

PRESS NOTICE



Department
of Energy &
Climate Change



Statistical Press Release

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Digest of UK Energy Statistics 2014

The Department of Energy and Climate Change today releases 4 key publications: the **Digest of United Kingdom Energy Statistics 2014**, **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 2013.

DIGEST OF UK ENERGY STATISTICS 2014

Key points

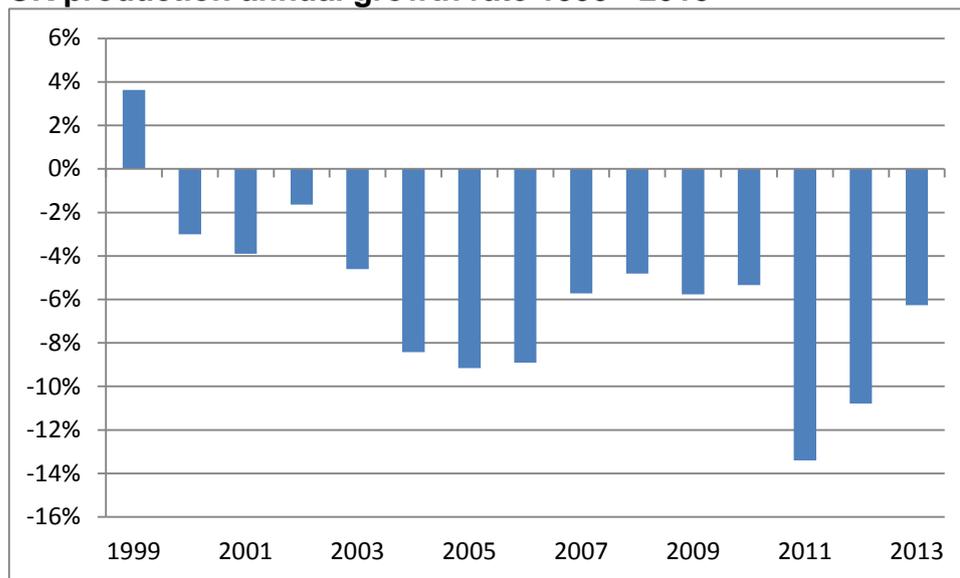
- **Primary energy production** fell by 6.3 per cent, on a year earlier, due to record low coal output following mine closures; oil and gas output were also down as output facilities were affected by maintenance issues alongside longer term decline.
- **Final energy consumption** rose by 0.7 per cent, reflecting the colder weather in 2013. On a temperature adjusted basis, energy consumption was down 0.3 per cent continuing the downward trend of the last nine years.
- Electricity generated from **renewable sources** in the UK in 2013 increased by 30 per cent on a year earlier, and accounted for 14.9 per cent of total UK electricity generation, up from 11.3 per cent in 2012. Total renewables, as measured by the 2009 EU Renewables Directive, accounted for 5.2 per cent of energy consumption in 2013, up from 4.2 per cent in 2012.

- In 2013, the UK became a **net importer** of petroleum products for the first time since 1984 (the year of the miner's strike) and before that 1973; largely due to the closure of the Coryton Refinery in July 2012.

Main energy production and trade statistics:

- **Primary energy production** fell by 6.3 per cent in 2013, following the record falls of 13.4 and 10.8 per cent in the previous two years. Production has now fallen in each year since 1999, and is now less than half its 1999 levels, an average annual rate of decline of 6.6 per cent.

UK production annual growth rate 1999 - 2013

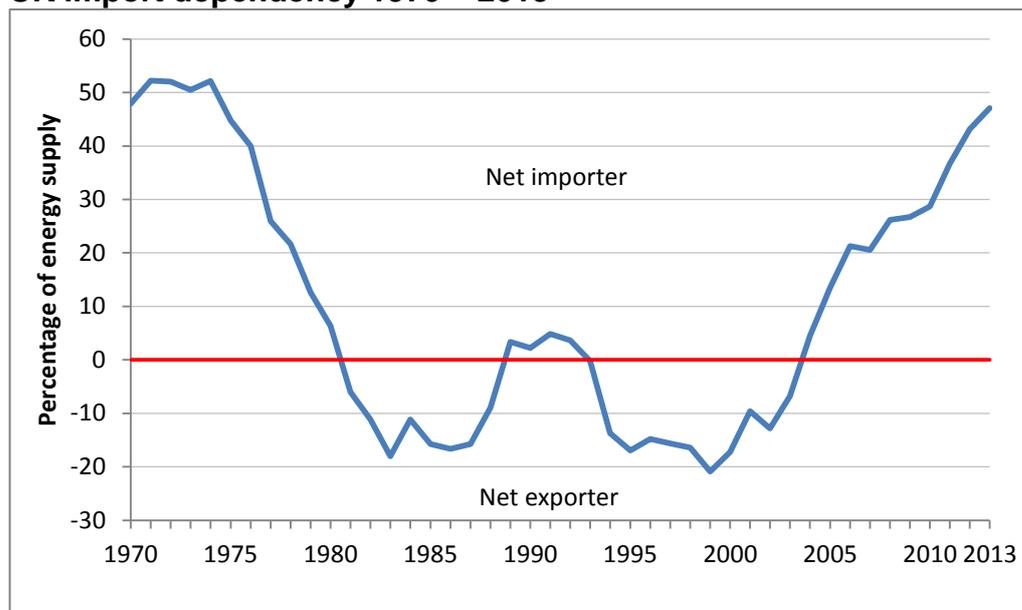


- **Gross natural gas** production fell 6.2 per cent in 2013. This reflects the continuing long-term decline in UK natural gas production, which has fallen by an average of 8.0 per cent per year since 2000, when production peaked.
- **Crude oil (including NGLs) production** in 2013 was 8.8 per cent lower than in 2012 at 41 million tonnes. Production has fallen by 70 per cent from its 1999 peak.
- **Coal production** was down by 25 per cent in 2013 compared to 2012, following the closure of a number of mines.
- Energy **imports** were at record levels in 2013, up 2.3 per cent on 2012 levels.



- For crude oil, the key source was Norway which accounted for 40 per cent of imports, with a large growth in imports from Algeria, and Saudi Arabia.
 - For gas the key source was also Norway, which accounted for 58 per cent of UK imports, with 16 per cent from the Netherlands. LNG accounted for 20 per cent of gas imports, down from 28 per cent in 2012, with 93 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 35 per cent of exports shipped to the US.
 - For coal the key source was Russia accounting for 41 per cent of UK imports, followed by the USA and Colombia which accounted for 25 and 23 per cent respectively.
- The UK remained a **net importer of energy**, with an increased dependency level (imports/ energy use) of 47 per cent; this continues the trend from 2004 when the UK once again became a net importer of fuel. In 2013 the UK was a net importer of all fuels, as imports of petroleum products in total exceeded exports following the closure of the Coryton refinery.

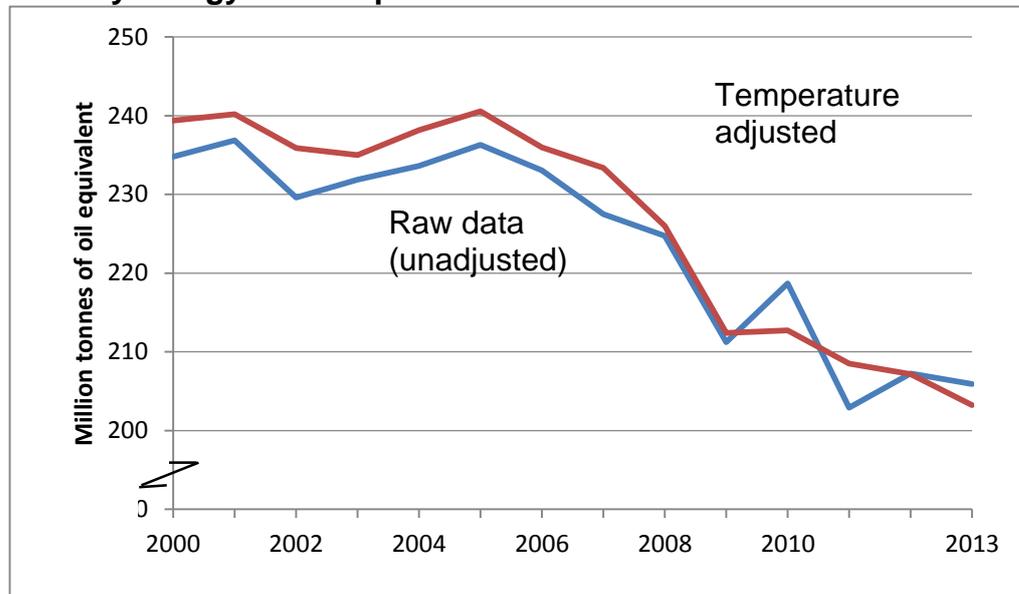
UK import dependency 1970 – 2013



Main energy consumption statistics:

- UK **primary energy consumption** in 2013 decreased by 0.6 per cent, and on a temperature adjusted basis, consumption was down 1.9 per cent continuing the downward trend of the last eight years.

Primary energy consumption 2000 - 2013



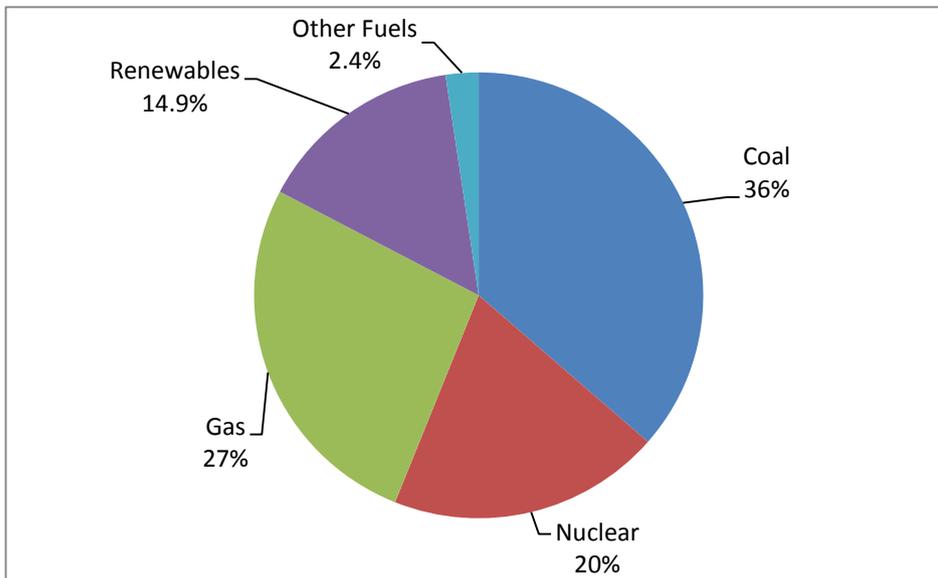
- **Overall gas demand** decreased by 1.1 per cent. **Gas demand for electricity generation** decreased by 5.7 per cent as gas's share of the UK's generation of electricity fell to 27 per cent, from 28 per cent last year. Domestic demand was similar to that in 2012.
- **Total oil consumption in the UK** saw a small fall down by 1 per cent when compared with 2012. Over 70 per cent of oil is consumed in the transport sector, which showed little change in overall consumption from 2012.
- **Consumption of diesel road fuel exceeded the consumption of motor spirit** in 2013 by over 9 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 in the past 10 years, whilst diesel use has increased by nearly 2 per cent per annum, over the same period.

- **Coal consumption** decreased by 5.7 per cent in 2013. There was a 7.4 per cent decrease in **consumption by major power producers** (consumers of 83 per cent of total coal demand) reflecting lower demand and more renewables. Coal accounted for 36 per cent of the electricity generated in the UK in 2013, down from 39 per cent in 2012. The domestic sector accounted for only 1.1 per cent of total coal consumption.
- **Energy consumption by final users** at 142.5 million tonnes of oil equivalent increased by 0.7 per cent in 2013. Consumption in the domestic sector was broadly unchanged, up only 0.2 per cent; with industry and service sector use up by 2.4 and 3.1 per cent respectively. There was reduced consumption from transport, which was down 0.7 per cent. Average temperatures in 2013 were marginally cooler than in 2012. On a temperature adjusted basis final energy consumption was down by 0.3 per cent continuing the downward trend of the last nine years.
- **Refinery production** decreased by 6 per cent on 2012 and 25 per cent on 2000. The closure of the Coryton refinery contributed to the decrease in production as it had been operating in the first half of 2012. Production was dented further by the temporary closure of the Grangemouth refinery in October 2013. Imports of petroleum product imports have increased by 8 per cent to make up the shortfall. In addition, exports have decreased by 3 per cent, as a result the UK was a net importer of petroleum products in 2013 for the first time since 1984, the year of the miners' strike. Petrol accounts for over a third of exports.

Main electricity generation and supply statistics:

- Gas prices remained high in 2013, such that the commercial attractiveness of **gas for electricity generation** continued to be weak in 2013. Meanwhile, nuclear's share of electricity generation was unchanged, despite a slight increase in generation. Gas accounted for 27 per cent of electricity supplied in 2013, with coal accounting for 36 per cent and nuclear 20 per cent.

Electricity generation by fuel, 2013



- Electricity generated from renewable sources in the UK in 2013 increased by 30 per cent on a year earlier, and accounted for 14.9 per cent of total UK electricity generation, up from 11.3 per cent in 2012. Offshore wind generation increased by 50 per cent, and onshore wind increased by 40 per cent. Both the offshore and onshore wind load factors (37.5 per cent and 27.9 per cent) exceeded or equalled that of gas (27.9 per cent).
- In 2013, the proportion of UK **electricity generated from renewables** was 14.9 per cent. Installed electrical generating capacity of renewable sources rose by 27 per cent (4.2 GW) in 2013, mainly as a result of a 27 per cent increase (1.6 GW) in onshore wind capacity, 59 per cent increase (1.0 GW) in solar photovoltaic capacity (due to high deployment of both small-scale capacity under Feed in Tariffs and large-scale capacity under the Renewables Obligation). Bioenergy capacity increased by 27 per cent (0.8 GW) due to new conversions of previously coal-fired capacity to biomass.

- There was a 0.5 per cent decrease in the **total supply of electricity** in the UK in 2013, to 373.6 TWh. Indigenous electricity supply fell by 1.0 per cent, but net imports of electricity increased by around 20 per cent, to 14.5 TWh, as imports rose substantially more than exports.
- **Final consumption of electricity** was broadly unchanged at 317.3 TWh, the lowest level since 1998.
- The **domestic sector** was the largest electricity consumer in 2013 (113.5 TWh), while the **industrial sector** consumed 98.0 TWh, and the **service sector** consumed 101.7 TWh. Industrial consumption increased by 0.2 per cent, while domestic consumption fell by 1.1 per cent.

Other energy statistics:

- **Total renewables**, as measured by the 2009 EU Renewables Directive, accounted for 5.2 per cent of energy consumption in 2013 up from 4.2 per cent in 2012, see article in Energy Trends June 2014 at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323358/Renewable_energy_in_2013.pdf.
- In 2013, **Combined Heat and Power (CHP)** capacity stood at 6,170 MWe, a small decrease on 2012.
- In 2013 the energy industries' accounted for 3.3 per cent of **GDP**.

The fuel switching away from gas and coal for electricity generation, with other changes, is provisionally estimated to have decreased **emissions** of carbon dioxide by around 2 per cent in 2013.

ENERGY CONSUMPTION IN THE UNITED KINGDOM

- Final energy consumption, excluding non-energy use, rose by 0.9 million tonnes of oil equivalent (mtoe) from 141.5 to 142.5 mtoe between 2012 and 2013 – an increase of 1 per cent.
- Energy consumption in 2013 was 16.9 mtoe lower than in 2000 (142.5 mtoe compared to 159.4 mtoe) – a decrease of 11 per cent, and 2 per cent lower than in 1970.
- In 2013, energy consumption in the **industrial sector** increased by 2 per cent since 2012, with the iron and steel sector showing a 17 per cent increase to 1.3 mtoe. The largest energy consuming single sub-sector in the **industrial sector** was **chemicals**, which accounted for 14 per cent of all industrial energy consumption. Energy consumption per unit of output fell by 53 per cent in the chemicals sector between 2000 and 2013, while there was a fall of 8 per cent in the same measure for the iron and steel sector; for all industries there was a fall of 19 per cent.
- Energy consumption in the **transport sector** decreased by 0.7 per cent between 2012 and 2013. Transport energy consumption fell 4 per cent (2.0 mtoe) between 2000 and 2013, with the largest actual decrease occurring in the **road transport** sector, where consumption fell by 4 per cent (18 mtoe) – with this sector accounting for 74 per cent of total transport consumption in 2013. Over the same period, **air transport** fuel increased by 2 per cent since 2000 and **rail transport** use fell by 23 per cent.
- In 2013, **domestic energy consumption** remained stable with consumption in 2012 (0.2 per cent increase) – similar levels of consumption to 2009. The intermediate years had unusual weather spells (the high levels of consumption in 2010 were largely driven by colder temperatures and the lower levels of consumption in 2011 were due to a warmer than usual heating season).
- The 7 per cent decrease in consumption since 2000 is set in the context of an increase of 11 per cent in the number of UK households and a 9 per cent increase in the UK population. At a per household level, energy consumption has fallen by 9 per cent since 2000.
- In the **service sector**, energy consumption in the **private commercial sector** increased by 30 per cent between 2000 and 2013, in the **public sector** it fell by 23 per cent and by 23 per cent in the **agriculture sector**. Over the same period, output, measured as the contribution made to the UK economy, increased by 35 per cent in the private sector and increased by 23 per cent in the public sector, in real terms.

NOTES TO EDITORS

1. The **Digest of United Kingdom Energy Statistics 2014**, 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 2013 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 2014** is available from the Stationery Office at a cost of £68 (ISBN 9780115155307) 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: 0300 068 5056.

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 26 June 2014. It is available on subscription (with Quarterly Energy Prices, see below) through SSD, tel: 01904 455527. Single copies are available from the Publications Orderline priced £6. It is also available on the Internet at:

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

6. The **Quarterly 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 26 June 2014. It is available on subscription (with Energy Trends, see above). Single copies are available from the Publications Orderline priced £8. It is also 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

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