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Explanatory notes are to be found inside the back cover

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The cover illustration used for Energy Trends and other DECC energy statistics publications is from a photograph by David Askew. It was a winning entry in the DTI News Photographic Competition in 2002.

Introduction

Energy Trends and Quarterly Energy Prices are produced by the Department of Energy and Climate Change (DECC) on a quarterly basis. Both periodicals are published concurrently in June, September, December and March. The June editions cover the first quarter of the current year.

Energy Trends includes information on energy as a whole and by individual fuels. The text and charts provide an analysis of the data in the tables. The tables are mainly in commodity balance format, as used in the annual Digest of UK Energy Statistics. The 2008 edition of the Digest was published on 31 July 2008. Printed and bound copies of the 2008 Digest can be obtained from The Stationery Office and an electronic version is available on the Internet at:
www.berr.gov.uk/energy/statistics/publications/dukes/page45537.html

The balance format shows the flow of a commodity from its sources of supply, through to its final use. The articles provide in-depth information on current issues within the energy sector.

The text and tables included in this publication represent a snapshot of the information available at the time of publication. However, the data collection systems operated by DECC, which produce this information, are in constant operation. New data are continually received and revisions to historic data made. To ensure that those who use the statistics have access to the most up-to-date information, revised data will be made available as soon as possible, via the electronic versions of these tables. The electronic versions are available free of charge on the Internet. In addition to quarterly tables, the main monthly tables that were published in the period up to May 2001 when Energy Trends was produced monthly, continue to be updated and are also available on the Internet. Both sets of tables are available on the Internet at:
www.berr.gov.uk/energy/statistics/source/index.html

Annual data for 2008 included within this edition is on a provisional basis. New data are continually received and revisions to previous data made. Finalised figures for 2008 will be published on the 30 July 2009 in the annual Digest of UK Energy Statistics and an electronic version will be available on the Internet at: www.berr.gov.uk/energy/statistics/publications/index.html

Energy Trends does not contain information on Foreign Trade, Temperatures, Wind Speeds and Prices. Foreign Trade, Temperatures and Wind Speeds tables are, however, available on the Internet at www.berr.gov.uk/energy/statistics/source/index.html. Information on Prices can be found in the Quarterly Energy Prices publication and on the Internet at:
www.berr.gov.uk/energy/statistics/source/prices/page47818.html

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The main points for the first quarter of 2009:

- Total energy production was 4 per cent lower than in the first quarter of 2008.

- Oil production fell by 2½ per cent compared to the first quarter of 2008. Production from older established fields continued to decline but this decline was partially offset by eight new fields.

- Natural gas production was 12 per cent lower compared with the first quarter of 2008. Gas imports and exports increased by 7½ and 62 per cent respectively. The UK was a net importer of gas in the first quarter of 2009 by 105.5 TWh compared with 109.2 TWh in the first quarter of 2008.

- Coal production was 10 per cent higher than a year earlier. Coal imports were 13 per cent higher than a year earlier. Generators' demand for coal was up 10 per cent.

- Total primary energy consumption for energy uses fell by 4 per cent in the first quarter of 2009 compared with the same period of 2008. When adjusted to take account of weather differences between 2008 and 2009, primary energy consumption fell by 7 per cent. The average temperature in the first quarter of 2009 was 4.9 degrees, 0.2 degrees below the long term average of 5.0 degrees between 1971 and 2000, and 1.1 degrees below that recorded in the first quarter of 2008.

- Final energy consumption fell by 4½ per cent between the first quarter of 2008 and the first quarter of 2009, with falls in all sectors.

- Industry demand has fallen sharply compared to a year earlier, with falls in the use of both gas and electricity of over 5 per cent. In particular energy demand from the iron and steel industry has contracted sharply.

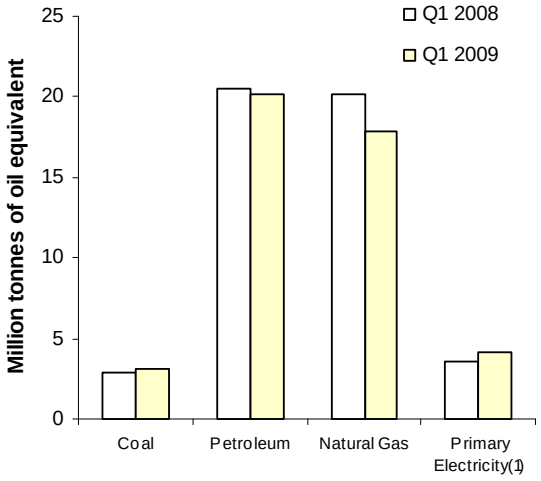
- Coal supplied 12 per cent more electricity than in the same period a year earlier, while gas supplied 22 per cent less. Nuclear supplied 17½ per cent more. Net imports of electricity were a quarter of the level of a year earlier.

- Gas demand was 9 per cent lower than a year earlier, with a sharp fall in gas used for electricity generation. There was a fall in domestic consumption, despite the colder weather particularly in January and February. A contributory factor to this fall in demand is likely to have been domestic gas prices which were up by around a third in the first quarter of 2009 compared to a year earlier.

- Electricity consumption was 5 per cent lower than in the first quarter of 2008.

Section 1 - Total Energy

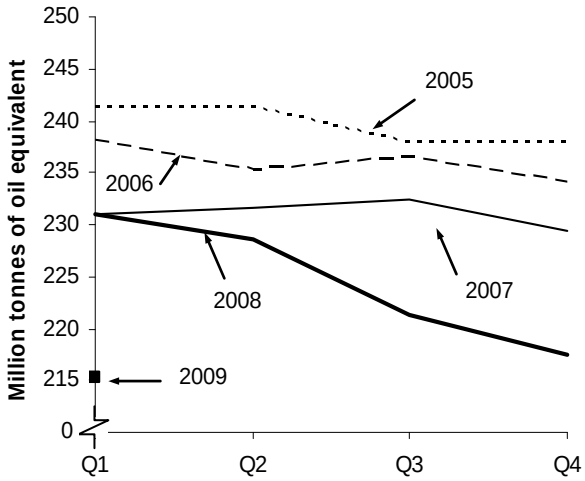
Chart 1.1 Production of indigenous primary fuels



(1) Nuclear, wind and natural flow hydro electricity.

- Total production in the first quarter of 2009 at 45.3 million tonnes of oil equivalent was 3.9 per cent lower than in the first quarter of 2008.
- Production of natural gas fell by 11.8 per cent while production of petroleum was 1.4 per cent lower than in the first quarter of 2008.
- Primary electricity output in the first quarter of 2009 was 16.3 per cent higher than in the first quarter of 2008 within which nuclear electricity output was 17.6 per cent higher and output from wind and natural flow hydro was 3.8 per cent higher than the same period of 2008.
- In the first quarter of 2009 production of coal and other solid fuels was 7.9 per cent higher than the corresponding period of 2008.

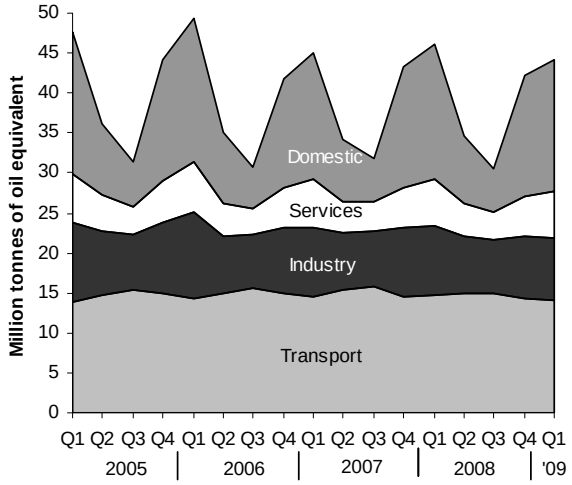
Chart 1.2 Total inland consumption (primary fuel input basis)[(1)]



(1) Seasonally adjusted and temperature corrected annual rates.

- Total inland consumption on a primary fuel input basis was 215.2 million tonnes of oil equivalent in the first quarter of 2009 (temperature corrected, seasonally adjusted annualised rate), 6.8 per cent lower than in the first quarter of 2008. The average temperature in this period of 2009 was 1.1 degrees Celsius cooler than the same time period a year earlier.
- Between the first quarter of 2008 and the first quarter of 2009 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption increased by 3.7 per cent.
- Also on a seasonally adjusted and temperature corrected basis, oil consumption fell by 7.0 per cent between quarter one of 2008 and quarter one of 2009.
- On the same basis, natural gas consumption fell by 13.6 per cent between quarter one of 2008 and quarter one of 2009.

Chart 1.3 Final energy consumption by user



- Total final energy consumption fell by 4.5 per cent between the first quarter of 2008 and the first quarter in 2009.
- Service sector energy consumption fell by 5.1 per cent.
- Domestic sector energy consumption fell by 2.2 per cent, despite the relatively colder weather in quarter one of 2009 compared to that of a year earlier.
- Transport energy sector consumption fell by 5.3 per cent.
- Industrial energy consumption fell by 7.1 per cent.

Background

Relevant tables

1.1: Indigenous production of primary fuels ..... Page 34
1.2: Inland energy consumption: primary fuel input basis ..... Page 35
1.3: Supply and use of fuels ..... Pages 36-37

Production

Indigenous production of energy was 5.1 per cent lower in 2008 than in 2007, continuing a year on year decline for each year since 2000. Coal and other solid fuel production was higher by 5.2 per cent, nuclear output fell by 16.7 per cent, gas production fell by 3.2 per cent and petroleum production fell by 6.6 per cent.

Petroleum accounted for 44.6 per cent of total indigenous production in the first quarter of 2009 while coal and other solid fuels accounted for 7.0 per cent, and natural gas 39.4 per cent. A year earlier the proportions were petroleum 43.4 per cent, coal and other solid fuels 6.2 per cent and natural gas 42.9 per cent.

Total inland consumption

In 2008 consumption of primary fuels was lower than the preceding year, 1.2 per cent down on 2007. The largest contribution to this fall in absolute terms was from coal (which decreased by 7.3 per cent). On a temperature corrected basis, consumption in 2008 was 2.8 per cent lower than in 2007.

Total inland energy consumption, on a primary fuel input basis (not temperature corrected or seasonally adjusted), in the first quarter of 2009 was 62.6 million tonnes of oil equivalent. This was 4.2 per cent lower than in the corresponding period a year ago and 2.9 per cent lower than in the corresponding period two years ago.

Consumption by final users

Final energy consumption shows a strong seasonal pattern with more energy being consumed in the winter months and less in the summer, particularly in the domestic and service sectors.

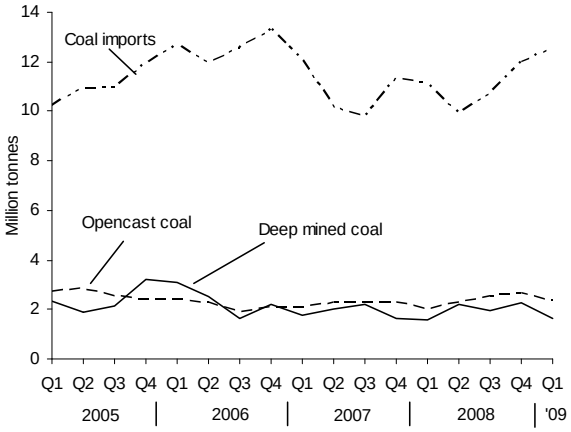
In the first quarter of 2009 the domestic sector was responsible for the largest share of final consumption at 35 per cent of all energy consumed by final users. The transport sector was responsible for a further 30 per cent, the industrial sector for another 17 per cent and the service

industries, including agriculture, consumed 13 per cent. The remaining 6 per cent was made up by fuel use for non-energy purposes.

Final energy consumption fell by 4.5 per cent between the first quarter of 2008 and the first quarter of 2009, mainly due to the decreases in consumption by the transport sector of 5.3 per cent and the industrial sector of 7.1 per cent. There were though falls in consumption from all the other sectors.

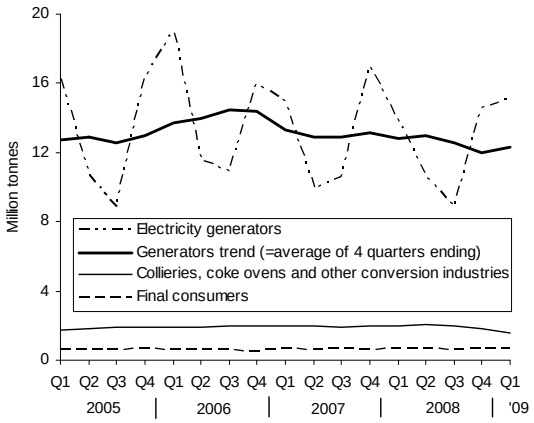
Section 2 - Solid Fuels and Derived Gases

Chart 2.1 Coal production and imports



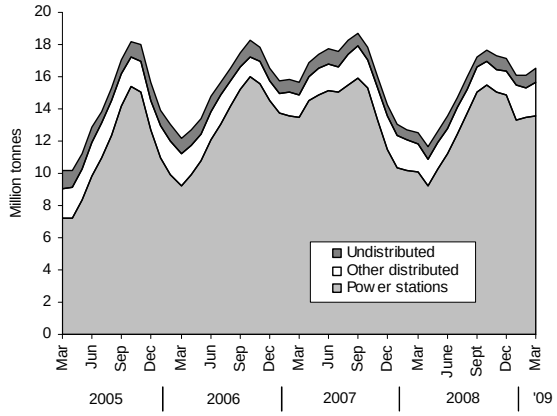
- Provisional figures for the first quarter of 2009 show that coal production (including an estimate for slurry) was up 9.8 per cent on the first quarter of 2008 at 4.1 million tonnes. The increase was the product of a rise of 2.9 per cent in deep mined production and a increase of 15.0 per cent in opencast production.
- Imports of coal in the first quarter of 2009 were 12.8 per cent higher than in the first quarter of 2008 at 12.5 million tonnes.
- Eighty-seven per cent of the coal imported in the first quarter of 2009 (10.9 million tonnes) was steam coal, largely for the power stations market.

Chart 2.2 Coal consumption



- Total demand for coal in the first quarter of 2009, at 17.4 million tonnes, was 6.1 per cent higher than in the first quarter of 2008. Consumption by electricity generators was up by 10.1 per cent to 15.2 million tonnes.
- Electricity generators accounted for 87 per cent of total coal use in the first quarter of 2009; compared with 84 per cent a year earlier.
- Provisionally, final consumption (as measured by disposals to final consumers) was up by 1.7 per cent in the first quarter of 2009.

Chart 2.3 Coal stocks



- Coal stocks showed a seasonal fall of 0.4 million tonnes during the first quarter of 2009, and at the end of March 2009 stood at 16.5 million tonnes, 4.2 million tonnes higher than at the end of March 2008.
- The level of coal stocks at power stations at the end of the first quarter of 2009 was 13.6 million tonnes, 3.5 million tonnes higher than at the end of March 2008.
- Stocks held by producers (undistributed stocks) rose but by less than 0.1 million tonnes during the first quarter of 2009 to stand at 0.9 million tonnes, less than 0.2 million tonnes higher than at the end of March 2008.

Background

Relevant tables

Coal production and imports

In 2005, for the first time ever opencast production exceeded deep mined production. Deep mined production recovered towards the end of 2005 and in the first half of 2006. However, it fell back in the second half of 2006 with the closure of Rossington at the end of March 2006 and the run down in production and eventual mothballing of Harworth in September 2006. These closures, geological difficulties and other one-off factors continued to suppress deep mined production in the first quarter of 2007, but in the second and third quarters production increased once more, before declining in the fourth quarter. Opencast production has been on an upward trend since the third quarter of 2006 but fell in the first quarter of 2009 to 2.4 million tonnes. Imports of coal in 2008 rose to 43.9 millions tonnes, 6.6 million tonnes below the record high level of 2006. Just over 0.7 million tonnes of coal were exported. In 2008, indigenous production of coal rose by 0.9 million tonnes. Deep mined production rose to 8.0 million tonnes despite the closure of Tower Colliery, in South Wales at the beginning of January 2008. Opencast coal production also increased by 0.5 million tonnes on its 2007 level to 9.4 million tonnes.

Coal consumption

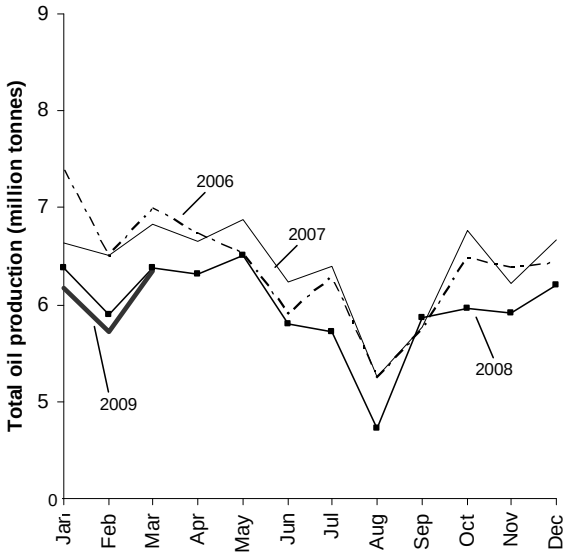
In 2006, coal use by electricity generators was 5.3 million tonnes higher than in 2005 as higher gas prices made coal more competitive for generation. With gas prices becoming more competitive in the first half of 2007 this trend reversed, before increasing again in the final quarter, which showed a 7.4 per cent increase on a year earlier. In 2008, coal use by generators continued to follow a downward trend for the first three quarters but then increased by 5.7 million tonnes in the fourth quarter of 2008. Coal use by generators increased by another 0.6 million tonnes in the first quarter of 2009. Generators' consumption in 2008 as a whole was down by 9.0 per cent compared with 2007. The use of coal for coke making and at blast furnaces decreased by 1.8 per cent (0.1 million tonnes) in 2008 and continued to decline in the first quarter of 2009.

Stocks

The seasonal rise in stocks over the summer periods of 2005 and 2006 was strong, boosted by record levels of coal imports over the period. In 2007/08, after a summer rise, coal stocks declined substantially to leave end winter levels at 12.3 million tonnes, comparable to the end winter level in 2006. In 2008, after a summer rise, coal stocks declined marginally in the final quarter, to leave end of year levels at 17.0 million, compared with 14.3 million at the end of 2007.

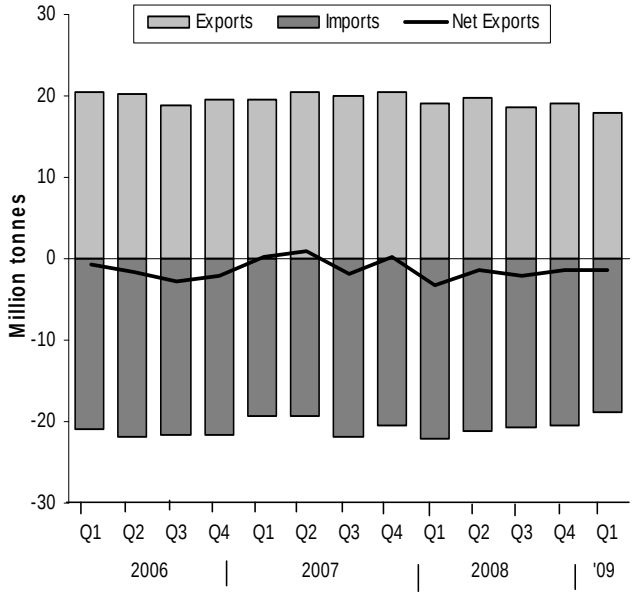
Section 3 - Oil and Oil Products

Chart 3.1 Production of crude oil and NGLs



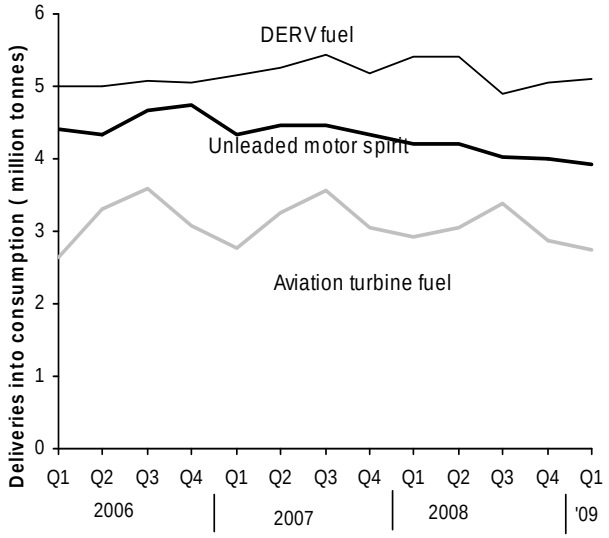
- Total indigenous UK production of crude oil and NGLs in the first quarter of 2009 was 2.3 per cent lower than a year earlier.
- Eight new fields started production in the year ending March 2009. Without these new fields, production in the first quarter of 2009 would have been 6.0 per lower than a year earlier.

Chart 3.2 UK trade in crude oils, NGLs and petroleum products



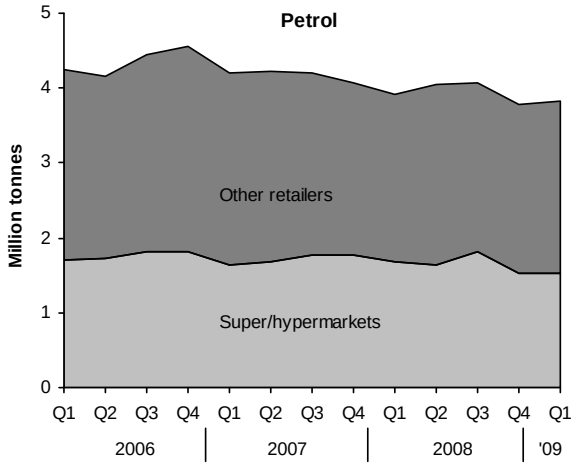
- During the first quarter of 2009 the UK was a net importer of oil and oil products by 1.2 million tonnes, whereas in the first quarter of 2008 the UK was a net importer by 1.9 million tonnes.
- The UK was a net importer of crude oil, NGLs and feedstocks in the first quarter of 2009 (by 2.0 million tonnes) with imports decreasing by 6.4 per cent compared with Q1 2008. Exports decreased by 9.2 per cent over the same period.
- In the first quarter of 2009 the UK was a net exporter of petroleum products (by 0.8 million tonnes).
- Imports of petroleum products fell during the first quarter of 2009, by 13.5 per cent compared with a year earlier. Exports remained virtually unchanged.

Chart 3.3 Demand for key transport fuels

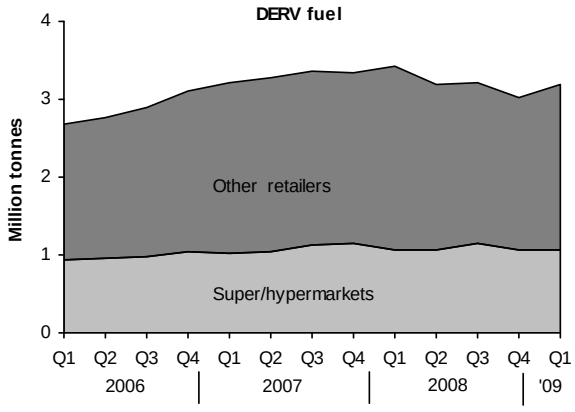


- Total deliveries of transport fuels were 1.0 million tonnes lower in the first quarter of 2009 than the first quarter of 2008.
- Motor spirit deliveries fell by 5.8 per cent.
- Deliveries of Diesel engined road vehicle fuel (DERV) decreased by 4.9 per cent.
- DERV fuel's share of road transport fuels in the first quarter of 2009 was 56.3 per cent compared to 56.1 per cent in the first quarter of 2008.
- Deliveries of aviation turbine fuel were 7.1 per cent lower.

Chart 3.4 Super/hypermarket shares of retail deliveries

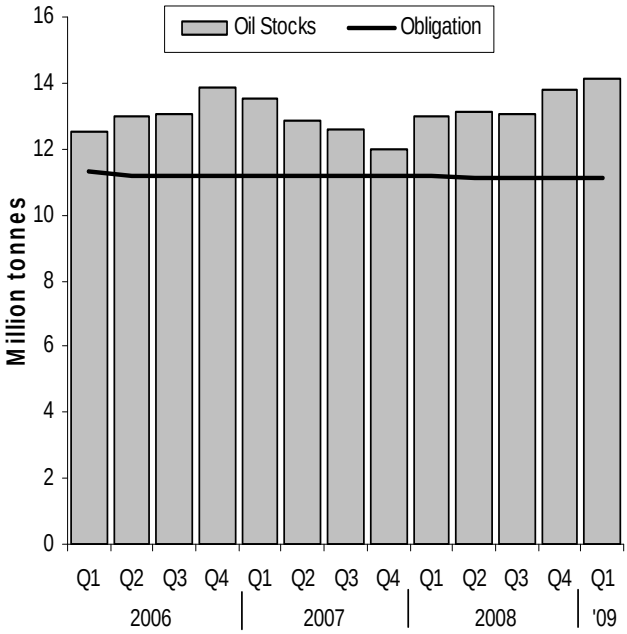


- Sales of motor spirit by super/hypermarket companies accounted for 39.9 per cent of overall retail sales in the first quarter of 2009, down from 44.3 per cent in the first quarter of 2008.



- Sales of DERV fuel by super/hypermarket companies accounted for 33.2 per cent of overall retail sales in the first quarter of 2009, up from 31.3 per cent in the first quarter of 2008.

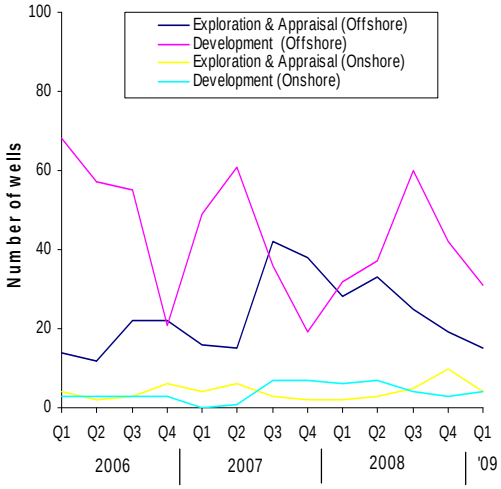
Chart 3.5 Stocks of key oil products[(1)]



- Overall, stocks of crude oil, process oils, and petroleum products were 6.5 per cent higher at the end of the first quarter of 2009 than a year earlier.
- Crude oil and refinery process oil stocks were 4.6 per cent lower and stocks of products were 16.1 per cent higher, than a year earlier.
- Stocks at UKCS pipeline terminals fell by 34.7 per cent (0.4 million tonnes) in the first quarter of 2009, compared with the previous quarter.
- Chart 3.5 combines stocks of products with the product equivalent of stocks of crude oil to give an overall level of UK stocks of key products.
- At the end of the first quarter of 2009, the UK held stocks equal to 86 days of consumption of these key products, compared with an obligation of 67½ days (see Background for more details).

(1) This includes motor spirit, DERV fuel, other gas diesel oils, aviation turbine fuel, kerosene and fuel oils.

Chart 3.6 Drilling activity on the UKCS



- Drilling figures for the first quarter of 2009 showed a decrease to 15 in the number of exploration and appraisal wells started offshore, compared to 28 in the corresponding quarter of 2008.
- A similar number of development wells were drilled offshore in the first quarter of 2009, compared with the first quarter of 2008.
- The number of development wells drilled onshore in the first quarter of 2009 stood at 4, compared with 6 in the corresponding quarter a year earlier.
- Four exploration and appraisal wells were started onshore in the first quarter of 2009, compared with 2 in the first quarter of 2008.

Background

Relevant tables

Oil and Oil Products

Crude oil production and trade

Total UK production of crude oil and NGLs decreased in the first quarter of 2009 by 2.3 per cent (0.4 million tonnes) when compared to the same period last year. In the year ending March 2009, eight new fields started production. Overall, the UK was a net importer of oil and oil products in the first quarter of 2009. Imports and exports of crude oil and NGLs both fell compared to the same period a year earlier. The UK was a net exporter of petroleum products in the first quarter of 2009, due to imports falling by 13.5 per cent and exports remaining virtually unchanged. The majority of UK production of crude oil and NGLs is exported, as indigenous UK crude oil tends to be the more valuable light/sweet type with lower sulphur levels and the relative modernity of UK refineries allows their use of less valuable or lower grade crude oil. Therefore the economics of crude oil markets results in significant volumes of crude oil being imported into the UK.

Refinery production of petroleum products and trade

The net refinery output in the first quarter of 2009 was 18.3 million tonnes, 0.2 million tonnes (1.0 per cent) higher than the first quarter of 2008.

Demand for petroleum products

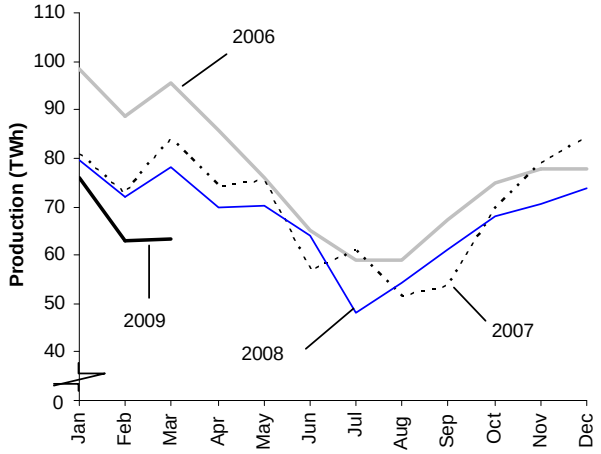
Overall demand for petroleum products in the first quarter of 2009 was 5.3 per cent lower than in the first quarter of 2008. Deliveries of motor spirit were lower by 4.9 per cent and DERV deliveries decreased by 5.5 per cent to 5.1 million tonnes. Deliveries of aviation turbine fuel were 7.1 per cent lower.

Stocks of crude oil and petroleum products

The UK has an obligation under EU law to maintain stocks of key oil products at or above a certain level to ensure adequate supplies would exist for any international oil supply emergency. These obligations are based on the UK's annual consumption of the key products motor spirit, DERV fuel and other gas diesel oils, aviation fuel and other kerosenes and fuel oils. These obligations are usually updated every 1st July as consumption data for the previous year are finalised. Chart 3.5 above combines data on stocks of key oil products with the product equivalent of stocks of crude oil to give an overall level of UK stocks of key oil products to show how the UK is complying with these obligations at an overall level. The UK's current overall obligation, based on 2007 consumption data, is to hold a total of 11 million tonnes of these products, equal to 67½ days of consumption.

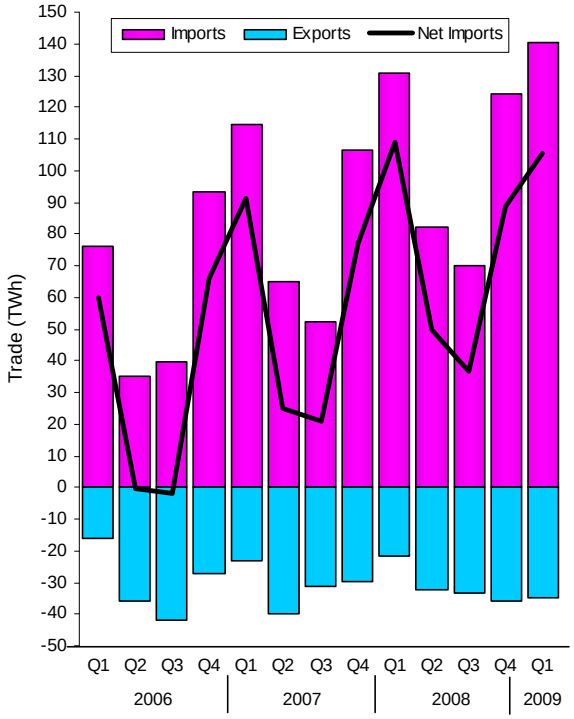
Section 4 – Gas

Chart 4.1 Production of natural gas



- Total indigenous production of natural gas in the first quarter of 2009 was 12.0 per cent lower than in the corresponding quarter a year earlier**.**

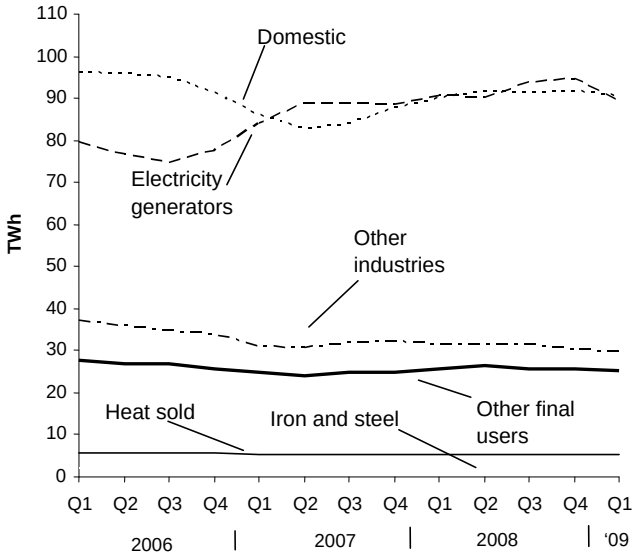
Chart 4.2 UK trade in natural gas



- In the first quarter of 2009, compared with the same period of 2008, imports and exports of natural gas were 7.3 and 61.6 per cent higher respectively.

- Net imports of gas at 105.5 TWh were 3.4 per cent lower than in the first quarter of 2008.

Chart 4.3 Natural gas consumption - average of four quarter ending



- Demand for gas in the first quarter of 2009 was 8.9 per cent lower than the level in the first quarter of 2008.
- Gas use for electricity generation was 20.8 per cent lower than the record high in the first quarter of 2008, with more Nuclear power stations back on stream.
- In public administration, commerce and agriculture, consumption fell by 4.7 per cent compared with a year earlier. In the industrial sector, gas sales were provisionally 8.1 per cent lower than in the first quarter of 2008, reflecting the slowdown in the economy.
- Provisionally, consumption in the domestic sector fell by 3.3 per cent. Compared to a year earlier, temperatures were on average one degree cooler, though prices were up by around a third over the same period.

Background

Relevant table

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Gas production and trade

In the first quarter of 2009, gross gas production was 12.0 per cent lower than a year ago. Imports of gas to the UK were 7.3 per cent higher than a year ago and exports 61.6 per cent higher. Net imports of gas were 3.4 per cent lower. During this quarter, net imports of gas accounted for 36.3 per cent of gas available for consumption, compared to 33.9 per cent a year ago.

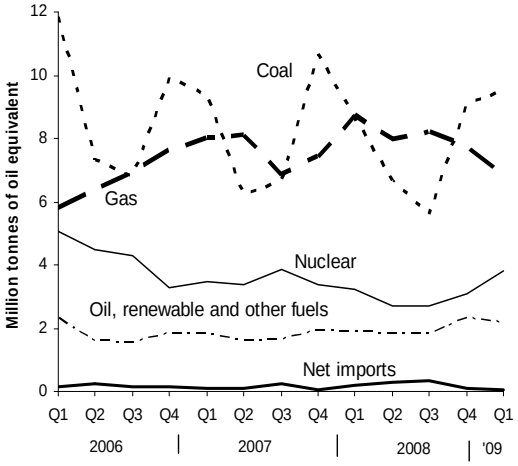
The UK currently exports gas to the Netherlands via the Chiswick, Grove, Markham, Minke, Stamford and Windermere fields (using the Dutch offshore gas pipeline infrastructure), and to the Irish Republic via the UK-Irish Interconnector, and to Belgium through the Bacton-Zeebrugge interconnector. Imports to the UK are from Belgium via the interconnector, from Norway via the Statfjord (Tampen Link), Langeled and Vesterled pipelines and the Netherlands via the BBL. The UK can also import Liquefied Natural Gas (LNG) at the Isle of Grain, South Hook and Teesside Gasport terminals.

Gas consumption

Much of the change in the use of gas for electricity generation in recent years is the result of changes in the relative prices of gas and coal. The downturn in 2005 resulted from generators preferring coal when prices reached very high levels at the end of the year. By the end of 2006, however, gas use had risen back to the levels of 2003 and 2004, as prices fell back. This increase continued through the first half of 2007 before falling back in the second half of the year. With lower gas prices (relative to coal), and the introduction of the Large Combustion Plant Directive, gas use for generation increased once more, to a record quarterly high in the first quarter of 2008. However, aside from a slight increase in the third quarter, gas use for generation declined for the rest of 2008, and continued into the first quarter of 2009. Gas use in the domestic sector is particularly dependent on temperatures not only during the heating season, but also in summer, when very hot weather deters use for cooking and hot water. Aside from the third quarter, 2008 was cooler than 2007, resulting in increased domestic gas consumption for the first, second and fourth quarters on a year earlier. Whilst temperatures in the first quarter of 2009 were lower than a year earlier, the effects of higher prices and the poor economic climate were also influential, with provisional figures showing a fall in domestic gas consumption on a year earlier.

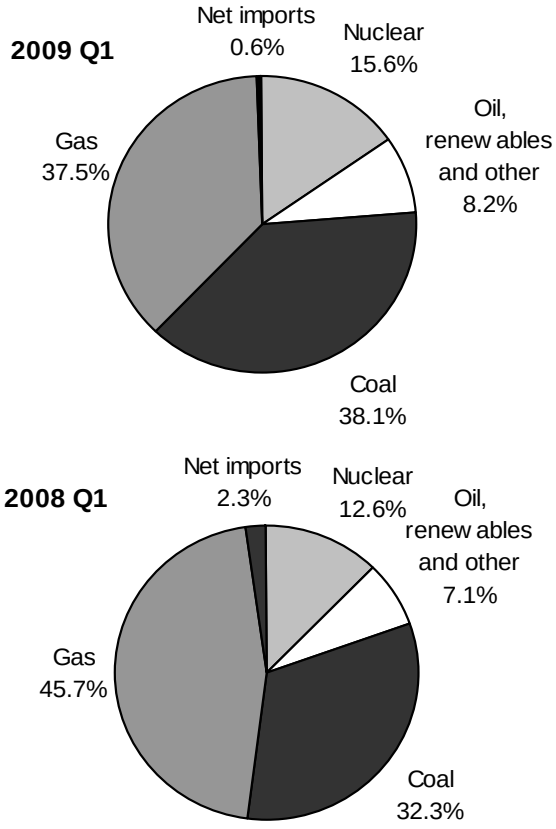
Section 5 - Electricity

Chart 5.1 Fuel used for electricity generation



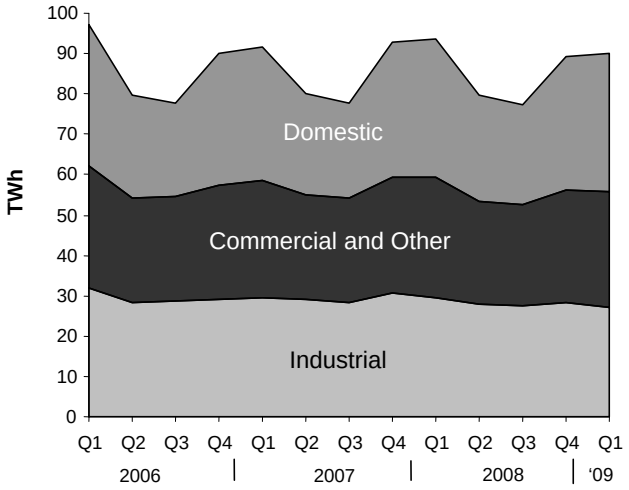
- Fuel used by generators in the first quarter of 2009 was 1.1 per cent lower than in the first quarter of 2008.
- Coal use during the quarter was 10.0 per cent higher than a year earlier.
- Gas use was 20.8 per cent down and nuclear sources were 17.6 per cent up on the first quarter of 2008.
- Hydro sources fell by 20.3 per cent on the first quarter of 2008, with wind up 16.3 per cent. Oil use rose by 67.8 per cent.

Chart 5.2 Electricity supplied



- Total electricity supplied by all generators in the first quarter of 2009 was 5.1 per cent lower (-5.4 TWh) than a year earlier.
- Indigenous supply was 3.4 per cent lower (-3.5 TWh), while net imports were down 76.6 per cent. (-1.8 TWh).
- The supply from coal rose by 11.9 per cent (+4.0 TWh), while supply from gas fired stations fell by 22.2 per cent (-10.6 TWh).
- The supply from nuclear stations rose by 17.5 per cent (+2.3 TWh). Wind, hydro (including net supply from pumped storage) and other renewables' supply rose by 1.8 per cent (0.1 TWh), with Wind alone up 16.6 per cent.
- Between the first quarter of 2008 and the first quarter of 2009, coal's share of electricity supplied rose by 5 percentage points to 38 per cent, while nuclear's share rose by 3 percentage point to 16 per cent. Gas's share fell by 8 percentage points to 38 per cent. The share of net imports fell by 1.7 percentage points to 0.6 per cent and the share of other fuels rose by 1.1 percentage points to 8.2 per cent.

Chart 5.3 Electricity consumption



- Final consumption of electricity fell by 5.1 per cent in the first quarter of 2009. Domestic use decreased by 0.4 per cent and consumption by commercial, public administration, transport and agricultural customers was down by 3.9 per cent. Industrial use of electricity was 8.6 per cent lower.
- In the first quarter of 2009, temperatures were on average about 1.1 degrees Celsius cooler than in the first quarter of 2008

Background

Relevant tables

Fuel use

Rising gas prices over the later part of 2005 led to a preference for coal as the main fuel source for electricity generation. Generators used much more coal during 2006 as a whole, as further rises in gas prices made coal fired generation more competitive. As a result of falling gas prices through the first three quarters of 2007, gas use rose by 15.1 per cent, while coal use fell by 8.5 per cent. Additionally, two of the oldest nuclear stations closed at the end of December 2006, and increased coal and gas fired generation replaced these stations' contribution. With the gap between gas and coal prices narrowing, and the introduction of the Large Combustion Plant Directive, gas use continued to rise to a record level in the first quarter of 2008, before gradually falling off through the remainder of the year, and into the first quarter of 2009.

Supply

Total electricity supplied in the UK fell by 0.7 and 1.0 per cent in 2006 and 2007, but 2008 saw an increase in supply, of 0.8 per cent, before falling in the first quarter of 2009. Supply from coal fired power stations fell by 8.0 per cent in 2008, with supply from gas rising 9.2 per cent from 2007's previous record level. After falling to its lowest level since 1998 in 2007, due to the closure of two stations, supply from nuclear fell again by 16.7 per cent in 2008, through a high level of outages for repairs and maintenance. With nuclear stations coming back online, supply began to pick up again in late 2008 and early 2009, as supply from gas began to fall. Hydro output fell by 7.6 per cent in 2008, following 2007's record levels. Imports and exports of electricity from and to continental Europe are volatile, with suppliers taking advantage of price differentials that have arisen during periods of extreme weather, industrial disputes, or production difficulties. Net imports for 2008 as a whole were more than double that of 2007, the highest level seen since 2000.

Consumption

In 2006, final consumption of electricity fell by 0.5 per cent, the first fall since 1994. This slide has continued to 2008, where final consumption fell by a further 0.6 per cent on 2007. In the first quarter of 2009, final consumption was down 5.1 per cent on a year earlier. Consumption in 2008 was divided 29.5 per cent to the domestic, 28.5 per cent to industry and 27 per cent to commerce, public administration, transport and agriculture. Fuel industries accounted for a further 7.5 per cent with the remaining 7.5 per cent accounted for by transmission and distribution losses.

The CO_2 Savings Attributable to Combined Heat and Power (CHP) in the United Kingdom (2001-2007)

Introduction

Combined Heat and Power (CHP) offers a carbon efficient way of using primary energy to meet the demands for heat and power on any site where these demands are appreciable and simultaneous. On site generation of electricity, and the efficient local use of the heat which is a by product of this generation, consumes less primary energy than satisfying a site's electricity and heat demands by importing from the grid and providing the required heat in local boilers. These carbon savings derive from two separate sources:

- The inefficiencies associated with central electricity generation, whereby large amounts of heat are rejected to the environment, are avoided.
- As the electricity is generated close to where it is finally consumed, and usually at or close to the required voltage, the losses associated with transmission and distribution are either avoided or significantly reduced.

Measuring the carbon savings associated with the deployment of CHP is an important exercise as it puts into context the success of environmental policy measures used to promote the wider use of CHP. Moreover, a value is now attached to carbon through the Climate Change Policy mechanisms of Climate Change Agreements (CCAs), the European Union Emissions Trading Scheme (EU ETS) and in time the Carbon Reduction Commitment (CRC). Therefore, being able to accurately account for carbon avoided, and therefore the financial value associated with this avoided carbon, allows better investment decisions to be made, where the deployment of CHP is an investment option.

This paper presents a methodology for determining the carbon savings associated with the deployment of CHP in the UK. It then presents the carbon savings, derived using this methodology, for the years 2001-2007.

CO_2 Savings Presented in this Paper and DUKES 2008

Chapter 6 of the Digest of United Kingdom Energy Statistics (DUKES) for 2008[1] presents statistics relating to CHP in the UK for the year of operation 2007. Table 6H of Chapter 6 presents the CO_2 emissions attributable to CHP for the years of operation of 2005-2007. These figures are presented on the basis of the CO_2 avoided when CHP generated electricity displaces electricity generated at central power stations, and two scenarios are considered:

(i) For power stations generating electricity only from fossil fuels,
(ii) For power stations generating electricity from all input sources, including nuclear and renewables.

Each year revisions are made to the statistics presented in Chapter 6 for a particular year to reflect better information. As such, the CO_2 savings quoted in the 2008 Digest for 2005 and 2006 supersede those quoted for those years in earlier editions of the Digest.

This paper develops the figures quoted in DUKES 2008 further and along two lines:

- It presents CO_2 savings attributable to CHP for the years of operation 2001-2007 on a common basis. This means that the savings quoted are based upon the final revised figures for 2001-2007, corrected for routine amendments and the data cleansing exercise, carried out in 2008 for the year of operation 2007 and earlier[2].

[1] Digest of United Kingdom Energy Statistics (DUKES) 2008, Chapter 6
[2] DUKES 2008 Chapter 6, Para 6.31, p. 159

- It factors in the transmission and distribution losses avoided when CHP generated electricity is consumed. From Dukes 2009 onwards CO_2 savings attributable to CHP will be presented along these lines. This approach allows the CO_2 savings associated CHP generated electricity displacing conventionally generated electricity at the point of consumption to be discerned.

Methodology

1) Savings of CO_2 are calculated in respect of the CHP Qualifying Power Output (QPO), the Qualifying Heat Output (QHO) and the Fuel Input for each year 2001-2007, as quoted in the 2008 edition of the Digest.

2) Carbon emission factors for the different fuel inputs to CHP are as set out in DUKES[3]. Blast Furnace Gas and Coke Oven Gas are zero rated for carbon, as these gases would otherwise have been flared or vented. Renewable fuels are also zero rated for carbon.

3) The carbon intensities of grid electricity per unit electricity supplied are as provided in DUKES Table 5C.

4) In order to factor in the transmission and distribution losses avoided when CHP generated electricity is consumed, the carbon intensities in 3) are raised by 7.5 per cent. (1.5 per cent. in respect of transmission losses and 6 per cent. in respect of distribution losses, consistent with figures in DUKES[4]). This produces the carbon intensity of grid electricity displaced by CHP generated electricity at the point of consumption.

5) The carbon intensity of heat raised conventionally in boilers, and displaced by CHP generated heat, is assumed to be 81 gC/kWh. This value takes into account the average efficiencies of coal, oil and gas fired boilers and the percentage mix of these different boiler types in the UK boiler population[5].

For each year 2001-2007, the total CO_2 emissions associated with the conventional generation and supply of the quantities of energy represented by QPO and QHO are calculated using the above factors and assumptions. This returns the CO_2 emissions that would have been incurred if the CHP generated QPO and QHO had instead been generated and supplied conventionally. From this the actual CO_2 emissions associated with the CHP fuel inputs that generated the QPO and QHO are subtracted. To derive the CO_2 savings resulting from the QPO and QHO displacing the conventionally generated equivalents, at the point of consumption.

These savings are also presented below normalised to units of 1,000 MWe of Good Quality CHP electricity capacity (QPC), in order to present the CO_2 emissions savings delivered by each increment of capacity.

Savings of CO_2 as a Result of the Deployment of CHP in the UK 2001-2007

Table 1 shows the carbon dioxide savings due to CHP, expressed in both absolute terms and in terms of savings per 1,000 MWe.

In 2007, the saving of 11.38 MtCO2 means that if CHP had not been deployed the total UK CO_2 emissions for 2007 could have been around 2.1% higher (as total emissions in the UK for 2007 were 542.6 $MtCO_2$[6]).

[3] Annex A Digest of United Kingdom Energy Statistics 2008
[4] DUKES 2007, Chapter 5, Para 5.66, p. 125, consistent with the EU Cogeneration Directive analysis.
[5] Savings in carbon emissions from Combined Heat and Power, Energy Trends, October 2000
[6] www.defra.gov.uk/environment/statistics/globatmos/index.htm

Table 1: Carbon dioxide savings due to CHP, 2001-2007

	2001		2002		2003	
	$MtCO_2$	$MtCO_2$/ 1,000 MWe	$MtCO_2$	$MtCO_2$/ 1,000 MWe	$MtCO_2$	$MtCO_2$/ 1,000 MWe
Carbon savings against all fossil fuels	11.98	2.69	11.88	2.60	13.28	2.95
Carbon savings against all fuels (including nuclear and renewables)	8.08	1.81	7.78	1.70	9.06	2.02

	2004		2005		2006		2007	
	$MtCO_2$	$MtCO_2$/ 1,000 MWe	$MtCO_2$	$MtCO_2$/ 1,000 MWe	$MtCO_2$	$MtCO_2$/ 1,000 MWe	$MtCO_2$	$MtCO_2$/ 1,000 MWe
Carbon savings against all fossil fuels	15.19	2.81	16.66	3.01	16.89	3.08	15.78	2.88
Carbon savings against all fuels (including nuclear and renewables)	10.71	1.98	11.42	2.06	11.64	2.12	11.38	2.08

Figure 1 shows the movements in CO_2 savings (both absolute and normalised to capacity) attributable to CHP over the period 2001-2007. Figure 2 provides the context in which these savings took place (in terms of good quality CHP capacity, CHP efficiency and CHP load factor).

The main points to note from the evolution of CO_2 savings over this period are:

1) At times of steady QPC and CHP efficiency, the savings in CO_2, both in absolute terms and when normalised to capacity, increase when the load factor increases. This is illustrated by the situation between 2002 and 2003 and is a result of the efficiencies inherent to CHP applying for a greater proportion of the year.

2) An increase in the QPC tends to raise the absolute value of CO_2 savings. However, this does not necessarily raise the value of CO_2 savings normalised to capacity if the overall CHP efficiency and load factor are falling. This is illustrated by the situation existing between 2003 and 2004, where a step-up in QPC was accompanied by an increase in the absolute savings value. However, a decrease in CHP efficiency and load factor suppressed any increase in the CO_2 savings normalised to capacity and, indeed, leads to an actual fall between 2003 and 2004. This highlights the need to maximise the running of the existing capacity base and the efficient use of generated heat if the full carbon saving potential of the UK's CHP assets are to be realised.

3) The CO_2 savings attributable to CHP are sensitive to the carbon intensity of the conventional generation it displaces. This is illustrated by the situation between 2006 and 2007, where substantially constant QPC, CHP efficiency and load factor is accompanied by a fall in the absolute CO_2 savings and, consequently, the CO_2 savings normalised to capacity. This is the result of a fall in the carbon intensity of electricity generated by fossil fuels during this period, which was in turn the result of a shift from the use of coal to gas, and explains why the downturn in the absolute savings against the fossil fuel basket is more pronounced than for the total basket.

Figure 1: CO_2 savings attributable to CHP in the UK over the period 2000-2007, in absolute terms and normalised to capacity

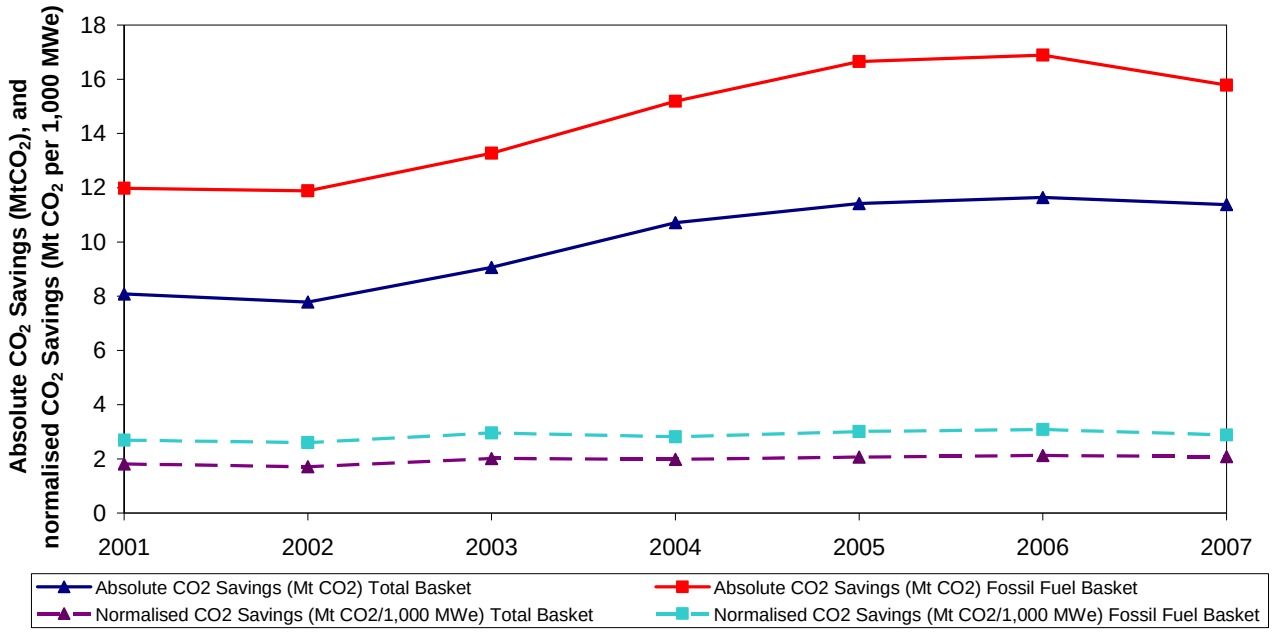
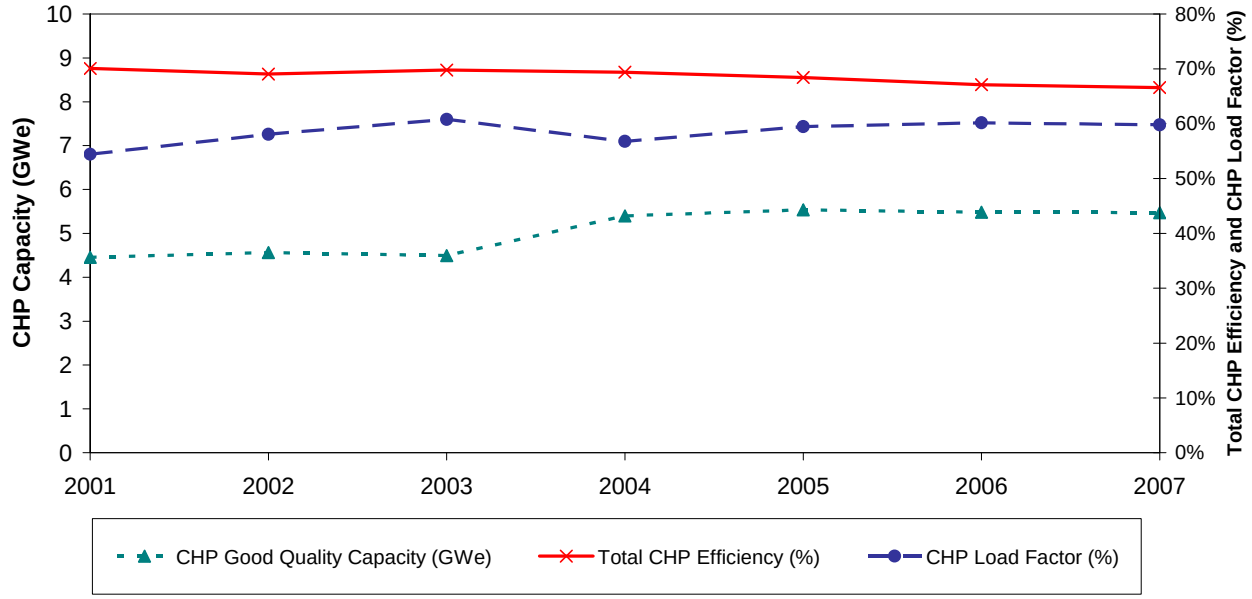


Figure 2: Good quality CHP capacity, efficiency and load factor



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Renewable energy in 2008

Introduction

This article updates the information on renewable energy published in the June 2008 edition of Energy Trends. It looks at the latest position on the Renewables Obligation and presents statistics on renewable energy production and use in the United Kingdom in 2008. The statistics show that in 2008, 5.3 per cent of electricity sales by licensed suppliers in the UK were from electricity generated from renewables eligible for the Renewables Obligation, up from 4.8 per cent in 2007.

Progress has also been made against the UK's targets introduced in the 2008 EU Renewables Directive: the available data currently show that around 2¼ per cent of energy consumption in 2008, measured using the Directive methodology, came from renewable sources; this is up from 1.8 per cent in 2007.

Data collection and methodology

The collection of renewable energy statistics began in 1989, when all relevant renewable energy sources were identified and, where possible, information was collected on the amounts of energy derived from each source. The renewable energy sources currently covered are as follows: active solar heating; photovoltaics; onshore and offshore wind power; wave power; large and small scale hydro; biomass; geothermal aquifers and liquid biofuels. Prior to 2004 wastes were added in with renewables as a convenient place to record this fuel source but with the publication of the 2003, data the international definition of total renewables was adopted for all reported years and this excludes non-biodegradable wastes.

The database now contains 20 years of data from 1989 to 2008 and this database will be used to provide the detailed figures on renewable sources of energy that will be available in the new Digest of UK Energy Statistics for 2009 to be published on 30 July 2009. The available detailed data from the Renewables Obligation Certificates (ROCs) system has again made a major contribution to this year's data analysis.

UK's renewables policy

Prior to 2002, the main instruments for pursuing the development of renewables capacity were the Non Fossil Fuel Obligation (NFFO) Orders for England and Wales and for Northern Ireland (NI-NFFO), and Scottish Renewable Obligation (SRO) Orders; the term "NFFO Orders" is used to refer to these instruments collectively. These aimed to assist the renewables industry by allowing premium prices to be paid for electricity for a fixed period. Since February 2000, however, the United Kingdom's renewables policy has consisted of four key strands:

- a **Renewables Obligation** on all electricity suppliers in Great Britain to supply a specific proportion of electricity from eligible renewables, introduced from April 2002;
- exemption of electricity from renewables[1] from the **Climate Change Levy**, introduced from April 2001;
- an **expanded support programme** for new and renewable energy **including capital grants** and an expanded **research and development** programme;
- development of a **regional strategic approach** to planning and targets for renewables.

In parallel with this, the European Union's Renewables Directive (RD) came into force in October 2001. It proposed that Member States adopt national targets for renewables that were consistent with reaching an overall EU target of 12 per cent of energy (amounting to 22.1 per cent of electricity) from renewables by 2010. The UK "share" of this target was that renewables sources eligible under the RD should account for 10 per cent of **electricity consumption** by 2010.

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 per cent of EU's energy to come from renewable sources. During 2008 a new Renewables Directive was negotiated on

[1] Electricity generated by hydro stations with a declared net capacity (DNC) of more than 10 MW is not exempt from the Climate Change Levy

this basis and resulted in agreement of country "shares" of this target. For the UK, by 2020 15 per cent 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. The Government will shortly publish a UK Renewable Energy Strategy, setting out how we will meet the 15 per cent target.

Renewables obligation

The obligation is part of the UK's programme to tackle climate change and to encourage a more sustainable approach to energy consumption. Previous policy has been successful in introducing renewables to the UK marketplace and in reducing costs. The focus of current policy is to build on these achievements through the obligation and a system of capital grants designed to bring forward offshore wind and energy crops, thereby maximising the chances of meeting the Government's targets.

In April 2002 the new Renewables Obligation (RO) covering England and Wales and the analogous Renewables (Scotland) Obligation came into effect[2]. Northern Ireland introduced a similar Renewables Obligation on 1 April 2005. It is an obligation on all electricity suppliers to supply a specific and growing proportion of electricity from eligible renewable sources in order to increase the level of renewable generating capacity and so contribute to the Government's climate change targets. Examples of eligible sources are listed in Table 1. There are, however, specific exclusions which are: generating stations using peat; existing hydro plant of over 20 MW built before 1990 (unless re-furbished); and energy from mixed waste combustion. Mixed waste that is converted to fuel using advanced conversion technology is eligible, but only the biodegradable fraction of any waste is eligible (in line with the EU Directive). All stations outside the UK (which includes its territorial waters and the continental shelf) are also excluded.

Table 1: Examples of eligible Renewables Obligation sources of renewable energy

Wind energy (off-shore and on-shore)
Hydro power, excluding hydro power from plants exceeding 20 MW DNC
Tidal and tidal stream
Wave energy
Photovoltaics
Geothermal (hot dry rock and aquifers)
All biodegradable material
Landfill gas and sewage gas
Co-firing of biomass with fossil fuel
Agriculture and forestry wastes, and energy crops

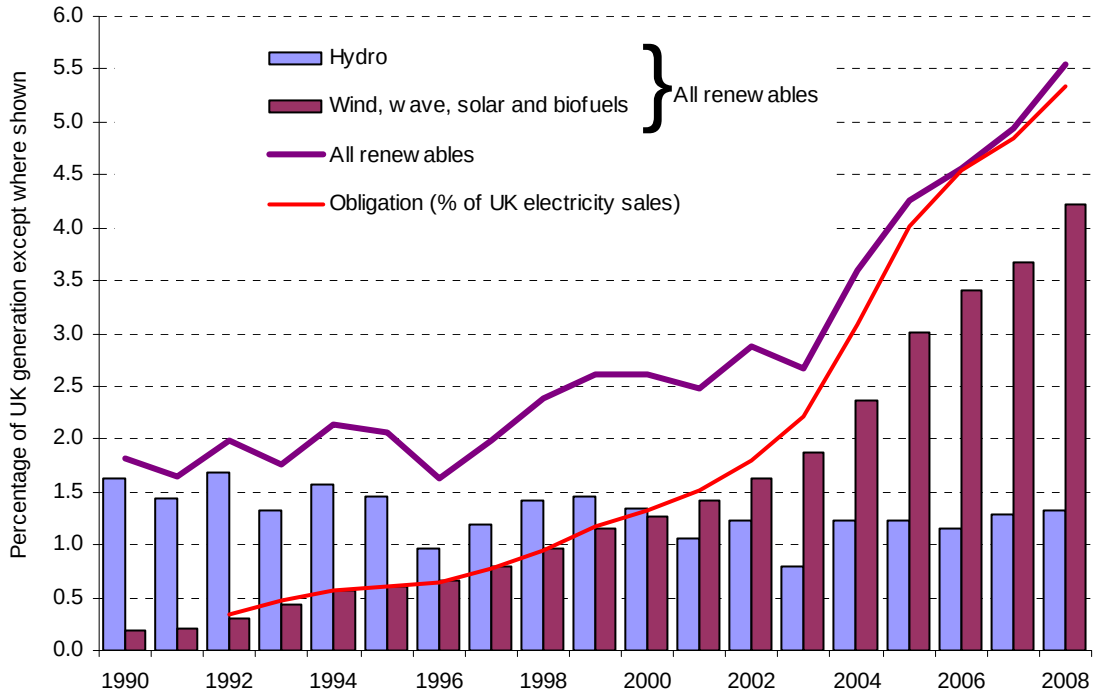
Monitoring compliance of the Renewables Obligation is the responsibility of the Office for Gas and Electricity Markets (Ofgem), who administer a system of certification. **Renewables Obligation Certificates** (ROCs) are issued to qualifying renewables generators as evidence that the electricity has been generated and supplied or used in a permitted way in the United Kingdom. These certificates may be sold by generators directly to licensed electricity suppliers or traders. ROCs can be traded separately from the electricity to which they relate.

Renewable electricity statistics

Renewables (on the international definition basis) - see Table 2 - provided 5.5 per cent of the electricity generated in the United Kingdom in 2008, 0.6 percentage points higher than in 2007. Total electricity generation from renewables in 2008 amounted to 21,597 GWh, an increase of 1,952 GWh (10 per cent) on 2007. The main contributors to this increase were 1301 GWh (+29 per cent) from onshore wind, 523 GWh (+67 per cent) from offshore wind, 159 GWh (+39 per cent) from plant biomass, 80 GWh (+2 per cent) from landfill gas and 69 GWh (+14 per cent) from sewage sludge digestion. There was a 343 GWh decrease in the co-firing of biomass with solid fuels (-18 per cent). Chart 1 shows the growth in the proportion of electricity produced from renewable sources. It includes the progress towards the renewables targets set under the Renewables Obligation (RO).

[2] Parliamentary approval of the Renewables Obligation Orders under The Utilities Act 2000 was given in March 2002.

Chart 1: Growth in electricity generation from renewable sources since 1990



In Chart 1, the bars show the growth in the two constituent parts of renewables generation since 1990. The lines show the growth in two of the three measures used for renewables growth; since the Renewables Directive percentage closely follows the Renewables Obligation's growth path it is not shown separately. In 2008, all three of the percentages showed strong growth, stronger than in the previous year but not as strong as in 2005. The percentage of UK electricity sales that were of electricity generated from sources eligible for the RO grew by 0.5 percentage points to 5.3 per cent, and, on the basis favoured by the Renewables Directive, the percentage of UK electricity consumption accounted for by RD eligible renewable sources increased by 0.5 percentage points to 5.4 per cent in 2008. Table 2 sets out the percentages for each of the last six years for each of the three percentage measures.

Table 2: Percentages of electricity derived from renewable sources

	2003	2004	2005	2006	2007	2008
Overall renewables percentage – International basis (Electricity generated from all renewables as a percentage	2.7	3.6	4.3	4.6	4.9	5.5
Percentage on a Renewables Obligation basis (Electricity generated from renewables eligible for the Renewables Obligation - see Table 1 - as a percentage of electricity sales by licensed suppliers in the UK)	2.2	3.1	4.0	4.5	4.8	5.3
Percentage on a Renewables Directive basis (Electricity generated from renewable sources eligible under the EU Directive - i.e. all renewables except non-biodegradable wastes – as a percentage of UK electricity consumption)	2.6	3.5	4.2	4.5	4.9	5.4

Wind continues to be the leading technology for the generation of electricity from renewable sources in 2008, with hydro second, followed closely by landfill gas. Thirty three per cent of renewables generation in 2008 was from wind, 24 per cent from hydro and 22 per cent from landfill gas. Generation from wind was 6 percentage points higher than in 2007, whilst hydro's contribution was 2 percentage points. Chart 2 shows the growth in generation from renewables.

Heat production

Around 13½ per cent of renewable sources are used to generate heat. The three sources of renewable heat production in the United Kingdom are: the direct combustion of biomass (93 per cent of the total), active solar heating, and geothermal aquifers. Together they produced energy equivalent to 797 thousand tonnes of oil equivalent. There was a decline in the total use of heat that began more than 10 years ago that was mainly due to tighter emission controls discouraging on-site burning of biomass, especially wood waste. Renewables used to generate heat are now shown as having some growth in the most recent years mainly because of a re-assessment of the figure for domestic wood combustion in the light of recent research. Further significant growth in this area is anticipated, especially in the industrial and domestic wood use sectors. Domestic use of wood is the main contributor to renewables used for heat – comprising around 45 per cent of the renewable heat total. Plant biomass overtook the industrial use of wood and wood waste in 2008 to become, at 16 per cent, the second largest component.

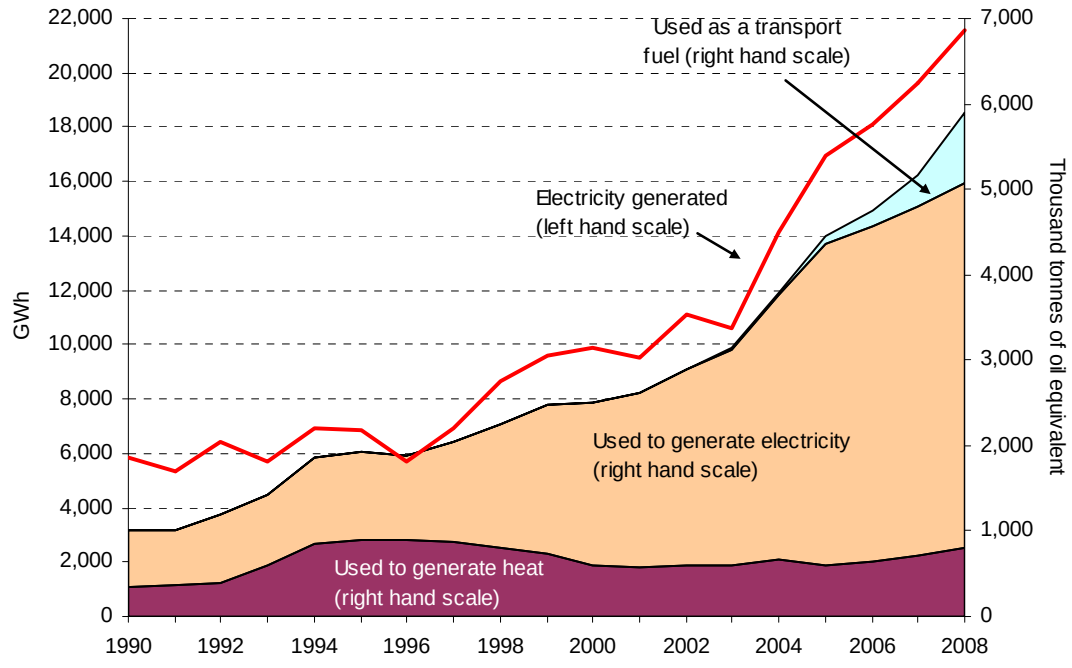
Liquid biofuels for transport

Renewables statistics produced by DECC now include liquid biofuels for transport, and these comprise around 14 percent of total renewable sources. Two road transport fuels, biodiesel and bioethanol, are sold blended with diesel and petrol. The Renewable Transport Fuel Obligation (RTFO), introduced in April 2008, places a legal requirement on transport fuel suppliers (ie those who supply more than 450,000 litres of fossil fuel per annum to the UK market) to ensure that 5 per cent (by volume) of their overall fuel sales are from a renewable source by 2010/11, with staged required levels of 2.5 per cent (by volume) for 2008/09 and 3.75 per cent (by volume) in 2009/10. Figures from HM Revenue and Customs based on road fuel taxation statistics show that 886 million litres of biodiesel and 206 million litres of bioethanol were consumed in 2008, up from 347 million litres and 153 million litres, respectively, in 2007 and from 169 million litres and 95 million litres, respectively, in 2006.

All renewable fuels

When renewables used for transport and renewables used for heat are combined with the use of renewable sources for electricity generation, renewable sources accounted for 2.5 per cent of the United Kingdom's total primary energy requirements in 2008, up from 2.0 per cent in 2007, 1.9 per cent in 2006 and 1.8 per cent in 2005. The trends in the use of renewable energy for transport, heat and electricity are shown in Chart 2.

Chart 2: Trends in the use of renewable energy for heat, electricity, and transport



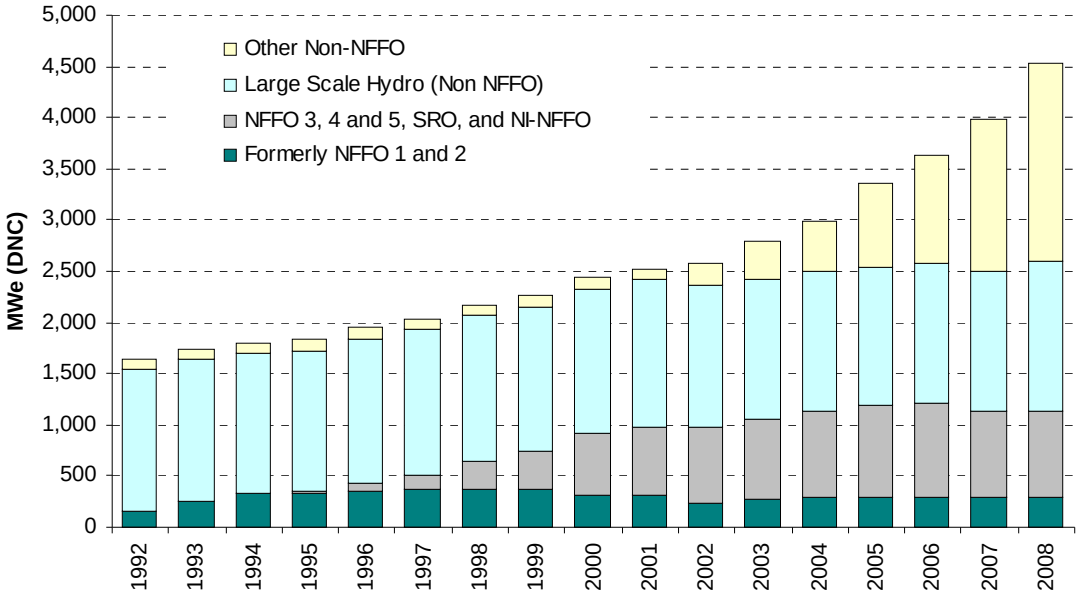
On the basis favoured by the Statistical Office of the European Communities (Eurostat) for measuring the targets for Member States towards the EU's 20 per cent of all energy from renewables in 2020, provisionally in the UK in 2008, 2¼ per cent of final energy consumption was from renewable sources; this is up from 1.8 per cent in 2007, and 1.5 per cent in 2006. An explanation of this measure, which uses net as opposed to gross calorific values to calculate energy use, was given in the March 2008 edition of Energy Trends. However since the article was published, a cap of 6.18 per cent has been introduced on the proportion that air transport can contribute to the total, which improves the UK's position slightly as in recent years the proportion in the UK has been between 8½ and 9 per cent.

NFFO

Before the Renewables Obligation was introduced in 2002, the Non Fossil Fuels Obligation (NFFO), along with the Scottish Renewables Orders and Northern Ireland NFFO, was the main means of encouraging the development of renewable sources to generate electricity.

While live projects under NFFO continues to account for 1,142 MW DNC of renewables capacity at the end of 2008, this was only one-quarter of the total renewables generating capacity in the United Kingdom at that date (4,529 MW DNC). Forty three per cent of the other 3,387 MW is accounted for by large-scale hydro capacity operated mainly by major power producers, a decline from over 80 per cent as recently as 2002. This is because new onshore and offshore windfarms and other new schemes eligible for ROCs are continuing to take a progressively larger proportion. Trends in capacity since 1992 (in DNC terms) are shown in Chart 3.

Chart 3: Renewable generating capacity from NFFO, former NFFO contracts (including equivalents in Scotland & Northern Ireland) & capacity outside NFFO



Regional statistics

The Government encourages a regional strategic approach to planning and targets for renewables and, as a result, regional statistics in support of both these regional initiatives are now produced. Since 2002 regional renewables statistics have appeared in the September issues of Energy Trends and an article updating the figures to 2008 is planned for the September 2009 edition.

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Regional and local use of road transport fuels for 2007

Introduction

Estimates of regional and local fuel consumption by the road transport sector are now available for 2005, 2006 and 2007, the latter of which are presented within this article. This work forms part of a wider project that came out of the 2003 Energy White Paper, which emphasised the importance of local and regional decision making in energy policy.

This information on regional and local use of road transport fuels in 2007 complements three other data sets: electricity and gas consumption data for 2007, both of which were published in the December 2008 edition of Energy Trends, and 2007 estimates for consumption of the remaining fuels (except fuels used for aviation and national navigation), which will be released later this year. All of the published datasets are available at: www.berr.gov.uk/energy/statistics/regional/index.html

Methodology

The road transport fuel estimates are based on the point of consumption rather than where the fuel was actually purchased. They are produced for DECC by AEA Energy and Environment by combining specific fuel consumption factors with local area traffic flow data.

Since last year's publication, the methodology used by AEA to produce the 2007 estimates has been improved. According to AEA, the two major changes to this methodology are:

- The use of more detailed speed data, which led to a revision in the fuel consumption factors used. A new database of vehicle speeds on different road type (Motorways, Major principal roads, Major roads, Minor roads) and area type (Central London, Inner London, Outer London, Conurbation, Urban, Rural) combinations was developed to align with the road and area type classifications used in Department for Transport (DfT) traffic census. The new speed data comes from AEA's review of recent DfT publications on average speeds measured under different traffic conditions from its detailed traffic census, combined with estimates from DfT's traffic models and information on road speed limits.
- A more accurate fuel split between petrol and diesel cars. AEA use data from the DfT traffic census to count the number of cars on the road. Unfortunately, there is no way to distinguish whether these cars are petrol or diesel fuelled and so vehicle licensing statistics had previously been used to determine the fuel split. However, recent data from DfT's National Travel Survey has shown that the annual mileage of diesel cars is approximately 1.6 times greater than that of petrol cars. As such, AEA have adjusted the fuel split in order to incorporate this additional information. An assumption is made that the additional diesel car mileage is done on motorways and rural roads, leading to a different fuel split on different road types.

A change was also made in the methodology for mapping fuel consumption on minor roads. Previously, census count point data were not used for B roads, a regional average being used instead. However, from 2007, DfT count point data for B-roads have been used where these data are available. Where data for B-roads are not available, regional averages have been used instead, corrected at county level for consistency with DfT's statistics at this level.

In order to provide a comparable time series, the data for 2005 and 2006 have been revised using the same methodology as for the 2007 data.

The total UK consumption figure for road transport fuels based on this methodology for 2007 is 38,897 thousand tonnes. This is 0.38 per cent more than the Digest of UK Energy Statistics (DUKES) total UK consumption of 38,750 thousand tones. The introduction of the revised methodology has reduced the percentage difference between the local and regional estimates and DUKES aggregate annual figures: using the previous methodology, the differences in 2005 and 2006 were 1.87 per cent and 1.71 per cent, whereas with the revised methodology they are 0.06 per cent and 0.49 per cent respectively.

Reports containing a fuller description of the methodology behind these estimates, and more details of the revisions to the consumption factors are available from the 'Related Documents' section at: www.berr.gov.uk/energy/statistics/regional/road-transport/page36199.html

More details around the specific changes to the methodology referred to above can be found at: www.berr.gov.uk/files/file51621.pdf

AEA operate a continuous improvement programme in the methodologies used for the national emissions inventory and these feed through into the methods used for mapping road transport energy consumption. AEA have advised that they are planning to improve their methodology further when producing the 2008 road transport energy consumption statistics (to be published in June 2010). At the time of writing, their proposed developments will include the use of a revised set of vehicle fuel consumption-speed relationships for more detailed vehicle classes. This will come from recent research carried out by Transport Research Laboratory (TRL) on behalf of DfT who examined more up-to-date independent vehicle emissions test data. Results from AEA's re-examination of the turnover in the vehicle fleet will also be used to define the year-on-year changes in the vehicle fleet composition.

Regional and local estimates

Table 1 presents estimates of road transport fuel consumption for Scotland, Wales, Northern Ireland and the regions of England for 2007. The table also includes four local authorities from each government office region showing the highest and lowest personal (defined as buses, diesel cars, petrol cars and motor cycles) and freight (defined as HGV, diesel LGV and petrol LGV) consumption levels. Consumption is also shown separately for cars, buses, motor cycles, HGVs and LGVs.

The North East of England and Northern Ireland have the lowest consumptions of transport fuels for both personal travel and freight, whilst the highest consumption rates occur in the South East of England. The local authority with the highest total consumption is Leeds, mainly because of the concentration of major motorways in the area.

The full tables showing road transport fuel consumption for all NUTS4[1] areas in the United Kingdom for 2002 to 2007 are available on the DECC Energy Statistics website at: www.berr.gov.uk/energy/statistics/regional/index.html. However, as noted above, the data prior to 2005 are produced using a different methodology, therefore it is not recommended that data for 2002 to 2004 are compared with later data.

Maps showing NUTS4 areas are available online at: www.statistics.gov.uk/geography/maps.asp

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[1] NUTS (Nomenclature of Units for Territorial Statistics) is a hierarchical classification of spatial units that provides a comparable breakdown of the European Union's territory for producing regional statistics. NUTS4 refers to the 354 individual London boroughs/metropolitan districts/unitary authorities/local authority districts in England, 22 individual unitary authorities in Wales, 41 individual or groups of whole/part unitary authorities and/or local enterprise company areas in Scotland, and 26 individual district unitary authorities in Northern Ireland, totalling 443 UK NUTS4 regions. NUTS4 areas in Scotland do not match exactly the Local Authority Areas. There are more NUTS4 areas in Scotland than Local Authorities. In the analysis Scottish Local Authorities are used in place of NUTS4 giving 434 local areas in the UK.

Table 1: Selected regional and local road transport consumption statistics 2007

Thousand tonnes of fuel

Government Office Regions and NUTS4 Areas	Buses	Diesel Cars	Petrol Cars	Motor cycles	HGV	Diesel LGV	Petrol LGV	Personal *(1)*	Freight *(2)*	Total
Blaenau Gwent	0.8	4.9	10.6	0.1	3.5	3.2	0.2	16.4	6.9	23.4
Cardiff	5.9	40.2	102.4	0.7	28.1	23.9	1.7	149.1	53.7	202.8
Merthyr Tydfil	0.7	5.6	12.2	0.1	4.1	4.4	0.3	18.6	8.8	27.4
Newport	3.4	27.8	53.1	0.5	35.4	19.1	1.4	84.8	55.9	140.7
TOTAL WALES	**64.5**	**390.3**	**829.9**	**7.8**	**338.4**	**297.5**	**21.4**	**1,292.4**	**657.3**	**1,949.8**
Orkney Islands	0.6	1.8	3.5	0.0	1.3	1.8	0.1	6.0	3.2	9.2
Glasgow City	13.0	47.5	109.1	0.6	43.9	36.0	2.6	170.2	82.5	252.7
Eilean Siar (Western Isles)	0.8	2.5	4.8	0.0	1.9	2.7	0.2	8.2	4.9	13.1
Dumfries & Galloway	5.0	27.8	46.7	0.4	83.4	21.8	1.6	79.9	106.8	186.7
TOTAL SCOTLAND	**146.0**	**591.8**	**1,277.3**	**10.0**	**717.6**	**470.4**	**34.1**	**2,025.2**	**1,222.1**	**3,247.2**
Alnwick	1.1	4.5	8.4	0.1	4.9	3.7	0.3	14.0	8.8	22.9
Newcastle upon Tyne	9.0	23.2	70.2	0.4	12.3	19.1	1.4	102.7	32.9	135.6
Wansbeck	1.5	3.9	9.6	0.1	2.0	2.8	0.2	15.1	5.0	20.2
Gateshead	8.9	24.0	67.1	0.5	18.2	21.2	1.5	100.5	40.9	141.5
TOTAL NORTH EAST	**80.5**	**258.5**	**658.9**	**4.8**	**214.9**	**213.3**	**15.4**	**1,002.6**	**443.7**	**1,446.2**
Barrow-in-Furness	1.1	2.6	7.5	0.1	1.9	2.2	0.2	11.4	4.3	15.7
Manchester	10.0	37.1	97.7	0.8	24.4	27.1	2.0	145.5	53.4	199.0
Copeland	1.2	4.8	11.0	0.2	3.1	3.5	0.3	17.2	6.8	24.0
Warrington	4.3	37.6	72.5	0.5	69.3	24.4	1.8	114.9	95.4	210.3
TOTAL NORTH WEST	**141.4**	**790.8**	**1,742.5**	**14.7**	**956.4**	**572.7**	**41.5**	**2,689.4**	**1,570.6**	**4,260.0**
Craven	1.6	8.9	17.9	0.2	9.9	6.2	0.5	28.7	16.6	45.3
Leeds	15.1	86.5	201.1	1.6	106.3	71.1	5.2	304.3	182.6	486.9
Scarborough	2.5	9.8	23.2	0.3	5.7	8.1	0.6	35.8	14.4	50.2
Doncaster	8.0	40.9	88.6	0.9	92.6	35.0	2.5	138.4	130.1	268.5
TOTAL YORKSHIRE & THE HUMBER	**105.6**	**563.4**	**1,270.7**	**12.9**	**841.6**	**485.5**	**35.1**	**1,952.6**	**1,362.2**	**3,314.8**
Oadby and Wigston	0.8	2.2	7.1	0.1	1.1	1.9	0.1	10.2	3.2	13.3
South Northamptonshire	2.6	34.4	52.6	0.4	68.3	23.0	1.5	90.0	92.8	182.8
Lincoln	1.0	3.0	8.6	0.2	2.7	2.8	0.2	12.8	5.7	18.5
Daventry	2.2	31.1	49.7	0.3	75.7	23.4	1.6	83.4	100.7	184.0
TOTAL EAST MIDLANDS	**78.3**	**566.5**	**1,184.3**	**12.1**	**892.5**	**444.9**	**31.5**	**1,841.3**	**1,368.9**	**3,210.2**
Oswestry	1.1	4.2	8.3	0.1	5.9	3.6	0.3	13.7	9.7	23.5
Birmingham	24.7	73.7	219.4	1.9	51.1	62.5	4.6	319.6	118.3	437.9
Tamworth	1.1	3.8	11.4	0.1	2.5	3.2	0.2	16.4	5.9	22.3
North Warwickshire	2.3	40.3	57.9	0.3	75.7	26.5	1.8	100.9	104.0	204.9
TOTAL WEST MIDLANDS	**129.5**	**696.3**	**1,510.8**	**12.8**	**859.4**	**544.3**	**38.8**	**2,349.4**	**1,442.5**	**3,791.9**

Table 1: Selected regional and local road transport consumption statistics 2007 (continued)

Thousand tonnes of fuel

Government Office Regions and NUTS4 Areas	Buses	Diesel Cars	Petrol Cars	Motor cycles	HGV	Diesel LGV	Petrol LGV	Personal *(1)*	Freight *(2)*	Total
Harlow	1.3	5.3	14.3	0.2	4.8	4.5	0.3	21.0	9.6	30.6
Huntingdonshire	4.0	39.0	70.2	0.6	79.5	28.6	1.9	113.9	110.0	224.0
Watford	1.2	5.6	16.3	0.2	2.8	4.5	0.3	23.2	7.7	30.9
Epping Forest	4.2	38.2	60.8	0.7	60.3	29.4	2.1	103.9	91.8	195.7
TOTAL EAST OF ENGLAND	**113.3**	**779.6**	**1,615.7**	**18.5**	**930.7**	**624.2**	**44.5**	**2,527.1**	**1,599.3**	**4,126.4**
City of London	1.7	2.5	8.4	0.7	1.5	3.5	0.3	13.3	5.2	18.5
Hillingdon	6.8	30.5	78.3	1.3	20.5	22.2	1.6	116.8	44.2	161.1
Harrow	2.5	8.1	25.5	0.4	3.2	6.3	0.5	36.4	10.0	46.4
Havering	4.0	19.9	48.3	0.9	35.5	17.3	1.3	73.1	54.0	127.1
TOTAL GREATER LONDON	**152.1**	**392.8**	**1,216.5**	**35.1**	**279.5**	**396.1**	**29.2**	**1,796.5**	**704.8**	**2,501.3**
Gosport	0.9	3.1	10.2	0.2	1.0	2.9	0.2	14.3	4.1	18.4
West Berkshire	4.5	56.6	88.2	0.7	68.0	30.5	2.1	150.0	100.6	250.6
Hastings	1.1	3.8	12.5	0.2	1.3	3.6	0.3	17.5	5.1	22.6
Cherwell	3.0	42.2	69.9	0.6	63.6	25.8	1.8	115.7	91.2	206.8
TOTAL SOUTH EAST	**146.5**	**1,287.7**	**2,574.1**	**29.8**	**1,141.0**	**905.9**	**64.4**	**4,038.0**	**2,111.3**	**6,149.3**
Isles of Scilly	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
South Gloucestershire	6.0	62.3	108.2	1.3	76.7	39.3	2.7	177.9	118.8	296.7
Weymouth and Portland	1.4	3.5	10.6	0.3	1.6	3.3	0.2	15.8	5.1	20.9
North Wiltshire	3.8	35.3	58.4	0.7	42.0	21.4	1.5	98.2	64.9	163.1
TOTAL SOUTH WEST	**102.5**	**697.9**	**1,424.1**	**20.2**	**660.5**	**511.6**	**36.7**	**2,244.7**	**1,208.8**	**3,453.5**
Carrickfergus	0.1	2.3	6.0	. .	3.2	2.5	0.2	8.4	5.8	14.2
Belfast	1.1	17.7	48.1	. .	28.3	6.0	0.4	66.9	34.8	101.7
North Down	0.2	6.4	17.3	. .	4.7	1.8	0.1	23.9	6.6	30.5
Lisburn	0.8	20.5	38.0	. .	39.4	9.4	0.7	59.4	49.5	108.8
TOTAL NORTHERN IRELAND	**10.7**	**278.9**	**566.8**	**. .**	**439.1**	**140.4**	**10.2**	**856.4**	**589.8**	**1,446.2**
GREAT BRITAIN	**1,260.3**	**7,015.5**	**15,304.7**	**178.6**	**7,832.4**	**5,466.6**	**392.5**	**23,759.1**	**13,691.5**	**37,450.6**
UNITED KINGDOM	**1,271.0**	**7,294.4**	**15,871.5**	**178.6**	**8,271.5**	**5,607.0**	**402.8**	**24,615.5**	**14,281.2**	**38,896.8**

(1) Personal travel includes buses, diesel cars, petrol cars and motorcycles. The UK total excludes motorcycles in Northern Ireland.

(2) Freight includes HGV, diesel LGV and petrol LGV.

DECC Electricity and Gas consumption data in small areas

Lower Layer Super Output Area data

Each year, in February, DECC publish electricity and gas consumption statistics for England and Wales at a Middle Layer Super Output Area (MLSOA) level, and for Scotland at an Intermediate Geography Zone (IGZ) level. However, the energy data suppliers have recently granted DECC permission to publish the electricity and gas consumption data at a Lower Layer Super Output Area (LLSOA) level for England and Wales.

LLSOAs are the building blocks of the MLSOAs, designed to be of consistent size across the country, and are not subject to regular boundary change. There are 34,378 LLSOAs in England and 1,896 in Wales, each with a minimum population of 1,000 people. Further information on these geographies are available at:
www.ons.gov.uk/about-statistics/geography/products/geog-products-area/names-codes/soa/index.html

The electricity and gas consumption data at MLSOA level enables councils to monitor and target small areas for further interventions as parts of their local energy strategies, and enhance implementations of energy efficiency programmes and reduction of carbon dioxide emissions. Therefore, publishing the consumption data at an LLSOA level would enable even more accurate monitoring and targeting of energy efficiency policies.

Several councils and other interested parties had already asked DECC about producing the electricity and gas consumption data at the LLSOA level for their local authority. As such, DECC decided to launch a pilot study and consumption data at the LLSOA level were produced for the following local authorities:

- Bristol
- Leeds
- Middlesbrough
- Shrewsbury and Atcham
- South Shropshire
- West Wiltshire

The LLSOA data were produced in a very similar format to the MLSOA data and can be found on the website at: www.berr.gov.uk/files/file51841.xls. Each dataset contains, for every LLSOA in the local authority, information on total electricity and gas consumption, total number of meters and average consumption. The electricity data are also split by domestic standard tariff and domestic off peak based tariffs such as Economy 7 for electricity meters. However, the consumption data are only available for domestic customers. Due to data disclosure issues, consumption relating to commercial/industrial consumers – who are generally larger energy users, and there are few in each LLSOA - could not be included in the datasets.

The LLSOA consumption data for the six above named local authorities have now been sent to the relevant councils and interested parties along with a brief feedback questionnaire. The questionnaire focuses around what the LLSOA data will be used for and what extra benefits it will have over using the MLSOA data only. The purpose of this feedback is to try and understand whether it is worthwhile for DECC to produce LLSOA data for all local authorities in England and Wales in the future. DECC have already received some feedback on the LLSOA data, which has generally been positive and indicative that these data are useful to local authorities and others.

It is likely that DECC will repeat this work for other selected local authorities in the coming months. Therefore, if you would like a particular local authority to be included in this second stage of production, or you have any other comments on this work, then please contact Laura Williams using the details below. Whilst we will continue to provide this work free of charge, the more details we can have for any specific local authority will be very helpful in prioritising work at the LLSOA level.

Neighbourhood Statistics

An article in the March 2009 edition of Energy Trends announced that the 2005 and 2006 MLSOA data had been incorporated onto the Neighbourhood Statistics database. This database allows users to analyse different official statistical datasets at a local level, enabling a greater level of analytical integration. DECC are now able to advise users that the 2007 MLSOA data, released on our website in February 2009, will be incorporated onto the Neighbourhood Statistics database at the end of June 2009. The Neighbourhood Statistics data can be found at:
www.neighbourhood.statistics.gov.uk/dissemination/

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Natural Gas Liquid imports from Norway

Background

Total oil production comprises crude oil and natural gas liquids (NGLs). NGLs consist of ethane, propane, butane and condensates. Once these NGLs such as propane and butane leave the processing terminal as products they are referred to as liquefied petroleum gas (LPG).

In the last quarter of 2007 the Tampen Link (see below) became operational and for the first time the UK began importing NGLs from Norway. As the UK had never had NGL imports before the upstream reporting system, the Petroleum Production Reporting System, was not designed to capture these data. During the latter part of 2008 it became apparent that the reported UK production of NGLs was too high. The Norwegian imports have now been taken out of the reported UK production and the monthly NGL production figures back to 2007 have now been revised downwards to take account of these imports. Overall supply of NGLs to the UK market remains unchanged.

Statfjord / Tampen Link

Statfjord is an oil field that straddles the UK/Norwegian median line in the North Sea. The UK owns about 14½ per cent of the field with the remainder owned by Norway. The oil reserves in Statfjord's reservoirs are declining and about 60 per cent of the oil has so far been extracted. In order to enhance the amount of oil that can be extracted from Statfjord, gas and water has been injected into the field to maintain reservoir pressure.

By reducing pressure in the reservoirs and on the platforms, large volumes of previously-injected gas can be recovered. Gas will also be released from the remaining non-recoverable oil.

This late life project called for the construction of a new gas export facility to the UK. As a result a 23 kilometre pipeline, called the Tampen Link, was laid from Statfjord B to FLAGS (Far North Liquids and Gas System) which runs from the UK's Brent field, near Statfjord, to St Fergus in Scotland. This pipeline became operational in October 2007 and the Norwegian imports associated with this wet stream gas have now been taken out of the previously reported UK production.

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Recent and forthcoming publications of interest to users of energy statistics

Digest of United Kingdom Energy Statistics

This annual publication provides essential information for everyone involved in energy, from economists to environmentalists, and from energy suppliers to energy users. The 2009 edition will be published on 30 July 2009. With extensive tables, charts and commentary covering all the major aspects of energy, it provides a detailed and comprehensive picture of energy production and use over the last 5 years. It will be available to purchase from The Stationery Office and it can also be accessed on the Internet (along with additional annexes and key series back to 1970) at: www.berr.gov.uk/energy/statistics/publications/index.html

Digest of United Kingdom Energy Statistics: 60th anniversary issue

This publication marks 60 years since the publication of the 1948 and 1949 energy statistical series in 1950 by the Ministry of Fuel and Power. The publication will be published on 30 July 2009 and will be available free from DECC. It can also be accessed on the Internet at: www.berr.gov.uk/energy/statistics/publications/index.html

Energy Flow Chart

This annual publication illustrates the flow of primary fuels from home production and imports to their eventual final uses. The flows are shown in their original state and after being converted into different kinds of energy by the secondary fuel producers, and are measured in million tonnes of oil equivalent, with the widths of the bands approximately proportional to the size of the flows they represent. The 2009 edition of the chart, showing the flows for 2008, will be published on 30 July 2009. The Chart will be available free from DECC; it can also be accessed on the Internet at: www.berr.gov.uk/energy/statistics/publications/flowchart/page37716.html

UK Energy in Brief

This annual publication summarises the latest statistics on energy production, consumption and prices in the United Kingdom. The figures are taken form the Digest of United Kingdom Energy Statistics (see above). The 2009 edition will be published on 30 July 2009 and will be available free from DECC. It can also be accessed on the Internet at: www.berr.gov.uk/energy/statistics/publications/in-brief/page17222.html

Energy Consumption in the UK

This annual Internet only publication brings together statistics from a variety of sources to produce a comprehensive review of energy consumption in the UK since the 1970s. It includes an analysis of the factors driving the changes in energy consumption, the impact of increasing activity, increased efficiency and structural change in the economy. The next update will take place on 30 July 2009; the range of tables can be accessed on the Internet at: www.berr.gov.uk/energy/statistics/publications/ecuk/page17658.html

UK Energy Sector Indicators

This annual publication is designed to show in headline form the progress that has been made in implementing the four key energy policy goals as set out in the 2003 Energy White Paper, and reiterated in the 2007 Energy White Paper. The 4 key indicators and 28 further supporting indicators will be published on 30 July 2009 and will be available free from DECC. It can also be accessed on the Internet at: www.berr.gov.uk/energy/statistics/publications/index.html

A further set of background indicators (charts and tables) will be available on the Internet only, web address as above, in October 2009.

1 TOTAL ENERGY

TABLE 1.1. Indigenous production of primary fuels

Million tonnes of oil equivalent

						Primary electricity	
		Total	Coal[1,2]	Petroleum[3]	Natural gas[4]	Nuclear	Wind and natural flow hydro[5]
2004		238.4	17.2	104.5	97.9	18.16	0.58
2005		216.5	14.8	92.9	89.8	18.37	0.67
2006		197.0	13.4	84.0	81.7	17.13	0.76
2007		185.9	12.9	84.2	73.9	14.04	0.89
2008 p		176.4r	13.5	78.6r	71.5	11.69	1.04
Per cent change		*-5.1*	*+5.2*	*-6.6*	*-3.2*	*-16.7*	*+17.1*
2008	Quarter 1	47.2r	2.9	20.5r	20.2	3.22	0.33
	Quarter 2	44.8r	3.5	20.4r	18.0	2.72	0.19
	Quarter 3	38.8r	3.4	17.9r	14.5	2.69	0.21
	Quarter 4	45.7r	3.7	19.8r	18.7	3.06	0.33
2009	Quarter 1 p	45.3r	3.1	20.2r	17.8r	3.79	0.34r
Per cent change[6]		*-3.9*	*+7.9*	*-1.4*	*-11.8*	*+17.6*	*+3.8*

1. Includes solid renewable sources (wood, straw and waste), a small amount of renewable primary heat sources (solar, geothermal etc) and an estimate for slurry.
2. Calculated on statistical months; data for 2008 is 4 days longer than the standard SRP for January to December 2008. This is to enable a smooth transition to publishing data on a calendar month basis from January 2009 rather than 4 and 5 week statistical reporting periods (SRPs).
3. Crude oil, offshore and land, plus condensates and petroleum gases derived at onshore treatment plants.
4. Includes colliery methane, landfill gas and sewage gas. Excludes gas flared or re-injected.
5. Includes generation by solar PV.
6. Percentage change in the first quarter of 2009 compared with a year earlier.

1 TOTAL ENERGY

TABLE 1.2 Inland energy consumption: primary fuel input basis

Million tonnes of oil equivalent

						Primary electricity								Primary electricity		
					Natural		Wind and natural	Net				Natural		Wind and natural	Net
		Total	Coal[1]	Petroleum[2]	gas[3]	Nuclear	flow hydro[4]	imports	Total	Coal	Petroleum	gas	Nuclear	flow hydro	imports
		Unadjusted[5]							*Seasonally adjusted and temperature corrected*[6,7,9] *(annualised rates)*						
2004		233.6	41.0	75.1	98.1	18.2	0.58	0.64	240.2	41.7	76.1	103.0	18.2	0.58	0.64
2005		234.9	42.3	77.0	95.8	18.4	0.67	0.72	239.6	43.0	77.6	99.1	18.4	0.67	0.72
2006		232.2	45.9	77.0	90.7	17.1	0.76	0.65	235.9	46.7	78.1	92.5	17.1	0.76	0.65
2007		226.1	43.5	75.3	91.9	14.0	0.89	0.45	231.1	44.2	76.6	95.0	14.0	0.89	0.45
2008 p		223.5r	40.3	74.7r	94.8	11.7	1.04	0.95	224.6r	40.5	75.1r	95.3	11.7	1.04	0.95
Per cent change		*-1.2*	*-7.3*	*-0.9*	*+3.1*	*-16.7*	*+17.1*	*(+)*	*-2.8*	*-8.4*	*-2.0*	*+0.4*	*-16.7*	*+17.1*	*(+)*
2008	Quarter 1	65.3r	11.3	19.0r	31.3	3.2	0.33	0.21	231.0r	40.4	76.9r	99.6	12.3	1.03	0.83
	Quarter 2	51.5r	9.3	18.7r	20.3	2.7	0.19	0.31	228.6r	44.1	75.6r	95.6	11.2	0.97	1.22
	Quarter 3	46.4r	8.0	18.6r	16.5	2.7	0.21	0.32	221.2r	39.0	74.3r	94.8	10.8	1.09	1.28
	Quarter 4	60.2r	11.7	18.3r	26.7	3.1	0.33	0.11	217.5r	38.7	73.4r	91.3	12.6	1.10	0.46
2009	Quarter 1 p	62.6r	11.9	18.0r	28.4	3.8	0.34r	0.05	215.2r	41.9r	71.6r	86.0r	14.5	1.06r	0.19
Per cent change[8]		*-4.2*	*+5.7*	*-4.9*	*-9.2*	*+17.6*	*+3.8*	*-76.6*	*-6.8*	*+3.7*	*-7.0*	*-13.6*	*+18.5*	*+3.2*	*-76.6*

1. Includes solid renewable sources (wood, straw and waste), a small amount of renewable primary heat sources (solar, geothermal, etc.) and net foreign trade and stock changes in other solid fuels.
2. Inland deliveries for energy use, plus refinery fuel and losses, minus the differences between deliveries and actual consumption at power stations.
3. Includes gas used during production, colliery methane, landfill gas and sewage gas. Excludes gas flared or re-injected and non-energy use of gas.
4. Includes generation by solar PV. Excludes generation from pumped storage stations.
5. Not seasonally adjusted or temperature corrected.
6. Coal, petroleum and natural gas are temperature corrected.
7. For details of temperature correction see http://stats.berr.gov.uk/energystats/dukes08_longterm.pdf Seasonal and temperature adjustment factors were reassessed in March 2009
8. Percentage change in the first quarter of 2009 compared with a year earlier.
9. National Grid have changed their methodology for calculating the temperature correction of gas. More information on the methodology used by National Grid can be found at: www.nationalgrid.com/uk/Gas/OperationalInfo/operationaldocuments/Gas+Demand+and+Supply+Forecasting+Methodology

1 TOTAL ENERGY

Table 1.3a Supply and use of fuels

Thousand tonnes of oil equivalent

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change [1]*
SUPPLY													
Indigenous production	186,017r	176,537r	*-5.1*	49,684r	46,726r	41,188r	48,419r	47,344r	44,755r	38,598r	45,840r	45,369	*-4.2*
Imports	149,225r	157,611r	*+5.6*	39,432r	34,196r	35,838r	39,759r	41,639r	37,485r	36,664r	41,822r	41,106	*-1.3*
Exports	-99,935r	-95,668r	*-4.3*	-23,477r	-26,085r	-24,965r	-25,407r	-22,717r	-24,828r	-23,635r	-24,487r	-22,724	*+0.0*
Marine bunkers	-2,513	-2,735r	*+8.8*	-681	-594	-647	-591	-623r	-678r	-712	-722r	-546	*-12.2*
Stock change [2]	+4,258r	-1,860r		+2,471r	-945r	-253r	+2,985r	+2,624r	-2,578r	-2,251r	+345r	+2,077	
Primary supply	237,053r	233,885r	*-1.3*	67,428r	53,298r	51,162r	65,165r	68,267r	54,157r	48,664r	62,798r	65,282	*-4.4*
Statistical difference [3]	+240r	-134r		-82r	+31r	+208r	+84r	-37r	-106r	+253r	-243r	-119	
Primary demand	236,812r	234,019r	*-1.2*	67,510r	53,267r	50,954r	65,082r	68,304r	54,263r	48,411r	63,042r	65,401	*-4.2*
Transfers [4]	-110	-105r		-345	+77	-70	+229	-25r	-30r	-30r	-21r	+55	
TRANSFORMATION	-52,997r	-51,319r	*-3.2*	-14,330r	-12,305r	-11,933r	-14,429r	-14,130r	-12,296r	-11,290r	-13,604r	-13,713	*-2.9*
Electricity generation	-49,419r	-47,263r	*-4.4*	-13,257r	-11,183r	-11,195r	-13,783r	-13,075r	-11,099r	-10,341r	-12,748r	-13,010	*-0.5*
Heat generation	-966	-966	-	-296	-210	-183	-276	-292	-209	-184	-280	-292	*-0.1*
Petroleum refineries	279r	-249r	*(-)*	-54r	-156r	155r	333r	-27r	-195r	-32r	6r	98	*(-)*
Coke manufacture	-150r	-227	*+51.6*	-39	-41	-37	-32	-46	-93	-47	-41	-48	*+3.9*
Blast furnaces	-2,747	-2,609	*-5.0*	-691	-716	-670	-669	-692	-704	-679	-534	-459	*-33.6*
Patent fuel manufacture	5	-6	*(-)*	7	1	-	-r	3	5	-7	-7	-3	*(+)*
Energy industry use	14,507r	14,021r	*-3.3*	3,609r	3,641r	3,494r	3,762r	3,677r	3,495r	3,250r	3,599r	3,456	*-6.0*
Losses	3,530r	3,975	*+12.6*	1,018r	726r	735r	1,051r	1,131	907	929	1,009	1,170	*+3.5*
FINAL CONSUMPTION	165,668r	164,599r	*-0.6*	48,207r	36,672r	34,721r	46,068r	49,341r	37,536r	32,913r	44,810r	47,116	*-4.5*
Iron & steel	1,696r	1,685r	*-0.6*	464r	440r	389r	402	450r	454r	416r	365r	296	*-34.4*
Other industries	29,825r	28,519r	*-4.4*	8,344r	6,680r	6,551r	8,251r	8,052r	6,662r	6,378r	7,427r	7,602	*-5.6*
Transport	60,129r	58,803r	*-2.2*	14,418r	15,434r	15,705r	14,571r	14,783r	14,959r	14,855r	14,206r	13,996	*-5.3*
Domestic	44,248r	45,985r	*+3.9*	15,964r	7,681r	5,591r	15,013r	16,858r	8,520r	5,433r	15,174r	16,484	*-2.2*
Other Final Users	19,341r	19,424r	*+0.4*	6,201r	4,107	3,826r	5,207r	6,375r	4,315r	3,531r	5,202r	6,047	*-5.1*
Non energy use	10,429r	10,183r	*-2.4*	2,816r	2,330r	2,659r	2,625r	2,822r	2,625r	2,300r	2,436r	2,691	*-4.7*

1. Percentage change in the first quarter of 2009 compared with a year earlier.
2. Stock fall (+), stock rise (-).
3. Primary supply minus primary demand.
4. Annual transfers should ideally be zero. For manufactured fuels differences occur in the rescreening of coke to breeze. For oil and petroleum products differences arise due to small variations in the calorific values used.

1 TOTAL ENERGY

Table 1.3b Supply and use of fuels

Thousand tonnes of oil equivalent

	2008 Quarter 1									2009 Quarter 1 p								
	Coal	Manufactured fuels[4]	Primary oil	Petroleum Products	Natural gas[5]	Rennewables & waste[6]	Primary electricity	Electricity	Heat sold	Coal	Manufactured fuels[4]	Primary oil	Petroleum Products	Natural gas[5]	Rennewables & waste[6]	Primary electricity	Electricity	Heat sold
SUPPLY																		
Indigenous production	2,354	-	20,478	-	19,756	1,208	3,547	-	-	2,582	-	20,005	-	17,391	1,268	4,124	-	-
Imports	7,169	119	15,379	7,381	11,238	120	-	233	-	8,090	19	14,193	6,380r	12,063	243	-	121	-
Exports	-112	-39	-13,487	-7,205	-1,850	-	-	-25	-	-123	-31	-12,257	-7,253	-2,989	-	-	-72	-
Marine bunkers	-	-	-	-623	-	-	-	-	-	-	-	-	-546	-	-	-	-	-
Stock change[1]	+1,142	+49	-466	-11	+1,909	-	-	-	-	+596	-13	-56	-163	+1,714	-	-	-	-
Primary supply	10,553	130	21,904	-457	31,054	1,329	3,547	208	-	11,145	-25	21,885	-1,583	28,178	1,510	4,124	49	-
Statistical difference[2]	+42	-3	-261	-12	+162	-	-	+35	-	+41	-6	-175	+10	+19	-	-	-8	-
Primary demand	10,511	133	22,165	-445	30,892	1,329	3,547	173	-	11,104	-20	22,060	-1,593	28,159	1,510	4,124	57	-
Transfers[3]	-	-33	-1,096	+1,106	-1	-	-325	+325	-	-	-22	-1,003	+1,083	-	-	-337	+337	-
TRANSFORMATION	-10,053	445	-21,068	20,734	-9,283	-898	-3,222	8,858	358	-10,639	450	-21,057	20,821	-7,461	-983	-3,787	8,584	358
Electricity generation	-8,624	-215	-	-231	-8,743	-898	-3,222	8,858	-	-9,492	-134	-	-277	-6,921	-983	-3,787	8,584	-
Heat generation	-83	-13	-	-15	-540	-	-	-	358	-82	-13	-	-15	-540	-	-	-	358
Petroleum refineries	-	-	-21,068	21,041	-	-	-	-	-	-	-	-21,057	21,154	-	-	-	-	-
Coke manufacture	-1,065	1,019	-	-	-	-	-	-	-	-889	841	-	-	-	-	-	-	-
Blast furnaces	-225	-406	-	-61	-	-	-	-	-	-109	-309	-	-42	-	-	-	-	-
Patent fuel manufacture	-56	59	-	-	-	-	-	-	-	-67	64	-	-	-	-	-	-	-
Energy industry use	-	222	-	1,195	1,657	-	-	587	15	-	159	-	1,118	1,578	-	-	586	15
Losses	-	39	-	-	383	-	-	709	-	-	31	-	-	396	-	-	743	-
FINAL CONSUMPTION	456	283	-	20,200	19,569	430	-	8,060	343	465	218	-	19,194	18,720	527	-	7,649	343
Iron & steel	-	164	-	1	179	-	-	106	-	-	100	-	1	119	-	-	76	-
Other industries	324	57	-	1,684	3,290	90	-	2,435	173	324	50	-	1,656	3,068	83	-	2,248	173
Transport	-	-	-	14,499	-	104	-	179	-	-	-	-	13,609	-	210	-	177	-
Domestic	131	63	-	1,006	12,506	172	-	2,960	20	137	68	-	1,038	12,100	171	-	2,949	20
Other final users	1	-	-	412	3,368	65	-	2,379	150	4	-	-	424	3,208	63	-	2,199	150
Non energy use	-	-	-	2,598	225	-	-	-	-	-	-	-	2,466	225	-	-	-	-

1. Stock fall (+), stock rise (-).
2. Primary supply minus primary demand.
3. Annual transfers should ideally be zero. For manufactured fuels differences occur in the rescreening of coke to breeze. For oil and petroleum products differences arise due to small variations in the calorific values used
4. Includes all manufactured solid fuels, benzole, tars, coke oven gas and blast furnace gas
5. Inludes colliery methane.
6. Includes geothermal, solar heat and biofuels for transport.

2 SOLID FUEL AND DERIVED GASES

Table 2.1 Supply and consumption of coal[1]

Thousand tonnes

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change*[2]
SUPPLY													
Indigenous production	17,007	17,912	*+5.3*	4,002	4,402	4,590	4,013	3,734	4,597	4,565	5,015	4,101	*+9.8*
Deep mined	7,674	8,034	*+4.7*	1,784	2,039	2,210	1,641	1,574	2,235	1,938	2,288	1,620	*+2.9*
Opencast	8,866	9,429	*+6.3*	2,102	2,240	2,258	2,266	2,048	2,245	2,510	2,624	2,356	*+15.0*
Other sources	467	449	*-4*	117	122	122	106	112	117	117	102	125	*+11.4*
Imports	43,365	43,888	*+1.2*	12,074	10,177	9,747	11,366	11,104	9,889	10,724	12,171	12,529	*+12.8*
Exports	521	723	*+39*	155	92	147	126	147	134	226	216	159	*+8.0*
Stock change[3]	+3,014	-2,869		+1,640	-2,027	-955	+4,355	+1,727	-1,007	-3,688	+98	+959	
Total supply	62,866	58,208	*-7.4*	17,561	12,460	13,235	19,609	16,419	13,345	11,376	17,069	17,429	*+6.2*
Statistical difference	-20	-32		-42	-29	47	4	-9	-9	-1	-13	-6	
Total demand	62,885	58,240	*-7.4*	17,604	12,489	13,188	19,605	16,428	13,354	11,377	17,082	17,435	*+6.1*
TRANSFORMATION	60,447	55,660	*-7.9*	16,954	11,934	12,534	19,025	15,763	12,693	10,794	16,410	16,760	*+6.3*
Electricity generation	52,571	47,819	*-9.0*	14,974	9,953	10,598	17,046	13,779	10,640	8,838	14,561	15,164	*+10.1*
Heat generation[4]	456	456	-	137	105	92	122	132	103	94	128	132	-
Coke manufacture	5,933	5,875	*-1.0*	1,504	1,497	1,472	1,459	1,463	1,538	1,458	1,416	1,220	*-16.6*
Blast furnaces	1,242	1,170	*-5.8*	290	320	305	327	309	336	316	210	149	*(-)*
Patent fuel manufacture	245	340	*+39*	48	59	66	72	80	76	88	96	95	*+18.5*
Energy industry use	5	5		3	-	1	1	2	1	-	2	1	
FINAL CONSUMPTION	2,433	2,575	*+5.8*	647	554	653	578	663	660	583	669	674	*+1.7*
Iron & steel	-	-		-	-	-	-	-	-	-	-	-	
Other industries	1,759	1,873	*+6.5*	443	434	471	411	485	506	418	464	486	*+0.1*
Domestic	648	691	*+7*	197	112	178	162	175	151	164	202	182	*+4.2*
Other final users	19	11	*-46*	6	7	3	3	2	4	1	3	5	*(+)*
Stocks at end of period													
Distributed stocks	13,587	16,133	*+18.7*	14,891	16,749	17,882	13,587	11,642	12,568	16,415	16,133	15,631	*+34.3*
Of which:													
Major power producers	11,447	14,863	*+29.8*	13,453	15,087	15,933	11,447	10,073	11,193	15,025	14,863	13,594	*+34.9*
Coke ovens	1,489	1,165	*-21.8*	1,209	1,034	1,337	1,489	1,133	1,187	1,185	1,165	1,202	*+6.1*
Undistributed stocks	691	820	*+19*	752	955	823	691	714	795	636	820	884	*+23.9*
Total stocks[5]	14,278	16,952	*+18.7*	15,643	17,705	18,705	14,278	12,356	13,363	17,051	16,952	16,515	*+33.7*

1. 2008 is 4 days longer than the standard 52 week statistical reporting period (SRP) for January to December 2008. This is to enable a smooth transition to publishing data on a calendar month basis from January 2009 rather than 4 and 5 week SRPs used for previous years.

2. Percentage change in the first quarter of 2009 compared with a year earlier.

3. Stock fall (+), stock rise (-).

4. For Heat generation and non energy use, the 2008 figures currently shown are the 2007 figures carried forward - these will be updated in the next edition.

5. For some quarters, closing stocks may not be consistent with stock changes, due to additional stock adjustments

2 SOLID FUEL AND DERIVED GASES

Table 2.2 Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels [1]

Thousand tonnes

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change* [5]
SUPPLY													
Indigenous production	4,703	4,661	*-0.9*	1,186	1,181	1,164	1,172	1,176	1,170	1,165	1,151	996	*-15.3*
Coke oven coke	4,451	4,324	*-2.9*	1,127	1,122	1,102	1,100	1,089	1,086	1,085	1,064	905	*-16.9*
Coke breeze [2]	25	35	*+36.7*	7	5	5	9	10	8	8	9	8	*-20.0*
Other MSF	227	302	*+33*	52	54	57	63	77	76	71	78	83	*+7.9*
Imports	1,076	730	*-32.2*	152	314	327	283	174	309	164	84	24	*(-)*
Exports	279	210	*-25*	39	47	106	87	56	71	39	44	46	*-18.6*
Stock change [3]	-44	-62		+108	-34	-67	-51	+66	-79	+28	-77	-17	
Transfers	-	-		-	-	-	-	-	-	-	-	-	
Total supply	5,456	5,119	*-6.2*	1,406	1,415	1,318	1,317	1,360	1,328	1,317	1,114	958	*-29.5*
Statistical difference	-29	-7		-11	-7	-6	-6	-2	-2	-1	-2	-6	
Total demand	5,485	5,126	*-6.5*	1,417	1,422	1,324	1,322	1,362	1,330	1,318	1,116	964	*-29.2*
TRANSFORMATION	4,392	4,097	*-6.7*	1,124	1,155	1,072	1,042	1,084	1,072	1,070	871	743	*-31.5*
Coke manufacture	-	-		-	-	-	-	-	-	-	-	-	
Blast furnaces	4,392	4,097	*-6.7*	1,124	1,155	1,072	1,042	1,084	1,072	1,070	871	743	*-31.5*
Energy industry use	-	-		-	-	-	-	-	-	-	-	-	
FINAL CONSUMPTION	1,093	1,029	*-5.8*	293	267	252	280	278	258	249	244	221	*-20.5*
Iron & steel	757	635	*-16*	198	188	185	187	172	167	161	134	115	*-33.3*
Other industries	88	95	*+8*	26	18	21	23	23	23	21	27	20	*-14.7*
Domestic	248	299	*+21*	69	62	46	71	82	68	67	83	86	*+4.7*
Stocks at end of period [4]	5,456	5,119	*-6.2*	419	441	519	924	481	553	521	594	616	*+28*

1. 2008 is 4 days longer than the standard 52 week statistical reporting period (SRP) for January to December 2008. This is to enable a smooth transition to publishing data on a calendar month basis from January 2009 rather than 4 and 5 week SRPs used for previous years.

2. At the start of the first quarter of 2007 the Iron and Steel industry has reclassified the majority of coke breeze production to coke oven coke production

3. Stock fall (+), stock rise (-).

4. For some quarters, closing stocks may not be consistent with stock changes, due to additional stock adjustments

5. Percentage change in the first quarter of 2009 compared with a year earlier.

2 SOLID FUEL AND DERIVED GASES

Table 2.3 Supply and consumption of coke oven gas, blast furnace gas, benzole and tars[1]

GWh

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change*[2]
SUPPLY													
Indigenous production	28,176	27,913	*-0.9*	7,129	7,304	6,994	6,750	6,866	7,018	6,853	5,706	4,678	*-31.9*
Coke oven gas	9,651	9,581	*-0.7*	2,432	2,430	2,411	2,378	2,362	2,436	2,322	2,242	1,870	*-20.8*
Blast furnace gas	16,701	16,550	*-0.9*	4,220	4,420	4,116	3,944	4,070	4,102	4,073	3,031	2,425	*-40.4*
Benzole & tars	1,824	1,781	*-2.3*	476	453	466	428	434	480	458	433	382	*-11.9*
Transfers	77	62	*-19*	29	27	16	6	14	9	29	14	35	*(+)*
Total supply	28,253	27,975	*-1.0*	7,157	7,331	7,010	6,756	6,880	7,028	6,882	5,720	4,713	*-31.5*
Statistical difference	-67	-56		-25	-24	-14	-3	-15	-6	-27	-12	-14	
Total demand	28,320	28,031	*-1.0*	7,183	7,355	7,023	6,759	6,894	7,033	6,909	5,732	4,726	*-31.4*
TRANSFORMATION	11,496	11,251	*-2.1*	2,897	2,865	2,874	2,859	2,653	2,578	2,158	1,816	1,706	*-35.7*
Electricity generation	10,898	10,653	*-2.2*	2,748	2,716	2,724	2,710	2,503	2,429	2,008	1,666	1,557	*-37.8*
Heat generation[3]	598	598	-	149	149	149	149	149	149	149	149	149	-
Energy industry use	10,252	10,238	*-0.1*	2,599	2,656	2,524	2,472	2,585	2,484	2,501	2,260	1,855	*-28.3*
Losses	2,516	2,546	*+1.2*	424	572	815	705	454	701	1,007	575	359	*-20.8*
FINAL CONSUMPTION	4,057	3,997	*-1.5*	1,262	1,261	810	723	1,203	1,270	1,243	1,081	806	*-33.0*
Iron & steel	2,012	1,995	*-0.9*	728	756	292	235	711	737	736	601	366	*-48.5*
Other industries	2,045	2,002	*-2.1*	534	505	518	488	492	533	507	480	440	*-10.5*

1. 2008 is 4 days longer than the standard 52 week statistical reporting period (SRP) for January to December 2008. This is to enable a smooth transition to publishing data on a calendar month basis from January 2009 rather than 4 and 5 week SRPs used for previous years.

2. Percentage change in the first quarter of 2009 compared with a year earlier.

3. For Heat generation and non energy use, the 2008 figures currently shown are the 2007 figures carried forward - these will be updated in the next edition.

3 OIL AND OIL PRODUCTS

Table 3.1 Supply and use of crude oil, natural gas liquids and feedstocks[1]

Thousand tonnes

	2007	2008p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009p 1st quarter p	*per cent change*[8]
SUPPLY													
Indigenous production[2]	76,575r	71,665r	*-6.4*	19,968r	19,745r	17,399r	19,464r	18,671r	18,616r	16,300r	18,079r	18,247	*-2.3*
Crude oil	70,357	65,497	*-6.9*	18,178	18,144	16,217	17,818	16,979	16,970	15,049	16,499r	16,730	*-1.5*
NGLs[3]	6,218r	6,168r	*-0.8*	1,790r	1,601r	1,181r	1,646r	1,692r	1,645r	1,250r	1,580r	1,517	*-10.4*
Imports[4]	57,357	60,074	*+4.7*	12,861	13,635	16,288	14,572	14,076r	15,514r	15,961r	14,524r	13,172	*-6.4*
Crude oil & NGLs	50,151	52,115	*+3.9*	11,315	11,465	14,162	13,209	11,837r	13,438r	13,993r	12,847r	11,434	*-3.4*
Feedstocks	7,206	7,959	*+10.4*	1,546	2,170	2,127	1,363	2,239	2,076	1,968	1,677	1,738	*-22.4*
Exports[4]	50,999	48,410	*-5.1*	12,254	12,580	12,699	13,466	12,324	12,399	11,218r	12,469r	11,194	*-9.2*
Crude Oil & NGLs	47,713	44,543	*-6.6*	11,470	11,876	11,920	12,447	11,460r	11,557	10,095r	11,431r	10,457	*-8.7*
Feedstocks	3,287	3,867	*+17.6*	784	704	779	1,019	864	841	1,123	1,038	736	*-14.8*
Stock change[5]	+784	+232		-850	+897	+777	-40	-431r	-121r	+627r	+156r	-55	
Transfers[6]	-2,678	-2,928		-659	-600	-670	-748	-926r	-802r	-525r	-675r	-855	
Total supply	81,038	80,633	*-0.5*	19,065	21,096	21,095	19,782	19,065r	20,808r	21,145r	19,615r	19,316	*+1.3*
Statistical difference[7]	-79	-91		-52	+28	-6	-49	-237r	+37r	+234r	-125r	+12	
Total demand	81,117	80,725	*-0.5*	19,117	21,068	21,101	19,831	19,302r	20,771r	20,911r	19,740r	19,304	-
TRANSFORMATION	81,117	80,725	*-0.5*	19,117	21,068	21,101	19,831	19,302	20,771r	20,911r	19,740r	19,304r	-
Petroleum refineries	81,117	80,725	*-0.5*	19,117	21,068	21,101	19,831	19,302	20,771r	20,911r	19,740r	19,304r	-
Energy industry use	-	-		-	-	-	-	-	-	-	-	-	

1. As there is no use made of primary oils and feedstocks by industries other than the oil and gas extraction and petroleum refining industries, other industry headings have not been included in this table. As such, this table is a summary of the activity of what is known as the Upstream oil industry.
2. Includes offshore and onshore production.
3. Natural Gas Liquids (NGLs) are condensate and petroleum gases derived at onshore treatment plants.
4. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics. Data are subject to further revision as revised information on imports and exports becomes available.
5. Stock fall (+), stock rise (-). Stocks include stocks held at refineries, at oil terminals and also those held in tanks and partially loaded vessels at offshore facilities.
6. Mostly direct disposals to petrochemical plants.
7. Total supply minus total demand.
8. Percentage change in the first quarter of 2009 compared with a year earlier.

3 OIL AND OIL PRODUCTS

Table 3.2 Supply and use of petroleum products

Thousand tonnes

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change*[1]
SUPPLY													
Indigenous production[2]	84,434	83,570	*-1.0*	19,669	21,779	21,973	21,012	20,271	21,391	21,458	20,450r	20,234	*-0.2*
Imports[3]	23,846	23,916	*+0.3*	6,648	6,174	6,088	6,298	6,770	5,768	5,063	6,315r	5,858	*-13.5*
Exports[3]	29,490	28,811	*-2.3*	7,209	7,985	7,560	7,263	6,638	7,664	7,622	6,886r	6,656	*+0.3*
Marine bunkers	2,371	2,594	*+9.4*	640	561	611	560	592	642	675	685r	518	*-12.4*
Stock change[4]	+990	+14		+919	-22	+95	-3	-8	+81	+336	-395r	-172	
Transfers[5]	-547	-208		-256	-225	-122	+56	-65	-13	-80	-49r	+33	
Total supply	76,861	75,887	*-1.3*	19,132	19,160	19,864	19,541	19,738	18,921	18,479	18,749r	18,778	*-4.9*
Statistical difference[6]	-78	-64		-174	-52	+82	+77	-11	-128	+84	-10r	+1	
Total demand	76,939	75,951	*-1.3*	19,306	19,212	19,782	19,463	19,749	19,048	18,395	18,759r	18,777	*-4.9*
TRANSFORMATION	874	1,170	*+33.8*	237	205	208	225	284	304	278	305r	309	*+8.8*
Electricity generation	616	905	*+46.8*	167	137	142	170	210	226	211	258r	254	*+20.8*
Heat generation	57	57	*+0.0*	14	14	14	14	14	14	14	14r	14	-
Blast furnaces	201	208	-	55	53	52	41	59	64	53	33	40	*-32.0*
Energy industry use	4,307	4,531	*+5.2*	925	1,157	1,216	1,185	1,140	1,147	1,122	1,123r	1,059	*-7.1*
Petrolem Refineries	4,307	4,531	*+5.2*	925	1,157	1,216	1,185	1,140	1,147	1,122	1,123r	1,059	*-7.1*
Blast Furnaces	-	-		-	-	-	-	-	-	-	-	-	
Others	-	-		-	-	-	-	-	-	-	-	-	
FINAL CONSUMPTION	71,757	70,249	*-2.1*	18,145	17,851	18,358	18,053	18,325	17,598	16,996	17,331r	17,410	*-5.0*
Iron & steel	19	12	*-38.5*	7	1	4	7	1	4	2	5	1	*(-)*
Other industries	6,199	5,796	*-6.5*	1,530	1,381	1,442	1,847	1,542	1,276	1,436	1,542r	1,509	*-2.2*
Transport	53,571	51,924	*-3.1*	12,853	13,761	14,006	12,968	13,150	13,224	13,070	12,480r	12,346	*-6.1*
Domestic	2,594	2,730	*+5.3*	894	478	408	814	904	555	352	919r	933	*+3.2*
Other final users	1,376	1,305	*-5.1*	516	310	294	256	376	351	234	344r	385	*+2.4*
Non energy use	7,998	8,483	*+6.1*	2,346	1,919	2,204	2,162	2,352	2,188	1,902	2,042r	2,236	*-4.9*

1. Percentage change in the first quarter of 2009 compared with a year earlier.
2. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.
3. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics. Data are subject for further revision as revised information on imports and exports becomes available.
4. Stock fall (+), stock rise (-).
5. Mainly transfers from product to feedstock. T
6. Total supply minus total demand.

3 OIL AND OIL PRODUCTS

Table 3.3 Supply and use of petroleum products - annual data

Thousand tonnes

	2007								2008p							
	Total Petroleum Products	Motor spirit	Gas diesel oil[1,9]	Aviation turbine fuel	Fuel oils	Petroleum gases[2]	Burning oil	Other products[3]	Total Petroleum Products	Motor spirit	Gas diesel oil[1,9]	Aviation turbine fuel	Fuel oils	Petroleum gases[2]	Burning oil	Other products[3]
SUPPLY																
Indigenous production[4]	84,434	21,313	26,397	6,176	11,452	7,553	2,968	8,574	83,570	20,319	26,971	6,549	11,349	7,732	3,092	7,559
Imports[5]	25,208	3,265	8,288	7,708	1,141	867	551	3,389	23,916	3,302	7,468	7,961	1,198	817	528	2,641
Exports[5]	30,017	7,331	6,551	1,221	7,739	1,557	356	5,262	28,811	7,017	7,277	1,908	7,304	1,060	213	4,032
Marine bunkers	2,371	-	901	-	1,471	-	-	-	2,594	-	680	-	1,915	-	-	-
Stock change[6]	+990	+106	+457	+182	+137	+45	+33	+30	+14	+27	-5	-154	+150	+30	+5	-41
Transfers[7]	-547	+59	-240	-338	-419	-32	+363	+60	-208	+17	+11	-300	-186	-54	+288	+16
Total supply	**77,696**	**17,413**	**27,449**	**12,507**	**3,102**	**6,875**	**3,560**	**6,790**	**75,887**	**16,648**	**26,489**	**12,148**	**3,292**	**7,466**	**3,699**	**6,144**
Statistical difference[8]	-67	-181	+228	-67	-126	+53	-70	+97	-64	-30	-91	+6	+1	+59	+6	-14
Total demand	**77,763**	**17,594**	**27,221**	**12,574**	**3,228**	**6,822**	**3,631**	**6,688**	**75,951**	**16,678**	**26,580**	**12,142**	**3,292**	**7,407**	**3,694**	**6,158**
TRANSFORMATION	**874**	**-**	**30**	**-**	**593**	**251**	**-**	**-**	**1,170**	**-**	**22**	**-**	**805**	**343**	**-**	**-**
Electricity generation	616	-	25	-	340	251	-	-	905	-	16	-	545	343	-	-
Heat generation	57	-	5	-	52	-	-	-	57	-	5	-	52	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	201	-	-	-	201	-	-	-	208	-	-	-	208	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy industry use	4,483	-	6	-	1,019	2,154	-	1,303	4,531	-	0	-	853	2,312	-	1,367
FINAL CONSUMPTION	**72,406**	**17,594**	**27,191**	**12,574**	**1,616**	**4,416**	**3,630**	**5,385**	**70,249**	**16,678**	**26,559**	**12,142**	**1,633**	**4,752**	**3,693**	**4,792**
Iron & steel	19	-	-	-	19	-	-	-	12	-	-	-	12	-	-	-
Other industries	6,199	-	2,957	-	912	906	1,424	-	5,796	-	2,883	-	794	673	1,445	-
Transport	53,587	17,594	22,686	12,574	569	119	12	33	51,924	16,678	22,301	12,142	644	125	-	30
Domestic	2,594	-	173	-	-	251	2,170	-	2,730	-	164	-	-	330	2,236	-
Other final users	1,376	-	1,138	-	116	98	24	-	1,305	-	1,010	-	183	104	-	-
Non energy use	8,631	-	238	-	-	3,042	-	5,352	8,483	-	201	-	-	3,520	-	4,761

1. Includes DERV road fuel and middle distillate feedstock destined for use in the petrochemical industry.
2. Includes ethane, propane, butane and other petroleum gases.
3. Includes naphtha, industrial and white spirits, lubricants, bitumen, petroleum waxes, petroleum coke and other oil products.
4. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.
5. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics. Data are subject to further revision as revised information on imports and exports becomes available.
6. Stock fall (+), stock rise (-).
7. Mainly transfers from product to feedstock.
8. Total supply minus total demand.
9. See page 11 of September 2006 Energy Trends for a note concerning changes to this table

3 OIL AND OIL PRODUCTS

Table 3.4 Supply and use of petroleum products - latest quarter

Thousand tonnes

	2008 1st quarter								2009 1st quarter p							
	Total Petroleum Products	Motor spirit	Gas diesel Oil[1,9]	Aviation turbine fuel	Fuel oils	Petroleum gases[2]	Burning oil	Other products[3]	Total Petroleum Products	Motor spirit	Gas diesel Oil[1,9]	Aviation turbine fuel	Fuel oils	Petroleum gases[2]	Burning oil	Other products[3]
SUPPLY																
Indigenous Production[4]	20,271	4,787	5,968	1,299	3,117	2,086	1,041	1,975	20,234	5,054	6,629	1,317	2,456	1,831	1,031	1,916
Imports[5]	6,770	909	2,740	1,840	253	232	140	657	5,858	858	1,579	1,825	477	149	194	775
Exports[5]	6,638	1,422	1,630	264	1,959	263	87	1,014	6,656	1,993	1,589	285	1,650	133	69	936
Marine bunkers	592	-	131	-	461	-	-	-	518	-	145	-	373	-	-	-
Stock change[6]	-8	-107	+25	+139	+24	+18	-9	-98	-172	+66	-9	+53	-133	-8	-67	-74
Transfers[7]	-65	+8	+5	-85	-78	-15	+82	+17	+33	-	+64	-209	-56	-	+215	+19
Total supply	19,738	4,174	6,978	2,929	896	2,057	1,167	1,537	18,778	3,985	6,529	2,700	720	1,839	1,305	1,700
Statistical difference[8]	-11	-26	-3	-9	54	+19	-20	-27	1	+30	+43	-28	-61	+11	-	7
Total demand	19,749	4,201	6,981	2,937	842	2,038	1,187	1,564	18,777	3,955	6,486	2,728	782	1,828	1,305	1,694
TRANSFORMATION	284	-	5	-	193	86	-	-	309	-	5	-	218	86	-	-
Electricity generation	210	-	4	-	121	86	-	-	254	-	4	-	165	86	-	-
Heat generation	14	-	1	-	13	-	-	-	14	-	1	-	13	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	59	-	-	-	59	-	-	-	40	-	-	-	40	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy industry use	1,140	-	-	-	230	550		360	1,059	-	-	-	206	529	-	325
FINAL CONSUMPTION	18,325	4,201	6,975	2,937	419	1,402	1,187	1,204	17,410	3,955	6,481	2,728	358	1,213	1,305	1,369
Iron & steel	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-
Other industries	1,542	-	769	-	208	107	458		1,509	-	670	-	146	153	521	-
Transport	13,150	4,201	5,779	2,937	194	30	3	6	12,346	3,955	5,446	2,728	184	27	3	3
Domestic	904	-	62	-	-	123	720	-	933	-	25	-		127	781	-
Other final users	376	-	321	-	15	33	6	-	385	-	294	-	27	63	-	1
Non energy use	2,352	-	45	-	-	1,109	-	1,198	2,236	-	45	-	-	844	-	1,347

1. Includes DERV road fuel and middle distillate feedstock destined for use in the petrochemical industry.
2. Includes ethane, propane, butane and other petroleum gases.
3. Includes naphtha, industrial and white spirits, lubricants, bitumen, petroleum waxes, petroleum coke and other oil products.
4. Includes refinery production and petroleum gases extracted as products during the production of oil and gas.
5. Foreign trade as recorded by the Petroleum Industry which may differ from the figures published by HM Revenue and Customs in the Overseas Trade Statistics. Data are subject to further revision as revised information on imports and exports becomes available.
6. Stock fall (+), stock rise (-).
7. Mainly transfers from product to feedstock.
8. Total supply minus total demand.
9. See page 11 of September 2006 Energy Trends for a note concerning changes to this table.

3 OIL AND OIL PRODUCTS

Table 3.5 Demand for key petroleum products[1]

Thousand tonnes

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change* [2]
MOTOR SPIRIT													
Total sales	17,594	16,678	*-5.2*	4,337	4,450	4,473	4,334	4,201	4,210	4,111	4,157r	3,955	*-5.8*
By seller:													
Retail sales: [3]	16,796	16,068	*-4.3*	4,231	4,262	4,231	4,072	4,033	4,068	3,900	4,067r	3,821	*-5.3*
hypermarkets [4]	6,879	6,917	*+0.5*	1,644	1,682	1,773	1,780	1,788	1,673	1,648	1,809	1,523	*-14.8*
refiners/other traders	9,916	9,150	*-7.7*	2,587	2,579	2,458	2,292	2,244	2,395	2,252	2,259r	2,298	*+2.4*
Commercial sales [5]	789	611	*-22.6*	106	188	242	253	168	142	211	90r	134	*-20.1*
By grade:													
4-Star/Leaded/LRP [6]	16	12	*-26.4*	4	4	4	3	2	4	3	3	3	*+0.7*
Super Premium Unleaded	819	1,068	*+30.3*	149	222	229	220	209	202	179	479r	482	*(+)*
Premium Unleaded/ULSP [7]	16,758	15,598	*-6.9*	4,184	4,223	4,240	4,111	3,989	4,005	3,929	3,676r	3,471	*-13.0*
GAS DIESEL OIL													
Total sales	27,150	26,580	*-2.1*	6,532	6,878	7,024	6,714	6,981	6,695	6,529	6,375r	6,486	*-7.1*
DERV fuel	21,112	20,614	*-2.4*	5,178	5,305	5,437	5,191	5,368	5,234	5,027	4,984	5,105	*-4.9*
Retail sales: [3]	12,344	12,870	*+4.3*	3,020	3,079	3,133	3,113	3,422	3,212	3,115	3,121	3,202	*-6.4*
hypermarkets [4]	4,355	4,352	*-0.1*	1,022	1,052	1,135	1,146	1,070	1,074	1,054	1,154	1,062	*-0.7*
refiners/other traders	7,989	8,518	*+6.6*	1,997	2,026	1,998	1,967	2,352	2,138	2,061	1,967	2,140	*-9.0*
Commercial sales [5]	8,767	7,743	*-11.7*	2,159	2,229	2,305	2,075	1,947	2,022	1,912	1,862	1,903	*-2.2*
Other gas diesel oil [8]	6,038	5,967	*-1.2*	1,354	1,573	1,587	1,523	1,612	1,461	1,502	1,392r	1,381	*-14.3*
AVIATION FUELS													
Total sales	12,666	12,172	*-3.9*	2,778	3,263	3,561	3,064	2,944	3,085	3,406	2,738	2,731	*-7.2*
Aviation spirit	33	30	*-9.2*	5	9	9	10	6	8	10	5	3	*(-)*
Aviation turbine fuel	12,633	12,142	*-3.9*	2,773	3,254	3,553	3,054	2,937	3,076	3,396	2,733	2,728	*-7.1*
FUEL OIL													
Total Sales	2,209	2,438	*+10.4*	656	491	442	620	612	607	509	711r	576	*-5.9*
Light	626	614	*-1.9*	164	134	162	166	182	224	89	120r	149	*-17.8*
Medium	203	295	*+45.2*	38	27	68	70	101	53	94	47	19	*(-)*
Heavy	1,380	1,529	*+10.8*	454	329	212	385	329	330	327	544r	407	*+23.8*

1. Monthly data for inland deliveries of oil products are available - See DECC web-site. www.berr.gov.uk/energy/statistics/source/oil/page18470.html.
2. Percentage change in the fourth quarter of 2008 compared with a year earlier.
3. Retail sales are those deliveries made to garages etc. mainly for resale to final consumers.
4. Data for sales by hypermarket companies are collected by a separate reporting system, but are consistent with the main data collected from companies.
5. Commercial sales are those deliveries made direct to a consumer for use in their own business, e.g. to bus and coach depots.
6. Sales of leaded petrol ceased from 31st December 1999, with Lead Replacement Petrol being introduced as a replacement fuel.
7. ULSP is Ultra Low Sulphur Petrol introduced during the second half of 2000 and first half of 2001 as a replacement for ordinary Premium grade unleaded petrol.
8. This includes gas diesel oil used for other purposes such as heating and middle distillate feedstock destined for use in the petrochemical industry.

3 OIL AND OIL PRODUCTS

Table 3.6 Stocks of petroleum[1] at end of period

Thousand tonnes

		Crude oil and refinery process oil				Petroleum products					Total stocks		
		Refineries[2]	Terminals[3]	Offshore[4]	Total[5]	Light distillates[6]	Kerosene & gas/diesel[7]	Fuel oils	Other products[8]	Total products	Net bilaterals[9]	Stocks in UK[10]	Total stocks
2005		4,875	1,129	798	7,067	1,051	3,911	1,057	1,548	7,567	1,587	13,047	14,634
2006		4,720	1,635	766	7,415	1,091	4,398	1,264	1,559	8,312	1,526	14,201	15,727
2007		4,704	1,131	638	6,874	825	4,353	959	1,558	7,695	1,172	13,396	14,569
2008p		4,616	1,038	642	6,710	1,068	5,563	638	1,924	9,193	2,104	13,799	15,903
Per cent change		*-1.9*	*-8.2*	*+0.6*	*-2.4*	*+29.4*	*+27.8*	*-33.4*	*+23.5*	*+19.5*	*+79.5*	*+3.0*	*+9.2*
2007	1st quarter	5,197	2,005	786	8,204	1,091	4,305	1,186	1,399	7,981	1,411	14,774	16,184
	2nd quarter	5,084	1,459	719	7,561	883	4,292	1,095	1,368	7,638	1,102	14,096	15,199
	3rd quarter	4,900	672	837	6,760	1,002	4,799	1,100	1,440	8,340	1,641	13,459	15,100
	4th quarter	4,704	1,131	638	6,874	825	4,353	959	1,558	7,695	1,172	13,396	14,569
2008	1st quarter	5,329	985	631	7,234	1,273	4,324	659	2,043	8,298	1,617	13,915	15,532
	2nd quarter	4,937	1,449	656	7,362	943	4,656	625	1,828	8,052	1,636	13,779	15,415
	3rd quarter	4,567	1,284	509	6,649	783	5,061	582	1,887	8,313	1,923	13,039	14,962
	4th quarter	4,616	1,038	642	6,710	1,068	5,563	638	1,924	9,193	2,104	13,799	15,903
2009	1st quarter p	4,453	1,398	635	6,901	974	5,868	626	2,166	9,634	2,427	14,108	16,535
Per cent change[11]		*-16.4*	*+42.0*	*+0.6*	*-4.6*	*-23.5*	*+35.7*	*-5.0*	*+6.1*	*+16.1*	*+50.0*	*+1.4*	*+6.5*

1. Stocks held at refineries, terminals and power stations. Stocks in the wholesale distribution system and certain stocks at offshore fields (UK Continental Shelf [UKCS]), and others held under approved bilateral agreements are also included.
2. Stocks of crude oil, NGLs and process oil at UK refineries.
3. Stocks of crude oil and NGLs at UKCS pipeline terminals
4. Stocks of crude oil in tanks and partially loaded tankers at offshore field (UKCS).
5. Includes process oils held under approved bilateral agreements.
6. Motor spirit and aviation spirit.
7. Aviation turbine fuel, burning oil, gas oil, DERV fuel, middle distillate feedstock (mdf) and marine diesel oil.
8. Ethane, propane, butane, other petroleum gases, naphtha (ldf), industrial white spirit, bitumen, petroleum wax, lubricating oil, petroleum coke and miscellaneous products.
9. The difference between the stocks held abroad for UK use under approved bilateral agreements and the equivalent stocks held in the UK for foreign use.
10. Stocks held in the national territory or elsewhere on the UKCS.
11. Percentage change in the first quarter of 2009 compared with a year earlier.

3 OIL AND OIL PRODUCTS

Table 3.7 Drilling activity[1] on the UKCS

Number of wells started

		Offshore				Onshore	
		Exploration	Appraisal	Exploration & Appraisal	Development[2]	Exploration & Appraisal	Development[2]
2006		29	41	70	201	15	12
2007		34	77	111	165	15	15
2008 p		44	61	105	171	20	20
Per cent change		*+29.4*	*-20.8*	*-5.4*	*+3.6*	*+33.3*	*+33.3*
2007	1st quarter	9	7	16	49	4	-
	2nd quarter	7	8	15	61	6	1
	3rd quarter	9	33	42	36	3	7
	4th quarter	9	29	38	19	2	7
2008	1st quarter	13	15	28	32	2	6
	2nd quarter	17	16	33	37	3	7
	3rd quarter	7	18	25	60	5	4
	4th quarter	7	12	19	42	10	3
2009	1st quarter p	3	12	15	31	4	4
Per cent change[3]		*-76.9*	*-20.0*	*-46.4*	*-3.1*	*(+)*	*-33.3*

1. Including sidetracked wells

2. Development wells are production or injection wells drilled after development approval has been granted.

3. Percentage change in the first quarter of 2009 compared with a year earlier

Please note that many of the quarterly well numbers (and the annual totals for 1998 and 1999) published here prior to June 2008 have been revised. The numbers affected are mainly those for earlier years and, in particular, for offshore development wells.

4 GAS

Table 4.1. Natural gas supply and consumption

GWh

	2007	2008 p	*per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*per cent change1*
SUPPLY													
Indigenous production	838,092	809,385	*-3.4*	237,300	206,242	165,568	228,983	229,586	204,021	163,526	212,252	202,093	*-12.0*
Imports	338,027	407,054	*+20.4*	114,360	64,726	52,279	106,662	130,700	82,129	69,836	124,388	140,286	*+7.3*
Exports	123,158	122,489	*-0.5*	23,186	39,840	30,652	29,481	21,512	32,106	33,113	35,758	34,759	*+61.6*
Stock change[2]	+5,480	-3,087		+15,066	-7,017	-6,660	+4,091	+22,199	-21,058	-11,055	+6,827	+19,930	
Transfers	-78	-67		-29	-27	-16	-6	-14	-9	-29	-14	-35	
Total supply	1,058,364	1,090,797	*+3.1*	343,512	224,084	180,519	310,249	360,960	232,977	189,165	307,695	327,516	*-9.3*
Statistical difference	1,518	-490		+1,350	+384	+279	-496	+1,879	-150	-662	-1,557	+225	
Total demand	1,056,846	1,091,287	*+3.3*	342,161	223,700	180,240	310,745	359,080	233,128	189,827	309,253	327,290	*-8.9*
TRANSFORMATION	373,375	398,931	*+6.8*	99,081	98,293	83,671	92,331	107,811	96,797	98,847	95,475	86,648	*-19.6*
Electricity generation	352,929	378,486	*+7.2*	92,801	93,919	79,867	86,342	101,531	92,424	95,043	89,487	80,368	*-20.8*
Heat generation[3]	20,446	20,446	*-*	6,280	4,373	3,804	5,988	6,280	4,373	3,804	5,988	6,280	*-*
Energy industry use	74,415	70,352	*-5.5*	20,391	18,733	16,371	18,920	19,247	17,750	15,133	18,221	18,324	*-4.8*
Losses	12,068	14,024	*+16.2*	3,820	2,373	2,076	3,798	4,449	2,967	2,532	4,075	4,609	*+3.6*
FINAL CONSUMPTION	596,989	607,980	*+1.8*	218,869	104,301	78,122	195,697	227,573	115,613	73,314	191,481	217,709	*-4.3*
Iron & steel	7,337	7,445	*+1.5*	1,968	1,819	1,703	1,846	2,084	2,101	1,803	1,457	1,388	*-33.4*
Other industries	129,392	120,913	*-6.6*	42,555	25,835	24,046	36,957	38,253	27,032	23,018	32,610	35,676	*-6.7*
Domestic	349,943	366,704	*+4.8*	135,602	55,251	33,240	125,848	145,449	62,827	31,432	126,996	140,717	*-3.3*
Other final users	99,858	102,460	*+2.6*	36,128	18,781	16,517	28,431	39,173	21,037	14,447	27,803	37,313	*-4.7*
Non energy use[3]	10,459	10,459	*-*	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	*-*

1. Percentage change in the first quarter of 2009 compared with a year earlier.

2. Stock fall (+), stock rise (-).

3. For Heat generation and non energy use, the 2008 figures currently shown are the 2007 figures carried forward - these will be updated in the next edition.

5 ELECTRICITY

Table 5.1 (including wind). Fuel used in electricity generation and electricity supplied[3]

	2007	2008 p	per cent change	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	per cent change [1]
FUEL USED IN GENERATION													
Major power producers[2]												**Million tonnes of oil equivalent**	
Coal	31.93	28.96	*-9.3*	9.11	5.97	6.44	10.42	8.36	6.40	5.34	8.86	9.23	*+10.4*
Oil	0.75	1.15	*+54.0*	0.18	0.13	0.15	0.29	0.21	0.22	0.28	0.45	0.38	*+80.9*
Gas	27.50	29.45	*+7.1*	7.24	7.42	6.19	6.65	7.90	7.22	7.44	6.90	6.21	*-21.3*
Nuclear	14.04	11.69	*-16.7*	3.46	3.37	3.86	3.35	3.22	2.72	2.69	3.06	3.79	*+17.6*
Hydro (natural flow)	0.36	0.36	*+0.1*	0.14	0.06	0.06	0.09	0.14	0.06	0.05	0.11	0.11	*-21.7*
Wind	0.33	0.45	*+37.7*	0.10	0.06	0.07	0.09	0.13	0.08	0.09	0.15	0.16	*+21.0*
Other renewables	0.63	0.72	*+14.8*	0.19	0.14	0.12	0.18	0.16	0.17	0.17	0.22	0.22	*+36.2*
Net imports	0.45	0.95	*(+)*	0.10	0.08	0.23	0.05	0.21	0.31	0.32	0.11	0.05	*-76.6*
Total major power producers	75.98	73.73	*-3.0*	20.53	17.21	17.12	21.12	20.33	17.16	16.37	19.87	20.14	*-0.9*
Other generators													
Coal	0.97	1.02	*+5.4*	0.26	0.26	0.19	0.25	0.26	0.25	0.25	0.25	0.25	*-1.6*
Oil	0.47	0.38	*-19.3*	0.15	0.14	0.08	0.10	0.06	0.10	0.10	0.11	0.08	*+25.0*
Gas	2.85	3.09	*+8.7*	0.74	0.66	0.68	0.78	0.83	0.73	0.74	0.79	0.70	*-16.1*
Hydro (natural flow)	0.08	0.07	*-7.6*	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	*-12.4*
Wind	0.13	0.16	*+27.3*	0.02	0.03	0.03	0.05	0.03	0.03	0.06	0.05	0.02	*-8.0*
Other renewables	2.86	2.95	*+3.2*	0.70	0.68	0.70	0.79	0.72	0.70	0.72	0.81	0.76	*+6.2*
Other fuels	1.39	1.54	*+10.7*	0.34	0.35	0.38	0.32	0.40	0.44	0.33	0.38	0.42	*+5.7*
Total other generators	8.74	9.22	*+5.5*	2.22	2.14	2.08	2.30	2.32	2.27	2.22	2.41	2.26	*-2.6*
All generating companies													
Coal	32.90	29.98	*-8.9*	9.37	6.23	6.63	10.67	8.62	6.65	5.59	9.11	9.48	*+10.0*
Oil	1.22	1.53	*+25.8*	0.33	0.27	0.23	0.39	0.27	0.31	0.38	0.56	0.46	*+67.8*
Gas	30.35	32.54	*+7.2*	7.98	8.08	6.87	7.42	8.73	7.95	8.17	7.69	6.91	*-20.8*
Nuclear	14.04	11.69	*-16.7*	3.46	3.37	3.86	3.35	3.22	2.72	2.69	3.06	3.79	*+17.6*
Hydro (natural flow)	0.44	0.43	*-1.3*	0.17	0.08	0.08	0.11	0.17	0.07	0.06	0.13	0.13	*-20.3*
Wind	0.45	0.61	*+34.8*	0.12	0.08	0.11	0.14	0.16	0.11	0.14	0.20	0.18	*+16.3*
Other renewables	3.49	3.67	*+5.3*	0.89	0.82	0.81	0.97	0.88	0.87	0.90	1.03	0.98	*+11.7*
Other fuels	1.39	1.54	*+10.7*	0.34	0.35	0.38	0.32	0.40	0.44	0.33	0.38	0.42	*+5.7*
Net imports	0.45	0.95	*(+)*	0.10	0.08	0.23	0.05	0.21	0.31	0.32	0.11	0.05	*-76.6*
Total all generating companies	84.72	82.95	*-2.1*	22.75	19.35	19.20	23.42	22.65	19.43	18.59	22.28	22.40	*-1.1*
ELECTRICITY SUPPLIED [4]													
All generating companies												**TWh**	
Coal	129.36	118.94	*-8.0*	36.98	24.15	25.79	42.43	33.70	26.30	22.22	36.72	37.73	*+11.9*
Oil	4.08	4.66	*+14.2*	1.14	1.01	0.67	1.26	0.74	1.03	1.22	1.67	1.36	*+84.5*
Gas	161.11	175.90	*+9.2*	42.54	43.32	36.15	39.11	47.73	42.60	43.86	41.70	37.15	*-22.2*
Nuclear	57.25	47.67	*-16.7*	14.12	13.73	15.73	13.66	13.14	11.08	10.96	12.49	15.45	*+17.5*
Hydro (natural flow and net supply by pumped storage stations) [5]	3.82	3.70	*-3.2*	1.66	0.59	0.61	0.96	1.64	0.54	0.36	1.15	1.22	*-25.8*
Wind	5.29	7.12	*+34.8*	1.36	0.98	1.26	1.68	1.83	1.32	1.68	2.28	2.14	*+16.6*
Other renewables	9.43	9.88	*+4.8*	2.47	2.14	2.17	2.65	2.46	2.35	2.37	2.70	2.69	*+9.2*
Other fuels	2.93	2.58	*-11.8*	0.66	0.76	0.81	0.69	0.68	0.68	0.59	0.63	0.69	*+1.6*
Net imports	5.21	11.02	*(+)*	1.12	0.89	2.66	0.54	2.42	3.56	3.72	1.33	0.57	*-76.6*
Total all generating companies	378.47	381.48	*+0.8*	102.06	87.59	85.85	102.98	104.35	89.46	86.98	100.68	98.99	*-5.1*

1. Percentage change in the first quarter of 2009 compared with a year earlier.

2. This table includes the change of definition of Major power producers (MPPs) to include major wind farm companies. Details of this change of definition were given in an article on pages 43 to 48 of the September 2008 edition of Energy Trends.

3. As this is a new table none of the data are regarded as being revised from the previous quarter. A table on the same basis as previously is available on the web site.

4. Electricity supplied net of electricity used in generation

5. In the next edition, natural flow and pumped storage hydro will be separated

5 ELECTRICITY

Table 5.2 Supply and consumption of electricity (including wind). [4]

GWh

	2007	2008 p	*Per cent change*	2007 1st quarter	2007 2nd quarter	2007 3rd quarter	2007 4th quarter	2008 1st quarter	2008 2nd quarter	2008 3rd quarter	2008 4th quarter	2009 1st quarter p	*Per cent change [1]*
SUPPLY													
Indigenous production	396,458	390,322	*-1.5*	106,981	91,914	88,648	108,913	107,754	90,521	88,088	103,958	104,605	*-2.9*
Major power producers [2 3]	358,195	350,664	*-2.1*	97,522	82,369	79,770	98,534	97,656	81,040	78,089	93,879	95,139	*-2.6*
Auto producers	34,402	35,569	*+3.4*	8,570	8,680	7,844	9,308	9,146	8,547	8,910	8,967	8,448	*-7.6*
Other sources [5]	3,859	4,089	*+6.0*	889	865	1,034	1,071	953	935	1,089	1,113	1,018	*+6.8*
Imports	8,613	12,294	*+42.7*	1,938	1,933	3,131	1,611	2,706	3,735	3,804	2,049	1,402	*-48.2*
Exports	3,398	1,272	*-62.6*	819	1,043	467	1,069	290	176	88	717	836	*(+)*
Transfers	-	-		-	-	-	-	-	-	-	-	-	
Total supply	401,672	401,344	*-0.1*	108,100	92,804	91,313	109,455	110,170	94,080	91,804	105,290	105,171	*-4.5*
Statistical difference	+1,511	+1,306		+585	+27	+359	+540	+408	+444	+243	+211	-263	
Total demand	400,162	400,038	-	107,515	92,778	90,954	108,915	109,761	93,636	91,562	105,079	105,433	*-3.9*
TRANSFORMATION	-	-		-	-	-	-	-	-	-	-	-	
Energy industry use [6]	31,814	30,267	*-4.9*	8,265	7,409	7,574	8,566	7,777	7,132	7,192	8,166	7,832	*+0.7*
Losses	26,402	29,857	*+13.1*	7,573	5,481	5,644	7,704	8,249	6,875	7,258	7,475	8,643	*+4.8*
FINAL CONSUMPTION	341,946	339,914	*-0.6*	91,677	79,888	77,735	92,645	93,735	79,629	77,112	89,438	88,959	*-5.1*
Iron & steel	4,924	4,835	*-1.8*	1,252	1,238	1,214	1,220	1,237	1,230	1,171	1,197	882	*-28.7*
Other industries	112,808	108,376	*-3.9*	28,280	27,839	27,219	29,471	28,320	26,724	26,332	27,000	26,147	*-7.7*
Transport	8,255	8,304	*+0.6*	2,086	2,079	2,062	2,028	2,082	2,080	2,053	2,089	2,059	*-1.1*
Domestic	115,051	118,184	*+2.7*	33,029	24,907	23,722	33,392	34,423	26,061	24,567	33,133	34,297	*-0.4*
Other final users	100,908	100,225	*-0.7*	27,031	23,825	23,518	26,534	27,673	23,535	22,989	26,029	26,545	*-4.1*
Non energy use	-	-		-	-	-	-	-	-	-	-	-	

1. Percentage change in the first quarter of 2009 compared with a year earlier.

2. Companies that produce electricity from nuclear sources plus all companies whose prime purpose is the generation of electricity are included under the heading "Major Power Producers". At the end of December 2007 they were:

AES Electric Ltd., Baglan Generation Ltd., Barking Power Ltd., British Energy plc., Centrica Energy., Coolkeeragh ESB Ltd., Corby Power Ltd., Coryton Energy Company Ltd., Derwent Cogeneration Ltd., Drax Power Ltd., EDF Energy plc., E.On UK plc., Energy Power Resources, Immingham CHP, International Power Mitsui, Magnox Electric Ltd., Premier Power Ltd., RGS Energy Ltd., Rocksavage Power Company Ltd., RWE Npower plc., Scottish Power plc., Scottish and Southern Energy plc., Seabank Power Ltd., SELCHP Ltd., Spalding Energy Company Ltd., Teesside Power Ltd., Uskmouth Power Company, Western Power Generation Ltd.

3. This table includes the change of definition of Major power producers (MPPs) to include major wind farm companies. Details of this change of definition were given in an article on pages 43 to 48 of the September 2008 edition of Energy Trends.

4. As this is a new table none of the data are regarded as being revised from the previous quarter. A table on the same basis as previously is available on the web site.

5. Gross supply from pumped storage hydro

6. Includes electricity used in generation and for pumping

List of special feature articles published in Energy Trends between September 2008 and March 2009

Energy

September	2008	Estimates of Heat use in the United Kingdom
September	2008	Publication of Weekly Fuel Prices
September	2008	Domestic Energy Consumption in the United Kingdom
September	2008	Energy flow charts
December	2008	Regional and local estimates of non gas, non electricity and non road transport fuels in 2006
December	2008	Regional and local total energy consumption statistics for 2006
March	2009	Distribution analysis of domestic electricity and gas consumption in Great Britain
March	2009	Recent DECC sub-national energy consumption analysis

CO_2

March	2009	CO_2 emissions and energy consumption in the UK 2008

Coal

March	2009	Trends in manufactured solid fuels production and consumption

Combined Heat and Power (CHP)

September	2008	Combined Heat and Power in Scotland, Wales, Northern Ireland and the regions of England in 2007

Electricity

September	2008	Major Power Producers statistics to include major wind farm operators
December	2008	Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2004 to 2007
December	2008	Regional and local electricity consumption statistics for 2007
December	2008	Changes to electricity tables in the Digest of UK Energy Statistics 2008

Gas

December	2008	Regional and local gas consumption statistics for 2007
December	2008	Physical gas flows across Europe in 2007
March	2009	More timely UK gas data via publication of the UK's Euro-indicators Submission

Petroleum (oil and oil products)

September	2008	More timely UK oil data via publication of the UK's Joint Oil Data Initiative (JODI) submission
March	2009	The role of biofuels in the UK transport market

Renewables

September	2008	Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2007
September	2008	Further statistics of renewable energy in 2007

UK Continental Shelf (UKCS)

March	2009	UKCS capital expenditure survey 2008

PDF versions of the special feature articles appearing in Energy Trends since 2006 can now be accessed on the Internet at:
www.berr.gov.uk/energy/statistics/publications/trends/articles-issue/page43984.html (articles by issue) or www.berr.gov.uk/energy/statistics/publications/trends/articles-subject/page44070.html (articles by subject).

Explanatory notes

General

More detailed notes on the methodology used to compile the figures and data sources are included in the annual Digest of United Kingdom Energy Statistics.

Notes to tables

- Figures for the latest periods and the corresponding averages (or totals) are provisional and are liable to subsequent revision.
- The figures have not been adjusted for temperature or seasonal factors except where noted.
- Due to rounding the sum of the constituent items may not equal the totals.
- Percentage changes relate to the corresponding period a year ago. They are calculated from unrounded figures but are shown only as (+) or (-) when the percentage change is very large.
- Quarterly figures relate to thirteen week periods except in the gas and petroleum sections where they relate to calendar quarters.
- All figures relate to the United Kingdom unless otherwise indicated.

Abbreviations

CCGT	Combined Cycle Gas Turbine
LRP	Lead Replacement Petrol
ATF	Aviation Turbine Fuel
NGLs	Natural gas liquids
UKCS	United Kingdom Continental Shelf
GVA	Gross Value Added
MSF	Manufactured Solid Fuels

Symbols used in the tables

.. not available.

- nil or less than half the final digit shown.

p provisional.

r revised; where a column or row shows 'r' at the beginning, most, but not necessarily all, of the data have been revised.

e estimated; totals of which the figures form a constituent part are therefore partly estimated.

Conversion factors

1 tonne of UK crude oil =	7.55 barrels
1 tonne =	1,000 kilograms
1 gallon (UK) =	4.54609 litres
1 kilowatt (kW) =	1,000 watts
1 megawatt (MW) =	1,000 kilowatts
1 gigawatt (GW) =	1,000 megawatts
1 terawatt (TW) =	1,000 gigawatts

All conversion of fuels from original units to units of energy is carried out on the basis of the gross calorific value of the fuel. More detailed information on conversion factors and calorific values is given in Annex A of the Digest of UK Energy Statistics.

Conversion matrices

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

To:	Thousand toe	Terajoules	GWh	Million therms
From	***Multiply by***			
Thousand toe	1	41.868	11.630	0.39683
Terajoules (TJ)	0.023885	1	0.27778	0.0094778
Gigawatt hours (GWh)	0.085985	3.6000	1	0.034121
Million therms	2.5200	105.51	29.307	1

To:	Tonnes of oil equivalent	Gigajoules	kWh	Therms
From	***Multiply by***			
Tonnes of oil equivalent	1	41.868	11,630	396.83
Gigajoules (GJ)	0.023885	1	277.78	9.4778
Kilowatt hours (kWh)	0.000085985	0.003600	1	0.034121
Therms	0.0025200	0.105510	29.307	1

Note that all factors are quoted to 5 significant figures

Sectoral breakdowns

The categories for final consumption by user are defined by the Standard Industrial Classification 2003, as follows:

Fuel producers	10-12, 23, 40
Final consumers:	
Iron and steel	27, *excluding* 27.4, 27.53 and 27.54
Other industry	13 to 22, 24 to 37, 41 and 45 excluding those parts of 27 relating to Iron and Steel.
Transport	60-63
Other final users	
Agriculture	01, 02, 05
Commercial	50-52, 55, 64-67, 70-74
Public administration	75, 80, 85
Other services	90-93, 99
Domestic	Not covered by SIC 2003

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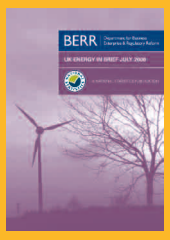

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