Department of Energy & Climate Change

A National Statistics Publication

UK ENERGY IN BRIEF 2013

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This booklet summarises the latest statistics on energy production, consumption, prices and climate change in the United Kingdom. Figures are primarily taken from the 2013 edition of the "Digest of UK Energy Statistics", published on 25 July 2013. Details of the Digest and other Department of Energy and Climate Change (DECC) statistical publications can be found on pages 43 and 44 of this booklet and are available on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics

This booklet is also available on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/uk-energy-in-brief

This is a National Statistics publication

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the UK Statistics Authority: Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs
- are well explained and readily accessible
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

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Introduction to the charts and tables

UK Energy in Brief aims to provide a summary of some of the key developments in the UK energy system: how energy is produced and used and the way in which energy use influences greenhouse gas emissions. It takes data from the main Department of Energy and Climate Change (DECC) statistical publications, the Digest of UK Energy Statistics, Energy Trends, Quarterly Energy Prices, Energy Consumption in the UK, the annual Fuel Poverty statistics report and statistical releases on emissions, and combines these with data produced by the Office for National Statistics and other Government Departments.

The booklet contains separate sections on the economics of the energy industry, overall energy production and consumption and trends in production and consumption of the major fuel sources, climate change and fuel poverty. Also discussed are developments in combined heat and power, renewable energy and feed in tariffs. Information is also given on energy efficiency, energy prices and energy expenditure.

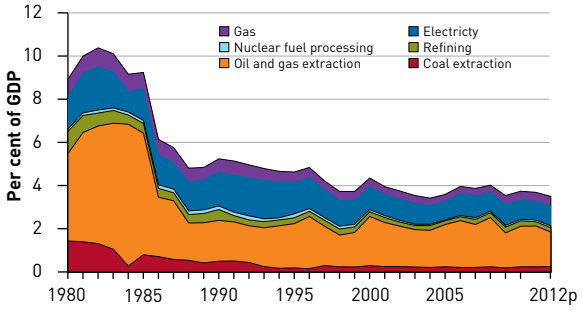
The detailed background data on energy production and consumption can be found in the Digest of UK Energy Statistics 2013 available from The Stationery Office, priced £65, but also available free of charge on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/digest-of-uk-energy-statistics-dukes

Other statistical outputs produced by DECC and drawn on in this publication are listed on pages 43 and 44.

THE ENERGY INDUSTRIES' CONTRIBUTION TO THE UK ECONOMY IN 2012

- 3.5% of GDP
- 10.1% of total investment in 2010
- 51.8% of industrial investment in 2010
- 1.8% of annual business expenditure on research and development in 2011
- 176,000 people directly employed in 2012 (7% of industrial employment) and more indirectly e.g. an estimated 207,000 in support of UK Continental Shelf production.

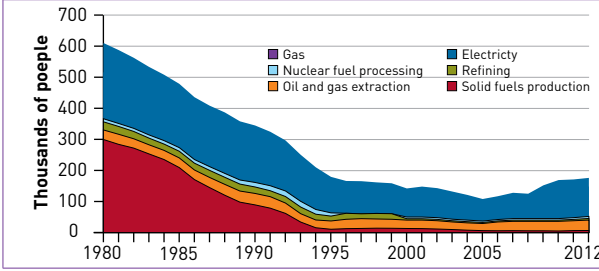
Contribution to GDP by the energy industries, 1980 to 2012



Source: Office for National Statistics

The contribution to the UK economy by the energy industries peaked in 1982 at 10.4%. Despite its significant fall in 1986, oil and gas extraction remains the major energy contributor to the UK economy (with its value dependent both on production and the price of oil and gas) followed by the electricity sector. For 2012, the contribution by the energy industries to the UK economy was 3.5% of GDP (a slight reduction of 0.2 percentage points on the previous year) with oil and gas extraction accounting for 46% and electricity (including renewables) 27% of the energy total.

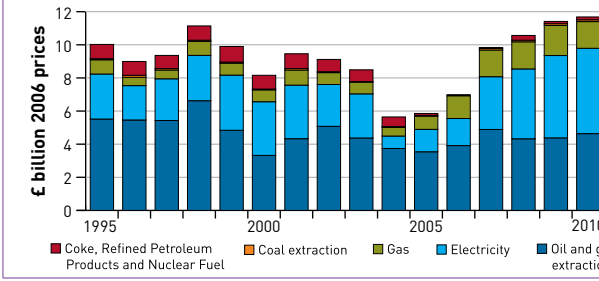
Trends in employment in the energy industries, 1980 to 2012



Source: Office for National Statistics
Data from 1996 onwards based on SIC 2007 classifications

Employment in the energy production and supply industries fell rapidly throughout the 1980s and mid-1990s largely as a result of closures of coal mines. Between 1995 and mid-2000s, employment declined more slowly, however since 2005, it has increased gradually, driven by growth in the electricity sector. In 2012, employment in the energy industries (176,000), was 63 per cent above the 2005 level.

Investment in the energy industries, 1995 to 2010

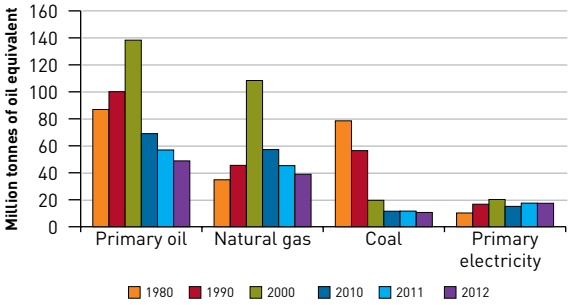


Source: Office for National Statistics

Since 2004, investment in the energy industries has continued to grow, specifically in electricity. In 2010, of the total amount invested in the energy industry, 40% was in oil and gas extraction, 44% in electricity, 14% in gas with the remaining 2% in coal extraction and coke, refined petroleum products and nuclear fuels. Data are not yet available for 2012

Overall energy

Production of primary fuels, 1980 to 2012



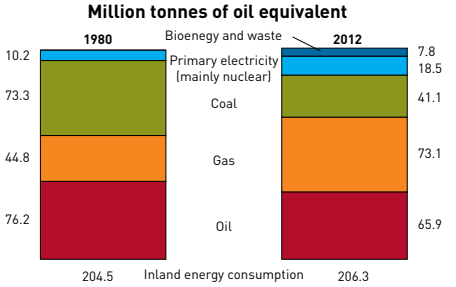
Million tonnes of oil equivalent

	1980	1990	2000	2010	2011	2012
Petroleum	86.9	100.1	138.3	69.0	56.9	48.8
Natural gas	34.8	45.5	108.4	57.2	45.3	38.9
Coal	78.5	56.4	19.6	11.5	11.6	10.6
Primary electricity	10.2	16.7	20.2	15.1	17.5	17.4
Bioenergy & waste	0.0	0.7	2.3	5.2	5.6	6.4
Total	**210.5**	**219.4**	**288.7**	**157.9**	**136.8**	**122.1**

Total production of primary fuels, when expressed in terms of their energy content, fell by 10.7% in 2012 compared to 2011. There were sharp falls in both oil and gas production due to a number of maintenance issues and longer term decline. Primary oil (crude oil and NGLs) accounted for 40% of total production, natural gas 32%, primary electricity (consisting of nuclear, wind and natural flow hydro) 14%, coal 9%, while bioenergy and waste accounted for the remaining 6.4 million tonnes of oil equivalent.

Total production increased rapidly between 1980 and 2000, mainly due to the growth of oil and gas. Production in 2000 was at record levels for natural gas, whilst in 1999 it was at record levels for overall energy and petroleum. Production has since been on the decline as a number of oil and gas fields become exhausted and also due to increased maintenance activity. Production is now 59% lower than its peak in 1999.

Inland energy consumption, 1980 to 2012



Million tonnes of oil equivalent

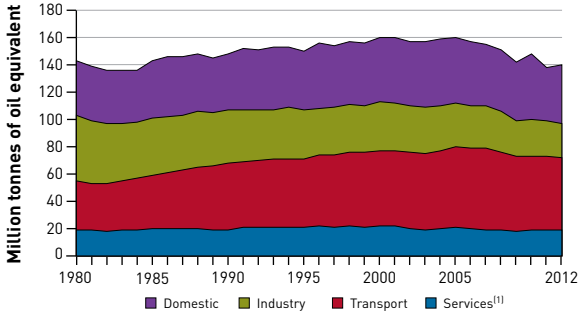
	1980	1990	2000	2010	2011	2012
Total inland primary energy consumption[1]:	**204.5**	**213.7**	**234.8**	**216.8**	**202.1**	**206.3**
Conversion losses:			53.8	50.2	48.1	49.4
Distribution losses	(62.1	66.4)				
and energy industry use:			20.7	18.2	17.4	16.7
Total final energy consumption:	**142.4**	**147.3**	**159.4**	**148.6**	**137.3**	**140.6**
Final consumption of which:						
Industry	48.3	38.7	35.5	26.9	25.9	25.2
Domestic sector	39.8	40.8	46.9	48.5	38.9	43.2
Transport	35.5	48.6	55.5	54.0	54.0	53.2
Services[2]	18.7	19.2	21.5	19.2	18.5	19.0
Temperature corrected total inland consumption:	**206.2**	**221.6**	**239.6**	**211.1**	**207.5**	**206.2**

(1) Excludes non-energy use
(2) Includes agriculture

Primary energy consumption was 2.1% higher in 2012 than in 2011. Consumption rose as a result of the colder weather in 2012, where the average daily temperature was 9.8°C, 1.0 degree C colder than in 2011. On a temperature corrected basis, primary energy consumption was 0.6% lower than in 2011, continuing the general fall seen since 2005. In the last 30 years or so, consumption of natural gas and primary electricity has risen considerably, whilst consumption of oil and coal have fallen. Energy industry use, losses during conversion to secondary fuels and losses during distribution accounted for 32% of inland energy consumption in 2012.

Overall energy

Final energy consumption, 1980 to 2012



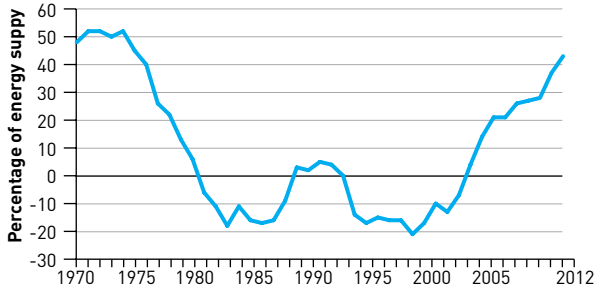
2011 **Million tonnes of oil equivalent**

	Industry	Domestic	Transport	Services[1]	Total
Coal & manufactured fuels	1.7	0.7	0.0	0.0	2.4
Gas	9.5	29.2	–	8.4	47.1
Oil	4.3	2.7	51.9	1.3	60.2
Electricity	8.4	9.9	0.4	8.7	27.3
Bioenergy and heat	1.3	0.7	1.0	0.7	3.6
Total	**25.2**	**43.2**	**53.2**	**19.0**	**140.6**

(1) Includes agriculture

Total final energy consumption (excluding non-energy use) was 2% higher in 2012 compared to 2011. By sector, final consumption fell by 3% in the industry sector and 1% in the transport sector but rose by 11% in the domestic sector and 3% in the service sector. The increase in domestic consumption was mainly due to the colder weather in 2012. In terms of fuel types, final consumption of coal and manufactured fuels fell by 3% and oil fell by 1%, however gas increased by 10% driven by more gas being consumed for domestic purpose. Final consumption of electricity remained unchanged, whilst bioenergy fell by 4%.

Import dependency, 1970 to 2012



Percentage

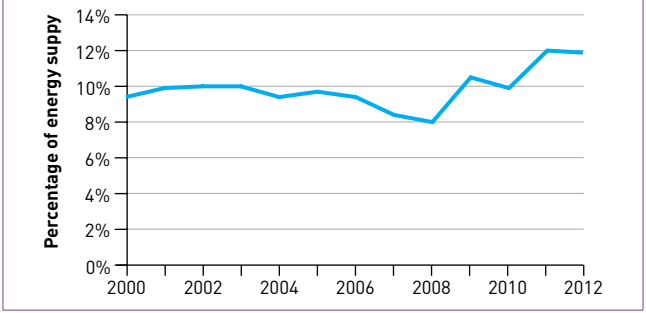
	2000	2008	2009	2010	2011	2012
Coal	39%	75%	78%	51%	63%	87%
Gas	-11%	26%	32%	38%	44%	47%
Oil	-55%	9%	7%	14%	27%	37%
Total	**-17%**	**26%**	**27%**	**28%**	**37%**	**43%**

In the 1970's the UK was a net importer of energy. Following development of oil and gas production in the North Sea, the UK became a net exporter of energy in 1981. Output fell back in the late 1980's following the Piper Alpha disaster, with the UK regaining a position as a net exporter in the mid 1990's. North Sea production peaked in 1999, and the UK returned to being an energy importer in 2004. The UK remains a net exporter of oil products, though the level of net imports of crude oil result in the UK being a net importer of oil. In 2012, 43% of energy used in the UK was imported, up sharply from the 2010 level due to increased maintenance activity that has restricted oil and gas output.

Latest comparable data from Eurostat, for 2011, show that the UK had the seventh lowest level of import dependency in the EU, behind Denmark, which remains a net exporter, Estonia, Romania, Czech Republic, Netherlands and Poland.

Overall energy

Proportion of UK energy supplied from low carbon sources, 2000 to 2012



Percentage

	2000	2008	2009	2010	2011	2012
Nuclear	8.4%	5.3%	7.2%	6.4%	7.7%	7.4%
Wind	0.0%	0.3%	0.4%	0.4%	0.7%	0.8%
Hydro	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%
Bioenergy	0.9%	1.8%	2.1%	2.3%	2.7%	2.9%
Transport fuels	0.0%	0.4%	0.5%	0.6%	0.6%	0.5%
Other	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%
Total	**9.4%**	**8.0%**	**10.5%**	**9.9%**	**12.0%**	**11.9%**

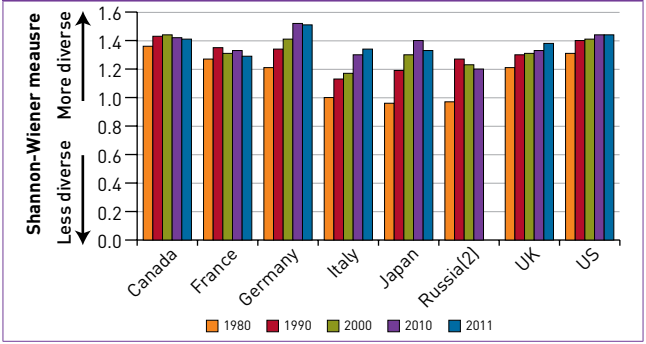
In 2012 the UK obtained 12% of its energy from low carbon sources, with two thirds of this from nuclear power. The second largest component of low carbon was bioenergy.

Energy supply from wind increased by 26%; with generation up by 46% for offshore and 17% for onshore. These increases were due to increased capacity, which were up by 63% for offshore and 27% for onshore. The rise in capacity more than offset the effect of reduced wind speeds in 2012, which fell from an average of 9.0 knots in 2011 to 8.3 knots in 2012.

The supply of nuclear heat, as shown above, was down by 3% in 2012; however, there was an increase in the thermal efficiency of the nuclear fleet which resulted in electricity generation increasing by 2%. In energy balances, the nuclear heat is shown, in line with internationally agreed definitions.

The UK had the 9th lowest share amongst EU countries of low carbon energy in 2011, the latest year of comparable data available, with the UK's share of supply being around half that of the EU average of 26%.

Diversity of primary energy supply in G8 countries[1], 1980 to 2011



(1) Based on the shares of five groups of fuels: coal, oil, gas, primary electricity and biomass.

Shannon-Weiner measure[3]

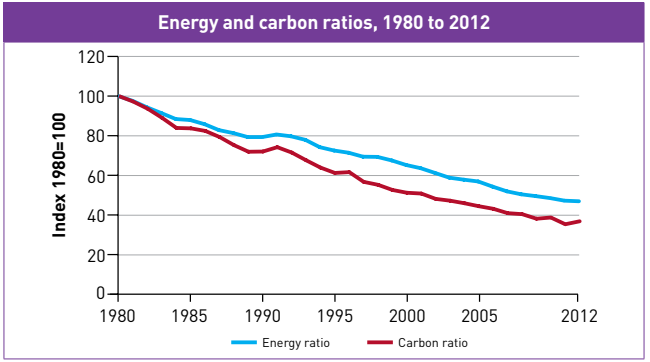
	1980	1990	2000	2010	2011
Canada	1.36	1.43	1.44	1.42	1.41
France	1.27	1.35	1.31	1.33	1.29
Germany	1.21	1.34	1.41	1.52	1.51
Italy	1.00	1.13	1.17	1.30	1.34
Japan	0.96	1.19	1.30	1.40	1.33
Russia[2]	0.97	1.27	1.23	1.20	n/a
UK	1.21	1.30	1.31	1.33	1.38
US	1.31	1.40	1.41	1.44	1.44

Source: DECC calculations based on International Energy Agency data.

(2) Russia data for 1980 to 1990 estimated from Former USSR data. The latest available data for Russia is for 2010.
(3) See definition on page 42.

All G8 countries have seen increases in the diversity of their primary energy supplies since 1980. However since 1990, diversity in Russia has been on the decline and in France the dominance of nuclear power has resulted in diversity being broadly stable. Of the G8 countries, Germany had the highest level of energy diversity in 2011, largely due to a relatively high level (9%) of contribution from bioenergy. In the UK, diversity increased slightly in 2011 from 2010 as the share of primary energy from gas dropped while shares from coal, oil, renewables and primary electricity increased

Overall energy



Index 1980=100

	1980	1990	2000	2010	2011	2012
Primary energy consumption[1]	100	107.5	116.1	102.8	101.2	100.8
Carbon dioxide emissions	100	97.7	91.3	82.1	75.7	79.1
GDP	100	135.6	178.1	212.1	214.2	214.8
Energy ratio	**100**	**79.3**	**65.2**	**48.4**	**47.2**	**46.9**
Carbon ratio	**100**	**71.8**	**51.2**	**38.7**	**35.3**	**36.8**

(1) Temperature corrected primary energy consumption.

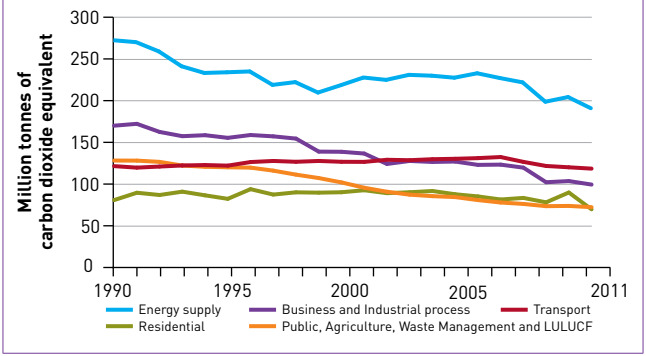
The energy ratio is calculated by dividing temperature corrected primary energy consumption by GDP at constant prices, with the carbon ratio similarly calculated by dividing carbon dioxide emissions by GDP. Both ratios have fallen steadily, with the energy ratio declining by around 2% per year, with the carbon ratio declining at a faster pace of around 3% per year.

The downward trends are due to a number of factors, with improvements in energy efficiency and the decline in the relative importance of energy intensive industries, affecting both ratios. The carbon ratio has been improved further by the increased use of more carbon efficient fuels.

The slight upward tick in the carbon ratio in 2012 is due, in the main, to temperatures, with energy consumption increasing in response to the colder weather. The switch to increased coal use for electricity generation from gas will also have increased this ratio.

Latest International Energy Authority data shows that the energy ratio is falling in all G8 countries. The UK is estimated to have the lowest energy ratio in the G8 (chart 5.7 of UK Energy Sector Indicators www.gov.uk/government/publications/uk-energy-sector-indicators-2012).

Greenhouse gas emissions by National Communication sector, 1990 to 2011



Million tonnes of carbon dioxide equivalent

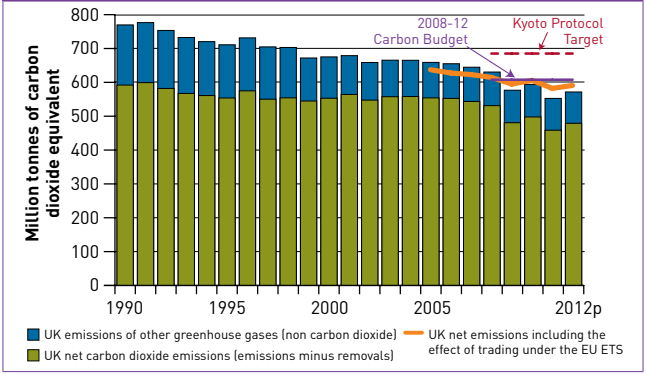
	1990	1995	2000	2005	2010	2011
Energy supply	272.4	234.0	218.5	227.5	204.3	190.9
Residential	80.8	82.3	90.2	87.8	89.9	69.7
Public, Agriculture, Waste Management and LULUCF	128.2	120.1	102.0	84.4	73.8	72.3
Business and Industrial process	170.0	155.4	138.7	127.0	103.6	99.4
Transport	121.5	122.1	126.7	130.3	120.1	118.5
Total greenhouse gas emissions	**772.9**	**713.8**	**675.9**	**657.0**	**591.7**	**550.7**

All figures are for the UK and Crown Dependencies only, and exclude Overseas Territories
Source: Ricardo-AEA, DECC (2011 final figures)

In 2011, UK greenhouse gas (GHG) emissions were estimated to be 550.7 million tonnes of carbon dioxide equivalent (MtCO2e), 29% lower than in 1990. The energy supply sector, at 190.9 $MtCO_2$, was the largest single source of greenhouse gas emissions in 2011, accounting for 35% of all GHG emissions. Between 1990 and 2011, emissions from this sector decreased by 30%. In 2011 greenhouse gas emissions from the transport sector, at 118.5 $MtCO_2$, accounted for 22% of all GHG emissions, compared to 16% in 1990. Emissions from the residential sector accounted for around 13% of all GHG emissions in 2011; and since 1990 emissions from this sector have decreased by 14%.

The overall decrease in emissions in 2011 has primarily resulted from a fall in residential gas use, combined with a reduction in demand for electricity accompanied by lower use of gas and greater use of nuclear power for electricity generation.

Greenhouse gas emissions and progress towards targets, 1990 to 2012



Million tonnes of carbon dioxide equivalent

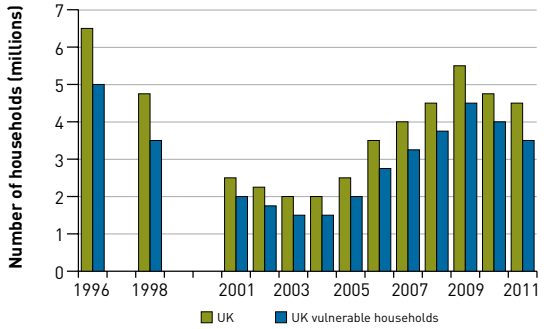
	1990	1995	2000	2005	2010	2012p
Carbon dioxide (net emissions)	592.0	553.8	553.1	554.1	497.8	479.1
Methane	98.9	85.0	64.8	48.3	42.8	–
Nitrous oxide	68.2	58.0	46.4	41.2	35.9	–
HFC	11.4	15.3	9.3	12.0	14.3	–
PFC	1.4	0.5	0.5	0.3	0.2	–
SF_6	1.0	1.2	1.8	1.1	0.7	–
Kyoto greenhouse gas basket	**769.7**	**711.0**	**675.2**	**659.0**	**594.0**	**571.6**

Kyoto basket total differs slightly from sum of individual pollutants above as the basket uses a narrower definition for the LULUCF sector, and includes emissions from UK Overseas Territories.
Source: Ricardo-AEA, DECC (2012 provisional figures)

In 2012, UK emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were provisionally estimated to be 571.6 million tonnes of carbon dioxide equivalent. This was 3.5% higher than the 2011 figure of 552.6 million tonnes and 26% lower than the 1990 figure of 769.7 million tonnes. In 2012, carbon dioxide emissions accounted for about 84% of total UK anthropogenic greenhouse gas emissions and are primarily created when fossil fuels are burned. Estimates based on energy production and consumption in 2012 indicate that carbon dioxide emissions were 4.5% higher than the previous year and 19% lower than in 1990.

The increase in CO_2 emissions between 2011 and 2012 resulted primarily from lower use of gas and greater use of coal for electricity generation at power stations, combined with an increase in residential gas use.

Number of households in fuel poverty – 10% measure of fuel poverty, UK



Last year, the Government published a consultation document setting out its proposals to adopt an alternative fuel poverty measure, based on the Low Income High Costs (LIHC) indicator recommended by Professor Hills in his independent review. The Government is considering responses to this consultation. As a result, both the 10 per cent measure of fuel poverty and the low income high costs measure were presented in this year's annual report on fuel poverty statistics www.gov.uk/government/publications/fuel-poverty-report-annual-report-on-statistics-2013.

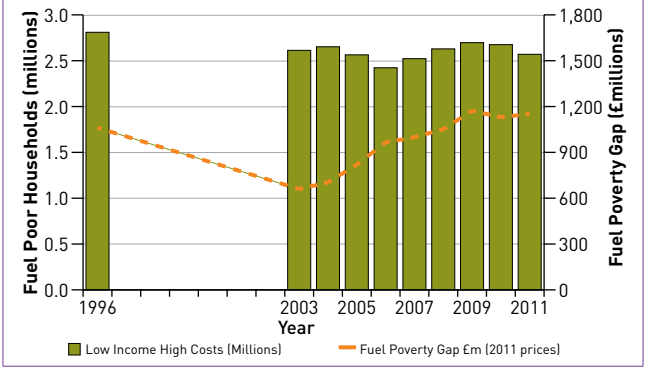
Under the 10% measure of fuel poverty, households are considered fuel poor if, in order to maintain a satisfactory heating regime, they need to spend more than 10% of their income on all household domestic fuel use. The number of fuel poor households in the UK followed a U-shaped trend between 1996 and 2009, falling from about 6½ million in 1996 to about 2 million in 2003, before rising to 5½ million in 2009. Since 2009, the number of households in fuel poverty has been falling. In 2010 the figure fell by approximately three quarters of a million, before falling by a further quarter of a million in 2011. The decrease in 2011 is mainly due to rises in income in the lower income groups, and improvements in energy efficiency. These outweighed the increase in fuel prices seen in 2011.

The number of vulnerable (those that contain children, elderly people, or those with disabilities or long-term illness) fuel poor households in the UK is estimated at 3.5 million in 2011. The 2011 level is a fall from 4 million vulnerable fuel poor households in 2010, and 1.5 million lower than in 1996.

Further analysis on fuel poverty under the 10 per cent measure can be found at the following link: www.gov.uk/government/organisations/department-of-energy-climate-change/series/fuel-poverty-statistics

Fuel poverty

Number of households in fuel poverty – Hills Low Income High Costs measure, England[1]



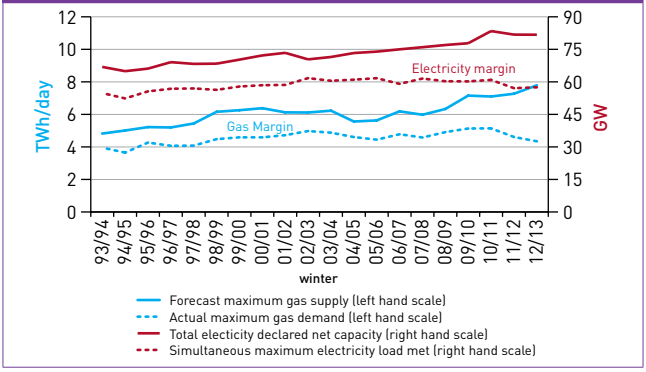
In the final report of his independent review of fuel poverty, Professor Hills proposed a measure of fuel poverty based on the low income high costs framework. Under this measure a household is considered fuel poor if it is both below the poverty line, and has higher than typical energy bills. Data on this measure is only available for England. For more information please see: www.gov.uk/government/organisations/department-of-energy-climate-change/series/fuel-poverty-statistics

The number of households with low income and high costs has remained relatively stable over time at just over 2½ million. In 2011, this number fell slightly, by 0.1 million. This is likely to reflect improvements in energy efficiency amongst the low income high costs group, relative to other groups, leading to reductions in their required energy spend.

The fuel poverty gap represents how much higher a fuel poor household's costs are than typical costs. This was £448 on average in 2011. The fuel poverty gaps of all fuel poor households can then be added together to get an aggregate gap. Generally speaking, the aggregate fuel poverty gap (shown above) tracks fuel prices closely. Between 2004 and 2009, when energy prices were increasing, the fuel poverty gap rose from £704 million to £1.17 billion (in 2011 prices). Prices fell in 2010, causing the aggregate gap to fall, but prices then rose again in 2011, leading to increases in both the aggregate and average gap.

1 Data on Hill's Low Income High Cost only available for England

Reliability – gas and electricity capacity margins – maximum supply and maximum demand 1993/94 to 2012/13



Source: National Grid and DECC

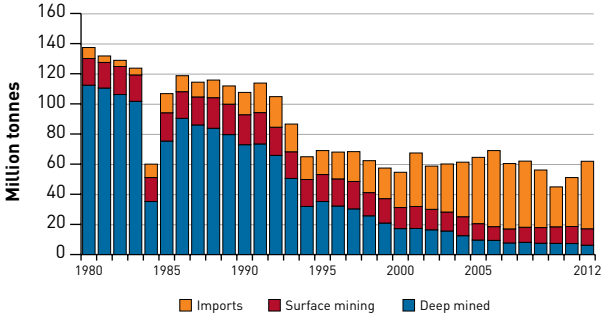
Whilst energy security is complex to measure, and subsequent charts on individual fuels provide fuller insight, this chart aims to provide a view on it, by looking at the difference between maximum supply and demand for gas and electricity.

Since 2007/08, the electricity capacity margin has increased year on year due to both a decrease in peak demand and an increase in capacity. However, in 2011/12, despite capacity falling by nearly 2 GW (largely due to the mothballing of a large CCGT station), the capacity margin increased to 43%. This was due to a fall in peak demand of nearly 4 GW, largely a result of a milder winter, but improved energy efficiency, the poorer economic climate and increased generation from distribution-system connected capacity also helped reduce the demand on the UK transmission networks. In 2012/13 the capacity margin fell, with a slight reduction in capacity and a slight increase in peak demand due to the colder winter.

Between 2007/08 and 2011/12, the gas capacity margin increased year on year, with the large increase seen between 2010/11 and 2011/12 when the margin rose from 38% to 58% brought about in the main by reduced demand. For this year, a slight increase in capacity – put against further reductions in gas demand due to a switch from gas to coal for power generation – has seen a further increase in the capacity margin.

Coal

Coal production and imports, 1980 to 2012

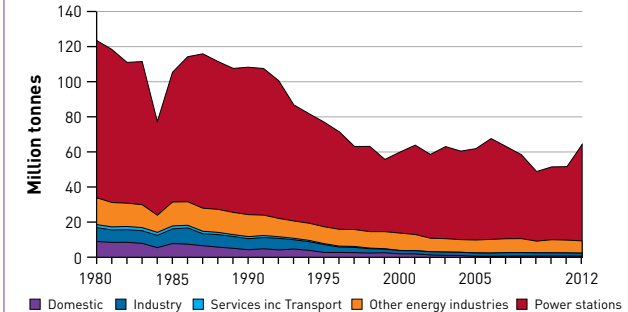


Million tonnes

	1980	1990	2000	2010	2011	2012
Deep mined	112.4	72.9	17.2	7.4	7.3	6.2
Surface mining (including slurry)	17.7	19.9	14.0	11.0	11.3	10.9
Total	**130.1**	**92.8**	**31.2**	**18.4**	**18.6**	**17.0**
Coal imports	7.3	14.8	23.4	26.5	32.5	44.8

In 2012 UK coal production fell to an all-time low of 17 million tonnes. Production was 8% lower in 2012 than in 2011; deep mined production fell by 16%, as a result of a number of operational and geological issues faced by several of the 10 deep-mined sites in operation at the end of 2012, whilst surface mine production (including a small amount of slurry) decreased by 4%. Imports started in 1970, and grew steadily to reach 20 million tonnes a year by the late 1990s; very rapid expansion of imports in 2001 meant that imports exceeded the level of UK production for the first time in that year. As annual levels of UK coal production continued to fall, imports continued to grow rapidly and in 2006 reached a new record of 51 million tonnes, representing 75 per cent of total UK coal supply. From this point on, imports fell, mainly as a result of less demand by electricity generators, rather than higher indigenous production. However, in 2012, due to a greater demand by electricity generators and with UK production at an all-time low, imports increased by 38 per cent (+12 million tonnes) from the levels reported in 2011 (33 million tonnes), but still 6 million tonnes lower than 2006.

Coal consumption, 1980 to 2012



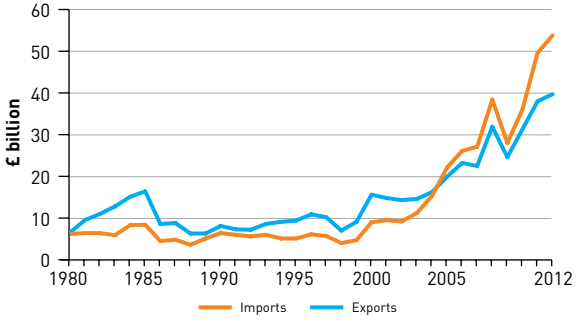
Million tonnes

	1980	1990	2000	2010	2011	2012
Power stations	89.6	84.0	46.9	41.5	41.8	54.9
Domestic	8.9	4.2	1.9	0.7	0.7	0.7
Industry	7.9	6.3	1.9	1.7	1.7	1.6
Services	1.8	1.2	0.08	0.06	0.05	0.04
Other energy industries	15.3	12.5	9.2	7.5	7.3	7.0
Total consumption	**123.5**	**108.3**	**59.9**	**51.4**	**51.6**	**64.2**

Coal use has remained significant in the electricity generation sector due to the fluctuations in gas prices, which allowed coal fired stations to generate electricity at a lower cost than some gas fired stations. In 2006, coal use by electricity generators peaked in the decade at 57 million tonnes, representing 85 per cent of total coal demand. Coal use gradually fell between 2007 and 2011 before increasing again in 2012 to 55 million tonnes, representing 86 per cent of total coal demand.

Petroleum

Foreign trade in crude oil and petroleum products, 1980 to 2012



Crude oil and petroleum products **£ billion**

	1980	1990	2000	2009	2010	2011	2012
Exports	6.5	8.1	15.6	24.6	31.3	38.0	39.7
Imports	6.2	6.4	9.0	28.0	36.0	49.6	53.8
Net Imports	**-0.3**	**-1.6**	**-6.6**	**3.4**	**4.7**	**11.5**	**14.2**

Source: Office for National Statistics

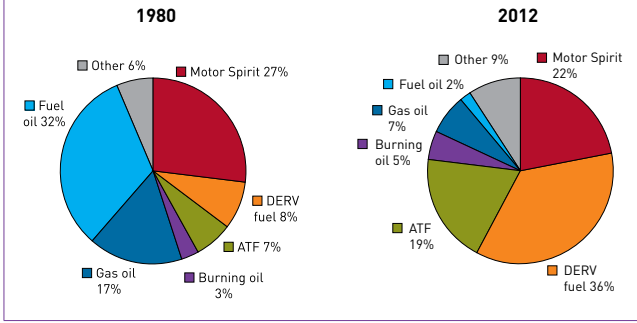
Crude oil and petroleum products **Million tonnes of oil equivalent**

	1980	1990	2000	2009	2010	2011	2012
Exports	58.4	80.4	123.9	77.5	74.6	67.2	66.7
Imports	60.4	69.2	74.8	83.8	85.9	88.2	94.6
Net Imports	**2.0**	**-11.2**	**-49.1**	**6.8**	**11.4**	**21.0**	**27.9**

Source: DECC

Since the first 'surplus' on oil trade (£0.3 billion) which occurred in 1980, oil trade has contributed more than £45 billion to the UK balance of payments. The largest 'surplus' of £8 billion in 1985 reflected high crude oil production and prices. In 1990 the 'surplus' fell from this peak due to lower prices but managed to peak again in 2000 (£6.6 billion). Since 2000 the surplus has steadily declined and in 2005 the UK became a net importer of oil (-£2.2 billion) though still an exporter of oil products. In 2012, the deficit was £14.2 billion, an increase of £2.6 billion from the previous year, as imports increased to offset the falls in UK production.

Demand by Product, 1980 to 2012



Million tonnes

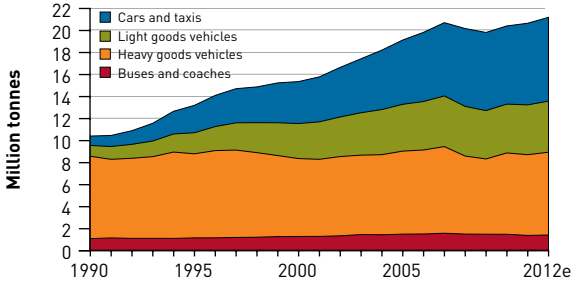
	1980	1990	2000	2010	2011	2012
Energy uses[1]						
Motor spirit (Petrol)	19.2	24.3	21.4	14.6	13.9	13.2
DERV fuel	5.9	10.7	15.6	20.7	21.0	21.5
Aviation turbine fuel	4.7	6.6	10.8	11.1	11.6	11.2
Burning oil	2.1	2.1	3.8	4.0	3.3	3.3
Gas oil	11.6	8.0	6.8	4.3	4.1	4.4
Fuel oil	22.7	14.0	3.3	2.0	1.5	1.1
Other	4.3	4.9	5.3	5.6	5.8	5.4
Total energy uses	**70.5**	**70.6**	**67.1**	**62.3**	**61.1**	**60.2**
Of which:						
Transport fuels	31.9	43.5	49.5	47.5	47.6	47.0
Industry	14.9	7.2	5.5	4.5	3.9	3.9
Energy Industry use	6.3	5.1	5.3	4.9	5.1	4.9
Non-energy uses	**7.0**	**9.2**	**10.1**	**7.7**	**7.2**	**6.5**
Total deliveries	**77.5**	**79.8**	**77.2**	**70.0**	**68.3**	**66.6**

(1) Energy uses includes uses for transformation (e.g. electricity generation) and energy industry own use (e.g. refinery fuels)

Demand for oil products has declined slightly since 1980 but the mix of products consumed has changed significantly. Transport now represents almost 80% of energy use of oil products, up from 45% in 1980. The main trends have been the declining use of fuel oil for electricity generation; a significant increase in aviation fuel; and the growth in road fuels (but with diesel growing as petrol use has declined since the early 1990s).

Petroleum

Demand for road fuels, 1990 to 2012



Total deliveries of diesel road fuel (DERV) have almost doubled in the past 20 years, this has been mainly caused by the increased use of DERV in cars, taxis and light goods vehicles.

Demand for DERV by Vehicle Type — **Thousand tonnes**

	1990	1995	2000	2010	2011	2012*
Car & taxi	856	2,486	3,813	7,099	7,413	7,606
Light goods vehicles	979	1,913	3,178	4,433	4,524	4,642
Heavy goods vehicles	7,480	7,635	7,073	7,388	7,328	7,519
Buses & coaches	1,047	1,115	1,245	1,441	1,339	1,374
Total	**10,653**	**13,448**	**15,623**	**20,740**	**20,991**	**21,538**

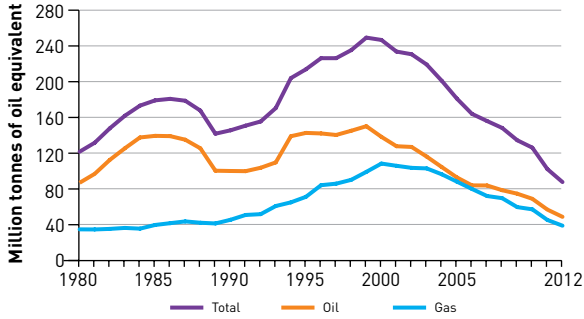
(*2012 estimated. Figures are derived from Ricardo-AEA modelling, total includes off road use of DERV.)

Demand for petrol decreased further in 2012, in line with an on-going trend that has seen the diesel share of road transport increase substantially over the last decade. Petrol is almost exclusively used in cars, motorcycles and taxis. Despite increasing dieselisation of the car fleet, the petrol consumed by cars and taxis is still just under double that of DERV.

Demand for Petrol — **Thousand tonnes**

	1990	1995	2000	2010	2011	2012
Total	24,310	21,950	21,403	14,602	13,895	13,231

UK Continental Shelf production, 1980 to 2012



Million tonnes of oil equivalent

	1980	1990	2000	2010	2011	2012
Oil	86.9	100.1	138.3	69.0	56.9	48.8
Gas	34.8	45.5	108.4	57.2	45.3	38.9
Total	**121.7**	**145.6**	**246.7**	**126.2**	**102.2**	**87.7**

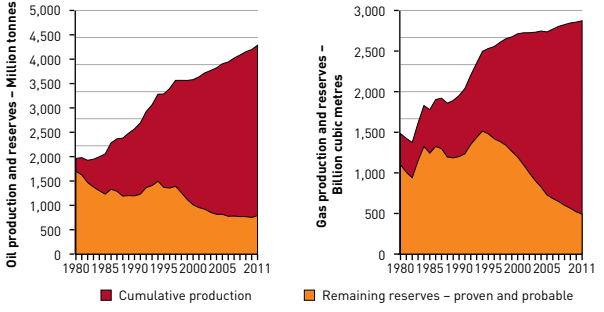
Total indigenous oil and gas production in 2012 recorded its lowest annual production volume since 1977; down 14% on 2011 and significantly above the long term decline rates in the last decade of around 8%.

Oil production in 2012 was 68% lower than the record 150.2 million tonnes in 1999, with output down 14% in 2012. This is due to significant maintenance issues at the large Buzzard field, St Fergus associated gas terminal and production constraints on the Elgin area.

As with oil, UK gas production is also declining as UK Continental Shelf reserves deplete. Gas production in 2012 was 14% lower than in 2011 and 64% lower than the record levels seen in 2000.

Oil and gas production

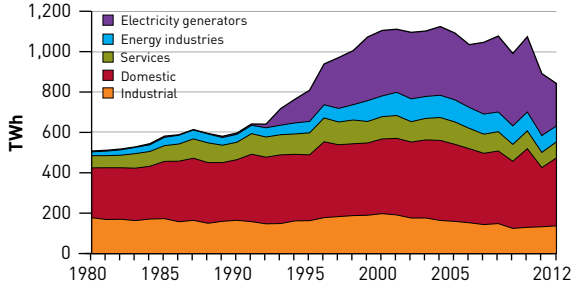
Oil and gas production and reserves



	1980	1990	2000	2009	2010	2011
Oil						**Million tonnes**
Cumulative production	263	1,374	2,570	3,383	3,446	3,498
Proven plus probable reserves	1,700	1,195	1,010	769	751	788
Estimated Ultimate Recovery	1,963	2,569	3,580	4,152	4,196	4,285
Gas						**Billion cubic metres**
Cumulative production	382	752	1,518	2,282	2,337	2,380
Proven plus probable reserves	1,101	1,200	1,195	564	520	493
Estimated Ultimate Recovery	1,483	1,952	2,713	2,846	2,857	2,872

The Estimated Ultimate Recovery (EUR) shows the cumulative total of production to the end of the years given and the total of proven plus probable reserves as estimated at the end of those years. For both oil and gas, EUR has grown substantially since 1980, increasing by 118% for oil and by 94% for gas. This reflects increased new discoveries and the effect of new technology allowing exploitation of resources that were previously regarded as uncommercial. Total cumulative production of oil and gas are 78% and 60% respectively greater than the estimated EUR in 1980. The EUR figures shown do not include estimates for Shale Gas.

Natural gas consumption, 1980 to 2012



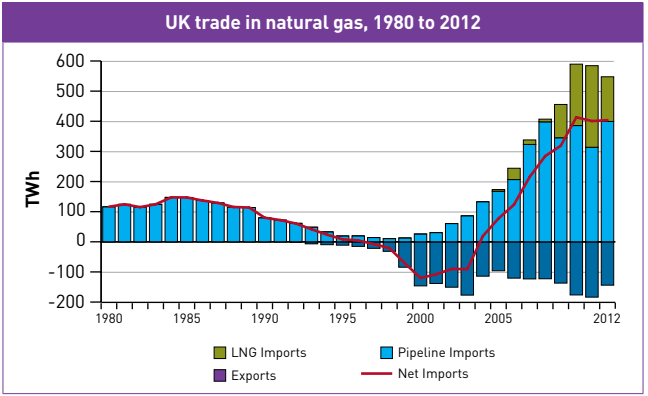
TWh

	1980	1990	2000	2010	2011	2012
Electricity generators	4.0	6.5	324.6	373.6	307.1	214.1
Energy Industries	19.1	39.2	102.1	92.1	81.8	77.8
Industry	177.5	164.6	198.5	123.1	120.0	116.9
Domestic	246.8	300.4	369.9	389.6	293.4	339.1
Services	60.4	86.4	110.5	98.6	91.9	97.6
Total	**507.8**	**597.0**	**1,105.5**	**1077.0**	**894.2**	**845.6**

From the early 1970s, following the expansion of UK production of natural gas, gas consumption grew rapidly reaching a record high in 2004 of 1,125 TWh. Since then, consumption has seen an overall decline, and in 2012 total gas consumption was 845.6 TWh, around 25% below its 2004 peak. These longer term trends are driven by commodity prices, energy efficiency and, for domestic use in particular, temperature.

Domestic demand in 2012 was high, up almost 16 per cent on 2011, reflecting colder temperatures, but gas demand for electricity generation fell by almost a third to 214 TWh largely as a result of coal replacing gas use due to high gas prices.

Natural gas



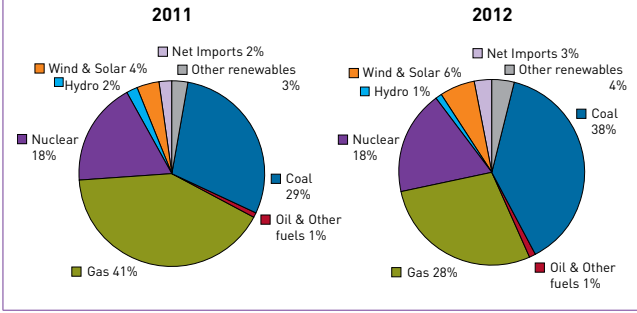
TWh

	1980	1990	2000	2010	2011	2012
Natural gas production	404.8	528.8	1,260.2	664.4	526.0	452.1
Imports	116.3	79.8	26.0	589.5	584.4	547.3
of which						
LNG	–	–	–	203.8	270.7	147.9
Exports	–	–	-146.3	-176.4	-183.7	-144.0
Net imports(+) or exports(-)	+116.3	+79.8	-120.3	+413.1	+400.7	+403.3

UK gas production peaked in 2000 and has since been declining. With declining production the UK has become increasingly reliant on gas imports to meet demand. Since 2000 net imports have steadily increased year on year, with the exception of 2011 which saw a 3 per cent decrease on the previous year's level. The recent fall in imports can be attributed to the reduced gas demand from electricity generators.

Imports of Liquefied Natural Gas (LNG) through the two terminals at Milford Haven (South Hook and Dragon) and via the Isle of Grain remain substantial, but their shares of total imports have dropped from 46 per cent in 2011 to 27 per cent in 2012. Demand for LNG on the global market remains strong but the UK has a diverse pipeline infrastructure (from Norway, the Netherland and Belgium) and the proportion delivered through each route will depend on global market conditions.

Electricity supplied by fuel type, 2011 and 2012



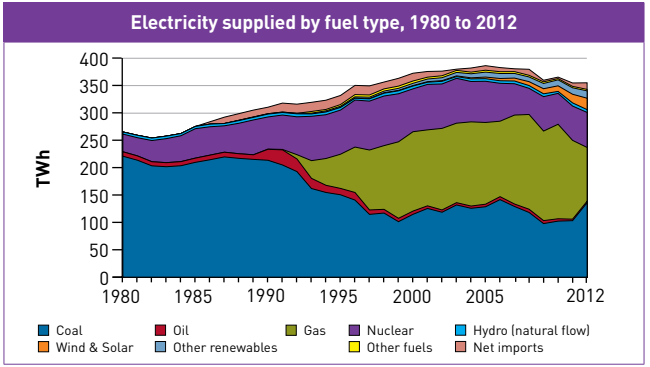
TWh

	1980	1990	2000	2010	2011	2012
Coal	220.8	213.4	114.7	102.3	103.1	135.9
Oil & other fuels[1]	7.9	19.2	7.3	5.6	4.4	4.4
Gas	–	0.4	138.7	172.5	143.8	98.2
Nuclear	32.3	58.7	78.3	56.4	62.7	63.9
Hydro	3.9	5.2	5.1	3.6	5.7	5.3
Wind & Solar	–	–	0.9	10.2	15.8	20.8
Other renewables	–	–	4.1	10.9	11.8	13.4
Net Imports	–	11.9	14.2	2.7	6.2	12.0
Total electricity available for supply	**264.9**	**308.7**	**371.4**	**364.1**	**353.4**	**353.9**

(1) Includes net supply from pumped storage

Between 2011 and 2012, supply of electricity rose slightly. Electricity supplied from gas decreased from 41% to 28%, as gas prices increased, particularly in relation to coal. Electricity supplied from coal rose from 29% to 38%, its highest level since 1996. Nuclear's share of supply was unchanged at 18%. Wind's share rose from 4% to 6% with much increased capacity. The share of net imports rose from 2% to 3%, due mainly to increased imports from the Netherlands (via the interconnector which came into full operation in April 2011). Further details on renewable electricity generation can be found on page 32.

Electricity



The mix of fuels used to generate electricity continues to evolve. Since 1990, the decline of coal and oil and the rise of gas and, in more recent years, renewables, have been the most marked features, but none of these fuels have followed a smooth path.

Supply from gas rose most markedly over this period from 0.4 TWh in 1990 to a peak of 173 TWh in 2008. After falling in 2009, as overall demand fell, gas rose again in 2010. It has fallen since due, due to high prices, and in 2012 fell to its lowest level since 1996.

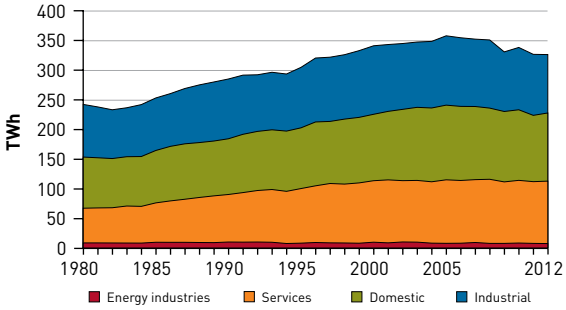
Supply from nuclear grew to a peak in 1998 before falling back, particularly during 2006 to 2008, as station closures and maintenance outages reduced supply, but recovered in 2009, before falling in 2010 due to further outages. In 2011, supply from nuclear rose again as stations returned from outages and in 2012 rose to its highest level for six years.

Coal recorded its highest level for ten years in 2006, making up for the reduced availability of nuclear stations and as a substitute for high priced gas. It fell back again in the next three years before rising again in 2010, particularly due to higher winter electricity demand. Again due to high gas prices, supply from coal rose in both 2011 and further still in 2012 to its highest level since 1996.

Supply from wind (including solar) has followed an upward trend since 2000, as capacity levels have increased each year. In 2012, wind supplied 20.8 TWh, a record level.

Total electricity available for supply rose continuously from 1997 to reach a peak in 2005. It has subsequently fallen, due to energy efficiency, economic and weather factors. After an increase in 2010, in part due to a particularly cold final quarter, supply fell once again in 2011, to its lowest level since 1997, as winter temperatures increased. In 2012 supply increased slightly, again partly due to a particularly cold final quarter.

Electricity consumption, 1980 to 2012



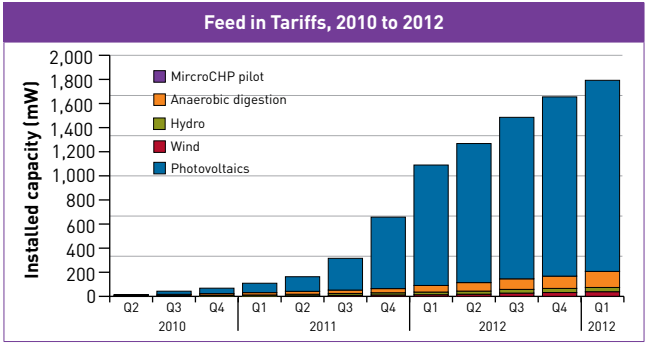
TWh

	1980	1990	2000	2010	2011	2012
Industrial	88.6	100.6	115.3	104.9	102.7	98.3
Domestic	86.1	93.8	111.8	118.8	111.6	114.7
Services	58.4	80.0	103.5	105.5	103.9	105.1
Energy industries	8.5	10.0	9.7	8.3	7.7	7.4
Total	**241.6**	**284.4**	**340.3**	**337.5**	**325.9**	**325.4**

Between 2000 and 2005, electricity consumption in the domestic sector grew by 12% to reach a record high of 125.7 TWh. However, between 2006 and 2008, mild winters and energy efficiency resulted in domestic consumption falling. Domestic consumption continued to fall in 2009 due to energy efficiency and adverse economic conditions, before rising slightly in 2010, mainly due to a very cold final quarter. With warmer first and final quarters, domestic consumption fell again in 2011, to its lowest level since 1999. Domestic consumption rose again in 2012, largely due to a cold final quarter.

Electricity consumption in the services sector has remained largely steady since 1999, with a peak in 2008. In recent years, it has remained broadly stable, with year on year changes reflecting economic and temperature conditions. Industrial consumption has varied more: it rose every year between 1994 and 2000, before falling between 2001 and 2003 but subsequent growth meant that in 2005 it had risen to a record high. Since then, however, industrial consumption has fallen, with 2009 showing a fall of 12.5% on 2008, to its lowest level since 1994. Increased energy efficiency within the industrial sector and, more recently, the economic downturn has contributed to a general fall seen over the past few years.

Feed in tariffs



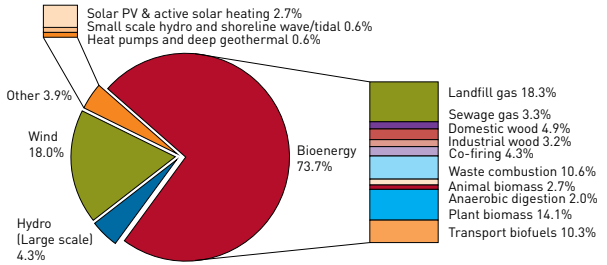
	2011			2012				2013
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
				Cumulative Installed capacity (MW)				
Micro CHP	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5
Anaerobic Digestion	5.0	8.8	11.6	13.7	17.7	26.8	31.4	38.2
Hydro	12.7	15.3	18.0	21.8	25.5	30.7	34.2	35.2
Wind	23.9	27.8	34.5	54.6	70.6	87.6	101.8	133.2
Photovoltaics	121.2	263.6	593.1	999.2	1,153.8	1,339.9	1,487.2	1,585.5
Total	**162.9**	**315.8**	**657.7**	**1,089.6**	**1,268.0**	**1,485.3**	**1,655.0**	**1,792.5**

Source: Extracted on 5th April 2013 from the Central Feed-in Tariffs Register (CFR), Ofgem. The register is a live database and is continually being updated and revised, so statistical reports extracted at a later date may not exactly match the totals presented here. Registration on the CFR represents the final stage in the Feed-in Tariff (FiTs) registration process. There will be installations eligible for FiT that have been installed but have not yet been registered onto CFR.

The Feed in Tariff scheme (FiTs) was introduced on 1st April 2010 and is a financial support scheme for eligible low-carbon electricity technologies, aimed at small-scale installations up to a maximum capacity of 5 Megawatts (MW).

At the end of quarter 1 of 2013, 1,792.5 MW of capacity (379,534 installations) was confirmed on FiTs, around 65 per cent the total installed capacity and just over 50 per cent the number of installations more than that confirmed at the end of quarter 1 2012. Of the 702.9 MW increase (131,866 installations) from the end of quarter 1 2013, 83 per cent (586.3 MW, 129,419 installations) were from solar photovoltaics, 11 per cent (78.6 MW, 2,231 installations) were from wind installations, with the other technologies (micro-CHP, anaerobic digestion and hydro) contributing to the remaining 5 per cent of this increase. At the end of quarter 1 2013, 68 per cent (1,218.3 MW) of the total installed capacity, was in the domestic sector, 1 percentage point lower than at the end of quarter 1 2012, when domestic sector capacity represented 69 per cent (755.3 MW) of total installed capacity.

Renewable energy sources, 2012



Total renewables used = 9,336 thousand tonnes of oil equivalent (ktoe)

Total use of renewables — **Thousand tonnes of oil equivalent**

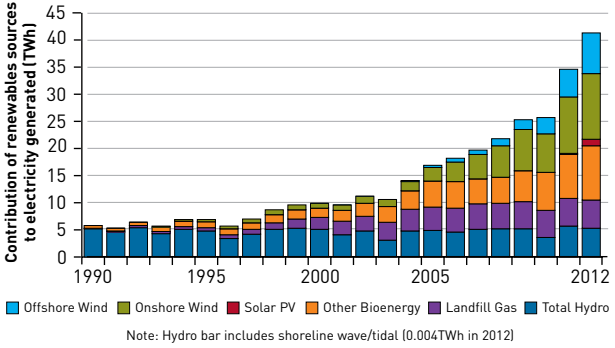
	1990	2000	2010	2011	2012
Solar PV and active solar heating	6	11	101	143	255
Wind	1	81	876	1,334	1,684
Hydro (large & small) and wave	448	437	308	489	455
Landfill gas	80	731	1,666	1,684	1,704
Sewage gas	138	169	286	317	308
Wood (domestic and industrial)	174	458	635	707	760
Municipal waste combustion	101	375	685	750	992
Heat pumps and deep geothermal	1	1	24	40	57
Transport biofuels	–	–	1,217	1,128	958
Cofiring	–	–	765	765	401
Other bioenergy	71.9	265	1,016	1,176	1,763
Total	**1,021**	**2,529**	**7,579**	**8,532**	**9,336**

In 2012, bioenergy accounted for 73.7% of renewable energy sources used, with most of the remainder coming from large-scale hydro and wind generation. Wind (with an 18.0% share) accounted for around four times the shares of large scale hydro (4.3%) in primary input terms.

Of the 9.3 million tonnes of oil equivalent of primary energy use accounted for by renewables, 7.0 million tonnes was used to generate electricity, 1.4 million tonnes was used to generate heat, and 1.0 million tonnes was used for road transport. Renewable energy use grew by 9% between 2011 and 2012 and is now over three and a half times the level it was at in 2000.

Renewables

Electricity generation from renewable sources since 1990



Note: Hydro bar includes shoreline wave/tidal (0.004TWh in 2012)

Renewable Electricity Generation, TWh

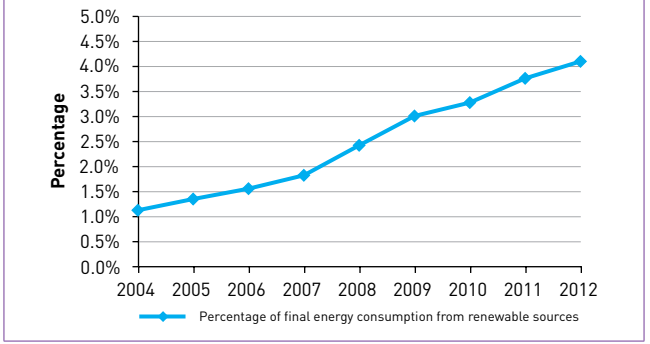
	1990	2000	2010	2011	2012
Onshore wind	–	0.9	7.1	10.4	12.1
Offshore wind	–	–	3.0	5.1	7.5
Solar PV	–	–	–	0.2	1.2
Hydro	5.2	5.1	3.6	5.7	5.3
Landfill Gas	0.1	2.2	5.0	5.1	5.2
Other Bioenergy	0.5	1.7	7.0	8.1	10.0
Total Renewables	**5.8**	**9.9**	**25.8**	**34.6**	**41.3**

At 41.3 TWh, renewables accounted for 11.3% of electricity generated in the UK during 2012, 1.9 percentage points higher than during 2011. Overall generation from renewables increased by 19% between 2011 and 2012. Generation from solar photovoltaics was almost 4 times higher than in 2011. Wind generation also saw large increases – offshore wind up 46 per cent, and onshore wind up 17 per cent; hydro generation fell by 7 per cent.

A number of weather factors had a major impact on renewable generation during 2012; average rainfall levels in hydro areas were 24% lower than in 2011, but at a similar level to the average between 2002 and 2011; average wind speeds were 0.8 knots lower than in 2011, and 0.6 knots lower than the 10 year average.

When taking into account only renewable sources eligible under the Renewables Obligation, they accounted for 10.6% of UK electricity sales, up from 9.4% in 2011.

UK progress against 2009 EU Renewable Energy Directive



Progress against the 2009 Renewable Energy Directive

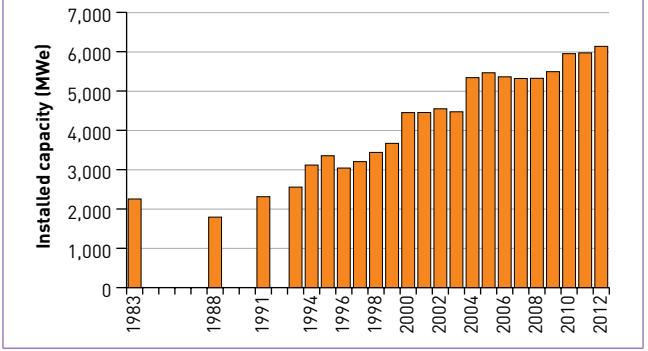
	2007	2008	2009	2010	2011	2012
Percentage of electricity from renewable sources	4.8	5.4	6.6	7.4	8.8	10.8
Percentage of heating and cooling from renewable sources	1.1	1.4	1.7	1.8	2.3	2.3
Percentage of transport energy from renewable sources	0.9	2.1	2.6	3.1	2.4	3.2
Overall renewable consumption as a percentage of capped gross final energy consumption using net calorific values	1.8	2.4	3.0	3.3	3.8	4.1

In March 2007, the European Council agreed to a common strategy for energy security and tackling climate change. An element of this was establishing a target of 20% of the EU's energy to come from renewable sources. In 2009 a new Renewable Energy Directive was implemented on this basis and resulted in agreement of country "shares" of this target. For the UK, by 2020, 15% of **final energy consumption** – calculated on a net calorific basis, and with a cap on fuel used for air transport – should be accounted for by energy from renewable sources.

Provisionally in the UK during 2012, 4.1% of final energy consumption was from renewable sources; this is up from 3.8% in 2011 and 3.3% in 2010. The agreed Eurostat methodology used for this calculation measures energy based on a net calorific value basis, as opposed to a gross basis that is generally used in presenting data in UK Energy in Brief and other UK Energy statistics publications.

Combined heat and power

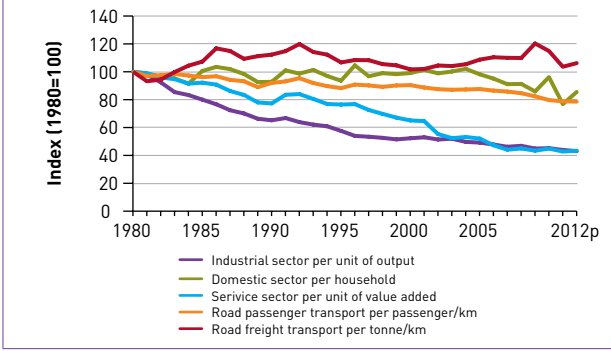
Combined heat and power, 1983 to 2012



	1995	2000	2010	2011	2012
CHP electrical capacity (MWe)	3,354	4,451	5,950	5,970	6,136
CHP electrical generation (GWh)	14,778	25,245	26,768	22,766	23,360
CHP heat generation (GWh)	56,833	54,877	48,267	48,183	49,134
Number of CHP sites					
Less than 100 kWe	617	555	395	491	531
100 kWe to 999 kWe	396	532	775	987	1,072
1 MWe to 9.9 MWe	139	182	221	248	257
10 MWe and greater	68	70	69	68	69
Total	**1,220**	**1,339**	**1,460**	**1,794**	**1,929**

In 2012, CHP electrical capacity increased slightly on the 2011 level. Electricity generation in 2012 was 2.6% higher than in 2011, while heat generation was 2% higher. The fall in CHP electricity generation between 2010 and 2011 was due to a change in the way 'Good Quality' CHP was defined. Around 28% of UK CHP installations are small schemes with an electrical capacity of less than 100 kWe, but account for less than 1% of the total CHP installed electrical capacity. Schemes larger than 10 MWe account for 82% of the total CHP installed electrical capacity. In 2012, around 6.4% of the total electricity generated in the UK came from CHP plants.

Energy intensity, 1980 to 2012



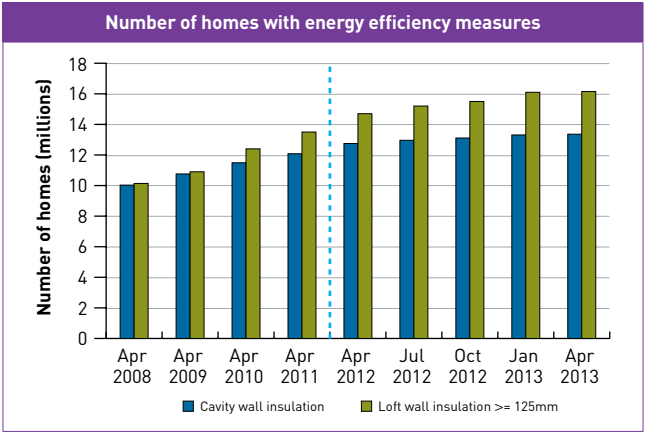
Tonnes of oil equivalent

	1980	1990	2000	2010	2011	2012p
Industrial energy consumption per million units of GVA	295.7	192.9	154.8	133.7	129.9	127.6
Domestic energy consumption per household	1.9	1.8	1.9	1.9	1.5	1.7
Service sector energy consumption per million units of GVA	46.4	35.8	30.2	20.8	19.9	20.1
Road passenger energy consumption per million passenger-kilometres*	45.6	41.9	41.2	36.3	35.9	35.8
Road freight energy consumption per million freight-kilometres*	77.2	86.7	78.5	88.7	80.0	82.0

* DECC estimates for 2012

Energy consumption per unit of output, known as energy intensity, gives a broad indication of how efficiently energy is being used over time. Changes in energy intensity can occur for a number of reasons: process change, technological change and structural change (in the case of industry and the service sector) as well as efficiency change. The largest falls in energy intensity over the last thirty years have occurred in the industrial sector mainly due to structural change in the period before 2000, and in the service sector due to general energy efficiency improvements. The rise in domestic consumption in 2012 was due to the cold weather when the average temperature was 1.0 degrees below the 2011 average.

Energy efficiency



Insulated homes in Great Britain (Thousands)

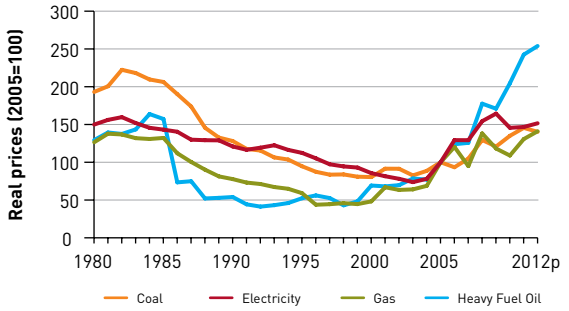
	Apr 2009	Apr 2010	Apr 2011	Apr 2012	Apr 2013
Cavity wall insulation	10,760	11,490	12,090	12,750	13,360
Loft insulation >= 125mm	10,930	12,450	13,540	14,770	16,160

Cost effective methods of improving energy efficiency in homes are to install cavity wall and loft insulation where these measures are practical. Building Regulations require new homes to reach thermal efficiency standards which would typically be met by installing these measures. In addition, existing homes have had these measures retrofitted through Government schemes or through a DIY loft insulation. These data show the change in the number of insulated homes as a result of new build and retro fitting insulation.

The number of homes with cavity wall insulation has increased by 33 per cent between April 2008 and April 2013 such that 13.4 million, of the 19.1 million homes with cavities are insulated.

The number of homes with loft insulation, of a depth of at least 125mm, has increased by 59 per cent between April 2008 and April 2013 meaning that 16.2 million, of the 23.7 million homes with lofts are insulated to this level.

Fuel price indices for the industrial sector, 1980 to 2012



Real prices, 2005 = 100

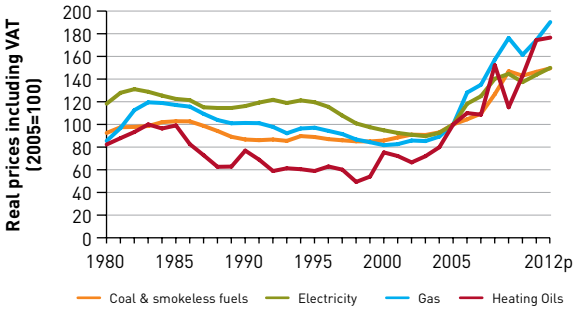
	1980	1990	2000	2010	2011	2012
Coal	193.1	128.1	80.4	135.0	145.5	140.3
Electricity	149.9	120.9	85.6	145.6	146.7	151.6
Gas	126.5	77.7	48.2	108.9	130.7	141.0
Heavy fuel oil	129.4	54.0	69.2	204.6	242.5	253.9
Industrial prices	141.2	103.5	75.1	150.8	164.3	171.6

Includes the Climate Change Levy that came into effect in April 2001.

Compared to 2011, industrial coal prices decreased in 2012 by 4% in real terms, but were 54% higher than 10 years earlier in 2002. Electricity prices increased in 2012 by 3% in real terms, and were 94% higher than 10 years earlier in 2002. Gas prices increased by 8% in 2012, but were 122% higher than in 2002. Heavy fuel oil prices increased by 5% in the year to 2012, and were over two and a half times as high as in 2002. The rise in heavy fuel oil prices is due to the sustained high price of crude oil since 2010.

Prices

Fuel price indices for the domestic sector, 1980 to 2012



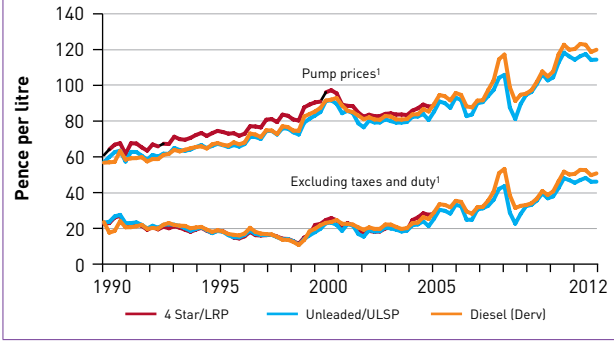
Real prices including VAT, 2005 = 100

	1980	1990	2000	2010	2011	2012
Coal and smokeless fuels.	92.5	86.7	85.8	143.0	146.4	149.5
Electricity	118.3	116.2	94.8	137.3	143.8	149.9
Gas	85.5	101.3	81.7	161.4	174.4	190.3
Heating oils	82.3	76.9	75.3	142.9	174.4	176.6
Domestic prices (fuel & light)	**101.7**	**105.1**	**86.7**	**145.4**	**157.1**	**166.7**

Source: Retail Price Index, Office for National Statistics

Compared to 2011, total domestic energy prices in 2012 increased in real terms by 6%. Within the overall movement, heating oils increased by 1%, electricity prices increased by 4%, and gas prices increased by 9%. Between 2002 and 2012, real prices for domestic energy have risen by 92%, with the real price of electricity increasing by 65% and the real price of heating oil and gas increasing by 165% and 122% respectively.

Petrol and diesel prices, 1990 to 2012



(1) Deflated using GDP (market prices) deflator (2005 = 100).

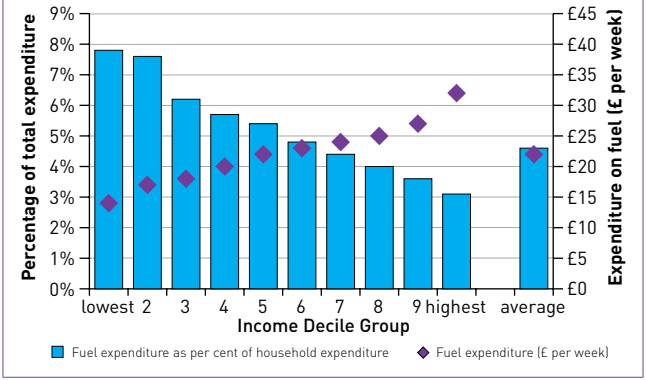
Current retail prices **Pence/litre**

	Unleaded	Diesel
1990	42.0	40.5
1995	53.8	54.2
2000	79.9	81.3
2005	86.8	90.9
2006	91.3	95.2
2007	94.2	96.9
2008	107.1	117.5
2009	99.3	103.9
2010	116.9	119.3
2011	133.3	138.7
2012	135.4	141.8

In cash terms ULSP cost 2.1 pence more in 2012 than in 2011, whilst diesel cost 3.1 pence per litre more. These increases reflect the price of crude oil, which rose above $100 per barrel early in 2011 and stayed between $100 – $120 per barrel throughout 2011 and 2012, apart from June 2012, when prices briefly dipped below $100 per barrel. Crude oil prices fell back below $100 a barrel in April 2013, with falls in both petrol and diesel prices, but have since risen above $100 per barrel once more.

In real terms the price of Ultra Low Sulphur Petrol (ULSP) was broadly unchanged between 2011 and 2012, whilst the price of diesel rose by 1%.

Fuel expenditure of households[1], 2011



Fuel expenditure as a percentage of total household expenditure, 1980 to 2011

Fuel type	1980	1990	2000/01	2004/05	2009	2010	2011
Gas	1.6%	1.7%	1.2%	1.3%	2.1%	2.0%	2.0%
Electricity	2.7%	2.3%	1.6%	1.4%	2.2%	2.1%	2.1%
Coal and Coke	0.9%	0.3%	} 0.3%	0.2%	0.3%	0.4%	0.4%
Heating oil	0.4%	0.2%					
Total	5.6%	4.5%	3.1%	2.9%	4.7%	4.5%	4.6%

Source: Living Costs and Food Survey 2011, Office for National Statistics

(1) Includes non-consuming households

Between 2004/05 and 2009, the proportion of household expenditure spent on fuel increased from 2.9 per cent to 4.7 per cent. Since 2009, it has remained fairly steady. Households in the lowest income decile group (i.e. the 10% of households with the lowest income) spend less than half as much on domestic fuel per week compared to households in the highest income decile group (£14 compared to £32 per week). However, when comparing expenditure on domestic fuels as a proportion of total expenditure, then those in the lowest income decile group spend more (7.8%) than those in the highest income decile group (3.1%).

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In addition, there is a general enquiry number, which the deaf and hard of hearing can use to contact DECC: 0300 060 4000

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Conversion factors and definitions

To convert from the units on the left hand side to the units across the top multiply by the value in the table.

		to:	**Thousand toe**	**TJ**	**GWh**	**Million therms**
			multiply by			
from:	**Thousand toe**		1	41.868	11.630	0.39683
	TJ		0.023885	1	0.27778	0.0094778
	GWh		0.085985	3.6000	1	0.034121
	Million therms		2.5200	105.51	29.307	1

Data relating to the energy content of fuels are on a gross calorific value basis.

Prices are presented in real terms i.e. the effect of inflation has been removed by adjusting each series using the GDP deflator.

The symbol '-' is used in the tables where the figure is zero or less than half the final digit shown, and '..' is used to indicate 'not available'.

The Department of Energy and Climate Change is the source of all data except where stated.

All data within this publication are classified as National Statistics except for those on page 36 which are classified as experimental official statistics.

All figures are for the United Kingdom, except for pages 11 and 16.

Shannon-Wiener measure of diversity

The Shannon-Wiener measure of diversity shows how the diversity of a particular market is changing over time. It is the sum of the product of the market share multiplied by the natural log of the market share for each fuel in the market, e.g.

Shannon-Wiener measure = $\sum_i \rho_i \ln(\rho_i)$,

where p_i represents the proportion of the total supplied by fuel *i*.

The minimum value that the Shannon-Wiener measure can produce is zero which occurs when only one fuel is available for use and in which case, there would be no diversity of supply. Five fuels have been used to calculate the Shannon-Wiener measure of diversity for the primary energy supply. If each fuel making up the energy supply are in equal proportion, the maximum value of the Shannon-Wiener measure, showing total equality, is 1.61.

The Department of Energy and Climate Change (DECC) also produces the following statistics publications:

The **Digest of United Kingdom Energy Statistics** is the annual energy statistics publication of DECC. With extensive tables, charts and commentary covering all the major aspects of energy, it provides a detailed and comprehensive picture of the last three years and a detailed picture for the last five years. It includes detailed information on the production and consumption of individual fuels and of energy as a whole. The 2013 edition was published by The Stationery Office on 25 July 2013 and costs £65. It can also be accessed on the Internet at: www.gov.uk/government/organisations/department-of-energy-climate-change/series/digest-of-uk-energy-statistics-dukes

The **Energy Flow Chart** is an annual publication illustrating the flow of primary fuels from home production and imports to their eventual final uses. They are shown in their original state and after being converted into different kinds of energy by the secondary fuel producers. The 2013 edition of the chart, published on 25 July 2013, shows the flows for 2012 and can be accessed on the Internet at: www.gov.uk/government/organisations/department-of-energy-climate-change/series/energy-flow-charts

Free copies are available from the Publications Orderline 0845 504 9188.

Energy Trends is a quarterly publication of statistics on energy in the United Kingdom. It includes tables, charts and commentary covering all major aspects of energy. It provides a comprehensive picture of energy production and use, to allow readers to monitor trends during the year. It is available on annual subscription together with Quarterly Energy Prices, or material can be accessed on the Internet at: www.gov.uk/government/organisations/department-of-energy-climate-change/series/energy-trends

Single copies are available from the Publications Orderline 0845 504 9188 priced £6. Monthly updates to tables in Energy Trends are split by fuel source and can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics

Quarterly Energy Prices is a quarterly publication that contains tables, charts and commentary covering energy prices, to domestic and industrial consumers, for all the major fuels. It also presents comparisons of fuel prices in the European Union and G7 countries. It is available on annual subscription together with Energy Trends, or material can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/quarterly-energy-prices

References

Single copies are available from the Publications Orderline 0845 504 9188 priced £8.

UK Energy Sector Indicators is designed to show the extent to which secure, diverse and sustainable supplies of energy to UK businesses and consumers, at competitive prices, are ensured. It can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/uk-energy-sector-indicators

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 since the 1970s, with a particular focus on trends since 1990. The information is presented in five sections covering overall energy consumption and energy consumption in the transport, domestic, industrial and service sectors. It can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/energy-consumption-in-the-uk

Sub-National Energy Consumption statistics are produced by DECC to emphasise the importance of local and regional decision making for energy policy in delivering a number of national energy policy objectives. Data can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics

DECC has constructed a **National Energy Efficiency Data-framework (NEED)** to enable detailed statistical analysis of energy efficiency. The data framework matches the gas and electricity consumption data collected for DECC sub-national energy consumption statistics and records of energy efficiency measures in the Homes Energy Efficiency Database (HEED) run by the Energy Saving Trust (EST). Data can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/national-energy-efficiency-data-need-framework

Fuel Poverty Statistics are produced by DECC to support the UK Fuel Poverty Strategy. Data can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/fuel-poverty-statistics

UK Greenhouse Gas Emissions statistics are produced by DECC to show progress against the UK's goals, both international and domestic, for reducing greenhouse gas emissions. Data can be accessed on the Internet at:
www.gov.uk/government/organisations/department-of-energy-climate-change/series/uk-greenhouse-gas-emissions

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