



Statistical Press Release

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Digest of UK Energy Statistics 2010

The **Digest of United Kingdom Energy Statistics 2010** is published today (Thursday 29 July) by the Department of Energy and Climate Change. With many detailed tables, supported by charts and commentary, the **Digest** provides comprehensive data for 2009 and an account of trends in energy supply and demand in the United Kingdom. The **Digest** is available both in hard copy from The Stationery Office and free on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx

Included with the Digest this year is the popular booklet "**UK Energy in Brief**" (which summarizes the latest energy statistics in 33 Charts), and the "**Energy Flow Chart**" (which shows the UK energy flows pictorially for 2009).

Data for 2009 in **Energy Consumption in the United Kingdom** are also released on 29 July, on the Internet by the Department of Energy and Climate Change. This publication brings together statistics from a variety of sources, providing a comprehensive review of energy consumption in the UK since the 1970s. It is available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx

where detailed tables can also be found.

In addition, **UK Energy Sector Indicators** are also released on 29 July, on the Internet by the Department of Energy and Climate Change. This publication aims to provide a headline overview of some of the key developments in the UK energy system. It is available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/indicators/indicators.aspx

where supporting data can also be found.

DIGEST OF UK ENERGY STATISTICS 2010

Main trends in energy in 2009:

- Overall there was a decrease in **indigenous energy production** of 5.7 per cent and a decrease in **primary energy consumption** of 6.3 per cent in the UK compared with 2008, largely driven by the recession.
- Overall primary fuel consumption was not met by indigenous production; this continues the trend from 2004 when the UK again became a **net importer** of fuel. The UK imported more coal, manufactured fuels, crude oil, electricity and gas than it exported; however the UK remained a net exporter of petroleum products.
- With the coal-gas price differential again high, the commercial attractiveness of **gas for electricity generation** remained high, while the amount of electricity generated from coal fell further, as nuclear stations returned from the outages of 2008 to increase output. Gas accounted for 45 per cent of electricity supplied in 2009, with coal accounting for 28 per cent and nuclear 18 per cent.
- Overall there was a decrease of 6.7 per cent in **final energy consumption** in the UK compared with 2008.
- The reduced demand for fossil fuels, and switching from coal to nuclear for electricity generation provisionally reduced the **emissions of carbon dioxide** by 9.7 per cent in 2009.
- Electricity generated from renewable sources in the UK in 2009 represented 6.7 per cent of total UK electricity generation, up from 5.6 per cent in 2008. On a renewable obligation basis, 6.7 per cent of electricity sales came from eligible renewable sources, up from 5.3 per cent in 2008. .
- **Refinery production** decreased by 7 per cent and **petroleum product exports** decreased by 11 per cent.
- In 2009 **Combined Heat and Power (CHP)** capacity stood at 5,569 MWe a small (1.4 per cent) increase on 2008.



- In 2009 the energy industries' accounted for 3.7 per cent of **GDP** and 10.1 per cent of **total investment**.

Main energy production and trade statistics:

- **Primary energy production** in the United Kingdom in 2009, at 166.9 million tonnes of oil equivalent, was 5.7 per cent lower than in 2008. Production has now fallen in each year since 1999, and is down 43.9 per cent on 1999 levels, an average rate of decline of 5.6 per cent.
- **Gross natural gas** production fell 14.3 per cent in 2009. Gross natural gas production has fallen by 45 per cent since its peak in 2000. Net imports of gas accounted for a third of gas input into the transmission system. LNG imports accounted for a quarter of gas imports compared to 2% in 2008.
- **Crude oil (including NGLs) production** in 2009 was 4.8 per cent lower than in 2008 at 68 million tonnes, and now accounts for 45 per cent of indigenous energy production.
- **Coal production** was 1.0 per cent lower in 2009 compared to 2008. Imports of coal were also lower compared to 2008 (by 13.0 per cent). These decreases coupled with a rise in stock levels has led to a 16.2 per cent fall in total coal supply in 2009 (48.8 million tonnes).
- **Electricity supplied** from nuclear sources has increased in 2009, accounting for 62.8 TWh out of the total electricity supply of 357.2 TWh (18 per cent).

Main energy consumption statistics:

- UK **primary energy consumption** in 2009 decreased by 6.3 per cent, largely driven by the recession.
- **Overall gas demand** fell by 7.7 per cent. **Gas demand for electricity generation** fell by 5.5 per cent and gas's share of the UK's supply of electricity was 45 per cent.
- **Total oil consumption in the UK** was down 5.1 per cent in 2009 at 72.5 million tonnes of oil equivalent. The majority of this, 75 per cent, was consumed in



the transport sector. Energy use for transport fell by 4 per cent in 2009 compared to 2008.

- **Consumption of Derv fuel exceeded the consumption of motor spirit** in 2009 by 4 million tonnes.
- **Coal consumption** fell by 16.8 per cent in 2009. There was a 17.6 per cent decrease in **consumption by major power producers** (consumers of 81 per cent of total coal demand). Twenty-eight per cent of the electricity generated in the UK came from coal in 2009, down from 32 per cent in 2008. The domestic sector accounted for only 1.4 per cent of total coal consumption.
- **Energy consumption by final users** (i.e. after conversion to secondary fuels, such as electricity or road transport fuels) at 152.8 million tonnes of oil equivalent fell by 6.7 per cent in 2009. Consumption decreased in all sectors, with larger falls recorded by the industrial sector (down 13.1 per cent) and the service sector (down 8.5 per cent). During 2009, the economic output of both these sectors contracted sharply.

Main electricity generation and supply statistics:

- There was a 5.3 per cent decrease in the **total supply of electricity** in the UK in 2009 to 378.5 TWh. This is the fourth successive year that total electricity supply has fallen. Indigenous electricity supply fell by 3.3 per cent and net imports of electricity fell by three quarters to 3 TWh caused by lower imports and higher exports.
- Energy industries' use of electricity fell by 1.8 per cent in 2009 to 29.4 TWh. **Final consumption of electricity** fell by 5.7 per cent to 322.4 TWh.
- The **domestic sector** was the largest electricity consumer in 2009 (122.5 TWh), while the **industrial sector** consumed 98.1 TWh, and the **service sector** consumed 93.0 TWh. Domestic consumption decreased by 2.6 per cent and industrial consumption decreased by 10.3 per cent.
- In 2009 the proportion of UK **electricity generated from renewables** was 6.7 per cent. On the basis of the policy measurement of the contribution of



renewables eligible under the Renewables Obligation to UK electricity sales, 2009 showed continued growth with the percentage increasing from 4.8 per cent in 2007, and 5.3 per cent in 2008, to reach 6.7 per cent in 2009. Installed electrical generating capacity of renewable sources rose by 18 per cent in 2009, mainly as a result of a 61 per cent increase in offshore wind capacity, a 24 per cent increase in onshore wind capacity and an 11 per cent increase in the capacity of sites fuelled by biomass and wastes.

ENERGY CONSUMPTION IN THE UNITED KINGDOM

- The overall decrease in final energy consumption between 2008 and 2009 was 10.4 million tonnes of oil equivalent – an fall of 6.7 per cent. The changes in the main sectors, between 2008 and 2009 were:

	Million tonnes of oil equivalent / <i>Percentage</i>		
	2008	2009	Percentage change
Industry	30.8	26.7	-13.1
Transport	58.9	56.5	-4.0
Domestic	46.0	43.6	-5.2
Services, public administration and agriculture	18.7	17.1	-8.5
Total	154.3	143.9	-6.7

- Energy consumption in 2009, was 3.3 million tonnes lower than in 1990 – a fall of 2.3 per cent. The changes in the main sectors, between 1990 and 2009 were:

	Million tonnes of oil equivalent / <i>Percentage</i>		
	1990	2009	Percentage change
Industry	38.7	26.7	-31.0
Transport	48.6	56.5	16.2
Domestic	40.8	43.6	7.0
Services, public administration and agriculture	19.2	17.1	-11.0
Total	147.3	143.9	-2.3

- In 2009, the largest energy consuming single sub-sector in the **industrial sector** was **chemicals**, which accounted for 16 per cent of all industrial energy consumption. In 2009, energy consumption in the chemical sector was 15 per cent (0.76 million tonnes of oil equivalent) lower than the previous year. The iron and steel sector showed the largest percentage decrease on the year in 2009, with a fall of 26 per cent to 1.2 million tonnes of oil equivalent. Energy



consumption per unit output fell by 50 per cent in the chemicals sector between 1990 and 2009, while there was a fall of 5.5 per cent in the same measure for the iron and steel sector; for all industries there was a fall of 27.5 per cent.

- Energy consumption in the **transport sector** has now fallen for two consecutive years signalling an end to the continuous growth seen since 1970. However, Transport energy consumption has doubled between 1970 and 2009, although two thirds of this increase had occurred by 1990. Transport energy consumption rose 16 per cent (7.9 million tonne of oil) between 1990 and 2009. Within this, the largest increase occurred in the **air transport** sector, where consumption rose by 74 per cent - accounting for 69 per cent of the total increase seen in transport energy consumption. Over the same period, the **rail** sector's consumption rose by 34 per cent, while **passenger road** fuel rose by 5 per cent and **water transport** by 15 per cent.
- **Domestic energy consumption** increased by 7 per cent between 1990 and 2009. However, as a result of the 5.2 per cent decrease (2.8 million tonnes of oil equivalent) between 2008 and 2009, domestic energy consumption has fallen to its lowest level since 1995, 10 per cent lower than the peak seen in 2004. For context, since 1990, the number of households in the UK increased by 18 per cent, the population by 8 per cent and total household disposable income by 58 per cent in real terms. In 2008, **space heating** accounted for 58 per cent of all energy consumed in the domestic sector, **water heating** a further 24 per cent, with **lighting and appliances** and **cooking** responsible for 16 and 3 per cent. It is estimated that had the savings through insulation and heating efficiency improvements from 1970 onwards not been made, then energy consumption in homes would be around twice current levels.
- In the **service sector**, energy consumption in the **private commercial sector** increased by 7.8 per cent between 1990 and 2009, but fell by 17.9 per cent in the **public sector** and 23.3 per cent in the **agriculture sector**. Over the same period, output, measured as the contribution made to the UK economy, increased by 90 per cent in the private sector and increased by 34 per cent in the public sector, in real terms. In 2008, space heating accounted for 48 per cent of energy consumption in the services sector, and lighting accounted for a further 19 per



cent. The retail sub-sector accounts for a fifth of energy use by service sector organisations.

- Reduced energy consumption between 2008 and 2009 has helped lower emissions of carbon dioxide by 9¾ per cent, with the reduction since 1990 being 19 per cent.



NOTES TO EDITORS

1. The **Digest of United Kingdom Energy Statistics 2010**, 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 2009 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 combined heat and power and renewable sources of energy. 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 2010** is available from the Stationery Office at a cost of £54 (ISBN 9780115155260) and on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx

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.decc.gov.uk/en/content/cms/statistics/publications/brief/brief.aspx

The 2009 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 2009 Energy Flow Chart is also available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/flow/flow.aspx

UK Energy in Brief and the 2009 Energy Flowchart are available on request from DECC, 0300 068 5056.

4. **Energy Consumption in the United Kingdom** brings together statistics from a number of sources to produce a comprehensive review of energy consumption in the UK since the 1970s, with a particular focus on changes since 1990. It includes an analysis of the factors driving changes in energy consumption, the impact of increasing activity, increased efficiency, and structural change in the economy. The updated information is released in tables on the Internet only at:

www.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx

5. **UK Energy Sector Indicators 2010** aims to provide a headline overview of some of the key developments in the UK energy system. The indicators are available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/indicators/indicators.aspx



A further set of background indicators (charts and tables) will be made available on the Internet only (web address as above) in October 2010.

6. **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 24 June 2010. It is available on subscription (with Quarterly Energy Prices, see below) through Amey plc - contact Nicola Mullen, tel: 01633 224755. Single copies are available from the Publications Orderline priced £6. It is also available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/trends/trends.aspx

7. 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 24 June 2010. It is available on subscription (with Energy Trends, see above) through Amey plc - contact Nicola Mullen, tel: 01633 224755. Single copies are available from the Publications Orderline priced £8. It is also available on the Internet at:

www.decc.gov.uk/en/content/cms/statistics/publications/prices/prices.aspx

8. In addition to the above statistical publications on the internet, the DECC's 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.decc.gov.uk/en/content/cms/statistics/source/source.aspx

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