PRESS NOTICE

Statistical Press Release

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Digest of UK Energy Statistics 2012

The Department of Energy and Climate Change today releases 4 key publications: the **Digest of United Kingdom Energy Statistics 2012**, **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 2011.

DIGEST OF UK ENERGY STATISTICS 2012

Key points

- **Primary energy production** fell by a record 13.2 per cent on a year earlier, with record falls in both oil and gas production caused by both maintenance and a number of unexpected slowdowns on the UK Continental Shelf.

- **Primary energy consumption** was down 6.9 per cent, though on a temperature adjusted basis, was down 1.7 per cent continuing the downward trend of the last six years.

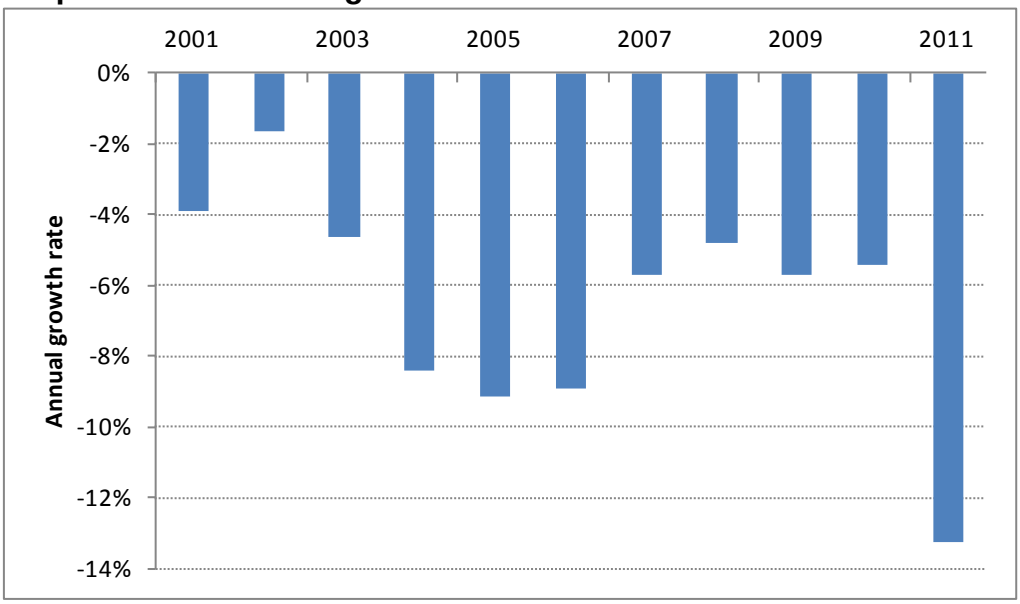
- Electricity generated from **renewable sources** in the UK in 2011 increased by 33 per cent on a year earlier, and accounted for 9.4 per cent of total UK electricity generation, up from 6.8 per cent in 2010. Total renewables, as measured by the 2009 EU Renewables Directive, accounted for 3.8 per cent of energy consumption in 2011 up from 3.2 per cent in 2010.

- In 2011, imports of energy exceeded UK production, the first time this has happened since 1974.

Main energy production and trade statistics:

- **Primary energy production** fell by a record 13.2 per cent on a year earlier, with record falls in both oil and gas production caused by both maintenance and a number of unexpected slowdowns on the UK Continental Shelf. 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 6.3 per cent.

UK production annual growth rate 2001 - 2011



- **Gross natural gas** production fell 20.8 per cent in 2011. Gas production has fallen by 58.3 per cent since its peak in 2000. Despite decreasing indigenous production of gas (down 20.8 per cent on 2010), the UK exported record amounts of gas. The UK's trading position has strengthened as a result of the significant increases in Liquefied Natural Gas (LNG) imports. In 2011, imports were at record levels, with **LNG** accounting for 47 per cent.

- **Crude oil (including NGLs) production** in 2011 was 17.5 per cent lower than in 2010 at 52 million tonnes. This is the largest decrease since large scale production peaked in 1999.

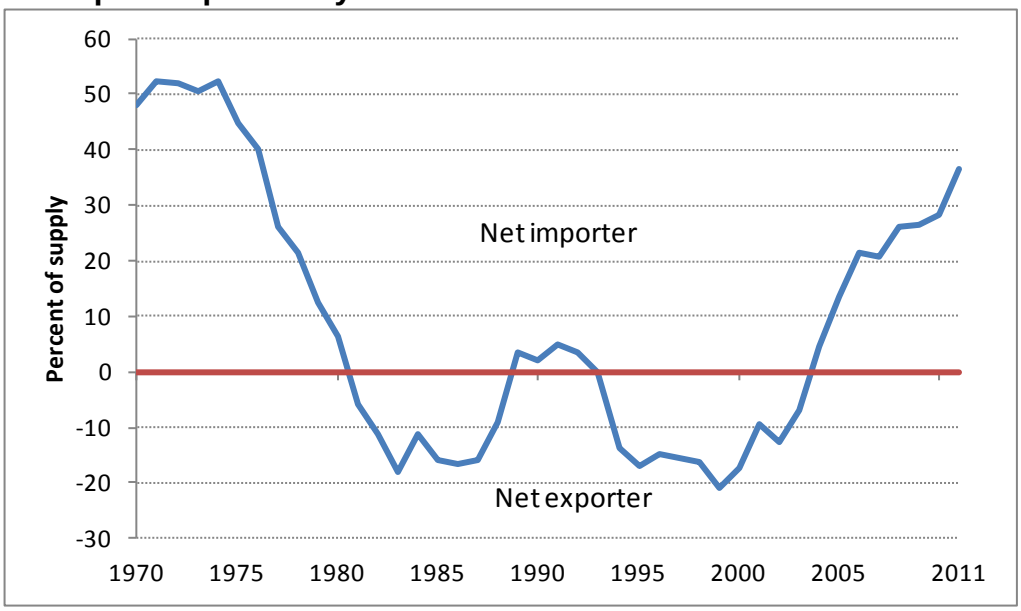
- **Coal production** was up marginally by 0.4 per cent in 2011 compared to 2010. Imports of coal were higher compared to 2010 (by 22.6 per cent).

- **Electricity supplied** from nuclear sources rose in 2011, accounting for 62.7 TWh out of total electricity supplied of 353.7 TWh (18 per cent).

- Energy **imports** were at record levels in 2011, up 3.8 per cent on 2010 levels.
    - For oil, the key source was Norway which accounted for 62 per cent of imports;
    - For gas the key sources were Norway and Qatar, both of which accounted for around 40 per cent of UK imports;
    - For petroleum products the UK sources its product widely, with a range of European countries supplying diesel road fuel, and aviation fuel mainly being sourced from Asia;
    - For coal the key source was Russia accounting for 38 per cent of UK imports, followed by Columbia which accounted for 25 per cent.

- The UK remained a **net importer of energy**, with an increased dependency level of 36 per cent; this continues the trend from 2004 when the UK once 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.

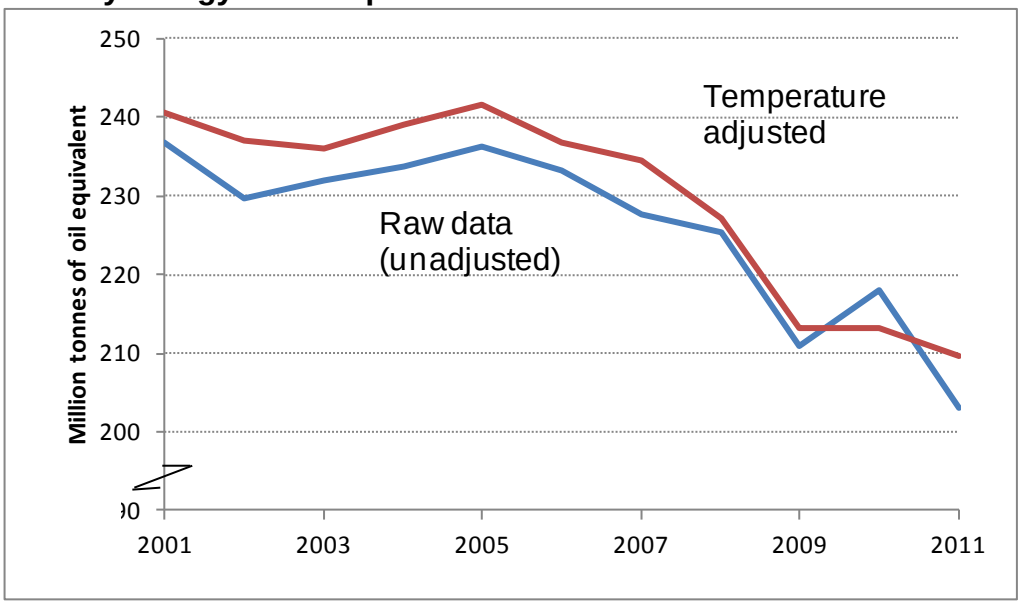
UK import dependency 1970 - 2011



Main energy consumption statistics:

- UK **primary energy consumption** in 2011 decreased by 6.9 per cent, largely due to the warmer weather in 2011. On a temperature adjusted basis, consumption was down 1.7 per cent continuing the downward trend of the last six years.

Primary energy consumption 2001 - 2011



- **Overall gas demand** decreased by 17 per cent. **Gas demand for electricity generation** decreased by 16.7 per cent and gas's share of the UK's generation of electricity was 40 per cent, down from 46 per cent last year.

- **Total oil consumption in the UK** fell by 2.4 per cent in 2011. Three quarters of oil consumption, was consumed in the transport sector, which showed little change from 2010.

- **Consumption of diesel road fuel exceeded the consumption of motor spirit** in 2010 by over 7 million tonnes due to increased substitution of diesel for motor spirit use in the UK's car fleet. Up until 2004, motor spirit exceeded diesel road fuel sales.

- **Coal consumption** increased by 0.1 per cent in 2011. There was a 0.9 per cent increase in **consumption by major power producers** (consumers of 81 per cent of total coal demand). Thirty per cent of the electricity generated in the UK came from coal in 2011, up from 28 per cent in 2010. The domestic sector accounted for only 0.2 per cent of total coal consumption.

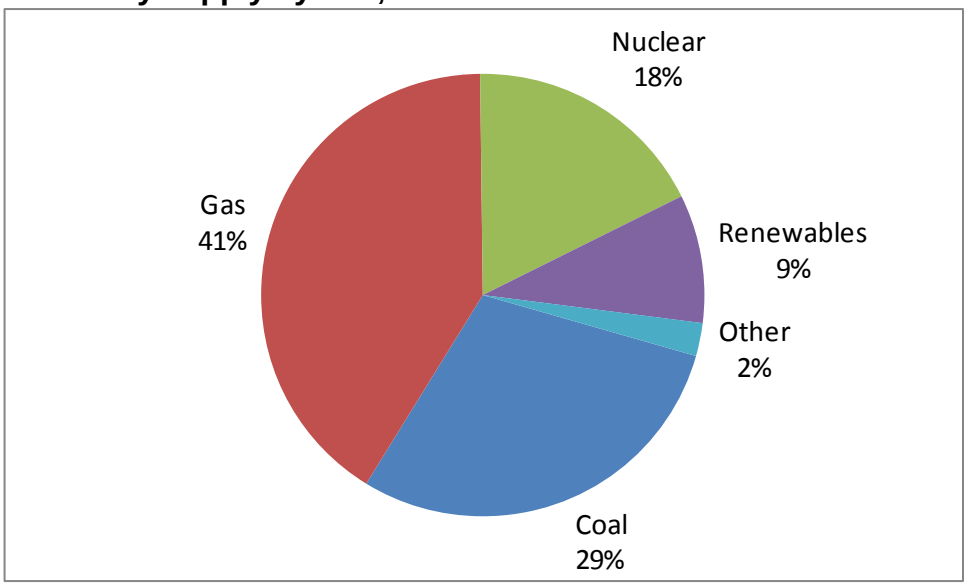
- **Energy consumption by final users** at 147.0 million tonnes of oil equivalent fell by 7.3 per cent in 2011. Consumption decreased in all sectors except transport which was broadly unchanged; domestic consumption decreased by 19.9 per cent mainly due to the warmer weather in 2011, which was on average 1.8 degrees warmer than in 2010.

- **Refinery production** increased by 2.2 per cent, with petroleum product imports decreasing by 4.9 per cent. Petroleum product exports increased by 6.7 per cent with exports of petrol accounting for a third of this.

Main electricity generation and supply statistics:

- With high gas prices, the commercial attractiveness of **gas for electricity generation** weakened in 2011, with its share of electricity supplied falling by six percentage points. Meanwhile, nuclear's share of electricity supplied increased in 2011, due to increased availability after the extensive outages of 2010. Gas accounted for 41 per cent of electricity supplied in 2011, with coal accounting for 29 per cent and nuclear 18 per cent.

Electricity supply by fuel, 2011



- Electricity generated from renewable sources in the UK in 2011 increased by 33 per cent on a year earlier, and accounted for 9.4 per cent of total UK electricity generation, up from 6.8 per cent in 2010.

- In 2011, the proportion of UK **electricity generated from renewables** was 9.4 per cent. On the basis of the policy measurement of the contribution of renewables eligible under the Renewables Obligation to UK electricity sales, 2011 showed a 2.7

percentage point increase, with the percentage increasing from 7.0 per cent in 2010 to reach 9.7 per cent in 2011. Installed electrical generating capacity of renewable sources rose by 33 per cent in 2011, mainly as a result of solar photovoltaic capacity increasing by 12 times (due to high uptake of Feed in Tariffs), a trebling of biomass capacity (due to the conversion of Tilbury power station from coal to dedicated biomass), and a 37 per cent increase in offshore wind capacity.

- There was a 2.7 per cent decrease in the **total supply of electricity** in the UK in 2011, to 374.0 TWh, the lowest level since 1997. Indigenous electricity supply fell by 2.7 per cent and net imports of electricity more than doubled, to 6.2 TWh as imports rose and exports fell.

- **Final consumption of electricity** fell by 3.3 per cent to 318.0 TWh, the lowest level since 1998.

- The **domestic sector** was the largest electricity consumer in 2011 (111.6 TWh), while the **industrial sector** consumed 104.5 TWh, and the **service sector** consumed 102.4 TWh. Industrial consumption decreased by 2.0 per cent, while domestic consumption fell by 6.1 per cent.

Other energy statistics

- **Total renewables**, as measured by the 2009 EU Renewables Directive, accounted for 3.8 per cent of energy consumption in 2011 up from 3.2 per cent in 2010.

- In 2011, **Combined Heat and Power (CHP)** capacity stood at 6,111 MWe, an increase of 1.0 per cent on 2010.

- In 2011 the energy industries' accounted for 4.4 per cent of **GDP.**

- The sharp decrease in residential gas use, due to the warmer weather in 2011, combined with fuel switching away from gas to low carbon sources for electricity generation, decreased **emissions** of carbon dioxide by 8 per cent in 2011.

ENERGY CONSUMPTION IN THE UNITED KINGDOM

- Final energy consumption fell by 11.3 million tonnes of oil equivalent between 2010 and 2011 – a decrease of 7.5 per cent (this excludes non-energy use). The changes in the main sectors, between 2010 and 2011 were:

	Million tonnes of oil equivalent / Percentage		
	2010	2011	Percentage change
Industry	27.7	27.1	-1.9%
Transport	55.2	55.2	0.1%
Domestic	48.5	38.8	-19.9%
Services, public administration and agriculture	18.3	17.2	-6.1%
Total	**149.6**	**138.3**	**-7.5%**

- Energy consumption in 2011, was 8.9 million tonnes lower than in 1990 – a decrease of 6.1 per cent. The changes in the main sectors between 1990 and 2011 were:

	Million tonnes of oil equivalent / Percentage		
	1990	2011	Percentage change
Industry	38.7	27.1	-29.8%
Transport	48.6	55.2	13.5%
Domestic	40.8	38.8	-4.7%
Services, public administration and agriculture	19.2	17.2	-10.7%
Total	**147.3**	**138.3**	**-6.1%**

- In 2011, energy consumption in the **industrial sector** decreased 2 per cent since 2010, with the iron and steel sector showing a 4 per cent decrease to 1.3 million tonnes of oil equivalent. The largest energy consuming single sub-sector in the **industrial sector** was **chemicals**, which accounted for 16 per cent of all industrial energy consumption. Energy consumption per unit of output fell by 46.5 per cent in the chemicals sector between 1990 and 2011, while there was a fall of 12.6 per cent in the same measure for the iron and steel sector; for all industries there was a fall of 29.7 per cent.

- Energy consumption in the **transport sector** has remained stable since 2010, following a fall for three consecutive years signalling an end to the continuous growth seen since 1970, with the falls related to the recession and specific weather events. Transport energy consumption rose 14 per cent (6.6 million tonnes of oil) between 1990 and 2011. Within this, the largest increase occurred in the **air transport** sector, where consumption rose by 75 per cent - accounting for 73 per cent of the total

increase seen in transport energy consumption. Over the same period, **passenger road** fuel rose by 6 per cent and **water transport** by 17 per cent.

- **Domestic energy consumption** decreased by 5 per cent between 1990 and 2011 reflecting milder winter temperatures, reducing domestic energy consumption to its lowest level since 1984.

- For context, since 1990, the number of households in the UK increased by 19 per cent, the population by 10 per cent and total household disposable income by 58 per cent in real terms. Energy consumption per household has fallen by 20 per cent since 1990, a rate of decline of 1 per cent per annum.

- In 2011, **space heating** accounted for 60 per cent of all energy consumed in the domestic sector, **water heating** a further 18 per cent, with **lighting and appliances** and **cooking** responsible for 19 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 7.0 per cent between 1990 and 2011, in the **public sector** it fell by 31.9 per cent and by 26.5 per cent in the **agriculture sector**. Over the same period, output, measured as the contribution made to the UK economy, increased by 96 per cent in the private sector and increased by 36 per cent in the public sector, in real terms. In 2011, space heating accounted for 45 per cent of energy consumption in the services sector, and lighting accounted for a further 21 per cent. The retail sub-sector accounts for 21 per cent of energy use by service sector organisations.

NOTES TO EDITORS

1. The **Digest of United Kingdom Energy Statistics 2012**, 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 2011 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 2012** is available from the Stationery Office at a cost of £62 (ISBN 9780115155284) 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 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.decc.gov.uk/en/content/cms/statistics/publications/flow/flow.aspx
UK Energy in Brief and the Energy Flow Chart are available on request from DECC, 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.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx

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 28 June 2012. It is available on subscription (with Quarterly Energy Prices, see below) through SSD, tel: 01904 455395. 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

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 28 June 2012. 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.decc.gov.uk/en/content/cms/statistics/publications/prices/prices.aspx

7. 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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