



Date: 28 March 2019

STATISTICAL PRESS RELEASE

UK Energy Statistics, 2018 & Q4 2018

Energy Trends and Energy Prices publications are published today 28 March 2019 by the Department for Business, Energy and Industrial Strategy. The publications cover new data for the fourth quarter of 2018 and thus provisional annual data for 2018. This press release focuses mainly on the 2018 annual data.

Energy Trends covers statistics on energy production and consumption, in total and by fuel, and provides an analysis of the year on year changes. Energy Prices covers prices to domestic and industrial consumers, prices of oil products and comparisons of international fuel prices.

The key points from 2018 are:

- Total energy production was 3.7 per cent higher than in 2017. This increase, the fourth in successive years, was due to rises in output from oil, bioenergy and waste, wind and solar. Oil output rose, up 9.0 per cent. The output from bioenergy and waste and wind, solar and hydro is now nearly 13 times higher than coal, notable as coal output was higher as recently as 2012. Coal output fell to a record low level, whilst output from nuclear also fell, due to outages.
- Total primary energy consumption for energy uses was 0.6 per cent lower than in 2017. However, when adjusted to take account of weather differences between 2017 and 2018, primary consumption fell by 1.3 per cent.
- Final energy consumption (excluding non-energy use) was 0.7 per cent higher than in 2017. On a seasonally and temperature adjusted basis it is estimated to have fallen by 0.3 per cent with rises in industrial and transport consumption offset by falls in the domestic and services sectors.
- Of electricity generated in 2018, gas accounted for 39.4 per cent whilst coal accounted for only 5.0 per cent. Renewables share of electricity generation increased to 33.3 per cent in 2018 - a record high - with 111 TWh electricity generated from renewable sources, as a result of increased capacity. Nuclear generation's share declined slightly on 2017, due to reactor outages and required maintenance.

- Renewable electricity capacity was 44.4 GW at the end of 2018, a 9.7 per cent increase (3.9 GW) on a year earlier.
- Low carbon electricity's share of generation increased from 50.1 per cent in 2017 to a record high of 52.8 per cent in 2018, driven by growth in renewable generation due to increased capacity.
- Average annual household energy bills (based on fixed consumption of 3,800 kWh per annum for electricity and 15,000 kWh per annum for gas) across all payment types in 2018 increased by £65 (up 5.2 per cent to £1,314) compared to 2017. Average electricity and gas bills were £49 and £16 higher respectively.
- Based on actual annual household consumption, combined energy bills increased by 3.9 per cent in cash terms (£1,155 in 2018) and increased by 1.9 per cent in real terms (£1,010 in 2018 based on 2010 prices).

Other highlights from 2018 include:

- Imports in 2018 were 0.1 per cent lower than in 2017, whilst exports rose by 3.3 per cent. As a result, net import dependency fell back from 36.3 per cent to 35.3 per cent.
- Crude oil & NGL production was higher by 8.9 per cent than in 2017. Production has increased as a result of new projects on the UKCS coming online, of which much has been exported. As such, exports increased 17 per cent on last year.
- Natural gas production was down 3.1 per cent higher in 2018 compared with the year before. Similarly, imports in 2018 decreased by 2.0 per cent whilst gas exports were down by a third in the same period to their lowest level since 1998.
- Coal production was 15 per cent lower than in 2017, and at a record low level, mainly due to one of the large surface mines not producing since April 2017 (it is under 'care and maintenance'), along with lower demand for electricity generation. Imports of coal in 2018 were nearly 17 per cent higher compared to 2017. Coal stocks were broadly similar to last year.
- Gas demand in 2018 was stable on the year before at 877 TWh, with decreased gas use for electricity generation offset by an increase in final consumption from cold weather during the 'Beast from the East'.
- Electricity generation in 2018 fell by 1.4 per cent, from 339 TWh a year earlier to 334 TWh, with falls in generation from coal, gas and nuclear offset by an increase from renewables, with a 14 per cent increase in wind and solar generation and a 12 per cent increase in bioenergy generation.

For more detailed information on methodology, quality assurance and use of the data, please refer to the methodology notes available by energy sector on the BEIS section of the GOV.UK website at: www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics



The March 2019 edition of Energy Trends also includes articles on:

- Diversity and security of gas supply in the EU, 2017
- Proposed change to method of reporting UK Liquefied Natural Gas imports
- Nuclear electricity in the UK
- Comparison of theoretical energy consumption with actual usage
- Sub-national consumption tables

The items below which previously would have been published in Energy Trends now form part of the March 2019 edition of the Energy Prices publication:

- Domestic energy bills in 2018: The impact of variable consumption
- Domestic prices: methodology change

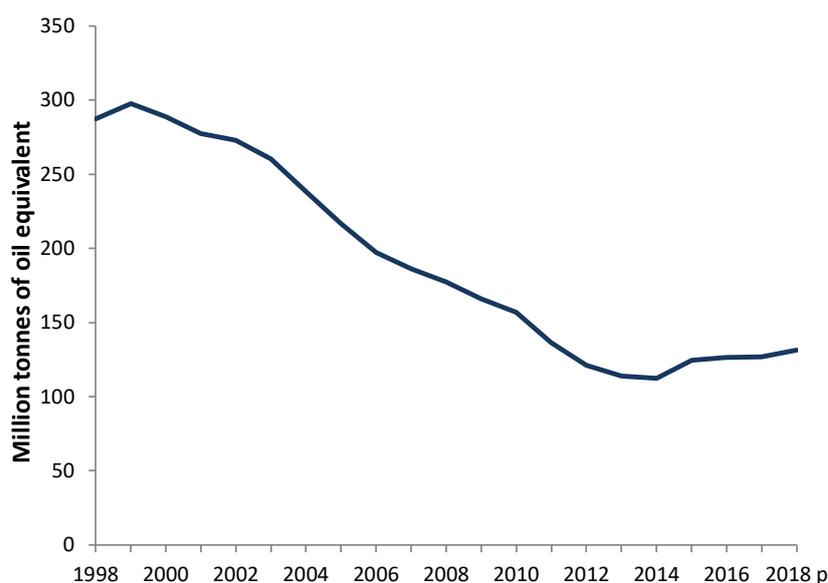
The following statistics are also published today 28 March 2019, by the Department for Business, Energy and Industrial Strategy:

- Greenhouse Gas emissions, 2018 provisional figures
www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2018
- Smart Meters installations, Q4 2018
www.gov.uk/government/statistics/statistical-release-and-data-smart-meters-great-britain-quarter-4-2018
- Solar Photovoltaics deployment, February 2019
www.gov.uk/government/statistics/solar-photovoltaics-deployment



TOTAL ENERGY: 2018

Total Energy - Production



	2018 Million tonnes of oil equivalent	Percentage change on a year earlier
Total production	131.5	+3.7
Oil	55.7	+9.0
Natural gas	38.8	-3.1
Primary electricity ⁽¹⁾	20.6	-1.8
Bioenergy & waste	14.8	+14.9
Coal	1.7	-14.4

(1) Nuclear and wind, solar & natural flow hydro electricity

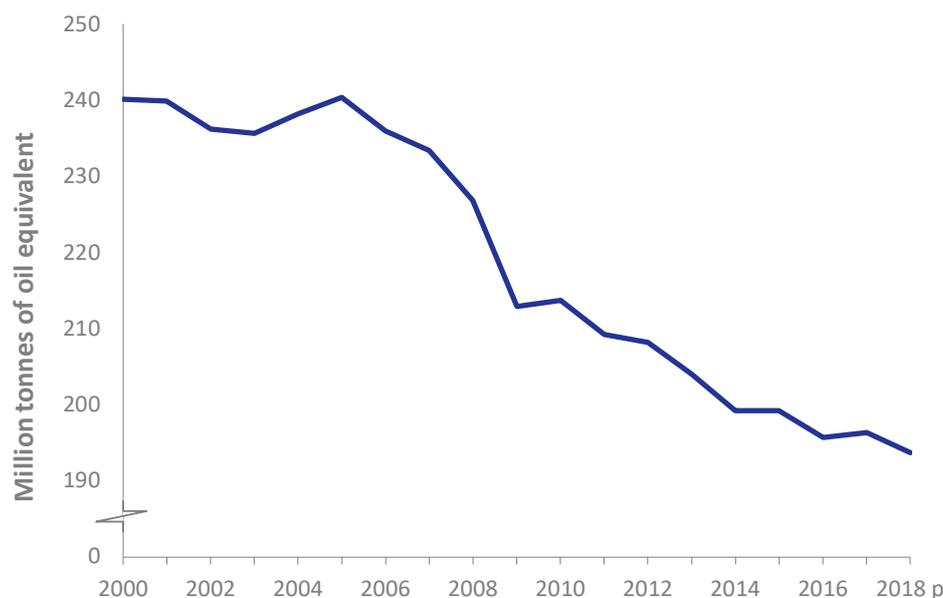
- Total production in 2018 was 131.5 million tonnes of oil equivalent, 3.7 per cent higher than in 2017. This increase, the fourth in successive years, was due to rises in output from oil, bioenergy and waste, wind and solar, which more than offset the decline in UK coal production and reduced output from gas and nuclear.
- Production of oil rose by 9.0 per cent due to new fields opening on the UKCS, as well as the closure of the Forties pipeline in December 2017. Gas fell by 3.1 per cent, with production in the second half of the year impacted by the closure of the Theddlethorpe gas terminal in August 2018.
- Production of bioenergy & waste rose by 15 per cent between 2017 and 2018 to a record 14.8 million tonnes of oil equivalent, driven by conversions from coal to biomass at the Drax and Lynemouth power stations. Production of coal fell by 14 per cent, to a new record low.
- Primary electricity output fell by 1.8 per cent between 2017 and 2018, within which nuclear output fell by 7.0 per cent due primarily to outages in the fourth quarter of 2018, whilst output from wind, solar and hydro rose by 12 per cent, to a record high level, due to increased wind and solar capacity.

Total energy quarterly tables ET 1.1 – 1.3 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/total-energy-section-1-energy-trends



TOTAL ENERGY: 2018

Total Energy – consumption⁽¹⁾



(1) Total inland consumption on a primary fuel input basis (seasonally adjusted and temperature corrected annual rates).

	2018 Million tonnes of oil equivalent	Percentage change on a year earlier
Total energy consumption <i>Unadjusted</i>	192.2	-0.6
<i>Seasonally adjusted and temperature corrected –annual rate</i>	193.7	-1.3
Final consumption: unadjusted	143.3	+0.7
temperature corrected	145.2	-0.3

When examining seasonally adjusted and temperature corrected annualised rates:

- Total inland consumption on a primary fuel input basis was 193.7 million tonnes of oil equivalent in 2018, 1.3 per cent lower than in 2017.
- Between 2017 and 2018 coal consumption fell by 19 per cent to a record low and gas consumption fell by 1.7 per cent as electricity generators made more use of renewable sources; oil consumption also fell by 1.3 per cent.
- Bioenergy and waste consumption rose by 9.6 per cent, whilst primary electricity consumption was broadly unchanged, within which nuclear fell by 7.0 per cent but wind, solar and hydro rose by 12 per cent.

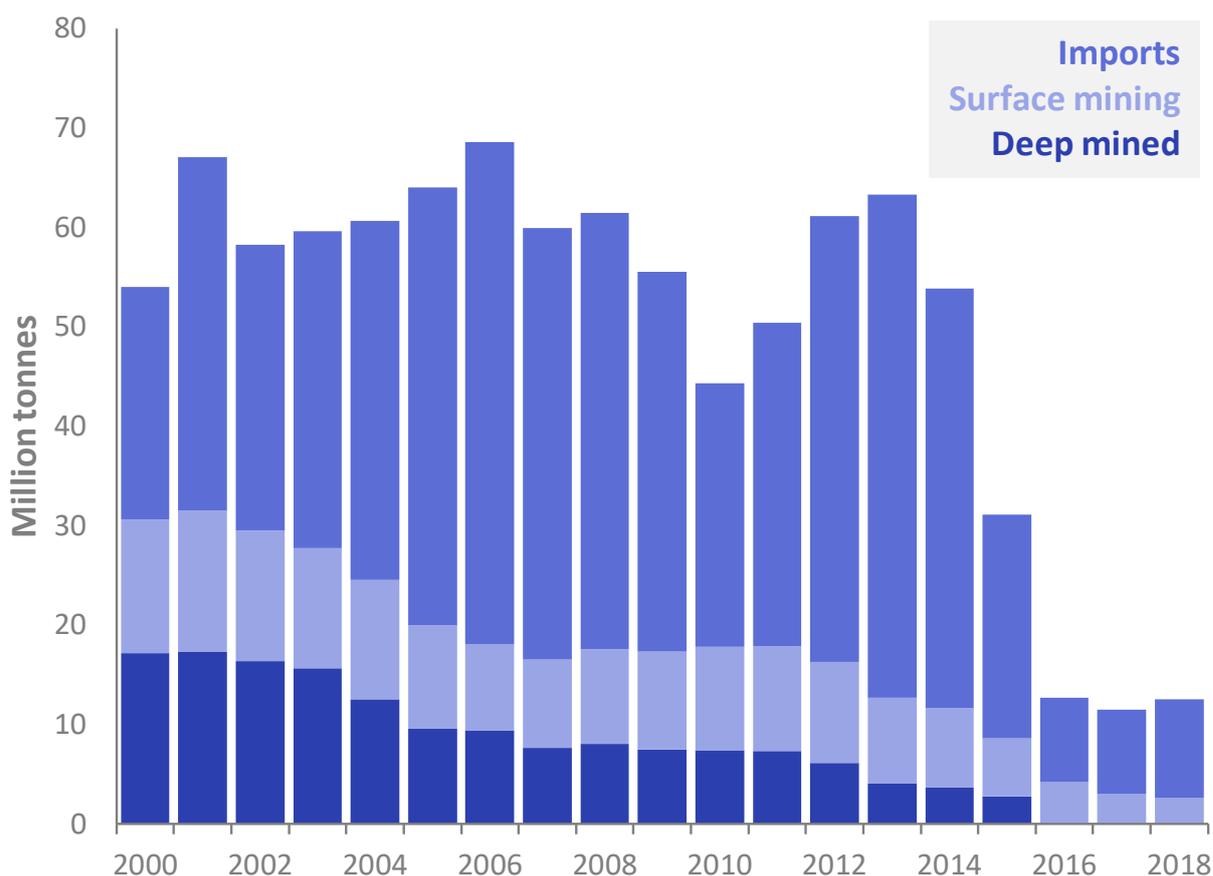
Final energy consumption (excluding non-energy use) was 0.7 per cent higher than in 2017. Domestic consumption rose by 2.3 per cent with notably high demand in quarter 1 as a result of the colder weather during the 'Beast from the East'. On a temperature corrected basis, final energy consumption fell by 0.3 per cent, with domestic consumption down 1.3 per cent.

Total energy quarterly tables ET 1.1 – 1.3 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/total-energy-section-1-energy-trends



COAL: 2018

Coal production and imports



	2018 Million tonnes	Percentage change on a year earlier
Coal Supply	11.8	-16.6
- Coal production	2.6	-15.1
- Coal imports	9.9	+17.0
Coal demand	11.8	-16.6
- Power stations	6.6	-23.7
- Coke ovens & blast furnaces	2.9	-8.4
- Final users	2.1	+0.1

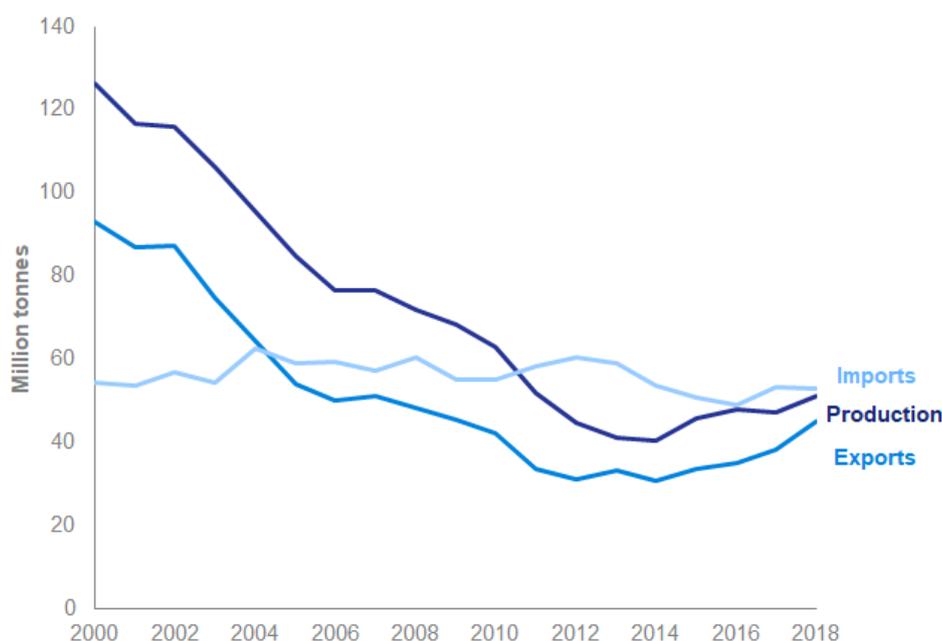
- Provisional figures for 2018, as a whole, show that coal production fell to a new record low of 2.6 million tonnes, 15 per cent down on 2017 due to further contraction of surface mining along with lower demand for electricity generation. Coal imports at 9.9 million tonnes were nearly 17 per cent higher compared to 2017.
- Total demand for coal in 2018 was 11.8 million tonnes, 17 per cent lower than in 2017, with consumption by electricity generators down by 24 per cent, a new record low.
- Total stocks at the end of the fourth quarter of 2018 were 5.2 million tonnes, broadly similar to last year and 3.7 per cent higher than the third quarter of 2018.

Coal quarterly tables ET 2.1 – 2.4 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/solid-fuels-and-derived-gases-section-2-energy-trends



OIL: 2018

Production and trade of crude oil and NGLs



	2018 <i>Million tonnes</i>	Percentage change on a year earlier
Primary oil production	51.2	+8.9
Primary oil demand	58.7	-2.6
Net imports (primary oil)	8.0	-46.2
Net imports (oil products)	13.3	9.1
Refinery production	60.7	-2.9
Petroleum demand	70.1	-1.6
- Motor spirit (including biofuels)	12.2	-1.4
- DERV fuel (including biofuels)	25.7	0.6
- Aviation turbine fuel	12.3	1.0

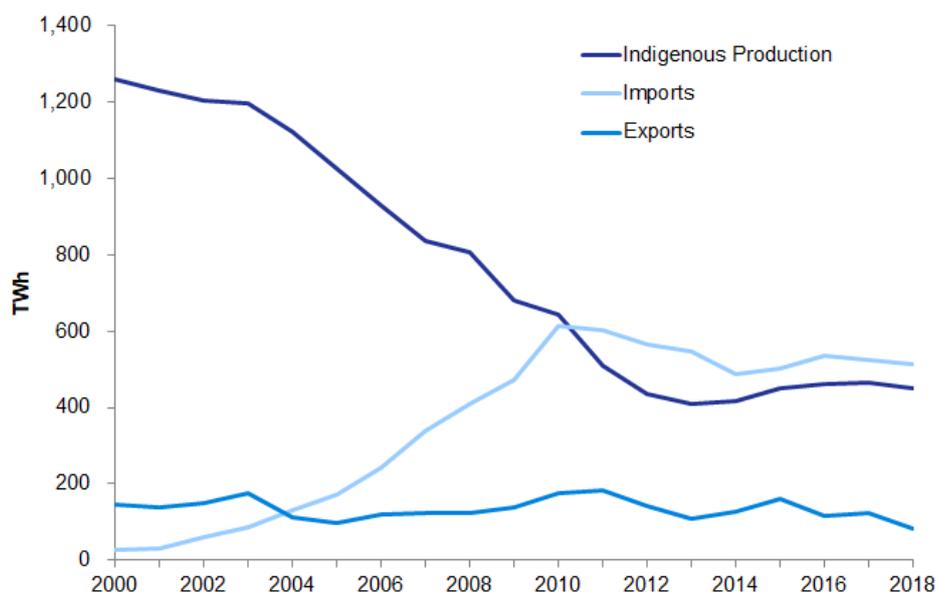
- Indigenous production of primary oils (crude, NGLs and feedstocks) increased by 8.9 per cent (4.2 million tonnes) compared with 2017. This was primarily due to multiple new projects on the UKCS in late 2017 which has increased production through 2018. Oil production stands at just over 51 million tonnes, just over a third of the peak production recorded in 1999.
- Overall demand for primary oils in 2018 decreased 2.6 per cent on 2017 as refineries entered a period of maintenance. Net imports of petroleum products were 8.0 million tonnes in 2017.
- Provisional data indicate that transport demand decreased by 1.2 per cent when compared to 2017, driven by a decrease in diesel sales over the year. Fuel used for aviation transport increased by 1.0 per cent.

Oil quarterly tables ET 3.1 & 3.2 and 3.4 – 3.6 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/oil-and-oil-products-section-3-energy-trends



GAS: 2018

Production and trade of natural gas



	2018 <i>TWh</i>	Percentage change on a year earlier
Gas production	450.4	-3.1
Gas imports	514.5	-2.0
Gas exports	83.7	-33.4
Gas demand	876.6	0.1
- Electricity generation	272.0	-4.7
- Domestic	306.7	3.2

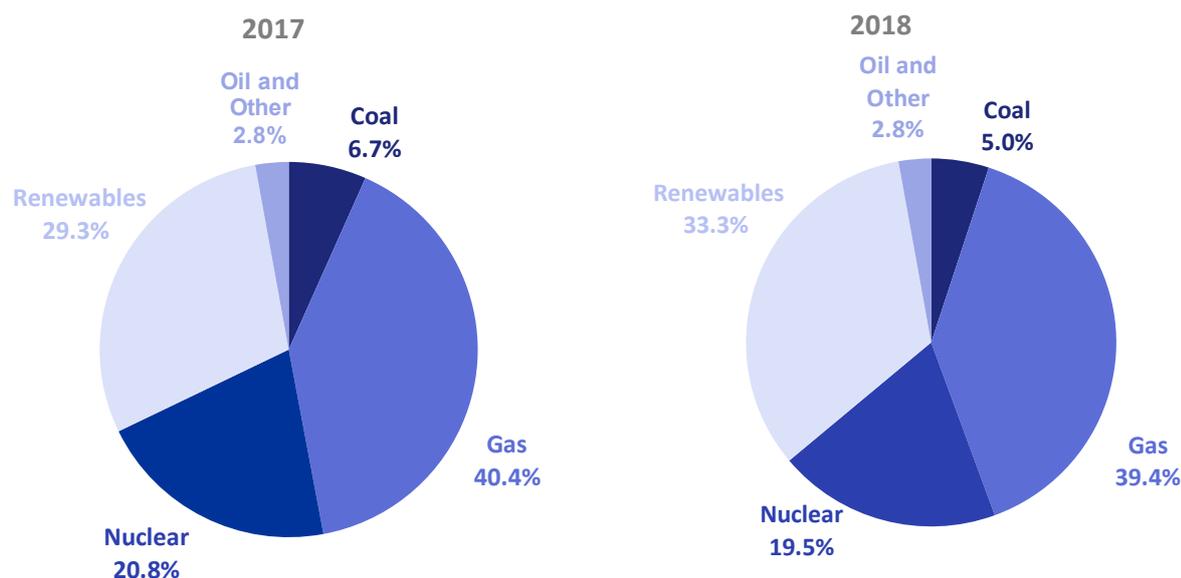
- In 2018 gross gas production decreased by 3.1 per cent compared to last year. This opposes the increase in year-on-year production since 2013, however the longer-term trend has been declining since the peak in 2000.
- Gas imports were 2.0 per cent lower than in 2017 with pipeline imports down 3.6 per cent. In contrast, liquefied natural gas (LNG) imports increased by 7.3 per cent. Exports decreased by a third caused by a substantial drop in exports to Belgium (down 44 per cent) and a smaller drop to the Netherlands.
- Gas demand in 2018 was stable on 2017 at 877 TWh. Demand for gas in electricity generation was down by 4.7 per cent as a result of the continued uptake in renewable sources. In contrast, final consumption was up 3.1 per cent, with domestic and other final users increasing by 3.2 and 3.9 per cent respectively. This demand was influenced by particularly cold weather and subsequent high demand during the ‘Beast from the East’.

Gas quarterly table ET 4.1 is available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/gas-section-4-energy-trends



ELECTRICITY: 2018

Electricity generated



Electricity	2018 TWh	Percentage change on a year earlier
Generated from		
Coal	16.8	-25.3
Nuclear	65.1	-7.5
Gas	131.5	-3.9
Renewables	111.1	+11.8
Total	333.9	-1.4
Supplied to		
Industry	92.4	-0.3
Domestic	105.3	-0.1
Other final consumers	103.3	0.6
All	301.0	0.1

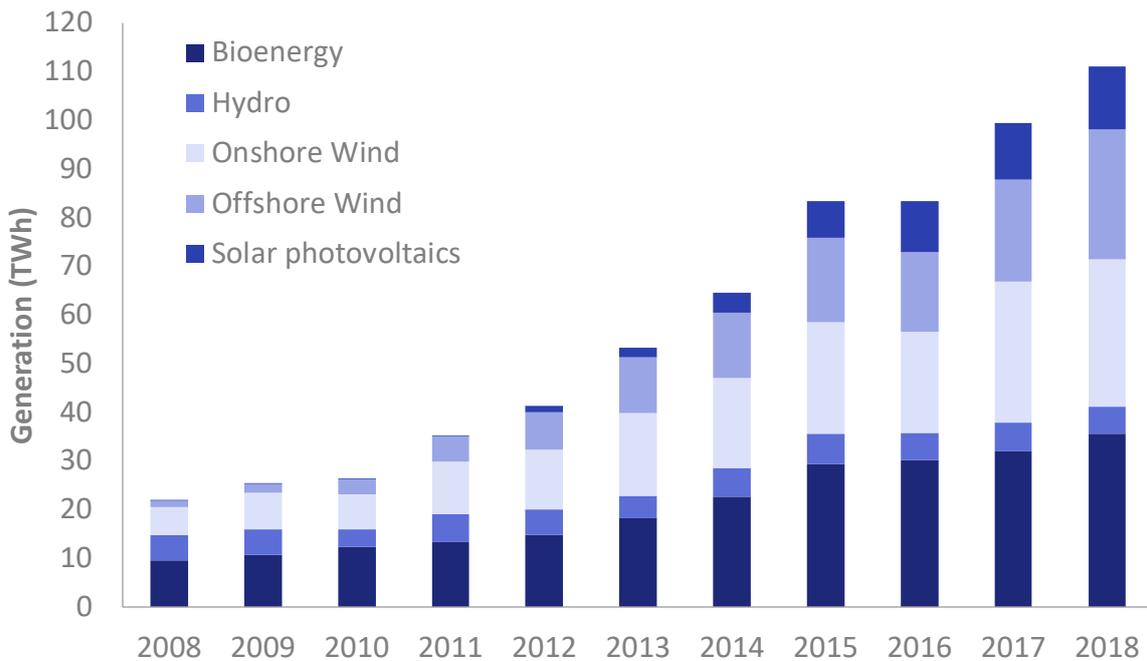
- Gas and coal generation accounted for 39.4 per cent and 5.0 per cent of generation respectively, as fossil fuelled generation was offset by higher renewable generation. Production favoured gas over coal, due to the carbon price per GWh being lower for gas.
- Low carbon generation (nuclear and renewables) accounted for a record high of 52.8 per cent of generation in 2018. This was due to large increases in renewable generation, which was up 11.8 per cent; making up 33.3 per cent of electricity generated. Nuclear generation decreased by 7.5 per cent, with its share 1.3 per cent lower than in 2017, due to outages.
- Total electricity generated in 2018 dropped 1.4 per cent compared to 2017, while imports increased 17.4 per cent. The total electricity supplied was down 0.2 per cent on 2017.
- Fuel used by generators in 2018 was 2.1 per cent lower than in 2017, as the fuel mix shifted to non-thermal renewables.
- Final consumption of electricity was broadly stable in 2018 compared to 2017, up 0.1 per cent.

Electricity quarterly tables ET 5.1, 5.2 & 5.6 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/electricity-section-5-energy-trends



RENEWABLES: 2018

Renewable electricity generation



	2018 TWh	Percentage change on a year earlier
Renewable electricity generation		
Onshore wind	30.4	+4.6
Offshore wind	26.7	+27.6
Hydro	5.5	-7.8
Solar PV	12.9	+12.1
Bioenergy	35.6	+11.6
All renewables	111.1	+11.8

- Renewable electricity generation was a record 111.1 TWh in 2018, an increase of 11.8 per cent on a year earlier. Onshore and offshore wind generation rose by 4.6 per cent and 28 per cent respectively, with increased capacity. Generation from solar photovoltaics increased by 12 per cent, to a record 12.9 TWh, largely due to increased sunlight hours. Generation from bioenergy was up by 12 per cent on 2017, to a record 35.6 TWh, partly as a result of power stations converting to plant biomass. However, hydro generation fell 7.8 per cent.
- Renewables' share of electricity generation was a record 33.3 per cent in 2017, an increase of 3.9 percentage points on a year earlier.
- Renewable electricity capacity was 44.4 GW at the end of 2017, a 9.7 per cent increase (3.9 GW) on a year earlier.
- Renewable transport: liquid biofuels accounted for 4.1 per cent of petrol and diesel consumed in road transport in 2018, up from 3.1 per cent in 2017.

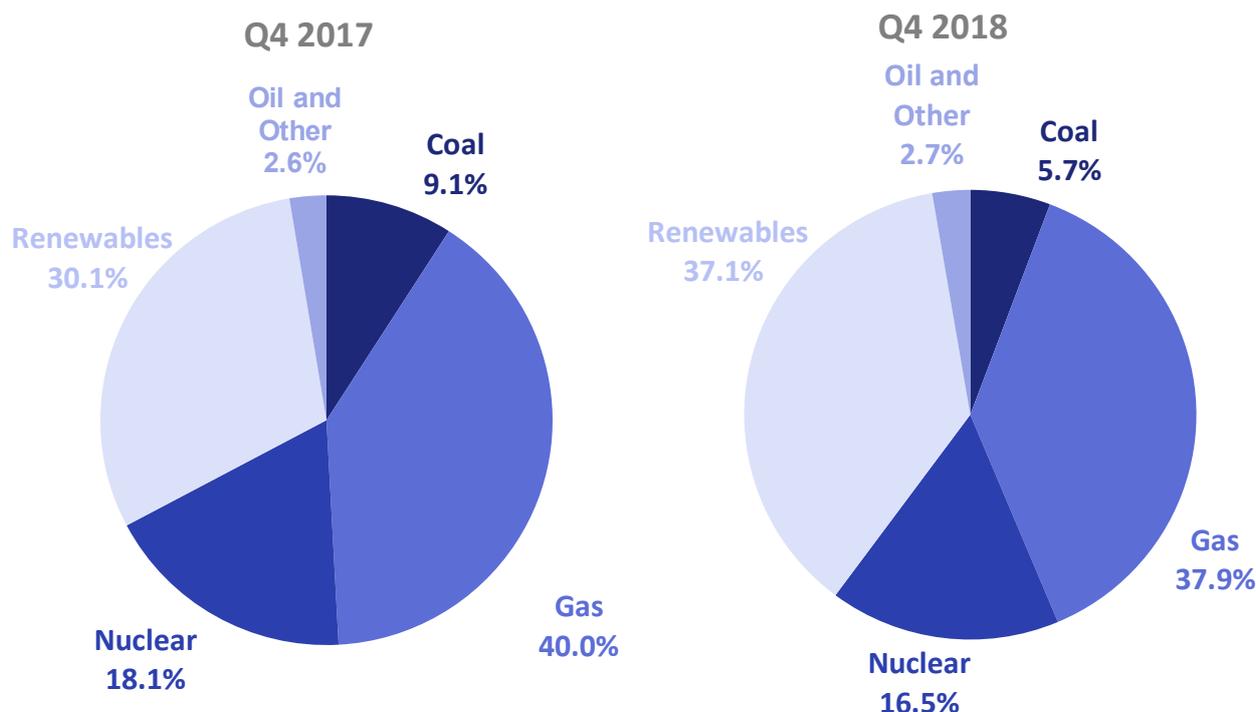
Renewables quarterly tables ET 6.1 – 6.2 are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/statistics/energy-trends-section-6-renewables



MAIN POINTS FOR THE FOURTH QUARTER OF 2018

- Total energy production was 7.9 per cent higher when compared with the fourth quarter of 2017, boosted by strong growth in oil and bioenergy and waste output.
- Total primary energy consumption for energy uses fell by 3.0 per cent. However, when adjusted to take account of weather differences between the fourth quarter of 2017 and the fourth quarter of 2018, primary energy consumption fell by 2.7 per cent.
- Final energy consumption (excluding non-energy use) was 2.1 per cent lower than in the fourth quarter of 2017. Domestic consumption fell by 4.4 per cent driven by the warmer weather in November and December 2018. On a seasonally and temperature adjusted basis final energy consumption fell by 0.2 per cent.

Electricity generated



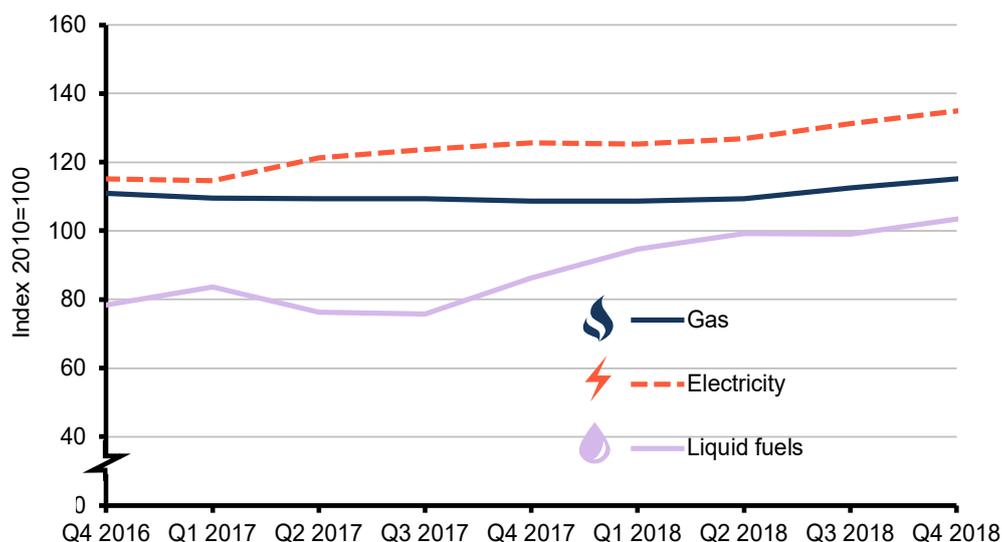
- Of electricity generated in the fourth quarter of 2018, gas accounted for 37.9 per cent, whilst coal accounted for 5.7 per cent. Nuclear generation accounted for 16.5 per cent of total electricity generated in the fourth quarter of 2018.
- Renewables' share of electricity generation increased from 30.1 per cent in the fourth quarter of 2017 to 37.1 per cent in the fourth quarter of 2018, reflecting higher renewable generation particularly from plant biomass following the conversion from coal to biomass at both the Drax and Lynemouth power stations.
- Low carbon electricity's share of generation increased from 48.2 per cent in the fourth quarter of 2017 to 53.6 per cent in the fourth quarter of 2018, with the rise in renewable generation offsetting the fall in nuclear output

Quarterly tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics



DOMESTIC PRICES: QUARTER 4 2018

Fuel price indices in the domestic sector in real terms



Consumer price index fuel components in real terms ⁽¹⁾ 2010=100	2018 Q4	Percentage change on a year earlier
Solid fuels	104.5	+0.5
Gas	115.1	+5.9
Electricity	134.9	+7.4
Liquid fuels	103.4	+19.8
Total domestic fuel	125.2	+6.8

(1) Deflated using the GDP implied deflator. The original source of the indices is ONS.

- The price paid for all domestic fuel by household consumers rose by 6.8 per cent in real terms between Q4 2017 and Q4 2018, and by 2.6 per cent between Q3 and Q4 2018.
- Domestic electricity prices, including VAT, in Q4 2018 were 7.4 per cent higher in real terms than in Q4 2017.
- The prices of domestic gas, including VAT, rose by 5.9 per cent in real terms between Q4 2017 and Q4 2018 and by 2.4 per cent between Q3 and Q4 2018.

Switching levels

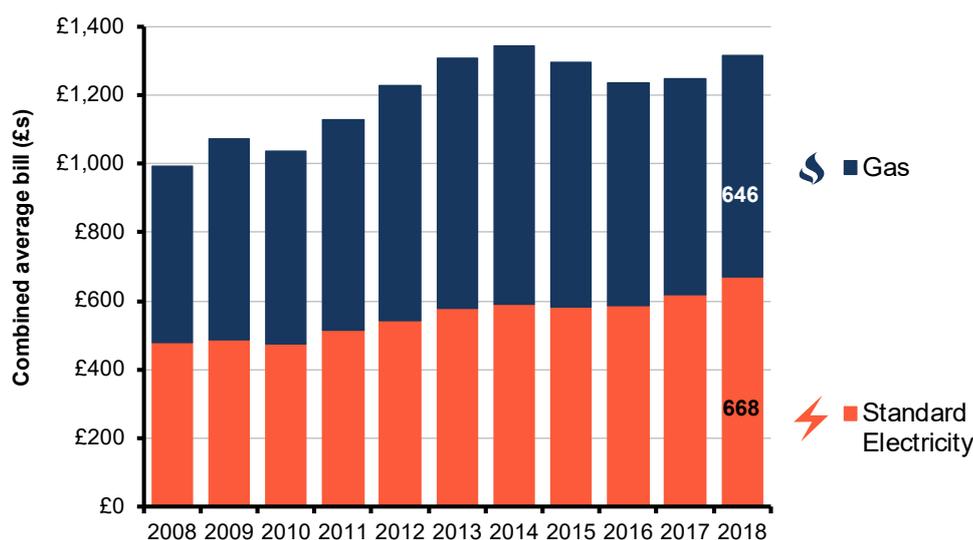
- The number of transfers made within the domestic electricity market increased by 3.7 per cent between Q4 2017 and Q4 2018, with an estimated 1,411,000 electricity transfers being made in Q4 2018. Since Q4 2017, gas transfers increased by 2.3 per cent to 1,189,000 transfers in Q4 2018. These transfers represent around 5.0 per cent of customers for electricity and 5.1 per cent of customers for gas in the domestic market.

Domestic prices tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/domestic-energy-prices



DOMESTIC ENERGY BILLS: 2018

Average domestic gas and electricity bills (cash terms)



Average annual domestic fuel bills ⁽¹⁾

	2017	2018	Percentage change, cash terms	Percentage change, real terms ⁽²⁾
Gas ⁽³⁾	£630	£646	2.5	0.7
Electricity ⁽⁴⁾	£619	£668	8.0	5.7
Total ⁽⁵⁾	£1,249	£1,314	5.2	3.2

(1) Average annual bills for domestic customers weighted by the proportion of customers on the different payment methods, which include standard credit, direct debit and pre-payment meter. Bills relate to the total bill received in the calendar year and are in cash terms.

(2) To estimate the percentage change in real terms bills were deflated using the GDP (implied) deflator.

(3) Gas bills are based on an annual consumption of 15,000 kWh.

(4) Electricity bills are based on an annual consumption of 3,800 kWh.

(5) The average total gas and electricity bill presented should be taken as broadly indicative only. It is not based on individual customers, but is simply the sum of the averages for electricity and gas.

- The average standard electricity bill in 2018 has increased by £49 (8.0 per cent) since 2017, from £619 to £668. Average gas bills for 2018 (across all payment types) increased by £16 (2.5 per cent) from £630 to £646. Overall, the average energy bill for households rose by £65. These bills are based on standard consumptions of 3,800kWh per year for electricity and 15,000kWh per year for gas.
- Credit remains the most expensive method of payment at £1,444 (an increase of £88 since last year). Direct debit is now slightly more expensive (in 2018 average payments were £1,285) than prepayment. Making prepayment the cheapest method of payment with a combined bill of £1,272, £13 cheaper than direct debit.
- For actual annual consumption levels, the average bill increased by £43 (3.9%) in cash terms to £1,155 in 2018.
- UK domestic gas and electricity prices for medium consumers are the second and fifth lowest in the EU15 respectively, when taxes are included.

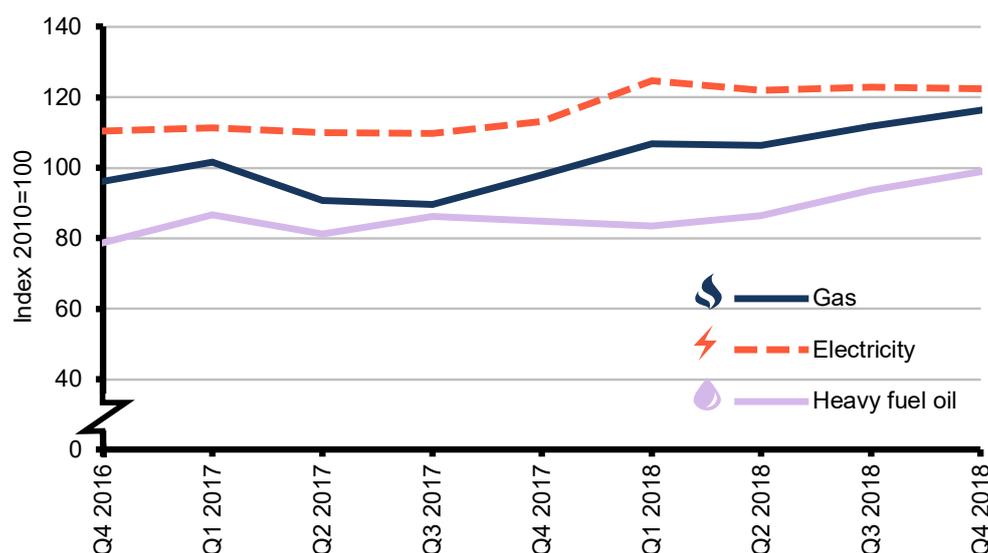
Domestic prices tables are available on the BEIS section of the GOV.UK website at:

www.gov.uk/government/collections/domestic-energy-prices



INDUSTRIAL PRICES: QUARTER 4 2018

Industrial fuel price indices in real terms including the Climate Change Levy



Fuel prices index in real terms ⁽¹⁾ 2010=100	2018 Q4	Percentage change on a year earlier
Coal	104.2	-1.9
Heavy fuel oil	99.0	+16.8
Gas	116.4	+18.8
Electricity	122.4	+8.2
Total fuel	117.2	+10.9

(1) Deflated using the GDP implied deflator. Includes estimates of the average Climate Change Levy (CCL) paid.

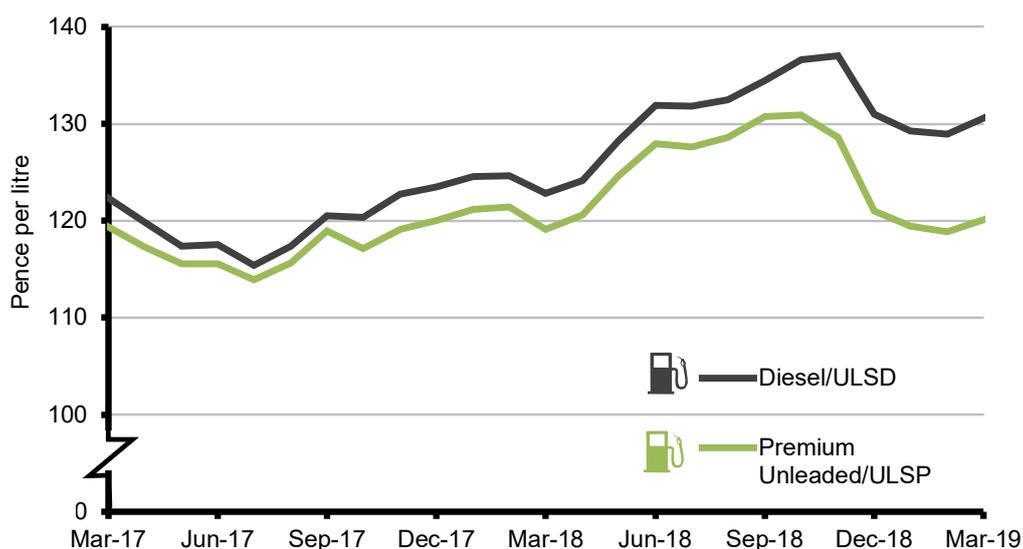
- Average industrial gas prices including CCL were 19 per cent higher in real terms in Q4 2018 compared to Q4 2017, and prices excluding CCL were also 19 per cent higher.
- Average industrial electricity prices including CCL were 8.2 per cent higher in real terms in Q4 2018 compared to Q4 2017 and prices excluding CCL were 8.5 per cent higher.
- Average coal prices including CCL were 1.9 per cent lower in real terms in Q4 2018 compared to Q4 2017 and prices excluding CCL were also 1.9 per cent lower. Prices for heavy fuel oil (not subject to CCL) were 17 per cent higher in real terms than a year ago.
- For the period January to June 2018, UK prices for medium industrial electricity consumers including taxes were the highest in the EU15. UK prices for medium industrial gas consumers including taxes were the second lowest in the EU15.

Industrial prices tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/industrial-energy-prices



ROAD TRANSPORT FUEL PRICES: QUARTER 4 2018

Typical retail prices of road transport fuels



Retail prices of petroleum products	Mid-March 2019 ⁽¹⁾ Pence per litre	Percentage change on a year earlier
Unleaded petrol ⁽²⁾	120.1	+0.8
Diesel ⁽²⁾	130.6	+6.3

(1) Prices are for ultra low sulphur versions of these fuels.

(2) Prices are provisional estimates.

- Crude oil prices, the key driver of petrol and diesel prices, followed a slow upward trend since July 2017 reaching a peak of \$80 per barrel in October 2018, the highest since October 2014, before falling sharply to \$56 in December 2018. Crude oil prices have since increased and in February 2019 were \$63 a barrel.
- In mid-March 2019, a litre of unleaded petrol was on average 120.1 pence per litre, 0.8 per cent higher than a year earlier and 15 per cent lower than the high of April 2012.
- In mid-March 2019, diesel was on average 130.6 pence per litre, 6.3 per cent higher than a year earlier but 12 per cent lower than the high of April 2012.
- In February 2019, the average UK retail prices for petrol were the seventh lowest in the EU15. UK diesel prices were the second highest in the EU15, partly due to the high tax rates.

Road transport fuel prices tables are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/road-fuel-and-other-petroleum-product-prices



Issued by:

Department for Business, Energy and Industrial Strategy, 1 Victoria Street, London SW1H 0ET

Contacts:

[Lead statistician: Warren Evans](#), Tel: 0300 068 5059

[Press enquiries](#): Tel: 0207 215 6140

[Statistical enquiries](#)

[General enquiries](#): Tel 0207 215 5000

Notes to editors

1. More detailed figures of United Kingdom energy production and consumption and of energy prices, for the fourth quarter of 2018 and 2018 as a whole are given in the March 2019 editions of ENERGY TRENDS and ENERGY PRICES respectively, the Department's statistical bulletins on energy, released on 28 March 2019.

2. Energy Trends and the Energy Prices bulletins, published quarterly, are available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/energy-trends and www.gov.uk/government/collections/quarterly-energy-prices

3. Articles featured in Energy Trends are also available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/energy-trends-articles

4. More detailed annual data on energy production and consumption for the years 2013 to 2017 are available in the DIGEST OF UNITED KINGDOM ENERGY STATISTICS 2018, published on 26 July 2018. The 2019 edition of the Digest will be published on 25 July 2019. All information contained in the Digest is available on the BEIS section of the GOV.UK website at: www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes

