	11.92	12.06	12.13	12.40	2.2%	1.9%	2.1%
Chile	1.32	1.33	1.44	1.48	1.49	1.46	1.50	1.57	1.58	1.66	1.66	-0.3%	2.1%	0.3%
Colombia	1.33	1.42	1.49	1.59	1.61	1.70	1.71	1.81	1.84	1.85	1.92	3.9%	2.9%	0.3%
Ecuador	0.50	0.55	0.58	0.62	0.64	0.67	0.67	0.66	0.69	0.73	0.74	2.5%	3.6%	0.1%
Peru	0.71	0.80	0.91	0.92	0.94	0.96	1.02	1.09	1.09	1.14	1.16	1.8%	5.1%	0.2%
Trinidad & Tobago	0.78	0.84	0.83	0.81	0.83	0.82	0.80	0.71	0.75	0.71	0.71	*	-1.0%	0.1%
Venezuela	3.53	3.33	3.48	3.62	3.53	3.41	3.29	2.99	2.86	2.45	2.23	-9.3%	-3.6%	0.4%
Other S. & Cent. America	3.60	3.67	3.76	3.82	3.83	3.82	3.99	4.18	4.18	4.31	4.32	0.2%	1.5%	0.7%
<b>Total S. &amp; Cent. America</b>	<b>24.82</b>	<b>26.16</b>	<b>27.26</b>	<b>27.93</b>	<b>28.53</b>	<b>28.76</b>	<b>28.80</b>	<b>28.50</b>	<b>28.61</b>	<b>28.53</b>	<b>28.61</b>	<b>0.3%</b>	<b>1.3%</b>	<b>4.9%</b>
Austria	1.43	1.48	1.39	1.45	1.44	1.38	1.39	1.43	1.47	1.44	1.50	4.3%	-0.3%	0.3%
Belgium	2.64	2.81	2.62	2.52	2.58	2.40	2.44	2.63	2.66	2.59	2.71	4.8%	-0.9%	0.5%
Czech Republic	1.76	1.84	1.80	1.78	1.75	1.71	1.68	1.66	1.73	1.73	1.71	-1.3%	-0.6%	0.3%
Finland	1.22	1.33	1.24	1.20	1.21	1.16	1.15	1.18	1.14	1.15	1.10	-4.3%	-1.4%	0.2%
France	10.34	10.65	10.24	10.22	10.31	9.87	9.92	9.76	9.70	9.87	9.68	-1.9%	-1.0%	1.7%
Germany	13.15	13.71	13.20	13.37	13.75	13.17	13.40	13.62	13.78	13.44	13.14	-2.2%	-0.4%	2.3%
Greece	1.43	1.36	1.33	1.26	1.19	1.12	1.13	1.11	1.17	1.16	1.15	-1.3%	-2.4%	0.2%
Hungary	0.97	0.99	0.99	0.91	0.87	0.87	0.92	0.93	0.98	0.98	0.99	1.0%	-0.7%	0.2%
Italy	7.07	7.28	7.12	6.92	6.59	6.23	6.37	6.43	6.49	6.53	6.37	-2.4%	-1.5%	1.1%
Netherlands	3.87	4.10	3.92	3.79	3.68	3.47	3.52	3.58	3.53	3.53	3.51	-0.4%	-1.1%	0.6%
Norway	1.80	1.74	1.76	1.95	1.82	1.87	1.89	1.91	1.92	1.90	1.77	-7.2%	-0.2%	0.3%
Poland	3.92	4.18	4.20	4.08	4.09	3.93	3.98	4.15	4.32	4.38	4.28	-2.4%	0.7%	0.7%
Portugal	1.03	1.08	1.03	0.94	1.03	1.03	1.03	1.08	1.07	1.08	1.04	-3.2%	0.5%	0.2%
Romania	1.41	1.42	1.46	1.40	1.31	1.35	1.36	1.38	1.38	1.41	1.37	-2.7%	-1.4%	0.2%
Spain	5.97	6.11	6.00	5.97	5.65	5.54	5.61	5.66	5.74	5.82	5.72	-1.7%	-1.0%	1.0%
Sweden	2.04	2.16	2.13	2.26	2.12	2.11	2.18	2.14	2.21	2.17	2.24	3.5%	-0.3%	0.4%
Switzerland	1.26	1.23	1.17	1.23	1.26	1.21	1.18	1.11	1.11	1.13	1.13	0.2%	-1.2%	0.2%
Turkey	4.28	4.50	4.81	5.11	5.07	5.23	5.72	6.01	6.37	6.29	6.49	3.2%	4.1%	1.1%
Ukraine	4.75	5.08	5.27	5.14	4.88	4.29	3.55	3.72	3.46	3.54	3.41	-3.9%	-4.5%	0.6%
United Kingdom	8.72	8.94	8.45	8.55	8.51	8.02	8.11	8.01	7.99	7.96	7.84	-1.6%	-1.4%	1.3%
Other Europe	6.48	6.71	6.55	6.27	6.33	6.12	6.25	6.41	6.53	6.66	6.67	0.1%	-0.3%	1.1%
<b>Total Europe</b>	<b>85.55</b>	<b>88.69</b>	<b>86.66</b>	<b>86.32</b>	<b>85.43</b>	<b>82.10</b>	<b>82.77</b>	<b>83.90</b>	<b>84.76</b>	<b>84.76</b>	<b>83.82</b>	<b>-1.1%</b>	<b>-0.7%</b>	<b>14.4%</b>
Azerbaijan	0.47	0.47	0.52	0.54	0.55	0.56	0.62	0.61	0.60	0.62	0.66	6.6%	1.4%	0.1%
Belarus	1.03	1.09	1.08	1.17	1.03	1.07	0.97	0.96	0.98	1.05	1.06	0.9%	-0.3%	0.2%
Kazakhstan	2.13	2.30	2.53	2.62	2.66	2.70	2.66	2.70	2.86	3.15	3.10	-1.7%	2.9%	0.5%
Russian Federation	26.92	27.99	28.92	28.98	28.61	28.71	28.14	28.76	28.87	30.04	29.81	-0.8%	0.6%	5.1%
Turkmenistan	0.83	0.90	1.00	1.09	0.97	1.00	1.20	1.19	1.17	1.31	1.45	10.1%	9.9%	0.2%
Uzbekistan	1.88	1.86	1.95	1.90	1.91	1.99	1.89	1.78	1.79	1.83	1.78	-2.5%	-0.2%	0.3%
Other CIS	0.65	0.67	0.71	0.74	0.71	0.72	0.72	0.75	0.81	0.81	0.83	2.8%	1.8%	0.1%
<b>Total CIS</b>	<b>33.92</b>	<b>35.28</b>	<b>36.71</b>	<b>37.04</b>	<b>36.43</b>	<b>36.74</b>	<b>36.19</b>	<b>36.73</b>	<b>37.02</b>	<b>38.81</b>	<b>38.68</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>6.6%</b>
Iran	8.91	8.94	9.34	9.41	9.85	10.28	10.22	10.79	11.30	11.83	12.34	4.3%	3.2%	2.1%
Iraq	1.36	1.45	1.54	1.63	1.76	1.68	1.68	1.94	1.91	2.00	2.23	11.1%	5.1%	0.4%
Israel	0.94	0.99	1.02	1.06	0.98	0.97	1.02	1.04	1.08	1.09	1.13	3.7%	1.1%	0.2%
Kuwait	1.30	1.41	1.42	1.57	1.63	1.49	1.62	1.69	1.58	1.57	1.64	4.2%	2.4%	0.3%
Oman	0.73	0.86	0.94	1.03	1.15	1.14	1.21	1.21	1.34	1.49	1.51	1.9%	7.3%	0.3%
Qatar	1.04	1.21	1.40	1.59	1.71	1.84	2.05	2.00	1.92	1.99	2.02	1.6%	6.8%	0.3%
Saudi Arabia	8.13	8.92	9.20	9.76	9.80	10.50	10.83	10.98	11.01	10.91	11.04	1.2%	3.5%	1.9%
United Arab Emirates	3.35	3.51	3.70	3.89	4.09	4.08	4.48	4.66	4.72	4.80	4.83	0.6%	3.5%	0.8%
Other Middle East	2.45	2.45	2.31	2.19	2.09	2.07	1.93	1.93	1.97	1.93	2.04	6.0%	-2.4%	0.3%
<b>Total Middle East</b>	<b>28.22</b>	<b>29.74</b>	<b>30.86</b>	<b>32.12</b>	<b>33.06</b>	<b>34.05</b>	<b>35.04</b>	<b>36.23</b>	<b>36.83</b>	<b>37.61</b>	<b>38.78</b>	<b>3.1%</b>	<b>3.2%</b>	<b>6.6%</b>
Algeria	1.62	1.57	1.67	1.83	1.93	2.11	2.22	2.22	2.24	2.42	2.54	4.9%	4.7%	0.4%
Egypt	3.12	3.28	3.33	3.50	3.48	3.47	3.55	3.74	3.84	3.92	3.89	-0.8%	2.7%	0.7%
Morocco	0.63	0.70	0.73	0.75	0.77	0.78	0.79	0.80	0.84	0.86	0.95	9.8%	2.9%	0.2%
South Africa	5.24	5.29	5.21	5.14	5.15	5.22	5.05	5.30	5.25	5.30	5.40	2.0%	0.1%	0.9%
Other Africa	4.97	5.23	5.18	5.48	5.81	6.08	6.30	6.32	6.62	6.90	7.10	2.9%	3.5%	1.2%
<b>Total Africa</b>	<b>15.57</b>	<b>16.07</b>	<b>16.13</b>	<b>16.69</b>	<b>17.14</b>	<b>17.66</b>	<b>17.91</b>	<b>18.38</b>	<b>18.79</b>	<b>19.39</b>	<b>19.87</b>	<b>2.5%</b>	<b>2.4%</b>	<b>3.4%</b>
Australia	5.48	5.50	5.70	5.63	5.67	5.75	5.84	5.88	5.87	6.00	6.41	6.9%	0.8%	1.1%
Bangladesh	0.88	0.90	0.98	1.05	1.08	1.13	1.32	1.34	1.39	1.48	1.76	18.6%	6.3%	0.3%
China	97.52	104.28	112.54	117.05	121.37	124.20	125.38	126.95	130.83	135.77	141.70	4.4%	3.8%	24.3%
China Hong Kong SAR	1.11	1.16	1.19	1.14	1.17	1.14	1.18	1.21	1.29	1.30	1.24	-4.7%	2.5%	0.2%
India	21.52	22.55	23.88	25.11	26.08	27.86	28.77	30.07	31.33	33.30	34.06	2.3%	5.2%	5.8%
Indonesia	5.76	6.32	6.90	7.27	7.57	7.09	7.10	7.30	7.57	8.23	8.91	8.3%	4.0%	1.5%
Japan	19.83	21.13	20.06	19.92	19.75	19.24	18.97	18.65	18.89	18.84	18.67	-0.9%	-1.4%	3.2%
Malaysia	3.25	3.35	3.47	3.73	3.90	3.94	4.00	4.21	4.27	4.21	4.26	1.3%	2.3%	0.7%
New Zealand	0.81	0.83	0.83	0.84	0.84	0.88	0.89	0.89	0.91	0.90	0.92	2.0%	1.0%	0.2%
Pakistan	2.64	2.65	2.65	2.47	2.88	2.77	2.92	3.19	3.37	3.48	3.56	2.4%	2.9%	0.6%
Philippines	1.18	1.22	1.24	1.28	1.38	1.45	1.59	1.73	1.90	1.96	2.02	3.5%	5.3%	0.3%
Singapore	2.67	2.87	2.99	3.00	3.06	3.15	3.35	3.48	3.59	3.61	3.55	-1.5%	3.8%	0.6%
South Korea	10.16	10.94	11.43	11.54	11.55	11.64	11.87	12.16	12.37	12.55	12.37	-1.4%	2.2%	2.1%
Sri Lanka	0.22	0.24	0.25	0.25	0.25	0.23	0.29	0.31	0.33	0.35	0.36	2.8%	5.0%	0.1%
Taiwan	4.42	4.66	4.61	4.61	4.71	4.82	4.77	4.85	4.87	4.93	4.81	-2.4%	0.9%	0.8%
Thailand	4.13	4.39	4.56	4.87	4.95	5.09								

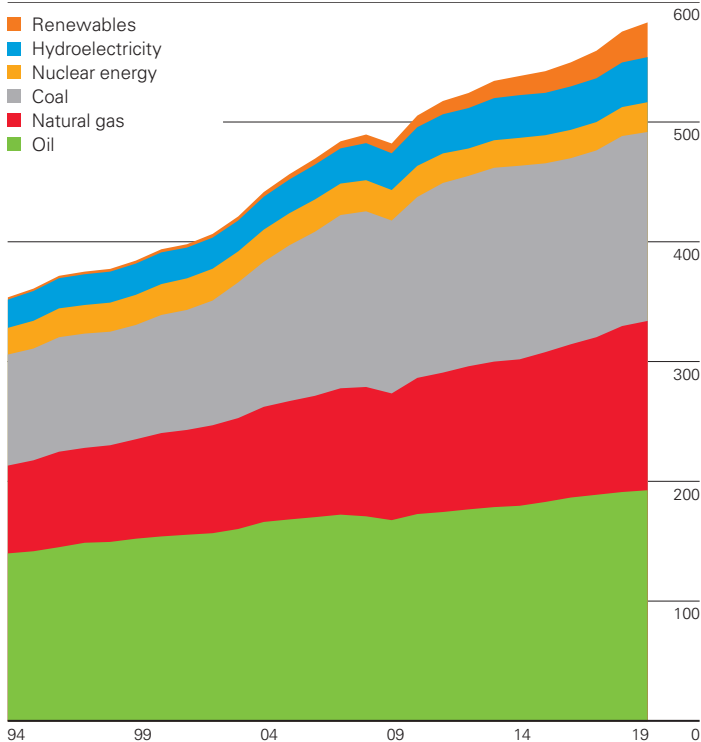


**Primary energy: Consumption by fuel\***

Exajoules	2018							2019						
	Oil	Natural gas	Coal	Nuclear energy	Hydro-electricity	Renewables	Total	Oil	Natural gas	Coal	Nuclear energy	Hydro-electricity	Renewables	Total
Canada	4.59	4.26	0.65	0.90	3.45	0.50	14.35	4.50	4.33	0.56	0.90	3.41	0.52	14.21
Mexico	3.48	3.15	0.57	0.12	0.29	0.22	7.83	3.29	3.26	0.51	0.10	0.21	0.35	7.72
US	37.11	29.52	13.28	7.60	2.59	5.50	95.60	36.99	30.48	11.34	7.60	2.42	5.83	94.65
<b>Total North America</b>	<b>45.18</b>	<b>36.93</b>	<b>14.50</b>	<b>8.62</b>	<b>6.33</b>	<b>6.22</b>	<b>117.79</b>	<b>44.78</b>	<b>38.07</b>	<b>12.41</b>	<b>8.59</b>	<b>6.03</b>	<b>6.70</b>	<b>116.58</b>
Argentina	1.20	1.75	0.05	0.06	0.37	0.10	3.54	1.19	1.71	0.02	0.08	0.33	0.14	3.46
Brazil	4.69	1.29	0.70	0.14	3.48	1.83	12.13	4.73	1.29	0.66	0.14	3.56	2.02	12.40
Chile	0.75	0.23	0.31	–	0.21	0.16	1.66	0.76	0.23	0.28	–	0.19	0.19	1.66
Colombia	0.69	0.48	0.16	–	0.51	0.02	1.85	0.70	0.48	0.26	–	0.46	0.02	1.92
Ecuador	0.51	0.03	–	–	0.19	0.01	0.73	0.49	0.02	–	–	0.22	0.01	0.74
Peru	0.50	0.29	0.03	–	0.28	0.05	1.14	0.51	0.30	0.02	–	0.28	0.05	1.16
Trinidad & Tobago	0.09	0.63	–	–	–	–	0.71	0.08	0.63	–	–	–	–	0.71
Venezuela	0.80	1.14	†	–	0.51	†	2.45	0.71	0.95	†	–	0.56	†	2.23
Other S. & Cent. America	2.68	0.29	0.18	–	0.89	0.27	4.31	2.69	0.33	0.24	–	0.77	0.29	4.32
<b>Total S. &amp; Cent. America</b>	<b>11.92</b>	<b>6.12</b>	<b>1.43</b>	<b>0.20</b>	<b>6.43</b>	<b>2.44</b>	<b>28.53</b>	<b>11.86</b>	<b>5.95</b>	<b>1.48</b>	<b>0.22</b>	<b>6.37</b>	<b>2.73</b>	<b>28.61</b>
Austria	0.54	0.31	0.12	–	0.34	0.13	1.44	0.55	0.32	0.13	–	0.36	0.14	1.50
Belgium	1.42	0.61	0.13	0.26	†	0.17	2.59	1.38	0.63	0.13	0.39	†	0.19	2.71
Czech Republic	0.43	0.29	0.65	0.27	0.01	0.08	1.73	0.43	0.30	0.60	0.27	0.02	0.08	1.71
Finland	0.41	0.08	0.18	0.20	0.12	0.18	1.15	0.39	0.07	0.15	0.20	0.11	0.18	1.10
France	3.17	1.54	0.35	3.70	0.57	0.54	9.87	3.15	1.56	0.27	3.56	0.52	0.61	9.68
Germany	4.63	3.09	2.90	0.68	0.16	1.97	13.44	4.68	3.19	2.30	0.67	0.18	2.12	13.14
Greece	0.65	0.17	0.19	–	0.05	0.10	1.16	0.68	0.19	0.14	–	0.04	0.11	1.15
Hungary	0.37	0.35	0.09	0.14	†	0.04	0.98	0.37	0.35	0.08	0.15	†	0.05	0.99
Italy	2.60	2.49	0.37	–	0.42	0.64	6.53	2.49	2.55	0.30	–	0.40	0.64	6.37
Netherlands	1.68	1.27	0.34	0.03	†	0.19	3.53	1.65	1.33	0.27	0.03	†	0.23	3.51
Norway	0.41	0.16	0.03	–	1.24	0.05	1.90	0.39	0.16	0.03	–	1.12	0.07	1.77
Poland	1.33	0.72	2.08	–	0.04	0.21	4.38	1.34	0.73	1.91	–	0.04	0.25	4.28
Portugal	0.48	0.21	0.11	–	0.11	0.16	1.08	0.51	0.22	0.06	–	0.08	0.18	1.04
Romania	0.43	0.42	0.21	0.10	0.16	0.09	1.41	0.45	0.39	0.19	0.10	0.14	0.10	1.37
Spain	2.72	1.13	0.46	0.50	0.31	0.70	5.82	2.72	1.30	0.21	0.52	0.22	0.75	5.72
Sweden	0.56	0.04	0.08	0.61	0.56	0.32	2.17	0.57	0.04	0.08	0.60	0.59	0.36	2.24
Switzerland	0.43	0.12	†	0.22	0.31	0.04	1.13	0.44	0.12	†	0.21	0.31	0.04	1.13
Turkey	2.00	1.70	1.71	–	0.54	0.34	6.29	2.03	1.56	1.70	–	0.79	0.41	6.49
Ukraine	0.41	1.10	1.15	0.76	0.09	0.02	3.54	0.44	1.02	1.10	0.74	0.06	0.05	3.41
United Kingdom	3.17	2.85	0.32	0.58	0.05	0.99	7.96	3.11	2.84	0.26	0.50	0.05	1.08	7.84
Other Europe	2.61	1.09	1.41	0.33	0.70	0.51	6.66	2.63	1.08	1.43	0.34	0.62	0.56	6.67
<b>Total Europe</b>	<b>30.46</b>	<b>19.73</b>	<b>12.92</b>	<b>8.37</b>	<b>5.79</b>	<b>7.50</b>	<b>84.76</b>	<b>30.40</b>	<b>19.95</b>	<b>11.35</b>	<b>8.28</b>	<b>5.66</b>	<b>8.18</b>	<b>83.82</b>
Azerbaijan	0.21	0.39	†	–	0.02	†	0.62	0.21	0.42	†	–	0.01	†	0.66
Belarus	0.31	0.70	0.04	–	†	†	1.05	0.32	0.69	0.04	–	†	†	1.06
Kazakhstan	0.67	0.68	1.70	–	0.09	†	3.15	0.69	0.64	1.67	–	0.09	0.01	3.10
Russian Federation	6.50	16.36	3.63	1.83	1.71	0.01	30.04	6.57	16.00	3.63	1.86	1.73	0.02	29.81
Turkmenistan	0.29	1.02	–	–	†	†	1.31	0.31	1.14	–	–	†	†	1.45
Uzbekistan	0.09	1.60	0.09	–	0.05	†	1.83	0.09	1.56	0.07	–	0.06	†	1.78
Other CIS	0.18	0.21	0.09	0.02	0.32	†	0.81	0.18	0.20	0.12	0.02	0.32	†	0.83
<b>Total CIS</b>	<b>8.24</b>	<b>20.96</b>	<b>5.54</b>	<b>1.85</b>	<b>2.19</b>	<b>0.02</b>	<b>38.81</b>	<b>8.37</b>	<b>20.65</b>	<b>5.53</b>	<b>1.88</b>	<b>2.21</b>	<b>0.03</b>	<b>38.68</b>
Iran	3.54	8.07	0.06	0.06	0.10	†	11.83	3.92	8.05	0.05	0.06	0.26	†	12.34
Iraq	1.46	0.53	–	–	0.02	†	2.00	1.49	0.72	–	–	0.02	†	2.23
Israel	0.49	0.38	0.20	–	†	0.02	1.09	0.50	0.39	0.21	–	†	0.03	1.13
Kuwait	0.80	0.76	0.01	–	–	†	1.57	0.78	0.85	0.01	–	–	†	1.64
Oman	0.58	0.90	†	–	–	†	1.49	0.61	0.90	0.01	–	–	†	1.51
Qatar	0.50	1.49	–	–	–	†	1.99	0.54	1.48	–	–	–	†	2.02
Saudi Arabia	6.86	4.04	†	–	–	†	10.91	6.92	4.09	†	–	–	0.02	11.04
United Arab Emirates	2.01	2.68	0.10	–	–	0.01	4.80	1.95	2.74	0.10	–	–	0.04	4.83
Other Middle East	1.06	0.81	0.02	–	0.01	0.03	1.93	1.08	0.89	0.02	–	0.02	0.03	2.04
<b>Total Middle East</b>	<b>17.31</b>	<b>19.65</b>	<b>0.39</b>	<b>0.06</b>	<b>0.13</b>	<b>0.07</b>	<b>37.61</b>	<b>17.80</b>	<b>20.10</b>	<b>0.40</b>	<b>0.06</b>	<b>0.30</b>	<b>0.12</b>	<b>38.78</b>
Algeria	0.83	1.56	0.02	–	†	0.01	2.42	0.88	1.63	0.02	–	†	0.01	2.54
Egypt	1.53	2.15	0.09	–	0.12	0.03	3.92	1.50	2.12	0.08	–	0.12	0.06	3.89
Morocco	0.55	0.04	0.22	–	0.02	0.04	0.86	0.57	0.04	0.28	–	0.01	0.06	0.95
South Africa	1.16	0.16	3.76	0.10	0.01	0.11	5.30	1.18	0.15	3.81	0.13	0.01	0.12	5.40
Other Africa	4.01	1.45	0.32	–	1.02	0.10	6.90	4.14	1.46	0.28	–	1.04	0.17	7.10
<b>Total Africa</b>	<b>8.07</b>	<b>5.36</b>	<b>4.41</b>	<b>0.10</b>	<b>1.17</b>	<b>0.29</b>	<b>19.39</b>	<b>8.28</b>	<b>5.40</b>	<b>4.47</b>	<b>0.13</b>	<b>1.18</b>	<b>0.41</b>	<b>19.87</b>
Australia	2.16	1.49	1.84	–	0.16	0.35	6.00	2.14	1.93	1.78	–	0.13	0.42	6.41
Bangladesh	0.38	0.99	0.10	–	0.01	†	1.48	0.37	1.24	0.14	–	0.01	†	1.76
China	26.58	10.19	79.83	2.64	10.73	5.81	135.77	27.91	11.06	81.67	3.11	11.32	6.63	141.70
China Hong Kong SAR	0.93	0.11	0.26	–	–	†	1.30	0.87	0.11	0.26	–	–	†	1.24
India	9.95	2.09	18.56	0.35	1.25	1.10	33.30	10.24	2.15	18.62	0.40	1.44	1.21	34.06
Indonesia	3.38	1.60	2.84	–	0.15	0.25	8.23	3.38	1.58	3.41	–	0.15	0.39	8.91
Japan	7.63	4.17	4.99	0.44	0.72	0.89	18.84	7.53	3.89	4.91	0.59	0.66	1.10	18.67
Malaysia	1.54	1.48	0.93	–	0.24	0.03	4.21	1.57	1.52	0.90	–	0.24	0.03	4.26
New Zealand	0.36	0.16	0.05	–	0.24	0.09	0.90	0.36	0.17	0.06	–	0.23	0.10	0.92
Pakistan	1.02	1.57	0.50	0.09	0.26	0.05	3.48	0.90	1.64	0.55	0.08	0.32	0.06	3.56
Philippines	0.89	0.15	0.68	–	0.08	0.15	1.96	0.91	0.15	0.73	–	0.09	0.15	2.02
Singapore	3.13	0.44	0.02	–	–	0.01	3.61	3.06	0.46	0.03	–	–	0.01	3.55
South Korea	5.37	2.08	3.63	1.19	0.03	0.24	12.55	5.30	2.01	3.44	1.30	0.02	0.29	12.37
Sri Lanka	0.23	–	0.06	–	0.06	0.01	0.35	0.25	–	0.06	–	0.04	0.01	0.36
Taiwan	2.04	0.85	1.70	0.25	0.04	0.06	4.93	1.93	0.84	1.63	0.29	0.05	0.07	4.81
Thailand	2.68	1.80	0.80	–	0.07	0.24	5.60	2.72	1.83	0.71	–	0.06	0.29	5.61
Vietnam	1.02	0.35	1.59	–	0.76	†	3.72	1.07	0.35	2.07	–	0.58	0.04	4.12
Other Asia Pacific	0.97	0.41	1.23	–	0.53	0.01	3.14	1.03	0.37	1.25	–	0.56	0.01	3.22
<b>Total Asia Pacific</b>	<b>70.27</b>	<b>29.92</b>	<b>119.62</b>	<b>4.96</b>	<b>15.31</b>	<b>9.29</b>	<b>2</b>							

## World consumption

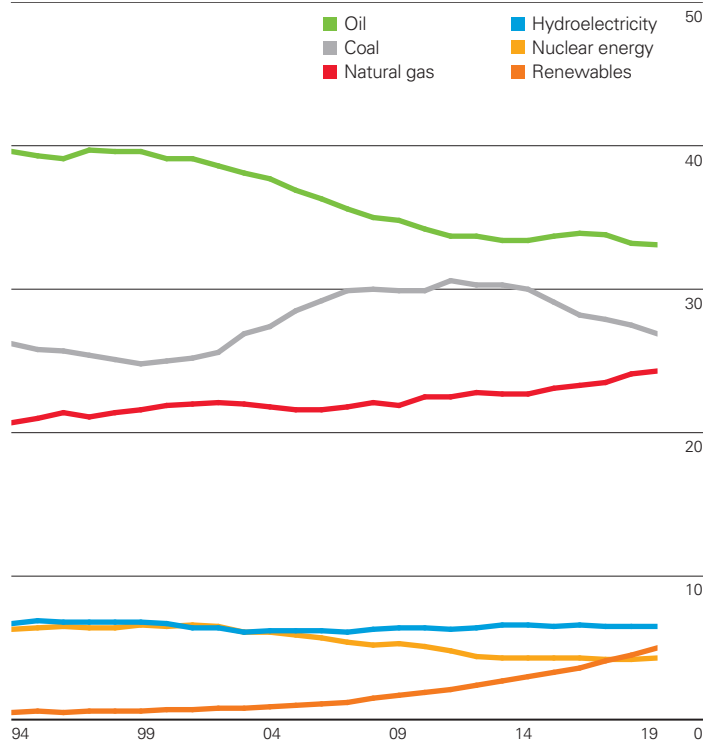
Exajoules



Primary energy consumption rose by 1.3% last year, less than half its rate in 2018 (2.8%). Growth was driven by renewables (3.2 EJ) and natural gas (2.8 EJ), which together contributed three quarters of the increase. All fuels grew at a slower rate than their 10-year averages, apart from nuclear, with coal consumption falling for the fourth time in six years (-0.9 EJ). By region, consumption fell in North America, Europe and CIS and growth was below average in South & Central America. In the other regions, growth was roughly in line with historical averages. China was the biggest individual driver of primary energy growth, accounting for more than three quarters of net global growth.

## Shares of global primary energy

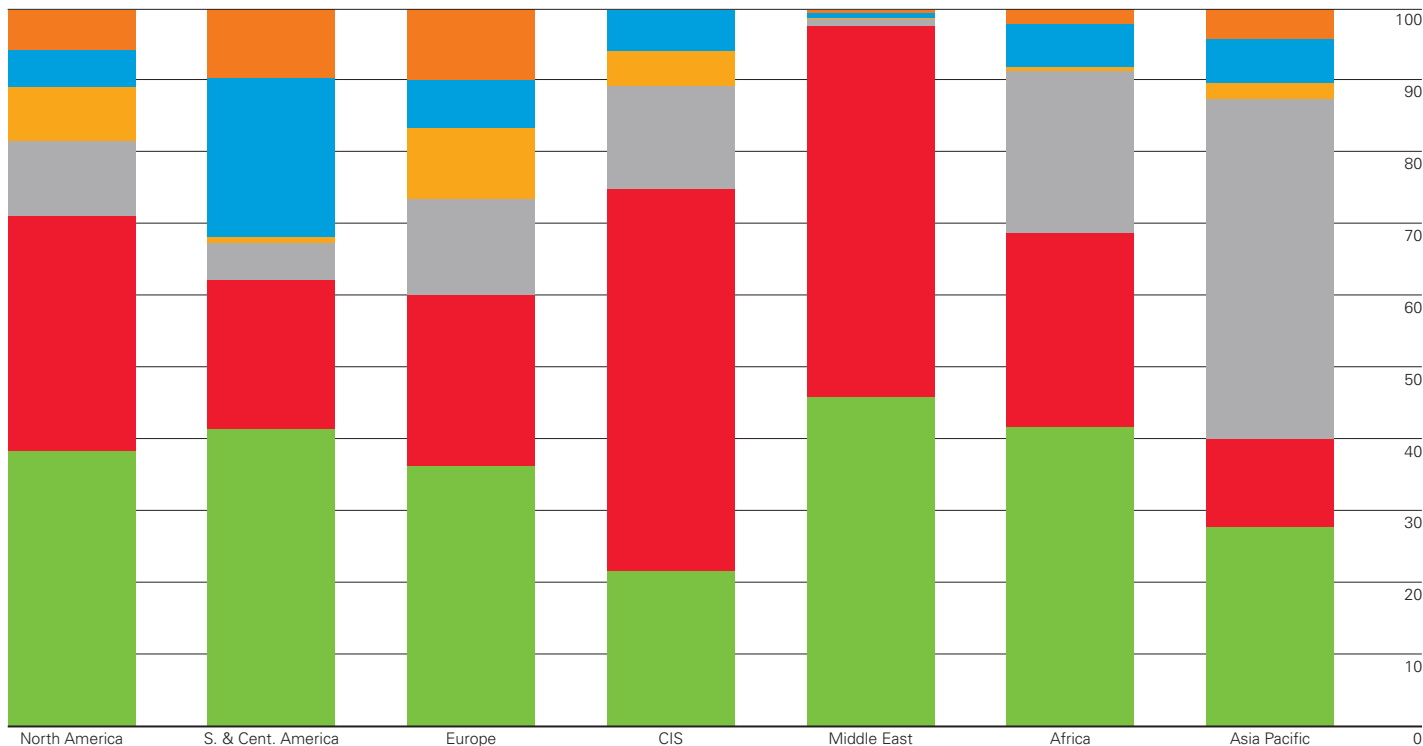
Percentage



Oil continues to hold the largest share of the energy mix (33.1%). Coal is the second largest fuel but lost share in 2019 to account for 27.0%, its lowest level since 2003. The share of both natural gas and renewables rose to record highs of 24.2% and 5.0% respectively. Renewables has now overtaken nuclear which makes up only 4.3% of the energy mix. The share of hydroelectricity has been stable at around 6% for several years.

## Regional consumption pattern 2019

Percentage



Oil remains the dominant fuel in Africa, Europe and the Americas, while natural gas dominates in CIS and the Middle East, accounting for more than half of the energy mix in both regions. Coal is the dominant fuel in the Asia Pacific region. In 2019 coal's share of primary energy fell to its lowest level in our data series in North America and Europe.



**Primary energy: Consumption per capita\***

Gigajoules per capita												Growth rate per annum	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019	2008-18
Canada	377.4	380.9	393.9	385.7	393.3	393.4	388.4	383.1	384.1	387.0	<b>379.9</b>	-1.8%	-0.4%
Mexico	63.1	64.1	66.2	65.7	65.1	64.0	63.1	63.1	63.3	62.1	<b>60.5</b>	-2.5%	-0.4%
US	293.6	300.9	295.5	285.6	291.1	292.0	287.2	284.9	284.0	292.3	<b>287.6</b>	-1.6%	-0.6%
<b>Total North America</b>	<b>242.6</b>	<b>247.8</b>	<b>245.5</b>	<b>237.8</b>	<b>241.7</b>	<b>241.8</b>	<b>237.8</b>	<b>235.6</b>	<b>235.0</b>	<b>240.2</b>	<b>236.0</b>	-1.8%	-0.7%
Argentina	75.8	78.9	79.6	81.0	83.5	82.2	83.2	82.2	81.2	79.8	<b>77.3</b>	-3.1%	0.2%
Brazil	51.5	56.1	58.1	58.7	60.3	61.2	59.8	57.8	58.0	57.9	<b>58.8</b>	1.5%	1.0%
Chile	78.3	77.9	83.8	84.9	84.9	82.4	83.2	86.2	85.5	88.7	<b>87.4</b>	-1.5%	0.9%
Colombia	29.7	31.5	32.6	34.6	34.7	36.2	36.0	37.5	37.6	37.3	<b>38.2</b>	2.5%	1.7%
Ecuador	33.6	36.8	38.4	39.9	40.6	42.0	41.2	40.2	41.0	42.5	<b>42.8</b>	0.8%	2.0%
Peru	24.7	27.6	30.9	31.1	31.5	31.9	33.5	35.1	34.6	35.7	<b>35.7</b>	0.2%	3.9%
Trinidad & Tobago	589.9	633.9	618.8	605.3	612.4	605.4	584.0	515.4	544.4	513.3	<b>511.6</b>	-0.3%	-1.5%
Venezuela	125.9	117.0	120.5	123.4	118.6	113.7	109.5	100.1	97.1	85.0	<b>78.1</b>	-8.1%	-4.0%
Other S. & Cent. America	34.8	35.1	35.5	35.6	35.4	34.8	36.0	37.3	36.9	37.6	<b>37.3</b>	-0.8%	0.4%
<b>Total S. &amp; Cent. America</b>	<b>52.5</b>	<b>54.8</b>	<b>56.5</b>	<b>57.3</b>	<b>58.0</b>	<b>57.8</b>	<b>57.4</b>	<b>56.2</b>	<b>55.9</b>	<b>55.3</b>	<b>55.0</b>	-0.6%	0.3%
Austria	171.0	176.0	163.9	171.0	168.8	160.7	159.7	163.7	166.3	161.7	<b>167.5</b>	3.6%	-0.9%
Belgium	242.9	256.8	237.7	226.9	231.3	214.3	216.1	231.4	232.7	225.4	<b>235.1</b>	4.3%	-1.5%
Czech Republic	168.1	174.3	170.0	168.7	165.3	161.6	158.6	155.9	162.6	161.9	<b>159.5</b>	-1.5%	-0.9%
Finland	228.9	247.8	229.6	221.3	221.7	212.7	210.1	214.7	207.2	207.7	<b>198.4</b>	-4.5%	-1.7%
France	165.4	169.4	162.0	160.9	161.4	153.8	154.0	151.0	149.6	151.9	<b>148.6</b>	-2.2%	-1.5%
Germany	162.6	169.6	163.3	165.1	169.3	161.6	163.8	165.7	166.8	161.7	<b>157.3</b>	-2.7%	-0.7%
Greece	130.6	125.1	122.5	116.4	117.0	104.5	105.7	104.4	110.4	110.4	<b>109.4</b>	-0.9%	-1.9%
Hungary	97.5	99.8	99.6	92.8	88.4	88.9	93.6	95.4	100.4	101.3	<b>102.6</b>	1.2%	-0.4%
Italy	119.6	122.8	119.4	115.6	109.6	103.1	105.1	106.0	107.0	107.7	<b>105.3</b>	-2.3%	-1.8%
Netherlands	232.7	245.5	234.2	225.8	218.4	205.7	207.6	210.8	207.4	206.7	<b>205.4</b>	-0.6%	-1.4%
Norway	372.5	355.6	354.9	388.0	358.4	363.6	364.3	364.6	362.9	356.7	<b>328.5</b>	-7.9%	-1.3%
Poland	102.3	109.1	109.8	106.6	107.1	103.3	104.5	109.3	113.7	115.6	<b>112.9</b>	-2.3%	0.9%
Portugal	96.9	101.7	97.3	89.3	98.1	99.3	99.2	104.9	104.4	105.0	<b>102.0</b>	-2.9%	0.9%
Romania	68.4	69.4	71.7	69.4	64.8	67.5	68.2	68.6	70.4	72.2	<b>70.8</b>	-2.0%	-0.7%
Spain	128.1	130.2	127.4	126.7	120.3	118.4	120.3	121.5	123.0	124.6	<b>122.4</b>	-1.8%	-1.2%
Sweden	218.8	230.0	225.3	236.8	220.5	217.8	222.8	217.7	223.1	217.3	<b>223.4</b>	2.8%	-1.0%
Switzerland	163.7	157.4	147.6	153.8	155.9	146.8	142.0	132.3	131.4	132.3	<b>131.5</b>	-0.6%	-2.3%
Turkey	60.0	62.2	65.5	68.4	66.7	67.7	72.9	75.3	78.6	76.4	<b>77.8</b>	1.9%	2.5%
Ukraine	103.3	110.9	115.6	113.1	107.7	95.1	79.0	83.2	77.7	80.1	<b>77.4</b>	-3.3%	-4.1%
United Kingdom	138.8	140.8	132.0	132.6	131.0	122.6	123.1	120.9	119.8	118.6	<b>116.1</b>	-2.1%	-2.2%
Other Europe	103.0	106.8	104.5	100.2	101.5	98.4	100.7	103.4	105.5	107.7	<b>108.0</b>	0.2%	-0.1%
<b>Total Europe</b>	<b>130.4</b>	<b>134.7</b>	<b>131.1</b>	<b>130.2</b>	<b>128.4</b>	<b>123.0</b>	<b>123.6</b>	<b>124.8</b>	<b>125.7</b>	<b>125.3</b>	<b>123.6</b>	-1.4%	-1.0%
Azerbaijan	53.2	51.9	57.0	58.0	58.8	59.2	64.0	62.6	60.7	61.9	<b>65.3</b>	5.5%	0.1%
Belarus	108.8	115.6	115.1	124.3	109.5	113.0	102.6	102.0	104.0	110.9	<b>111.9</b>	0.9%	-0.3%
Kazakhstan	132.9	141.4	153.5	156.6	156.0	155.8	151.5	151.6	158.0	172.1	<b>167.1</b>	-2.9%	1.5%
Russian Federation	187.8	195.1	201.2	201.3	198.2	198.4	194.1	198.0	198.4	206.1	<b>204.3</b>	-0.9%	0.4%
Turkmenistan	166.5	176.6	192.7	206.4	180.0	183.1	215.3	209.5	203.9	224.6	<b>243.6</b>	8.4%	8.0%
Uzbekistan	66.8	65.3	67.3	64.6	63.8	65.3	61.1	56.6	56.0	56.3	<b>54.1</b>	-4.0%	-1.8%
Other CIS	33.2	33.4	35.3	36.2	34.0	34.3	33.6	33.3	34.0	36.2	<b>36.7</b>	1.4%	0.4%
<b>Total CIS</b>	<b>147.1</b>	<b>152.2</b>	<b>157.5</b>	<b>157.9</b>	<b>154.2</b>	<b>154.4</b>	<b>151.1</b>	<b>152.3</b>	<b>152.6</b>	<b>158.9</b>	<b>157.5</b>	-0.9%	0.3%
Iran	122.1	121.1	125.1	124.6	128.8	132.7	130.2	135.7	140.1	144.6	<b>148.9</b>	2.9%	1.9%
Iraq	47.1	48.9	50.0	51.2	53.1	48.9	47.2	53.0	50.9	52.2	<b>56.6</b>	8.6%	1.9%
Israel	130.2	135.1	135.6	139.3	127.3	123.2	127.9	128.0	131.6	129.6	<b>132.2</b>	2.0%	-0.7%
Kuwait	461.0	471.4	446.7	469.5	462.2	405.0	422.9	426.0	388.9	379.9	<b>389.2</b>	2.5%	-2.1%
Oman	255.5	283.9	290.2	293.2	304.4	283.3	282.5	270.1	287.8	307.8	<b>304.3</b>	-1.1%	1.4%
Qatar	628.3	651.6	687.6	723.5	731.3	746.5	798.0	751.7	705.6	715.8	<b>714.3</b>	-0.2%	♦
Saudi Arabia	305.4	325.2	325.6	334.7	326.0	339.7	341.6	338.3	332.5	323.7	<b>322.0</b>	-0.5%	0.8%
United Arab Emirates	422.8	410.3	413.5	425.0	445.2	442.4	484.2	497.6	497.1	498.5	<b>494.4</b>	-0.8%	0.4%
Other Middle East	40.5	39.4	36.6	34.1	32.3	31.6	29.2	28.8	29.0	28.0	<b>29.2</b>	4.3%	-3.9%
<b>Total Middle East</b>	<b>133.4</b>	<b>137.2</b>	<b>139.2</b>	<b>141.8</b>	<b>143.1</b>	<b>144.6</b>	<b>146.1</b>	<b>148.4</b>	<b>148.4</b>	<b>149.0</b>	<b>151.1</b>	1.4%	1.2%
Algeria	45.7	43.8	45.6	48.9	50.7	54.2	56.0	54.8	54.2	57.3	<b>59.0</b>	2.9%	2.7%
Egypt	38.5	39.7	39.4	40.5	39.3	38.4	38.4	39.6	39.9	39.8	<b>38.7</b>	-2.7%	0.5%
Morocco	19.7	21.6	22.4	22.4	22.7	22.7	22.8	22.7	23.5	24.0	<b>26.0</b>	8.5%	1.6%
South Africa	103.7	103.3	100.3	97.2	96.0	95.7	91.1	94.3	92.1	91.6	<b>92.2</b>	0.7%	-1.4%
Other Africa	6.1	6.2	6.0	6.2	6.4	6.5	6.6	6.4	6.5	6.6	<b>6.6</b>	0.2%	0.7%
<b>Total Africa</b>	<b>15.4</b>	<b>15.5</b>	<b>15.1</b>	<b>15.3</b>	<b>15.3</b>	<b>15.3</b>	<b>15.1</b>	<b>15.2</b>	<b>15.1</b>	<b>15.2</b>	<b>15.2</b>	-0.1%	-0.2%
Australia	251.8	248.1	252.7	245.7	243.8	243.7	243.9	242.5	238.8	240.8	<b>254.3</b>	5.6%	-0.7%
Bangladesh	6.0	6.1	6.6	6.9	7.1	7.3	8.5	8.5	8.7	9.2	<b>10.8</b>	17.4%	5.2%
China	71.6	76.2	81.8	84.6	87.2	88.7	89.1	89.8	92.1	95.1	<b>98.8</b>	3.9%	3.3%
China Hong Kong SAR	160.6	166.0	169.2	161.7	165.1	160.3	163.6	166.6	177.1	176.6	<b>166.9</b>	-5.5%	1.8%
India	17.7	18.3	19.1	19.8	20.4	21.5	22.0	22.7	23.4	24.6	<b>24.9</b>	1.2%	4.0%
Indonesia	24.1	26.1	28.1	29.3	30.1	27.8	27.5	27.9	28.6	30.7	<b>32.9</b>	7.2%	2.7%
Japan	154.3	164.4	156.1	155.1	153.9	150.1	148.2	146.0	148.2	148.1	<b>147.2</b>	-0.6%	-1.3%
Malaysia	117.2	118.8	121.1	128.2	132.4	131.9	132.0	137.1	137.4	133.5	<b>133.4</b>	♦	0.8%
New Zealand	187.9	190.0	188.6	187.5	186.1	192.8	192.7	192.0	192.7	189.3	<b>191.6</b>	1.2%	-0.1%
Pakistan	15.0	14.8	14.4	13.2	15.1	14.2	14.7	15.7	16.2	16.4	<b>16.4</b>	0.3%	0.8%
Philippines	12.8	13.0	13.0	13.2	13.9	14.4	15.6	16.7	18.1	18.3	<b>18.7</b>	2.1%	3.6%
Singapore	537.9	559.5	567.1	558.3	561.8	570.4	599.4	615.2	628.7	626.2	<b>611.6</b>	-2.3%	1.9%
South Korea	205.9	220.8	229.7	230.5	229.4	230.0	233.6	238.5	242.1	245.2	<b>241.5</b>	-1.5%	1.8%
Sri Lanka	11.0	11.7	12.2	12.2	12.3	11.0	13.9	14.7	15.5	16.4	<b>16.8</b>	2.4%	4.4%
Taiwan	191.1	201.0	198.1	197.6	201.2	205.2	202.4	205.3	205.6	207.8	<b>202.3</b>	-2.6%	0.6%
Thailand	61.7	65.3	67.5	71.8	72.7	74.3	76.3	77.7	78.8	80.7	<b>80.6</b>	♦	3.0%
Vietnam	18.9	21.3	24.0	24.9	26.3	28.5	31.2	33.2	35.1	38.9	<b>42.7</b>	9.6%	7.6%
Other Asia Pacific	10.6	11.6	11.3	11.7	11.4	12.2	12.6	13.4	13.6	16.8	<b>17.0</b>	1.3%	3.7%
<b>Total Asia Pacific</b>	<b>48.2</b>	<b>50.8</b>	<b>52.9</b>	<b>54.1</b>	<b>55.2</b>	<b>55.9</b>	<b>56.2</b>	<b>56.8</b>	<b>58.0</b>	<b>59.7</b>	<b>61.1</b>	2.4%	2.3%
<b>Total World</b>	<b>70.2</b>	<b>72.7</b>	<b>73.6</b>	<b>73.7</b>	<b>74.2</b>	<b>73.9</b>	<b>73.6</b>	<b>73.8</b>	<b>74.2</b>	<b>75.5</b>	<b>75.7</b>	<b>0.2%</b>	<b>0.4%</b>
of which: OECD	182.3	187.8	184.6	181.5	182.0	179.4	178.7	178.4	179.1	180.9	<b>178.5</b>	-1.3%	-0.7%
Non-OECD	45.8	47.7	49.7	50.6	51.2	51.6	51.5	52.0	52.5	53.8	<b>54.7</b>	1.6%	1.7%
European Union	142.8	147.5	142.2	140.6	139.1	133.4	134.7	135.7	136.9	136.4	<b>134.3</b>	-1.6%	-1.1%

\*In this review, primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.

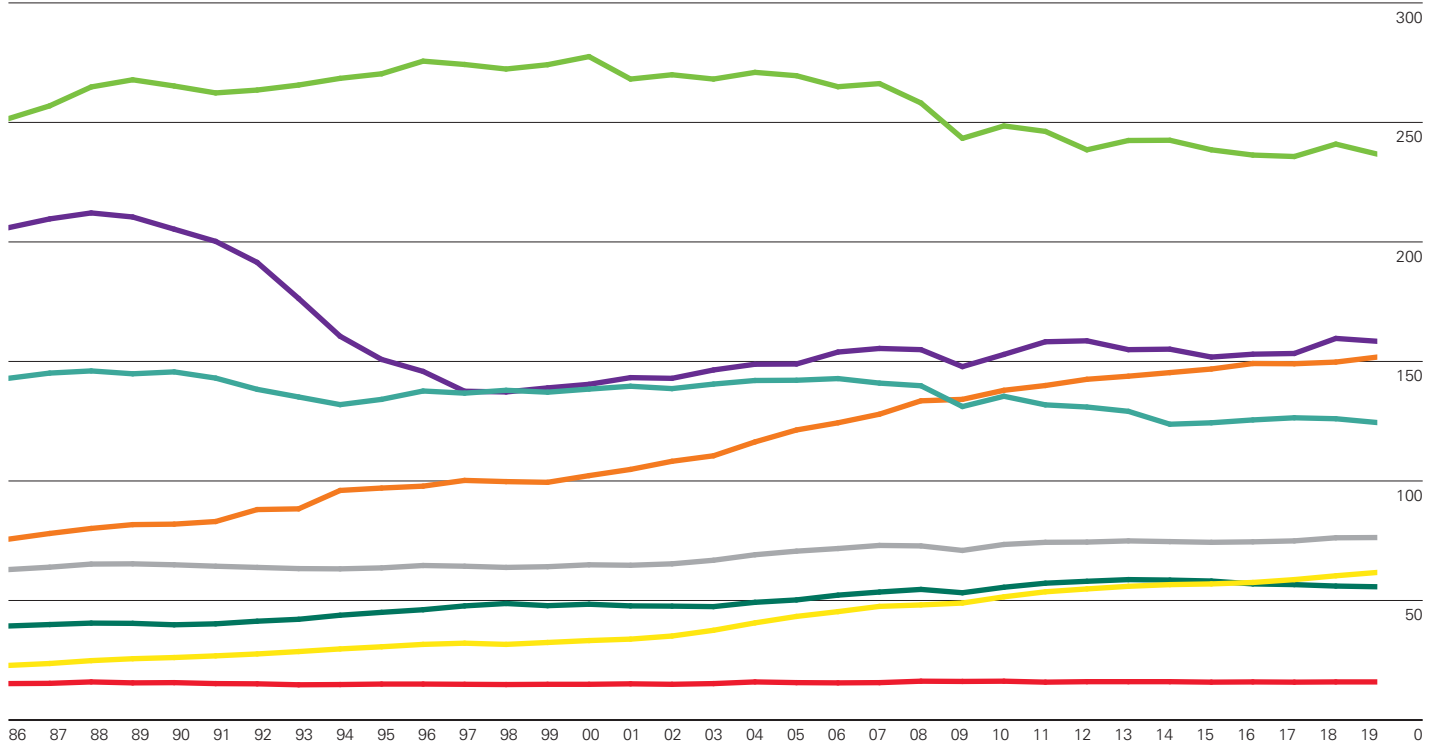
Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis. See the appendix or [bp.com/statisticalreview](http://bp.com/statisticalreview) for more details on this methodology.

♦Less than 0.05%.

## Energy per capita by region

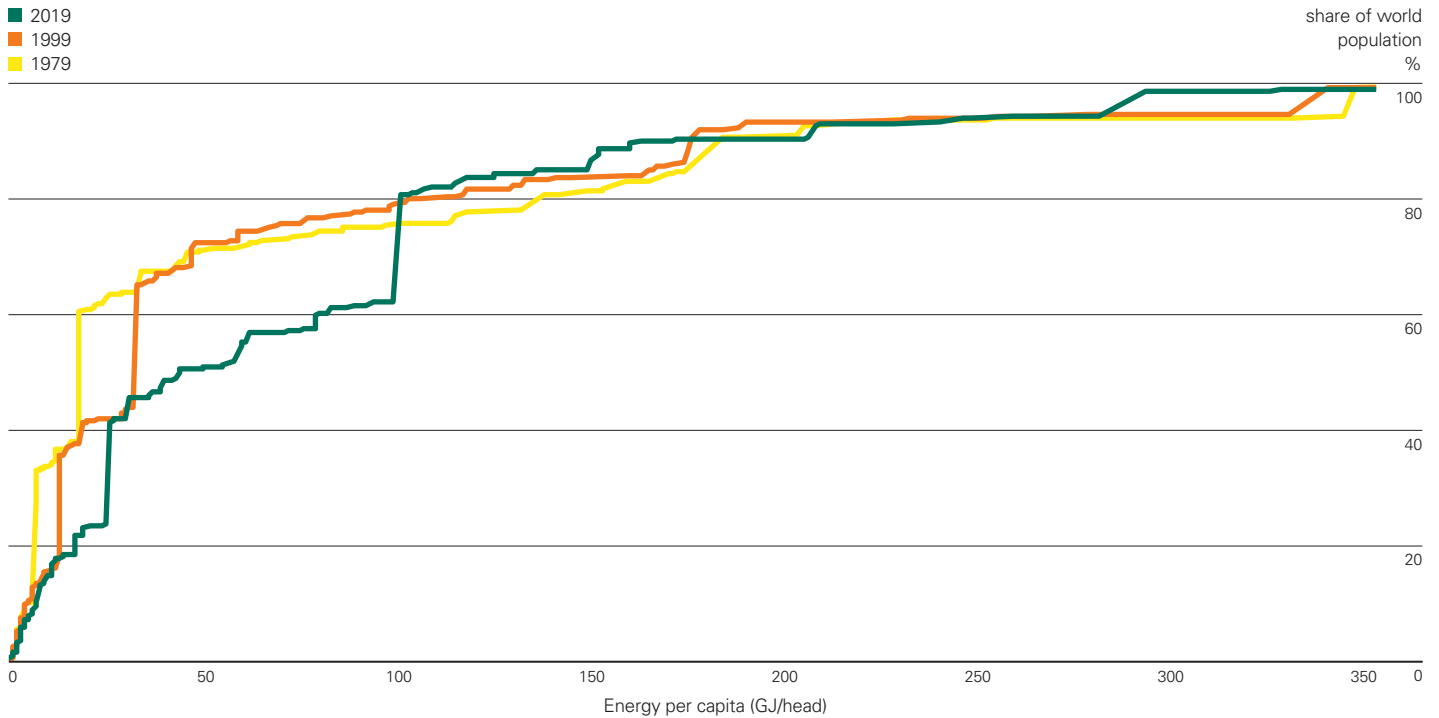
Gigajoules per head

■ North America    ■ S. & Cent. America    ■ Europe    ■ CIS  
■ Middle East    ■ Africa    ■ Asia Pacific    ■ World



Average global energy consumption per capita increased by only 0.2% in 2019 to 75.7 GJ/head, driven by growth in the Middle East (1.4%) and Asia Pacific (2.4%). Energy demand per head fell in all other regions. North America is the region with the highest consumption per capita (236 GJ/head), followed by CIS (158 GJ/head) and the Middle East (151 GJ/head). Africa remains the region with the lowest average consumption (15 GJ/head).

## Energy per capita: Distribution across countries



In 2019 81% of the global population lived in countries where average energy demand per capita was less than 100 GJ/head, two percentage points more than 20 years ago. However, the share of the global population consuming less than 75 GJ/head declined from 76% in 1999 to 57% last year. Average energy demand per capita in China increased from 17 GJ/head in 1979 to 99 GJ/head in 2019.





## Total proved reserves

	At end 1999 Thousand million barrels	At end 2009 Thousand million barrels	At end 2018 Thousand million barrels	At end 2019			
				Thousand million barrels	Thousand million tonnes	Share of total	R/P ratio
Canada	181.6	175.0	170.8	169.7	27.3	9.8%	82.3
Mexico	21.5	11.9	5.8	5.8	0.8	0.3%	8.3
US	29.7	30.9	68.9	68.9	8.2	4.0%	11.1
<b>Total North America</b>	<b>232.8</b>	<b>217.8</b>	<b>245.5</b>	<b>244.4</b>	<b>36.3</b>	<b>14.1%</b>	<b>27.2</b>
Argentina	3.1	2.5	2.4	2.4	0.3	0.1%	10.5
Brazil	8.2	12.9	13.4	12.7	1.8	0.7%	12.1
Colombia	2.3	1.4	1.8	2.0	0.3	0.1%	6.1
Ecuador	2.6	2.7	1.6	1.6	0.2	0.1%	8.4
Peru	0.9	1.1	0.9	0.9	0.1	♦	16.5
Trinidad & Tobago	0.8	0.8	0.2	0.2	†	♦	8.1
Venezuela	76.8	211.2	303.8	303.8	48.0	17.5%	*
Other S. & Cent. America	1.3	0.8	0.5	0.5	0.1	♦	12.7
<b>Total S. &amp; Cent. America</b>	<b>95.9</b>	<b>233.3</b>	<b>324.7</b>	<b>324.1</b>	<b>50.9</b>	<b>18.7%</b>	<b>143.8</b>
Denmark	0.9	0.9	0.4	0.4	0.1	♦	11.7
Italy	0.6	0.5	0.6	0.6	0.1	♦	17.0
Norway	10.9	7.1	8.6	8.5	1.1	0.5%	13.5
Romania	1.2	0.6	0.6	0.6	0.1	♦	22.0
United Kingdom	5.0	2.8	2.7	2.7	0.4	0.2%	6.6
Other Europe	2.0	2.0	1.6	1.6	0.2	0.1%	15.0
<b>Total Europe</b>	<b>20.7</b>	<b>14.0</b>	<b>14.6</b>	<b>14.4</b>	<b>1.9</b>	<b>0.8%</b>	<b>11.6</b>
Azerbaijan	1.2	7.0	7.0	7.0	1.0	0.4%	24.6
Kazakhstan	5.4	30.0	30.0	30.0	3.9	1.7%	42.6
Russian Federation	112.1	105.6	107.2	107.2	14.7	6.2%	25.5
Turkmenistan	0.5	0.6	0.6	0.6	0.1	♦	6.2
Uzbekistan	0.6	0.6	0.6	0.6	0.1	♦	26.3
Other CIS	0.3	0.3	0.3	0.3	†	♦	17.6
<b>Total CIS</b>	<b>120.1</b>	<b>144.0</b>	<b>145.7</b>	<b>145.7</b>	<b>19.8</b>	<b>8.4%</b>	<b>27.3</b>
Iran	93.1	137.0	155.6	155.6	21.4	9.0%	120.6
Iraq	112.5	115.0	145.0	145.0	19.6	8.4%	83.1
Kuwait	96.5	101.5	101.5	101.5	14.0	5.9%	92.8
Oman	5.7	5.5	5.4	5.4	0.7	0.3%	15.2
Qatar	13.1	25.9	25.2	25.2	2.6	1.5%	36.7
Saudi Arabia	262.8	264.6	297.7	297.6	40.9	17.2%	68.9
Syria	2.3	2.5	2.5	2.5	0.3	0.1%	291.2
United Arab Emirates	97.8	97.8	97.8	97.8	13.0	5.6%	67.0
Yemen	1.9	3.0	3.0	3.0	0.4	0.2%	84.2
Other Middle East	0.2	0.3	0.2	0.2	†	♦	2.6
<b>Total Middle East</b>	<b>685.8</b>	<b>753.1</b>	<b>833.9</b>	<b>833.8</b>	<b>112.9</b>	<b>48.1%</b>	<b>75.3</b>
Algeria	11.3	12.2	12.2	12.2	1.5	0.7%	22.5
Angola	5.1	9.5	8.2	8.2	1.1	0.5%	15.8
Chad	-	1.5	1.5	1.5	0.2	0.1%	32.4
Republic of Congo	1.7	2.0	3.0	3.0	0.4	0.2%	24.1
Egypt	3.8	4.4	3.1	3.1	0.4	0.2%	12.3
Equatorial Guinea	0.6	1.7	1.1	1.1	0.1	0.1%	16.7
Gabon	2.6	2.0	2.0	2.0	0.3	0.1%	25.1
Libya	29.5	46.4	48.4	48.4	6.3	2.8%	107.9
Nigeria	29.0	37.2	37.0	37.0	5.0	2.1%	48.0
South Sudan	n/a	n/a	3.5	3.5	0.5	0.2%	69.1
Sudan	0.3	5.0	1.5	1.5	0.2	0.1%	40.2
Tunisia	0.3	0.4	0.4	0.4	0.1	♦	23.2
Other Africa	0.7	0.6	3.9	3.9	0.5	0.2%	33.8
<b>Total Africa</b>	<b>84.7</b>	<b>123.0</b>	<b>125.7</b>	<b>125.7</b>	<b>16.6</b>	<b>7.2%</b>	<b>41.0</b>
Australia	4.7	4.1	2.4	2.4	0.3	0.1%	13.4
Brunei	1.3	1.1	1.1	1.1	0.1	0.1%	24.8
China	15.1	21.6	26.2	26.2	3.6	1.5%	18.7
India	5.0	5.8	4.5	4.7	0.6	0.3%	15.5
Indonesia	5.2	4.3	3.2	2.5	0.3	0.1%	8.7
Malaysia	2.1	3.6	2.8	2.8	0.4	0.2%	11.9
Thailand	0.4	0.4	0.3	0.3	†	♦	1.7
Vietnam	1.8	4.5	4.4	4.4	0.6	0.3%	51.0
Other Asia Pacific	1.4	1.1	1.2	1.4	0.2	0.1%	16.3
<b>Total Asia Pacific</b>	<b>37.0</b>	<b>46.6</b>	<b>46.0</b>	<b>45.7</b>	<b>6.1</b>	<b>2.6%</b>	<b>16.4</b>
<b>Total World</b>	<b>1277.1</b>	<b>1531.8</b>	<b>1735.9</b>	<b>1733.9</b>	<b>244.6</b>	<b>100.0%</b>	<b>49.9</b>
of which: OECD	256.4	234.7	261.3	260.1	38.3	15.0%	25.1
Non-OECD	1020.7	1297.1	1474.6	1473.7	206.3	85.0%	60.4
OPEC	821.8	1040.8	1214.8	1214.7	171.8	70.1%	93.6
Non-OPEC	455.3	491.0	521.1	519.2	72.8	29.9%	23.9
European Union	8.8	6.0	5.1	5.0	0.7	0.3%	9.0
Canadian oil sands: Total	175.2	169.8	163.5	162.4	26.4	9.4%	
of which: Under active development	11.9	26.5	21.2	20.1	3.3	1.2%	
Venezuela: Orinoco Belt	-	133.4	261.8	261.8	42.0	15.1%	

†Less than 0.05.

\*Less than 0.05%.

n/a not available.

\*More than 500 years.

**Notes:** Total proved reserves of oil – generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for total proved oil reserves does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent bp's view of proved reserves by country.

**Reserves-to-production (R/P) ratio** – if the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate.

**Source of data** – the estimates in this table have been compiled using a combination of primary official sources, third-party data from the OPEC Secretariat, World Oil, Oil & Gas Journal and Chinese reserves based on official data and information in the public domain.

Canadian oil sands 'under active development' are an official estimate. Venezuelan Orinoco Belt reserves are based on the OPEC Secretariat and government announcements.

Reserves and R/P ratio for Canada includes Canadian oil sands. Reserves and R/P ratio for Venezuela includes the Orinoco Belt. Saudi Arabia's oil reserves include NGLs from 2017.

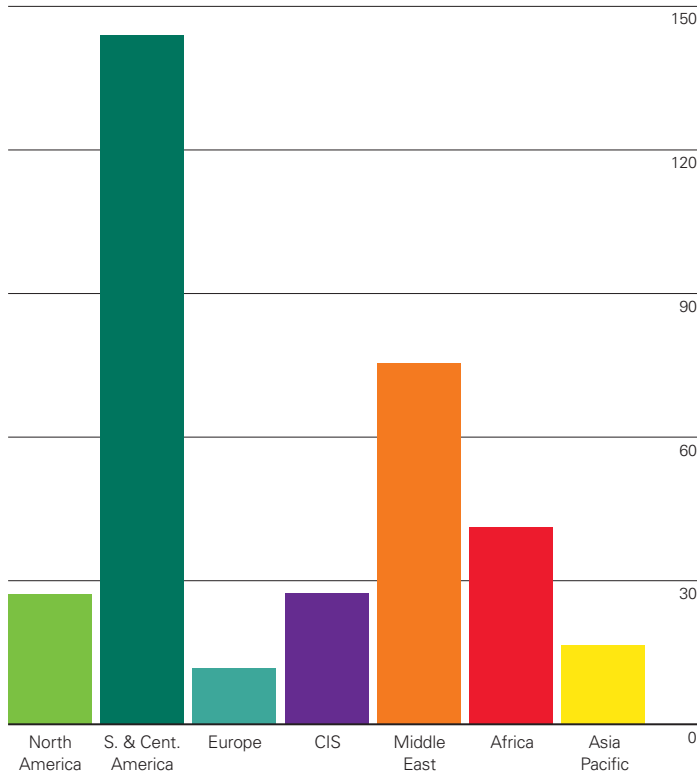
**Reserves include gas condensate and natural gas liquids (NGLs) as well as crude oil.**

**Shares of total and R/P ratios are calculated using thousand million barrels figures.**

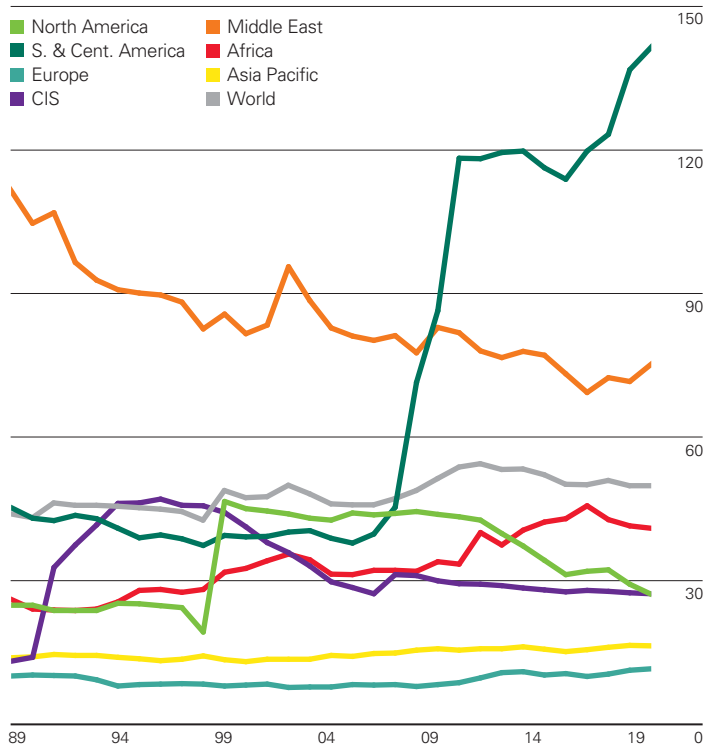
## Reserves-to-production (R/P) ratios

Years

2019 by region



History

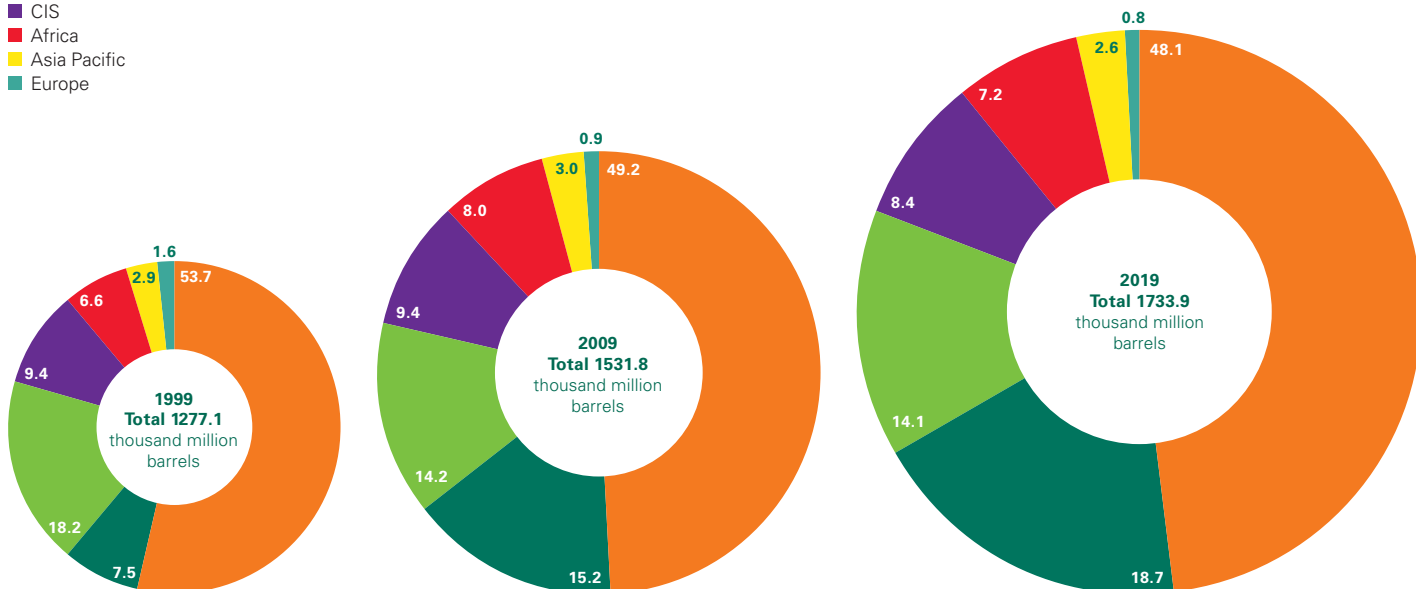


Global proved oil reserves were 1734 billion barrels at the end of 2019, down 2 billion barrels versus 2018. The global R/P ratio shows that oil reserves in 2019 accounted for 50 years of current production. Regionally, South & Central America has the highest R/P ratio (144 years) while Europe has the lowest (12 years). OPEC holds 70.1% of global reserves. The top countries in terms of reserves are Venezuela (17.5% of global reserves), closely followed by Saudi Arabia (17.2%) and Canada (9.8%).

## Distribution of proved reserves in 1999, 2009 and 2019

Percentage

- Middle East
- S. & Cent. America
- North America
- CIS
- Africa
- Asia Pacific
- Europe





## Oil: Production in thousands of barrels per day\*

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	3331	3457	3637	3860	4128	4418	4572	4655	5037	5501	<b>5651</b>	2.7%	5.1%	5.9%
Mexico	2978	2959	2940	2911	2875	2784	2587	2456	2224	2068	<b>1918</b>	-7.3%	-4.2%	2.0%
US	7267	7558	7883	8926	10099	11801	12781	12349	13135	15360	<b>17045</b>	11.0%	8.5%	17.9%
<b>Total North America</b>	<b>13576</b>	<b>13975</b>	<b>14460</b>	<b>15697</b>	<b>17101</b>	<b>19004</b>	<b>19940</b>	<b>19460</b>	<b>20396</b>	<b>22929</b>	<b>24614</b>	<b>7.3%</b>	<b>5.6%</b>	<b>25.9%</b>
Argentina	730	712	667	657	644	638	646	610	590	591	<b>620</b>	4.9%	-3.0%	0.7%
Brazil	2019	2125	2173	2132	2096	2341	2525	2591	2721	2679	<b>2877</b>	7.4%	3.6%	3.0%
Colombia	671	786	915	944	1010	990	1006	886	854	865	<b>886</b>	2.4%	3.9%	0.9%
Ecuador	488	488	501	505	527	557	543	548	531	517	<b>531</b>	2.7%	0.2%	0.6%
Peru	155	165	159	157	171	175	153	141	137	154	<b>142</b>	-7.2%	2.3%	0.1%
Trinidad & Tobago	150	145	136	117	116	114	109	97	99	87	<b>82</b>	-5.8%	-5.2%	0.1%
Venezuela	3038	2842	2755	2704	2680	2692	2631	2347	2096	1475	<b>918</b>	-37.7%	-7.5%	1.0%
Other S. & Cent. America	136	144	144	147	152	155	146	135	133	127	<b>118</b>	-7.1%	-1.2%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>7387</b>	<b>7407</b>	<b>7450</b>	<b>7362</b>	<b>7397</b>	<b>7662</b>	<b>7758</b>	<b>7355</b>	<b>7161</b>	<b>6495</b>	<b>6174</b>	<b>-4.9%</b>	<b>-1.3%</b>	<b>6.5%</b>
Denmark	265	249	225	204	178	167	158	142	138	116	<b>103</b>	-11.2%	-8.7%	0.1%
Italy	95	106	110	112	114	120	113	78	86	97	<b>89</b>	-8.7%	-1.1%	0.1%
Norway	2343	2133	2033	1911	1832	1881	1940	1991	1965	1845	<b>1731</b>	-6.2%	-2.8%	1.8%
Romania	94	90	89	83	86	84	83	79	76	75	<b>75</b>	0.3%	-2.8%	0.1%
United Kingdom	1474	1358	1114	947	865	854	964	1015	1005	1092	<b>1118</b>	2.4%	-3.5%	1.2%
Other Europe	357	342	336	336	344	339	331	313	303	308	<b>298</b>	-3.1%	-2.0%	0.3%
<b>Total Europe</b>	<b>4627</b>	<b>4277</b>	<b>3906</b>	<b>3593</b>	<b>3420</b>	<b>3444</b>	<b>3590</b>	<b>3618</b>	<b>3573</b>	<b>3532</b>	<b>3413</b>	<b>-3.4%</b>	<b>-3.2%</b>	<b>3.6%</b>
Azerbaijan	1027	1037	932	882	888	861	851	838	793	796	<b>779</b>	-2.1%	-1.4%	0.8%
Kazakhstan	1609	1676	1684	1664	1737	1710	1695	1655	1838	1927	<b>1931</b>	0.2%	2.6%	2.0%
Russian Federation	10152	10379	10533	10656	10807	10860	11007	11269	11255	11438	<b>11540</b>	0.9%	1.4%	12.1%
Turkmenistan	221	226	234	244	256	263	271	270	271	261	<b>264</b>	1.1%	1.9%	0.3%
Uzbekistan	95	78	77	68	63	61	59	58	61	64	<b>62</b>	-3.2%	-4.5%	0.1%
Other CIS	36	36	36	35	35	35	36	36	37	38	<b>39</b>	2.9%	0.3%	♦
<b>Total CIS</b>	<b>13141</b>	<b>13431</b>	<b>13496</b>	<b>13549</b>	<b>13786</b>	<b>13790</b>	<b>13918</b>	<b>14126</b>	<b>14255</b>	<b>14524</b>	<b>14614</b>	<b>0.6%</b>	<b>1.3%</b>	<b>15.4%</b>
Iran	4285	4421	4452	3810	3609	3714	3853	4578	5007	4801	<b>3535</b>	-26.4%	0.8%	3.7%
Iraq	2446	2469	2773	3079	3103	3239	3986	4423	4538	4632	<b>4779</b>	3.2%	6.7%	5.0%
Kuwait	2502	2564	2918	3173	3134	3106	3069	3150	3009	3050	<b>2996</b>	-1.8%	0.9%	3.1%
Oman	813	865	885	918	942	943	981	1004	971	978	<b>971</b>	-0.8%	2.6%	1.0%
Qatar	1415	1630	1824	1928	1991	1975	1933	1938	1882	1900	<b>1883</b>	-0.9%	2.9%	2.0%
Saudi Arabia	9709	9865	11079	11622	11393	11519	11998	12406	11892	12261	<b>11832</b>	-3.5%	1.4%	12.4%
Syria	401	385	353	171	59	33	27	25	25	24	<b>24</b>	-2.2%	-24.6%	♦
United Arab Emirates	2795	2937	3300	3425	3566	3603	3898	4038	3910	3912	<b>3998</b>	2.2%	2.3%	4.2%
Yemen	308	306	220	178	197	153	63	43	71	83	<b>98</b>	18.1%	-12.5%	0.1%
Other Middle East	192	192	201	184	209	214	213	214	208	207	<b>214</b>	3.7%	0.7%	0.2%
<b>Total Middle East</b>	<b>24866</b>	<b>25634</b>	<b>28007</b>	<b>28487</b>	<b>28202</b>	<b>28499</b>	<b>30021</b>	<b>31819</b>	<b>31512</b>	<b>31848</b>	<b>30329</b>	<b>-4.8%</b>	<b>1.8%</b>	<b>31.9%</b>
Algeria	1775	1689	1642	1537	1485	1589	1558	1577	1540	1511	<b>1486</b>	-1.6%	-2.5%	1.6%
Angola	1754	1812	1670	1734	1738	1701	1796	1745	1671	1519	<b>1417</b>	-6.7%	-2.1%	1.5%
Chad	118	122	114	101	91	89	111	117	98	116	<b>127</b>	9.8%	-0.9%	0.1%
Republic of Congo	276	314	301	280	243	253	234	232	270	330	<b>339</b>	2.6%	3.4%	0.4%
Egypt	730	725	714	715	710	714	726	691	660	699	<b>686</b>	-1.9%	-0.2%	0.7%
Equatorial Guinea	332	306	301	320	282	284	260	223	195	190	<b>180</b>	-5.3%	-6.4%	0.2%
Gabon	241	233	236	221	213	211	214	221	210	193	<b>218</b>	12.7%	-2.1%	0.2%
Libya	1739	1799	516	1539	1048	518	437	412	929	1165	<b>1227</b>	5.3%	-4.6%	1.3%
Nigeria	2211	2533	2461	2412	2279	2276	2201	1900	1969	2007	<b>2109</b>	5.1%	-0.8%	2.2%
South Sudan	n/a	n/a	n/a	31	100	155	148	117	122	128	<b>139</b>	8.7%	n/a	0.1%
Sudan	475	462	291	103	118	120	109	104	95	100	<b>102</b>	2.2%	-14.1%	0.1%
Tunisia	91	83	77	82	76	71	64	60	48	50	<b>50</b>	-	-6.3%	0.1%
Other Africa	181	149	198	196	225	234	273	255	300	300	<b>317</b>	5.8%	5.0%	0.3%
<b>Total Africa</b>	<b>9923</b>	<b>10227</b>	<b>8520</b>	<b>9270</b>	<b>8607</b>	<b>8216</b>	<b>8129</b>	<b>7653</b>	<b>8109</b>	<b>8308</b>	<b>8399</b>	<b>1.1%</b>	<b>-2.1%</b>	<b>8.8%</b>
Australia	507	548	483	479	407	436	384	361	348	356	<b>490</b>	37.9%	-4.0%	0.5%
Brunei	168	172	165	159	135	126	127	121	113	112	<b>121</b>	8.8%	-4.4%	0.1%
China	3805	4077	4074	4155	4216	4246	4309	3999	3846	3798	<b>3836</b>	1.0%	♦	4.0%
India	838	901	937	926	926	905	893	874	885	869	<b>826</b>	-4.9%	0.6%	0.9%
Indonesia	994	1003	952	917	883	847	838	876	838	808	<b>781</b>	-3.4%	-2.2%	0.8%
Malaysia	688	733	659	663	627	649	696	726	718	707	<b>651</b>	-8.0%	-0.3%	0.7%
Thailand	385	393	429	471	466	464	481	489	486	478	<b>477</b>	-0.1%	2.6%	0.5%
Vietnam	340	312	316	347	346	325	352	317	284	257	<b>236</b>	-7.9%	-1.9%	0.2%
Other Asia Pacific	331	318	302	291	274	296	298	281	273	233	<b>230</b>	-1.3%	-3.7%	0.2%
<b>Total Asia Pacific</b>	<b>8057</b>	<b>8458</b>	<b>8318</b>	<b>8407</b>	<b>8281</b>	<b>8295</b>	<b>8377</b>	<b>8043</b>	<b>7792</b>	<b>7617</b>	<b>7650</b>	<b>0.4%</b>	<b>-0.6%</b>	<b>8.0%</b>
<b>Total World</b>	<b>81578</b>	<b>83409</b>	<b>84157</b>	<b>86366</b>	<b>86794</b>	<b>88910</b>	<b>91733</b>	<b>92072</b>	<b>92798</b>	<b>95254</b>	<b>95192</b>	<b>-0.1%</b>	<b>1.4%</b>	<b>100.0%</b>
of which: OECD	18570	18671	18713	19630	20780	22749	23781	23310	24193	26682	<b>28381</b>	6.4%	3.7%	29.8%
Non-OECD	63008	64738	65444	66736	66014	66161	67951	68762	68604	68572	<b>66811</b>	-2.6%	0.6%	70.2%
OPEC	33590	34272	34905	36358	35300	35262	36677	37799	37769	37563	<b>35566</b>	-5.3%	0.5%	37.4%
Non-OPEC	47988	49138	49252	50008	51494	53648	55056	54273	55029	57691	<b>59626</b>	3.4%	2.0%	62.6%
European Union	2124	1984	1714	1519	1425	1406	1499	1485	1470	1540	<b>1531</b>	-0.6%	-3.8%	1.6%

Source: includes data from FGE.

\*Includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids – ethane, LPG and naphtha separated from the production of natural gas).

Excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. This also excludes liquid fuel adjustment factors such as refinery processing gain.

Excludes oil shales/kerogen extracted in solid form.

♦Less than 0.05%.

n/a not available.

**Note: Annual changes and shares of total are calculated using thousand barrels daily figures.**

## Oil: Production in million tonnes\*

Million tonnes	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Growth rate per annum		Share 2019	
											2019	2019		2008-18
Canada	158.4	165.7	175.1	187.8	200.6	215.8	223.6	226.7	245.8	268.3	<b>274.9</b>	2.5%	5.4%	6.1%
Mexico	146.7	145.6	144.5	143.9	141.8	137.1	127.5	121.4	109.5	102.3	<b>94.9</b>	-7.2%	-4.2%	2.1%
US	322.6	333.1	346.0	395.0	448.5	524.4	567.0	542.4	573.9	671.6	<b>746.7</b>	11.2%	8.3%	16.7%
<b>Total North America</b>	<b>627.7</b>	<b>644.5</b>	<b>665.7</b>	<b>726.7</b>	<b>790.9</b>	<b>877.3</b>	<b>918.2</b>	<b>890.5</b>	<b>929.2</b>	<b>1042.2</b>	<b>1116.5</b>	<b>7.1%</b>	<b>5.4%</b>	<b>24.9%</b>
Argentina	34.0	33.3	31.2	30.8	30.2	29.8	30.0	28.6	27.2	27.5	<b>28.8</b>	4.7%	-3.1%	0.6%
Brazil	105.7	111.3	113.8	111.9	109.7	122.5	132.2	136.2	142.3	140.2	<b>150.8</b>	7.5%	3.6%	3.4%
Colombia	35.3	41.4	48.2	49.9	53.2	52.2	53.0	46.8	45.0	45.6	<b>46.7</b>	2.4%	3.9%	1.0%
Ecuador	26.1	26.1	26.8	27.1	28.2	29.8	29.1	29.5	28.5	27.7	<b>28.5</b>	2.7%	0.2%	0.6%
Peru	6.9	7.3	7.0	6.9	7.3	7.5	6.5	5.8	5.7	6.4	<b>6.1</b>	-5.3%	1.2%	0.1%
Trinidad & Tobago	6.8	6.2	5.9	5.2	5.1	5.1	4.8	4.3	4.4	3.9	<b>3.7</b>	-6.2%	-5.5%	0.1%
Venezuela	155.9	145.8	141.5	139.3	137.8	138.5	135.4	121.0	107.6	75.6	<b>46.6</b>	-38.3%	-7.6%	1.0%
Other S. & Cent. America	6.9	7.3	7.3	7.4	7.6	7.8	7.3	6.8	6.7	6.4	<b>5.9</b>	-6.9%	-1.3%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>377.6</b>	<b>378.7</b>	<b>381.7</b>	<b>378.6</b>	<b>379.1</b>	<b>393.1</b>	<b>398.4</b>	<b>379.1</b>	<b>367.4</b>	<b>333.4</b>	<b>317.0</b>	<b>-4.9%</b>	<b>-1.3%</b>	<b>7.1%</b>
Denmark	12.9	12.2	10.9	10.0	8.7	8.1	7.7	6.9	6.7	5.6	<b>5.0</b>	-11.2%	-8.7%	0.1%
Italy	4.6	5.1	5.3	5.4	5.5	5.8	5.5	3.8	4.1	4.7	<b>4.3</b>	-8.7%	-1.1%	0.1%
Norway	108.2	98.4	93.2	86.9	82.8	84.8	87.5	90.1	88.7	83.1	<b>78.4</b>	-5.7%	-3.1%	1.7%
Romania	4.5	4.3	4.2	4.0	4.1	4.1	4.0	3.8	3.6	3.6	<b>3.6</b>	-0.3%	-2.7%	0.1%
United Kingdom	68.2	63.0	52.0	44.6	40.6	39.9	45.3	47.4	46.6	50.9	<b>51.8</b>	1.8%	-3.4%	1.2%
Other Europe	17.6	16.9	16.7	16.7	17.1	16.9	16.5	15.6	15.0	15.2	<b>14.8</b>	-3.0%	-2.0%	0.3%
<b>Total Europe</b>	<b>215.9</b>	<b>199.8</b>	<b>182.3</b>	<b>167.5</b>	<b>158.8</b>	<b>159.6</b>	<b>166.4</b>	<b>167.7</b>	<b>164.9</b>	<b>163.2</b>	<b>157.8</b>	<b>-3.3%</b>	<b>-3.3%</b>	<b>3.5%</b>
Azerbaijan	50.9	51.3	46.1	43.7	43.8	42.5	42.0	41.4	39.1	39.2	<b>38.1</b>	-2.7%	-1.4%	0.9%
Kazakhstan	76.5	79.7	80.1	79.3	82.3	81.1	80.2	78.6	87.0	91.2	<b>91.4</b>	0.2%	2.6%	2.0%
Russian Federation	501.4	512.3	519.5	526.7	532.2	535.1	541.8	555.9	554.3	563.3	<b>568.1</b>	0.8%	1.3%	12.7%
Turkmenistan	10.9	11.1	11.5	12.0	12.5	12.9	13.2	13.2	13.1	12.6	<b>12.5</b>	-0.5%	1.7%	0.3%
Uzbekistan	4.5	3.6	3.6	3.2	2.9	2.8	2.7	2.6	2.8	2.9	<b>2.8</b>	-3.3%	-4.9%	0.1%
Other CIS	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	<b>1.9</b>	2.9%	0.3%	♦
<b>Total CIS</b>	<b>645.9</b>	<b>659.9</b>	<b>662.5</b>	<b>666.7</b>	<b>675.5</b>	<b>676.1</b>	<b>681.7</b>	<b>693.6</b>	<b>698.1</b>	<b>711.1</b>	<b>714.9</b>	<b>0.5%</b>	<b>1.3%</b>	<b>15.9%</b>
Iran	207.2	212.0	212.5	180.5	169.7	174.0	180.2	216.1	235.5	224.7	<b>160.8</b>	-28.4%	0.4%	3.6%
Iraq	119.7	120.8	135.8	151.3	152.0	158.8	195.6	217.6	222.4	227.0	<b>234.2</b>	3.2%	6.6%	5.2%
Kuwait	121.0	123.4	140.9	154.0	151.4	150.2	148.2	152.7	145.0	146.8	<b>144.0</b>	-1.9%	0.8%	3.2%
Oman	39.7	42.2	43.2	45.0	46.1	46.2	48.0	49.3	47.6	47.8	<b>47.3</b>	-1.0%	2.6%	1.1%
Qatar	62.4	70.9	77.7	82.2	84.2	83.5	81.2	81.6	79.1	79.5	<b>78.5</b>	-1.2%	2.1%	1.8%
Saudi Arabia	459.0	463.3	522.7	549.2	538.4	543.8	568.0	586.7	559.3	576.8	<b>556.6</b>	-3.5%	1.2%	12.4%
Syria	19.3	18.5	16.9	8.1	2.7	1.5	1.2	1.1	1.1	1.1	<b>1.0</b>	-2.5%	-25.4%	♦
United Arab Emirates	129.3	135.2	150.5	156.2	162.8	163.4	176.1	182.4	176.2	176.7	<b>180.2</b>	2.0%	2.0%	4.0%
Yemen	14.4	14.3	10.2	8.1	9.0	6.9	2.6	1.6	3.0	3.5	<b>4.2</b>	20.5%	-13.4%	0.1%
Other Middle East	9.4	9.4	9.9	9.0	10.3	10.5	10.5	10.6	10.3	10.2	<b>10.4</b>	2.7%	0.7%	0.2%
<b>Total Middle East</b>	<b>1181.5</b>	<b>1210.1</b>	<b>1320.4</b>	<b>1343.7</b>	<b>1326.6</b>	<b>1338.9</b>	<b>1411.8</b>	<b>1499.8</b>	<b>1479.3</b>	<b>1494.1</b>	<b>1417.4</b>	<b>-5.1%</b>	<b>1.6%</b>	<b>31.6%</b>
Algeria	77.2	73.8	71.7	67.2	64.8	68.8	67.2	68.4	66.6	65.3	<b>64.3</b>	-1.6%	-2.6%	1.4%
Angola	86.0	88.9	82.0	85.3	85.2	83.3	88.2	85.8	81.6	74.1	<b>69.1</b>	-6.8%	-2.2%	1.5%
Chad	6.2	6.4	6.0	5.3	4.8	4.7	5.8	6.1	5.2	6.1	<b>6.7</b>	9.8%	-1.0%	0.1%
Republic of Congo	14.1	16.0	15.3	14.2	12.3	12.9	11.9	11.9	13.8	16.9	<b>17.4</b>	2.6%	3.3%	0.4%
Egypt	35.3	35.0	34.6	34.7	34.4	35.1	35.4	33.8	32.2	34.2	<b>33.6</b>	-1.9%	-0.1%	0.7%
Equatorial Guinea	15.6	14.5	14.2	15.2	13.2	13.3	12.1	10.4	9.0	8.7	<b>8.2</b>	-5.8%	-6.8%	0.2%
Gabon	12.0	11.6	11.8	11.1	10.7	10.5	10.7	11.0	10.5	9.7	<b>10.9</b>	12.7%	-2.1%	0.2%
Libya	81.7	84.6	24.3	72.6	49.4	24.4	20.5	19.3	43.8	54.9	<b>57.8</b>	5.2%	-4.6%	1.3%
Nigeria	106.9	122.1	118.4	116.4	109.5	109.3	105.7	91.3	94.5	96.4	<b>101.4</b>	5.3%	-0.9%	2.3%
South Sudan	n/a	n/a	n/a	1.5	4.9	7.7	7.3	5.8	6.0	6.3	<b>6.8</b>	8.7%	n/a	0.2%
Sudan	23.4	22.8	14.3	5.1	5.8	5.9	5.4	5.1	4.7	4.9	<b>5.0</b>	2.2%	-14.1%	0.1%
Tunisia	4.2	3.9	3.6	3.8	3.5	3.3	2.9	2.8	2.2	2.3	<b>2.3</b>	-	-6.4%	0.1%
Other Africa	9.1	7.4	9.8	9.8	11.2	11.6	13.5	12.7	14.8	14.8	<b>15.6</b>	5.8%	4.8%	0.3%
<b>Total Africa</b>	<b>471.8</b>	<b>487.0</b>	<b>406.0</b>	<b>442.2</b>	<b>409.5</b>	<b>390.6</b>	<b>386.7</b>	<b>364.5</b>	<b>384.8</b>	<b>394.5</b>	<b>399.1</b>	<b>1.1%</b>	<b>-2.2%</b>	<b>8.9%</b>
Australia	22.4	24.5	21.5	21.4	17.8	19.1	17.0	15.6	14.9	15.2	<b>20.6</b>	36.0%	-4.5%	0.5%
Brunei	8.2	8.4	8.1	7.8	6.6	6.2	6.2	5.9	5.5	5.4	<b>5.9</b>	9.0%	-4.5%	0.1%
China	189.5	203.0	202.9	207.5	210.0	211.4	214.6	199.7	191.5	189.1	<b>191.0</b>	1.0%	-0.1%	4.3%
India	38.0	41.3	42.9	42.5	42.5	41.6	41.2	40.2	40.4	39.5	<b>37.5</b>	-5.2%	0.5%	0.8%
Indonesia	48.4	48.6	46.3	44.6	42.7	41.0	40.6	42.8	41.0	39.5	<b>38.2</b>	-3.4%	-2.2%	0.9%
Malaysia	31.8	33.1	29.7	30.1	28.7	29.8	32.2	33.3	32.9	32.4	<b>29.8</b>	-7.8%	-0.4%	0.7%
Thailand	15.0	15.2	15.8	17.3	17.1	16.9	17.6	18.1	17.6	17.1	<b>17.0</b>	-0.2%	1.7%	0.4%
Vietnam	16.6	15.3	15.4	17.0	16.9	15.9	17.2	15.5	13.9	12.4	<b>11.4</b>	-7.8%	-2.0%	0.3%
Other Asia Pacific	14.5	14.0	13.2	12.8	12.1	13.3	13.4	12.6	12.2	10.5	<b>10.3</b>	-1.6%	-3.5%	0.2%
<b>Total Asia Pacific</b>	<b>384.4</b>	<b>403.4</b>	<b>395.8</b>	<b>400.9</b>	<b>394.4</b>	<b>395.1</b>	<b>399.8</b>	<b>383.7</b>	<b>369.8</b>	<b>361.0</b>	<b>361.8</b>	<b>0.2%</b>	<b>-0.7%</b>	<b>8.1%</b>
<b>Total World</b>	<b>3904.8</b>	<b>3983.4</b>	<b>4014.4</b>	<b>4126.3</b>	<b>4134.9</b>	<b>4230.8</b>	<b>4362.9</b>	<b>4378.9</b>	<b>4393.5</b>	<b>4499.5</b>	<b>4484.5</b>	<b>-0.3%</b>	<b>1.2%</b>	<b>100.0%</b>
of which: OECD	859.1	862.3	862.7	908.6	960.2	1049.2	1095.0	1067.4	1102.9	1213.9	<b>1288.3</b>	6.1%	3.5%	28.7%
Non-OECD	3045.7	3121.0	3151.7	3217.6	3174.7	3181.5	3267.9	3311.4	3290.6	3285.6	<b>3196.2</b>	-2.7%	0.4%	71.3%
OPEC	1611.9	1638.2	1668.5	1739.7	1685.4	1681.1	1749.0	1804.3	1794.2	1781.4	<b>1680.0</b>	-5.7%	0.3%	37.5%
Non-OPEC	2292.8	2345.2	2345.9	2386.6	2449.5	2549.7	2613.9	2574.6	2599.3	2718.1	<b>2804.5</b>	3.2%	1.8%	62.5%
European Union	99.9	93.4	81.2	72.5	68.0	66.9	71.4	70.5	69.3	72.8	<b>72.0</b>	-1.1%	-3.7%	1.6%

Source: includes data from FGE.

\*Includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids – ethane, LPG and naphtha separated from the production of natural gas).

Excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. This also excludes liquid fuel adjustment factors such as refinery processing gain.

Excludes oil shales/kerogen extracted in solid form.

♦ Less than 0.05%.

n/a not available.

Note: Annual changes and shares of total are calculated using million tonnes figures.

## Oil: Crude oil and condensate production in thousands of barrels per day\*

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	2705	2849	3021	3250	3486	3758	3863	3868	4216	4596	<b>4688</b>	2.0%	5.4%	5.6%
Mexico	2601	2577	2553	2548	2522	2429	2267	2154	1948	1833	<b>1701</b>	-7.2%	-4.1%	2.0%
US	5357	5484	5667	6518	7493	8787	9439	8839	9352	10990	<b>12232</b>	11.3%	8.2%	14.7%
<b>Total North America</b>	<b>10663</b>	<b>10910</b>	<b>11241</b>	<b>12317</b>	<b>13501</b>	<b>14973</b>	<b>15569</b>	<b>14861</b>	<b>15516</b>	<b>17420</b>	<b>18620</b>	<b>6.9%</b>	<b>5.2%</b>	<b>22.4%</b>
Argentina	604	589	553	549	540	532	532	511	480	489	<b>509</b>	3.9%	-3.2%	0.6%
Brazil	1950	2055	2105	2061	2024	2255	2437	2510	2622	2587	<b>2788</b>	7.8%	3.6%	3.4%
Colombia	671	786	915	944	1010	990	1006	886	854	865	<b>886</b>	2.4%	3.9%	1.1%
Ecuador	486	486	500	504	526	557	543	548	531	517	<b>531</b>	2.7%	0.2%	0.6%
Peru	117	123	117	112	118	121	104	91	88	98	<b>95</b>	-2.8%	♦	0.1%
Trinidad & Tobago	107	98	92	82	81	81	79	71	72	63	<b>59</b>	-7.3%	-5.7%	0.1%
Venezuela	2879	2695	2623	2580	2564	2578	2514	2242	1992	1386	<b>839</b>	-39.5%	-7.6%	1.0%
Other S. & Cent. America	121	125	126	131	135	140	133	122	118	113	<b>105</b>	-6.9%	-1.3%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>6935</b>	<b>6957</b>	<b>7031</b>	<b>6963</b>	<b>6998</b>	<b>7255</b>	<b>7347</b>	<b>6982</b>	<b>6757</b>	<b>6119</b>	<b>5811</b>	<b>-5.0%</b>	<b>-1.3%</b>	<b>7.0%</b>
Denmark	265	249	225	204	178	167	158	142	138	116	<b>103</b>	-11.2%	-8.7%	0.1%
Italy	95	106	110	112	114	120	113	78	86	97	<b>89</b>	-8.7%	-1.1%	0.1%
Norway	2058	1871	1758	1612	1532	1562	1608	1647	1620	1516	<b>1437</b>	-5.2%	-3.5%	1.7%
Romania	90	86	84	79	83	82	80	76	73	72	<b>71</b>	-1.3%	-2.6%	0.1%
United Kingdom	1332	1234	1028	885	810	791	903	933	913	1002	<b>1019</b>	1.6%	-3.2%	1.2%
Other Europe	331	319	316	317	327	324	317	297	284	289	<b>282</b>	-2.5%	-1.9%	0.3%
<b>Total Europe</b>	<b>4171</b>	<b>3865</b>	<b>3521</b>	<b>3209</b>	<b>3046</b>	<b>3045</b>	<b>3180</b>	<b>3173</b>	<b>3114</b>	<b>3092</b>	<b>3000</b>	<b>-3.0%</b>	<b>-3.5%</b>	<b>3.6%</b>
Azerbaijan	1014	1023	919	872	877	849	840	826	781	783	<b>762</b>	-2.8%	-1.3%	0.9%
Kazakhstan	1609	1676	1684	1662	1720	1701	1672	1637	1813	1900	<b>1903</b>	0.1%	2.5%	2.3%
Russian Federation	9927	10150	10287	10395	10528	10595	10758	11003	11017	11201	<b>11292</b>	0.8%	1.4%	13.6%
Turkmenistan	211	216	224	231	239	246	254	250	248	236	<b>228</b>	-3.5%	1.4%	0.3%
Uzbekistan	95	78	77	68	63	61	59	58	61	64	<b>62</b>	-3.2%	-4.5%	0.1%
Other CIS	36	36	36	35	35	35	36	36	37	38	<b>39</b>	2.9%	0.3%	♦
<b>Total CIS</b>	<b>12893</b>	<b>13179</b>	<b>13226</b>	<b>13263</b>	<b>13463</b>	<b>13488</b>	<b>13619</b>	<b>13811</b>	<b>13957</b>	<b>14222</b>	<b>14284</b>	<b>0.4%</b>	<b>1.3%</b>	<b>17.2%</b>
Iran	4015	4068	4048	3398	3192	3273	3392	4090	4470	4260	<b>2980</b>	-30.0%	0.2%	3.6%
Iraq	2405	2424	2728	3037	3058	3198	3945	4375	4473	4568	<b>4712</b>	3.2%	6.7%	5.7%
Kuwait	2278	2307	2645	2890	2847	2830	2782	2860	2704	2737	<b>2678</b>	-2.1%	0.6%	3.2%
Oman	813	865	885	918	942	943	981	1004	971	978	<b>971</b>	-0.8%	2.6%	1.2%
Qatar	1151	1307	1399	1491	1520	1508	1463	1465	1432	1427	<b>1405</b>	-1.6%	1.7%	1.7%
Saudi Arabia	8411	8423	9566	9987	9875	9941	10420	10688	10175	10533	<b>10145</b>	-3.7%	1.1%	12.2%
Syria	366	350	319	146	45	23	19	17	17	16	<b>16</b>	-3.2%	-27.0%	♦
United Arab Emirates	2495	2603	2853	2946	3084	3063	3284	3384	3279	3308	<b>3360</b>	1.6%	1.6%	4.0%
Yemen	286	284	197	154	173	128	38	16	44	55	<b>70</b>	27.2%	-15.4%	0.1%
Other Middle East	182	182	191	173	199	204	203	204	199	196	<b>196</b>	♦	0.7%	0.2%
<b>Total Middle East</b>	<b>22402</b>	<b>22813</b>	<b>24831</b>	<b>25140</b>	<b>24933</b>	<b>25113</b>	<b>26527</b>	<b>28104</b>	<b>27763</b>	<b>28078</b>	<b>26532</b>	<b>-5.5%</b>	<b>1.5%</b>	<b>31.9%</b>
Algeria	1517	1461	1416	1320	1275	1329	1290	1316	1287	1259	<b>1239</b>	-1.6%	-2.6%	1.5%
Angola	1734	1793	1656	1714	1716	1672	1780	1722	1632	1479	<b>1377</b>	-6.9%	-2.2%	1.7%
Chad	118	122	114	101	91	89	111	117	98	116	<b>127</b>	9.8%	-0.9%	0.2%
Republic of Congo	269	307	292	268	234	245	227	225	263	323	<b>332</b>	2.6%	3.3%	0.4%
Egypt	665	663	649	649	643	667	662	631	603	644	<b>633</b>	-1.7%	-0.1%	0.8%
Equatorial Guinea	310	286	280	299	261	266	242	204	174	169	<b>159</b>	-6.0%	-7.0%	0.2%
Gabon	241	233	236	221	213	211	214	221	210	193	<b>218</b>	12.7%	-2.1%	0.3%
Libya	1687	1748	508	1499	1025	510	422	397	909	1144	<b>1200</b>	4.9%	-4.5%	1.4%
Nigeria	2138	2455	2373	2330	2193	2188	2119	1822	1890	1922	<b>2021</b>	5.2%	-0.9%	2.4%
South Sudan	n/a	n/a	n/a	31	100	155	148	117	122	128	<b>139</b>	8.7%	n/a	0.2%
Sudan	475	462	291	103	118	120	109	104	95	100	<b>102</b>	2.2%	-14.1%	0.1%
Tunisia	82	79	70	70	64	59	54	51	43	42	<b>42</b>	-	-7.1%	0.1%
Other Africa	181	149	198	196	225	234	273	255	300	299	<b>316</b>	5.7%	5.0%	0.4%
<b>Total Africa</b>	<b>9418</b>	<b>9759</b>	<b>8083</b>	<b>8802</b>	<b>8158</b>	<b>7745</b>	<b>7649</b>	<b>7180</b>	<b>7626</b>	<b>7818</b>	<b>7905</b>	<b>1.1%</b>	<b>-2.2%</b>	<b>9.5%</b>
Australia	423	471	411	405	335	353	322	292	284	295	<b>400</b>	35.8%	-4.3%	0.5%
Brunei	155	159	153	146	122	114	115	109	101	100	<b>110</b>	10.1%	-4.7%	0.1%
China	3805	4077	4074	4155	4216	4246	4309	3999	3846	3798	<b>3836</b>	1.0%	♦	4.6%
India	690	762	793	786	789	778	771	744	744	719	<b>677</b>	-5.9%	0.2%	0.8%
Indonesia	949	945	902	859	825	789	786	831	801	772	<b>745</b>	-3.5%	-2.3%	0.9%
Malaysia	659	653	583	598	588	610	662	667	660	653	<b>604</b>	-7.4%	-0.5%	0.7%
Thailand	238	242	224	239	241	233	248	258	240	228	<b>228</b>	♦	♦	0.3%
Vietnam	332	304	308	339	337	315	342	308	275	243	<b>225</b>	-7.7%	-2.1%	0.3%
Other Asia Pacific	281	270	256	246	237	261	265	250	241	208	<b>204</b>	-1.7%	-3.3%	0.2%
<b>Total Asia Pacific</b>	<b>7531</b>	<b>7883</b>	<b>7705</b>	<b>7773</b>	<b>7690</b>	<b>7699</b>	<b>7820</b>	<b>7457</b>	<b>7192</b>	<b>7015</b>	<b>7029</b>	<b>0.2%</b>	<b>-0.8%</b>	<b>8.5%</b>
<b>Total World</b>	<b>74013</b>	<b>75366</b>	<b>75638</b>	<b>77467</b>	<b>77789</b>	<b>79318</b>	<b>81711</b>	<b>81567</b>	<b>81926</b>	<b>83764</b>	<b>83182</b>	<b>-0.7%</b>	<b>1.0%</b>	<b>100.0%</b>
of which: OECD	15119	15114	15035	15789	16730	18234	18937	18201	18793	20677	<b>21891</b>	5.9%	3.1%	26.3%
Non-OECD	58894	60253	60602	61678	61059	61084	62773	63366	63133	63087	<b>61291</b>	-2.8%	0.4%	73.7%
OPEC	30866	31290	31725	32993	32063	31861	33174	34093	33990	33798	<b>31790</b>	-5.9%	0.2%	38.2%
Non-OPEC	43147	44076	43912	44474	45726	47457	48537	47474	47936	49966	<b>51392</b>	2.9%	1.6%	61.8%
European Union	1960	1839	1609	1441	1356	1331	1426	1390	1364	1438	<b>1421</b>	-1.2%	-3.6%	1.7%

Source: includes data from FGE.

\*Includes crude oil, shale/tight oil, oil sands, lease condensate or gas condensates that require further refining. Excludes liquid fuels from other sources such as biomass and synthetic derivatives of coal and natural gas.

♦ Less than 0.05%.

n/a not available.

Note: Annual changes and shares of total are calculated using thousand barrels daily figures.



## Oil: Natural gas liquids production in thousands of barrels per day\*

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	626	608	615	610	642	661	709	787	821	904	<b>963</b>	6.5%	3.7%	8.0%
Mexico	377	382	388	363	353	355	320	302	276	235	<b>217</b>	-7.5%	-4.5%	1.8%
US	1910	2074	2216	2408	2606	3015	3342	3509	3783	4369	<b>4813</b>	10.2%	9.4%	40.1%
<b>Total North America</b>	<b>2913</b>	<b>3064</b>	<b>3219</b>	<b>3381</b>	<b>3600</b>	<b>4031</b>	<b>4371</b>	<b>4599</b>	<b>4880</b>	<b>5509</b>	<b>5993</b>	<b>8.8%</b>	<b>7.1%</b>	<b>49.9%</b>
Argentina	126	123	114	107	104	105	114	99	110	102	<b>112</b>	9.8%	-1.9%	0.9%
Brazil	69	70	68	70	72	87	88	81	99	92	<b>89</b>	-3.8%	2.2%	0.7%
Colombia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Ecuador	2	2	1	1	1	-	-	-	-	-	-	n/a	-100.0%	-
Peru	38	42	42	45	54	54	49	50	49	56	<b>47</b>	-15.1%	8.5%	0.4%
Trinidad & Tobago	44	47	44	35	34	33	30	25	27	24	<b>23</b>	-1.9%	-3.7%	0.2%
Venezuela	159	147	132	124	116	114	117	105	104	88	<b>80</b>	-10.0%	-6.0%	0.7%
Other S. & Cent. America	15	19	19	16	17	14	13	12	15	14	<b>13</b>	-8.7%	-0.3%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>453</b>	<b>451</b>	<b>419</b>	<b>399</b>	<b>398</b>	<b>407</b>	<b>411</b>	<b>373</b>	<b>404</b>	<b>376</b>	<b>363</b>	<b>-3.3%</b>	<b>-1.5%</b>	<b>3.0%</b>
Denmark	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Italy	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Norway	285	261	275	300	300	318	332	343	345	329	<b>293</b>	-10.9%	1.5%	2.4%
Romania	4	4	5	4	3	3	3	4	3	3	<b>4</b>	39.6%	-6.4%	♦
United Kingdom	142	125	86	62	55	62	60	82	92	90	<b>99</b>	10.3%	-5.9%	0.8%
Other Europe	25	23	20	19	17	15	14	16	19	19	<b>17</b>	-11.7%	-3.6%	0.1%
<b>Total Europe</b>	<b>456</b>	<b>413</b>	<b>385</b>	<b>384</b>	<b>374</b>	<b>399</b>	<b>410</b>	<b>445</b>	<b>459</b>	<b>441</b>	<b>413</b>	<b>-6.3%</b>	<b>-0.8%</b>	<b>3.4%</b>
Azerbaijan	12	13	13	10	11	12	11	11	11	12	<b>17</b>	37.8%	-5.3%	0.1%
Kazakhstan	†	†	†	2	17	9	23	18	25	27	<b>28</b>	4.5%	31.4%	0.2%
Russian Federation	225	228	247	260	278	265	249	266	238	237	<b>248</b>	4.4%	2.8%	2.1%
Turkmenistan	10	10	10	14	17	17	17	20	23	25	<b>36</b>	44.8%	9.3%	0.3%
Uzbekistan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Other CIS	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a	-
<b>Total CIS</b>	<b>248</b>	<b>252</b>	<b>271</b>	<b>286</b>	<b>323</b>	<b>303</b>	<b>299</b>	<b>315</b>	<b>297</b>	<b>302</b>	<b>330</b>	<b>9.1%</b>	<b>3.5%</b>	<b>2.7%</b>
Iran	270	352	404	412	418	441	461	488	537	541	<b>555</b>	2.6%	8.4%	4.6%
Iraq	41	45	45	42	45	40	41	48	64	64	<b>68</b>	5.3%	6.6%	0.6%
Kuwait	224	257	273	283	287	276	288	290	305	313	<b>318</b>	1.5%	3.7%	2.6%
Oman	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Qatar	264	323	426	437	471	466	470	473	450	473	<b>478</b>	1.1%	7.9%	4.0%
Saudi Arabia	1298	1442	1513	1635	1518	1577	1578	1718	1717	1728	<b>1687</b>	-2.4%	3.6%	14.0%
Syria	35	35	34	25	14	10	8	8	8	8	<b>8</b>	-0.1%	-13.7%	0.1%
United Arab Emirates	300	334	447	479	482	539	614	654	631	604	<b>638</b>	5.6%	7.5%	5.3%
Yemen	22	23	23	24	24	25	26	26	27	28	<b>28</b>	-	2.7%	0.2%
Other Middle East	10	10	11	10	10	10	10	10	10	11	<b>19</b>	69.0%	1.2%	0.2%
<b>Total Middle East</b>	<b>2464</b>	<b>2821</b>	<b>3175</b>	<b>3346</b>	<b>3269</b>	<b>3386</b>	<b>3494</b>	<b>3715</b>	<b>3749</b>	<b>3770</b>	<b>3797</b>	<b>0.7%</b>	<b>5.1%</b>	<b>31.6%</b>
Algeria	258	228	225	216	210	260	268	261	254	252	<b>247</b>	-1.7%	-2.0%	2.1%
Angola	20	19	14	20	22	30	16	23	39	40	<b>40</b>	-	6.4%	0.3%
Chad	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Republic of Congo	7	7	9	12	9	8	7	7	7	7	<b>7</b>	-	13.3%	0.1%
Egypt	65	61	65	66	67	47	64	60	57	55	<b>53</b>	-3.9%	-1.6%	0.4%
Equatorial Guinea	22	20	21	20	21	19	17	19	21	21	<b>21</b>	♦	0.3%	0.2%
Gabon	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Libya	51	50	8	40	22	8	15	15	20	21	<b>27</b>	27.7%	-10.9%	0.2%
Nigeria	73	78	88	82	86	88	82	78	80	85	<b>88</b>	4.0%	1.7%	0.7%
South Sudan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Sudan	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
Tunisia	9	4	7	13	12	12	10	9	5	8	<b>8</b>	-	♦	0.1%
Other Africa	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	<b>1</b>	54.0%	n/a	♦
<b>Total Africa</b>	<b>506</b>	<b>468</b>	<b>437</b>	<b>468</b>	<b>449</b>	<b>471</b>	<b>480</b>	<b>473</b>	<b>483</b>	<b>490</b>	<b>493</b>	<b>0.6%</b>	<b>-1.4%</b>	<b>4.1%</b>
Australia	84	77	71	73	72	83	62	69	64	61	<b>90</b>	47.7%	-2.9%	0.8%
Brunei	14	13	13	13	13	12	11	12	13	12	<b>12</b>	-2.2%	-1.7%	0.1%
China	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<b>n/a</b>	n/a	n/a	n/a
India	148	140	144	140	136	128	122	130	141	150	<b>150</b>	-0.3%	2.8%	1.2%
Indonesia	45	58	50	58	58	58	52	45	37	36	<b>36</b>	-0.3%	2.3%	0.3%
Malaysia	29	79	76	65	39	39	35	59	58	54	<b>46</b>	-15.3%	3.3%	0.4%
Thailand	147	152	205	232	225	231	233	231	247	249	<b>249</b>	-0.2%	5.8%	2.1%
Vietnam	8	8	8	8	10	10	9	10	9	13	<b>12</b>	-11.6%	5.0%	0.1%
Other Asia Pacific	51	48	46	45	38	36	33	31	32	25	<b>26</b>	1.4%	-6.8%	0.2%
<b>Total Asia Pacific</b>	<b>526</b>	<b>574</b>	<b>613</b>	<b>634</b>	<b>591</b>	<b>595</b>	<b>557</b>	<b>586</b>	<b>600</b>	<b>602</b>	<b>621</b>	<b>3.0%</b>	<b>2.3%</b>	<b>5.2%</b>
<b>Total World</b>	<b>7565</b>	<b>8043</b>	<b>8519</b>	<b>8899</b>	<b>9005</b>	<b>9592</b>	<b>10022</b>	<b>10505</b>	<b>10872</b>	<b>11490</b>	<b>12010</b>	<b>4.5%</b>	<b>4.7%</b>	<b>100.0%</b>
of which: OECD	3451	3557	3677	3841	4050	4514	4844	5109	5400	6006	<b>6490</b>	8.1%	6.0%	54.0%
Non-OECD	4114	4486	4842	5058	4955	5077	5178	5396	5471	5484	<b>5520</b>	0.7%	3.5%	46.0%
OPEC	2724	2982	3180	3365	3237	3401	3503	3706	3779	3765	<b>3776</b>	0.3%	3.6%	31.4%
Non-OPEC	4841	5061	5339	5534	5768	6191	6519	6799	7093	7725	<b>8235</b>	6.6%	5.3%	68.6%
European Union	163	144	104	78	69	75	73	95	106	102	<b>110</b>	8.0%	-6.0%	0.9%

\*Includes ethane, LPG and naphtha separated from the production of natural gas. Excludes condensates.

†Less than 0.05%.

♦Less than 0.05%.

n/a not available.

Note: Annual changes and shares of total are calculated using thousand barrels daily figures.

Source: includes data from FGE, ICIS.

## Oil: Total liquids consumption in thousands of barrels per day\*

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	2209	2359	2437	2376	2398	2443	2402	2449	2450	2503	<b>2464</b>	-1.6%	0.8%	2.4%
Mexico	2024	2043	2068	2086	2038	1965	1945	1956	1890	1828	<b>1740</b>	-4.8%	-1.3%	1.7%
US	18771	19180	18882	18490	18961	19106	19531	19687	19958	20492	<b>20466</b>	-0.1%	0.5%	20.3%
<b>Total North America</b>	<b>23005</b>	<b>23582</b>	<b>23387</b>	<b>22953</b>	<b>23397</b>	<b>23513</b>	<b>23878</b>	<b>24092</b>	<b>24297</b>	<b>24823</b>	<b>24670</b>	<b>-0.6%</b>	<b>0.4%</b>	<b>24.4%</b>
Argentina	532	594	609	636	683	673	696	686	678	651	<b>639</b>	-1.7%	1.9%	0.6%
Brazil	2498	2714	2832	2884	3100	3210	3140	2960	3030	3010	<b>3098</b>	2.9%	2.0%	3.1%
Chile	383	343	371	376	362	353	355	377	364	374	<b>381</b>	1.9%	-0.4%	0.4%
Colombia	230	256	275	295	297	316	332	344	339	342	<b>348</b>	1.7%	3.2%	0.3%
Ecuador	191	220	226	233	247	260	254	240	237	255	<b>249</b>	-2.3%	3.1%	0.2%
Peru	182	191	220	215	228	225	247	259	258	267	<b>272</b>	2.0%	4.3%	0.3%
Trinidad & Tobago	44	45	42	40	45	41	45	47	44	42	<b>39</b>	-6.9%	-0.8%	♦
Venezuela	726	725	737	792	782	720	637	537	463	402	<b>356</b>	-11.6%	-5.6%	0.4%
Other S. & Cent. America	1168	1174	1186	1182	1166	1165	1232	1272	1283	1305	<b>1312</b>	0.5%	0.8%	1.3%
<b>Total S. &amp; Cent. America</b>	<b>5954</b>	<b>6262</b>	<b>6498</b>	<b>6653</b>	<b>6911</b>	<b>6964</b>	<b>6938</b>	<b>6723</b>	<b>6696</b>	<b>6648</b>	<b>6694</b>	<b>0.7%</b>	<b>1.1%</b>	<b>6.6%</b>
Austria	262	274	257	257	264	256	257	263	265	269	<b>275</b>	2.0%	-0.1%	0.3%
Belgium	671	700	657	639	659	658	675	684	696	714	<b>695</b>	-2.7%	-0.2%	0.7%
Czech Republic	204	194	201	198	190	202	196	182	217	219	<b>222</b>	1.2%	0.5%	0.2%
Finland	213	223	214	205	220	214	212	221	215	215	<b>201</b>	-6.5%	-0.4%	0.2%
France	1819	1760	1722	1670	1658	1609	1611	1596	1607	1605	<b>1602</b>	-0.2%	-1.6%	1.6%
Germany	2405	2441	2365	2352	2404	2344	2336	2374	2443	2331	<b>2352</b>	0.9%	-0.7%	2.3%
Greece	419	382	362	321	303	302	313	314	324	319	<b>332</b>	3.9%	-3.2%	0.3%
Hungary	153	146	155	143	142	159	168	166	177	189	<b>190</b>	0.4%	1.5%	0.2%
Italy	1561	1531	1474	1384	1274	1204	1257	1266	1279	1307	<b>1235</b>	-5.5%	-2.4%	1.2%
Netherlands	945	964	971	925	898	866	834	851	829	859	<b>843</b>	-1.8%	-1.3%	0.8%
Norway	222	233	227	225	229	217	223	217	223	231	<b>215</b>	-7.0%	0.6%	0.2%
Poland	566	593	591	570	537	538	558	605	662	685	<b>694</b>	1.4%	1.9%	0.7%
Portugal	274	272	256	231	241	241	246	240	249	239	<b>256</b>	6.9%	-2.0%	0.3%
Romania	195	184	191	191	174	187	191	202	213	219	<b>233</b>	6.2%	0.1%	0.2%
Spain	1457	1447	1383	1300	1203	1199	1243	1288	1300	1336	<b>1329</b>	-0.5%	-1.5%	1.3%
Sweden	327	329	311	310	308	306	304	321	323	308	<b>317</b>	2.7%	-1.0%	0.3%
Switzerland	260	242	234	238	249	224	227	216	222	215	<b>220</b>	2.3%	-1.7%	0.2%
Turkey	709	694	673	704	756	774	917	976	1025	991	<b>1009</b>	1.8%	3.8%	1.0%
Ukraine	282	267	278	267	257	221	194	205	210	208	<b>223</b>	7.2%	-3.6%	0.2%
United Kingdom	1650	1633	1600	1546	1532	1536	1578	1622	1635	1617	<b>1585</b>	-1.9%	-0.6%	1.6%
Other Europe	1231	1216	1189	1140	1124	1122	1168	1211	1260	1274	<b>1285</b>	0.8%	-0.3%	1.3%
<b>Total Europe</b>	<b>15826</b>	<b>15725</b>	<b>15310</b>	<b>14816</b>	<b>14624</b>	<b>14379</b>	<b>14709</b>	<b>15020</b>	<b>15372</b>	<b>15350</b>	<b>15311</b>	<b>-0.3%</b>	<b>-0.7%</b>	<b>15.2%</b>
Azerbaijan	73	72	89	92	101	99	100	98	99	104	<b>108</b>	4.1%	3.4%	0.1%
Belarus	182	150	172	211	144	163	139	136	137	148	<b>152</b>	2.7%	-0.8%	0.2%
Kazakhstan	200	211	243	245	260	262	295	305	317	340	<b>353</b>	3.8%	3.6%	0.3%
Russian Federation	2775	2878	3074	3119	3134	3298	3143	3219	3195	3282	<b>3317</b>	1.1%	1.4%	3.3%
Turkmenistan	106	118	125	129	137	143	145	143	144	149	<b>162</b>	8.7%	2.7%	0.2%
Uzbekistan	89	76	71	63	60	57	53	49	47	45	<b>44</b>	-3.3%	-6.9%	♦
Other CIS	64	63	65	75	78	76	78	86	82	91	<b>93</b>	2.0%	4.1%	0.1%
<b>Total CIS</b>	<b>3488</b>	<b>3567</b>	<b>3838</b>	<b>3935</b>	<b>3914</b>	<b>4098</b>	<b>3952</b>	<b>4036</b>	<b>4021</b>	<b>4158</b>	<b>4228</b>	<b>1.7%</b>	<b>1.5%</b>	<b>4.2%</b>
Iran	1920	1788	1823	1859	2020	1901	1713	1764	1808	1835	<b>2018</b>	10.0%	-0.5%	2.0%
Iraq	536	570	629	666	716	681	683	760	724	705	<b>716</b>	1.7%	3.9%	0.7%
Israel	233	241	255	295	223	214	227	231	255	250	<b>254</b>	1.7%	-0.2%	0.3%
Kuwait	455	478	453	499	517	455	471	482	440	434	<b>427</b>	-1.7%	0.7%	0.4%
Oman	119	135	146	157	178	185	184	187	243	284	<b>295</b>	4.0%	8.8%	0.3%
Qatar	173	191	246	257	287	294	332	347	312	325	<b>346</b>	6.6%	6.2%	0.3%
Saudi Arabia	2914	3206	3295	3460	3451	3764	3883	3875	3838	3769	<b>3788</b>	0.5%	3.7%	3.8%
United Arab Emirates	606	654	735	773	852	880	957	1028	1012	1057	<b>1042</b>	-1.4%	5.8%	1.0%
Other Middle East	776	724	712	676	624	619	537	516	524	515	<b>529</b>	2.6%	-4.3%	0.5%
<b>Total Middle East</b>	<b>7731</b>	<b>7987</b>	<b>8293</b>	<b>8642</b>	<b>8868</b>	<b>8993</b>	<b>8988</b>	<b>9191</b>	<b>9157</b>	<b>9174</b>	<b>9416</b>	<b>2.6%</b>	<b>2.2%</b>	<b>9.3%</b>
Algeria	327	327	349	370	387	401	425	412	407	417	<b>454</b>	8.8%	3.1%	0.4%
Egypt	725	766	720	747	756	806	834	857	804	757	<b>743</b>	-1.8%	1.0%	0.7%
Morocco	234	258	275	277	282	272	268	275	290	286	<b>294</b>	2.8%	2.2%	0.3%
South Africa	507	538	542	552	561	555	579	547	547	558	<b>571</b>	2.3%	0.9%	0.6%
Other Africa	1529	1599	1520	1630	1726	1739	1754	1804	1891	1969	<b>2036</b>	3.4%	3.0%	2.0%
<b>Total Africa</b>	<b>3322</b>	<b>3489</b>	<b>3405</b>	<b>3575</b>	<b>3712</b>	<b>3773</b>	<b>3860</b>	<b>3895</b>	<b>3939</b>	<b>3988</b>	<b>4098</b>	<b>2.8%</b>	<b>2.2%</b>	<b>4.1%</b>
Australia	950	959	1014	1040	1058	1065	1025	1026	1073	1098	<b>1088</b>	-0.8%	1.5%	1.1%
Bangladesh	72	81	104	110	108	120	127	138	156	178	<b>171</b>	-4.0%	8.7%	0.2%
China	8285	9435	9791	10230	10736	11221	11969	12317	12915	13453	<b>14127</b>	5.0%	5.4%	14.0%
China Hong Kong SAR	332	359	361	344	352	336	368	380	428	435	<b>409</b>	-6.0%	4.1%	0.4%
India	3299	3378	3544	3742	3783	3908	4234	4637	4864	5115	<b>5274</b>	3.1%	5.0%	5.2%
Indonesia	1321	1415	1595	1651	1680	1712	1574	1624	1704	1789	<b>1863</b>	4.1%	3.3%	1.8%
Japan	4390	4442	4442	4702	4516	4303	4151	4020	3986	3870	<b>3827</b>	-1.1%	-2.2%	3.8%
Malaysia	678	688	724	759	806	809	759	847	811	821	<b>838</b>	2.0%	2.0%	0.8%
New Zealand	150	150	154	152	153	156	163	166	174	175	<b>176</b>	0.5%	1.2%	0.2%
Pakistan	415	411	414	402	442	458	505	566	589	498	<b>446</b>	-10.5%	2.5%	0.4%
Philippines	300	313	298	309	326	347	397	427	459	464	<b>474</b>	2.0%	5.1%	0.5%
Singapore	1049	1157	1208	1202	1217	1259	1328	1372	1405	1431	<b>1404</b>	-1.8%	3.9%	1.4%
South Korea	2345	2378	2401	2466	2464	2463	2587	2781	2811	2796	<b>2775</b>	-0.8%	1.9%	2.7%
Sri Lanka	87	87	92	95	82	71	90	105	114	114	<b>123</b>	7.5%	3.3%	0.1%
Taiwan	1022	1043	950	950	981	1013	1021	1046	1038	1050	<b>998</b>	-4.9%	0.4%	1.0%
Thailand	1075	1121	1184	1248	1299	1309	1373	1409	1456	1486	<b>1515</b>	2.0%	3.9%	1.5%
Vietnam	305	332	361	371	398	409	452	470	487	506	<b>528</b>	4.4%	5.4%	0.5%
Other Asia Pacific	265	308	320	333	357	388	425	437	454	474	<b>506</b>	6.7%	6.8%	0.5%
<b>Total Asia Pacific</b>	<b>26340</b>	<b>28057</b>	<b>28958</b>	<b>30106</b>	<b>30757</b>									

## Oil: Consumption in thousands of barrels per day\*

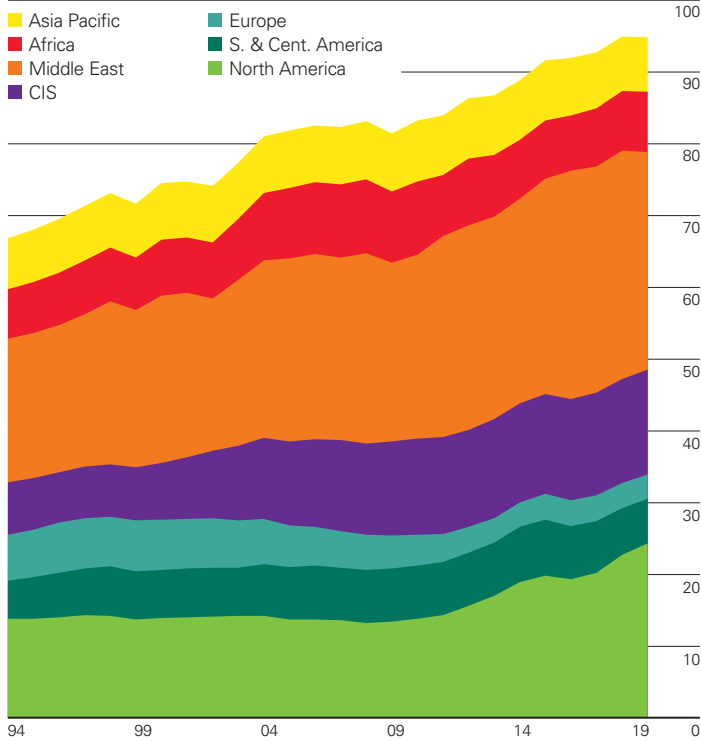
Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
<b>Canada</b>	2183	2333	2397	2330	2345	2387	2347	2393	2393	2443	<b>2403</b>	-1.7%	0.6%	2.4%
<b>Mexico</b>	2021	2040	2065	2083	2034	1960	1939	1950	1883	1821	<b>1733</b>	-4.8%	-1.3%	1.8%
<b>US</b>	18030	18324	17983	17594	18006	18136	18524	18618	18883	19428	<b>19400</b>	-0.1%	0.3%	19.7%
<b>Total North America</b>	<b>22235</b>	<b>22697</b>	<b>22445</b>	<b>22006</b>	<b>22385</b>	<b>22483</b>	<b>22810</b>	<b>22961</b>	<b>23160</b>	<b>23692</b>	<b>23536</b>	<b>-0.7%</b>	<b>0.2%</b>	<b>23.9%</b>
Argentina	532	582	591	614	658	643	662	651	637	611	<b>599</b>	-2.0%	1.2%	0.6%
Brazil	2078	2271	2432	2509	2655	2721	2559	2436	2481	2377	<b>2398</b>	0.9%	1.3%	2.4%
Chile	383	343	371	376	362	353	355	377	364	374	<b>381</b>	1.9%	-0.4%	0.4%
Colombia	230	256	274	294	297	315	331	343	338	341	<b>347</b>	1.7%	3.2%	0.4%
Ecuador	191	220	226	233	247	260	254	239	237	255	<b>249</b>	-2.4%	3.1%	0.3%
Peru	178	186	215	207	219	216	237	250	248	257	<b>262</b>	1.9%	4.0%	0.3%
Trinidad & Tobago	44	45	42	40	45	41	45	47	44	42	<b>39</b>	-6.9%	-0.8%	♦
Venezuela	726	725	737	792	782	720	637	537	463	402	<b>356</b>	-11.6%	-5.6%	0.4%
Other S. & Cent. America	1158	1162	1173	1169	1151	1150	1217	1255	1267	1288	<b>1294</b>	0.5%	0.8%	1.3%
<b>Total S. &amp; Cent. America</b>	<b>5519</b>	<b>5791</b>	<b>6061</b>	<b>6234</b>	<b>6418</b>	<b>6420</b>	<b>6298</b>	<b>6136</b>	<b>6078</b>	<b>5946</b>	<b>5923</b>	<b>-0.4%</b>	<b>0.6%</b>	<b>6.0%</b>
Austria	250	262	245	245	253	243	242	250	254	258	<b>263</b>	2.0%	-0.2%	0.3%
Belgium	668	691	649	631	651	649	669	674	685	702	<b>683</b>	-2.7%	-0.3%	0.7%
Czech Republic	199	189	194	191	183	194	189	175	209	212	<b>213</b>	0.8%	0.3%	0.2%
Finland	209	219	209	200	215	204	202	217	207	207	<b>193</b>	-6.8%	-0.7%	0.2%
France	1762	1703	1666	1610	1597	1543	1545	1529	1539	1538	<b>1530</b>	-0.5%	-1.7%	1.6%
Germany	2339	2373	2294	2276	2336	2273	2269	2307	2374	2260	<b>2281</b>	0.9%	-0.7%	2.3%
Greece	417	380	359	318	300	298	309	311	320	316	<b>328</b>	3.9%	-3.2%	0.3%
Hungary	149	141	151	139	139	154	164	161	173	184	<b>186</b>	0.7%	1.5%	0.2%
Italy	1536	1500	1443	1350	1246	1180	1227	1236	1249	1277	<b>1218</b>	-4.6%	-2.5%	1.2%
Netherlands	935	957	962	916	889	856	826	843	818	844	<b>825</b>	-2.2%	-1.4%	0.8%
Norway	220	231	224	221	226	214	219	210	211	222	<b>207</b>	-7.1%	0.3%	0.2%
Poland	550	577	574	552	520	521	542	594	646	663	<b>670</b>	1.2%	1.8%	0.7%
Portugal	269	265	249	225	235	235	238	234	243	233	<b>250</b>	7.1%	-2.1%	0.3%
Romania	192	181	186	186	170	184	186	195	206	212	<b>224</b>	5.6%	-0.1%	0.2%
Spain	1449	1413	1343	1251	1181	1176	1219	1262	1270	1297	<b>1298</b>	0.1%	-1.7%	1.3%
Sweden	317	315	295	292	292	286	280	291	289	276	<b>283</b>	2.7%	-1.8%	0.3%
Switzerland	260	242	234	238	249	224	226	214	219	212	<b>216</b>	2.2%	-1.9%	0.2%
Turkey	709	694	672	702	748	771	915	973	1022	987	<b>1005</b>	1.8%	3.7%	1.0%
Ukraine	282	267	278	267	256	219	193	204	208	207	<b>222</b>	7.3%	-3.6%	0.2%
United Kingdom	1627	1604	1573	1522	1505	1506	1552	1597	1610	1584	<b>1545</b>	-2.5%	-0.7%	1.6%
Other Europe	1223	1205	1175	1124	1106	1103	1148	1191	1238	1248	<b>1257</b>	0.7%	-0.4%	1.3%
<b>Total Europe</b>	<b>15561</b>	<b>15409</b>	<b>14976</b>	<b>14458</b>	<b>14296</b>	<b>14032</b>	<b>14360</b>	<b>14669</b>	<b>14991</b>	<b>14936</b>	<b>14896</b>	<b>-0.3%</b>	<b>-0.9%</b>	<b>15.2%</b>
Azerbaijan	73	72	89	92	101	99	100	98	99	104	<b>108</b>	4.1%	3.4%	0.1%
Belarus	181	149	172	210	143	163	139	136	136	147	<b>151</b>	2.7%	-0.8%	0.2%
Kazakhstan	200	211	243	245	260	262	295	305	317	340	<b>353</b>	3.8%	3.6%	0.4%
Russian Federation	2775	2878	3074	3119	3134	3298	3143	3219	3195	3282	<b>3317</b>	1.1%	1.4%	3.4%
Turkmenistan	106	118	125	129	137	143	145	143	144	149	<b>162</b>	8.7%	2.7%	0.2%
Uzbekistan	89	76	71	63	60	57	53	49	47	45	<b>44</b>	-3.3%	-6.9%	♦
Other CIS	64	63	65	75	78	76	78	86	82	91	<b>93</b>	2.0%	4.1%	0.1%
<b>Total CIS</b>	<b>3487</b>	<b>3566</b>	<b>3838</b>	<b>3934</b>	<b>3914</b>	<b>4097</b>	<b>3952</b>	<b>4036</b>	<b>4021</b>	<b>4157</b>	<b>4227</b>	<b>1.7%</b>	<b>1.5%</b>	<b>4.3%</b>
Iran	1920	1788	1823	1859	2020	1901	1713	1764	1808	1835	<b>2018</b>	10.0%	-0.5%	2.1%
Iraq	536	570	629	666	716	681	683	760	724	705	<b>716</b>	1.7%	3.9%	0.7%
Israel	232	241	254	295	223	214	226	230	255	250	<b>254</b>	1.7%	-0.2%	0.3%
Kuwait	455	478	453	499	517	455	471	482	440	434	<b>427</b>	-1.7%	0.7%	0.4%
Oman	119	135	146	157	178	185	184	187	243	284	<b>295</b>	4.0%	8.8%	0.3%
Qatar	173	191	246	257	287	294	332	347	312	325	<b>346</b>	6.6%	6.2%	0.4%
Saudi Arabia	2914	3206	3295	3460	3451	3764	3883	3875	3838	3769	<b>3788</b>	0.5%	3.7%	3.9%
United Arab Emirates	606	654	735	773	852	880	957	1028	1012	1057	<b>1042</b>	-1.4%	5.8%	1.1%
Other Middle East	776	724	712	676	624	619	537	516	524	515	<b>529</b>	2.6%	-4.3%	0.5%
<b>Total Middle East</b>	<b>7730</b>	<b>7987</b>	<b>8293</b>	<b>8642</b>	<b>8868</b>	<b>8993</b>	<b>8987</b>	<b>9191</b>	<b>9156</b>	<b>9174</b>	<b>9416</b>	<b>2.6%</b>	<b>2.2%</b>	<b>9.6%</b>
Algeria	327	327	349	370	387	401	425	412	407	417	<b>454</b>	8.8%	3.1%	0.5%
Egypt	725	766	720	747	756	806	834	857	804	757	<b>743</b>	-1.8%	1.0%	0.8%
Morocco	234	258	275	277	282	272	268	275	290	286	<b>294</b>	2.8%	2.2%	0.3%
South Africa	507	538	542	552	561	555	578	546	546	557	<b>569</b>	2.3%	0.9%	0.6%
Other Africa	1529	1599	1519	1630	1726	1739	1754	1804	1890	1969	<b>2036</b>	3.4%	3.0%	2.1%
<b>Total Africa</b>	<b>3322</b>	<b>3489</b>	<b>3405</b>	<b>3575</b>	<b>3712</b>	<b>3773</b>	<b>3859</b>	<b>3894</b>	<b>3938</b>	<b>3986</b>	<b>4096</b>	<b>2.8%</b>	<b>2.2%</b>	<b>4.2%</b>
Australia	916	907	959	991	1012	1021	985	992	1034	1054	<b>1046</b>	-0.8%	1.4%	1.1%
Bangladesh	72	81	104	110	108	120	127	138	156	178	<b>171</b>	-4.0%	8.7%	0.2%
China	8240	9390	9739	10170	10668	11134	11911	12248	12842	13375	<b>14056</b>	5.1%	5.4%	14.3%
China Hong Kong SAR	332	359	360	344	352	336	367	380	428	435	<b>408</b>	-6.0%	4.1%	0.4%
India	3298	3378	3542	3740	3781	3906	4230	4632	4860	5112	<b>5271</b>	3.1%	5.0%	5.4%
Indonesia	1317	1411	1589	1639	1662	1680	1558	1572	1660	1724	<b>1732</b>	0.5%	3.0%	1.8%
Japan	4389	4434	4435	4694	4508	4292	4138	4006	3971	3855	<b>3812</b>	-1.1%	-2.3%	3.9%
Malaysia	678	688	724	757	802	802	751	839	803	813	<b>829</b>	2.1%	1.9%	0.8%
New Zealand	150	150	154	151	153	156	163	166	174	175	<b>176</b>	0.5%	1.2%	0.2%
Pakistan	415	411	414	402	442	458	505	566	589	498	<b>446</b>	-10.5%	2.5%	0.5%
Philippines	294	307	292	301	316	336	384	413	445	450	<b>458</b>	1.9%	4.8%	0.5%
Singapore	1049	1157	1208	1202	1217	1259	1328	1372	1405	1431	<b>1404</b>	-1.8%	3.9%	1.4%
South Korea	2339	2370	2394	2458	2455	2454	2577	2771	2801	2781	<b>2760</b>	-0.8%	1.9%	2.8%
Sri Lanka	87	87	92	95	82	71	90	105	114	114	<b>123</b>	7.5%	3.3%	0.1%
Taiwan	1022	1043	950	950	981	1013	1021	1046	1038	1050	<b>998</b>	-4.9%	0.4%	1.0%
Thailand	1058	1104	1166	1225	1267	1270	1330	1364	1407	1432	<b>1453</b>	1.5%	3.6%	1.5%
Vietnam	305	332	361	371	398	409	452	470	487	506	<b>528</b>	4.4%	5.4%	0.5%
Other Asia Pacific	265	308	320	333	357	388	425	437	454	474	<b>506</b>	6.7%	6.8%	0.5%
<b>Total Asia Pacific</b>	<b>26228</b>	<b>27917</b>	<b>28802</b>	<b>29935</b>	<b>30560</b>									





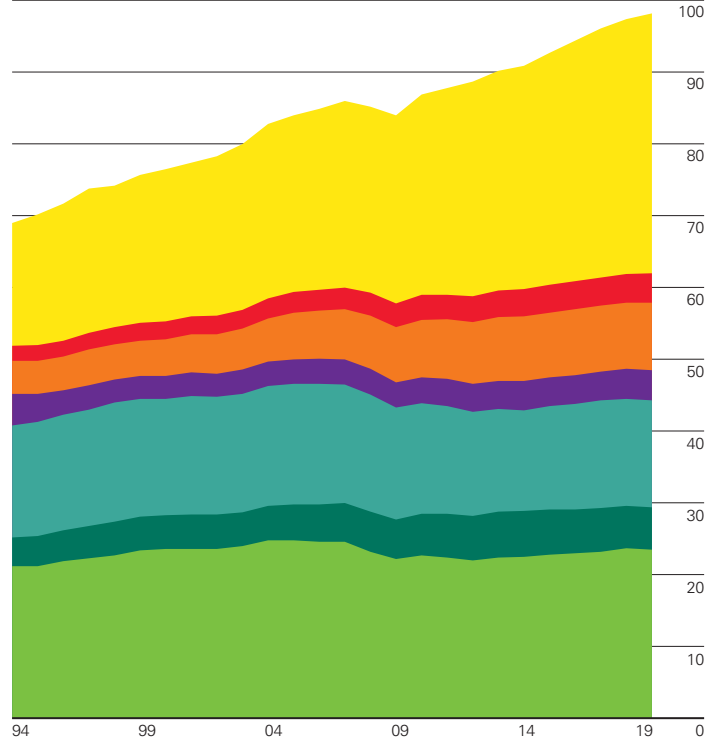
### Oil: Production by region

Million barrels daily



### Oil: Consumption by region

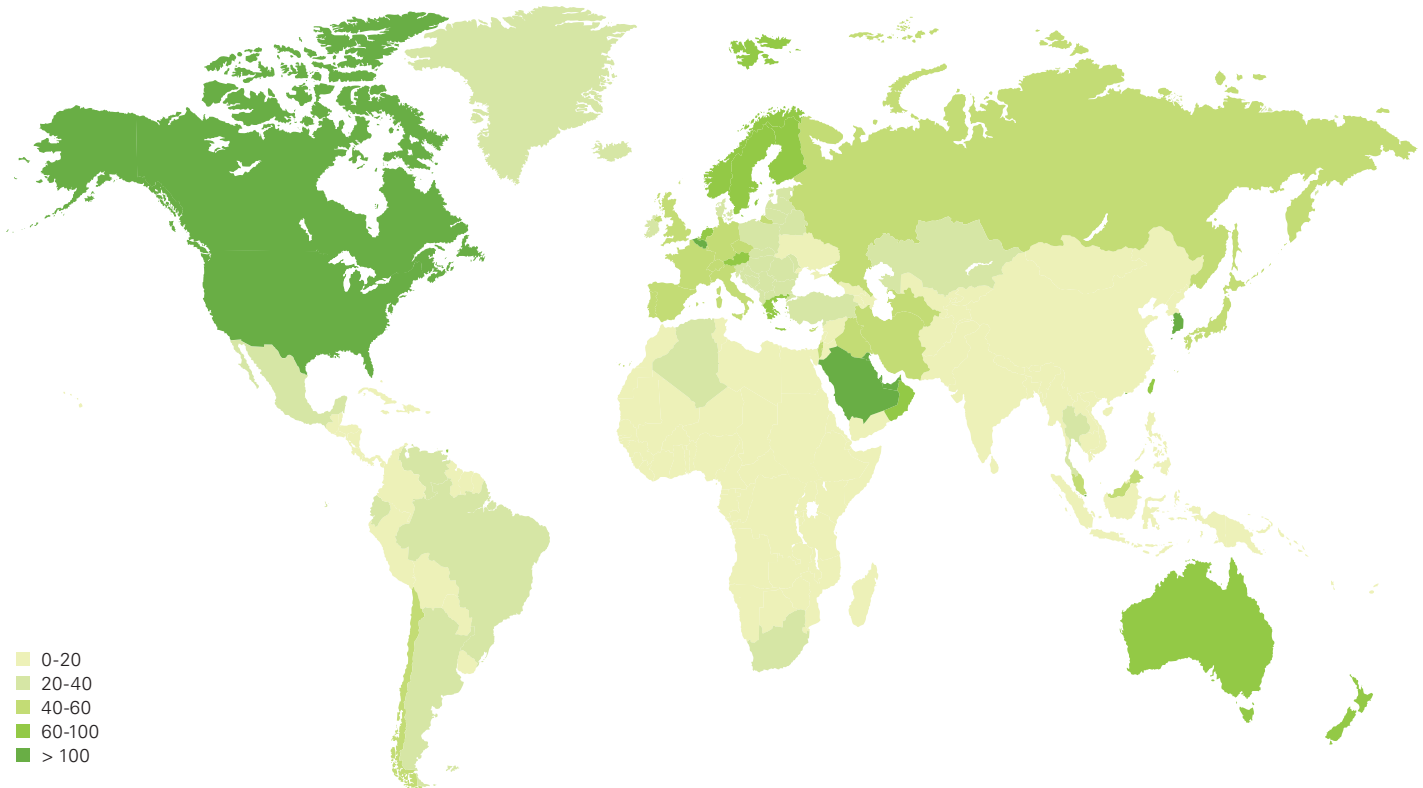
Million barrels daily



World oil production fell by 60,000 b/d in 2019 as strong growth in US output (1.7 million b/d) was more than offset by a decline in OPEC production (-2 million b/d), with sharp declines in Iran (-1.3 million b/d) Venezuela (-560,000 b/d) and Saudi Arabia (-430,000 b/d). Oil consumption grew by a below-average 0.9 million barrels per day (b/d), or 0.9%. Growth was led by China (680,000 b/d) and other emerging economies, while demand fell in the OECD (-290,000 b/d).

### Oil: Consumption per capita 2019

GJ per capita



## Oil: Regional consumption – by product group

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
<b>North America</b>														
Ethane and LPG	2929	3063	3121	3167	3364	3330	3392	3439	3505	3742	<b>3808</b>	1.8%	2.8%	16.2%
Naphtha	304	377	361	331	376	349	333	328	285	291	<b>263</b>	-9.4%	-1.4%	1.1%
Gasoline	9789	9710	9460	9362	9493	9566	9799	9975	9951	9967	<b>9876</b>	-0.9%	0.1%	42.0%
Jet/kerosene	1571	1619	1637	1587	1631	1676	1766	1840	1920	1963	<b>2012</b>	2.5%	1.2%	8.5%
Diesel/gasoil	4689	4929	4994	4758	4788	5017	4945	4776	4869	5129	<b>4969</b>	-3.1%	-0.1%	21.1%
Fuel oil	801	810	745	662	576	447	418	474	519	478	<b>409</b>	-14.5%	-6.5%	1.7%
Others	2152	2188	2127	2139	2157	2098	2156	2128	2111	2122	<b>2199</b>	3.6%	-0.9%	9.3%
<b>Total North America</b>	<b>22235</b>	<b>22697</b>	<b>22445</b>	<b>22006</b>	<b>22385</b>	<b>22483</b>	<b>22810</b>	<b>22961</b>	<b>23160</b>	<b>23692</b>	<b>23536</b>	-0.7%	0.2%	100.0%
<b>of which: US</b>														
Ethane and LPG	2043	2166	2201	2247	2436	2389	2446	2463	2533	2867	<b>2925</b>	2.0%	3.9%	15.1%
Naphtha	246	256	254	236	270	231	223	219	228	233	<b>207</b>	-11.3%	-0.6%	1.1%
Gasoline	8291	8168	7926	7858	7993	8056	8280	8394	8393	8400	<b>8338</b>	-0.7%	♦	43.0%
Jet/kerosene	1411	1452	1438	1403	1440	1479	1555	1623	1687	1712	<b>1747</b>	2.0%	1.0%	9.0%
Diesel/gasoil	3809	3995	4022	3816	3838	4060	4005	3845	3925	4121	<b>4073</b>	-1.2%	-0.3%	21.0%
Fuel oil	508	532	459	367	317	256	258	325	341	317	<b>272</b>	-14.1%	-6.3%	1.4%
Others	1723	1754	1683	1666	1711	1665	1757	1749	1776	1777	<b>1837</b>	3.4%	-0.6%	9.5%
<b>Total US</b>	<b>18030</b>	<b>18324</b>	<b>17983</b>	<b>17594</b>	<b>18006</b>	<b>18136</b>	<b>18524</b>	<b>18618</b>	<b>18883</b>	<b>19428</b>	<b>19400</b>	-0.1%	0.3%	100.0%
<b>S. &amp; Cent. America</b>														
Ethane and LPG	645	639	675	712	712	705	697	713	723	723	<b>728</b>	0.7%	1.1%	12.3%
Naphtha	182	187	184	185	161	157	173	160	177	149	<b>151</b>	1.4%	-1.3%	2.5%
Gasoline	1181	1265	1390	1458	1511	1534	1490	1523	1533	1446	<b>1435</b>	-0.8%	2.5%	24.2%
Jet/kerosene	248	272	285	299	306	321	325	330	331	344	<b>349</b>	1.3%	3.3%	5.9%
Diesel/gasoil	1853	2030	2123	2223	2335	2325	2293	2213	2205	2211	<b>2230</b>	0.8%	1.5%	37.6%
Fuel oil	740	716	686	697	679	693	690	629	567	543	<b>520</b>	-4.3%	-3.6%	8.8%
Others	670	682	719	661	714	684	629	568	542	530	<b>512</b>	-3.5%	-2.8%	8.6%
<b>Total S. &amp; Cent. America</b>	<b>5519</b>	<b>5791</b>	<b>6061</b>	<b>6234</b>	<b>6418</b>	<b>6420</b>	<b>6298</b>	<b>6136</b>	<b>6078</b>	<b>5946</b>	<b>5923</b>	-0.4%	0.6%	100.0%
<b>of which: Brazil</b>														
Ethane and LPG	257	267	290	300	316	307	300	303	309	308	<b>313</b>	1.4%	1.4%	13.0%
Naphtha	168	173	168	169	147	142	155	145	163	135	<b>136</b>	0.9%	-1.5%	5.7%
Gasoline	329	393	468	514	549	575	522	541	556	483	<b>481</b>	-0.5%	4.0%	20.1%
Jet/kerosene	94	108	120	126	125	129	127	116	115	124	<b>120</b>	-2.6%	3.1%	5.0%
Diesel/gasoil	736	849	901	961	1009	1034	986	933	944	959	<b>987</b>	3.0%	2.5%	41.2%
Fuel oil	179	152	126	126	139	161	149	112	110	90	<b>91</b>	1.0%	-6.9%	3.8%
Others	314	329	359	315	371	373	321	286	283	278	<b>270</b>	-3.1%	-1.4%	11.2%
<b>Total Brazil</b>	<b>2078</b>	<b>2271</b>	<b>2432</b>	<b>2509</b>	<b>2655</b>	<b>2721</b>	<b>2559</b>	<b>2436</b>	<b>2481</b>	<b>2377</b>	<b>2398</b>	0.9%	1.3%	100.0%
<b>Europe</b>														
Ethane and LPG	1021	1017	1007	997	1125	1139	1157	1191	1223	1239	<b>1212</b>	-2.2%	1.8%	8.1%
Naphtha	1053	1123	1009	974	959	920	894	901	932	926	<b>877</b>	-5.3%	-1.3%	5.9%
Gasoline	2451	2313	2212	2098	2029	1995	1945	1949	1952	1943	<b>1958</b>	0.8%	-2.6%	13.1%
Jet/kerosene	1254	1249	1255	1227	1247	1278	1347	1387	1474	1537	<b>1570</b>	2.1%	1.4%	10.5%
Diesel/gasoil	6284	6381	6256	6138	6201	6102	6386	6493	6646	6602	<b>6650</b>	0.7%	0.1%	44.6%
Fuel oil	1481	1338	1291	1166	1041	969	923	965	975	964	<b>931</b>	-3.4%	-5.1%	6.3%
Others	2018	1990	1945	1860	1692	1629	1708	1782	1789	1725	<b>1697</b>	-1.6%	-2.3%	11.4%
<b>Total Europe</b>	<b>15561</b>	<b>15409</b>	<b>14976</b>	<b>14458</b>	<b>14296</b>	<b>14032</b>	<b>14360</b>	<b>14669</b>	<b>14991</b>	<b>14936</b>	<b>14896</b>	-0.3%	-0.9%	100.0%
<b>of which: European Union</b>														
Ethane and LPG	821	810	798	793	910	926	929	957	982	989	<b>959</b>	-3.0%	1.6%	7.4%
Naphtha	999	1069	965	929	910	877	840	843	868	871	<b>816</b>	-6.3%	-1.6%	6.3%
Gasoline	2140	2019	1933	1832	1773	1763	1732	1736	1747	1745	<b>1758</b>	0.7%	-2.3%	13.6%
Jet/kerosene	1150	1152	1157	1130	1135	1135	1171	1213	1295	1348	<b>1372</b>	1.8%	1.0%	10.6%
Diesel/gasoil	5553	5634	5491	5349	5383	5304	5538	5618	5725	5683	<b>5713</b>	0.5%	-0.2%	44.2%
Fuel oil	1303	1210	1165	1050	927	858	815	854	854	862	<b>833</b>	-3.3%	-5.1%	6.5%
Others	1813	1776	1750	1656	1488	1451	1482	1525	1525	1478	<b>1461</b>	-1.2%	-2.9%	11.3%
<b>Total European Union</b>	<b>13779</b>	<b>13669</b>	<b>13258</b>	<b>12740</b>	<b>12526</b>	<b>12315</b>	<b>12507</b>	<b>12746</b>	<b>12996</b>	<b>12976</b>	<b>12913</b>	-0.5%	-1.1%	100.0%
<b>CIS</b>														
Ethane and LPG	389	379	435	460	517	561	579	621	641	681	<b>732</b>	7.5%	5.9%	17.3%
Naphtha	178	191	189	173	194	180	191	201	226	246	<b>238</b>	-3.2%	2.4%	5.6%
Gasoline	925	968	981	1030	1050	1073	1053	1044	1037	1050	<b>1043</b>	-0.6%	1.3%	24.7%
Jet/kerosene	261	275	308	314	298	314	283	279	307	326	<b>335</b>	2.7%	1.4%	7.9%
Diesel/gasoil	791	873	942	942	945	906	889	915	942	1013	<b>1060</b>	4.6%	1.6%	25.1%
Fuel oil	343	336	358	354	363	432	366	373	341	346	<b>351</b>	1.4%	-0.8%	8.3%
Others	600	544	625	662	546	632	591	602	528	497	<b>469</b>	-5.5%	-1.5%	11.1%
<b>Total CIS</b>	<b>3487</b>	<b>3566</b>	<b>3838</b>	<b>3934</b>	<b>3914</b>	<b>4097</b>	<b>3952</b>	<b>4036</b>	<b>4021</b>	<b>4157</b>	<b>4227</b>	1.7%	1.5%	100.0%
<b>Middle East</b>														
Ethane and LPG	1309	1569	1743	1840	1800	1903	1918	2054	2100	2182	<b>2194</b>	0.5%	6.7%	23.3%
Naphtha	288	296	336	344	324	369	382	389	431	482	<b>503</b>	4.5%	5.4%	5.3%
Gasoline	1340	1369	1423	1501	1585	1611	1642	1688	1802	1818	<b>1867</b>	2.7%	3.6%	19.8%
Jet/kerosene	447	437	434	436	488	467	538	565	542	540	<b>564</b>	4.4%	2.0%	6.0%
Diesel/gasoil	1856	1846	1973	2075	2150	2069	1904	1805	1701	1661	<b>1773</b>	6.7%	-1.1%	18.8%
Fuel oil	1902	1938	1953	1993	2066	2099	2127	2118	2059	2007	<b>2022</b>	0.7%	1.4%	21.5%
Others	589	532	430	453	457	475	476	572	522	484	<b>493</b>	1.8%	-2.6%	5.2%
<b>Total Middle East</b>	<b>7730</b>	<b>7987</b>	<b>8293</b>	<b>8642</b>	<b>8868</b>	<b>8993</b>	<b>8987</b>	<b>9191</b>	<b>9156</b>	<b>9174</b>	<b>9416</b>	2.6%	2.2%	100.0%
<b>Africa</b>														
Ethane and LPG	351	363	372	381	386	387	386	399	411	425	<b>463</b>	9.2%	2.2%	11.3%
Naphtha	30	27	7	3	4	4	4	4	4	4	<b>4</b>	0.4%	-18.0%	0.1%
Gasoline	772	810	811	867	881	900	965	1037	1073	1099	<b>1122</b>	2.1%	4.1%	27.4%
Jet/kerosene	294	320	303	306	317	299	263	254	260	260	<b>262</b>	0.9%	-1.3%	6.4%
Diesel/gasoil	1219	1304	1315	1375	1476	1535	1601	1580	1614	1636	<b>1678</b>	2.6%	3.5%	41.0%
Fuel oil	445	461	395	443	442	440	429	406	376	356	<b>355</b>	-0.1%	-2.0%	8.7%
Others	211	203	203	201	206	207	212	214	199	206	<b>211</b>	2.3%	0.2%	5.2%
<b>Total Africa</b>	<b>3322</b>	<b>3489</b>	<b>3405</b>	<b>3575</b>	<b>3712</b>	<b>3773</b>	<b>3859</b>	<b>3894</b>	<b>3938</b>	<b>3986</b>	<b>4096</b>	2.8%	2.2%	100.0%

♦Less than 0.05%.

Table continues on next page.

## Oil: Regional consumption – by product group (continued)

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019	
												2019	2008-18		
<b>Asia Pacific</b>															
Ethane and LPG	2636	2771	2880	2969	3061	3233	3374	3723	4009	4172	<b>4402</b>	5.5%	5.1%	12.2%	
Naphtha	3258	3559	3571	3729	3863	4022	4281	4379	4567	4694	<b>4740</b>	1.0%	4.1%	13.1%	
Gasoline	4353	4650	4829	5103	5481	5601	6132	6383	6612	6770	<b>7023</b>	3.7%	4.8%	19.4%	
Jet/kerosene	2053	2194	2205	2242	2316	2352	2447	2589	2723	2872	<b>2888</b>	0.6%	3.0%	8.0%	
Diesel/gasoil	7320	7725	8122	8518	8647	8705	8859	8901	9135	9346	<b>9595</b>	2.7%	2.6%	26.5%	
Fuel oil	3043	3047	3113	3218	2976	2813	2807	2854	2739	2621	<b>2404</b>	-8.3%	-2.5%	6.6%	
Others	3565	3971	4082	4157	4215	4380	4443	4689	4884	4982	<b>5125</b>	2.9%	4.4%	14.2%	
<b>Total Asia Pacific</b>	<b>26228</b>	<b>27917</b>	<b>28802</b>	<b>29935</b>	<b>30560</b>	<b>31105</b>	<b>32344</b>	<b>33519</b>	<b>34669</b>	<b>35457</b>	<b>36178</b>	<b>2.0%</b>	<b>3.2%</b>	<b>100.0%</b>	
<b>of which: China</b>															
Ethane and LPG	640	677	691	689	771	884	1028	1207	1351	1432	<b>1578</b>	10.2%	8.6%	11.2%	
Naphtha	598	778	811	868	914	1032	1115	1188	1277	1384	<b>1391</b>	0.5%	9.9%	9.9%	
Gasoline	1412	1591	1738	1863	2143	2236	2601	2707	2840	2921	<b>3087</b>	5.7%	7.6%	22.0%	
Jet/kerosene	363	437	459	495	546	588	659	728	816	927	<b>974</b>	5.0%	11.4%	6.9%	
Diesel/gasoil	2761	3005	3196	3453	3503	3506	3538	3418	3440	3492	<b>3690</b>	5.7%	2.4%	26.3%	
Fuel oil	662	666	588	560	564	592	591	556	528	566	<b>604</b>	6.8%	-2.4%	4.3%	
Others	1804	2235	2257	2243	2227	2295	2380	2444	2591	2652	<b>2731</b>	3.0%	5.6%	19.4%	
<b>Total China</b>	<b>8240</b>	<b>9390</b>	<b>9739</b>	<b>10170</b>	<b>10668</b>	<b>11134</b>	<b>11911</b>	<b>12248</b>	<b>12842</b>	<b>13375</b>	<b>14056</b>	<b>5.1%</b>	<b>5.4%</b>	<b>100.0%</b>	
<b>of which: India</b>															
Ethane and LPG	470	506	544	557	565	625	684	765	894	955	<b>1023</b>	7.1%	7.9%	19.4%	
Naphtha	283	255	270	289	279	267	315	328	306	345	<b>325</b>	-5.9%	0.4%	6.2%	
Gasoline	285	317	331	349	380	415	471	520	569	620	<b>674</b>	8.7%	9.8%	12.8%	
Jet/kerosene	299	301	300	279	274	276	280	274	249	254	<b>235</b>	-7.3%	-1.6%	4.5%	
Diesel/gasoil	1140	1218	1301	1406	1410	1417	1493	1573	1629	1703	<b>1729</b>	1.6%	4.9%	32.8%	
Fuel oil	222	199	178	147	117	107	113	136	122	120	<b>112</b>	-6.5%	-6.1%	2.1%	
Others	600	583	618	713	756	798	875	1035	1092	1115	<b>1172</b>	5.1%	7.7%	22.2%	
<b>Total India</b>	<b>3298</b>	<b>3378</b>	<b>3542</b>	<b>3740</b>	<b>3781</b>	<b>3906</b>	<b>4230</b>	<b>4632</b>	<b>4860</b>	<b>5112</b>	<b>5271</b>	<b>3.1%</b>	<b>5.0%</b>	<b>100.0%</b>	
<b>of which: Japan</b>															
Ethane and LPG	500	492	496	536	508	492	443	419	424	399	<b>351</b>	-12.0%	-2.9%	9.2%	
Naphtha	644	690	655	633	679	651	706	663	694	655	<b>759</b>	15.9%	0.4%	19.9%	
Gasoline	990	999	973	974	944	914	903	894	879	865	<b>840</b>	-2.9%	-1.3%	22.0%	
Jet/kerosene	543	550	527	539	528	516	495	504	514	499	<b>485</b>	-2.7%	-1.5%	12.7%	
Diesel/gasoil	837	841	816	821	817	803	786	786	782	781	<b>770</b>	-1.4%	-1.6%	20.2%	
Fuel oil	450	442	577	824	646	532	433	371	284	269	<b>210</b>	-21.7%	-9.2%	5.5%	
Others	425	422	391	367	387	384	373	370	393	388	<b>397</b>	2.3%	-2.3%	10.4%	
<b>Total Japan</b>	<b>4389</b>	<b>4434</b>	<b>4435</b>	<b>4694</b>	<b>4508</b>	<b>4292</b>	<b>4138</b>	<b>4006</b>	<b>3971</b>	<b>3855</b>	<b>3812</b>	<b>-1.1%</b>	<b>-2.3%</b>	<b>100.0%</b>	
<b>World</b>															
Ethane and LPG	9281	9802	10234	10525	10965	11259	11503	12140	12612	13163	<b>13540</b>	2.9%	4.0%	13.8%	
Naphtha	5292	5759	5656	5738	5881	6000	6259	6362	6621	6790	<b>6775</b>	-0.2%	2.7%	6.9%	
Gasoline	20811	21084	21107	21420	22030	22279	23024	23600	23960	24094	<b>24324</b>	1.0%	1.5%	24.8%	
Jet/kerosene	6127	6366	6427	6410	6603	6707	6970	7245	7556	7842	<b>7979</b>	1.8%	1.9%	8.1%	
Diesel/gasoil	24012	25087	25725	26028	26542	26660	26879	26682	27112	27539	<b>27955</b>	1.3%	1.1%	28.4%	
Fuel oil	8754	8645	8541	8532	8143	7893	7761	7819	7576	7316	<b>6992</b>	-4.4%	-2.3%	7.1%	
Others	9805	10112	10130	10132	9988	10105	10214	10556	10576	10546	<b>10706</b>	1.5%	0.7%	10.9%	
<b>Total World</b>	<b>84083</b>	<b>86856</b>	<b>87820</b>	<b>88784</b>	<b>90152</b>	<b>90903</b>	<b>92610</b>	<b>94404</b>	<b>96013</b>	<b>97348</b>	<b>98272</b>	<b>0.9%</b>	<b>1.3%</b>	<b>100.0%</b>	
<b>OECD</b>															
Ethane and LPG	4828	4946	4972	5047	5321	5273	5283	5399	5487	5717	<b>5736</b>	0.3%	1.8%	12.5%	
Naphtha	2886	3106	3010	3008	3072	3019	3074	3071	3173	3112	<b>3104</b>	-0.3%	0.8%	6.8%	
Gasoline	13650	13450	13075	12885	12944	12970	13179	13365	13334	13328	<b>13236</b>	-0.7%	-0.3%	28.9%	
Jet/kerosene	3679	3752	3751	3692	3752	3817	3970	4119	4306	4412	<b>4473</b>	1.4%	1.1%	9.8%	
Diesel/gasoil	12388	12736	12701	12408	12515	12644	12895	12847	13115	13332	<b>13212</b>	-0.9%	0.1%	28.8%	
Fuel oil	2926	2791	2795	2851	2447	2092	1924	1987	1906	1847	<b>1643</b>	-11.0%	-6.3%	3.6%	
Others	4798	4765	4672	4565	4414	4277	4374	4423	4425	4367	<b>4418</b>	1.2%	-1.6%	9.6%	
<b>Total OECD</b>	<b>45155</b>	<b>45547</b>	<b>44976</b>	<b>44457</b>	<b>44465</b>	<b>44092</b>	<b>44700</b>	<b>45210</b>	<b>45747</b>	<b>46115</b>	<b>45822</b>	<b>-0.6%</b>	<b>-0.3%</b>	<b>100.0%</b>	
<b>Non-OECD</b>															
Ethane and LPG	4453	4857	5262	5478	5644	5985	6219	6741	7125	7445	<b>7804</b>	4.8%	6.0%	14.9%	
Naphtha	2406	2653	2647	2730	2809	2981	3184	3291	3448	3678	<b>3671</b>	-0.2%	4.6%	7.0%	
Gasoline	7161	7634	8031	8534	9086	9310	9845	10235	10626	10765	<b>11088</b>	3.0%	4.5%	21.1%	
Jet/kerosene	2448	2614	2675	2717	2850	2890	3000	3126	3251	3430	<b>3506</b>	2.2%	3.2%	6.7%	
Diesel/gasoil	11625	12351	13024	13620	14028	14016	13985	13835	13997	14266	<b>14743</b>	3.3%	2.2%	28.1%	
Fuel oil	5828	5854	5746	5681	5696	5801	5837	5832	5669	5469	<b>5349</b>	-2.2%	-0.5%	10.2%	
Others	5008	5346	5458	5566	5573	5828	5840	6133	6151	6179	<b>6287</b>	1.7%	2.8%	12.0%	
<b>Total Non-OECD</b>	<b>38927</b>	<b>41308</b>	<b>42844</b>	<b>44327</b>	<b>45687</b>	<b>46811</b>	<b>47910</b>	<b>49194</b>	<b>50266</b>	<b>51233</b>	<b>52450</b>	<b>2.4%</b>	<b>3.1%</b>	<b>100.0%</b>	

\*Less than 0.05%.

**Notes:** Gasoline includes motor and aviation gasoline, gasolines and light distillate feedstock (LDF).

Diesel/gasoil includes marine gasoil.

'Fuel oil' includes marine bunkers and crude oil used directly for fuel.

'Others' consists of refinery gas, solvents, petroleum coke, lubricants, bitumen, wax, other refined products and refinery fuel and loss.

**Annual changes and shares of total are calculated using thousand barrels daily figures.**



## Spot crude prices

US dollars per barrel	Dubai \$/bbl*	Brent \$/bbl†	Nigerian Forcados \$/bbl	West Texas Intermediate \$/bbl‡
1984	28.06	28.78	28.14	29.39
1985	27.53	27.56	27.75	27.98
1986	13.10	14.43	14.46	15.05
1987	16.95	18.44	18.39	19.19
1988	13.18	14.92	15.00	15.98
1989	15.65	18.23	18.30	19.67
1990	20.26	23.73	23.85	24.46
1991	16.63	20.00	20.11	21.53
1992	17.17	19.32	19.61	20.57
1993	14.93	16.97	17.41	18.45
1994	14.74	15.82	16.25	17.21
1995	16.10	17.02	17.26	18.42
1996	18.52	20.67	21.16	22.16
1997	18.23	19.09	19.33	20.61
1998	12.21	12.72	12.62	14.39
1999	17.25	17.97	18.00	19.31
2000	26.20	28.50	28.42	30.37
2001	22.81	24.44	24.23	25.93
2002	23.74	25.02	25.04	26.16
2003	26.78	28.83	28.66	31.06
2004	33.64	38.27	38.13	41.49
2005	49.35	54.52	55.69	56.59
2006	61.50	65.14	67.07	66.04
2007	68.19	72.39	74.48	72.20
2008	94.34	97.26	101.43	100.06
2009	61.39	61.67	63.35	61.92
2010	78.06	79.50	81.05	79.45
2011	106.18	111.26	113.65	95.04
2012	109.08	111.67	114.21	94.13
2013	105.47	108.66	111.95	97.99
2014	97.07	98.95	101.35	93.28
2015	51.20	52.39	54.41	48.71
2016	41.19	43.73	44.54	43.34
2017	53.13	54.19	54.31	50.79
2018	69.51	71.31	72.47	65.20
2019	63.43	64.21	64.95	57.03

\*1984-1985 Arabian Light, 1986-2019 Dubai dated.

†1984-2019 Brent dated.

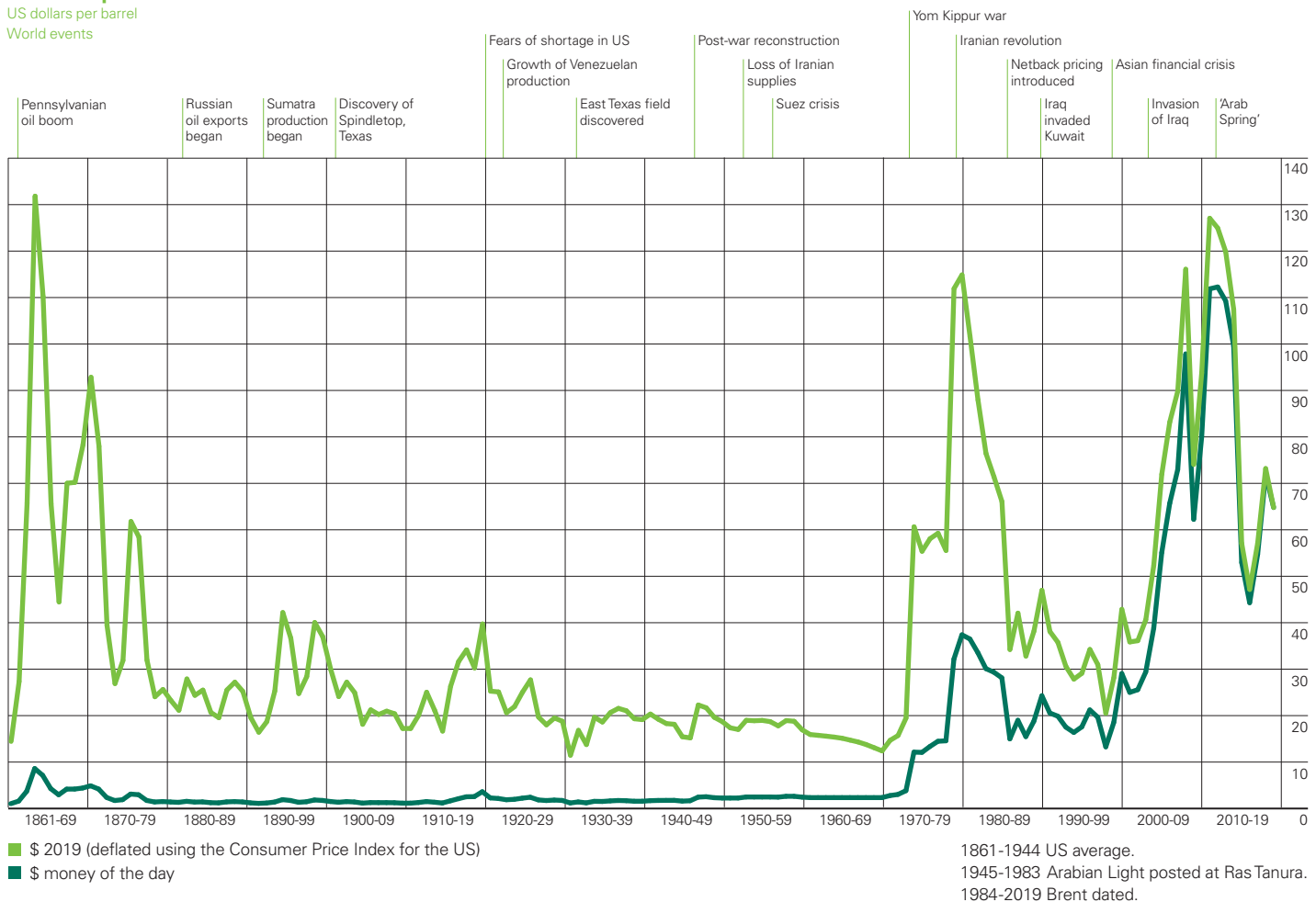
‡1984-2019 Spot WTI (Cushing) prices.

Source: S&P Global Platts, © 2020, S&P Global Inc.

## Crude oil prices 1861-2019

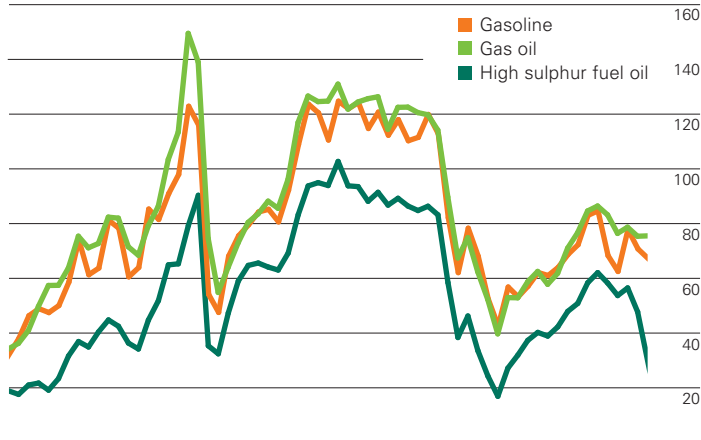
US dollars per barrel

World events



### Oil product prices (Rotterdam)

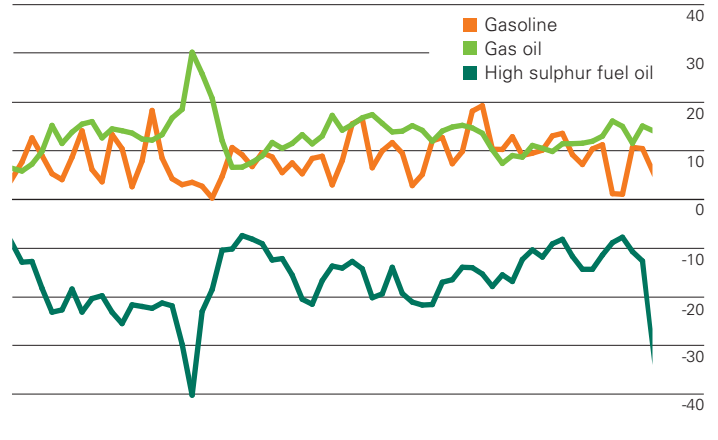
US dollars per barrel



Source: S&P Global Platts, © 2020, S&P Global Inc.

### Product differentials to crude (Rotterdam products minus Dated Brent)

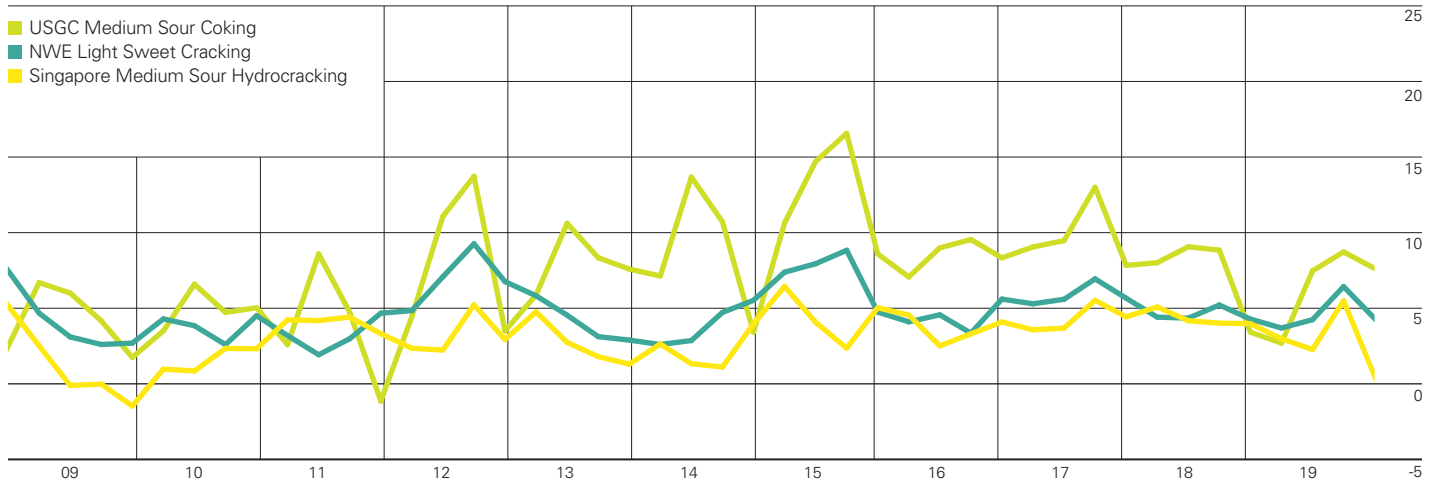
US dollars per barrel



Source: S&P Global Platts, © 2020, S&P Global Inc.

### Regional refining margins

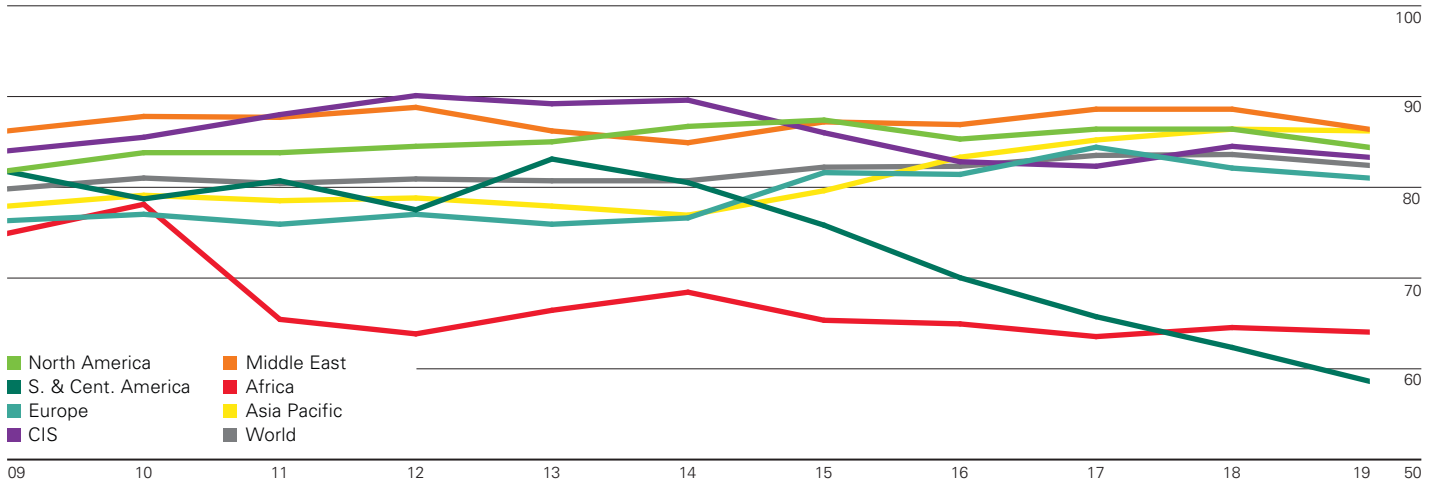
US dollars per barrel



**Note:** The refining margins presented are benchmark margins for three major global refining centres. US Gulf Coast (USGC), North West Europe (NWE – Rotterdam) and Singapore. In each case they are based on a single crude oil appropriate for that region and have optimized product yields based on a generic refinery configuration (cracking, hydrocracking or coking), again appropriate for that region. The margins are on a semi-variable basis, i.e. the margin after all variable costs and fixed energy costs.

### Refinery utilization

Percentage (based on average annual capacity)



Global refinery throughput grew by only 30,000 b/d in 2019, held back by weak demand and robust growth in NGLs supplies. China's crude runs rose by a record 950,000 b/d, but throughput declined in most other regions, particularly the US (-400,000 b/d) and South & Central America (-300,000 b/d). Refining capacity rose by 1.5 million b/d, the largest increase since 2009 aided by a record low level of refinery closures. As a result, global refinery utilization fell sharply by 1.2 percentage points to 82.5%, the largest annual decline since 2009. Utilization in S&C America fell to an all-time low of 58.7%.







## Oil: Trade movements

Thousand barrels daily	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
<b>Imports</b>														
US	11453	11689	11338	10587	9859	9241	9451	10056	10148	9943	<b>9094</b>	-8.5%	-2.5%	12.8%
Europe	12802	12407	12489	12721	12920	12957	13993	14354	14700	14896	<b>14867</b>	-0.2%	0.6%	21.0%
China	5100	5886	6295	6675	6978	7398	8333	9214	10241	11024	<b>11825</b>	7.3%	9.4%	16.7%
India	3491	3749	3823	4168	4370	4155	4380	4945	4920	5196	<b>5379</b>	3.5%	5.4%	7.6%
Japan	4263	4567	4494	4743	4637	4383	4332	4180	4142	3940	<b>3779</b>	-4.1%	-2.2%	5.3%
Rest of World	17211	17048	17634	17812	20012	21193	22026	23776	25663	26154	<b>25980</b>	-0.7%	4.3%	36.6%
<b>Total World</b>	<b>54320</b>	<b>55346</b>	<b>56072</b>	<b>56706</b>	<b>58776</b>	<b>59328</b>	<b>62515</b>	<b>66526</b>	<b>69814</b>	<b>71154</b>	<b>70925</b>	<b>-0.3%</b>	<b>2.3%</b>	<b>100.0%</b>
<b>Exports</b>														
Canada	2518	2599	2798	3056	3296	3536	3836	3890	4241	4513	<b>4683</b>	3.8%	6.1%	6.6%
Mexico	1449	1539	1487	1366	1347	1293	1323	1380	1290	1314	<b>1268</b>	-3.5%	-2.0%	1.8%
US	1947	2154	2495	2682	3563	4033	4521	5078	5888	7054	<b>8016</b>	13.6%	13.6%	11.3%
S. & Cent. America	3748	3568	3755	3830	3790	3939	4107	4147	3958	3741	<b>3422</b>	-8.5%	0.3%	4.8%
Europe	2076	1966	2139	2181	2545	2467	2926	3082	3392	3419	<b>3159</b>	-7.6%	5.1%	4.5%
Russia	7257	7397	7448	7457	7948	7792	8313	8814	8992	9080	<b>9186</b>	1.2%	1.9%	13.0%
Other CIS	1861	2039	2180	1962	2166	2092	2100	2096	2201	2201	<b>2265</b>	2.9%	2.4%	3.2%
Saudi Arabia	7276	7595	8120	8468	8365	7911	7968	8606	8404	8638	<b>8397</b>	-2.8%	0.3%	11.8%
Middle East (ex Saudi Arabia)	11744	11976	12188	11742	12242	12699	13537	15321	16255	16098	<b>15010</b>	-6.8%	2.6%	21.2%
North Africa	2943	2878	1951	2602	2127	1743	1701	1727	2226	2410	<b>2420</b>	0.4%	-3.0%	3.4%
West Africa	4531	4755	4759	4724	4590	4849	4880	4401	4531	4552	<b>4560</b>	0.2%	-0.3%	6.4%
Asia Pacific (ex Japan)	5631	6226	6088	6299	6307	6450	6780	7356	7811	7568	<b>7963</b>	5.2%	3.4%	11.2%
Rest of World	1340	653	663	338	491	524	525	625	625	565	<b>577</b>	2.0%	-8.6%	0.8%
<b>Total World</b>	<b>54320</b>	<b>55346</b>	<b>56072</b>	<b>56706</b>	<b>58776</b>	<b>59328</b>	<b>62515</b>	<b>66526</b>	<b>69814</b>	<b>71154</b>	<b>70925</b>	<b>-0.3%</b>	<b>2.3%</b>	<b>100.0%</b>

**Notes:** Unless otherwise stated, this table shows inter-regional trade based on the regional classification in the table 'Oil trade in 2018 and 2019'.

Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded.

**Annual changes and shares of total are calculated using thousand barrels daily figures.**

## Oil: Inter-area movements 2019

Crude (million tonnes)	To															Total
	Canada	Mexico	US	S. & Cent. America	Europe	Russia	Other CIS	Middle East	Africa	Australasia	China	India	Japan	Singapore	Other Asia Pacific	
Canada	-	-	189.7	0.3	3.7	-	-	†	†	†	2.2	0.9	†	-	0.2	<b>197.0</b>
Mexico	-	-	29.9	0.1	10.5	-	-	0.1	-	-	0.5	10.0	0.3	-	6.8	<b>58.1</b>
US	24.2	0.1	-	8.1	45.8	-	†	2.5	0.2	0.5	6.3	9.1	3.1	1.9	36.0	<b>137.7</b>
S. & Cent. America	0.2	†	40.0	-	12.6	†	-	0.4	0.3	-	67.2	18.7	2.3	0.5	3.9	<b>146.2</b>
Europe	0.9	-	6.3	0.8	-	†	†	0.4	0.3	†	13.6	2.4	-	0.2	1.8	<b>26.7</b>
Russia	0.9	-	6.6	0.4	153.0	-	18.4	5.6	†	0.9	77.7	2.9	7.9	1.4	10.4	<b>286.1</b>
Other CIS	0.3	-	1.6	0.1	68.1	†	-	4.9	0.3	0.1	4.2	3.6	0.9	0.4	6.9	<b>91.5</b>
Iraq	-	-	16.5	0.6	55.4	†	†	3.3	0.3	-	51.8	49.2	2.1	2.7	18.9	<b>200.8</b>
Kuwait	-	-	2.2	-	4.9	-	-	†	3.7	-	22.7	10.6	12.6	2.7	39.8	<b>99.2</b>
Saudi Arabia	5.1	-	24.9	3.5	39.9	-	-	13.2	8.4	0.3	83.3	42.6	52.6	6.1	78.5	<b>358.4</b>
UAE	-	-	0.1	†	0.2	†	-	†	2.6	6.1	15.3	19.6	42.9	13.2	39.4	<b>139.4</b>
Other Middle East	-	-	-	†	4.3	-	†	5.7	0.1	0.1	52.2	10.8	19.3	9.2	23.5	<b>125.2</b>
North Africa	0.1	-	4.6	2.7	59.1	-	0.1	1.3	†	2.1	10.7	5.6	0.4	1.4	5.1	<b>93.4</b>
West Africa	1.1	-	14.1	4.7	65.1	†	†	1.7	10.0	1.7	77.8	30.2	0.4	2.3	10.0	<b>219.0</b>
East & S. Africa	†	-	0.2	†	†	†	-	†	†	-	3.9	0.7	0.1	†	0.6	<b>5.5</b>
Australasia	†	-	-	†	†	-	-	0.6	†	-	2.3	-	0.4	3.0	6.8	<b>13.0</b>
China	-	-	-	†	-	-	†	†	†	-	-	-	-	†	0.4	<b>0.4</b>
India	-	-	-	†	†	-	-	†	†	†	-	-	-	†	†	<b>0.1</b>
Japan	-	-	-	-	†	-	-	-	†	†	-	-	-	†	†	<b>†</b>
Singapore	-	-	-	†	-	-	-	†	†	0.4	-	-	-	-	1.5	<b>1.9</b>
Other Asia Pacific	†	-	1.6	†	†	-	-	0.5	0.1	10.6	15.6	4.7	1.5	4.6	-	<b>39.2</b>
<b>Total imports</b>	<b>32.9</b>	<b>0.1</b>	<b>338.4</b>	<b>21.3</b>	<b>522.5</b>	<b>†</b>	<b>18.5</b>	<b>40.2</b>	<b>26.4</b>	<b>22.9</b>	<b>507.2</b>	<b>221.7</b>	<b>146.9</b>	<b>49.6</b>	<b>290.4</b>	<b>2239.0</b>

Product (million tonnes)	To															Total
	Canada	Mexico	US	S. & Cent. America	Europe	Russia	Other CIS	Middle East	Africa	Australasia	China	India	Japan	Singapore	Other Asia Pacific	
Canada	-	0.6	29.2	1.0	1.7	†	†	†	†	†	0.9	0.1	0.8	0.1	0.4	<b>34.7</b>
Mexico	†	-	2.4	1.1	0.1	-	†	†	0.1	†	0.2	†	0.2	0.7	†	<b>4.8</b>
US	26.3	55.5	-	83.0	23.6	†	†	2.5	8.6	1.1	2.7	10.2	13.1	2.5	22.1	<b>251.1</b>
S. & Cent. America	0.2	0.9	9.2	-	3.8	†	†	0.6	2.6	0.1	1.3	0.4	0.4	2.7	1.3	<b>23.3</b>
Europe	4.8	1.5	24.4	9.6	-	0.4	1.1	13.6	43.9	1.2	2.4	0.6	0.6	16.2	5.1	<b>125.4</b>
Russia	0.3	0.1	18.3	2.8	106.1	-	4.2	3.3	4.8	†	3.1	0.9	1.1	9.4	10.1	<b>164.6</b>
Other CIS	0.3	†	0.6	0.1	8.2	8.8	-	0.1	0.6	†	0.4	0.1	†	0.1	1.2	<b>20.4</b>
Iraq	-	-	0.4	†	†	-	†	0.4	†	-	0.1	1.4	-	6.9	1.7	<b>11.0</b>
Kuwait	†	-	†	0.2	1.8	-	†	4.0	3.5	†	2.4	2.1	1.4	1.8	8.1	<b>25.4</b>
Saudi Arabia	†	-	1.4	0.4	16.5	†	†	5.7	10.3	0.2	3.5	8.1	1.3	3.3	6.7	<b>57.4</b>
UAE	†	†	1.1	1.0	6.7	†	†	5.4	11.2	0.7	6.6	7.9	4.5	8.9	23.1	<b>77.0</b>
Other Middle East	†	†	1.2	0.2	8.1	†	0.1	13.2	5.1	0.2	6.9	6.6	4.4	1.9	14.3	<b>62.1</b>
North Africa	†	-	5.0	1.4	10.3	†	†	0.7	0.4	†	1.6	0.9	0.3	0.7	4.7	<b>26.1</b>
West Africa	†	†	1.3	0.6	2.1	†	†	†	0.5	†	1.7	†	†	0.2	1.2	<b>7.7</b>
East & S. Africa	†	†	†	0.2	0.3	†	†	1.3	0.7	†	†	†	†	†	0.3	<b>3.0</b>
Australasia	†	†	0.1	0.1	1.2	†	†	†	†	-	1.2	0.1	1.3	0.6	1.0	<b>5.5</b>
China	0.3	1.3	0.5	3.7	2.5	†	0.1	1.6	2.8	3.4	-	0.8	0.8	15.0	34.1	<b>66.9</b>
India	†	†	4.6	1.5	10.4	†	†	13.5	10.9	0.6	1.1	-	1.0	5.3	11.9	<b>60.7</b>
Japan	0.1	0.3	1.7	1.5	0.2	†	†	0.1	0.1	4.6	2.4	0.1	-	1.4	6.9	<b>19.3</b>
Singapore	0.1	0.1	1.2	1.2	1.7	†	†	1.2	3.7	9.3	7.1	1.8	0.5	-	58.2	<b>86.1</b>
Other Asia Pacific	0.1	0.6	7.1	0.9	3.8	0.1	0.2	2.3	5.3	11.0	32.8	2.4	8.0	34.8	-	<b>109.3</b>
<b>Total imports</b>	<b>32.5</b>	<b>60.9</b>	<b>109.9</b>	<b>110.2</b>	<b>209.2</b>	<b>9.4</b>	<b>5.6</b>	<b>69.3</b>	<b>115.1</b>	<b>32.2</b>	<b>78.4</b>	<b>44.4</b>	<b>39.7</b>	<b>112.4</b>	<b>212.7</b>	<b>1241.9</b>

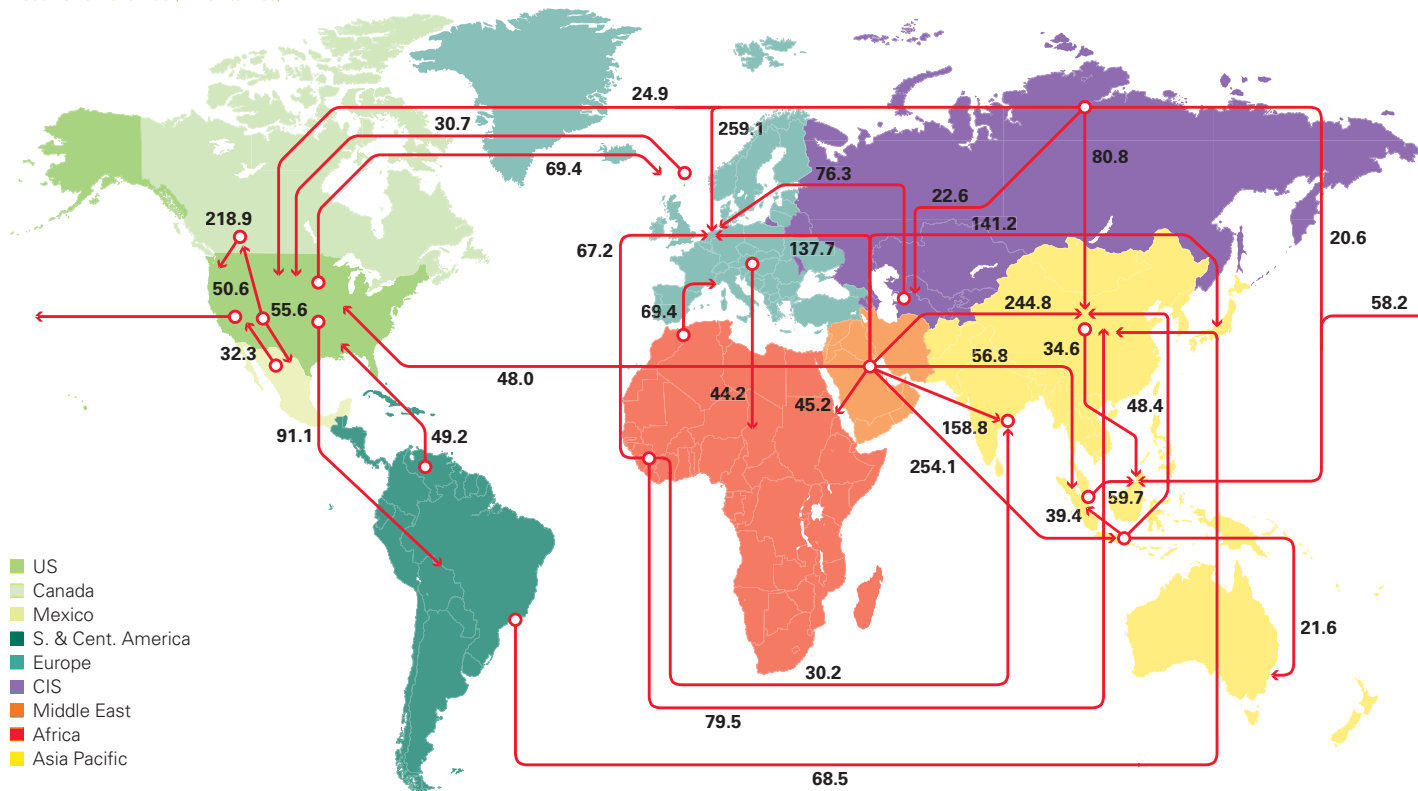
† Less than 0.05.

**Notes:** Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded.

Crude imports and exports include condensates.

## Major trade movements 2019

Trade flows worldwide (million tonnes)



## Oil trade in 2018 and 2019

Million tonnes	2018				2019			
	Crude imports	Product imports	Crude exports	Product exports	Crude imports	Product imports	Crude exports	Product exports
Canada	26.6	35.7	191.5	32.0	32.9	32.5	197.0	34.7
Mexico	0.1	61.6	59.8	5.4	0.1	60.9	58.1	4.8
US	386.8	104.0	92.2	248.9	338.4	109.9	137.7	251.1
S. & Cent. America	24.4	105.9	156.9	28.2	21.3	110.2	146.2	23.3
Europe	514.4	218.4	25.7	138.9	522.5	209.2	26.7	125.4
Russia	0.5	9.4	274.7	170.4	†	9.4	286.1	164.6
Other CIS	18.6	10.0	86.8	21.9	18.5	5.6	91.5	20.4
Iraq	†	3.4	201.1	8.6	†	4.5	200.8	11.0
Kuwait	†	0.7	107.4	25.1	†	0.8	99.2	25.4
Saudi Arabia	†	10.9	367.1	60.6	0.1	11.4	358.4	57.4
United Arab Emirates	7.3	32.4	126.5	75.1	12.3	34.9	139.4	77.0
Other Middle East	24.9	16.7	191.3	59.6	27.8	17.8	125.2	62.1
North Africa	7.3	38.9	92.3	26.6	6.4	37.6	93.4	26.1
West Africa	1.0	41.7	218.9	7.5	0.4	38.5	219.0	7.7
East & S. Africa	21.5	34.4	6.3	3.0	19.6	39.0	5.5	3.0
Australasia	23.4	32.6	9.0	4.0	22.9	32.2	13.0	5.5
China	463.8	81.8	2.4	54.7	507.2	78.4	0.4	66.9
India	226.1	31.3	0.1	58.2	221.7	44.4	0.1	60.7
Japan	150.7	43.7	†	18.0	146.9	39.7	†	19.3
Singapore	51.8	120.4	0.6	88.9	49.6	112.4	1.9	86.1
Other Asia Pacific	300.0	209.0	38.9	107.2	290.4	212.7	39.2	109.3
<b>Total World</b>	<b>2249.3</b>	<b>1242.9</b>	<b>2249.3</b>	<b>1242.9</b>	<b>2239.0</b>	<b>1241.9</b>	<b>2239.0</b>	<b>1241.9</b>
<b>Thousand barrels daily</b>								
Canada	534	747	3845	668	660	679	3956	726
Mexico	3	1287	1200	114	1	1273	1167	101
US	7768	2175	1851	5203	6796	2298	2766	5250
S. & Cent. America	490	2215	3150	590	427	2303	2936	486
Europe	10330	4566	516	2904	10494	4373	537	2622
Russia	10	196	5517	3563	†	197	5746	3440
Other CIS	373	210	1743	458	372	117	1838	427
Iraq	†	71	4039	181	†	94	4032	230
Kuwait	†	15	2156	524	†	17	1992	531
Saudi Arabia	†	228	7372	1266	1	238	7198	1199
United Arab Emirates	147	677	2540	1569	248	729	2800	1610
Other Middle East	501	348	3842	1246	558	372	2514	1299
North Africa	147	812	1853	557	129	785	1875	545
West Africa	19	873	4395	157	9	806	4399	161
East & S. Africa	432	719	127	62	393	815	110	62
Australasia	469	681	182	84	459	672	262	115
China	9314	1711	48	1144	10186	1639	9	1398
India	4541	655	1	1218	4451	928	1	1268
Japan	3027	913	†	376	2950	830	†	404
Singapore	1040	2516	12	1858	997	2350	38	1799
Other Asia Pacific	6025	4368	781	2241	5833	4446	788	2286
<b>Total World</b>	<b>45172</b>	<b>25982</b>	<b>45172</b>	<b>25982</b>	<b>44964</b>	<b>25961</b>	<b>44964</b>	<b>25961</b>

†Less than 0.05.

‡Less than 0.5.

**Notes:** Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded. Crude imports and exports include condensates.

## Total proved reserves

	At end 1999 Trillion cubic metres	At end 2009 Trillion cubic metres	At end 2018 Trillion cubic metres	At end 2019			
				Trillion cubic metres	Trillion cubic feet	Share of total	R/P ratio
Canada	1.6	1.6	1.9	2.0	70.1	1.0%	11.5
Mexico	0.9	0.3	0.2	0.2	6.3	0.1%	5.3
US	4.5	7.4	12.9	12.9	454.6	6.5%	14.0
<b>Total North America</b>	<b>7.0</b>	<b>9.4</b>	<b>15.0</b>	<b>15.0</b>	<b>531.0</b>	<b>7.6%</b>	<b>13.3</b>
Argentina	0.7	0.4	0.4	0.4	12.7	0.2%	8.7
Bolivia	0.1	0.3	0.2	0.2	7.5	0.1%	14.2
Brazil	0.2	0.4	0.4	0.4	13.3	0.2%	14.5
Colombia	0.2	0.1	0.1	0.1	3.6	0.1%	7.8
Peru	0.2	0.3	0.3	0.3	10.2	0.1%	21.4
Trinidad & Tobago	0.6	0.4	0.3	0.3	10.2	0.1%	8.4
Venezuela	4.6	5.6	6.3	6.3	222.4	3.2%	238.0
Other S. & Cent. America	0.1	0.1	0.1	0.1	2.2	♦	17.5
<b>Total S. &amp; Cent. America</b>	<b>6.8</b>	<b>7.6</b>	<b>8.0</b>	<b>8.0</b>	<b>282.1</b>	<b>4.0%</b>	<b>46.0</b>
Denmark	0.1	0.1	†	†	†	♦	0.0
Germany	0.2	0.1	†	†	0.8	♦	4.1
Italy	0.2	0.1	†	†	1.5	♦	9.4
Netherlands	1.6	1.2	0.2	0.2	6.1	0.1%	6.2
Norway	1.2	2.0	1.6	1.5	54.1	0.8%	13.4
Poland	0.1	0.1	0.1	0.1	2.6	♦	18.1
Romania	0.3	0.6	0.1	0.1	3.6	0.1%	10.6
Ukraine	0.8	0.7	1.1	1.1	38.5	0.5%	55.7
United Kingdom	0.8	0.3	0.2	0.2	6.6	0.1%	4.7
Other Europe	0.2	0.2	0.1	0.1	4.8	0.1%	18.4
<b>Total Europe</b>	<b>5.6</b>	<b>5.3</b>	<b>3.4</b>	<b>3.4</b>	<b>118.7</b>	<b>1.7%</b>	<b>14.2</b>
Azerbaijan	1.0	1.0	2.1	2.8	100.5	1.4%	117.0
Kazakhstan	2.0	2.0	2.7	2.7	93.7	1.3%	113.4
Russian Federation	32.9	34.0	38.0	38.0	1340.5	19.1%	55.9
Turkmenistan	2.6	8.2	19.5	19.5	688.1	9.8%	308.5
Uzbekistan	1.2	1.3	1.2	1.2	42.7	0.6%	21.5
Other CIS	†	†	†	†	1.2	♦	110.9
<b>Total CIS</b>	<b>39.8</b>	<b>46.6</b>	<b>63.6</b>	<b>64.2</b>	<b>2266.8</b>	<b>32.3%</b>	<b>75.8</b>
Bahrain	0.3	0.2	0.2	0.1	2.7	♦	4.6
Iran	23.6	28.0	32.0	32.0	1130.7	16.1%	131.1
Iraq	3.1	3.0	3.5	3.5	125.1	1.8%	328.7
Israel	†	0.1	0.4	0.5	16.4	0.2%	46.2
Kuwait	1.4	1.7	1.7	1.7	59.9	0.9%	92.1
Oman	0.8	0.5	0.7	0.7	23.5	0.3%	18.3
Qatar	11.5	26.2	24.7	24.7	871.6	12.4%	138.6
Saudi Arabia	5.8	7.4	5.9	6.0	211.3	3.0%	52.7
Syria	0.2	0.3	0.3	0.3	9.5	0.1%	72.1
United Arab Emirates	5.8	5.9	5.9	5.9	209.7	3.0%	95.0
Yemen	0.3	0.3	0.3	0.3	9.4	0.1%	458.2
Other Middle East	†	†	†	†	0.2	♦	47.1
<b>Total Middle East</b>	<b>53.0</b>	<b>73.6</b>	<b>75.6</b>	<b>75.6</b>	<b>2670.0</b>	<b>38.0%</b>	<b>108.7</b>
Algeria	4.4	4.3	4.3	4.3	153.1	2.2%	50.3
Egypt	1.2	2.1	2.1	2.1	75.5	1.1%	32.9
Libya	1.2	1.5	1.4	1.4	50.5	0.7%	151.5
Nigeria	3.3	5.0	5.4	5.4	190.4	2.7%	109.4
Other Africa	0.8	1.2	1.4	1.6	57.5	0.8%	58.1
<b>Total Africa</b>	<b>11.0</b>	<b>14.2</b>	<b>14.7</b>	<b>14.9</b>	<b>527.0</b>	<b>7.5%</b>	<b>62.7</b>
Australia	1.6	2.8	2.4	2.4	84.4	1.2%	15.6
Bangladesh	0.3	0.4	0.1	0.1	4.3	0.1%	4.2
Brunei	0.4	0.3	0.2	0.2	8.3	0.1%	18.0
China	1.4	2.9	6.4	8.4	296.6	4.2%	47.3
India	0.6	1.1	1.3	1.3	46.9	0.7%	49.4
Indonesia	2.7	3.1	2.8	1.4	50.5	0.7%	21.2
Malaysia	1.1	1.1	0.9	0.9	33.4	0.5%	12.0
Myanmar	0.3	0.3	1.2	1.2	41.3	0.6%	68.4
Pakistan	0.4	0.6	0.4	0.4	14.2	0.2%	11.9
Papua New Guinea	†	0.1	0.2	0.2	6.2	0.1%	14.2
Thailand	0.4	0.3	0.2	0.2	6.3	0.1%	5.0
Vietnam	0.2	0.7	0.6	0.6	22.8	0.3%	65.6
Other Asia Pacific	0.3	0.3	0.2	0.2	8.4	0.1%	13.9
<b>Total Asia Pacific</b>	<b>9.5</b>	<b>13.9</b>	<b>16.9</b>	<b>17.7</b>	<b>623.5</b>	<b>8.9%</b>	<b>26.3</b>
<b>Total World</b>	<b>132.8</b>	<b>170.5</b>	<b>197.1</b>	<b>198.8</b>	<b>7019.0</b>	<b>100.0%</b>	<b>49.8</b>
of which: OECD	13.2	16.2	20.1	20.1	709.5	10.1%	13.3
Non-OECD	119.6	154.3	177.0	178.7	6309.5	89.9%	72.0
European Union	3.5	2.5	0.7	0.7	23.9	0.3%	6.7

†Less than 0.05.

♦Less than 0.05%.

**Notes:** Total proved reserves of natural gas – generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for total proved natural gas does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at a company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent bp's view of proved reserves by country.

**Reserves-to-production (R/P) ratio** – if the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate.

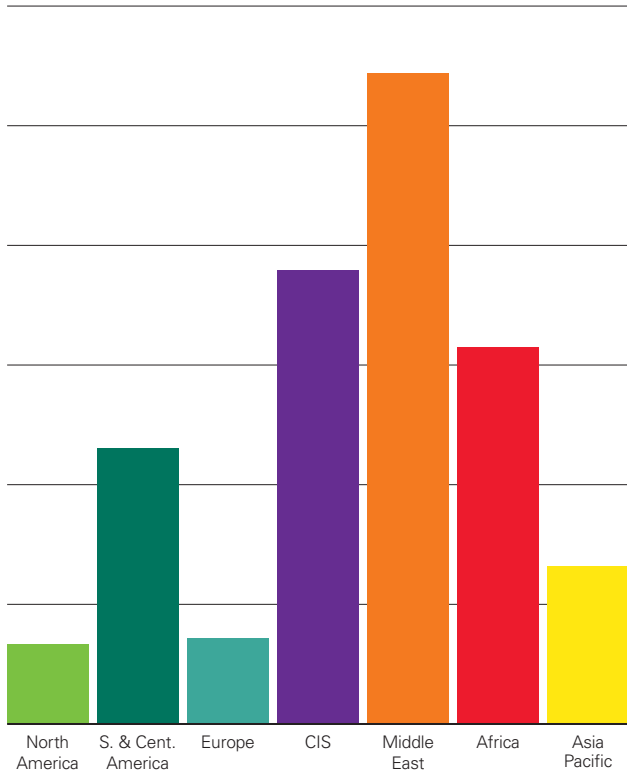
**Source of data** – the estimates in this table have been compiled using a combination of primary official sources and third-party data from Cedigaz and the OPEC Secretariat.

As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and have been standardized using a gross calorific value (GCV) of 40 MJ/m<sup>3</sup>.

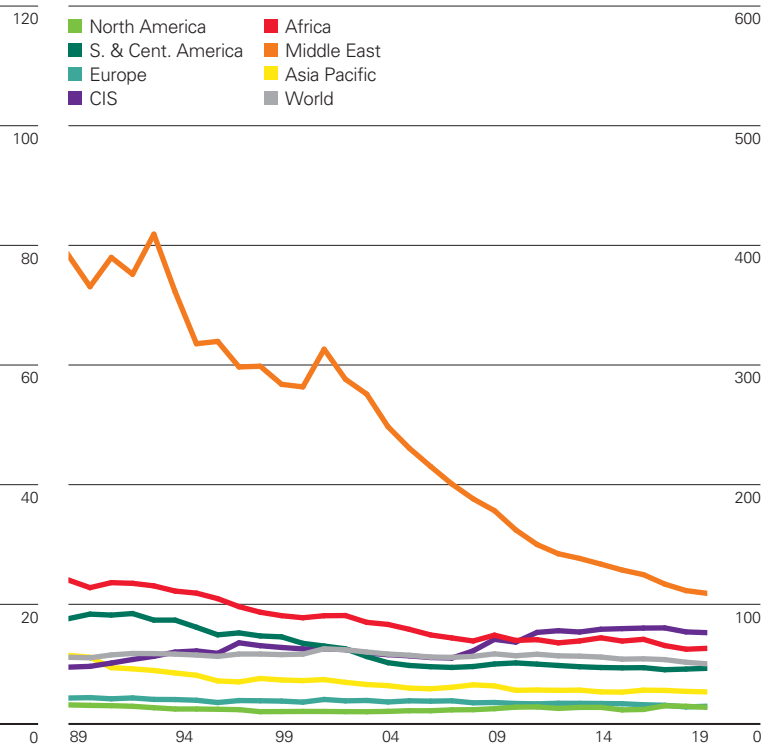
## Reserves-to-production (R/P) ratios

Years

### 2019 by region



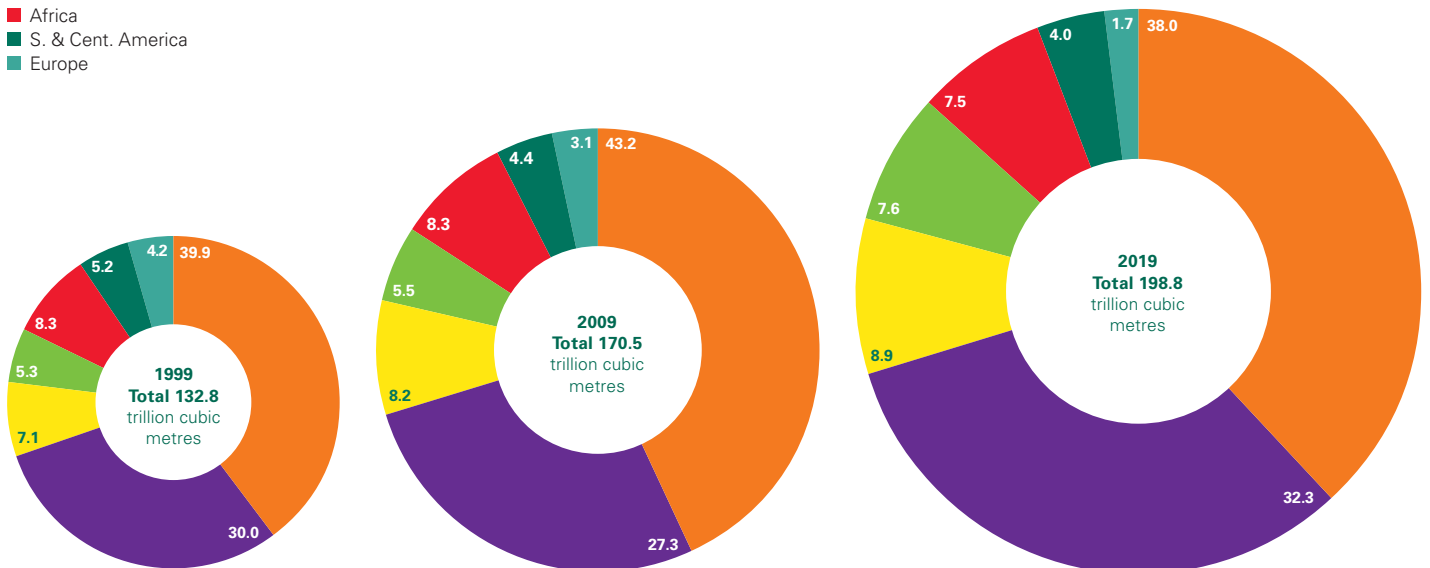
### History



World proved gas reserves increased by 1.7 Tcm to 198.8 Tcm in 2019. China (2 Tcm) and Azerbaijan (0.7 Tcm) provided the largest increments, although this was partially offset by a 1.3 Tcm decline in Indonesian reserves. Russia (38 Tcm), Iran (32 Tcm) and Qatar (24.7 Tcm) are the countries with the largest reserves. The current global R/P ratio shows that gas reserves in 2019 accounted for 49.8 years of current production. The Middle East (108.7 years) and CIS (75.8 years) are the regions with the highest R/P ratio.

## Distribution of proved reserves in 1999, 2009 and 2019

Percentage





## Natural gas: Production in billion cubic metres\*

Billion cubic metres	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	155.1	149.6	151.1	150.3	151.9	159.0	160.8	171.8	175.6	179.0	<b>173.1</b>	-3.3%	0.7%	4.3%
Mexico	52.6	51.2	52.1	50.9	52.5	51.3	47.9	43.7	38.3	35.2	<b>34.0</b>	-3.4%	-2.9%	0.9%
US	557.6	575.2	617.4	649.1	655.7	704.7	740.3	727.4	746.2	835.9	<b>920.9</b>	10.2%	4.3%	23.1%
<b>Total North America</b>	<b>765.2</b>	<b>775.9</b>	<b>820.5</b>	<b>850.3</b>	<b>860.1</b>	<b>915.0</b>	<b>949.0</b>	<b>942.8</b>	<b>960.0</b>	<b>1050.1</b>	<b>1128.0</b>	<b>7.4%</b>	<b>3.3%</b>	<b>28.3%</b>
Argentina	40.3	39.0	37.7	36.7	34.6	34.5	35.5	37.3	37.1	39.4	<b>41.6</b>	5.6%	-0.8%	1.0%
Bolivia	11.9	13.7	15.0	17.1	19.6	20.3	19.6	18.8	18.2	17.0	<b>15.0</b>	-12.2%	2.1%	0.4%
Brazil	12.3	15.0	17.2	19.8	21.9	23.3	23.8	24.1	27.2	25.2	<b>25.8</b>	2.6%	5.8%	0.6%
Colombia	10.1	10.8	10.5	11.5	13.2	12.3	11.6	12.0	12.3	12.9	<b>13.2</b>	2.6%	4.0%	0.3%
Peru	3.6	7.3	11.5	12.0	12.4	13.1	12.7	14.0	13.0	12.8	<b>13.5</b>	5.6%	13.8%	0.3%
Trinidad & Tobago	38.6	40.3	38.7	38.5	38.7	38.1	36.0	31.3	31.9	34.0	<b>34.6</b>	1.8%	-1.0%	0.9%
Venezuela	31.8	30.5	30.2	31.9	30.6	31.8	36.1	37.2	38.6	31.6	<b>26.5</b>	-16.3%	-0.6%	0.7%
Other S. & Cent. America	3.8	3.8	3.2	3.0	2.7	2.6	2.9	3.1	3.1	3.3	<b>3.5</b>	5.2%	-1.5%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>152.3</b>	<b>160.4</b>	<b>164.1</b>	<b>170.6</b>	<b>173.8</b>	<b>176.0</b>	<b>178.0</b>	<b>177.9</b>	<b>181.4</b>	<b>176.2</b>	<b>173.6</b>	<b>-1.5%</b>	<b>1.1%</b>	<b>4.4%</b>
Denmark	8.8	8.5	6.9	6.0	5.0	4.8	4.8	4.7	5.1	4.3	<b>3.2</b>	-25.4%	-8.5%	0.1%
Germany	12.7	11.1	10.5	9.5	8.6	8.1	7.5	6.9	6.4	5.5	<b>5.3</b>	-3.8%	-8.6%	0.1%
Italy	7.6	8.0	8.0	8.2	7.4	6.8	6.4	5.5	5.3	5.2	<b>4.6</b>	-10.9%	-5.2%	0.1%
Netherlands	65.5	75.3	69.5	68.4	72.4	60.4	45.9	44.3	38.5	32.3	<b>28.1</b>	-13.0%	-7.6%	0.7%
Norway	103.6	106.4	100.5	113.9	107.9	108.0	116.2	115.9	123.2	121.3	<b>114.4</b>	-5.7%	2.0%	2.9%
Poland	4.3	4.3	4.5	4.5	4.4	4.3	4.3	4.1	4.0	4.0	<b>4.0</b>	0.1%	-0.7%	0.1%
Romania	10.4	10.0	10.1	10.1	10.0	10.2	10.2	9.1	10.0	10.0	<b>9.7</b>	-2.8%	-0.5%	0.2%
Ukraine	20.3	19.4	19.5	19.4	20.2	20.2	18.8	19.0	19.4	19.7	<b>19.6</b>	-0.5%	-0.3%	0.5%
United Kingdom	61.2	57.9	46.1	39.2	37.0	37.4	40.7	41.7	41.9	40.5	<b>39.6</b>	-2.2%	-5.7%	1.0%
Other Europe	9.3	9.3	9.2	8.4	7.2	6.3	6.1	8.7	9.0	8.5	<b>7.4</b>	-12.9%	-1.1%	0.2%
<b>Total Europe</b>	<b>303.7</b>	<b>310.4</b>	<b>284.8</b>	<b>287.5</b>	<b>280.0</b>	<b>266.6</b>	<b>261.0</b>	<b>259.9</b>	<b>262.8</b>	<b>251.2</b>	<b>235.9</b>	<b>-6.1%</b>	<b>-2.4%</b>	<b>5.9%</b>
Azerbaijan	15.9	16.3	16.0	16.8	17.4	18.4	18.8	18.3	17.8	19.0	<b>24.3</b>	27.7%	1.8%	0.6%
Kazakhstan	19.0	20.4	20.1	19.8	21.4	21.7	22.0	22.9	23.4	23.9	<b>23.4</b>	-2.2%	2.7%	0.6%
Russian Federation	536.2	598.4	616.8	601.9	614.5	591.2	584.4	589.3	635.6	669.1	<b>679.0</b>	1.5%	0.9%	17.0%
Turkmenistan	33.3	40.1	56.3	59.0	59.0	63.5	65.9	63.2	58.7	61.5	<b>63.2</b>	2.7%	♦	1.6%
Uzbekistan	58.4	57.1	56.6	56.5	55.9	56.3	53.6	53.1	53.4	57.2	<b>56.3</b>	-1.6%	-0.7%	1.4%
Other CIS	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	<b>0.3</b>	2.0%	0.2%	♦
<b>Total CIS</b>	<b>663.2</b>	<b>732.7</b>	<b>766.2</b>	<b>754.3</b>	<b>768.5</b>	<b>751.4</b>	<b>745.0</b>	<b>747.2</b>	<b>789.1</b>	<b>831.1</b>	<b>846.5</b>	<b>1.9%</b>	<b>0.8%</b>	<b>21.2%</b>
Bahrain	12.1	12.4	12.6	13.1	14.0	14.7	14.8	14.4	14.5	14.6	<b>16.9</b>	15.4%	2.0%	0.4%
Iran	135.7	143.9	151.0	156.9	157.5	175.5	183.5	199.3	219.5	238.3	<b>244.2</b>	2.4%	6.8%	6.1%
Iraq	6.9	7.1	6.3	6.3	7.1	7.5	7.3	9.9	10.1	10.6	<b>10.8</b>	1.9%	5.1%	0.3%
Kuwait	10.9	11.1	12.9	14.7	15.5	14.3	16.1	16.4	16.2	16.9	<b>18.4</b>	9.2%	3.4%	0.5%
Oman	23.9	25.7	27.1	28.3	30.8	29.3	30.7	31.5	32.3	36.0	<b>36.3</b>	0.9%	4.1%	0.9%
Qatar	92.4	123.1	150.4	162.5	168.2	169.5	174.9	173.6	168.6	176.5	<b>178.1</b>	0.9%	8.3%	4.5%
Saudi Arabia	74.5	83.3	87.6	94.4	95.0	97.3	99.2	105.3	109.3	112.1	<b>113.6</b>	1.4%	3.9%	2.8%
Syria	6.1	8.4	7.4	6.1	5.0	4.6	4.1	3.5	3.5	3.6	<b>3.7</b>	3.6%	-4.3%	0.1%
United Arab Emirates	47.6	50.0	51.0	52.9	53.2	52.9	58.7	60.3	62.4	61.4	<b>62.5</b>	1.9%	2.3%	1.6%
Yemen	0.8	6.3	9.4	7.6	10.4	9.8	2.9	0.5	0.6	0.6	<b>0.6</b>	0.8%	n/a	♦
Other Middle East	2.7	3.3	4.2	2.5	6.3	7.3	8.1	9.0	9.5	10.1	<b>10.1</b>	0.1%	11.3%	0.3%
<b>Total Middle East</b>	<b>413.8</b>	<b>474.6</b>	<b>520.0</b>	<b>545.5</b>	<b>562.9</b>	<b>582.7</b>	<b>600.2</b>	<b>623.9</b>	<b>646.5</b>	<b>680.7</b>	<b>695.3</b>	<b>2.1%</b>	<b>5.7%</b>	<b>17.4%</b>
Algeria	76.6	77.4	79.6	78.4	79.3	80.2	81.4	91.4	93.0	93.8	<b>86.2</b>	-8.1%	1.3%	2.2%
Egypt	60.3	59.0	59.1	58.6	54.0	47.0	42.6	40.3	48.8	58.6	<b>64.9</b>	10.9%	0.3%	1.6%
Libya	15.1	16.0	7.5	11.6	12.2	11.8	11.0	9.4	8.6	8.3	<b>9.4</b>	14.0%	-5.8%	0.2%
Nigeria	23.2	30.9	36.4	39.2	33.1	40.0	47.6	42.6	47.2	48.3	<b>49.3</b>	2.1%	3.9%	1.2%
Other Africa	16.9	19.0	19.1	19.0	19.8	19.7	21.4	22.2	26.5	27.3	<b>28.0</b>	2.7%	5.1%	0.7%
<b>Total Africa</b>	<b>192.1</b>	<b>202.3</b>	<b>201.7</b>	<b>206.8</b>	<b>198.3</b>	<b>198.7</b>	<b>204.0</b>	<b>205.9</b>	<b>224.2</b>	<b>236.2</b>	<b>237.9</b>	<b>0.7%</b>	<b>1.5%</b>	<b>6.0%</b>
Australia	46.7	54.0	55.7	59.5	61.8	66.6	76.0	96.4	112.8	130.1	<b>153.5</b>	18.0%	12.1%	3.8%
Bangladesh	18.7	19.3	19.6	21.3	22.0	23.0	25.9	26.5	26.6	26.6	<b>28.7</b>	8.0%	5.0%	0.7%
Brunei	11.1	12.0	12.5	12.3	11.9	12.7	13.3	12.9	12.9	12.6	<b>13.0</b>	3.3%	0.6%	0.3%
China	85.9	96.5	106.2	111.5	121.8	131.2	135.7	137.9	149.2	161.5	<b>177.6</b>	9.9%	7.2%	4.5%
India	36.1	47.4	42.9	37.3	31.1	29.4	28.1	26.6	27.7	27.5	<b>26.9</b>	-2.1%	-0.7%	0.7%
Indonesia	78.0	87.0	82.7	78.3	77.6	76.4	76.2	75.1	72.7	72.8	<b>67.5</b>	-7.2%	-0.3%	1.7%
Malaysia	66.2	65.1	67.0	69.3	72.6	72.2	76.8	76.7	78.5	77.3	<b>78.8</b>	2.0%	1.1%	2.0%
Myanmar	11.4	12.2	12.6	12.5	12.9	16.5	19.2	18.3	17.8	17.1	<b>17.1</b>	-	3.4%	0.4%
Pakistan	34.7	35.3	35.3	36.6	35.6	35.0	35.0	34.7	34.7	34.2	<b>33.9</b>	-1.0%	-0.1%	0.8%
Thailand	29.4	33.7	33.8	38.4	38.9	39.1	37.5	37.3	35.9	34.7	<b>35.8</b>	3.0%	1.5%	0.9%
Vietnam	7.7	9.1	8.2	9.0	9.4	9.9	10.3	10.2	9.5	9.7	<b>9.9</b>	2.0%	2.9%	0.2%
Other Asia Pacific	18.5	18.2	18.3	18.0	18.7	23.6	29.4	30.2	30.2	28.1	<b>29.6</b>	5.5%	4.4%	0.7%
<b>Total Asia Pacific</b>	<b>444.6</b>	<b>489.8</b>	<b>494.7</b>	<b>504.0</b>	<b>514.2</b>	<b>535.5</b>	<b>563.5</b>	<b>582.8</b>	<b>608.5</b>	<b>632.0</b>	<b>672.1</b>	<b>6.3%</b>	<b>4.0%</b>	<b>16.8%</b>
<b>Total World</b>	<b>2934.9</b>	<b>3146.2</b>	<b>3251.9</b>	<b>3318.9</b>	<b>3357.8</b>	<b>3425.9</b>	<b>3500.6</b>	<b>3540.4</b>	<b>3672.5</b>	<b>3857.5</b>	<b>3989.3</b>	<b>3.4%</b>	<b>2.4%</b>	<b>100.0%</b>
of which: OECD	1094.9	1121.7	1141.9	1177.1	1184.8	1232.0	1271.5	1286.9	1323.3	1419.3	<b>1506.2</b>	6.1%	2.6%	37.8%
Non-OECD	1840.0	2024.5	2110.0	2141.8	2173.1	2193.9	2229.2	2253.4	2349.2	2438.3	<b>2483.2</b>	1.8%	2.4%	62.2%
European Union	178.8	183.5	163.5	153.1	150.9	137.4	124.9	124.1	119.3	109.3	<b>101.0</b>	-7.7%	-5.8%	2.5%

\*Excludes gas flared or recycled. Includes natural gas produced for gas-to-liquids transformation.

Source: includes data from Cedigaz, FGE MENAgas service.

♦Less than 0.05%.

n/a not available.

**Notes:** As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar); as they are derived directly from measures of energy content using an average conversion factor and have been standardized using a gross calorific value (GCV) of 40 MJ/m<sup>3</sup>, they do not necessarily equate with gas volumes expressed in specific national terms.

**Annual changes and shares of total are calculated using billion cubic metres figures.**

Natural gas production data expressed in billion cubic feet per day is available at [bp.com/statisticalreview](http://bp.com/statisticalreview).

## Natural gas: Production in exajoules\*

Exajoules	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	5.58	5.39	5.44	5.41	5.47	5.72	5.79	6.18	6.32	6.45	<b>6.23</b>	-3.3%	0.7%	4.3%
Mexico	1.89	1.84	1.88	1.83	1.89	1.85	1.73	1.57	1.38	1.27	<b>1.22</b>	-3.4%	-2.9%	0.9%
US	20.07	20.71	22.22	23.37	23.60	25.37	26.65	26.18	26.86	30.09	<b>33.15</b>	10.2%	4.3%	23.1%
<b>Total North America</b>	<b>27.55</b>	<b>27.93</b>	<b>29.54</b>	<b>30.61</b>	<b>30.96</b>	<b>32.94</b>	<b>34.16</b>	<b>33.94</b>	<b>34.56</b>	<b>37.80</b>	<b>40.61</b>	<b>7.4%</b>	<b>3.3%</b>	<b>28.3%</b>
Argentina	1.45	1.40	1.36	1.32	1.24	1.24	1.28	1.34	1.34	1.42	<b>1.50</b>	5.6%	-0.8%	1.0%
Bolivia	0.43	0.49	0.54	0.62	0.70	0.73	0.70	0.68	0.66	0.61	<b>0.54</b>	-12.2%	2.1%	0.4%
Brazil	0.44	0.54	0.62	0.71	0.79	0.84	0.86	0.87	0.98	0.91	<b>0.93</b>	2.6%	5.8%	0.6%
Colombia	0.36	0.39	0.38	0.41	0.48	0.44	0.42	0.43	0.44	0.46	<b>0.47</b>	2.6%	4.0%	0.3%
Peru	0.13	0.26	0.41	0.43	0.45	0.47	0.46	0.50	0.47	0.46	<b>0.49</b>	5.6%	13.8%	0.3%
Trinidad & Tobago	1.39	1.45	1.39	1.39	1.39	1.37	1.29	1.13	1.15	1.22	<b>1.24</b>	1.8%	-1.0%	0.9%
Venezuela	1.14	1.10	1.09	1.15	1.10	1.14	1.30	1.34	1.39	1.14	<b>0.95</b>	-16.3%	-0.6%	0.7%
Other S. & Cent. America	0.14	0.14	0.11	0.11	0.10	0.09	0.10	0.11	0.11	0.12	<b>0.13</b>	5.2%	-1.5%	0.1%
<b>Total S. &amp; Cent. America</b>	<b>5.48</b>	<b>5.78</b>	<b>5.91</b>	<b>6.14</b>	<b>6.26</b>	<b>6.34</b>	<b>6.41</b>	<b>6.40</b>	<b>6.53</b>	<b>6.34</b>	<b>6.25</b>	<b>-1.5%</b>	<b>1.1%</b>	<b>4.4%</b>
Denmark	0.32	0.31	0.25	0.22	0.18	0.17	0.17	0.17	0.18	0.15	<b>0.12</b>	-25.4%	-8.5%	0.1%
Germany	0.46	0.40	0.38	0.34	0.31	0.29	0.27	0.25	0.23	0.20	<b>0.19</b>	-3.8%	-8.6%	0.1%
Italy	0.27	0.29	0.29	0.30	0.27	0.25	0.23	0.20	0.19	0.19	<b>0.17</b>	-10.9%	-5.2%	0.1%
Netherlands	2.36	2.71	2.50	2.46	2.61	2.17	1.65	1.59	1.39	1.16	<b>1.01</b>	-13.0%	-7.6%	0.7%
Norway	3.73	3.83	3.62	4.10	3.89	3.89	4.18	4.17	4.44	4.37	<b>4.12</b>	-5.7%	2.0%	2.9%
Poland	0.15	0.15	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.14	<b>0.14</b>	0.1%	-0.7%	0.1%
Romania	0.37	0.36	0.36	0.36	0.36	0.37	0.37	0.33	0.36	0.36	<b>0.35</b>	-2.8%	-0.5%	0.2%
Ukraine	0.73	0.70	0.70	0.70	0.73	0.73	0.68	0.68	0.70	0.71	<b>0.71</b>	-0.5%	-0.3%	0.5%
United Kingdom	2.20	2.08	1.66	1.41	1.33	1.35	1.46	1.50	1.51	1.46	<b>1.43</b>	-2.2%	-5.7%	1.0%
Other Europe	0.33	0.34	0.33	0.30	0.26	0.23	0.22	0.31	0.32	0.30	<b>0.27</b>	-12.9%	-1.1%	0.2%
<b>Total Europe</b>	<b>10.93</b>	<b>11.17</b>	<b>10.25</b>	<b>10.35</b>	<b>10.08</b>	<b>9.60</b>	<b>9.39</b>	<b>9.36</b>	<b>9.46</b>	<b>9.04</b>	<b>8.49</b>	<b>-6.1%</b>	<b>-2.4%</b>	<b>5.9%</b>
Azerbaijan	0.57	0.59	0.57	0.61	0.63	0.66	0.68	0.66	0.64	0.69	<b>0.88</b>	27.7%	1.8%	0.6%
Kazakhstan	0.68	0.74	0.72	0.71	0.77	0.78	0.79	0.83	0.84	0.86	<b>0.84</b>	-2.2%	2.7%	0.6%
Russian Federation	19.30	21.54	22.21	21.67	22.12	21.28	21.04	21.21	22.88	24.09	<b>24.45</b>	1.5%	0.9%	17.0%
Turkmenistan	1.20	1.44	2.03	2.12	2.12	2.29	2.37	2.28	2.11	2.21	<b>2.27</b>	2.7%	♦	1.6%
Uzbekistan	2.10	2.06	2.04	2.03	2.01	2.03	1.93	1.91	1.92	2.06	<b>2.03</b>	-1.6%	-0.7%	1.4%
Other CIS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	<b>0.01</b>	2.0%	0.2%	♦
<b>Total CIS</b>	<b>23.87</b>	<b>26.38</b>	<b>27.58</b>	<b>27.16</b>	<b>27.67</b>	<b>27.05</b>	<b>26.82</b>	<b>26.90</b>	<b>28.41</b>	<b>29.92</b>	<b>30.47</b>	<b>1.9%</b>	<b>0.8%</b>	<b>21.2%</b>
Bahrain	0.44	0.45	0.45	0.47	0.50	0.53	0.53	0.52	0.52	0.53	<b>0.61</b>	15.4%	2.0%	0.4%
Iran	4.89	5.18	5.44	5.65	5.67	6.32	6.61	7.18	7.90	8.58	<b>8.79</b>	2.4%	6.8%	6.1%
Iraq	0.25	0.26	0.23	0.23	0.25	0.27	0.26	0.36	0.36	0.38	<b>0.39</b>	1.9%	5.1%	0.3%
Kuwait	0.39	0.40	0.46	0.53	0.56	0.51	0.58	0.59	0.58	0.61	<b>0.66</b>	9.2%	3.4%	0.5%
Oman	0.86	0.93	0.98	1.02	1.11	1.06	1.11	1.13	1.16	1.30	<b>1.31</b>	0.9%	4.1%	0.9%
Qatar	3.33	4.43	5.41	5.85	6.05	6.10	6.30	6.25	6.07	6.35	<b>6.41</b>	0.9%	8.3%	4.5%
Saudi Arabia	2.68	3.00	3.16	3.40	3.42	3.50	3.57	3.79	3.93	4.04	<b>4.09</b>	1.4%	3.9%	2.8%
Syria	0.22	0.30	0.27	0.22	0.18	0.17	0.15	0.13	0.13	0.13	<b>0.13</b>	3.6%	-4.3%	0.1%
United Arab Emirates	1.71	1.80	1.84	1.91	1.92	1.90	2.11	2.17	2.24	2.21	<b>2.25</b>	1.9%	2.3%	1.6%
Yemen	0.03	0.23	0.34	0.27	0.37	0.35	0.10	0.02	0.02	0.02	<b>0.02</b>	0.8%	n/a	♦
Other Middle East	0.10	0.12	0.15	0.09	0.23	0.26	0.29	0.33	0.34	0.36	<b>0.37</b>	0.1%	11.3%	0.3%
<b>Total Middle East</b>	<b>14.90</b>	<b>17.09</b>	<b>18.72</b>	<b>19.64</b>	<b>20.26</b>	<b>20.98</b>	<b>21.61</b>	<b>22.46</b>	<b>23.28</b>	<b>24.51</b>	<b>25.03</b>	<b>2.1%</b>	<b>5.7%</b>	<b>17.4%</b>
Algeria	2.76	2.79	2.87	2.82	2.86	2.89	2.93	3.29	3.35	3.38	<b>3.10</b>	-8.1%	1.3%	2.2%
Egypt	2.17	2.12	2.13	2.11	1.94	1.69	1.53	1.45	1.76	2.11	<b>2.34</b>	10.9%	0.3%	1.6%
Libya	0.54	0.58	0.27	0.42	0.44	0.43	0.40	0.34	0.31	0.30	<b>0.34</b>	14.0%	-5.8%	0.2%
Nigeria	0.83	1.11	1.31	1.41	1.19	1.44	1.71	1.53	1.70	1.74	<b>1.77</b>	2.1%	3.9%	1.2%
Other Africa	0.61	0.69	0.69	0.68	0.71	0.71	0.77	0.80	0.96	0.98	<b>1.01</b>	2.7%	5.1%	0.7%
<b>Total Africa</b>	<b>6.92</b>	<b>7.28</b>	<b>7.26</b>	<b>7.44</b>	<b>7.14</b>	<b>7.15</b>	<b>7.34</b>	<b>7.41</b>	<b>8.07</b>	<b>8.50</b>	<b>8.57</b>	<b>0.7%</b>	<b>1.5%</b>	<b>6.0%</b>
Australia	1.68	1.94	2.00	2.14	2.22	2.40	2.74	3.47	4.06	4.68	<b>5.52</b>	18.0%	12.1%	3.8%
Bangladesh	0.67	0.69	0.70	0.77	0.79	0.83	0.93	0.95	0.96	0.96	<b>1.03</b>	8.0%	5.0%	0.7%
Brunei	0.40	0.43	0.45	0.44	0.43	0.46	0.48	0.47	0.46	0.45	<b>0.47</b>	3.3%	0.6%	0.3%
China	3.09	3.48	3.82	4.01	4.39	4.72	4.88	4.97	5.37	5.82	<b>6.39</b>	9.9%	7.2%	4.5%
India	1.30	1.71	1.55	1.34	1.12	1.06	1.01	0.96	1.00	0.99	<b>0.97</b>	-2.1%	-0.7%	0.7%
Indonesia	2.81	3.13	2.98	2.82	2.79	2.75	2.74	2.70	2.62	2.62	<b>2.43</b>	-7.2%	-0.3%	1.7%
Malaysia	2.38	2.34	2.41	2.49	2.61	2.60	2.77	2.76	2.82	2.78	<b>2.84</b>	2.0%	1.1%	2.0%
Myanmar	0.41	0.44	0.45	0.45	0.46	0.60	0.69	0.66	0.64	0.61	<b>0.61</b>	-	3.4%	0.4%
Pakistan	1.25	1.27	1.27	1.32	1.28	1.26	1.26	1.25	1.25	1.23	<b>1.22</b>	-1.0%	-0.1%	0.8%
Thailand	1.06	1.21	1.22	1.38	1.40	1.41	1.35	1.34	1.29	1.25	<b>1.29</b>	3.0%	1.5%	0.9%
Vietnam	0.28	0.33	0.29	0.32	0.34	0.35	0.37	0.37	0.34	0.35	<b>0.35</b>	2.0%	2.9%	0.2%
Other Asia Pacific	0.67	0.65	0.66	0.65	0.67	0.85	1.06	1.09	1.09	1.01	<b>1.07</b>	5.5%	4.4%	0.7%
<b>Total Asia Pacific</b>	<b>16.01</b>	<b>17.63</b>	<b>17.81</b>	<b>18.14</b>	<b>18.51</b>	<b>19.28</b>	<b>20.28</b>	<b>20.98</b>	<b>21.90</b>	<b>22.75</b>	<b>24.20</b>	<b>6.3%</b>	<b>4.0%</b>	<b>16.8%</b>
<b>Total World</b>	<b>105.66</b>	<b>113.26</b>	<b>117.07</b>	<b>119.48</b>	<b>120.88</b>	<b>123.33</b>	<b>126.02</b>	<b>127.45</b>	<b>132.21</b>	<b>138.87</b>	<b>143.62</b>	<b>3.4%</b>	<b>2.4%</b>	<b>100.0%</b>
of which: OECD	39.42	40.38	41.11	42.37	42.65	44.35	45.77	46.33	47.64	51.09	<b>54.22</b>	6.1%	2.6%	37.8%
Non-OECD	66.24	72.88	75.96	77.11	78.23	78.98	80.25	81.12	84.57	87.78	<b>89.39</b>	1.8%	2.4%	62.2%
European Union	6.44	6.60	5.89	5.51	5.43	4.94	4.50	4.47	4.29	3.94	<b>3.63</b>	-7.7%	-5.8%	2.5%

\*Excludes gas flared or recycled. Includes natural gas produced for gas-to-liquids transformation.

Source: includes data from Cedigaz, FGE MENAgas service.

♦Less than 0.05%.

n/a not available.

Note: Annual changes and shares of total are calculated using exajoules figures.

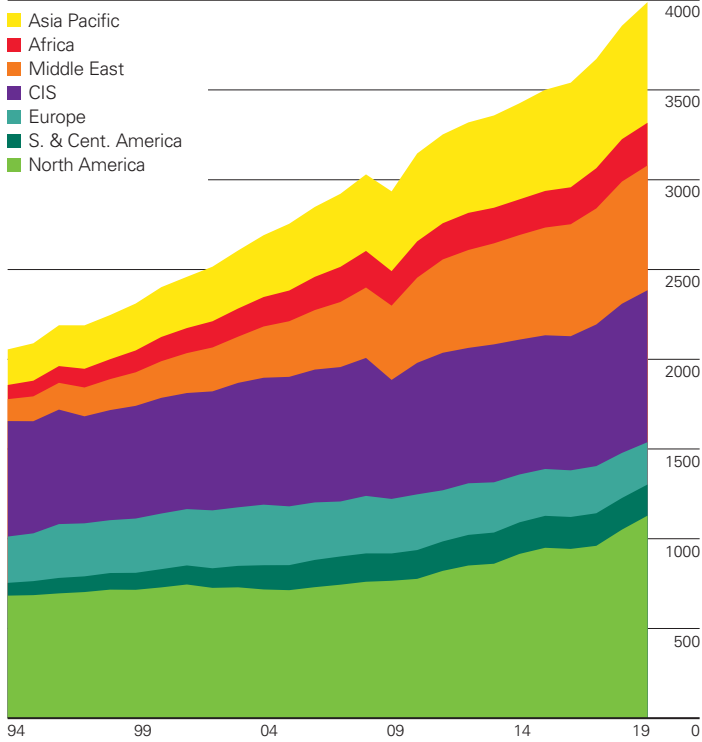






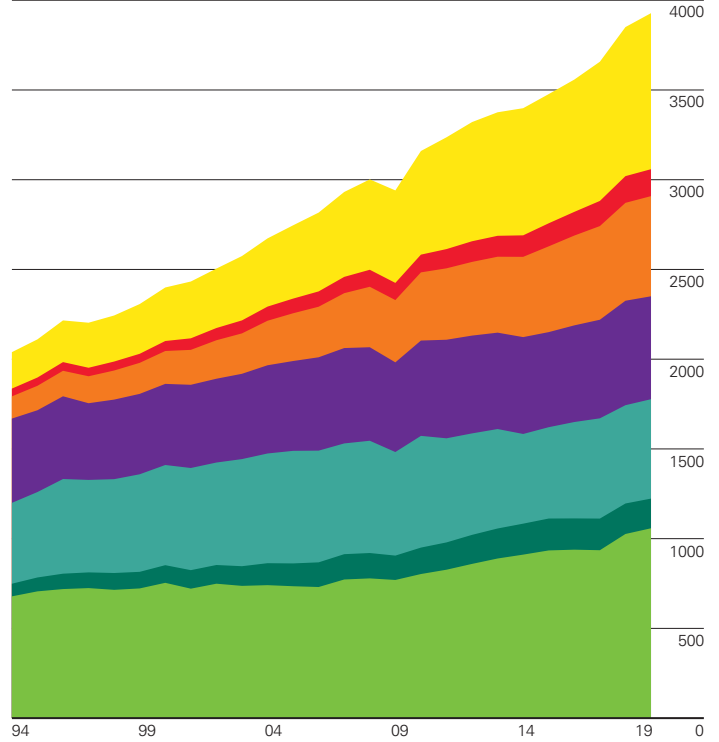
### Natural gas: Production by region

Billion cubic metres



### Natural gas: Consumption by region

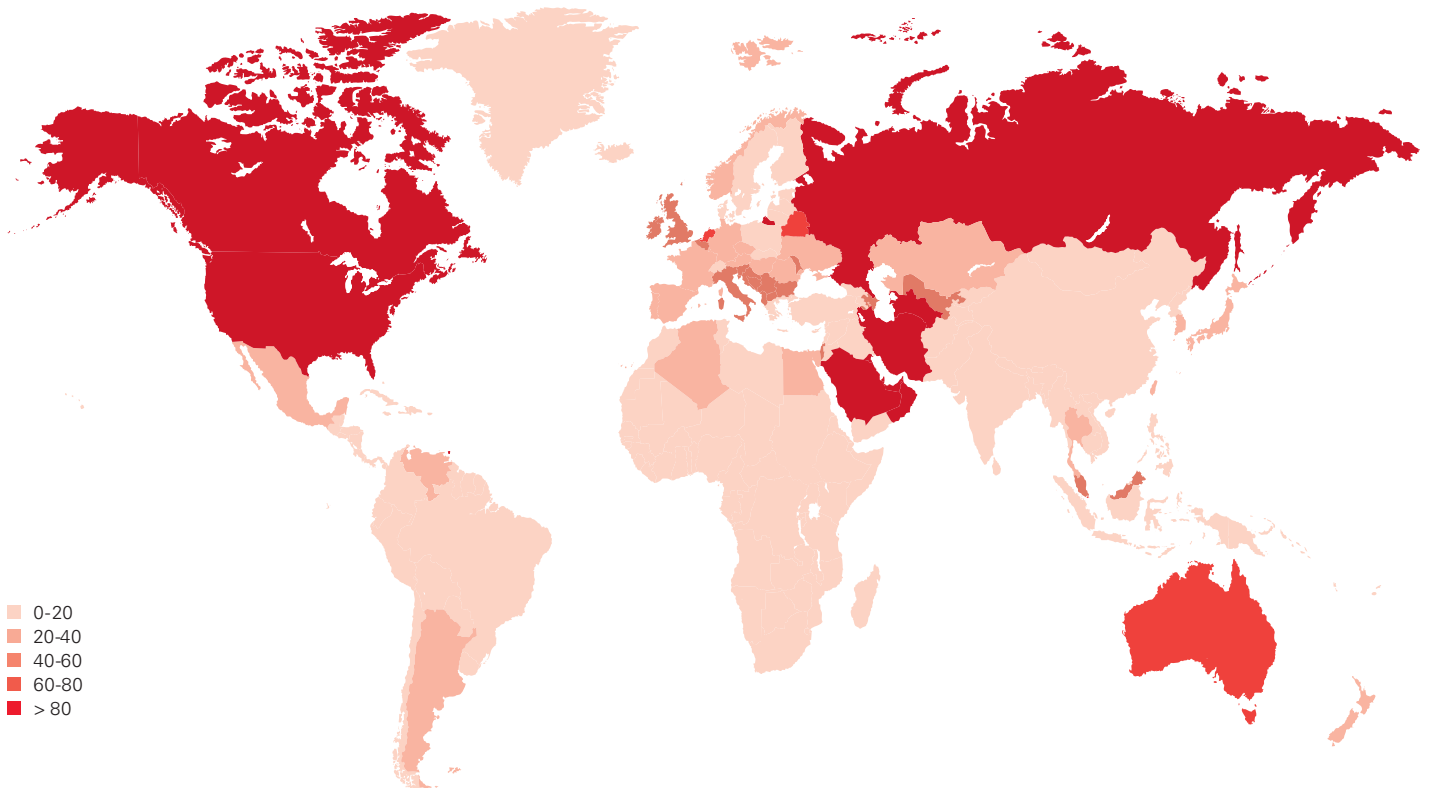
Billion cubic metres



Natural gas consumption increased by 78 billion cubic metres (bcm), or 2%, well below the strong growth seen in 2018 (5.3%). Growth was driven by the US (27 bcm) and China (24 bcm), while Russia and Japan saw the largest declines (10 and 8 bcm respectively). Gas production grew by 132 bcm (3.4%), with the US accounting for almost two-thirds of this increase (85 bcm). Australia (23 bcm) and China (16 bcm) were also key contributors to growth.

### Natural gas: Consumption per capita 2019

GJ per capita



- 0-20
- 20-40
- 40-60
- 60-80
- > 80

## Prices

US dollars per million Btu	LNG		Natural gas					Crude oil OECD countries CIF <sup>6</sup>
	Japan CIF <sup>1</sup>	Japan Korea Marker (JKM) <sup>2</sup>	Average German Import Price <sup>3</sup>	UK (Heren NBP Index) <sup>4</sup>	Netherlands TTF (DA Heren Index) <sup>4</sup>	US Henry Hub <sup>5</sup>	Canada (Alberta) <sup>5</sup>	
1989	3.28	-	2.00	-	-	1.70	-	3.01
1990	3.64	-	2.78	-	-	1.64	1.05	3.82
1991	3.99	-	3.23	-	-	1.49	0.89	3.33
1992	3.62	-	2.70	-	-	1.77	0.98	3.19
1993	3.52	-	2.51	-	-	2.12	1.69	2.82
1994	3.18	-	2.35	-	-	1.92	1.45	2.70
1995	3.46	-	2.43	-	-	1.69	0.89	2.96
1996	3.66	-	2.50	1.87	-	2.76	1.12	3.54
1997	3.91	-	2.66	1.96	-	2.53	1.36	3.29
1998	3.05	-	2.33	1.86	-	2.08	1.42	2.16
1999	3.14	-	1.86	1.58	-	2.27	2.00	2.98
2000	4.72	-	2.91	2.71	-	4.23	3.75	4.83
2001	4.64	-	3.67	3.17	-	4.07	3.61	4.08
2002	4.27	-	3.21	2.37	-	3.33	2.57	4.17
2003	4.77	-	4.06	3.33	-	5.63	4.83	4.89
2004	5.18	-	4.30	4.46	-	5.85	5.03	6.27
2005	6.05	-	5.83	7.38	6.07	8.79	7.25	8.74
2006	7.14	-	7.87	7.87	7.46	6.76	5.83	10.66
2007	7.73	-	7.99	6.01	5.93	6.95	6.17	11.95
2008	12.55	-	11.60	10.79	10.66	8.85	7.99	16.76
2009	9.06	5.28	8.53	4.85	4.96	3.89	3.38	10.41
2010	10.91	7.72	8.03	6.56	6.77	4.39	3.69	13.47
2011	14.73	14.02	10.49	9.04	9.26	4.01	3.47	18.55
2012	16.75	15.12	10.93	9.46	9.45	2.76	2.27	18.82
2013	16.17	16.56	10.73	10.64	9.75	3.71	2.93	18.25
2014	16.33	13.86	9.11	8.25	8.14	4.35	3.87	16.80
2015	10.31	7.45	6.72	6.53	6.44	2.60	2.01	8.77
2016	6.94	5.72	4.93	4.69	4.54	2.46	1.55	7.04
2017	8.10	7.13	5.62	5.80	5.72	2.96	1.60	8.97
2018	10.05	9.76	6.62	8.06	7.90	3.13	1.12	11.68
2019	9.94	5.49	5.25	4.47	4.45	2.53	1.27	10.82

<sup>1</sup>Source: EDMC Energy Trend.

<sup>2</sup>Source: S&P Global Platts ©2020, S&P Global Inc.

<sup>3</sup>Source: 1986-1990 German Federal Statistical Office, 1991-2019 German Federal Office of Economics and Export Control (BAFA).

<sup>4</sup>Source: ICIS Heren Energy Ltd.

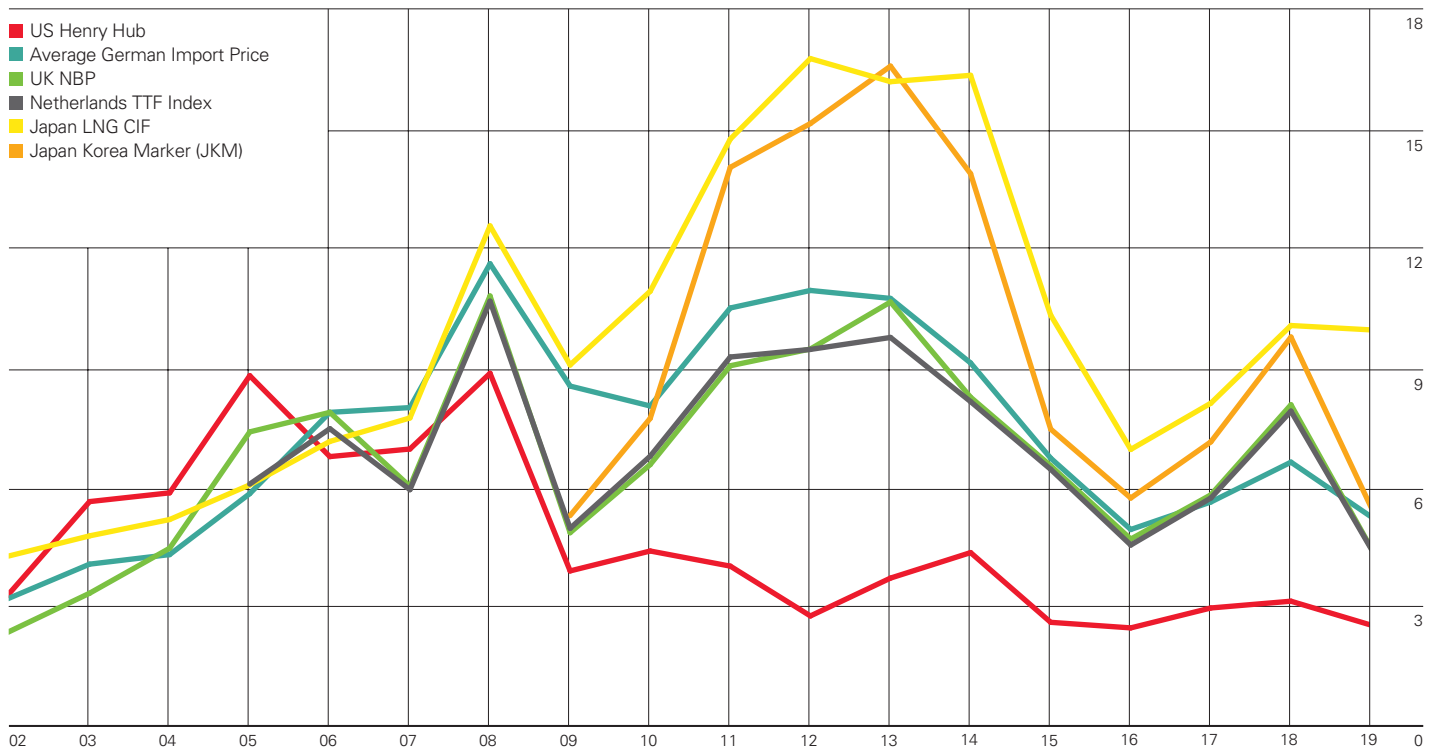
<sup>5</sup>Source: Energy Intelligence Group, *Natural Gas Week*.

<sup>6</sup>Source: ©OECD/IEA 2020, Oil, Gas, Coal and Electricity, Quarterly Statistics [www.iea.org/statistics](http://www.iea.org/statistics).

**Note:** CIF = cost+insurance+freight (average prices).

## Prices

\$/mmBtu





## Natural gas: LNG imports

Billion cubic metres	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	1.0	2.0	3.2	1.6	1.0	0.5	0.6	0.3	0.4	0.6	<b>0.5</b>	-13.2%	n/a	0.1%
Mexico	3.7	6.1	3.8	4.9	7.8	9.3	6.8	5.6	6.6	6.9	<b>6.6</b>	-4.4%	6.2%	1.4%
US	12.6	12.1	9.9	4.9	2.7	1.7	2.5	2.4	2.2	2.1	<b>1.5</b>	-30.9%	-14.2%	0.3%
<b>Total North America</b>	<b>17.3</b>	<b>20.2</b>	<b>16.8</b>	<b>11.4</b>	<b>11.4</b>	<b>11.5</b>	<b>10.0</b>	<b>8.3</b>	<b>9.2</b>	<b>9.6</b>	<b>8.6</b>	<b>-10.8%</b>	<b>-3.4%</b>	<b>1.8%</b>
Argentina	1.0	1.9	3.7	4.7	6.3	6.2	5.6	5.1	4.6	3.6	<b>1.7</b>	-51.9%	23.7%	0.4%
Brazil	0.4	2.8	0.7	3.5	5.2	7.1	6.8	2.6	1.7	2.9	<b>3.2</b>	12.2%	n/a	0.7%
Chile	0.7	3.1	3.7	4.0	3.8	3.5	3.7	4.5	4.4	4.3	<b>3.3</b>	-22.2%	n/a	0.7%
Other S. & Cent. America	1.4	1.4	1.9	2.4	2.8	2.8	2.8	3.0	2.8	3.7	<b>4.8</b>	29.5%	10.7%	1.0%
<b>Total S. &amp; Cent. America</b>	<b>3.5</b>	<b>9.2</b>	<b>9.9</b>	<b>14.6</b>	<b>18.1</b>	<b>19.6</b>	<b>18.9</b>	<b>15.2</b>	<b>13.5</b>	<b>14.5</b>	<b>13.1</b>	<b>-9.5%</b>	<b>23.4%</b>	<b>2.7%</b>
Belgium	6.8	6.5	6.3	4.1	3.1	2.9	3.6	2.4	1.3	3.3	<b>7.2</b>	117.9%	0.9%	1.5%
France	13.3	14.7	14.4	9.8	8.3	6.9	6.4	9.1	10.9	12.7	<b>22.9</b>	79.8%	-0.1%	4.7%
Italy	3.0	9.3	9.1	7.1	5.8	4.5	5.9	5.9	8.2	8.2	<b>13.5</b>	64.2%	17.5%	2.8%
Spain	27.5	28.2	23.9	21.4	15.7	16.2	13.7	13.8	16.6	15.0	<b>21.9</b>	46.0%	-6.6%	4.5%
Turkey	6.0	7.8	5.9	7.6	5.9	7.1	7.5	7.6	10.9	11.4	<b>12.9</b>	12.4%	7.5%	2.7%
United Kingdom	10.1	18.8	24.7	13.9	9.2	11.2	13.7	10.7	6.6	7.2	<b>18.0</b>	151.9%	24.3%	3.7%
Other EU	3.7	3.9	4.9	4.4	3.7	3.3	5.2	6.9	10.2	13.4	<b>23.4</b>	74.7%	13.6%	4.8%
Rest of Europe	-	†	-	†	-	†	-	†	0.1	†	<b>†</b>	26.8%	n/a	♦
<b>Total Europe</b>	<b>70.5</b>	<b>89.1</b>	<b>89.2</b>	<b>68.2</b>	<b>51.8</b>	<b>52.1</b>	<b>56.0</b>	<b>56.4</b>	<b>64.7</b>	<b>71.3</b>	<b>119.8</b>	<b>68.1%</b>	<b>2.2%</b>	<b>24.7%</b>
Egypt	-	-	-	-	-	-	3.9	10.7	8.3	3.2	-	-100.0%	n/a	-
Kuwait	0.9	2.8	3.0	2.8	2.3	3.6	4.3	4.7	4.8	4.3	<b>5.1</b>	19.0%	n/a	1.1%
United Arab Emirates	-	0.2	1.4	1.4	1.6	1.6	2.9	4.2	3.0	1.0	<b>1.6</b>	55.0%	n/a	0.3%
Other Middle East & Africa	-	-	-	-	0.5	0.1	2.7	4.8	5.3	4.0	<b>2.8</b>	-30.9%	n/a	0.6%
<b>Total Middle East &amp; Africa</b>	<b>0.9</b>	<b>3.0</b>	<b>4.4</b>	<b>4.2</b>	<b>4.3</b>	<b>5.3</b>	<b>13.7</b>	<b>24.5</b>	<b>21.4</b>	<b>12.5</b>	<b>9.5</b>	<b>-24.1%</b>	<b>n/a</b>	<b>2.0%</b>
China	8.0	13.0	16.9	20.1	25.1	27.3	27.0	36.8	52.9	73.5	<b>84.8</b>	15.4%	31.8%	17.5%
India	13.0	11.5	17.4	18.4	18.0	19.1	20.0	24.3	26.1	30.6	<b>32.9</b>	7.4%	10.5%	6.8%
Japan	88.9	96.4	108.6	119.8	120.4	121.8	115.9	113.6	113.9	113.0	<b>105.5</b>	-6.6%	1.7%	21.7%
Malaysia	-	-	-	-	2.0	2.2	2.2	1.5	2.0	1.8	<b>3.3</b>	85.7%	n/a	0.7%
Pakistan	-	-	-	-	-	-	1.5	4.0	6.1	9.4	<b>11.8</b>	25.6%	n/a	2.4%
Singapore	-	-	-	-	1.3	2.6	3.0	3.2	4.1	4.5	<b>5.0</b>	10.1%	n/a	1.0%
South Korea	35.3	45.0	47.7	49.7	55.3	51.8	45.8	46.3	51.4	60.2	<b>55.6</b>	-7.6%	4.6%	11.5%
Taiwan	12.4	15.0	16.3	17.1	17.2	18.6	19.6	20.4	22.7	22.9	<b>22.8</b>	-0.5%	6.2%	4.7%
Thailand	-	-	1.1	1.4	2.0	1.9	3.6	3.9	5.2	6.0	<b>6.7</b>	11.5%	n/a	1.4%
Other Asia Pacific	-	-	-	0.1	-	-	-	-	-	0.8	<b>5.7</b>	576.6%	n/a	1.2%
<b>Total Asia Pacific</b>	<b>157.5</b>	<b>180.9</b>	<b>207.9</b>	<b>226.6</b>	<b>241.2</b>	<b>245.2</b>	<b>238.5</b>	<b>253.9</b>	<b>284.6</b>	<b>322.7</b>	<b>334.1</b>	<b>3.5%</b>	<b>7.1%</b>	<b>68.9%</b>
<b>Total LNG imports</b>	<b>249.7</b>	<b>302.4</b>	<b>328.3</b>	<b>324.9</b>	<b>326.8</b>	<b>333.6</b>	<b>337.1</b>	<b>358.3</b>	<b>393.3</b>	<b>430.6</b>	<b>485.1</b>	<b>12.7%</b>	<b>6.2%</b>	<b>100.0%</b>

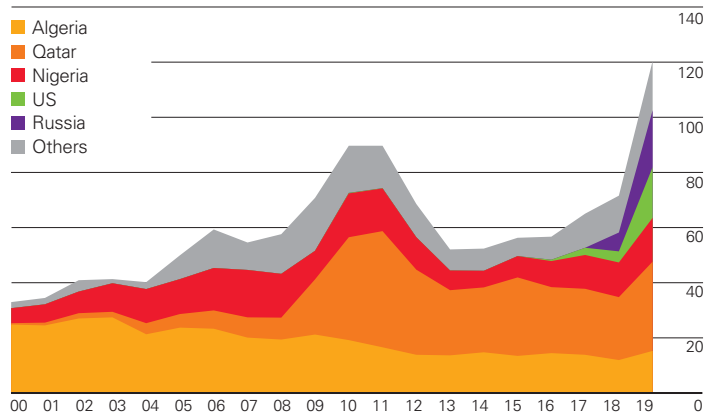
Gross LNG trade  
†Less than 0.05.

♦Less than 0.05%.  
n/a not available.

Source: includes GIIGNL, IHS.

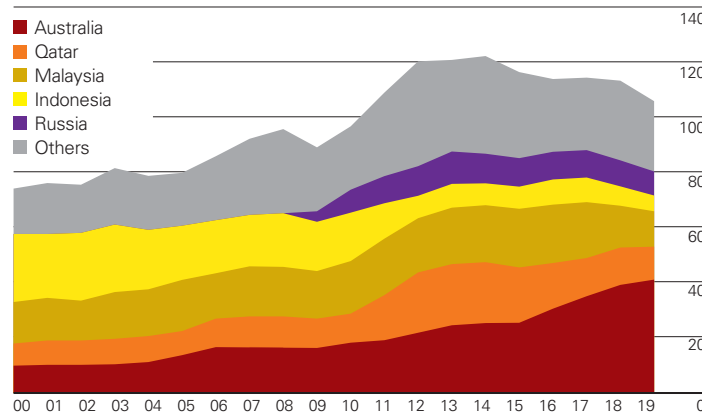
### LNG imports by source: Europe

Billion cubic metres



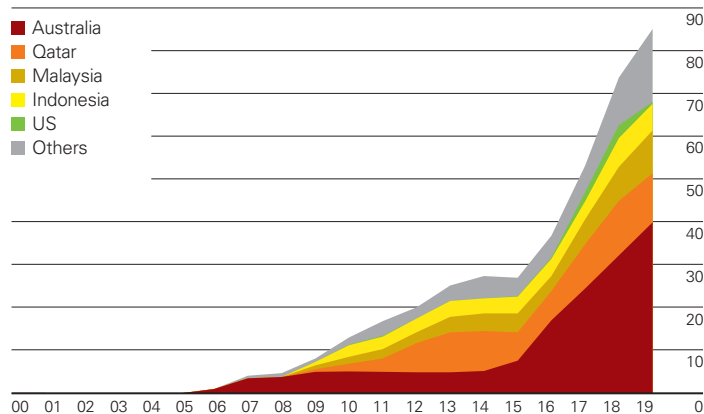
### LNG imports by source: Japan

Billion cubic metres



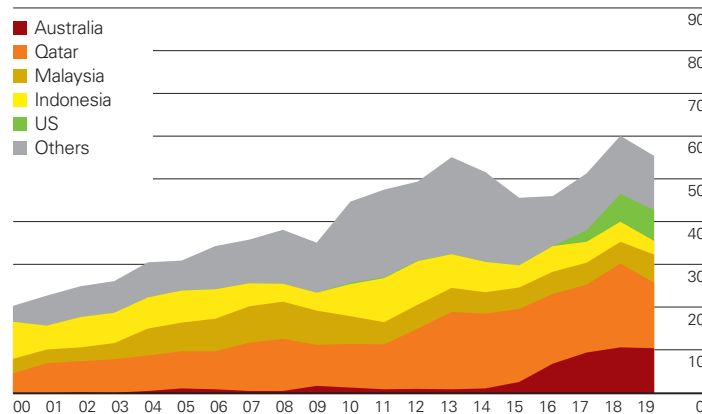
### LNG imports by source: China

Billion cubic metres



### LNG imports by source: South Korea

Billion cubic metres

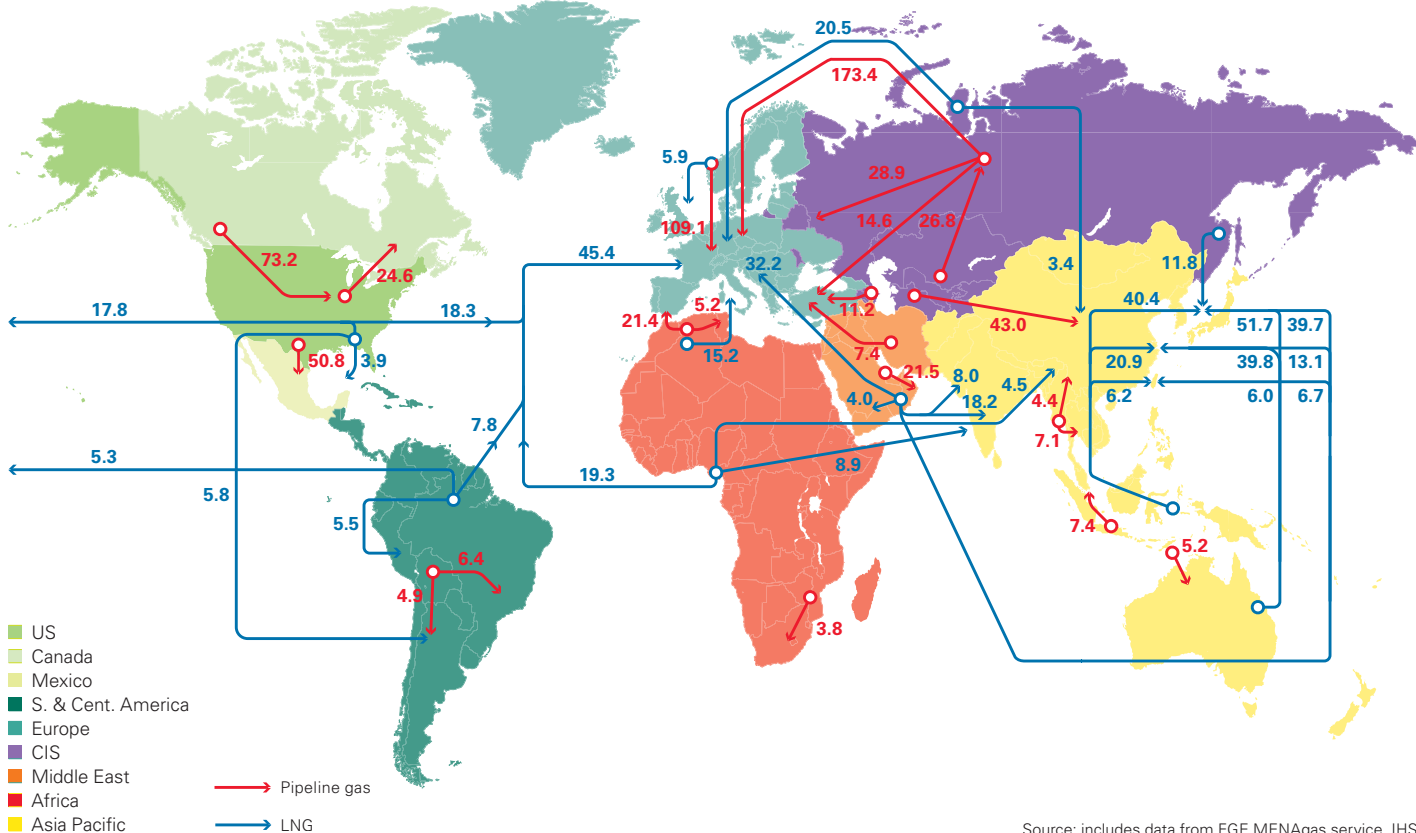






## Major trade movements 2019

Trade flows worldwide (billion cubic metres)



Source: includes data from FGE MENAGas service, IHS.

## Natural gas: Trade movements 2019 by pipeline

To	From																			Total imports				
	Canada	Mexico	US	Bolivia	Other S. & Cent. America	Netherlands	Norway	Other Europe	Azerbaijan	Kazakhstan	Russian Federation	Turkmenistan	Uzbekistan	Iran	Qatar	Other Middle East	Algeria	Libya	Other Africa		Indonesia	Myanmar	Other Asia Pacific	
Canada	-	-	24.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.6
Mexico	-	-	50.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50.8
US	73.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73.3
<b>North America</b>	<b>73.2</b>	<b>0.1</b>	<b>75.4</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>148.7</b>
Argentina	-	-	-	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9
Brazil	-	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4
Other S. & Cent. America	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
<b>S. &amp; Cent. America</b>	-	-	-	<b>11.3</b>	<b>0.7</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>12.0</b>
Belgium	-	-	-	-	-	6.6	5.1	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.6
France	-	-	-	-	-	4.4	19.3	5.8	-	-	7.8	-	-	-	-	-	-	-	-	-	-	-	-	37.2
Germany	-	-	-	-	-	23.4	27.8	2.9	-	-	55.6	-	-	-	-	-	-	-	-	-	-	-	-	109.6
Italy	-	-	-	-	-	1.2	2.7	14.2	-	-	20.7	-	-	-	-	-	9.7	5.4	-	-	-	-	-	54.1
Netherlands	-	-	-	-	-	-	25.3	6.7	-	-	8.0	-	-	-	-	-	-	-	-	-	-	-	-	40.0
Spain	-	-	-	-	-	-	1.8	2.8	-	-	-	-	-	-	-	-	11.4	-	-	-	-	-	-	16.0
Turkey	-	-	-	-	-	-	-	-	9.2	-	14.6	-	-	-	-	-	-	-	-	-	-	-	-	31.3
Ukraine	-	-	-	-	-	-	-	11.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.0
United Kingdom	-	-	-	-	-	1.6	26.6	0.4	-	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-	33.2
Other EU	-	-	-	-	-	1.0	0.4	37.5	-	-	73.9	-	-	-	-	-	0.4	-	-	-	-	-	-	113.2
Rest of Europe	-	-	-	-	-	0.1	-	8.3	2.0	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	13.0
<b>Europe</b>	-	-	-	-	-	<b>38.2</b>	<b>109.1</b>	<b>90.5</b>	<b>11.2</b>	-	<b>188.0</b>	-	-	<b>7.4</b>	-	-	<b>21.4</b>	<b>5.4</b>	-	-	-	-	-	<b>471.3</b>
Belarus	-	-	-	-	-	-	-	-	-	-	19.0	-	-	-	-	-	-	-	-	-	-	-	-	19.0
Kazakhstan	-	-	-	-	-	-	-	-	-	-	5.1	-	1.8	-	-	-	-	-	-	-	-	-	-	6.9
Russian Federation	-	-	-	-	-	-	-	-	-	20.6	-	-	6.2	-	-	-	-	-	-	-	-	-	-	26.8
Other CIS	-	-	-	-	-	-	-	-	-	0.4	4.8	-	0.4	0.4	-	-	-	-	-	-	-	-	-	5.9
<b>CIS</b>	-	-	-	-	-	-	-	-	-	<b>20.9</b>	<b>28.9</b>	-	<b>8.4</b>	<b>0.4</b>	-	-	-	-	-	-	-	-	-	<b>58.5</b>
United Arab Emirates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19.5	-	-	-	-	-	-	-	-	19.5
Other Middle East	-	-	-	-	-	-	-	-	0.3	-	-	-	-	9.1	2.0	0.1	-	-	1.4	-	-	-	-	13.0
<b>Middle East</b>	-	-	-	-	-	-	-	-	<b>0.3</b>	-	-	-	-	<b>9.1</b>	<b>21.5</b>	<b>0.1</b>	-	-	<b>1.4</b>	-	-	-	-	<b>32.5</b>
South Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
Other Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	-	3.8	-	-	-	-	6.0
<b>Africa</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>5.2</b>	-	<b>4.6</b>	-	-	-	-	<b>9.8</b>
Australia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	-	5.2
China	-	-	-	-	-	-	-	-	-	6.5	0.3	31.6	4.9	-	-	-	-	-	-	-	-	4.4	-	47.7
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	0.6
Singapore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	1.3	8.1
Thailand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	7.1
<b>Asia Pacific</b>	-	-	-	-	-	-	-	-	-	<b>6.5</b>	<b>0.3</b>	<b>31.6</b>	<b>4.9</b>	-	-	-	-	-	-	<b>7.4</b>	<b>11.5</b>	<b>6.5</b>	-	<b>68.7</b>
<b>Total exports</b>	<b>73.2</b>	<b>0.1</b>	<b>75.4</b>	<b>11.3</b>	<b>0.7</b>	<b>38.2</b>	<b>109.1</b>	<b>90.5</b>	<b>11.5</b>	<b>27.5</b>	<b>217.2</b>	<b>31.6</b>	<b>13.2</b>	<b>16.9</b>	<b>21.5</b>	<b>0.1</b>	<b>26.7</b>	<b>5.4</b>	<b>6.0</b>	<b>7.4</b>	<b>11.5</b>	<b>6.5</b>	-	<b>801.5</b>

Source: includes data from FGE MENAGas service, IHS.

Note: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardized using a gross calorific value (GCV) of 40 MJ/m³.

**Total proved reserves at end 2019**

Million tonnes	Anthracite and bituminous	Sub-bituminous and lignite	Total	Share of Total	R/P ratio
Canada	4346	2236	<b>6582</b>	0.6%	130
Mexico	1160	51	<b>1211</b>	0.1%	108
US	219534	30003	<b>249537</b>	23.3%	390
<b>Total North America</b>	<b>225040</b>	<b>32290</b>	<b>257330</b>	<b>24.1%</b>	<b>367</b>
Brazil	1547	5049	<b>6596</b>	0.6%	*
Colombia	4554	–	<b>4554</b>	0.4%	55
Venezuela	731	–	<b>731</b>	0.1%	*
Other S. & Cent. America	1784	24	<b>1808</b>	0.2%	*
<b>Total S. &amp; Cent. America</b>	<b>8616</b>	<b>5073</b>	<b>13689</b>	<b>1.3%</b>	<b>152</b>
Bulgaria	192	2174	<b>2366</b>	0.2%	153
Czech Republic	413	2514	<b>2927</b>	0.3%	71
Germany	–	35900	<b>35900</b>	3.4%	268
Greece	–	2876	<b>2876</b>	0.3%	105
Hungary	276	2633	<b>2909</b>	0.3%	425
Poland	21067	5865	<b>26932</b>	2.5%	240
Romania	11	280	<b>291</b>	♦	13
Serbia	402	7112	<b>7514</b>	0.7%	193
Spain	868	319	<b>1187</b>	0.1%	*
Turkey	550	10975	<b>11525</b>	1.1%	140
Ukraine	32039	2336	<b>34375</b>	3.2%	*
United Kingdom	26	–	<b>26</b>	♦	12
Other Europe	1109	5172	<b>6281</b>	0.6%	141
<b>Total Europe</b>	<b>56953</b>	<b>78156</b>	<b>135109</b>	<b>12.6%</b>	<b>244</b>
Kazakhstan	25605	–	<b>25605</b>	2.4%	222
Russian Federation	71719	90447	<b>162166</b>	15.2%	369
Uzbekistan	1375	–	<b>1375</b>	0.1%	339
Other CIS	1509	–	<b>1509</b>	0.1%	331
<b>Total CIS</b>	<b>100208</b>	<b>90447</b>	<b>190655</b>	<b>17.8%</b>	<b>338</b>
South Africa	9893	–	<b>9893</b>	0.9%	39
Zimbabwe	502	–	<b>502</b>	♦	215
Other Africa	4376	66	<b>4442</b>	0.4%	202
Middle East	1203	–	<b>1203</b>	0.1%	*
<b>Total Middle East &amp; Africa</b>	<b>15974</b>	<b>66</b>	<b>16040</b>	<b>1.5%</b>	<b>57</b>
Australia	72571	76508	<b>149079</b>	13.9%	294
China	133467	8128	<b>141595</b>	13.2%	37
India	100858	5073	<b>105931</b>	9.9%	140
Indonesia	28163	11728	<b>39891</b>	3.7%	65
Japan	340	10	<b>350</b>	♦	462
Mongolia	1170	1350	<b>2520</b>	0.2%	44
New Zealand	825	6750	<b>7575</b>	0.7%	*
Pakistan	207	2857	<b>3064</b>	0.3%	481
South Korea	326	–	<b>326</b>	♦	300
Thailand	–	1063	<b>1063</b>	0.1%	76
Vietnam	3116	244	<b>3360</b>	0.3%	73
Other Asia Pacific	1333	726	<b>2059</b>	0.2%	32
<b>Total Asia Pacific</b>	<b>342376</b>	<b>114437</b>	<b>456813</b>	<b>42.7%</b>	<b>77</b>
<b>Total World</b>	<b>749167</b>	<b>320469</b>	<b>1069636</b>	<b>100.0%</b>	<b>132</b>
of which: OECD	324066	177130	<b>501196</b>	46.9%	308
Non-OECD	425101	143339	<b>568440</b>	53.1%	88
European Union	23434	53051	<b>76485</b>	7.2%	209

\*More than 500 years.

♦Less than 0.05%.

Source: Federal Institute for Geosciences and Natural Resources (BGR) Energy Study 2020.

**Notes: Total proved reserves of coal** – generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for total proved coal reserves does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent bp's view of proved reserves by country.

**Reserves-to-production (R/P) ratio** – if the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate.

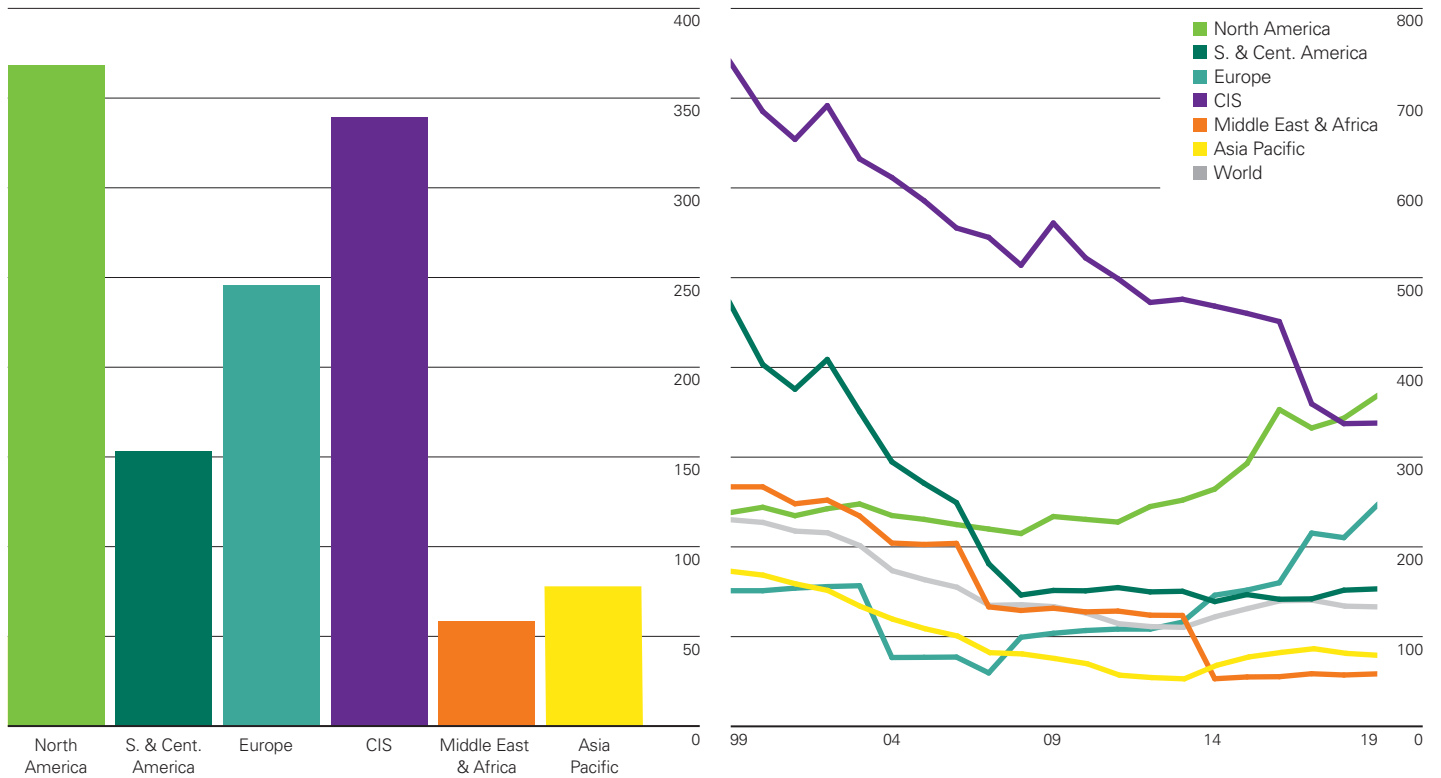
**Reserves-to-production (R/P) ratios are calculated excluding other solid fuels in reserves and production.**

**Shares of total and R/P ratios are calculated using million tonnes figures.**

## Reserves-to-production (R/P) ratios

Years

2019 by region

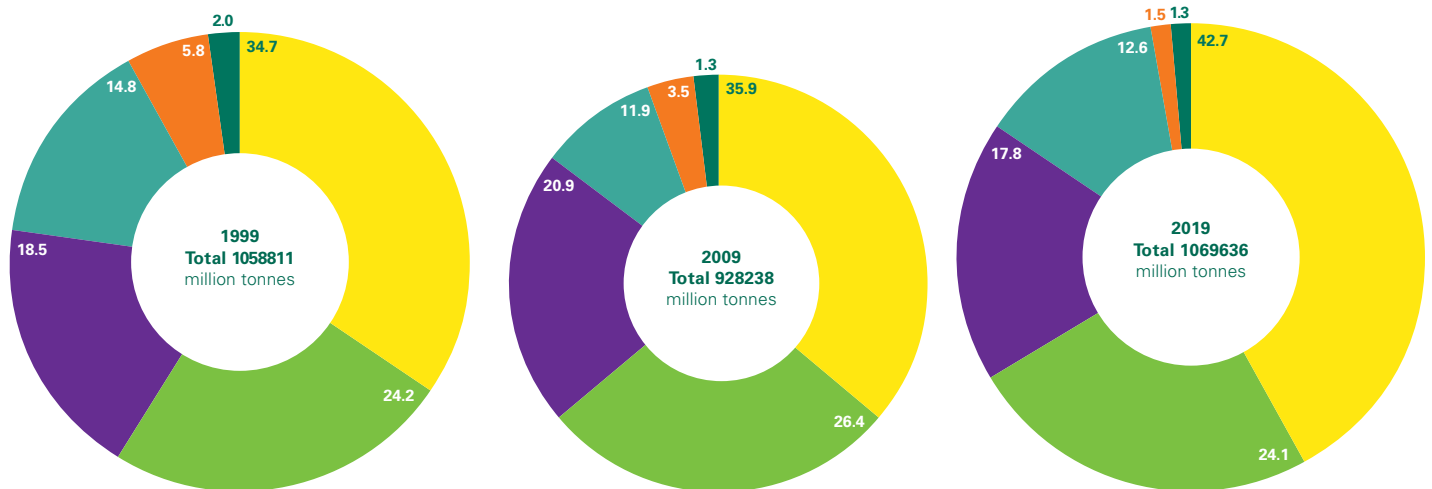


World coal reserves in 2019 stood at 1070 billion tonnes and are heavily concentrated in just a few countries: US (23%), Russia (15%), Australia (14%) and China (13%). Most of the reserves are anthracite and bituminous (70%). The current global R/P ratio shows that coal reserves in 2019 accounted for 132 years of current production with North America (367 years) and CIS (338 years) the regions with the highest ratios.

## Distribution of proved reserves in 1999, 2009 and 2019

Percentage

- Asia Pacific
- North America
- CIS
- Europe
- Middle East & Africa
- S. & Cent. America





**Coal: Production\***

Exajoules	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	1.39	1.48	1.48	1.49	1.51	1.50	1.35	1.37	1.32	1.18	<b>1.11</b>	-5.1%	-2.3%	0.7%
Mexico	0.25	0.31	0.39	0.31	0.30	0.30	0.29	0.25	0.31	0.28	<b>0.26</b>	-5.4%	-0.4%	0.2%
US	21.67	22.09	22.27	20.72	20.05	20.33	17.99	14.70	15.66	15.40	<b>14.30</b>	-7.1%	-4.3%	8.5%
<b>Total North America</b>	<b>23.32</b>	<b>23.88</b>	<b>24.15</b>	<b>22.52</b>	<b>21.86</b>	<b>22.14</b>	<b>19.63</b>	<b>16.33</b>	<b>17.29</b>	<b>16.85</b>	<b>15.68</b>	<b>-7.0%</b>	<b>-4.1%</b>	<b>9.4%</b>
Brazil	0.13	0.11	0.11	0.12	0.15	0.15	0.12	0.11	0.09	0.10	<b>0.12</b>	24.8%	-3.2%	0.1%
Colombia	2.09	2.14	2.47	2.56	2.46	2.55	2.46	2.60	2.60	2.42	<b>2.37</b>	-2.2%	1.4%	1.4%
Venezuela	0.10	0.08	0.08	0.06	0.04	0.02	0.02	0.01	0.01	0.01	<b>0.01</b>	49.1%	-27.5%	♦
Other S. & Cent. America	0.02	0.01	0.02	0.02	0.07	0.12	0.10	0.08	0.05	0.05	<b>0.03</b>	-27.2%	12.0%	♦
<b>Total S. &amp; Cent. America</b>	<b>2.34</b>	<b>2.35</b>	<b>2.68</b>	<b>2.76</b>	<b>2.72</b>	<b>2.85</b>	<b>2.70</b>	<b>2.81</b>	<b>2.76</b>	<b>2.58</b>	<b>2.54</b>	<b>-1.5%</b>	<b>0.6%</b>	<b>1.5%</b>
Bulgaria	0.19	0.21	0.26	0.23	0.20	0.21	0.25	0.21	0.24	0.22	<b>0.20</b>	-7.6%	0.8%	0.1%
Czech Republic	0.87	0.87	0.88	0.85	0.74	0.71	0.71	0.67	0.64	0.62	<b>0.57</b>	-8.2%	-4.3%	0.3%
Germany	1.94	1.92	1.96	2.00	1.89	1.85	1.79	1.66	1.65	1.58	<b>1.27</b>	-20.0%	-2.8%	0.8%
Greece	0.34	0.31	0.31	0.34	0.28	0.27	0.24	0.17	0.19	0.18	<b>0.13</b>	-25.1%	-6.2%	0.1%
Hungary	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05	<b>0.06</b>	18.1%	-2.8%	♦
Poland	2.36	2.32	2.33	2.42	2.39	2.26	2.22	2.18	2.08	1.98	<b>1.87</b>	-5.5%	-2.5%	1.1%
Romania	0.27	0.25	0.28	0.27	0.19	0.19	0.20	0.18	0.19	0.17	<b>0.16</b>	-8.4%	-5.2%	0.1%
Serbia	0.31	0.30	0.33	0.31	0.32	0.24	0.30	0.30	0.30	0.28	<b>0.29</b>	3.4%	-1.2%	0.2%
Spain	0.16	0.14	0.11	0.10	0.07	0.07	0.05	0.03	0.05	0.04	†	-97.4%	-14.4%	♦
Turkey	0.73	0.73	0.75	0.71	0.65	0.68	0.54	0.65	0.63	0.69	<b>0.70</b>	0.4%	-0.1%	0.4%
Ukraine	1.35	1.35	1.52	1.64	1.60	1.09	0.72	0.76	0.57	0.59	<b>0.57</b>	-2.3%	-8.7%	0.3%
United Kingdom	0.46	0.48	0.48	0.44	0.33	0.31	0.23	0.11	0.08	0.07	<b>0.06</b>	-16.1%	-17.5%	♦
Other Europe	0.65	0.66	0.66	0.59	0.69	0.66	0.60	0.56	0.57	0.82	<b>0.65</b>	-21.1%	2.5%	0.4%
<b>Total Europe</b>	<b>9.71</b>	<b>9.60</b>	<b>9.94</b>	<b>9.96</b>	<b>9.43</b>	<b>8.60</b>	<b>7.90</b>	<b>7.55</b>	<b>7.25</b>	<b>7.28</b>	<b>6.52</b>	<b>-10.5%</b>	<b>-3.4%</b>	<b>3.9%</b>
Kazakhstan	1.82	1.99	2.08	2.16	2.15	2.05	1.93	1.85	2.02	2.13	<b>2.08</b>	-2.4%	0.6%	1.2%
Russian Federation	5.93	6.32	6.60	7.05	7.25	7.39	7.80	8.12	8.62	9.23	<b>9.20</b>	-0.3%	4.0%	5.5%
Uzbekistan	0.04	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.05	<b>0.05</b>	-2.9%	1.5%	♦
Other CIS	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.07	0.08	0.10	<b>0.10</b>	4.7%	10.7%	0.1%
<b>Total CIS</b>	<b>7.83</b>	<b>8.39</b>	<b>8.77</b>	<b>9.31</b>	<b>9.51</b>	<b>9.55</b>	<b>9.84</b>	<b>10.09</b>	<b>10.77</b>	<b>11.51</b>	<b>11.43</b>	<b>-0.6%</b>	<b>3.3%</b>	<b>6.8%</b>
<b>Total Middle East</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>	-	-3.4%	♦
South Africa	5.85	6.03	6.00	6.14	6.08	6.20	5.96	6.01	5.97	5.99	<b>6.02</b>	0.4%	0.2%	3.6%
Zimbabwe	0.05	0.07	0.07	0.04	0.08	0.16	0.12	0.07	0.08	0.10	<b>0.06</b>	-35.0%	9.0%	♦
Other Africa	0.03	0.04	0.05	0.18	0.21	0.24	0.25	0.32	0.59	0.74	<b>0.57</b>	-22.4%	36.9%	0.3%
<b>Total Africa</b>	<b>5.92</b>	<b>6.15</b>	<b>6.11</b>	<b>6.36</b>	<b>6.38</b>	<b>6.59</b>	<b>6.33</b>	<b>6.41</b>	<b>6.64</b>	<b>6.83</b>	<b>6.66</b>	<b>-2.6%</b>	<b>1.3%</b>	<b>4.0%</b>
Australia	10.16	10.49	10.26	11.13	11.97	12.81	12.80	12.83	12.50	13.06	<b>13.15</b>	0.7%	2.9%	7.8%
China	64.39	69.72	77.53	78.44	79.32	78.05	76.43	70.82	73.17	76.58	<b>79.82</b>	4.2%	2.1%	47.6%
India	10.30	10.56	10.50	10.68	10.71	11.28	11.77	11.89	11.99	12.80	<b>12.73</b>	-0.5%	3.0%	7.6%
Indonesia	6.32	6.79	8.72	9.52	11.71	11.30	11.39	11.25	11.38	13.76	<b>15.05</b>	9.4%	8.8%	9.0%
Japan	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	<b>0.02</b>	-27.1%	-1.6%	♦
Mongolia	0.28	0.48	0.63	0.59	0.64	0.47	0.46	0.67	0.94	1.04	<b>1.09</b>	4.7%	18.4%	0.6%
New Zealand	0.12	0.14	0.13	0.13	0.12	0.10	0.09	0.07	0.07	0.08	<b>0.08</b>	-5.8%	-4.3%	♦
Pakistan	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.08	0.08	<b>0.12</b>	45.9%	0.9%	0.1%
South Korea	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.02	<b>0.02</b>	-9.4%	-7.9%	♦
Thailand	0.20	0.21	0.25	0.20	0.20	0.19	0.16	0.18	0.17	0.16	<b>0.15</b>	-6.1%	-2.4%	0.1%
Vietnam	1.03	1.05	1.09	0.98	0.96	0.96	0.97	0.90	0.90	0.98	<b>1.08</b>	10.2%	0.6%	0.6%
Other Asia Pacific	0.81	0.87	0.93	0.96	0.98	0.99	1.06	1.33	1.14	1.39	<b>1.42</b>	2.2%	4.1%	0.8%
<b>Total Asia Pacific</b>	<b>93.74</b>	<b>100.44</b>	<b>110.16</b>	<b>112.76</b>	<b>116.71</b>	<b>116.29</b>	<b>115.24</b>	<b>110.08</b>	<b>112.41</b>	<b>119.98</b>	<b>124.72</b>	<b>4.0%</b>	<b>2.9%</b>	<b>74.4%</b>
<b>Total World</b>	<b>142.89</b>	<b>150.82</b>	<b>161.84</b>	<b>163.70</b>	<b>166.64</b>	<b>166.05</b>	<b>161.68</b>	<b>153.30</b>	<b>157.16</b>	<b>165.06</b>	<b>167.58</b>	<b>1.5%</b>	<b>1.4%</b>	<b>100.0%</b>
of which: OECD	41.04	41.85	41.92	41.14	40.95	41.86	38.84	35.19	35.66	35.67	<b>33.90</b>	-5.0%	-2.0%	20.2%
Non-OECD	101.86	108.97	119.92	122.56	125.69	124.19	122.84	118.11	121.50	129.39	<b>133.68</b>	3.3%	2.7%	79.8%
European Union	7.02	6.93	7.05	7.03	6.58	6.29	6.05	5.55	5.47	5.28	<b>4.59</b>	-13.2%	-3.4%	2.7%

\*Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Includes coal produced for coal-to-liquids and coal-to-gas transformations.

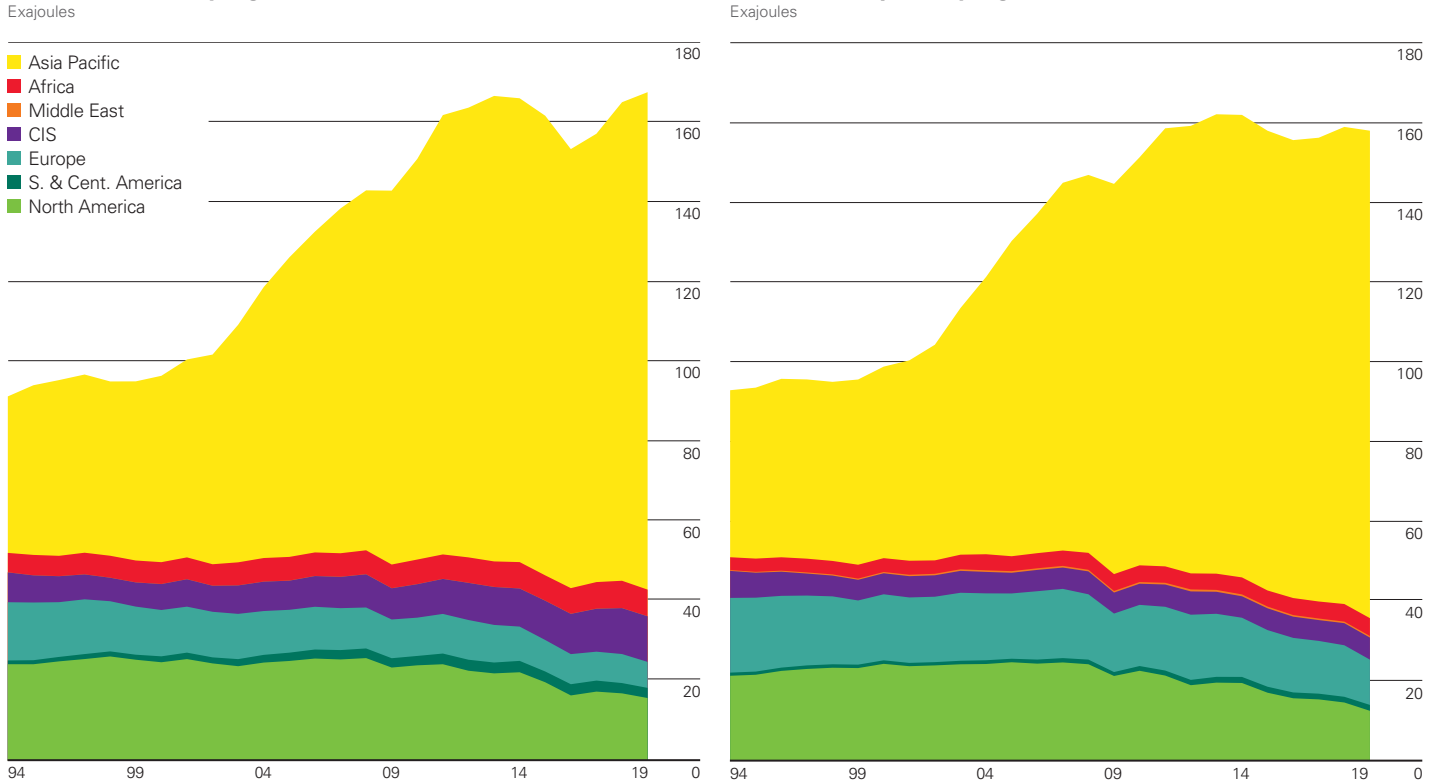
†Less than 0.005.

♦Less than 0.05%.

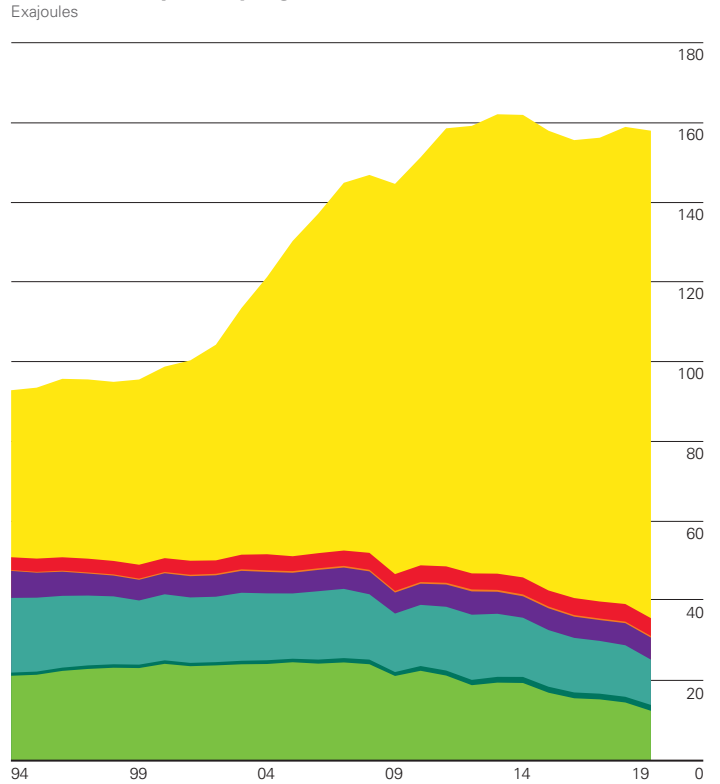
Coal production data expressed in million tonnes is available at [bp.com/statisticalreview](http://bp.com/statisticalreview).



### Coal: Production by region



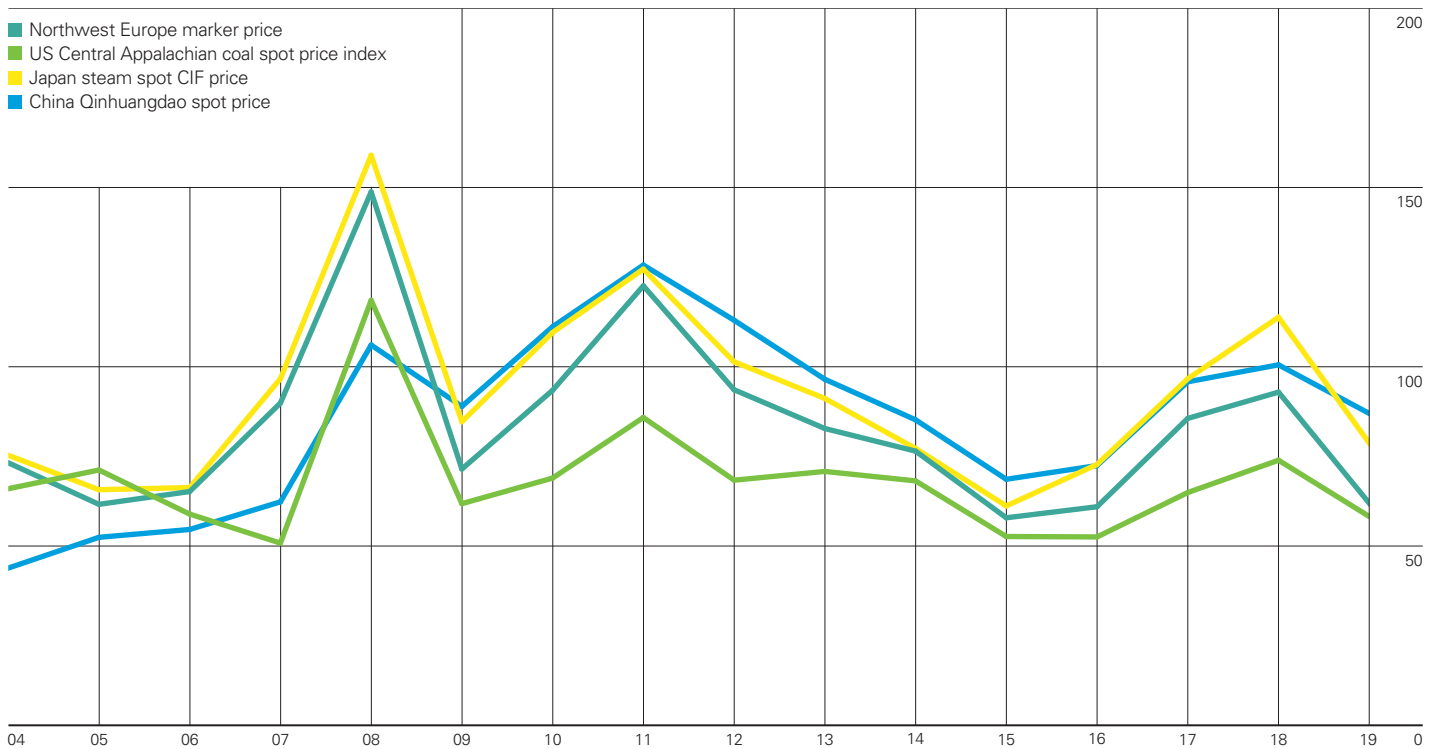
### Coal: Consumption by region



World coal consumption fell by 0.6% (-0.9 EJ), its fourth decline in six years. In the non-OECD, there were notable increases in China (1.8 EJ), Indonesia (0.6 EJ) and Vietnam (0.5 EJ), however, growth in India was only 0.3% (0.1 EJ) – its lowest since 2001. OECD demand fell sharply, led by the US (-1.9 EJ) and Germany (-0.6 EJ), to the lowest level in our data series (which goes back to 1965). Global coal production rose by 1.5%, with China and Indonesia providing the only significant increases (3.2 EJ and 1.3 EJ respectively). The largest declines in production also came from the US (-1.1 EJ) and Germany (-0.3 EJ).

### Coal prices

US dollars per tonne



## Coal: Prices

US dollars per tonne	Northwest Europe marker price†	US Central Appalachian coal spot price index‡	Japan steam spot CIF price†	China Qinhuangdao spot price†
1999	28.79	31.29	–	–
2000	35.99	29.90	–	27.52
2001	39.03	50.15	37.69	31.78
2002	31.65	33.20	31.47	33.19
2003	43.60	38.52	39.61	31.74
2004	72.13	64.90	74.22	42.76
2005	60.54	70.12	64.62	51.34
2006	64.11	57.82	65.22	53.53
2007	88.79	49.73	95.59	61.23
2008	147.67	117.42	157.88	104.97
2009	70.39	60.73	83.59	87.86
2010	92.35	67.87	108.47	110.08
2011	121.48	84.75	126.13	127.27
2012	92.50	67.28	100.30	111.89
2013	81.69	69.72	90.07	95.42
2014	75.38	67.08	76.13	84.12
2015	56.79	51.57	60.10	67.53
2016	59.87	51.45	71.66	71.35
2017	84.51	63.83	95.57	94.72
2018	91.83	72.84	112.73	99.45
2019	60.86	57.16	77.63	85.89

†Source: IHS Northwest Europe prices for 1999-2000 are the average of the monthly marker, 2001-2019 the average of weekly prices. IHS Japan prices basis = 6,000 kilocalories per kilogram NAR CIF. Chinese prices are the average monthly price for 2000-2005, weekly prices 2006-2019, 5,500 kilocalories per kilogram NAR, including cost and freight (CFF).

‡Source: S&P Global Platts ©2020, S&P Global Inc. Prices are for Central Appalachian 12,500 BTU, 1.2 SO<sub>2</sub> coal, FOB. Prices for 1999-2000 are by coal price publication date, 2001-2005 by coal price assessment date, 2006-2019 weekly CAPP 12,500 BTU, 1.6 SO<sub>2</sub> coal, FOB.

Note: CIF = cost+insurance+freight (average prices); FOB = free on board.

## Coal: Trade movements

Exajoules												Growth rate per annum		Share 2019
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019	2008-18	
Imports														
Canada	0.36	0.36	0.24	0.23	0.22	0.26	0.22	0.19	0.22	0.23	<b>0.21</b>	-11.7%	-10.0%	0.6%
Mexico	0.18	0.22	0.21	0.22	0.20	0.22	0.23	0.21	0.34	0.34	<b>0.24</b>	-27.9%	9.9%	0.7%
US	0.57	0.51	0.36	0.27	0.24	0.28	0.28	0.25	0.19	0.15	<b>0.17</b>	11.5%	-16.7%	0.5%
S. & Cent. America	0.67	0.85	0.99	0.88	1.06	1.06	1.00	1.06	1.21	1.19	<b>1.12</b>	-6.2%	1.8%	3.2%
Europe	5.01	4.82	5.64	6.09	5.85	6.09	6.03	5.40	5.86	6.44	<b>5.25</b>	-18.4%	0.4%	14.9%
CIS	0.52	0.37	0.59	0.53	0.56	0.56	0.53	0.48	0.56	0.61	<b>0.65</b>	7.9%	-1.2%	1.9%
Middle East	0.40	0.35	0.43	0.49	0.44	0.49	0.38	0.34	0.35	0.35	<b>0.32</b>	-7.1%	-4.2%	0.9%
Africa	0.27	0.32	0.35	0.31	0.83	0.39	0.47	0.51	0.60	0.73	<b>0.64</b>	-12.0%	7.8%	1.8%
China	3.28	4.45	5.20	6.71	7.63	6.62	4.69	5.65	5.87	6.13	<b>6.40</b>	4.3%	19.4%	18.1%
India	1.80	2.00	2.37	3.09	3.66	4.65	4.92	6.46	5.15	5.28	<b>5.69</b>	7.9%	14.1%	16.1%
Japan	4.22	4.84	4.61	4.87	5.06	5.00	5.05	5.01	5.06	5.01	<b>4.90</b>	-2.2%	♦	13.9%
South Korea	2.69	3.11	3.38	3.30	3.32	3.43	3.54	3.89	3.92	3.92	<b>3.73</b>	-4.7%	4.0%	10.6%
Other Asia Pacific	2.79	3.18	3.29	3.65	3.61	2.73	3.96	4.60	5.00	5.37	<b>5.96</b>	10.9%	6.0%	16.9%
<b>Total World</b>	<b>22.75</b>	<b>25.39</b>	<b>27.66</b>	<b>30.62</b>	<b>32.66</b>	<b>31.78</b>	<b>31.29</b>	<b>33.70</b>	<b>34.29</b>	<b>35.74</b>	<b>35.28</b>	<b>-1.3%</b>	<b>4.2%</b>	<b>100.0%</b>
Exports														
Canada	0.72	0.92	1.03	0.99	1.13	1.00	0.86	0.78	0.94	1.04	<b>1.03</b>	-0.3%	2.9%	2.9%
US	1.46	2.02	2.51	3.02	2.89	2.38	1.90	1.53	2.40	2.89	<b>2.39</b>	-17.5%	3.4%	6.8%
Colombia	1.63	1.78	2.02	2.25	2.05	2.27	2.19	2.33	2.48	2.43	<b>2.10</b>	-13.5%	2.1%	5.9%
Europe	0.23	0.12	0.16	0.20	0.68	0.13	0.10	0.13	0.19	0.25	<b>0.23</b>	-8.3%	0.1%	0.7%
Russia	2.45	2.50	2.86	3.23	3.55	3.78	4.11	4.47	5.09	5.78	<b>5.87</b>	1.5%	9.4%	16.6%
Other CIS	0.50	0.35	0.58	0.50	0.51	0.51	0.48	0.45	0.47	0.51	<b>0.54</b>	5.9%	-2.3%	1.5%
South Africa	1.93	1.98	2.04	2.22	2.10	2.18	2.30	2.16	2.52	2.33	<b>2.20</b>	-5.8%	2.9%	6.2%
Other Africa	0.03	0.11	0.04	0.13	0.12	0.19	0.28	2.02	0.65	0.22	<b>0.28</b>	27.7%	21.5%	0.8%
Australia	6.99	7.46	7.04	7.96	9.19	9.12	9.95	9.87	9.70	9.78	<b>9.69</b>	-0.9%	4.1%	27.5%
China	0.59	0.59	0.44	0.28	0.28	0.36	0.45	0.51	0.42	0.42	<b>0.34</b>	-18.0%	-12.3%	1.0%
Indonesia	5.07	6.20	7.18	8.16	8.57	8.42	7.48	7.73	8.08	8.56	<b>9.18</b>	7.2%	6.4%	26.0%
Mongolia	0.17	0.48	0.58	0.63	0.49	0.53	0.41	0.73	0.95	0.99	<b>1.02</b>	3.2%	24.0%	2.9%
Other Asia Pacific	0.82	0.76	1.01	0.90	0.92	0.77	0.65	0.77	0.30	0.39	<b>0.29</b>	-26.3%	-5.0%	0.8%
Rest of World	0.15	0.13	0.16	0.15	0.19	0.14	0.14	0.22	0.12	0.15	<b>0.13</b>	-13.9%	-3.6%	0.4%
<b>Total World</b>	<b>22.75</b>	<b>25.39</b>	<b>27.66</b>	<b>30.62</b>	<b>32.66</b>	<b>31.78</b>	<b>31.29</b>	<b>33.70</b>	<b>34.29</b>	<b>35.74</b>	<b>35.28</b>	<b>-1.3%</b>	<b>4.2%</b>	<b>100.0%</b>

♦Less than 0.05%.

Note: Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Intra-area movements (for example between countries in Europe, Other CIS, Other Africa, Other Asia Pacific) are excluded.

## Coal: Inter-area movements 2019

Exajoules	To													Total
	Canada	Mexico	US	S. & Cent. America	Europe	CIS	Middle East	Africa	China	India	Japan	South Korea	Other Asia Pacific	
Canada	–	†	0.02	0.03	0.11	–	†	†	0.10	0.08	0.26	0.33	0.11	<b>1.03</b>
US	0.15	0.07	–	0.28	0.85	†	†	0.23	0.03	0.32	0.36	0.10	†	<b>2.39</b>
Colombia	0.05	0.13	0.12	0.54	0.84	†	0.13	0.01	0.05	0.03	0.03	0.14	0.03	<b>2.10</b>
Europe	†	†	†	†	–	0.08	†	0.03	†	0.08	†	0.01	0.01	<b>0.23</b>
Russia	†	0.04	†	0.07	2.41	0.17	0.10	0.14	0.82	0.22	0.54	0.78	0.58	<b>5.87</b>
Other CIS	–	–	–	–	0.13	0.41	†	–	0.01	†	–	–	†	<b>0.54</b>
South Africa	–	–	†	0.02	0.09	–	0.07	0.15	†	1.20	0.01	0.11	0.54	<b>2.20</b>
Other Africa	–	–	†	0.01	0.07	–	†	0.02	†	0.12	0.03	0.03	†	<b>0.28</b>
Australia	–	†	–	0.15	0.65	–	†	0.05	2.06	0.83	2.88	1.36	1.71	<b>9.69</b>
China	†	†	†	0.01	0.02	†	0.01	0.01	–	0.03	0.07	0.06	0.14	<b>0.34</b>
Indonesia	–	–	0.02	†	0.07	–	0.01	†	2.19	2.61	0.70	0.80	2.78	<b>9.18</b>
Mongolia	–	–	–	–	–	†	–	–	1.02	–	–	†	–	<b>1.02</b>
Other Asia Pacific	†	†	†	†	0.02	†	†	†	0.13	0.13	0.02	0.02	0.04	<b>0.35</b>
Rest of World	†	†	†	†	0.02	†	†	†	†	0.04	†	†	†	<b>0.07</b>
<b>Total imports</b>	<b>0.21</b>	<b>0.24</b>	<b>0.17</b>	<b>1.12</b>	<b>5.25</b>	<b>0.65</b>	<b>0.32</b>	<b>0.64</b>	<b>6.40</b>	<b>5.69</b>	<b>4.90</b>	<b>3.73</b>	<b>5.96</b>	<b>35.28</b>

†Less than 0.005.

Note: Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Intra-area movements (for example, between countries in Europe, Other CIS, Other Africa, Other Asia Pacific) are excluded.

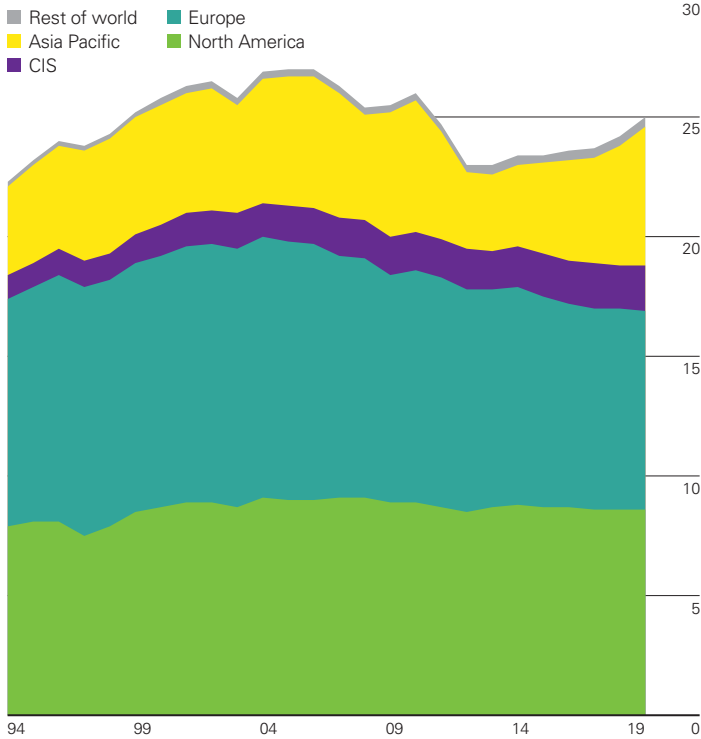






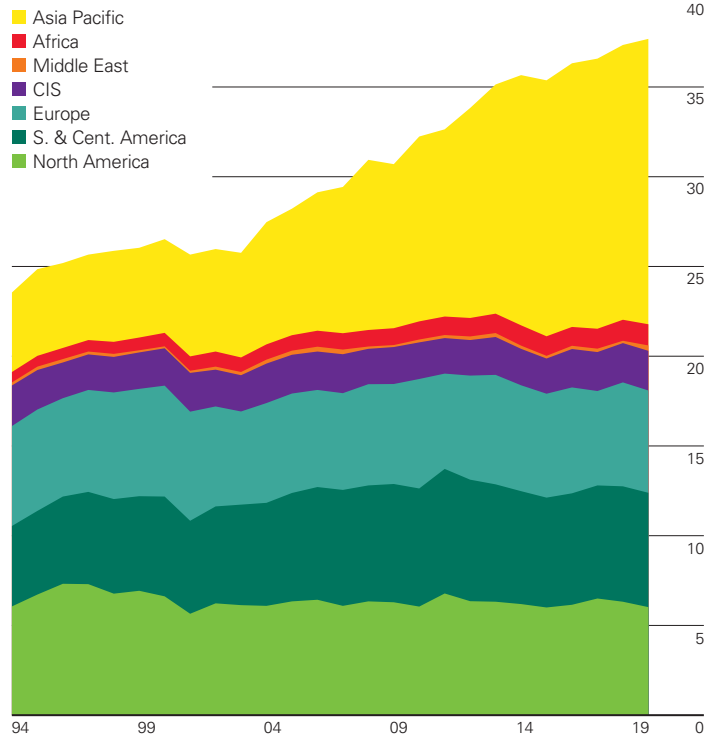
## Nuclear energy consumption by region

Exajoules



## Hydroelectricity consumption by region

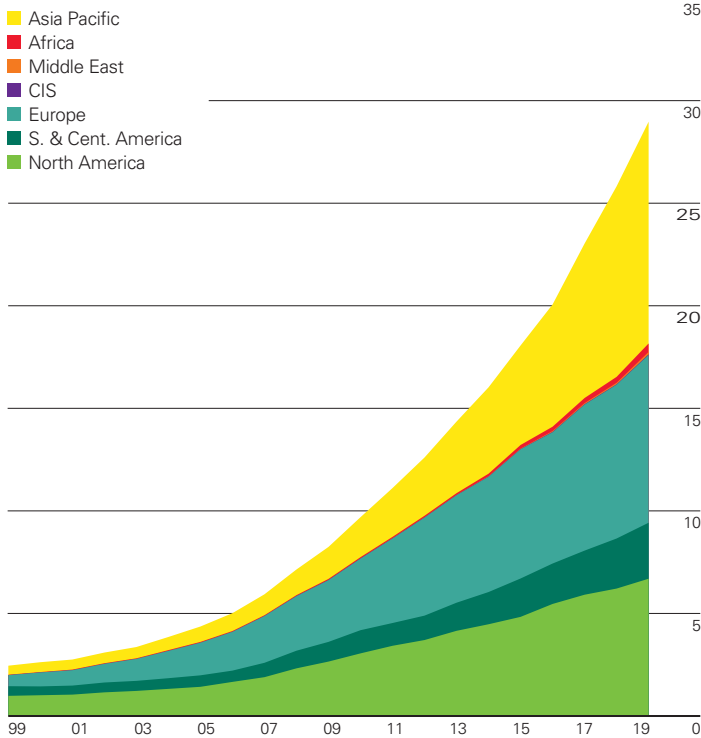
Exajoules



Nuclear consumption increased by 3.2% (on an input-equivalent basis), its fastest growth since 2004 and well above the 10-year average of -0.7%. As in 2018, China recorded the largest increment of any country, and last year's increase was China's largest ever (0.5 EJ). Japan also posted notable growth of 0.15 EJ, or 33% as it continued to recover from the complete shutdown of generation in 2014. Hydroelectric consumption rose by 0.8%, below the 10-year average of 1.9%. Growth was led by China (0.6 EJ), Turkey (0.3 EJ) and India (0.2 EJ). The US and Vietnam saw the biggest declines (both -0.2 EJ).

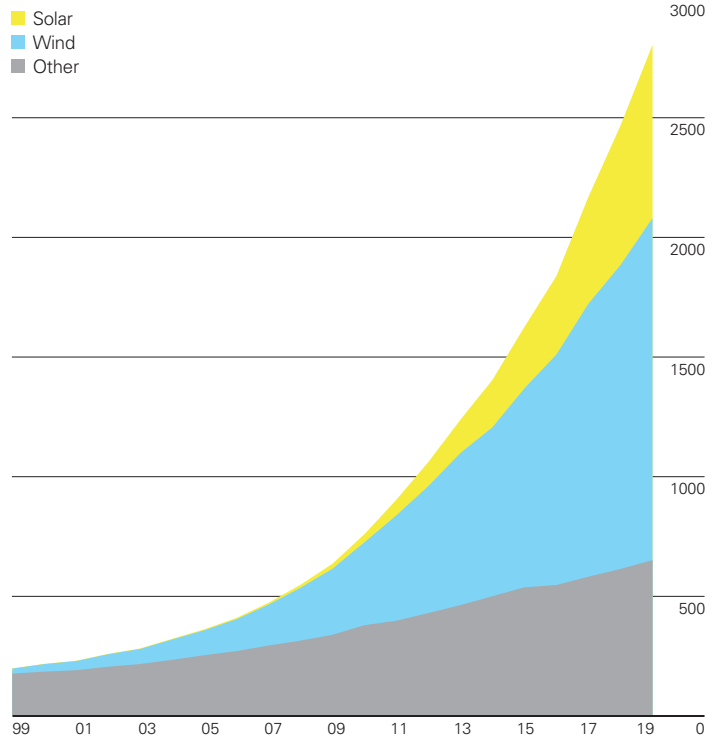
## Renewables consumption by region

Exajoules



## Renewables generation by source

Terawatt-hours



Renewable energy consumption (including biofuels but excluding hydro) grew by 12.1%, below its historical average, although its increase in energy terms (3.2 EJ) was the highest on record and the largest for any fuel in 2019. By country, China was the largest contributor to renewables growth (0.8 EJ), followed by the US (0.3 EJ) and Japan (0.2 EJ). Wind provided the largest contribution to the growth of renewables electricity generation (160 TWh) followed closely by solar (140 TWh). Solar has constantly increased its share of renewable generation and now makes up 26% compared with only 14% five years earlier.









## Renewables: Biofuels production\*

Thousand barrels of oil equivalent per day	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	14	16	19	20	19	21	22	23	25	25	29	14.4%	9.4%	1.6%
Mexico	–	†	†	†	†	†	†	†	†	†	†	–	–	♦
US	445	526	585	557	582	617	634	673	696	717	697	-2.7%	6.2%	37.9%
<b>Total North America</b>	<b>460</b>	<b>542</b>	<b>604</b>	<b>577</b>	<b>601</b>	<b>638</b>	<b>656</b>	<b>696</b>	<b>722</b>	<b>742</b>	<b>726</b>	<b>-2.1%</b>	<b>6.3%</b>	<b>39.4%</b>
Argentina	19	32	42	43	38	49	38	53	58	51	46	-9.9%	16.1%	2.5%
Brazil	286	316	270	276	321	337	362	340	342	413	444	7.6%	3.6%	24.1%
Colombia	5	8	10	11	12	12	12	12	11	14	13	-4.6%	18.7%	0.7%
Other S. & Cent. America	4	4	5	5	7	8	8	10	10	11	12	7.2%	2.1%	0.7%
<b>Total S. &amp; Cent. America</b>	<b>315</b>	<b>360</b>	<b>327</b>	<b>335</b>	<b>378</b>	<b>406</b>	<b>421</b>	<b>415</b>	<b>422</b>	<b>489</b>	<b>516</b>	<b>5.4%</b>	<b>4.6%</b>	<b>28.0%</b>
Austria	7	7	7	7	7	6	7	8	7	7	7	-1.7%	3.7%	0.4%
Belgium	3	7	8	8	8	11	7	7	8	8	9	7.9%	–	0.5%
Finland	4	6	4	5	6	7	8	2	6	5	6	4.9%	12.8%	0.3%
France	44	43	42	49	48	51	53	49	52	58	51	-13.1%	4.1%	2.7%
Germany	47	59	58	54	58	65	60	60	62	64	64	0.6%	3.1%	3.5%
Italy	14	15	11	6	9	10	10	10	12	13	14	12.2%	0.8%	0.8%
Netherlands	5	7	13	24	28	34	36	29	37	36	35	-1.8%	37.8%	1.9%
Poland	8	8	8	12	13	14	15	17	17	17	18	5.5%	12.1%	1.0%
Portugal	4	5	6	5	5	6	6	6	6	6	7	20.2%	8.2%	0.4%
Spain	17	19	16	12	14	19	21	22	29	34	30	-13.4%	17.0%	1.6%
Sweden	3	4	4	4	4	4	4	4	3	4	4	26.3%	3.6%	0.2%
United Kingdom	4	5	3	6	9	7	6	10	14	13	11	-14.9%	9.2%	0.6%
Other Europe	20	20	22	26	28	28	32	33	35	39	40	2.5%	8.9%	2.2%
<b>Total Europe</b>	<b>180</b>	<b>205</b>	<b>201</b>	<b>218</b>	<b>237</b>	<b>262</b>	<b>265</b>	<b>257</b>	<b>289</b>	<b>304</b>	<b>296</b>	<b>-2.6%</b>	<b>7.6%</b>	<b>16.1%</b>
<b>Total CIS</b>	<b>†</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>–</b>	<b>12.1%</b>	<b>♦</b>
<b>Total Middle East</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>†</b>	<b>–</b>	<b>–</b>	<b>♦</b>
<b>Total Africa</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>6.6%</b>	<b>25.5%</b>	<b>0.5%</b>
Australia	4	3	4	4	5	5	4	4	2	3	3	6.3%	-0.7%	0.2%
China	31	30	37	39	44	49	42	40	49	47	50	6.6%	5.3%	2.7%
India	2	4	5	5	5	5	10	12	11	19	24	24.9%	20.9%	1.3%
Indonesia	3	4	27	33	41	59	24	54	50	91	123	35.7%	27.1%	6.7%
South Korea	4	6	5	7	7	7	8	8	8	8	8	-3.2%	11.3%	0.4%
Thailand	12	16	17	24	30	34	36	31	37	40	43	8.1%	14.9%	2.3%
Other Asia Pacific	8	8	16	22	28	34	36	34	33	35	43	21.6%	17.0%	2.3%
<b>Total Asia Pacific</b>	<b>65</b>	<b>69</b>	<b>111</b>	<b>133</b>	<b>160</b>	<b>193</b>	<b>161</b>	<b>183</b>	<b>191</b>	<b>243</b>	<b>294</b>	<b>21.0%</b>	<b>14.6%</b>	<b>15.9%</b>
<b>Total World</b>	<b>1025</b>	<b>1183</b>	<b>1250</b>	<b>1268</b>	<b>1381</b>	<b>1505</b>	<b>1511</b>	<b>1560</b>	<b>1631</b>	<b>1787</b>	<b>1842</b>	<b>3.0%</b>	<b>6.8%</b>	<b>100.0%</b>
of which: OECD	646	755	811	803	846	908	929	961	1016	1052	1027	-2.3%	6.7%	55.8%
Non-OECD	378	428	439	465	535	597	581	599	615	736	814	10.6%	7.1%	44.2%
European Union	179	204	199	216	235	260	262	254	285	299	291	-2.8%	7.6%	15.8%
<b>Biofuels production by fuel type</b>														
<b>Biogasoline</b>														
Canada & Mexico	13	15	17	17	17	17	17	17	18	19	22	11.9%	8.2%	1.9%
US	417	507	531	502	506	545	564	585	607	613	601	-2.0%	5.7%	52.6%
Brazil	263	281	231	236	278	287	304	284	279	334	357	6.9%	2.1%	31.3%
Other S. & Cent. America	6	7	9	10	13	16	18	21	22	24	24	1.0%	8.0%	2.1%
Europe	31	36	41	47	53	53	58	54	57	59	57	-3.7%	8.7%	4.9%
CIS	–	–	–	–	†	†	†	†	†	†	†	–	–	♦
Middle East	†	†	†	†	†	†	†	†	†	†	†	–	–	♦
Africa	5	6	6	4	4	5	6	6	5	6	6	0.5%	20.8%	0.5%
Asia Pacific	31	32	40	42	48	55	59	54	61	67	76	13.3%	8.8%	6.6%
<b>Total World</b>	<b>765</b>	<b>883</b>	<b>875</b>	<b>858</b>	<b>921</b>	<b>978</b>	<b>1027</b>	<b>1021</b>	<b>1050</b>	<b>1122</b>	<b>1143</b>	<b>1.8%</b>	<b>4.8%</b>	<b>100.0%</b>
of which: OECD	463	560	591	569	579	617	641	657	683	692	681	-1.7%	5.9%	59.6%
Non-OECD	302	323	283	290	342	361	386	363	367	430	462	7.5%	3.3%	40.4%
European Union	30	36	41	47	51	52	57	53	56	57	55	-3.8%	8.6%	4.8%
<b>Biodiesel</b>														
Canada & Mexico	2	2	2	2	2	4	5	6	7	6	7	22.0%	15.7%	1.0%
US	29	19	54	55	76	71	70	87	89	104	96	-7.2%	10.6%	13.8%
Brazil	24	35	39	40	43	50	58	56	63	79	87	10.3%	16.5%	12.4%
Other S. & Cent. America	22	37	48	49	43	53	40	54	57	52	47	-9.8%	15.8%	6.8%
Europe	149	168	160	171	184	209	207	204	232	246	240	-2.4%	7.4%	34.3%
CIS	†	1	1	1	†	†	†	†	†	†	†	–	12.1%	0.1%
Middle East	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Africa	–	–	–	†	†	†	1	2	2	3	3	19.5%	–	0.5%
Asia Pacific	34	37	71	91	111	138	102	130	130	176	218	24.0%	18.0%	31.2%
<b>Total World</b>	<b>260</b>	<b>300</b>	<b>375</b>	<b>409</b>	<b>460</b>	<b>526</b>	<b>483</b>	<b>539</b>	<b>581</b>	<b>665</b>	<b>699</b>	<b>5.1%</b>	<b>11.6%</b>	<b>100.0%</b>
of which: OECD	183	195	220	234	267	291	288	304	333	359	347	-3.4%	8.3%	49.6%
Non-OECD	77	105	155	175	193	236	195	235	248	306	352	15.0%	17.6%	50.4%
European Union	148	168	159	169	183	209	205	202	229	242	236	-2.6%	7.3%	33.7%

Source: includes data from F.O. Licht; US Energy Information Administration (March 2020).

\*Includes biogasoline (such as ethanol) and biodiesel. Volumes have been adjusted for energy content.

†Less than 0.5.

♦Less than 0.05%.

Annual changes and shares of total are calculated using thousand barrels a day oil equivalent figures.

## Renewables: Biofuels consumption\*

Thousand barrels of oil equivalent per day	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Canada	15	16	25	29	33	34	34	34	35	37	38	2.1%	10.5%	2.1%
Mexico	2	2	2	2	2	3	3	4	4	4	4	1.4%	8.4%	0.2%
US	438	504	541	539	583	591	615	661	662	655	655	-0.1%	5.5%	36.9%
<b>Total North America</b>	<b>456</b>	<b>522</b>	<b>567</b>	<b>570</b>	<b>618</b>	<b>629</b>	<b>651</b>	<b>699</b>	<b>701</b>	<b>696</b>	<b>696</b>	<b>0.1%</b>	<b>5.7%</b>	<b>39.2%</b>
Argentina	-	10	14	17	19	23	25	26	30	29	30	2.1%	n/a	1.7%
Brazil	253	269	246	232	273	301	357	324	341	395	437	10.6%	5.6%	24.6%
Colombia	†	†	1	1	1	1	1	1	1	1	1	2.8%	11.5%	♦
Other S. & Cent. America	9	11	12	14	15	16	17	17	18	18	19	4.7%	8.8%	1.1%
<b>Total S. &amp; Cent. America</b>	<b>262</b>	<b>290</b>	<b>272</b>	<b>264</b>	<b>308</b>	<b>340</b>	<b>399</b>	<b>368</b>	<b>389</b>	<b>443</b>	<b>486</b>	<b>9.8%</b>	<b>6.4%</b>	<b>27.4%</b>
Austria	10	10	10	10	8	10	12	10	9	9	10	1.4%	1.9%	0.5%
Belgium	2	7	7	7	6	8	5	8	9	9	9	♦	n/a	0.5%
Finland	2	2	4	4	4	8	8	3	7	6	6	-1.4%	15.8%	0.3%
France	45	44	44	48	49	53	53	53	54	53	56	4.5%	2.3%	3.1%
Germany	51	52	54	57	51	54	50	50	51	54	54	0.1%	0.4%	3.0%
Italy	21	26	25	28	24	20	25	25	25	26	15	-42.6%	7.2%	0.8%
Netherlands	7	4	6	6	6	7	6	5	8	12	14	15.8%	8.0%	0.8%
Poland	12	12	13	14	14	13	12	8	11	17	18	6.7%	7.6%	1.0%
Portugal	4	6	6	5	5	5	7	5	5	5	5	-1.4%	7.5%	0.3%
Spain	6	27	32	39	17	18	19	21	25	32	25	-22.1%	23.6%	1.4%
Sweden	6	9	11	12	12	16	19	25	28	27	28	3.3%	15.8%	1.6%
United Kingdom	19	22	20	17	20	22	18	18	18	24	31	27.4%	5.0%	1.8%
Other Europe	19	23	27	31	38	37	37	43	50	53	56	6.1%	12.8%	3.1%
<b>Total Europe</b>	<b>205</b>	<b>244</b>	<b>258</b>	<b>279</b>	<b>255</b>	<b>272</b>	<b>272</b>	<b>276</b>	<b>300</b>	<b>327</b>	<b>325</b>	<b>-0.5%</b>	<b>6.6%</b>	<b>18.3%</b>
Total CIS	†	†	†	†	†	†	†	†	†	†	†	0.5%	12.7%	♦
Total Middle East	†	†	†	†	†	†	†	†	†	†	†	1.7%	-4.0%	♦
Total Africa	†	†	†	†	†	†	1	1	1	1	2	19.1%	59.1%	0.1%
Australia	20	31	33	29	28	26	24	20	23	26	25	-2.3%	6.3%	1.4%
China	29	29	34	39	46	61	36	42	43	50	44	-10.4%	6.5%	2.5%
India	†	†	1	1	1	1	2	3	2	2	2	-0.5%	6.6%	0.1%
Indonesia	3	3	5	10	15	27	13	44	38	55	111	102.0%	57.1%	6.3%
South Korea	5	7	6	7	7	7	8	8	8	13	13	0.7%	14.4%	0.7%
Thailand	12	13	14	18	23	28	31	32	35	38	45	16.9%	15.4%	2.5%
Other Asia Pacific	4	9	10	12	15	19	23	25	26	26	26	1.7%	29.1%	1.5%
<b>Total Asia Pacific</b>	<b>74</b>	<b>91</b>	<b>103</b>	<b>116</b>	<b>135</b>	<b>170</b>	<b>138</b>	<b>174</b>	<b>175</b>	<b>209</b>	<b>267</b>	<b>27.5%</b>	<b>14.0%</b>	<b>15.0%</b>
<b>Total World</b>	<b>997</b>	<b>1148</b>	<b>1201</b>	<b>1229</b>	<b>1317</b>	<b>1412</b>	<b>1463</b>	<b>1518</b>	<b>1567</b>	<b>1676</b>	<b>1776</b>	<b>6.0%</b>	<b>6.8%</b>	<b>100.0%</b>
of which: OECD	683	805	864	883	905	934	957	1003	1032	1060	1056	-0.4%	6.1%	59.4%
Non-OECD	314	343	337	346	412	477	506	515	535	617	720	16.8%	8.2%	40.6%
European Union	203	241	255	274	244	266	266	265	284	313	311	-0.7%	6.2%	17.5%
<b>Biofuels consumption by fuel type</b>														
<b>Biogasoline</b>														
US	420	490	491	489	503	512	531	545	552	549	554	0.8%	4.1%	49.4%
Canada & Mexico	16	16	22	26	29	32	32	33	33	35	36	3.3%	9.0%	3.2%
Brazil	230	234	208	191	230	251	299	268	277	316	349	10.5%	4.0%	31.1%
Other S. & Cent. America	7	9	10	12	15	17	19	21	23	24	24	3.3%	14.4%	2.2%
Europe	45	56	58	58	55	55	56	54	57	59	64	8.8%	4.7%	5.7%
CIS	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a	-
Middle East	†	†	†	†	†	†	†	†	†	†	†	1.7%	-4.0%	♦
Africa	†	†	†	†	†	†	†	†	†	†	†	4.3%	19.2%	♦
Asia Pacific	48	61	66	66	73	77	77	86	95	94	94	-0.2%	9.8%	8.4%
<b>Total World</b>	<b>766</b>	<b>867</b>	<b>857</b>	<b>843</b>	<b>905</b>	<b>945</b>	<b>1015</b>	<b>1007</b>	<b>1037</b>	<b>1077</b>	<b>1122</b>	<b>4.1%</b>	<b>4.8%</b>	<b>100.0%</b>
of which: OECD	502	596	606	604	616	627	646	657	670	673	682	1.3%	4.5%	60.8%
Non-OECD	264	271	250	240	289	318	369	350	367	404	439	8.8%	5.2%	39.2%
European Union	45	56	58	58	53	53	54	51	54	56	61	9.2%	4.2%	5.4%
<b>Biodiesel</b>														
US	18	15	49	50	80	79	83	116	111	106	101	-4.5%	20.1%	15.4%
Canada & Mexico	1	2	4	5	5	6	4	5	6	6	5	-5.7%	27.7%	0.8%
Brazil	23	35	38	40	43	50	58	56	63	79	87	11.0%	16.9%	13.3%
Other S. & Cent. America	3	12	16	20	20	22	23	23	25	24	25	2.9%	29.1%	3.8%
Europe	160	187	200	220	200	217	217	222	243	268	261	-2.6%	7.0%	39.9%
CIS	†	1	1	1	†	†	†	†	†	†	†	0.5%	12.7%	0.1%
Middle East	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a	-
Africa	-	-	-	-	-	†	1	1	1	1	1	20.0%	n/a	0.2%
Asia Pacific	26	30	36	49	63	93	61	89	80	115	173	50.1%	19.4%	26.4%
<b>Total World</b>	<b>231</b>	<b>281</b>	<b>344</b>	<b>386</b>	<b>412</b>	<b>467</b>	<b>448</b>	<b>511</b>	<b>530</b>	<b>599</b>	<b>655</b>	<b>9.2%</b>	<b>12.1%</b>	<b>100.0%</b>
of which: OECD	181	210	258	280	289	307	311	346	362	386	374	-3.3%	9.6%	57.1%
Non-OECD	50	72	86	106	122	159	137	165	168	213	281	31.9%	19.3%	42.9%
European Union	158	185	197	216	191	213	212	214	230	257	250	-2.8%	6.7%	38.1%

\*Includes biogasoline (such as ethanol) and biodiesel. Volumes have been adjusted for energy content.

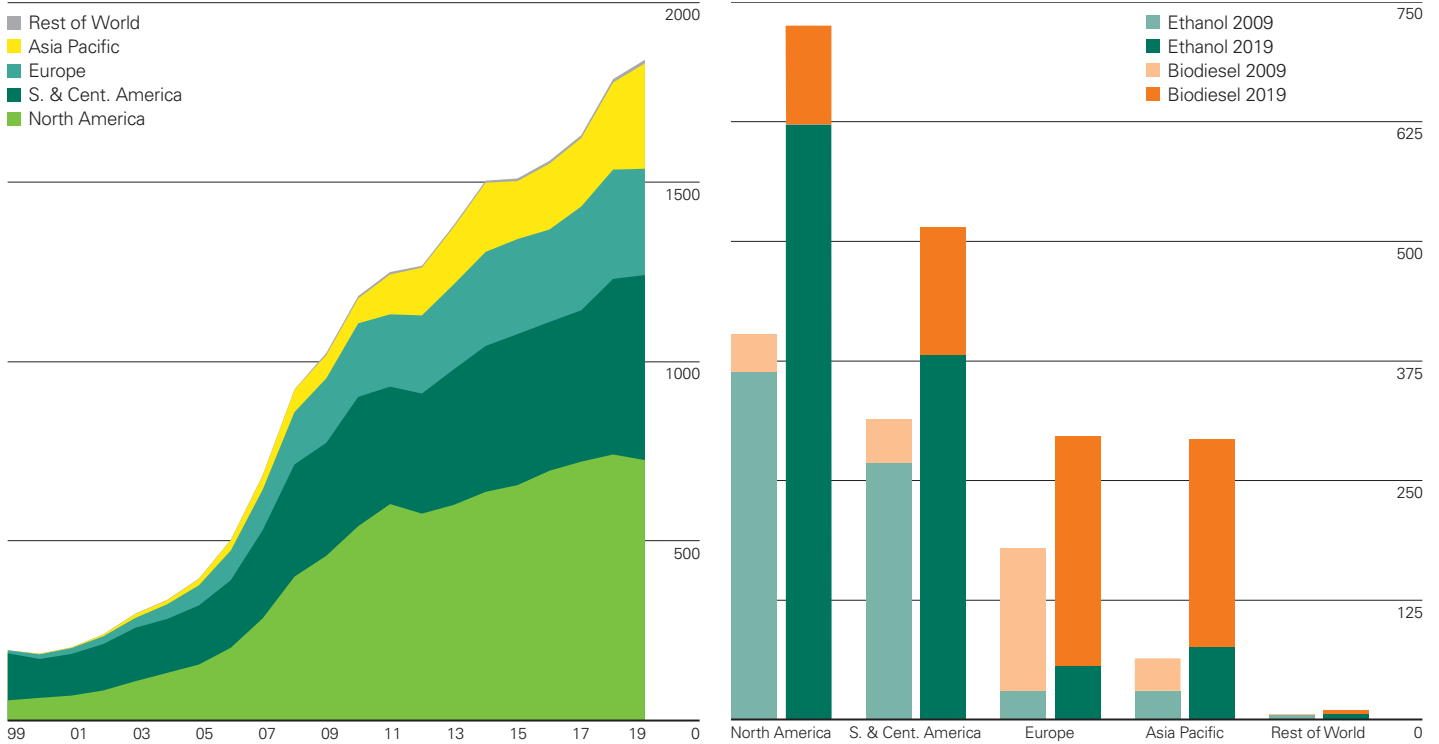
†Less than 0.5.

♦Less than 0.05%.

Annual changes and shares of total are calculated using thousand barrels of oil equivalent per day figures.

## World biofuels production

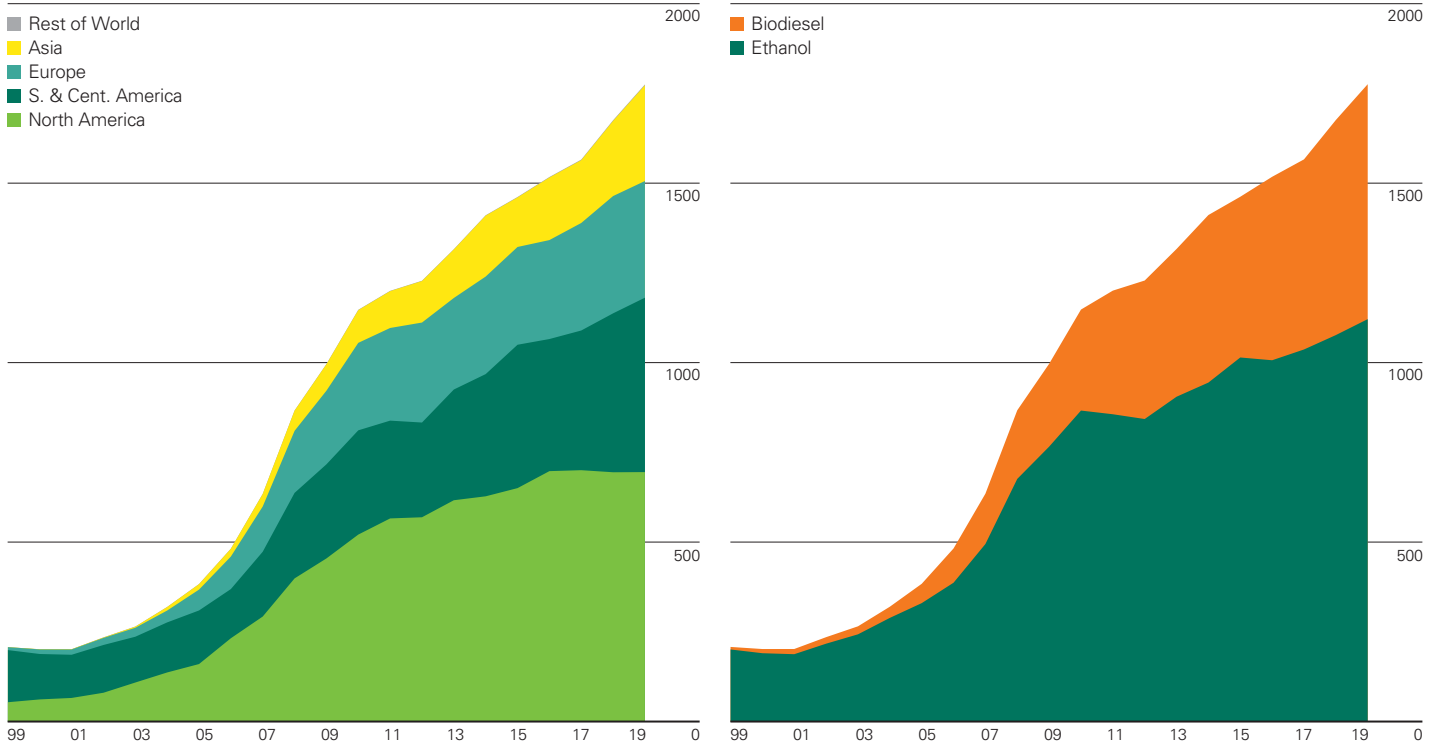
Thousand barrels of oil equivalent per day



Biofuels production growth averaged 3% (54,000 barrels of oil equivalent per day or boe/d, less than half the 10-year average). Growth was led by Brazil (31,000 boe/d) and Indonesia (32,000 boe/d) but US output declined by 19,000 boe/d. Growth was weighted towards biodiesel, which grew by 34,000 boe/d driven largely by Indonesia. Biodiesel is the dominant fuel in Europe and Asia Pacific (making up 81% and 74% of biofuels respectively in 2019), while ethanol is the main fuel in North America (86% of total) and S&C America (74%).

## World biofuels consumption

Thousand barrels of oil equivalent per day



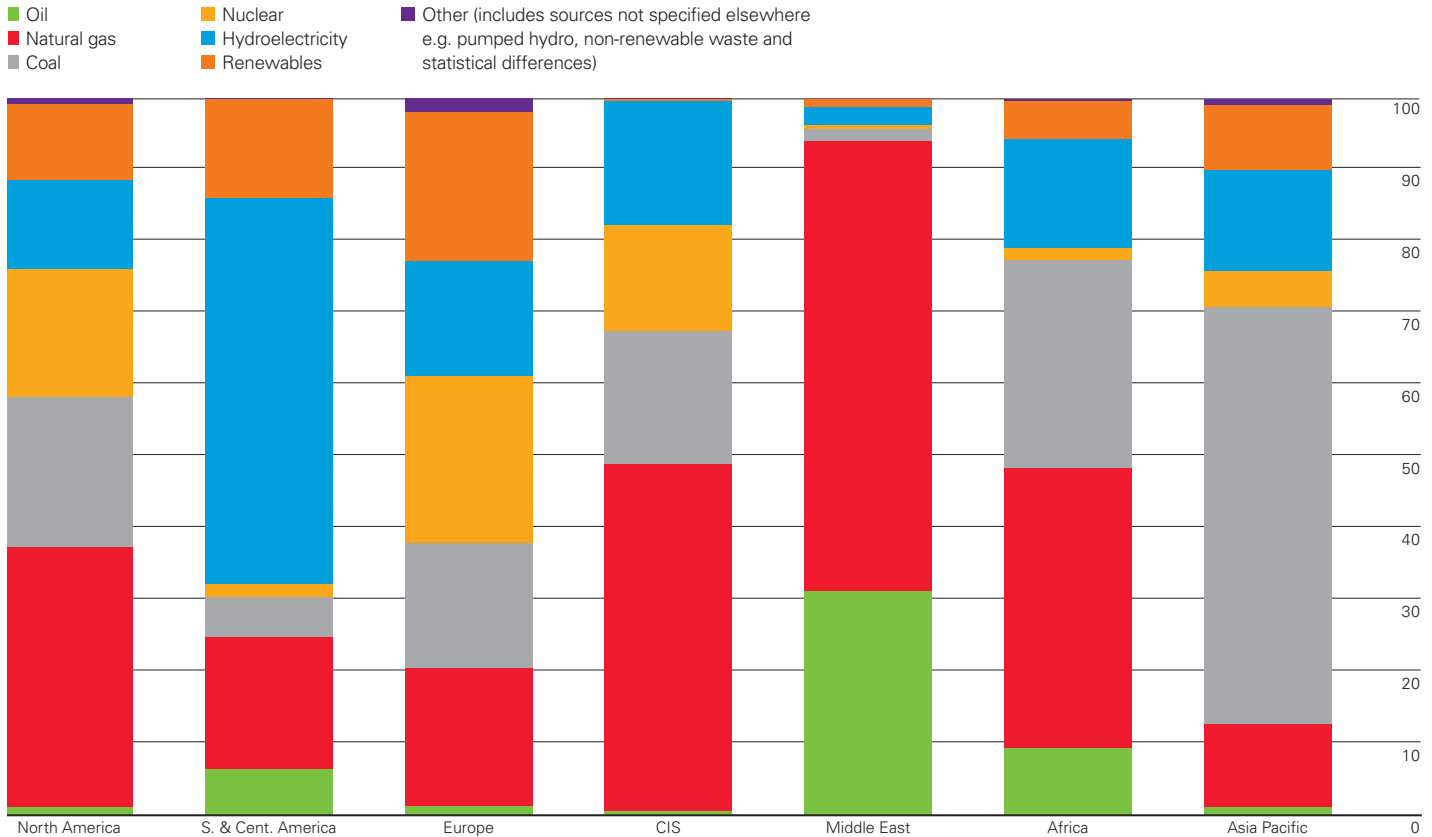
Biofuels consumption rose by 6% (100,000 boe/d). As with production, growth was driven mainly by Brazil (42,000 boe/d), most of which was ethanol and Indonesia (56,000 boe/d), which was largely biodiesel. At the global level, ethanol made up 63% of biofuels in 2019, but the share of biodiesel has risen continually. For example, biodiesel's share was 23% in 2009 but rose to 37% last year.





## Regional electricity generation by fuel 2019

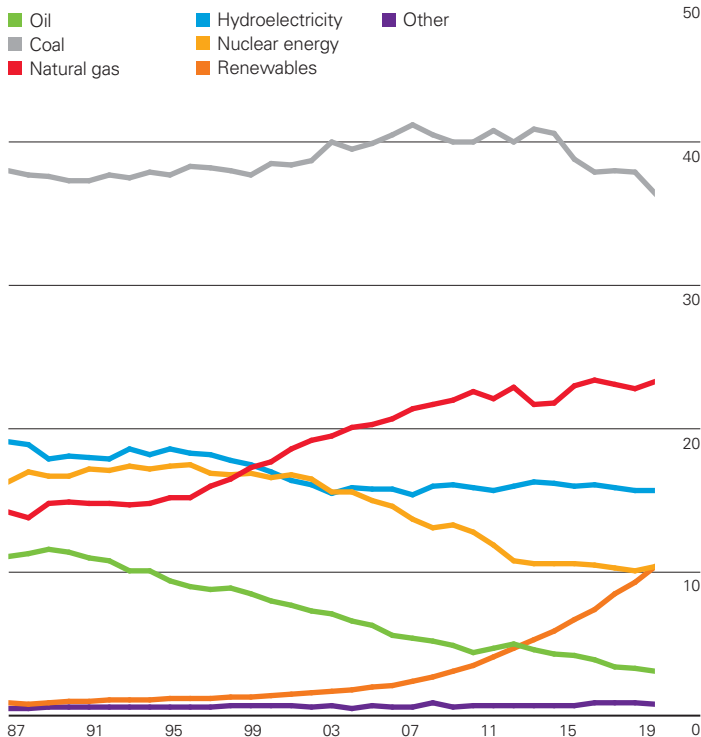
Percentage



Natural gas is the dominant fuel used for power generation in North America, CIS, the Middle East and Africa. South and Central America gets more than half of its power from hydroelectricity, with a share far higher than any other region. In Asia, coal is the dominant fuel. In Europe, nuclear energy is the top source of electricity, but only just, as generation is spread fairly evenly between five different fuels: the shares of nuclear, coal, natural gas, renewables and hydro are all in a narrow range of 16-23%.

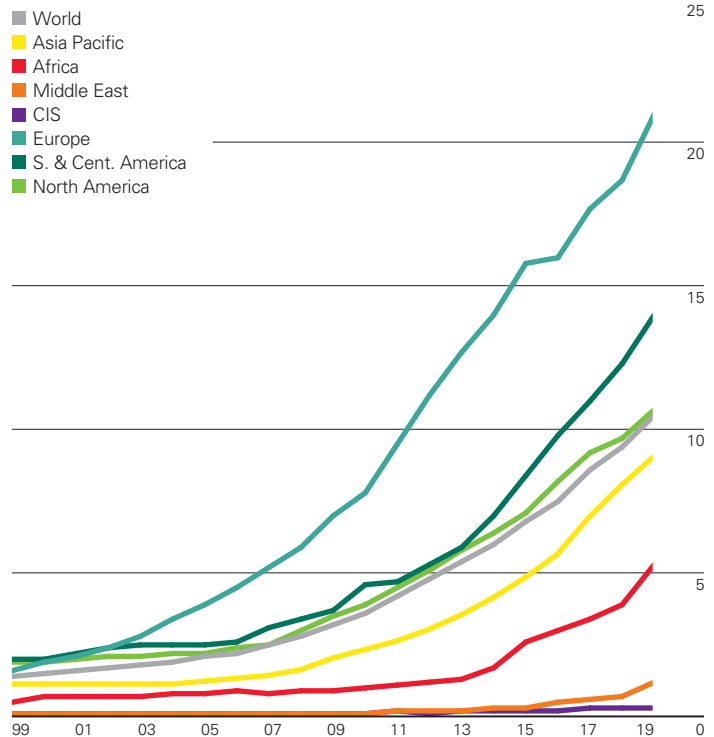
## Share of global electricity generation by fuel

Percentage



## Renewables share of power generation by region

Percentage



At the global level, coal is the dominant fuel for power generation, however its share fell 1.5 percentage points to 36.4% in 2019, the lowest level in our data series. The shares of both natural gas and renewables rose to record levels last year (to 23.3% and 10.4% respectively) and renewables generation surpassed nuclear for the first time. Regionally, there is significant variation in the penetration of renewables: Europe has the highest penetration at 20.9% – twice the global average, followed by South & Central America at 13.9%.

## Electricity generation by fuel\*

Terawatt-hours	2018								2019							
	Oil	Natural Gas	Coal	Nuclear energy	Hydro electric	Renewables	Other†	Total	Oil	Natural Gas	Coal	Nuclear energy	Hydro electric	Renewables	Other†	Total
Canada	3.8	64.1	50.6	100.0	385.9	47.1	0.7	652.3	4.1	69.3	54.6	100.5	382.0	49.3	0.7	<b>660.4</b>
Mexico	35.7	194.6	29.0	13.6	32.5	23.3	20.6	349.3	37.7	205.6	26.3	11.3	23.8	37.8	21.6	<b>364.0</b>
US	27.1	1579.3	1246.7	849.6	289.5	451.6	13.6	4457.4	20.0	1700.9	1053.5	852.0	271.2	489.8	14.0	<b>4401.3</b>
<b>Total North America</b>	<b>66.7</b>	<b>1838.0</b>	<b>1326.3</b>	<b>963.2</b>	<b>707.9</b>	<b>522.0</b>	<b>34.9</b>	<b>5459.0</b>	<b>61.8</b>	<b>1975.8</b>	<b>1134.4</b>	<b>963.7</b>	<b>676.9</b>	<b>576.9</b>	<b>36.2</b>	<b>5425.7</b>
Argentina	6.7	84.9	2.1	6.9	41.6	4.0	0.5	146.8	2.8	82.3	0.7	8.4	37.1	8.2	0.5	<b>139.9</b>
Brazil	12.2	54.6	23.7	15.7	389.0	106.3	-	601.4	7.9	58.9	25.7	16.2	399.3	117.7	-	<b>625.6</b>
Other S. & C. America	95.1	104.0	44.6	-	287.6	51.6	-0.1	582.8	75.6	103.8	47.8	-	278.3	58.3	-0.1	<b>563.8</b>
<b>Total S. &amp; C. America</b>	<b>113.9</b>	<b>243.5</b>	<b>70.4</b>	<b>22.5</b>	<b>718.2</b>	<b>161.9</b>	<b>0.5</b>	<b>1331.0</b>	<b>86.3</b>	<b>245.0</b>	<b>74.3</b>	<b>24.6</b>	<b>714.7</b>	<b>184.1</b>	<b>0.4</b>	<b>1329.3</b>
Germany	5.2	82.5	228.2	76.0	18.0	206.8	26.8	643.5	5.1	91.0	171.2	75.1	20.2	224.1	25.7	<b>612.4</b>
Italy	11.0	128.5	31.0	-	47.1	65.6	6.5	289.7	10.2	126.5	29.7	-	45.1	67.6	4.7	<b>283.8</b>
Netherlands	1.3	57.7	27.5	3.5	0.1	18.8	5.6	114.5	1.4	71.0	17.4	3.9	0.1	22.3	5.0	<b>121.0</b>
Poland	1.8	12.6	133.3	-	2.0	19.6	0.7	170.0	1.2	14.8	121.9	-	2.0	23.1	1.0	<b>163.9</b>
Spain	14.5	58.0	38.7	55.8	34.8	69.8	2.9	274.5	13.4	86.0	13.1	58.4	25.2	77.5	2.1	<b>275.8</b>
Turkey	0.3	92.5	113.2	-	59.9	37.8	1.0	304.8	0.2	58.1	114.6	-	89.2	45.3	1.1	<b>308.5</b>
Ukraine	0.7	9.0	52.1	84.4	10.4	2.5	0.7	159.9	0.2	9.2	48.3	83.0	6.8	5.0	1.9	<b>154.5</b>
United Kingdom	1.7	131.5	16.8	65.1	5.5	104.5	7.8	332.9	1.0	132.5	6.9	56.2	6.0	113.4	7.8	<b>323.7</b>
Other Europe	19.5	157.5	215.8	651.1	467.5	230.8	35.2	1777.5	19.0	179.1	175.6	651.9	438.0	258.3	27.9	<b>1749.7</b>
<b>Total Europe</b>	<b>56.1</b>	<b>729.9</b>	<b>856.6</b>	<b>935.8</b>	<b>645.3</b>	<b>756.3</b>	<b>87.1</b>	<b>4067.2</b>	<b>51.8</b>	<b>768.1</b>	<b>698.6</b>	<b>928.5</b>	<b>632.5</b>	<b>836.6</b>	<b>77.2</b>	<b>3993.3</b>
Kazakhstan	0.8	20.7	79.6	-	10.4	0.5	-4.7	107.3	0.8	20.8	78.1	-	10.0	0.8	-2.1	<b>108.4</b>
Russian Federation	6.8	511.1	190.3	204.6	190.6	1.4	4.4	1109.2	6.9	519.5	182.2	209.0	194.4	1.8	4.3	<b>1118.1</b>
Other CIS	0.9	148.6	4.1	2.1	43.3	0.6	0.3	199.9	0.9	152.7	4.0	2.2	44.0	0.7	0.1	<b>204.5</b>
<b>Total CIS</b>	<b>8.5</b>	<b>680.4</b>	<b>274.0</b>	<b>206.7</b>	<b>244.3</b>	<b>2.5</b>	<b>†</b>	<b>1416.3</b>	<b>8.6</b>	<b>693.0</b>	<b>264.2</b>	<b>211.2</b>	<b>248.4</b>	<b>3.3</b>	<b>2.3</b>	<b>1431.0</b>
Iran	86.0	209.0	0.6	6.9	11.4	0.5	-	314.4	82.6	199.5	0.6	6.4	29.0	0.6	-	<b>318.7</b>
Saudi Arabia	158.8	200.0	-	-	-	0.4	-	359.2	149.6	206.0	-	-	-	1.8	-	<b>357.4</b>
United Arab Emirates	†	134.7	-	-	-	1.3	-	136.0	†	133.9	-	-	-	4.2	-	<b>138.1</b>
Other Middle East	147.5	238.0	20.6	-	3.1	5.3	-	414.5	163.9	253.5	21.9	-	4.3	6.8	-	<b>450.5</b>
<b>Total Middle East</b>	<b>392.3</b>	<b>781.6</b>	<b>21.3</b>	<b>6.9</b>	<b>14.5</b>	<b>7.5</b>	<b>-</b>	<b>1224.1</b>	<b>396.1</b>	<b>792.9</b>	<b>22.6</b>	<b>6.4</b>	<b>33.3</b>	<b>13.3</b>	<b>-</b>	<b>1264.7</b>
Egypt	28.8	153.7	-	-	13.4	3.5	-	199.4	28.2	152.5	-	-	13.4	6.5	-	<b>200.6</b>
South Africa	1.2	1.9	224.6	11.1	0.8	12.3	4.6	256.3	1.2	1.9	217.3	14.2	0.8	12.6	4.6	<b>252.6</b>
Other Africa	49.3	175.8	32.0	-	116.3	16.4	0.3	390.1	51.9	186.1	36.2	-	118.6	26.0	-1.8	<b>417.0</b>
<b>Total Africa</b>	<b>79.3</b>	<b>331.3</b>	<b>256.6</b>	<b>11.1</b>	<b>130.4</b>	<b>32.2</b>	<b>4.9</b>	<b>845.8</b>	<b>81.3</b>	<b>340.5</b>	<b>253.6</b>	<b>14.2</b>	<b>132.7</b>	<b>45.1</b>	<b>2.8</b>	<b>870.1</b>
Australia	5.4	51.4	156.5	-	17.4	32.2	0.1	263.1	5.8	54.4	149.5	-	14.3	41.1	0.1	<b>265.1</b>
China	5.5	215.5	4765.0	295.0	1198.9	636.4	49.8	7166.1	6.0	236.5	4853.7	348.7	1269.7	732.3	56.5	<b>7503.4</b>
India	8.5	73.9	1167.3	39.1	139.6	122.8	0.2	1551.4	8.2	71.0	1137.4	45.2	161.8	134.9	0.2	<b>1558.7</b>
Indonesia	18.1	57.3	160.0	-	16.8	14.6	0.3	267.1	17.3	51.6	177.0	-	17.0	16.0	0.3	<b>279.1</b>
Japan	66.2	386.9	323.0	49.1	81.0	96.8	53.3	1056.2	44.7	362.4	326.2	65.6	73.9	121.2	42.3	<b>1036.3</b>
Malaysia	1.3	64.8	73.5	-	26.5	1.3	-	167.3	2.6	68.6	71.1	-	27.0	1.7	-	<b>171.0</b>
South Korea	10.1	160.9	250.9	133.5	3.4	23.9	10.7	593.4	7.4	150.8	238.7	146.0	2.8	29.2	9.7	<b>584.7</b>
Taiwan	8.2	92.4	131.2	27.7	4.5	6.4	5.2	275.6	5.8	91.1	126.4	32.3	5.5	8.0	5.0	<b>274.2</b>
Thailand	0.2	116.3	35.8	-	7.6	17.8	†	177.6	1.1	121.8	35.8	-	6.3	21.4	†	<b>186.5</b>
Vietnam	0.2	40.1	83.9	-	84.5	0.5	-	209.2	1.4	43.1	112.5	-	65.6	4.7	-	<b>227.4</b>
Other Asia Pacific	49.9	218.2	138.9	9.8	130.8	32.8	1.9	582.2	39.1	231.4	148.0	9.5	139.7	35.7	0.5	<b>604.0</b>
<b>Total Asia Pacific</b>	<b>173.5</b>	<b>1477.7</b>	<b>7286.1</b>	<b>554.1</b>	<b>1710.9</b>	<b>985.5</b>	<b>121.5</b>	<b>12309.3</b>	<b>139.5</b>	<b>1482.6</b>	<b>7376.4</b>	<b>647.3</b>	<b>1783.7</b>	<b>1146.2</b>	<b>114.8</b>	<b>12690.5</b>
<b>Total World</b>	<b>890.4</b>	<b>6082.5</b>	<b>10091.3</b>	<b>2700.4</b>	<b>4171.4</b>	<b>2468.0</b>	<b>248.9</b>	<b>26652.7</b>	<b>825.3</b>	<b>6297.9</b>	<b>9824.1</b>	<b>2796.0</b>	<b>4222.2</b>	<b>2805.5</b>	<b>233.6</b>	<b>27004.7</b>
of which: OECD	196.4	3201.2	2829.6	1969.8	1423.0	1442.4	183.9	11246.1	164.9	3347.5	2471.0	1993.0	1380.2	1616.8	162.6	<b>11136.0</b>
Non-OECD	694.0	2881.3	7261.7	730.6	2748.4	1025.6	65.0	15406.6	660.4	2950.4	7353.1	803.0	2842.1	1188.8	71.0	<b>15868.7</b>
EU	52.6	621.2	643.6	827.0	346.9	700.9	77.9	3270.1	49.1	692.2	488.4	822.4	327.9	768.2	67.2	<b>3215.3</b>

\*Based on gross output.

†Includes sources not specified elsewhere e.g. pumped hydro, non-renewable waste and statistical discrepancies (which can be positive or negative).

‡Less than 0.05.

# Key minerals for the energy transition

## Cobalt production

### Mine production

Thousand tonnes	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Australia	4.6	3.9	3.9	5.9	6.4	6.2	6.0	5.5	5.8	4.9	<b>5.1</b>	4.5%	0.2%	4.2%
Canada	3.9	4.6	6.8	3.7	4.0	3.9	4.3	4.2	3.7	3.5	<b>3.3</b>	-5.3%	-8.9%	2.7%
Democratic Republic of Congo	56.1	84.0	99.5	86.4	76.6	76.5	84.4	69.0	90.3	109.4	<b>78.0</b>	-28.7%	9.9%	64.0%
Cuba	4.6	4.8	5.1	4.7	4.0	3.7	4.3	5.1	5.0	4.5	<b>4.7</b>	4.4%	1.2%	3.8%
Madagascar	–	0.2	0.5	0.6	2.4	3.4	4.0	3.8	3.4	3.3	<b>3.4</b>	1.8%	n/a	2.8%
Morocco	2.6	3.1	2.2	2.0	2.0	2.2	2.3	2.7	2.5	2.1	<b>2.1</b>	–	2.1%	1.7%
New Caledonia	2.0	2.9	3.1	2.7	3.2	4.0	3.7	3.4	2.8	1.7	<b>1.2</b>	-25.3%	-2.4%	1.0%
Papua New Guinea	–	–	n/a	0.5	1.0	2.1	2.5	2.2	3.3	3.3	<b>3.1</b>	-5.5%	n/a	2.5%
Philippines	1.4	2.1	2.0	2.7	2.8	4.6	4.3	4.1	4.6	4.4	<b>4.6</b>	4.3%	14.0%	3.8%
Russian Federation	6.1	6.2	6.1	6.3	6.3	6.3	6.2	5.5	5.9	6.1	<b>6.1</b>	–	-0.2%	5.0%
South Africa	0.6	1.8	1.6	2.5	3.0	3.0	2.9	2.3	2.3	2.3	<b>2.4</b>	4.3%	14.6%	2.0%
Zambia	5.9	8.6	7.7	5.4	5.9	4.6	3.0	5.0	2.6	1.6	<b>1.3</b>	-20.0%	-10.1%	1.0%
Rest of World	5.7	7.3	9.8	11.4	12.9	9.0	8.6	6.3	5.5	7.5	<b>6.5</b>	-13.9%	1.7%	5.3%
<b>Total World</b>	<b>93.5</b>	<b>129.5</b>	<b>148.2</b>	<b>134.7</b>	<b>130.5</b>	<b>129.4</b>	<b>136.5</b>	<b>119.1</b>	<b>137.8</b>	<b>154.6</b>	<b>121.8</b>	<b>-21.2%</b>	<b>6.4%</b>	<b>100.0%</b>

Sources: includes data from US Geological Survey, British Geological Survey © UKRI and World Mining Data.

## Lithium production

### Mine production

Thousand tonnes of lithium content	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Argentina	2.2	3.0	3.0	2.7	2.5	3.2	3.6	5.8	5.7	6.4	<b>6.4</b>	–	7.3%	8.3%
Australia	5.5	8.5	11.7	12.7	10.1	12.4	11.9	14.0	21.3	57.0	<b>40.7</b>	-28.6%	23.9%	52.9%
Brazil	0.2	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.3	<b>0.3</b>	–	6.5%	0.4%
Chile	6.0	10.4	13.6	13.9	11.7	12.0	10.9	15.2	15.8	18.8	<b>16.6</b>	-12.0%	5.5%	21.5%
China	3.8	4.0	4.1	4.5	4.7	2.3	2.0	2.3	6.8	7.1	<b>7.5</b>	5.6%	8.0%	9.7%
Portugal	–	0.8	0.8	0.6	0.6	0.3	0.2	0.4	0.8	0.8	<b>1.2</b>	50.0%	1.3%	1.6%
US	1.5	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	<b>0.9</b>	–	-5.0%	1.2%
Zimbabwe	0.4	0.5	0.5	1.1	1.0	0.9	0.9	1.0	0.8	1.6	<b>1.6</b>	–	12.3%	2.1%
Rest of World	0.3	n/a	n/a	–	–	–	–	0.2	1.1	2.3	<b>1.8</b>	-21.8%	12.8%	2.3%
<b>Total World</b>	<b>19.8</b>	<b>28.2</b>	<b>35.0</b>	<b>36.6</b>	<b>31.9</b>	<b>32.2</b>	<b>30.7</b>	<b>40.0</b>	<b>53.3</b>	<b>95.2</b>	<b>77.0</b>	<b>-19.2%</b>	<b>13.2%</b>	<b>100.0%</b>

Sources: includes data from US Geological Survey, British Geological Survey © UKRI and World Mining Data.

## Natural graphite production

### Mine production

Thousand tonnes	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Brazil <sup>1</sup>	59.4	92.4	105.2	88.1	91.9	87.0	75.1	85.0	85.0	95.0	<b>96.0</b>	1.1%	1.7%	8.3%
Canada	15.0	20.0	25.0	24.0	20.0	30.0	30.0	30.0	40.0	40.0	<b>40.0</b>	–	4.0%	3.4%
China	450.0	700.0	800.0	820.0	750.0	780.0	780.0	780.0	625.0	630.0	<b>700.0</b>	11.1%	-0.3%	60.2%
India <sup>2</sup>	124.6	115.7	153.3	134.7	146.4	116.7	134.6	122.4	35.0	35.0	<b>35.0</b>	–	-11.4%	3.0%
Madagascar	3.4	3.8	3.6	2.9	4.3	5.3	8.1	9.2	13.3	48.1	<b>48.1</b>	–	25.6%	4.1%
Mexico	5.1	6.6	7.3	7.5	7.0	9.2	6.5	3.8	1.7	4.2	<b>4.2</b>	–	-5.3%	0.4%
Mozambique	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	104.0	<b>153.0</b>	47.1%	n/a	13.2%
Russian Federation	14.0	7.7	20.7	14.3	20.2	17.6	15.9	19.4	25.2	17.8	<b>16.6</b>	-6.7%	2.4%	1.4%
Sri Lanka	3.2	3.4	3.4	4.2	3.1	4.0	4.2	4.0	3.5	4.0	<b>4.0</b>	–	-4.9%	0.3%
Ukraine	4.3	2.8	0.6	4.6	6.9	13.8	14.5	14.6	14.9	15.0	<b>15.0</b>	–	2.9%	1.3%
Zimbabwe	2.5	4.0	7.0	6.0	4.0	7.0	7.0	6.0	1.6	2.0	<b>2.0</b>	♦	-9.0%	0.2%
Rest of World	58.5	24.7	25.2	49.7	51.6	37.1	22.8	21.6	22.9	44.4	<b>48.4</b>	9.1%	0.9%	4.2%
<b>Total World</b>	<b>740.0</b>	<b>981.1</b>	<b>1151.3</b>	<b>1156.1</b>	<b>1105.5</b>	<b>1107.7</b>	<b>1098.7</b>	<b>1096.1</b>	<b>868.4</b>	<b>1039.5</b>	<b>1162.3</b>	<b>11.8%</b>	<b>0.7%</b>	<b>100.0%</b>

<sup>1</sup>Including beneficiated and directly shipped material.

<sup>2</sup>Run of the mine.

♦Less than 0.05%.

Sources: includes data from US Geological Survey, British Geological Survey © UKRI and World Mining Data.

## Rare earth metals production

### Mine production

Thousand tonnes <sup>1</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum		Share 2019
												2019	2008-18	
Australia	–	–	2.2	3.2	1.3	6.2	11.9	13.9	17.3	18.6	<b>17.6</b>	-5.1%	n/a	8.4%
Brazil	0.2	0.1	0.1	1.6	0.3	–	0.9	2.2	1.7	1.1	<b>1.0</b>	-9.1%	9.1%	0.5%
China	129.0	89.2	93.8	93.8	93.8	105.0	105.0	105.0	105.0	120.0	<b>132.0</b>	10.0%	-0.4%	63.0%
India	†	n/a	n/a	n/a	0.3	1.7	1.0	1.5	1.5	2.9	<b>3.0</b>	3.4%	62.9%	1.4%
Malaysia	†	0.4	0.4	0.1	0.2	0.2	0.3	1.9	0.3	0.1	<b>0.1</b>	–	-3.3%	♦
Russian Federation	1.9	1.5	1.4	2.1	1.4	2.1	2.3	3.1	2.5	2.6	<b>2.6</b>	–	0.5%	1.2%
Thailand	4.0	5.6	3.1	0.1	0.1	1.9	0.8	1.6	1.3	–	–	n/a	n/a	–
US	–	–	–	3.0	5.5	5.4	5.9	–	–	18.0	<b>26.0</b>	44.4%	n/a	12.4%
Rest of World	–	0.2	0.2	0.2	0.1	–	0.3	0.2	0.3	23.9	<b>27.3</b>	14.1%	n/a	13.0%
<b>Total World</b>	<b>135.1</b>	<b>97.0</b>	<b>101.3</b>	<b>104.2</b>	<b>103.0</b>	<b>122.6</b>	<b>128.3</b>	<b>129.4</b>	<b>129.8</b>	<b>187.2</b>	<b>209.6</b>	<b>12.0%</b>	<b>3.9%</b>	<b>100.0%</b>

<sup>1</sup>Thousand tonnes of rare earth oxide equivalent.

†Less than 0.05%.

♦Less than 0.05%.

n/a not available.

Sources: includes data from US Geological Survey, British Geological Survey © UKRI and World Mining Data.

## Reserves of key minerals

### Cobalt reserves

Thousand tonnes	At end of 2019	Share	R/P ratio
Australia	1200	17.8%	234
Canada	230	3.4%	69
Democratic Republic of Congo	3600	53.3%	46
Cuba	500	7.4%	107
Madagascar	120	1.8%	36
Morocco	18	0.3%	9
New Caledonia	64	0.9%	52
Papua New Guinea	56	0.8%	18
Philippines	260	3.9%	56
Russian Federation	250	3.7%	41
South Africa	50	0.7%	21
Zambia	270	4.0%	213
Rest of World*	135	2.0%	21
<b>Total World</b>	<b>6753</b>	<b>100.0%</b>	<b>55</b>

### Natural graphite reserves

Thousand tonnes	At end of 2019	Share	R/P ratio
Brazil	72000	22.8%	750
Canada	n/a	n/a	n/a
China	73000	23.1%	104
India	8000	2.5%	229
Madagascar	1600	0.5%	33
Mexico	3100	1.0%	738
Mozambique	25000	7.9%	163
Russian Federation	14800	4.7%	892
Sri Lanka	n/a	n/a	n/a
Ukraine	n/a	n/a	n/a
Zimbabwe	n/a	n/a	n/a
Rest of World*	118200	37.4%	2440
<b>Total World</b>	<b>315700</b>	<b>100.0%</b>	<b>272</b>

### Lithium reserves

Thousand tonnes	At end of 2019	Share	R/P ratio
Argentina	1700	11.0%	266
Australia	2800	18.1%	69
Brazil	95	0.6%	317
Chile	8600	55.5%	519
China	1000	6.5%	133
Portugal	60	0.4%	50
US	630	4.1%	700
Zimbabwe	230	1.5%	144
Rest of World*	370	2.4%	206
<b>Total World</b>	<b>15485</b>	<b>100%</b>	<b>201</b>

### Rare earth metals reserves

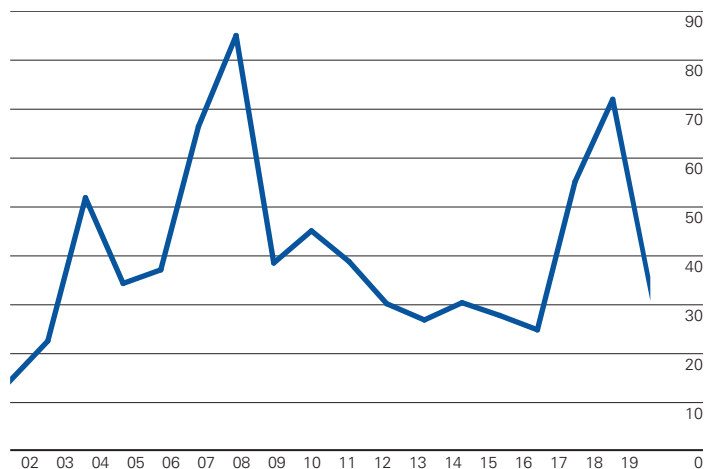
Thousand tonnes	At end of 2019	Share	R/P ratio
Australia	3300	2.7%	187
Brazil	22000	17.7%	22000
China	44000	35.4%	333
India	6900	5.5%	2300
Malaysia	30	♦	349
Russian Federation	20695	16.6%	7960
Thailand	890	0.7%	n/a
US	1400	1.1%	54
Rest of World*	25120	20.2%	920
<b>Total World</b>	<b>124335</b>	<b>100.0%</b>	<b>593</b>

\*Rest of World is the sum of only recorded reserves.  
 ♦Less than 0.05%.  
 n/a not available.

Source (for all tables): includes data from US Geological Survey.

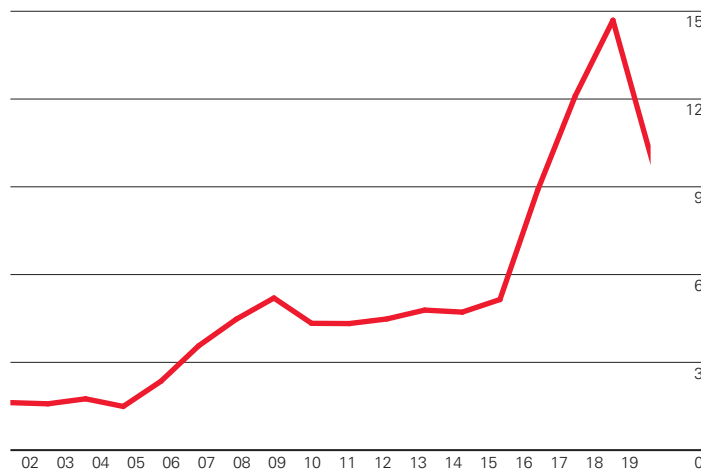
## Cobalt prices

Thousands of US dollars per tonne\*



## Lithium carbonate prices

Thousands of US dollars per tonne†



\*2000-2012 spot grade for cathodes, source US Geological Survey. Data from 2013 onwards: min purity 99.8%, source London Metal Exchange.

†2000-2008 unit value, data series 140, source US Geological Survey. Data from 2009 onwards: FOB South America, source Benchmark Mineral Intelligence.



# Appendices

## Approximate conversion factors

### Crude oil\*

From	To				
	tonnes (metric)	kilolitres	barrels	US gallons	tonnes per year
	<b>Multiply by</b>				
Tonnes (metric)	1	1.165	7.33	307.86	–
Kilolitres	0.8581	1	6.2898	264.17	–
Barrels	0.1364	0.159	1	42	–
US gallons	0.00325	0.0038	0.0238	1	–
Barrels per day	–	–	–	–	49.8

\*Based on worldwide average gravity.

### Products

	To convert					
	barrels to tonnes	tonnes to barrels	kilolitres to tonnes	tonnes to kilolitres	tonnes to gigajoules	tonnes to barrels oil equivalent
	<b>Multiply by</b>					
Ethane	0.059	16.850	0.373	2.679	49.400	8.073
Liquefied petroleum gas (LPG)	0.086	11.600	0.541	1.849	46.150	7.542
Gasoline	0.120	8.350	0.753	1.328	44.750	7.313
Kerosene	0.127	7.880	0.798	1.253	43.920	7.177
Gas oil/diesel	0.134	7.460	0.843	1.186	43.380	7.089
Residual fuel oil	0.157	6.350	0.991	1.010	41.570	6.793
Product basket	0.124	8.058	0.781	1.281	43.076	7.039

### Natural gas (NG) and liquefied natural gas (LNG)

From	To						
	billion cubic metres NG	billion cubic feet NG	petajoules NG	million toe	million tonnes LNG	trillion Btu	million boe
	<b>Multiply by</b>						
1 billion m <sup>3</sup> NG	1.000	35.315	36.000	0.860	0.735	34.121	5.883
1 billion ft <sup>3</sup> NG	0.028	1.000	1.019	0.024	0.021	0.966	0.167
1 petajoule NG	0.028	0.981	1.000	0.024	0.021	0.952	0.164
1 million toe	1.163	41.071	41.868	1.000	0.855	39.683	6.842
1 million tonnes LNG	1.360	48.028	48.747	1.169	1.000	46.405	8.001
1 trillion Btu	0.029	1.035	1.050	0.025	0.022	1.000	0.172
1 million boe	0.170	6.003	6.093	0.146	0.125	5.800	1.000

### Methodology

#### Methodology for converting non-fossil electricity generation to primary energy

Primary energy consumption numbers for non-fossil based electricity (nuclear, hydro, wind, solar, geothermal, biomass in power and other renewables sources) are calculated on an 'input-equivalent' basis – i.e. based on the equivalent amount of fossil fuel input required to generate that amount of electricity in a standard thermal power plant.

From this review onwards, the thermal efficiency assumption for the standard power plant is time varying, based on a simplified representation of measured average efficiency levels:

1965-2000: assumed constant efficiency of 36%

2000-2017: a linear increase from 36% to 40% based on observed data

2018 onwards: the annual rate of efficiency improvement is based on the simplified assumption that efficiency will increase linearly to 45% by 2050.

The table below quantifies these assumptions:

#### Thermal equivalent efficiency factors used to convert non-fossil electricity to primary energy

Year(s)	Efficiency factor	Year(s)	Efficiency factor
1965-2000	36%	2010	38.4%
2001	36.2%	2011	38.6%
2002	36.5%	2012	38.8%
2003	36.7%	2013	39.1%
2004	36.9%	2014	39.3%
2005	37.2%	2015	39.5%
2006	37.4%	2016	39.8%
2007	37.6%	2017	40.0%
2008	37.9%	2018	40.2%
2009	38.1%	2019	40.4%

For more details on the change in methodology please go to using the review at [bp.com/statisticalreview](http://bp.com/statisticalreview).

### Units

1 metric tonne	= 2204.62lb = 1.1023 short tons
1 kilolitre	= 6.2898 barrels = 1 cubic metre
1 kilocalorie (kcal)	= 4.1868kJ = 3.968Btu
1 kilojoule (kJ)	= 1,000 joules = 0.239 kcal = 0.948 Btu
1 petajoule (PJ)	= 1 quadrillion joules (1 x 10 <sup>15</sup> )
1 exajoule (EJ)	= 1 quintillion joules (1 x 10 <sup>18</sup> )
1 British thermal unit (Btu)	= 0.252kcal = 1.055kJ
1 tonne of oil equivalent (toe)	= 39.683 million Btu = 41.868 million kJ
1 barrel of oil equivalent (boe)	= 5.8 million Btu = 6.119 million kJ
1 kilowatt-hour (kWh)	= 860kcal = 3600kJ = 3412Btu

### Calorific equivalents

One exajoule equals approximately:

Heat units	239 trillion kilocalories 948 trillion Btu
Solid fuels	40 million tonnes of hard coal 95 million tonnes of lignite and sub-bituminous coal
Gaseous fuels	See Natural gas and LNG table
Electricity	278 terawatt-hours

All fuel energy content is net or lower heating value (i.e., net of heat of vaporisation of water generated from combustion).

1 barrel of ethanol = 0.58 barrels of oil equivalent  
1 barrel of biodiesel = 0.86 barrels of oil equivalent  
1 tonne of ethanol = 0.68 tonnes of oil equivalent  
1 tonne of biodiesel = 0.88 tonnes of oil equivalent

Primary energy consumption is reported in net terms. The gross calorific value to net calorific value adjustment is fuel specific.

Fuels used as inputs for conversion technologies (gas-to-liquids, coal-to-liquids and coal-to-gas) are counted as production for the source fuel and the outputs are counted as consumption for the converted fuel.

#### Percentages

Calculated before rounding of actuals.

#### Rounding differences

Because of rounding, some totals may not agree exactly with the sum of their component parts.

#### Tonnes

Metric equivalent of tons.

# Definitions

Statistics published in this review are taken from government sources and published data. No use is made of confidential information obtained by bp in the course of its business.

## Country, regions and geographic groupings

Country and geographic groupings are made purely for statistical purposes and are not intended to imply any judgement about political or economic standings.

### North America

US (excluding US territories), Canada, Mexico.

### South & Central America

Caribbean (including Puerto Rico and US Virgin Islands), Bermuda, Central and South America.

### Europe

European members of the OECD plus Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Georgia, Gibraltar, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Romania, Serbia and Ukraine.

### Commonwealth of Independent States (CIS)

Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Uzbekistan.

### Middle East

Arabian Peninsula, Iran, Iraq, Israel, Jordan, Lebanon, Syria.

### North Africa

Territories on the north coast of Africa from Egypt to Western Sahara.

### West Africa

Territories on the west coast of Africa from Mauritania to Angola, including Cape Verde, Chad.

### East and Southern Africa

Territories on the east coast of Africa from Sudan to Republic of South Africa. Also Botswana, Madagascar, Malawi, Namibia, Uganda, Zambia, Zimbabwe.

### Asia Pacific

Brunei, Cambodia, China<sup>†</sup>, China Hong Kong SAR\*, China Macau SAR\*, Indonesia, Japan, Laos, Malaysia, Mongolia, North Korea, Philippines, Singapore, South Asia (Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan, Sri Lanka), South Korea, Taiwan, Thailand, Vietnam, Australia, New Zealand, Papua New Guinea, Oceania.

<sup>†</sup>Mainland China.

\*Special Administrative Region.

### Australasia

Australia, New Zealand.

### OECD members

**Europe:** Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, UK.

**Other member countries:** Australia, Canada, Chile, Israel, Japan, Mexico, New Zealand, South Korea, US.

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**North Africa:** Algeria, Libya.

**West Africa:** Angola, Equatorial Guinea, Gabon, Nigeria, Republic of Congo.

**South America:** Ecuador, Venezuela.

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