



Department for
Business, Energy
& Industrial Strategy



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STATISTICAL PRESS RELEASE

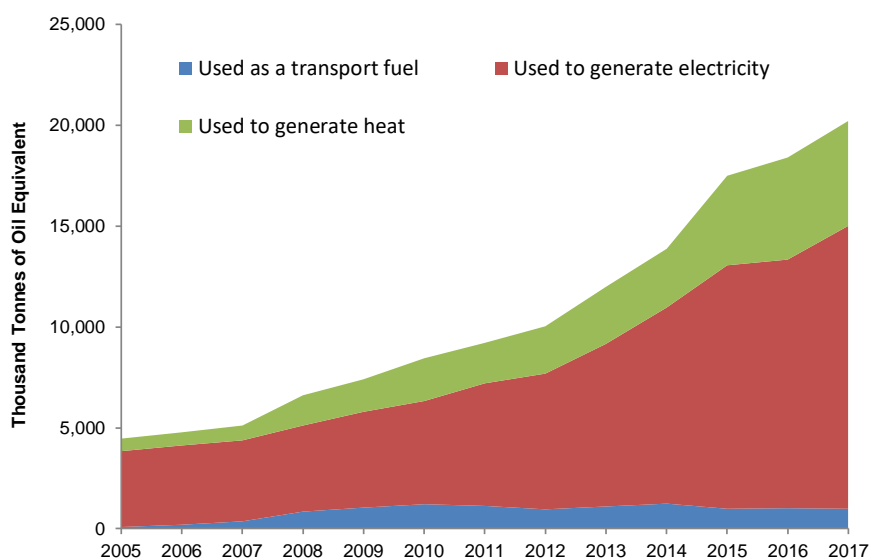
UK Energy Statistics, Q1 2018

Energy Trends and Energy Prices publications are published today 28 June 2018 by the Department for Business, Energy and Industrial Strategy.

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.

An article on Renewable Energy in 2017, within Energy Trends, shows the progress made against **the UK's 15 per cent target under the 2009 EU Renewable Directive**. Provisional calculations show that 10.2 per cent of final energy consumption in 2017 came from renewable sources; up from 9.2 (revised) per cent in 2016. There was an increase in the fuel used to generate electricity (up 13 per cent); heat fuels also increased, by 3.6 per cent though transport renewable fuels fell slightly, by 1.2 per cent. The chart below shows the use of renewable energy for heat, electricity and transport.

Trends in the use of renewable energy



The main points for the first quarter of 2018 are:

- Total **energy production** was 1.0 per cent lower than in the first quarter of 2017, despite increased oil output and record high output from wind, solar and hydro.
- Total **primary energy consumption** for energy rose by 3.3 per cent. However, when adjusted to take account of weather differences between the first quarter of 2017 and the first quarter of 2018, total primary energy consumption fell by 1.6 per cent.
- **Final energy consumption** (excluding non-energy use) was 7.0 per cent higher than in the first quarter of 2017. Domestic consumption rose by 13.2 per cent due to colder weather. Temperatures in the first quarter of 2018 were on average 1.9 degrees Celsius colder than the same period a year earlier, with average temperatures in both February and March being colder than a year earlier. On a temperature corrected basis, final energy consumption was up 0.5 per cent over the same period.
- Of **electricity generated** in the first quarter of 2018, coal accounted for 9.4 per cent, whilst gas accounted for 39.9 per cent. Nuclear generation accounted for 17.9 per cent of total electricity generated in the first quarter of 2018.
- **Renewables' share of electricity generation** (hydro, wind and other renewables) increased to a record quarterly high of 30.1 per cent in 2018 Q1, compared to 27.0 per cent in 2017 Q1, mostly due to increased capacity and higher wind speeds.
- **Renewable electricity generation** was a record 27.9 TWh in the first quarter of 2018, an increase of 10.2 per cent on the same period a year earlier.
- **Renewable electricity capacity** was a record 41.9 GW in the first quarter of 2018, an increase of 11.2 per cent on the same period a year earlier.

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

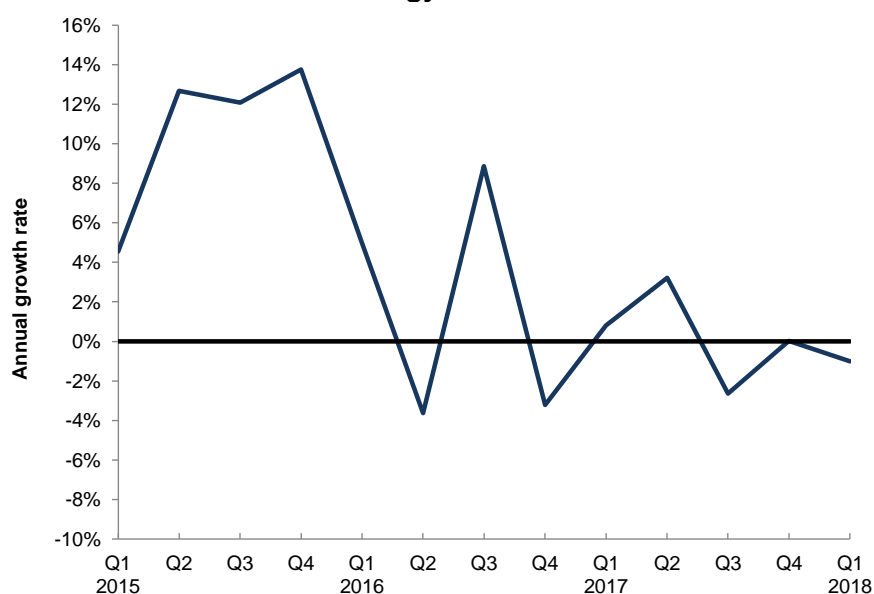
The following statistics are also published today 28 June 2018 by the Department for Business, Energy and Industrial Strategy:

- National Energy Efficiency Data-framework 2016
www.gov.uk/government/collections/national-energy-efficiency-data-need-framework.
- Solar photovoltaics deployment, May 2018
www.gov.uk/government/statistics/solar-photovoltaics-deployment



TOTAL ENERGY: QUARTER 1 2018

Total Energy - Production



| | 2018 Q1 <i>Million tonnes of oil equivalent</i> | Percentage change on a year earlier |
|------------------------------------|---|-------------------------------------|
| Total production | 33.5 | -1.0 |
| Oil | 13.4 | +1.5 |
| Natural gas | 10.3 | -4.1 |
| Primary electricity ⁽¹⁾ | 5.4 | +2.7 |
| Bioenergy & waste | 4.1 | -2.2 |
| Coal | 0.4 | -26.9 |

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

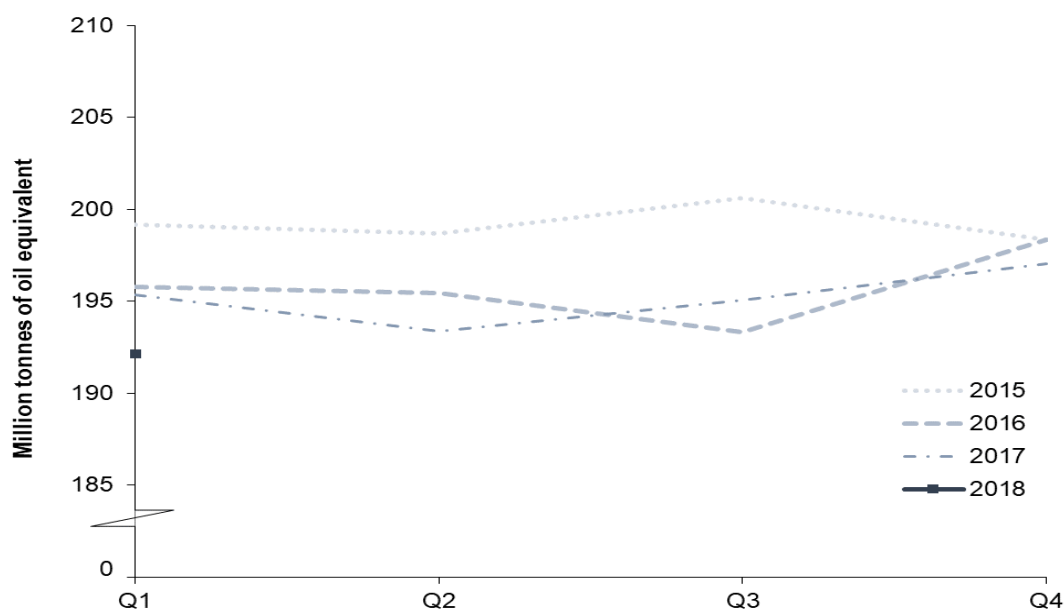
- Total production in the first quarter of 2018 stood at 33.5 million tonnes of oil equivalent, 1.0 per cent lower than in the first quarter of 2017.
- Production of oil rose by 1.5 per cent compared to the first quarter of 2017, whilst production of natural gas fell by 4.1 per cent, but against particularly strong production in the same period last year.
- Primary electricity output in the first quarter of 2018 was 2.7 per cent higher than in the first quarter of 2017, within which nuclear electricity output was 5.7 per cent lower due to outages, whilst output from wind, solar and natural flow hydro was 25 per cent higher, mainly due to increased wind capacity and wind speeds. Output from wind, solar and hydro in the first quarter of 2018 was at a record high quarterly level.
- Production of bioenergy and waste was 2.2 per cent lower compared to the first quarter in 2017.
- Coal production fell by 27 per cent compared to the first quarter in 2017 due to falling demand, particularly for electricity generation.

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: QUARTER 1 2018

Total Energy – consumption⁽¹⁾



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

| | 2018 Q1 Million tonnes of oil equivalent | Percentage change on a year earlier |
|--|--|---|
| Total energy consumption | | |
| Unadjusted | 57.3 | +3.3 |
| Seasonally adjusted and temperature corrected – annual rate | 192.2 | -1.6 |
| Final consumption: unadjusted | 44.0 | +7.0 |
| temperature corrected | 36.3 | +0.5 |

When examining seasonally adjusted and temperature corrected annualised rates:

- Total inland energy consumption on a primary fuel input basis was 192.2 million tonnes of oil equivalent in the first quarter of 2018, 1.6 per cent lower than the same quarter in 2017.
- Between the first quarter of 2017 and the first quarter of 2018, coal and other solid fuel consumption fell by 20 per cent as demand fell from electricity generators.
- Oil consumption rose by 1.0 per cent, whilst gas consumption fell by 3.4 per cent.
- Bioenergy consumption fell by 0.6 per cent.
- Primary electricity consumption rose by 6.7 per cent.

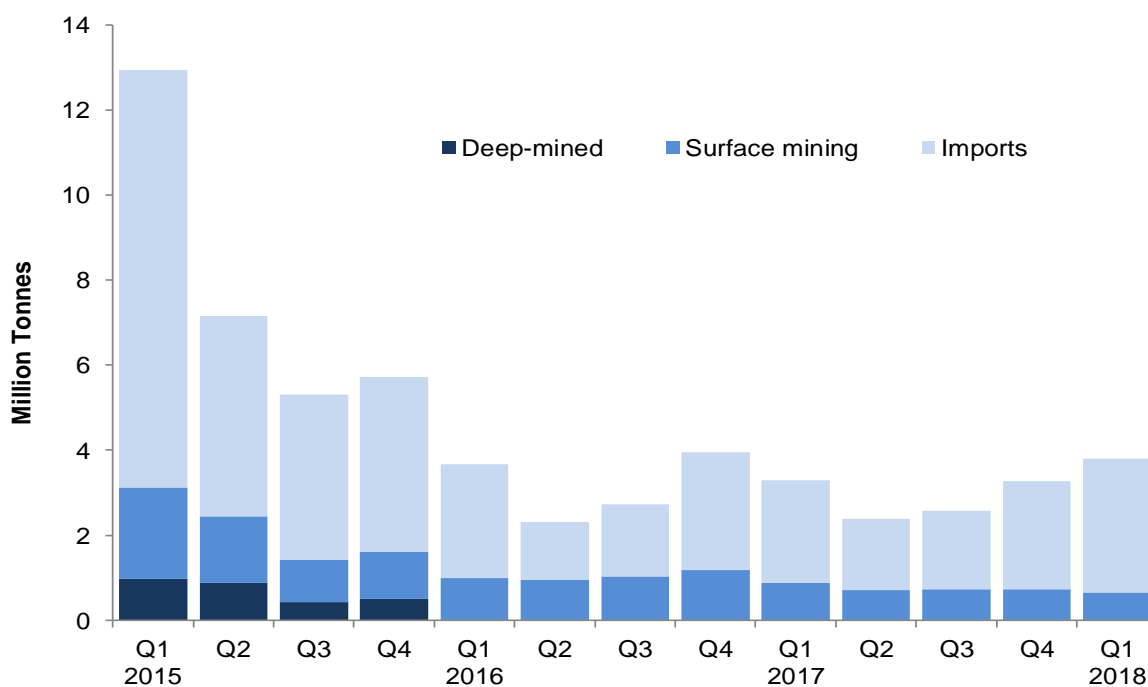
Final consumption (excluding non energy use) was provisionally 7.0 per cent higher than in the first quarter of 2017, with domestic consumption up 13.2 per cent, reflecting colder weather (the average temperature in the first quarter of 2018 was 1.9 degrees Celsius colder than the same period last year). On a temperature corrected basis, final energy consumption was up 0.5 per cent over the same period, within which domestic consumption was 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: QUARTER 1 2018

Coal production and imports



| | 2018 Q1 Thousand tonnes | Percentage change on a year earlier |
|-------------------------------|----------------------------|--|
| Coal supply | 4,747 | -11.3 |
| Coal production | 649 | -26.9 |
| Coal imports | 3,145 | +30.4 |
| Coal demand | 4,752 | -11.0 |
| - Power stations | 3,418 | -12.5 |
| - Coke ovens & blast furnaces | 714 | -14.3 |
| - Final users | 553 | +3.5 |

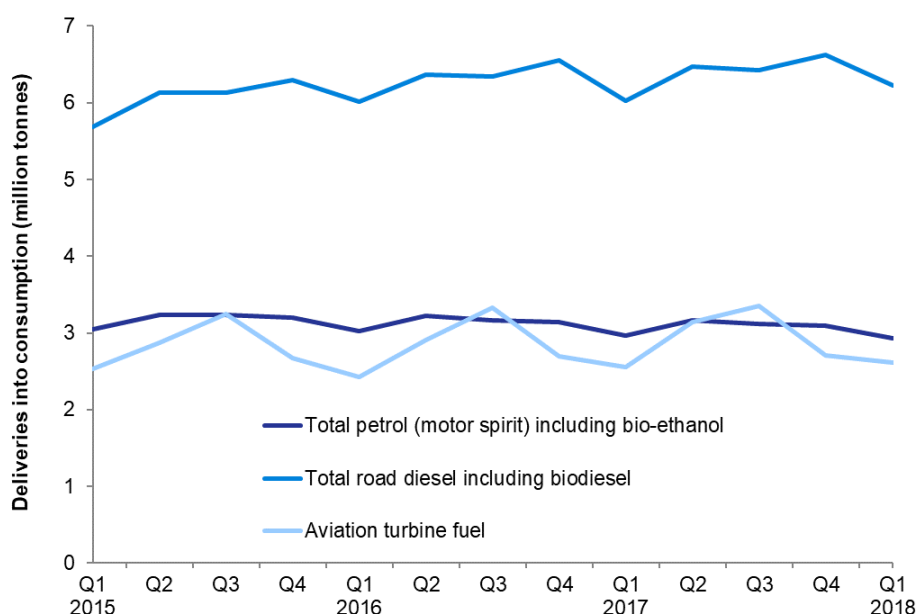
- Provisional figures for the first quarter of 2018 show that coal production fell to a new record low of 0.6 million tonnes, 27 per cent lower than the first quarter 2017. This was due to falling demand for electricity generation and a number of mines under 'care and maintenance' rather than active production.
- Imports of coal in the first quarter of 2018 were 30 per cent higher than in the first quarter of 2017 at 3.1 million tonnes.
- Total demand for coal in the first quarter of 2018 was 4.8 million tonnes, 11 per cent lower than in the first quarter of 2017, with consumption by electricity generators down by 13 per cent to 3.4 million tonnes.
- Coal stocks showed a seasonal fall of 1.1 million tonnes during the first quarter of 2018 and stood at 4.1 million tonnes (lowest value for at least 19 years), 2.1 million tonnes lower than at the end of March 2017. This was due to closing power stations using up their stocks.

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: QUARTER 1 2018

Demand for key transport fuels



| | 2018 Q1 <i>Thousand tonnes</i> | Percentage change on a year earlier |
|-------------------------------------|-----------------------------------|--|
| Primary oil production | 12,297 | +1.4 |
| Primary oil demand | 13,212 | -9.4 |
| Net imports (primary oil) | 994 | -63.9 |
| Net imports (oil products) | 4,095 | +59.7 |
| Refinery production | 13,724 | -9.8 |
| Petroleum demand | 16,934 | +0.9 |
| - Motor spirit (including biofuels) | 2,779 | -1.3 |
| - DERV fuel (including biofuels) | 6,024 | +2.0 |
| - Aviation turbine fuel | 2,610 | +2.0 |

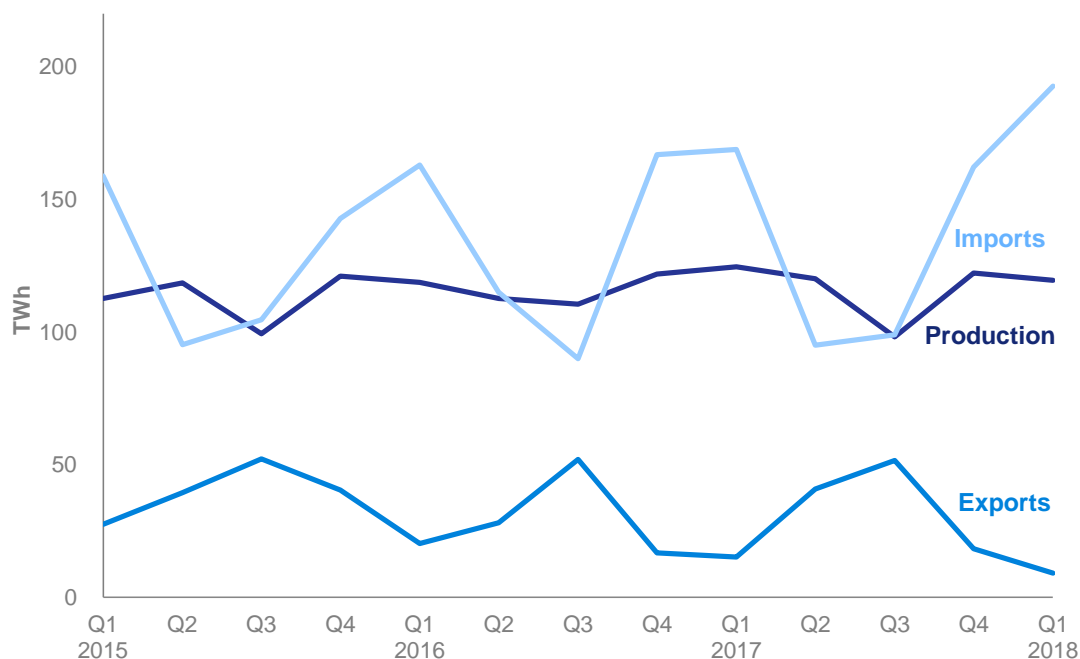
- Indigenous production of crude oil and NGL's was up 1.4 per cent in Q1 2018 on a year earlier. The Schiehallion and Kraken fields were not producing during Q1 2017 but increases from these fields were balanced against lower production at other fields across the UKCS.
- Indigenous production of petroleum products in Q1 2018 was down 9.8 per cent on the same quarter in 2017 as some of the UK's refineries completed major maintenance work. This maintenance and longer-term refinery closures and rationalisations caused the lowest import levels of primary oils since prior to the turn of the century.
- The UK was a net importer of petroleum products by 4.1 million tonnes in Q1 2018, up from 2.6 million tonnes in the first quarter of 2017.
- Demand for all fuels increased by 0.9 per cent in Q1 2018 and total deliveries of the three key transport fuels were higher by 1.2 per cent. In line with recent trends, petrol deliveries were down by 1.3 per cent with road diesel up 2.0 per cent compared to the same period last year. Demand for aviation fuels was up on the same quarter of 2017, again by 2.0 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: QUARTER 1 2018

Production and trade of natural gas



| | 2018 Q1 <i>TWh</i> | Percentage change on a year earlier |
|--------------------------|-----------------------|--|
| Gas production | 119.5 | -4.1 |
| Gas imports | 192.8 | +14.2 |
| Gas exports | 9.1 | -39.9 |
| Gas demand | 311.8 | +7.4 |
| - Electricity generation | 77.1 | -1.9 |
| - Domestic | 138.3 | +15.5 |

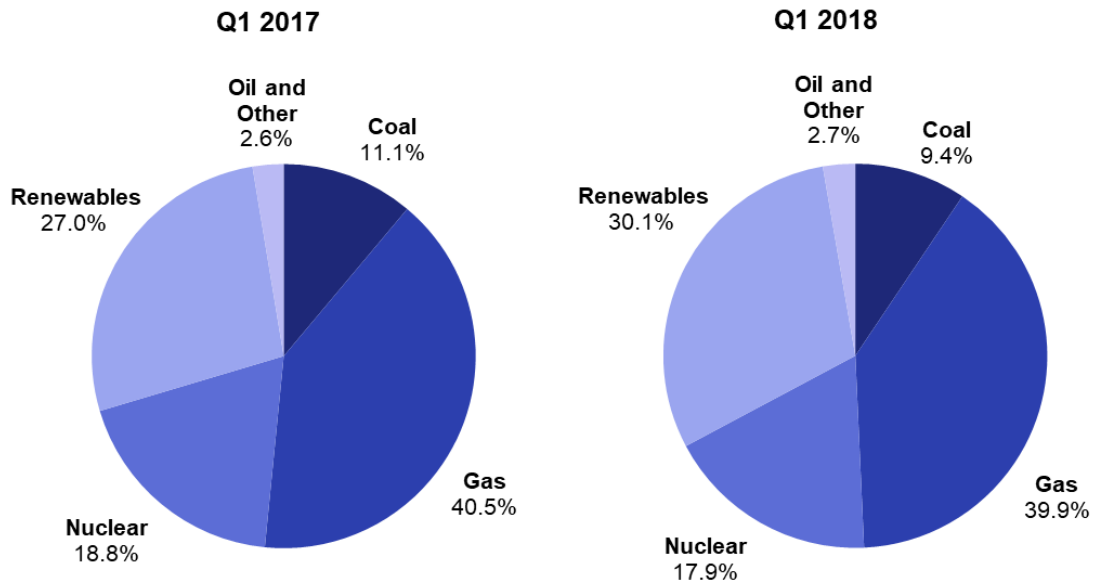
- Imports were up 14 per cent (to a near record high), exports were down 40 per cent (to a near record low) and net imports reached an all-time record high of 184 TWh. The increase in imports was driven by higher pipeline volumes from Belgium and the Netherlands; more was imported from these countries during Q1 2018 than in all of 2017.
- Strong demand drove this trade pattern, with colder temperatures brought by the 'Beast from the East' seeing a 16 per cent increase in domestic demand.
- Increased output from renewable energy has been displacing demand for gas for electricity generation four quarters in a row now, with a fall of 1.9 per cent compared to the same period last year.
- Total indigenous UK production of natural gas in the first quarter of 2017 was 119.5 TWh, 4.1 per cent lower than a year before due to strong production this time last year.
- Imports of LNG were down 14 per cent on last year, with shipments from Russia comprising less than one per cent total import volumes during the quarter.

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: QUARTER 1 2018

Electricity generated



| | 2018 Q1 <i>TWh</i> | Percentage change on a year earlier |
|-----------------------------------|-----------------------|--|
| Electricity Generated from | | |
| Coal | 8.74 | -16.2 |
| Nuclear | 16.64 | -5.7 |
| Gas | 36.98 | -2.5 |
| Renewables | 27.90 | +10.2 |
| Total | 92.79 | -1.1 |
| Supplied to | | |
| Industry | 22.54 | -4.1 |
| Domestic | 31.82 | +3.9 |
| Other final consumers | 28.06 | +5.3 |
| All | 80.74 | -2.3 |

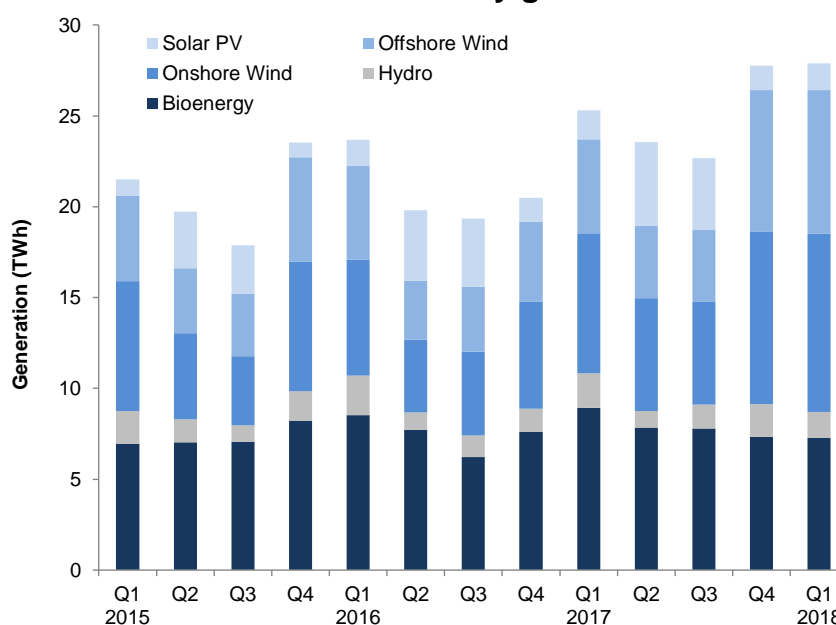
- Cold weather in Q1 2018 drove an increase in consumption of 2.0 per cent compared to Q1 2017. Domestic use increased by 3.9 per cent, service sector consumption increased by 5.6 per cent, but industrial consumption decreased by 4.1 per cent.
- As generation was 1.1 per cent lower, demand was met by increased imports.
- Low carbon's share of generation remained high at 48.0 per cent, compared to 45.8 per cent in the same period in 2017.
- The share of generation from fossil fuels decreased to 52.0 per cent; this was largely driven by the decrease in the share of generation from coal.
- Fuel used by generators in the first quarter of 2018 was 2.2 per cent lower than in the first quarter of 2017.

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: QUARTER 1 2018

Renewable electricity generation



| | 2018 Q1 TWh | Percentage change on a year earlier |
|----------------------------------|----------------|--|
| Renewable electricity generation | | |
| Onshore wind | 9.81 | +27.1 |
| Offshore wind | 7.91 | +53.2 |
| Hydro | 1.41 | -25.9 |
| Solar PV | 1.48 | -8.3 |
| Bioenergy (inc. co-firing) | 7.29 | -18.3 |
| All renewables | 27.90 | +10.2 |

- Renewable electricity generation was a record 27.9 TWh in 2018 quarter 1, an increase of 10 per cent on the 25.3 TWh recorded one year earlier. Compared to 2017 quarter 1, electricity generated from onshore wind rose by 27 per cent to 9.8 TWh and generation from offshore wind increased to 7.9 TWh, due to more capacity and higher average wind speeds. At 9.8 knots, wind speeds were up 0.6 knots on 2017 quarter 1, bringing it in line with the long term mean. Generation from hydro fell by more than a quarter but generation in 2017 quarter 1 had been especially high. Generation from solar photovoltaics decreased by 8.3 per cent to 1.5 TWh. Generation from bioenergy decreased by 18.3 per cent to 7.3 TWh, partly due to an outage at a major power station that uses biomass.
- Renewables' share of total generation in 2018 quarter 1 was 30.1 per cent, an increase of 3.1 percentage points on 2017 quarter 1, reflecting increased capacity.
- Renewable electricity capacity was a record 41.9 GW at the end of the first quarter of 2018, an 11 per cent increase (4.2 GW) on a year earlier, and a 3.2 per cent increase (1.3 GW) on 2017 quarter 4.
- Liquid biofuels represented 3.6 per cent of petrol and diesel consumed in road transport in 2018 quarter 1, 0.8 percentage points up on a year earlier. However, the biofuel figures are provisional and are liable to revisions.

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



RENEWABLES: 2017

A special feature in the June 2018 edition of Energy Trends looks at Renewable energy in 2017. It includes summary renewables statistics for 2017, which are published for the first time. A full set of renewables statistics will appear in the Digest of United Kingdom Energy Statistics 2018, which will be published on 26 July 2018. The main features of the latest statistics are:

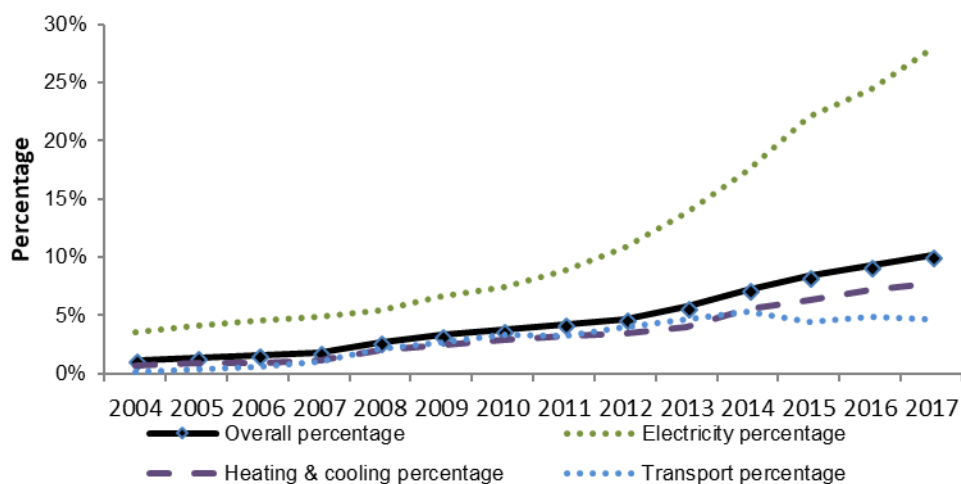
Renewable energy provisionally accounted for 10.2 per cent of final energy consumption, as measured using the 2009 Renewable Energy Directive (RED) methodology, an increase of 0.9 percentage points on 2016. The table and chart below shows progress by electricity generation, heat, and biofuels used as transport fuel.

UK progress towards the 2009 Renewable Energy Directive

| | 2004 | 2010 | 2015 | 2016 | 2017 |
|---|------|------|-------|-------|-------|
| Percentage of electricity from renewable sources (normalised) | 3.5% | 7.4% | 22.1% | 24.4% | 27.9% |
| Percentage of heating and cooling from renewable sources | 0.7% | 2.8% | 6.3% | 7.2% | 7.7% |
| Percentage of transport energy from renewable sources | 0.2% | 3.3% | 4.4% | 4.8% | 4.6% |
| Overall renewable consumption ^{1,2} | 1.1% | 3.8% | 8.4% | 9.2% | 10.2% |

¹Measured as a percentage of capped gross final energy consumption using net calorific values

²Cannot be directly calculated from the three separate measures



The UK exceeded its third interim target; averaged over 2015 and 2016, at 8.8 per cent (revised) against its target of 7.5 per cent. The UK's the fourth interim target is 10.2 per cent averaged across 2017 and 2018 and an initial estimate will be published in June 2019.

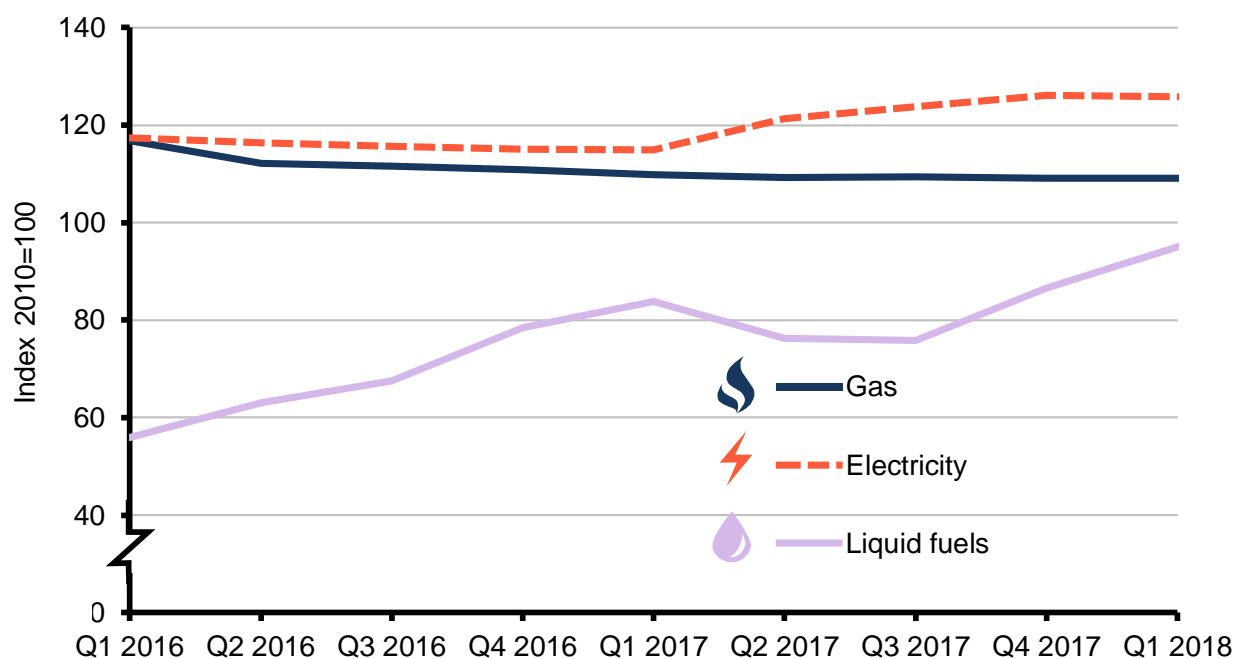
Renewable electricity generation increased by 16.2 TWh (19 per cent) to 99.3 TWh in 2017 due to increased capacity, high wind speeds, and increased rainfall.

Total wind generation showed the largest increase; by 12.7 TWh to 50.0 TWh (34 per cent). Onshore wind generation increased by more than offshore, the result of greater capacity increases.



DOMESTIC PRICES: QUARTER 1 2018

Fuel price indices in the domestic sector in real terms



| Consumer price index fuel components in real terms ⁽¹⁾ 2010=100 | 2018 Q1 | Percentage change on a year earlier |
|--|--------------|-------------------------------------|
| Solid fuels | 105.0 | 0.9 |
| Gas | 109.1 | -0.7 |
| Electricity | 125.8 | 9.5 |
| Liquid fuels | 95.0 | 13.4 |
| Total domestic fuels | 117.8 | 4.8 |

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

- The price paid for all domestic fuels by household consumers has increased by 4.8 per cent in real terms between Q1 2017 and Q1 2018, and by 0.1 per cent between Q4 2017 and Q1 2018.
- Domestic electricity prices, including VAT, in Q1 2018 were 9.5 per cent higher in real terms than in Q1 2016. Prices were 0.2 per cent lower than in Q4 2017.
- The price of domestic gas, including VAT, fell by 0.7 per cent in real terms between Q1 2017 and Q1 2018, and were broadly similar between Q4 2017 and Q1 2018.
- For the period July to December 2017, prices for medium domestic gas, including tax, were the second lowest and for electricity consumers, including tax, were the sixth lowest in the EU15.

Switching levels

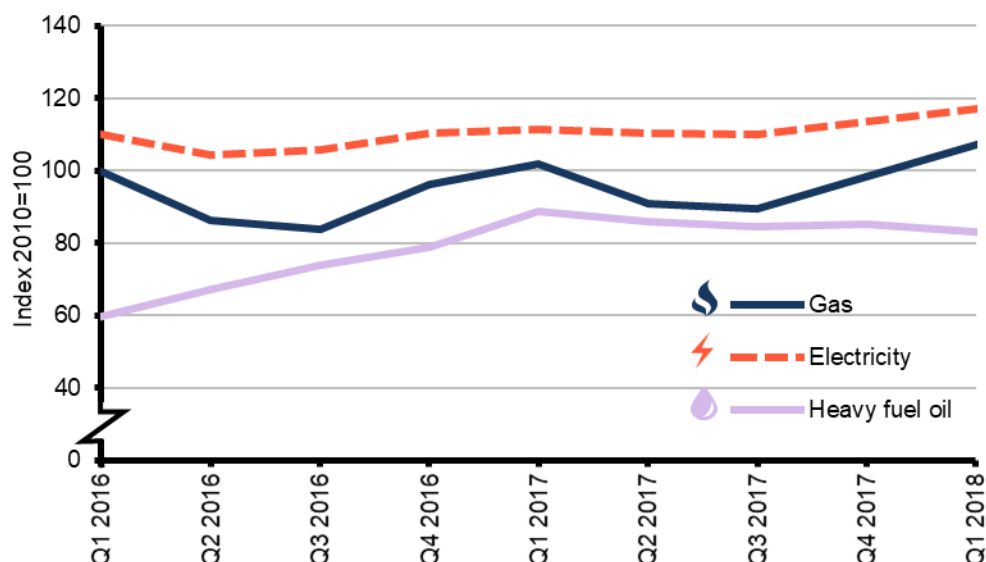
- The rates of switching in the electricity market decreased by 3.3 per cent between 2017 quarter 1 and 2018 quarter 1. Gas transfers increased by 5.5 per cent between Q1 2017 and Q1 2018 and have decreased by 16 per cent on the last quarter.

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 1 2018

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



| Fuel prices index in real terms ⁽¹⁾ 2010=100 | 2018 Q1 | Percentage change on a year earlier |
|---|---------|-------------------------------------|
| Coal | 113.0 | 26.5 |
| Heavy fuel oil | 83.0 | -6.4 |
| Gas | 107.3 | 5.4 |
| Electricity | 118.6 | 6.4 |
| Total fuel | 111.1 | 4.8 |

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

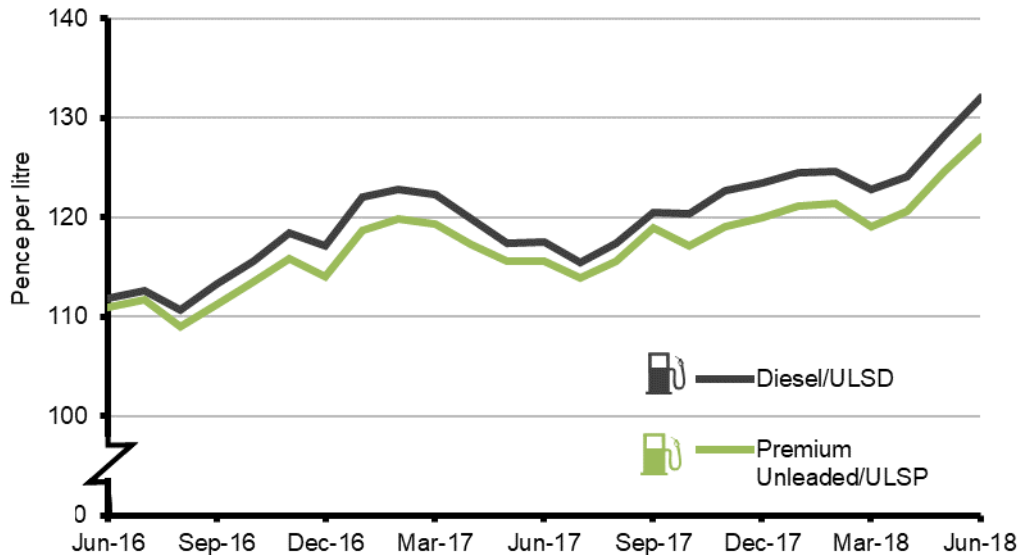
- Average industrial gas prices, including CCL were 5.4 per cent higher in real terms in Q1 2018 compared to Q1 2017, whilst prices excluding CCL were 5.2 per cent higher.
- Average industrial electricity prices were 6.4 per cent higher including CCL and also 6.4 per cent higher excluding CCL, in real terms, in Q1 2018 compared to Q1 2017.
- Average coal prices were 26.5 per cent higher in real terms including CCL and 28.4 per cent higher excluding CCL in Q1 2018 compared to Q1 2017.
- Heavy fuel oil prices were 6.4 per cent lower in real terms than a year ago.
- For the period July to December 2017, UK industrial electricity prices for medium consumers including tax were the third highest in the EU 15, whilst industrial gas prices for medium consumers including tax were the lowest in the EU 15.

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 1 2018

Typical retail prices of road transport fuels



| Retail prices of petroleum products | Mid June 2018 ⁽¹⁾ Pence per litre | Percentage change on a year earlier |
|-------------------------------------|---|--|
| Unleaded petrol ⁽²⁾ | 127.9 | 10.7 |
| Diesel ⁽²⁾ | 132.0 | 12.3 |

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

(2) Prices are provisional estimates.

- In mid June 2018, unleaded petrol was on average 127.9 pence per litre, 12.4 pence per litre higher than a year earlier, but 9.7 per cent lower than the high reached in April 2012.
- In mid June 2018, diesel was on average 132.0 pence per litre, 14.4 pence per litre higher than a year earlier, but 11 per cent below the peak seen in April 2012.
- In May 2018, the UK retail price for petrol was ranked eleventh highest in the EU. UK diesel prices were the third highest in the EU.
- In May 2018 the price of crude oil acquired by refineries, in £ sterling terms, was 45 per cent higher than a year earlier and 13 per cent higher than in the previous month.

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



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Notes to editors

1. More detailed figures of United Kingdom energy production and consumption and of energy prices, for the first quarter of 2018 are given in the June 2018 editions of ENERGY TRENDS and ENERGY PRICES respectively, the Department's statistical bulletins on energy, released on 28 June 2018.
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 2012 to 2016 are available in the DIGEST OF UNITED KINGDOM ENERGY STATISTICS 2017, published on 27 July 2017. The 2018 edition of the Digest will be published on 26 July 2018. 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

