

PRESS NOTICE



Department
of Energy &
Climate Change



Statistical Press Release

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Digest of UK Energy Statistics 2015

The Department of Energy and Climate Change today releases 4 key publications: the **Digest of United Kingdom Energy Statistics 2015**, **UK Energy in Brief**, **Energy Flow Chart**, and **Energy Consumption in the United Kingdom** (web only) providing detailed analysis of production, transformation and consumption of energy in 2014.

DIGEST OF UK ENERGY STATISTICS 2015

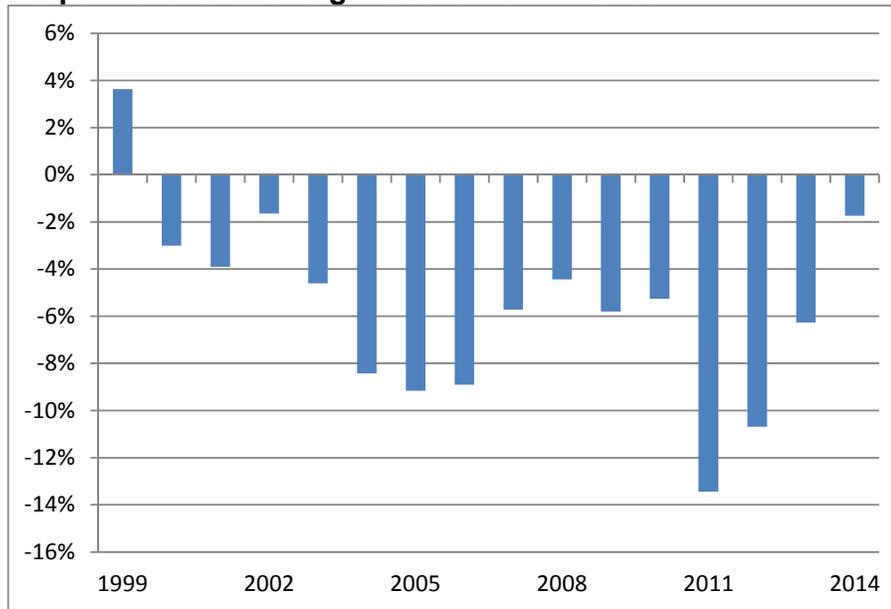
Key points

- **Primary energy production** fell by 1.7 per cent, on a year earlier, its smallest fall since 2002. Nuclear output was down 10 per cent, with coal down 8.6 per cent, though renewables were up by 9.3 per cent. Output of oil and gas from the UK Continental Shelf together were down by just 0.9 per cent, with gas output up for the first time since 2000.
- **Final energy consumption** fell by 5.6 per cent, reflecting the warmer weather in 2014. On a temperature adjusted basis, final energy consumption was down 1.0 per cent continuing the downward trend of the last ten years.
- Electricity generated from **renewable sources** in the UK in 2014 increased by 21 per cent on a year earlier, and accounted for 19.1 per cent of total UK electricity generation, up from 14.8 per cent in 2013. Total renewables, as measured by the 2009 EU Renewables Directive, accounted for 7.0 per cent of energy consumption in 2014, up from 5.6 per cent in 2013.

Main energy production and trade statistics:

- **Primary energy production** fell by 1.7 per cent in 2014; its lowest rate of fall since 2002. Production has now fallen in each year since 1999, and is now at 38% of its 1999 levels, an average annual rate of decline of 6.3 per cent.

UK production annual growth rate 1999 - 2014

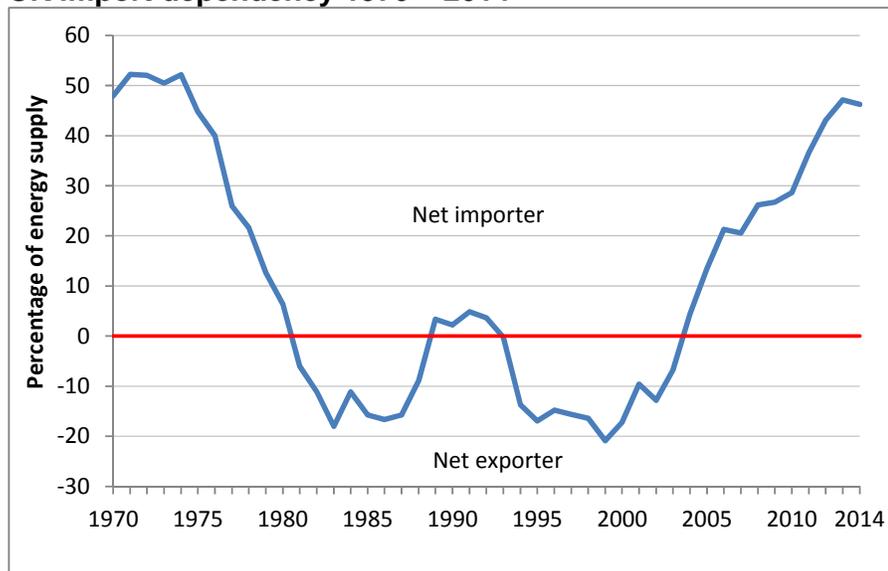


- **Gross natural gas** production increased 0.2 per cent in 2014. Although small the increase contrasts with the long term decline in UK natural gas production which has fallen by an average of 8 per cent from the peak production in 2000 to the end of 2013.
- **Crude oil (including NGLs) production** in 2014 was 1.8 per cent lower than in 2013 at 40 million tonnes. Production has fallen by 71 per cent from its 1999 peak.
- **Coal production** was down by 8.1 per cent to a record level in 2014 compared to 2013, following the closure of a number of mines.
- Energy **imports** fell back by 7.7 per cent in 2014 from last year's record level, as consumption levels fell.
 - For crude oil, the key source was Norway which accounted for 46 per cent of imports. In total crude oil imports fell, due to lower refinery demand.



- For gas the key source was also Norway, which accounted for 57 per cent of UK imports, with 15 per cent from the Netherlands. LNG accounted for 27 per cent of gas imports, up from 20 per cent in 2013, with 92 per cent of these imports from Qatar.
- The UK sources its petroleum products widely, with a range of European countries supplying diesel road fuel. Aviation fuel is also sourced widely with significant volumes from OPEC countries such as Kuwait and Saudi Arabia. The UK though remains a net exporter of petrol with nearly a third of exports shipped to the US.
- For coal the key source was Russia accounting for 42 per cent of UK imports, followed by the US and Colombia which accounted for 26 and 23 per cent respectively.
- The UK remained a **net importer of energy**, though with a slightly decreased dependency level (imports / energy use) of 46 per cent; this continues the trend from 2004 when the UK once again became a net importer of fuel. In 2014 the UK was a net importer of all main fuels types.

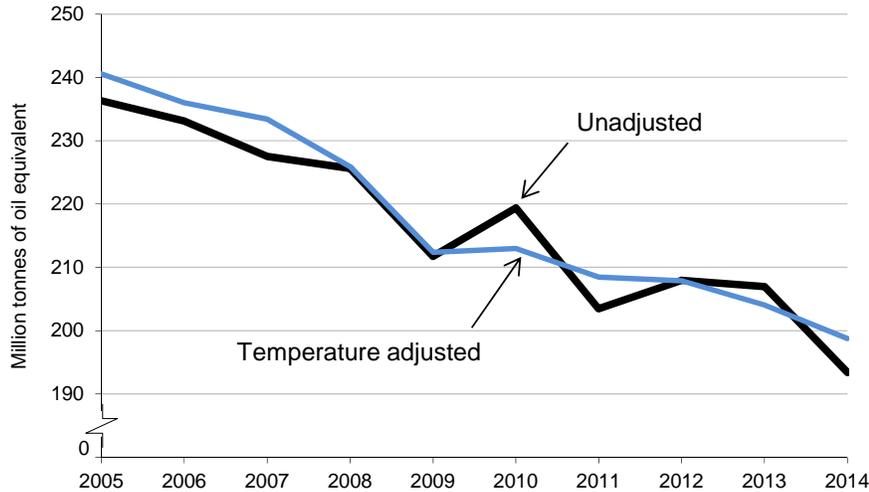
UK import dependency 1970 – 2014



Main energy consumption statistics:

- UK **primary energy consumption** in 2014 decreased by 6.6 per cent, and on a temperature adjusted basis, consumption was down 2.6 per cent continuing the downward trend of the last nine years.

Primary energy consumption 2000 - 2014



- **Overall gas demand** decreased by 8.9 per cent. **Gas demand for electricity generation** increased by 5.9 per cent as gas's share of the UK's generation of electricity rose to 30 per cent, from 27 per cent last year. Domestic demand, which is influenced by temperature, was 19 per cent lower than in 2013.
- **Total oil consumption in the UK** was at broadly the same level as 2013. Over 70 per cent of oil is consumed in the transport sector, which showed a small increase, of 1 per cent, in overall consumption from 2013.
- **Consumption of diesel road fuel exceeded the consumption of motor spirit** in 2014 by over 10 million tonnes. Up until 2005, motor spirit exceeded diesel road fuel sales, since then a large element of the UK's car fleet has switched to diesel. Petrol consumption has fallen by around 4 per cent per annum since 2000, whilst diesel use has increased by nearly 2 per cent per annum, over the same period.



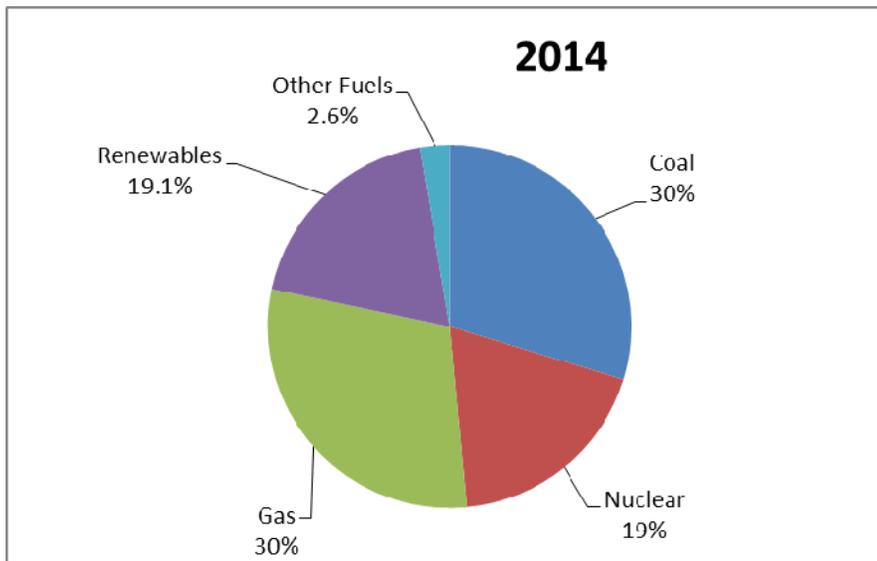
- **Coal consumption** decreased by 20 per cent in 2014. There was a 23 per cent decrease in **consumption by major power producers** (consumers of 79 per cent of total coal demand). The decline was due to a number of reasons: outages at several power stations, the closure of Uskmouth and the partial closure of Ferrybridge C during 2014, a second unit of Drax being converted to biomass, lower demand for electricity overall and changes in the relative prices of coal and gas. Coal accounted for 30 per cent of the electricity generated in the UK in 2014, down from 36 per cent in 2013. The domestic sector accounted for only 1.1 per cent of total coal consumption.
- **Energy consumption by final users** at 135.3 million tonnes of oil equivalent decreased by 5.6 per cent in 2014. Consumption in the domestic sector was down by 14 per cent; with industry and service sector use down by 1.0 and 9.5 per cent respectively. There was slightly increased consumption from transport, which was up 1.1 per cent. Average temperatures in 2014 were at record levels up 1.2 degrees Celsius compared to 2013 levels. On a temperature adjusted basis final energy consumption was down by 2.6 per cent continuing the downward trend of the last ten years.
- **Refinery production** decreased by 8 per cent on 2013 and 30 per cent on 2000. The closure of the Milford Haven refinery in the summer of 2014 contributed to the decrease in production. Net imports increased to make up the shortfall in refinery production. Imports of petroleum product imports increased by just 1 per cent but exports decreased by 16 per cent. As a result, the UK was a net importer of petroleum products in 2014 by around 6 million tonnes, up from 2 million tonnes in 2013 and the largest figure since 1984, the year of the miners' strike. Petrol accounts for over a third of exports.



Main electricity generation and supply statistics:

- In 2014, gas became the main fuel used for electricity generation, with its share increasing from 27 per cent to 30 per cent. Coal's share decreased from 36 per cent to 30 per cent, whilst nuclear's share fell marginally to 19 per cent following outages in the second half of 2014.

Electricity generation by fuel, 2014



- Electricity generated from renewable sources in the UK in 2014 increased by 21 per cent on a year earlier, and accounted for 19.1 per cent of total UK electricity generation, up from 14.8 per cent in 2013. Offshore wind generation increased by 17 per cent, and onshore wind increased by 10 per cent. The offshore wind load factor (37.3 per cent) exceeded that of gas (30.5 per cent).
- In 2014, the proportion of UK **electricity generated from renewables** was 19.1 per cent. Installed electrical generating capacity of renewable sources rose by 24 per cent (4.8 GW) in 2014, mainly as a result of a 89 per cent increase (2.5 GW) in solar photovoltaic capacity (mainly due to high deployment of large-scale capacity under the Renewables Obligation), and a 13 per cent increase (1.0 GW) in onshore wind capacity. Bioenergy capacity increased by 13 per cent (0.5 GW), with new and converted capacity (mainly a second unit at Drax) exceeding reductions.

- There was a 3.8 per cent decrease in the **total supply of electricity** in the UK in 2014, to 359.4 TWh. Indigenous electricity supply fell by 5.6 per cent, but net imports of electricity increased by around 42 per cent, to a record 20.5 TWh, as imports rose substantially more than exports.
- **Final consumption of electricity** fell by 4.3 per cent to 303.4 TWh, the lowest level since 1998.
- The **domestic sector** was the largest electricity consumer in 2014 (108.9 TWh), while the **industrial sector** consumed 93.4 TWh, and the **service sector** consumed 96.9 TWh. Industrial consumption fell by 4.4 per cent, while domestic consumption fell by 4.0 per cent.

Other energy statistics:

- **Total renewables**, as measured by the 2009 EU Renewables Directive, accounted for 7.0 per cent of energy consumption in 2014 up from 5.6 per cent in 2013, see article in Energy Trends June 2015 at: www.gov.uk/government/statistics/energy-trends-june-2015-special-feature-articles-renewable-energy-in-2014
- In 2014, **Combined Heat and Power (CHP)** capacity stood at 6,118 MWe, a decrease of 72 MWe on 2013.
- In 2014 the energy industries' accounted for 2.8 per cent of **GDP**.

Reduced demand due to warm weather and fuel switching away from coal for electricity generation, with other changes, is provisionally estimated to have sharply decreased **emissions** of carbon dioxide by around 9.7 per cent in 2014.



ENERGY CONSUMPTION IN THE UNITED KINGDOM

- Final energy consumption excluding non-energy use was 135.3 Mtoe in 2014, the lowest since prior to 1970. Between 2013 and 2014, consumption fell by 8.0 Mtoe, a decrease of 5.6 per cent.
- Energy consumption in 2014 was 24.1 Mtoe lower than in 2000 (135.3 Mtoe compared to 159.4 mtoe) – a decrease of 15 per cent, and 10.7 Mtoe (7.3 per cent) lower than in 1970.
- In 2014, energy consumption in the **industrial sector** fell by 1.0 per cent since 2013, with most sectors showing a decrease of between 1 and 6 per cent. The biggest decrease in absolute terms was in the chemicals sector which fell from 3.4 Mtoe to 3.3 Mtoe. Overall there was little change in each sub-sectors' share of consumption when compared to 2013, with the largest single share being from the chemical industry accounting for 14 per cent.
- Energy consumption in the **transport sector** increased by 1.1 per cent between 2013 and 2014. Transport energy consumption fell 2.3 per cent (1.3 Mtoe) between 2000 and 2014, with the largest actual decrease occurring in the **road transport** sector, where consumption fell by 2.7 per cent (1.1 Mtoe) – with this sector accounting for 74 per cent of total transport consumption in 2014. Over the same period, **air transport** fuel increased by 3.7 per cent and **rail transport** use fell by 26 per cent.
- In 2014, **domestic energy consumption** fell by 6.2 Mtoe (14 per cent) to 38.2 Mtoe, the lowest since 1984, reflecting the unusually warm average temperatures, the warmest since prior to 1970. Compared to 2011, which had a similarly warm average temperature, consumption in 2014 was 3.3 per cent lower. The intervening years showed higher consumption due to colder average temperatures.
- The 19 per cent decrease in domestic consumption since 2000 is set in the context of an increase of 12 per cent in the number of UK households and a 9.7 per cent increase in the UK population. At a per household level, energy consumption has fallen by 27 per cent since 2000.
- In the **service sector**, energy consumption in the **private commercial sector** increased by 16 per cent between 2000 and 2014, in the **public sector** it fell by 31 per cent and by 14 per cent in the **agriculture sector**.



NOTES TO EDITORS

1. The **Digest of United Kingdom Energy Statistics 2015**, compiled by the Department of Energy and Climate Change, contains tables and extensive commentary, charts and technical notes. As well as giving new data for 2014 it also presents some revised data for earlier years.

2. The Digest provides a comprehensive account of energy supply and demand in the United Kingdom, with the majority of the tables covering the last five years. The first chapter covers aggregated overall energy statistics, energy balances and the estimated value of fuel purchases. This chapter gives details of the conversion of fuels by the energy supply industries and figures for consumption by final users, with an analysis of consumption by main industrial groups. It also contains a table covering fuel used for electricity generation by industries whose main activity is not the generation of electricity (i.e. autogenerators). Other chapters cover the individual fuels and particular topics such as renewable sources of energy and combined heat and power. The Digest also contains annexes on key events in the energy industries in recent years and a glossary of terms.

3. The **Digest of United Kingdom Energy Statistics 2015** is available from the Stationery Office at a cost of £75 (ISBN 9780115155314) and on the Internet at: www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes.

UK Energy in Brief included with this year's Digest, is a booklet summarising the main figures in the publication. UK Energy in Brief is also available on the Internet at:

www.gov.uk/government/collections/uk-energy-in-brief

The Energy Flow Chart included with this year's Digest, is a chart showing the UK energy flows of primary fuels from home production and imports to their eventual final uses. The Energy Flow Chart is also available on the Internet at:

www.gov.uk/government/collections/energy-flow-charts

UK Energy in Brief and the Energy Flow Chart are available on request from DECC, Tel: 0845 504 9188.

4. **Energy Consumption in the United Kingdom** brings together statistics from a variety of sources to produce a comprehensive review of energy consumption and changes in efficiency, intensity and output in the UK since the 1970s, with a particular focus on trends since 1990. The updated information is released in tables on the Internet only at: www.gov.uk/government/collections/energy-consumption-in-the-uk



5. **Energy Trends** is a quarterly publication that contains tables, charts and commentary covering all major aspects of energy. It provides a comprehensive picture of energy production and use over recent months and enables readers to monitor trends during the year and complements the annual publications. The latest edition was published on 25 June 2015. It is available on the Internet at:

www.gov.uk/government/collections/energy-trends

6. The **Energy Prices** publication issued with Energy Trends by DECC presents information on energy prices. It contains analyses of petroleum product prices, industrial energy prices, domestic electricity and gas prices, and international comparisons of energy prices. It contains the information on energy prices that until 2001 was published in the Digest of United Kingdom Energy Statistics. The latest edition was published on 25 June 2015. It is available on the Internet at:

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

7. In addition to the above statistical publications on the internet, the DECC section of the GOV.UK website also contains key energy data in downloadable spreadsheet format. The spreadsheet format includes data on energy production, consumption, trade and prices and is available in monthly, quarterly and annual time-series format. These data are available at: www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics

8. UK Greenhouse Gas Emissions statistics are also produced by DECC to show progress against the UK's goals, both international and domestic, for reducing greenhouse gas emissions. These data are available at: www.gov.uk/government/collections/uk-greenhouse-gas-emissions

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