

2017 at a glance

Global primary energy consumption grew strongly in 2017, led by natural gas and renewables, with coal's share of the energy mix continuing to decline.

Energy developments

- Primary energy consumption growth averaged 2.2% in 2017, up from 1.2% last year and the fastest since 2013. This compares with the 10-year average of 1.7% per year.
- By fuel, natural gas accounted for the largest increment in energy consumption, followed by renewables and then oil.
- Energy consumption rose by 3.1% in China. China was the largest growth market for energy for the 17th consecutive year.

Carbon emissions

- Carbon emissions from energy consumption increased by 1.6%, after little or no growth for the three years from 2014 to 2016.

Oil

- The oil price (Dated Brent) averaged \$54.19 per barrel, up from \$43.73/barrel in 2016. This was the first annual increase since 2012.
- Global oil consumption growth averaged 1.8%, or 1.7 million barrels per day (b/d), above its 10-year average of 1.2% for the third consecutive year. China (500,000 b/d) and the US (190,000 b/d) were the single largest contributors to growth.
- Global oil production rose by 0.6 million b/d, below average for the second consecutive year. US (690,000 b/d) and Libya (440,000 b/d) posted the largest increases in output, while Saudi Arabia (-450,000 b/d) and Venezuela (-280,000 b/d) saw the largest declines.
- Refinery throughput rose by an above-average 1.6 million b/d, while refining capacity growth was only 0.6 million b/d, below average for the third consecutive year. As a result, refinery utilization climbed to its highest level in nine years.

Natural gas

- Natural gas consumption rose by 96 billion cubic metres (bcm), or 3%, the fastest since 2010.
- Consumption growth was driven by China (31 bcm), the Middle East (28 bcm) and Europe (26 bcm). Consumption in the US fell by 1.2%, or 11 bcm.
- Global natural gas production increased by 131 bcm, or 4%, almost double the 10-year average growth rate. Russian growth was the largest at 46 bcm, followed by Iran (21 bcm).



+2.2%

Growth of global primary energy consumption, the fastest growth since 2013

- Gas trade expanded by 63 bcm, or 6.2%, with growth in LNG outpacing growth in pipeline trade.
- The increase in gas exports was driven largely by Australian and US LNG (up by 17 and 13 bcm respectively), and Russian pipeline exports (15 bcm).

Coal

- Coal consumption increased by 25 million tonnes of oil equivalent (mtoe), or 1%, the first growth since 2013.
- Consumption growth was driven largely by India (18 mtoe), with China consumption also up slightly (4 Mtoe) following three successive annual declines during 2014-2016. OECD demand fell for the fourth year in a row (-4 mtoe).
- Coal's share in primary energy fell to 27.6%, the lowest since 2004.
- World coal production grew by 105 mtoe or 3.2%, the fastest rate of growth since 2011. Production rose by 56 mtoe in China and 23 mtoe in the US.

Renewables, hydro and nuclear

- Renewable power grew by 17%, higher than the 10-year average and the largest increment on record (69 mtoe).
- Wind provided more than half of renewables growth, while solar contributed more than a third despite accounting for just 21% of the total.
- In China, renewable power generation rose by 25 mtoe – a country record, and the second largest contribution to global primary energy growth from any single fuel and country, behind natural gas in China.
- Hydroelectric power rose by just 0.9%, compared with the 10-year average of 2.9%. China's growth was the slowest since 2011, while European output declined by 10.5% (-16 mtoe).
- Global nuclear generation grew by 1.1%. Growth in China (8 mtoe) and Japan (3 mtoe) was partially offset by declines in South Korea (-3 mtoe) and Taiwan (-2 mtoe).

Power generation

- Power generation rose by 2.8%, close to the 10-year average. Practically all growth came from emerging economies (94%). Generation in the OECD has remained relatively flat since 2010.
- Renewables accounted for almost half of the growth in power generation (49%), with most of the remainder provided for by coal (44%).
- The share of renewables in global power generation increased from 7.4% to 8.4%.

Key materials

- Cobalt production has grown by only 0.9% per annum since 2010, while lithium production has increased by 6.8% p.a. over the same period.
- Cobalt prices more than doubled in 2017, while lithium carbonate prices increased by 37%.

Left: China Hong Kong SAR at night.