



Statistical Review of World Energy 2020 | 69th edition





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Introduction

- 2 Chief executive officer's introduction
- 3 2019 at a glance
- 4 The year in review

Primary energy

- 8 Consumption
- 9 Consumption by fuel
- **11** Consumption per capita

Carbon

13 Carbon dioxide emissions

Oil 🔘

- 14 Reserves
- **16** Production
- **20** Consumption
- 26 Prices
- 28 Refining
- **30** Trade movements

Natural gas

- 32 Reserves
- **34** Production
- 36 Consumption
- 39 Prices
- 40 Trade movements

Coal

- 44 Reserves
- 46 Production
- 47 Consumption
- **49** Prices and trade movements

Nuclear energy

50 Consumption

Hydroelectricity

51 Consumption

Renewable energy

- 53 Renewables consumption
- 55 Generation by source
- **56** Biofuels production
- 57 Biofuels consumption

Electricity

- 59 Generation
- **61** Generation by fuel

Key minerals

- 62 Production
- 63 Reserves
- 63 Prices

Appendices

- 64 Approximate conversion factors
- 64 Methodology
- 65 Definitions
- 65 More information

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*.

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_2 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.

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%
Total	583.9	7.7		

*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 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

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)		
Increases		Increases			
China	681	US	1685		
Iran	183	Brazil	198		
India	159	Canada	150		
Algeria	37	Iraq	148		
Russia	35	Australia	135		
Decreases		Decreases			
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



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.



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-togas 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.

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

LNG exports	Annual change (bcm)	LNG imports	Annual change (bcm)
Increases		Increases	
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
Decreases		Decreases	
Indonesia	-4.3	Japan	-7.5
		South Korea	-4.6
		Egypt	-3.2
		Argentina	-1.9
		Chile	-1.0

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%



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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Turkmenistan 0.83 0.90 1.00 1.09 0.97 1.00 1.19 1.17 1.31 1.145 10.1% 9.9% 0.2% Other CIS 0.65 0.67 0.71 0.74 0.71 0.72 0.72 0.75 0.81 0.83 2.8% 1.8% 0.1% Total CIS 33.92 35.28 36.71 37.04 38.81 36.86 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 2.2% 0.3% 1.8% 1.8% 1.8% 1.3% 1.7% 1.88 1.5% 1.4% 1.83 1.7% 1.8% 1.3% 1.7% 1.8% 1.3% 1.7% 1.8% 1.3% 1.7% 1.8% 1.3% 1.3% 1.7% 1.8% 1.3% 1.7% 1.8% 1.3% 1.7% 1.8% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 1.3% 3.3% 1				2.53											0.5%
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Catar 1.04 1.21 1.40 1.59 1.71 1.84 2.00 1.99 2.02 1.96% 6.8% 0.3% Saudi Arabia 8.35 3.51 3.70 3.89 4.09 4.08 10.50 10.83 10.99 1.01 11.001 11.04 1.2% 3.5% 0.8% 3.5% 0.8% 0.5% 0.8% 0.2% 0.7% 0.7% 0.7% 0.7% 0.7% 0.7% 0.7% 0.7% 0.80 0.86 0.84 0.86 0.9% 0.8% 0.2% 0.7% 0.7% 0.7% 0.80 0.84 <td></td> <td>1.30</td> <td></td> <td>4.2%</td> <td></td> <td>0.3%</td>		1.30											4.2%		0.3%
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Total Middle East 28.22 29.74 30.86 32.12 33.06 34.05 36.04 36.23 36.83 37.61 38.78 3.1% 3.2% 6.6% Algeria 1.62 1.57 1.67 1.83 1.93 2.11 2.22 2.24 2.42 2.54 4.9% 4.7% 0.4% 0.7% 0.7% 0.79 0.80 0.84 0.86 0.95 9.8% 2.9% 0.2% <															
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Other Africa 4.97 5.23 5.18 5.44 5.81 6.08 6.30 6.32 6.62 6.90 7.10 2.9% 3.5% 1.2% Total Africa 15.57 16.07 16.13 16.69 17.14 17.66 17.91 18.38 18.79 19.39 19.87 2.5% 2.4% 3.4% 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% 0.3% 0.3% 0.4% 1.13 1.32 1.34 1.39 1.48 1.76 18.6% 6.3% 0.3% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.4% 0.4% 0.2% 0.4% 0.4% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2%	Morocco	0.63	0.70	0.73			0.78						9.8%		0.2%
Total Africa15.5716.0716.1316.6917.1417.6617.9118.3818.7919.3919.872.5%2.4%3.4%Australia5.485.505.705.635.675.755.845.885.876.006.416.9%0.8%1.1%Bangladesh0.880.900.981.051.081.131.221.241.391.441.791.481.791.441.701.83135.77141.704.4%3.8%24.3%China97.52104.28112.54117.05121.37124.20125.38126.95130.83135.77141.704.4%3.8%24.3%India21.5222.552.3825.1126.0827.8628.7730.077.133.3034.062.3%5.2%5.8%Indonesia5.766.326.907.277.577.097.107.307.578.238.918.3%4.0%1.5%Japan19.8321.1320.0619.9219.7519.2418.9718.6518.8918.8418.67-0.9%-1.4%3.2%Malaysia3.253.353.473.733.903.944.004.214.274.214.261.3%2.3%0.7%Pakistan2.642.652.672.872.890.890.890.910.900.922.0%1.0%0.2%South Korea10			5.29 5.23												1.2%
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 1.05 121.37 124.20 125.38 126.95 130.83 135.77 141.70 18.6% 6.3% 0.3% 24.3% China Pong Kong SAR 1.11 1.16 1.19 1.14 1.17 1.14 1.88 1221 1.29 1.30 1.44 4.4% 3.8% 24.3% India 21.52 22.55 23.88 25.11 26.06 72.7 7.57 7.09 7.00 7.33 33.33 34.06 2.3% 5.2% 5.8% 5.8% 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% 2.3% 2.0% -0.9% -1.4% 3.2% 2.3% 0.9% -0.9% -1.4% 3.2% 2.3% 0.9% 0.9% 0.90 0.90															
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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% 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 0.84 0.84 0.89 0.89 0.91 0.90 0.92 2.0% 1.0% 0.2% Singapore 2.67 2.87 2.99 3.00 3.06 3.15 3.35 3.48 3.59 3.61 3.55 1.4% 2.3% 0.6% 0.6% Singapore 2.67 2.87 <th< td=""><td></td><td>0.88</td><td></td><td>0.98</td><td>1.05</td><td></td><td>1.13</td><td>1.32</td><td>1.34</td><td>1.39</td><td>1.48</td><td>1.76</td><td>18.6%</td><td>6.3%</td><td>0.3%</td></th<>		0.88		0.98	1.05		1.13	1.32	1.34	1.39	1.48	1.76	18.6%	6.3%	0.3%
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% 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 0.91 0.90 0.92 2.0% 1.0% 0.2% 0.7% Pakistan 2.64 2.65 2.67 2.47 2.88 2.77 2.92 3.19 3.37 3.48 3.56 2.4% 2.9% 0.6% Singapore 2.67 2.87 2.99 0.30 3.66 3.15 3.35 3.48 3.59 3.61 3.55 12.37 -1.5% 3.8% 0.6% South Korea 0.16					117.05		124.20	125.38		130.83	135.77		4.4%	3.8%	24.3%
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 0.91 0.90 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% 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%	India	21.52	22.55	23.88		26.08		28.77	30.07		33.30	34.06	2.3%		5.8%
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 0.91 0.90 0.92 2.0% 1.0% 0.2% Pakistan 2.64 2.65 2.67 2.87 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% South Korea 10.16 10.94 11.43 11.55 11.64 11.87 12.16 12.37 12.55 12.37 -1.4% 2.2% 2.1% 5.0% 0.1% 0.6% 0.9% 0.9% 0.31 0.33 0.35 0.36 2.8% 5.0% 0.1% 0.9% 0.9% 0.9% 0.9% 0.8% 0.9% 0.9% 0.8% 0.9% 0.8% <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>7.09</td><td>7.10</td><td>7.30</td><td>7.57</td><td></td><td></td><td></td><td>4.0%</td><td>1.5%</td></td<>							7.09	7.10	7.30	7.57				4.0%	1.5%
New Zealand 0.81 0.83 0.83 0.84 0.84 0.88 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% 0.9% 0.8% 0.6% 0.36 0.35 0.36 0.36 0.35 0.36 0.36 0.35 0.36 0.36 </td <td></td>															
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 0.23 0.29 0.31 0.33 0.35 0.36 2.8% 5.0% 0.1% Taiwan 4.42 4.66 4.61 4.71 4.82 4.77 4.85 4.87 4.93 4.81 -2.4% 0.9% 0.8% Vietnam 1.65 1.87 2.13 2.24	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%
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 -1.4% 2.2% 2.1% Taiwan 4.42 4.66 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 5.25 5.36 5.45 5.60 5.61 0.3% 3.5% 1.0% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.50 3.14 3.22 2.6% 5.0% 0.6% Other Asia Pacific 184.99 196.8	Pakistan	2.64	2.65	2.65	2.47		2.77	2.92		3.37			2.4%	2.9%	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 4.71 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 5.25 5.36 5.45 5.60 5.61 0.3% 3.5% 1.0% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.00 3.11 3.32 3.72 4.12 10.7% 8.7% 0.7% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.00 3.11 3.32 3.72 4.12 10.7% 8.7% 0.7% <th< td=""><td></td><td>1.18</td><td>1.22</td><td>1.24</td><td></td><td>1.38</td><td>1.45 3.15</td><td>1.59</td><td>1./3 3.48</td><td>1.90 3.59</td><td></td><td></td><td>3.5% -1.5%</td><td>5.3% 3.8%</td><td>0.3%</td></th<>		1.18	1.22	1.24		1.38	1.45 3.15	1.59	1./3 3.48	1.90 3.59			3.5% -1.5%	5.3% 3.8%	0.3%
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 4.71 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 4.93 2.61 2.90 3.11 3.32 3.72 4.12 0.3% 3.5% 0.7% Vietnam 1.65 1.87 2.13 2.24 2.39 2.61 2.90 3.11 3.32 3.72 4.12 10.7% 8.7% 0.7% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.50 3.14 3.22 2.6% 5.0% 0.6% Total Asia Pacific 18.49 196.80 207.33 214.02 220.60 225.15 228.63 233.13 240.07 249.35	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%
Thailand 4.13 4.39 4.56 4.87 4.95 5.09 5.25 5.36 5.45 5.60 5.61 0.3% 3.5% 1.0% Vietnam 1.65 1.87 2.13 2.24 2.39 2.61 2.90 3.11 3.32 3.72 4.12 10.7% 8.7% 0.7% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.50 3.14 3.22 2.6% 5.0% 0.6% Total Asia Pacific 184.99 196.80 207.33 214.02 220.60 225.15 228.63 233.13 240.07 249.35 257.56 3.3% 3.3% 44.1% Total World 482.82 506.02 518.31 524.98 534.91 539.25 543.17 550.60 560.42 57.62 358.90 1.3% 1.6% 100.0% of which: OECD 224.69 233.04 230.63 228.16 230.26 228.31 228.75 239.64 231.84 235.39 233.43 -0.8% -0.8% 40.0% </td <td></td> <td>0.22</td> <td></td> <td></td> <td></td> <td></td> <td>0.23</td> <td></td> <td></td> <td>0.33</td> <td>0.35</td> <td></td> <td>2.8%</td> <td></td> <td></td>		0.22					0.23			0.33	0.35		2.8%		
Vietnam 1.65 1.87 2.13 2.24 2.39 2.61 2.90 3.11 3.32 3.72 4.12 10.7% 8.7% 0.7% Other Asia Pacific 1.76 1.94 1.93 2.02 1.99 2.16 2.25 2.44 2.50 3.14 3.22 2.6% 5.0% 0.6% Total Asia Pacific 184.99 196.80 207.33 214.02 220.60 225.15 228.63 233.13 240.07 249.35 257.56 3.3% 4.4.1% Total World 482.82 506.02 518.31 524.98 534.91 539.25 543.17 50.60 506.42 576.23 583.98 1.3% 4.4.1% of which: OECD 224.69 233.04 230.63 228.16 230.26 228.75 229.64 231.84 235.39 233.43 Non-OECD 258.13 272.99 287.68 296.82 304.65 310.94 314.42 320.96 328.58 340.84 350.47<															
Total Asia Pacific 184.99 196.80 207.33 214.02 220.60 225.15 228.63 233.13 240.07 249.35 257.56 3.3% 3.3% 44.1% Total World 482.82 506.02 518.31 524.98 534.91 539.25 543.17 550.60 560.42 576.23 583.90 1.3% 1.6% 100.0% of which: OECD Non-OECD 224.69 233.04 230.63 228.16 230.26 228.31 228.75 229.64 231.84 235.39 233.43 -0.8% • 40.0% 0.07 258.13 272.99 287.68 296.82 304.65 310.94 314.42 320.96 328.58 340.84 350.47 2.8% 3.0% 60.0%	Vietnam	1.65	1.87	2.13	2.24	2.39	2.61	2.90	3.11	3.32	3.72	4.12	10.7%	8.7%	0.7%
Total World 482.82 506.02 518.31 524.98 534.91 539.25 543.17 550.60 560.42 576.23 583.90 1.3% 1.6% 100.0% of which: OECD Non-OECD 224.69 233.04 230.63 228.16 230.26 228.31 228.75 229.64 231.84 235.39 233.43 -0.8% + 40.0% 0.00 258.13 272.99 287.68 296.82 304.65 310.94 314.42 320.96 328.58 340.84 350.47 2.8% 3.0% 60.0%															
of which: OECD 224.69 233.04 230.63 228.16 230.26 228.31 228.75 229.64 231.84 235.39 233.43 -0.8% + 40.0% Non-OECD 258.13 272.99 287.68 296.82 304.65 310.94 314.42 320.96 328.58 340.84 350.47 2.8% 3.0% 60.0%															
Non-OECD 258.13 272.99 287.68 296.82 304.65 310.94 314.42 320.96 328.58 340.84 350.47 2.8% 3.0% 60.0%															

*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* for more details on this methodology. •Less than 0.05%.

Primary energy

Consumption*