

Introduction

Energy Trends and Quarterly Energy Prices are produced by the Department of Trade and Industry on a quarterly basis. Both periodicals are published concurrently in June, September, December and March. The March editions cover the fourth quarter of the previous year and also the previous year as a whole.

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 DTI's annual Digest of UK Energy Statistics. The 2005 edition of the Digest was published on 28 July 2005. Hard copies of the Digest can be obtained from The Stationery Office and electronic versions are available on our web site at www.dti.gov.uk/energy/inform/dukes/index.shtml. 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 the DTI, 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 from the DTI web site. 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 DTI web site. Both sets of tables can be obtained from www.dti.gov.uk/energy/inform/energy_stats/.

Energy Trends does not contain information on Foreign Trade, Temperatures and Prices. Foreign Trade and Temperatures tables are, however, available on the DTI web site and information on Prices can be found in the Quarterly Energy Prices publication. Prices information is also available on our web site at the above address.

If you have any comments on Energy Trends or Quarterly Energy Prices publications please send them to:

Clive Sarjantson
Energy Strategy Unit, Bay 209
DTI, 1 Victoria Street
London
SW1H 0ET

Tel: 020 7215 2698
Fax: 020 7215 2723
E-mail: Clive.Sarjantson@dti.gsi.gov.uk

The main points for 2005:

- Total energy production was 9½ per cent lower than in 2004.
- Oil production fell by 11 per cent as production from older established fields continued to decline.
- Gas production was 8½ per cent lower than in 2004. Net imports of gas increased fourfold and represented 7 per cent of gas demand. Gas demand was 2½ per cent lower than in 2004.
- Total primary energy consumption for energy uses rose by ½ per cent in 2005. This was also ½ per cent higher when adjusted to take account of weather differences between 2004 and 2005.
- Final energy consumption rose by 1 per cent, with rises in the services and other consumers sector of 4 per cent, the transport sector of 2½ per cent; the domestic sector of 1 per cent and a fall in the industrial sector of 1½ per cent.
- Coal production was 18 per cent lower than in 2005. Coal imports were 21 per cent higher and at a new record level and generators' demand for coal was up 3½ per cent.
- Coal supplied 4 per cent more electricity than in 2005 while gas supplied 3 per cent less. Nuclear supplied 2 per cent more. Net imports of electricity increased by 11 percent.

The main points for the fourth quarter of 2005:

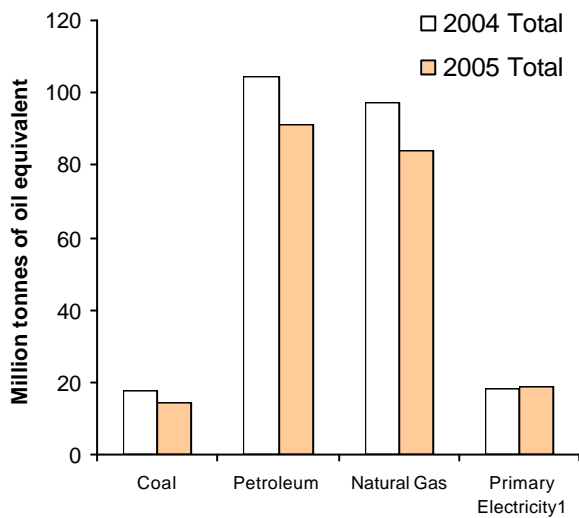
- Total energy production was 10 per cent lower than in the fourth quarter of 2004.
- Oil production fell by 12 per cent from that a year ago.
- Gas production was 9 per cent lower than the same period of 2004. Net imports of gas increased by 13½ per cent. Gas demand was 5½ per cent lower than in the fourth quarter of 2004.
- Total primary energy consumption for energy uses fell by 1 per cent in during the fourth quarter of 2005 compared with the same period of 2004. This was 2 per cent lower when adjusted to take account of weather differences between 2004 and 2005.
- Final energy consumption rose by 2 per cent over quarter four of 2004, with rises in the services and other consumers sector of ½ per cent, the transport sector of 5 per cent; the domestic sector of 1 per cent and a fall in the industrial sector of 1 per cent.
- Coal production was 13 per cent lower than in the same period of 2004. Coal imports were 32 per cent higher, reaching a new quarterly record and generators' demand for coal was 12 per cent higher.
- Coal supplied 13 per cent more electricity than in quarter four 2004 while gas supplied 12 per cent less. Nuclear supplied 1 per cent less. Net imports of electricity increased by 16 per cent.

Forthcoming changes to DTI web site addresses

During May 2006 the DTI will be launching a new web site. This means that web addresses given in this edition of Energy Trends will change before the next Energy Trends is published in June 2006. However, if you use the links from this edition you should be re-directed to the corresponding page on the new site. Furthermore, the DTI home page (www.dti.gov.uk) will not change and will contain details of how to locate the references listed in this edition and previous editions.

Section 1 - Total Energy

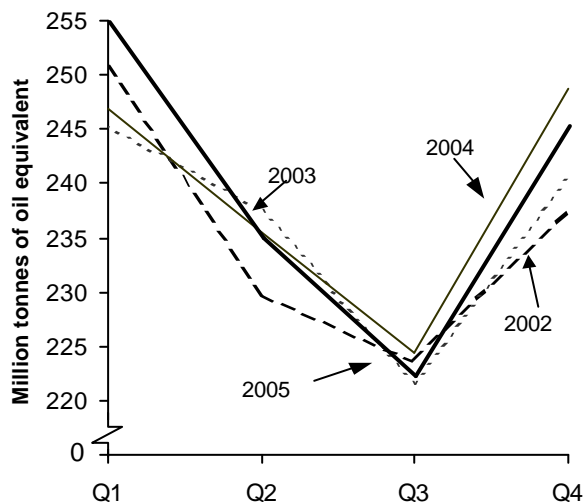
Chart 1.1 Production of indigenous primary fuels



¹ Nuclear and natural flow hydro electricity.

- Total production in 2005 was 216.1 million tonnes of oil equivalent, 9.3 per cent lower than in 2004. In the fourth quarter of 2005 production was 9.9 per cent lower than in the fourth quarter of 2004.
- Production of natural gas fell by 8.2 per cent between 2004 and 2005. Between the fourth quarter of 2004 and the fourth quarter of 2005 it fell by 8.8 per cent.
- Production of petroleum was 11.2 per cent lower in 2005 than a year earlier. In the fourth quarter of 2005 it was 12.2 per cent lower than in the fourth quarter of 2004.
- Primary electricity output in 2005 was 1.2 per cent higher than in 2004 within which nuclear electricity output was 1.3 per cent higher but output from other primary electricity sources (natural flow hydro and wind) decreased by 3.6 per cent. In quarter four of 2005 nuclear electricity output was 1.6 per cent lower than quarter four of 2004 but other primary electricity sources were 10.4 per cent higher in the same period of 2004.
- In 2005 production of coal and other solid fuel was 16.0 per cent lower than in 2004. In quarter four 2005 it was 11.7 per cent lower than a year earlier.

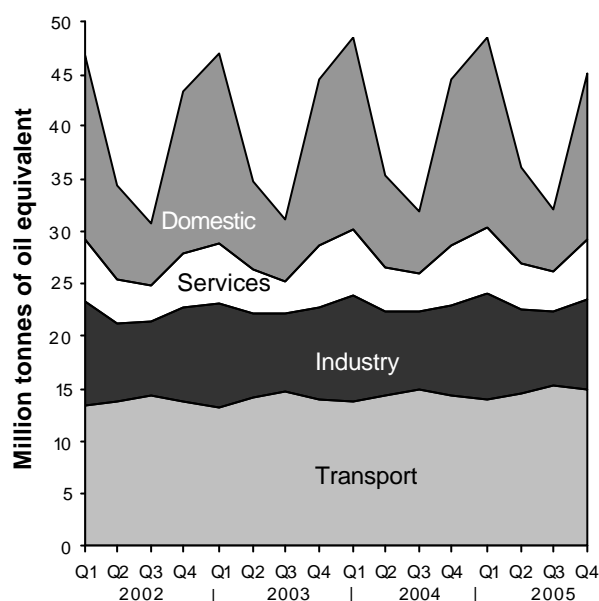
Chart 1.2 Total inland consumption (primary fuel input basis)¹



¹ Seasonally adjusted and temperature corrected annual rates.

- Total inland consumption on a primary fuel input basis was 237.8 million tonnes of oil equivalent in 2005 (temperature corrected, seasonally adjusted annualised rate). The average temperature in 2005 was about the same as in 2004.
- The 2005 quarter four consumption level was 2 per cent lower than the same period a year earlier; the fourth quarter of 2005 was marginally cooler than during the same period a year earlier, however November and December 2005 were 1.6 and 0.9 degrees Celsius colder than the same months a year earlier.
- Between 2004 and 2005 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption increased by 1.5 per cent. Between quarter four 2004 and quarter four 2005 it rose by 7.4 per cent.
- Also on a seasonally adjusted and temperature corrected basis, oil consumption rose by 2.5 per cent in 2005 but fell 1.2 per cent between quarter four of 2004 and quarter four of 2005.
- On the same basis, gas consumption fell by 4 per cent in 2005 and by 6.7 per cent between quarter four of 2004 and quarter four of 2005.

Chart 1.3 Final energy consumption by user



- Total final energy consumption increased by 0.7 per cent between 2004 and 2005.
- Total final energy consumption rose by 1.7 per cent between the fourth quarter of 2004 and the fourth quarter in 2005.
- Service sector energy consumption increased by 1.6 per cent between quarter four 2004 and quarter four 2005; during the year as whole it rose by 3.8 per cent.
- During the final quarter of 2005 domestic sector energy consumption rose by 0.8 per cent; annually it was also 0.8 per cent higher.
- Transport energy consumption was 5.2 per cent higher during the final quarter of 2005 compared with the previous year, annually it was 2.6 per cent higher.
- Industrial energy consumption fell by 0.9 per cent in quarter four and fell by 1.5 per cent annually.

Background

Relevant tables

[1.1: Indigenous production of primary fuels](#)

[1.2: Inland energy consumption: primary fuel input basis](#)

[1.3: Supply and use of fuels](#)

Production

Indigenous production of energy was 9.3 per cent lower in 2005 than in 2004, continuing a year on year decline for each year since 2000. Coal and other solid fuel production was lower by 16.0 per cent, gas production fell by 8.2 per cent and petroleum production fell by 11.2 per cent, but nuclear output rose by 1.3 per cent.

Natural gas was 42.9 per cent of total indigenous production in the fourth quarter of 2005 while petroleum accounted for 41.4 per cent and coal and other solid fuels 7.5 per cent. A year earlier the proportions were natural gas 42.2 per cent, petroleum 42.6 per cent, and coal and other solid fuels 7.6 per cent.

Total inland consumption

In 2005 consumption of primary fuels was higher than the preceding year, 0.3 per cent up on 2004. The largest contributions to this rise in absolute terms were from petroleum (which increased by 2.6 per cent) and coal (which increased by 1.6 per cent). On a temperature corrected basis consumption in 2005 was 0.4 per cent lower than in 2004.

Total inland energy consumption, on a primary fuel input basis (not temperature corrected or seasonally adjusted), in the fourth quarter of 2005 was 64.6 million tonnes of oil equivalent. This was 0.9 per cent lower than in the corresponding period a year ago and also 0.9 per cent higher 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.

Total Energy

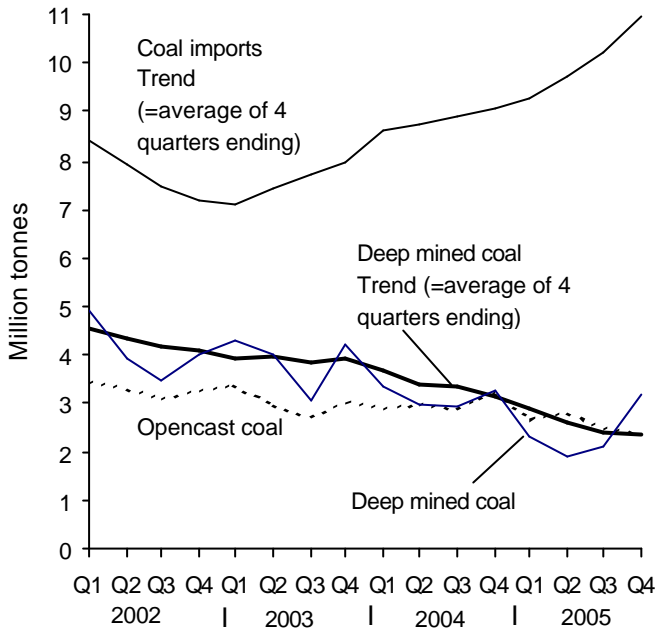
In 2005 the transport sector had the largest share of total final consumption, 34 per cent. The domestic sector accounted for 28 per cent of the total, while the industrial sector made up 19 per cent of the total, and the service industries, including agriculture, accounted for 12 per cent. Non-energy use contributed the remaining 7 per cent.

Final consumption increased by 0.7 per cent between 2004 and 2005, following an increase of 1.6 per cent between 2003 and 2004. Final energy consumption fell between 2004 and 2005 by 1.5 per cent in the industrial sector; however there were rises of 2.6 per cent in the transport sector, 0.8 in the domestic sector and 3.8 per cent in the service sector.

Final energy consumption rose by 1.7 per cent between the fourth quarter of 2004 and the fourth quarter of 2005, mainly due to increases in the transport sector (a 5.2 per cent increase, mainly due to the increase in aviation use), the service sector (a 1.6 per cent increase) and the domestic sector (0.8 per cent higher). There was a decrease in the industrial sector of 0.9 per cent.

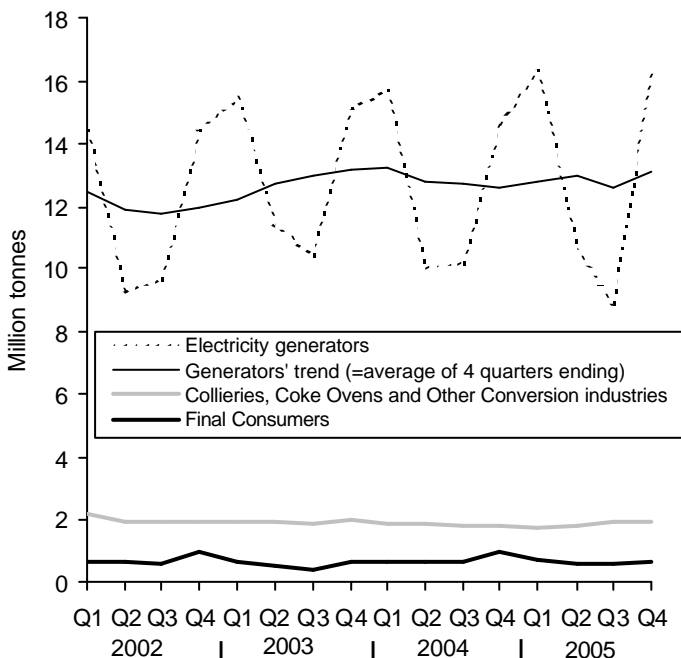
Section 2 - Solid Fuels and Derived Gases

Chart 2.1 Coal production and imports



- Provisional figures for 2005 as a whole show that coal production (including an estimate for slurry) was 17.8 per cent down on production in 2004 at 20.6 million tonnes. Deep mined production was down 23.8 per cent and opencast production was down 12.9 per cent
- Provisional figures for the fourth quarter of 2005 show that coal production (including an estimate for slurry) was 13.0 per cent lower than the fourth quarter of 2004 at 5.8 million tonnes, with deep mined production down 0.2 per cent and opencast production down 25.4 per cent.
- Imports of coal in 2005 as a whole were 21.2 per cent up on 2004 at a record high level of 43.8 million tonnes.
- Imports of coal in the fourth quarter of 2005 were 32.3 per cent higher than in the fourth quarter of 2004 at a new quarterly record of 11.8 million tonnes.
- 36.1 million tonnes of the coal imported in 2005 (82½ per cent) was steam coal, largely for the power stations market.

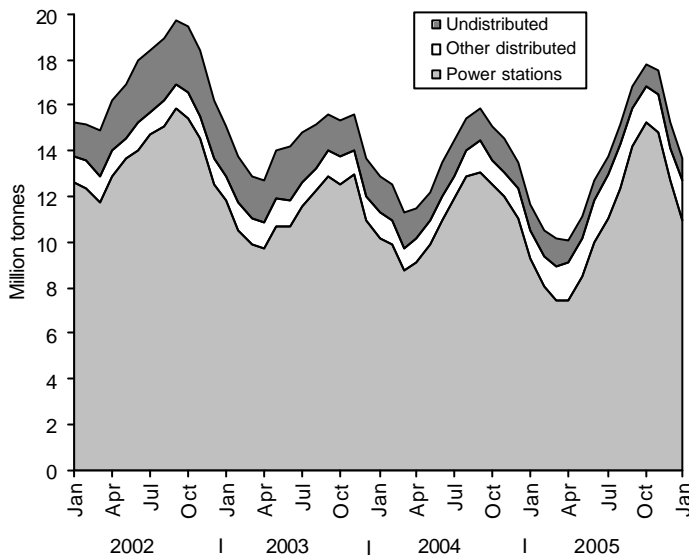
Chart 2.2 Coal consumption



- Demand for coal in 2005 as a whole, at 62.2 million tonnes was 2.6 per cent higher than in 2004, with consumption by electricity generators up by 3.4 per cent.
- Demand for coal in the fourth quarter of 2005, at 19.0 million tonnes was 9.2 per cent up on demand in the fourth quarter of 2004; consumption by electricity generators was up by 11.6 per cent over the same period. Provisional figures for the three months to January 2006 show an even larger increase for electricity generation of over 20 per cent.
- Electricity generators accounted for 84 per cent of total coal use in 2005, compared with 83 per cent a year earlier.
- Provisionally, final consumption fell by 10.7 per cent in 2005 compared with a year earlier. Disposals to domestic consumers were 18.6 per cent lower than in 2004.

Solid Fuels and Derived Gases

Chart 2.3 Coal stocks



- Coal stocks showed a seasonal fall of 1.6 million tonnes during the fourth quarter 2005 and at the end of December 2005 stocks stood at 15.3 million tonnes, 1.8 million tonnes higher than at the end of December 2004. By the end of January 2006 the seasonal decline had taken stocks lower to 13.7 million tonnes.
- The level of coal stock at power stations fell by 1.5 million tonnes in the fourth quarter of 2005 to 12.7 million tonnes. This was 1.7 million tonnes higher than the corresponding level a year earlier.
- There was a rise of 0.2 million tonnes in stocks held by producers (undistributed stocks) in the fourth quarter of 2005 to 1.2 million tonnes. At the end of December 2005 the level was almost the same as the level at the end of December 2004.

Background

Relevant tables

[2.1: Supply and consumption of coal](#)

[2.2: Supply and consumption of coke oven coke, coke breeze and other manufactured solid fuels](#)

[2.3: Supply and consumption of coke oven gas, blast furnace gas, benzole and tars](#)

Coal production and imports

In 2005 indigenous production of coal fell by 4.5 million tonnes. Deep mined production fell to a record low of 9.5 million tonnes, while opencast coal production was at its lowest level since 1975, and 13 per cent lower than in 2004. During the first quarter of 2005 Ellington mine closed due to flooding leaving only 8 major deep mines. Geological and operational difficulties reduced production at some of these deep mines during the first three quarters of 2005, so that in 2005, opencast production exceeded deep mined production. However, in the fourth quarter production of deep mined coal started to recover. Imports of coal in 2005 were at a new record level of 43.8 million tonnes, 7.6 million tonnes above the previous record level of 2004. Just over 0.1 million tonnes of coal was exported.

Coal consumption

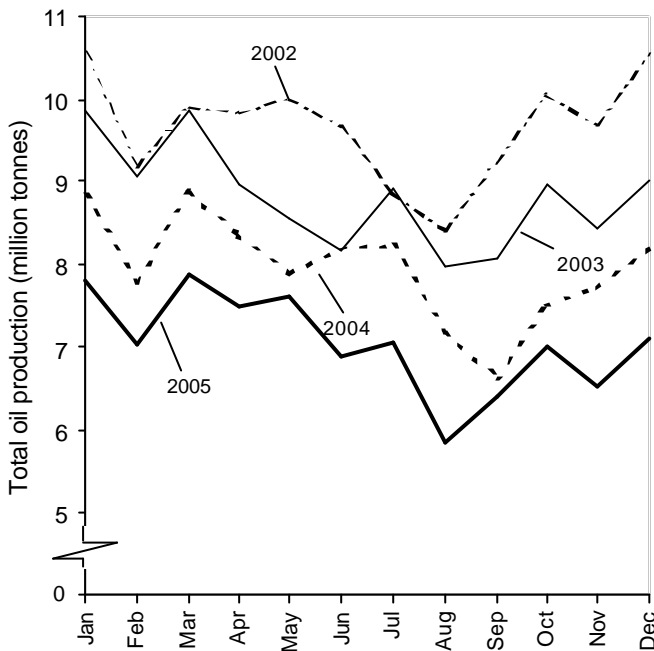
Coal use by electricity generators was 5.3 million tonnes higher in 2003 as a whole than it was in 2002, but in 2004 it fell back by 2.0 million tonnes because prices enabled gas fired generation to be more competitive. In 2005 as a whole, demand rose 3.4 per cent, as higher gas prices made coal more competitive for generation. There was a dip in the third quarter when consumption declined but then it rose strongly in the fourth quarter of 2005 as gas prices continued to be high. The use of coal for coke making and at blast furnaces did not retain the small recovery seen in 2003 and fell by 3½ per cent in 2004. However, in 2005 use increased again and was 3.5 per cent higher than a year earlier.

Stocks

End of winter stock levels have been edging lower each winter since 2001/02 falling to just over 10 million tonnes at the end of winter 2004/05. However, the seasonal rise in stocks over the summer of 2005 was strong, boosted by coal imports and the peak level reached in October 2005 was 1.9 million tonnes higher than the peak of the previous autumn. Even with the heavy demand for coal over the colder than average winter 2005/06, coal stocks at the end of January 2006 remained 1.6 million tonnes higher than a year earlier.

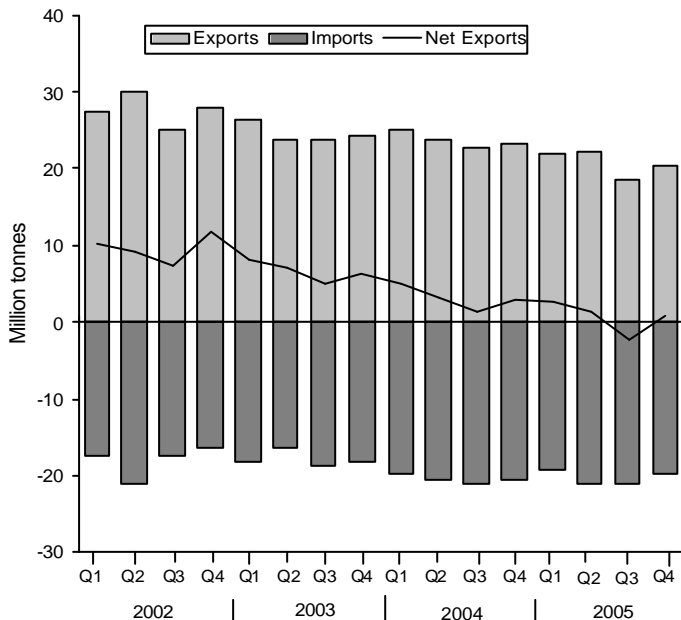
Section 3 - Oil and Oil Products

Chart 3.1 Production of crude oil and NGLs



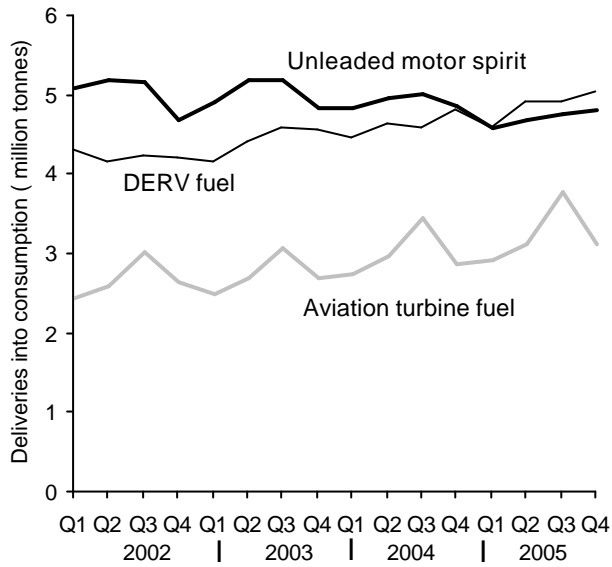
- Total indigenous UK production of crude oil and NGLs in 2005 decreased by 11.2 per cent, compared to 2004, to 84.7 million tonnes.
- Production in the fourth quarter of 2005 was 12.2 per cent lower than a year earlier.
- Six new fields started production in 2005, but production from these fields was insufficient to make up the general decline in production from older established fields.

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



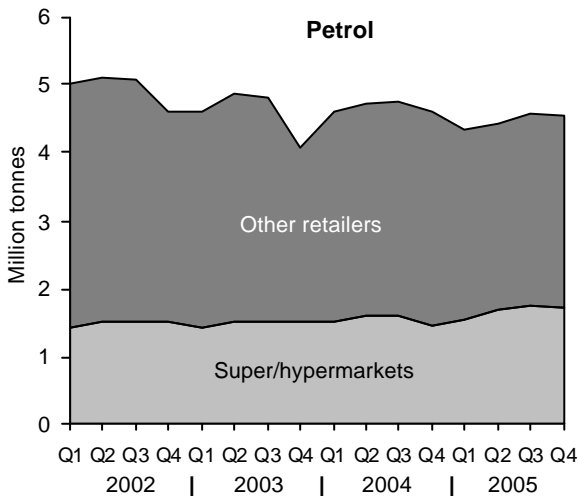
- Net exports of oil and oil products fell from 12.8 million tonnes in 2004 to 2.1 million tonnes in 2005.
- Whilst the UK remained a net exporter of oil and oil products in 2005, the UK was a net importer in value terms for the first time since the early 1980's due to the differential in prices of oil and differing oil products.
- In 2005 net exports of petroleum products fell by a third to 7.2 million tonnes when compared with the 2004.
- Exports of petroleum products fell by 3.3 per cent whilst imports rose by 13.1 per cent.

Chart 3.3 Demand for key transport fuels

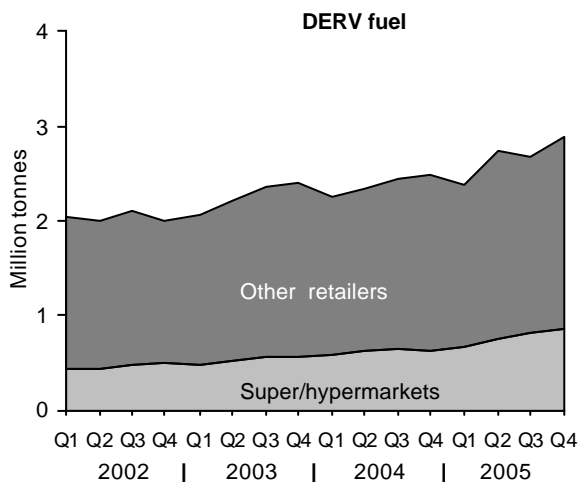


- In 2005 total deliveries of transport fuels were 2.7 per cent higher than in 2004. Quarter four saw an increase of 5.3 per cent on the same quarter a year earlier.
- Preliminary figures for 2005 suggest motor spirit deliveries fell by 4.2 per cent.
- Deliveries of DERV fuel in 2005 increased by 5.0 per cent.
- DERV fuel's share of road transport fuels in 2005 was 51.0 per cent compared to 48.7 per cent in 2004. These figures reflect the continuing shift from petrol engine vehicles to diesel engine vehicles.
- Deliveries of aviation turbine fuel were 7.5 per cent higher in 2005. Quarter four saw an increase of 8.8 per cent on the same quarter a year earlier.

Chart 3.4 Super/hypermarket shares of retail deliveries

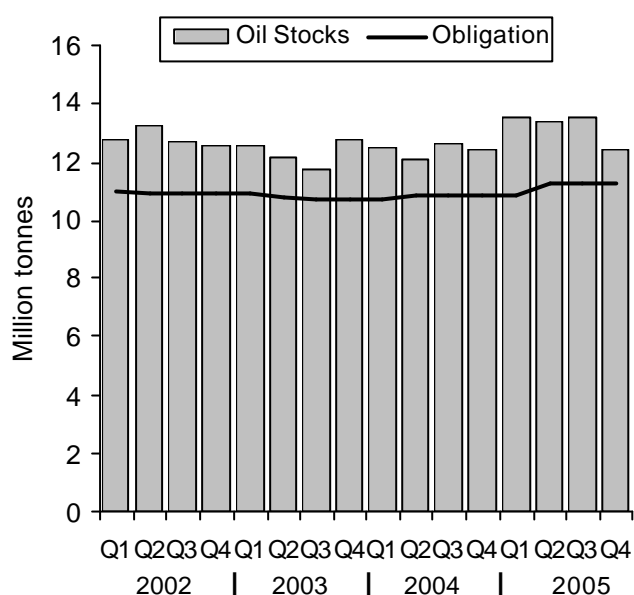


- Sales of motor spirit by super/hypermarket companies accounted for 37.6 per cent of retail sales of petrol in 2005, up from 32.9 per cent in 2004.
- In the fourth quarter of 2005, sales of motor spirit by the super/hypermarkets accounted for 38.1 per cent of total retail sales.



- Sales of DERV by super/hypermarket companies accounted for 28.9 per cent of retail sales of DERV in 2005, up from 26.0 per cent in 2004.
- In the fourth quarter of 2005, sales of Derv by the super/hypermarkets accounted for 29.3 per cent of total retail sales.

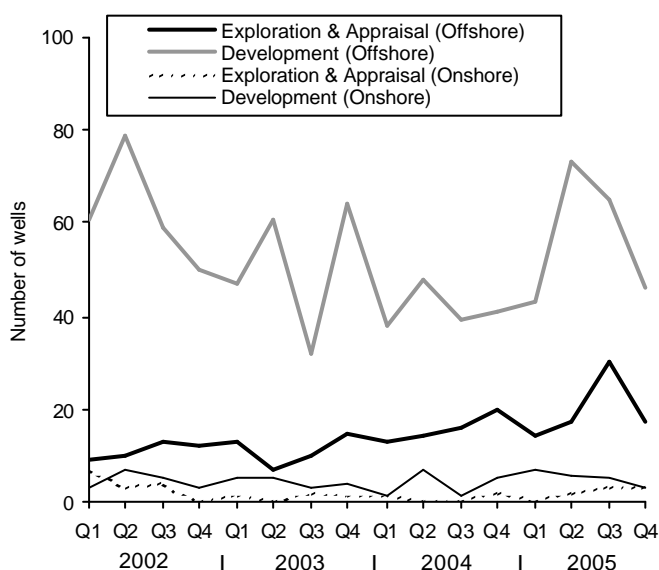
Chart 3.5 Stocks of key oil products⁽¹⁾



- Overall, stocks of crude oil and petroleum products were 2.9 per cent lower at the end of 2005 than a year earlier.
- Compared with a year earlier crude oil and refinery process oil stocks were 6.3 per cent higher while stocks of products were 10.1 per cent lower.
- Stocks at UKCS pipeline terminals fell by 10.4 per cent (132 thousand tonnes) in 2005.
- 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 fourth quarter of 2005, the UK held stocks equal to 73.5 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



- The number of exploration and appraisal wells started offshore increased to 78 in 2005, compared to 63 in 2004.
- The number of development wells drilled offshore increased to 227, compared to 166 in 2004, despite a slight fall in the fourth quarter of 2005.
- 21 development wells were drilled onshore in 2005, compared to 14 in the previous year.
- 8 exploration and appraisal wells started onshore in 2005, compared to only 3 in 2004.

Background

Relevant tables

- [3.1: Supply and use of crude oil, natural gas liquids and feedstocks](#)
- [3.2: Supply and use of petroleum products](#)
- [3.3: Supply and use of petroleum products - annual data](#)
- [3.4: Supply and use of petroleum products - latest quarter](#)
- [3.5: Demand for key petroleum products](#)
- [3.6: Stocks of petroleum at end of period](#)
- [3.7: Drilling activity on the UK Continental Shelf](#)

Oil and Oil Products

Crude oil production and trade

Total UK production of crude oil and NGL's decreased in 2005 by 11.2 per cent to 84.7 million tonnes when compared to 2004. Six new fields started production in 2005, but production from these fields was insufficient to make up the general decline in production from older established fields. The UK remains a net exporter of oil and oil products despite declining production. However, due to the differential in prices of oil and differing oil products, the UK was a net importer in value terms for the first time since the early 1980's. About two thirds of UK production of crude oil and NGL's is exported as the UK generally produces a lighter, more valuable crude oil than other areas of the world such as the Middle East or West Africa. UK refineries are relatively modern and as such can cope with having these lower grade crude oils as an input. 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 2005 was 79.7 million tonnes, 4.7 million tonnes (5.6 per cent) lower than in 2004. The fourth quarter of 2005 saw an 8.2 per cent fall in refinery output compared with year earlier.

Demand for petroleum products

Overall demand for petroleum products in 2005 was 1.2 per cent higher than in 2004. Deliveries of motor spirit were lower by 4.2 per cent whilst DERV deliveries were 5.0 per cent higher at 19.4 million tonnes. Deliveries of aviation turbine fuel were 7.5 per cent higher.

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 2003 consumption data, is to hold a total of 11 million tonnes of these products, equal to 67½ days of consumption.

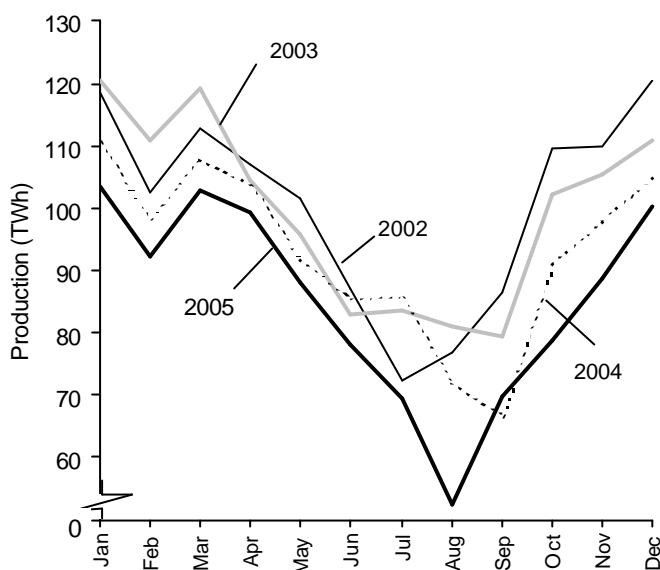
Financial aspects of operations on the United Kingdom Continental Shelf

As announced in the June 2004 issue of Energy Trends, the quarterly collection of the data used to compile Table 3.8, Value of UKCS production and investment by operators and licensees, has now ceased. Data up to Q4 2003 is still available on the DTI Energy Statistics web site.

As announced in the September 2005 issue of Energy Trends, publication of Table 3.9 Indicative tariffs rates offered in the UKCS for handling of oil and gas, has been discontinued. Indicative tariffs are no longer reported to DTI following the introduction in 2004 of a substantially revised Code of Practice on Access to Upstream Infrastructure. Under the new Code, information on actual tariff agreements should be posted on the infrastructure owner/operator's website or, if they do not have an appropriate website, on the DEAL website (<http://www.ukdeal.co.uk>). Historical data on indicative tariffs (as was reported in Table 3.9) continues to be available on the DTI Energy Statistics website.

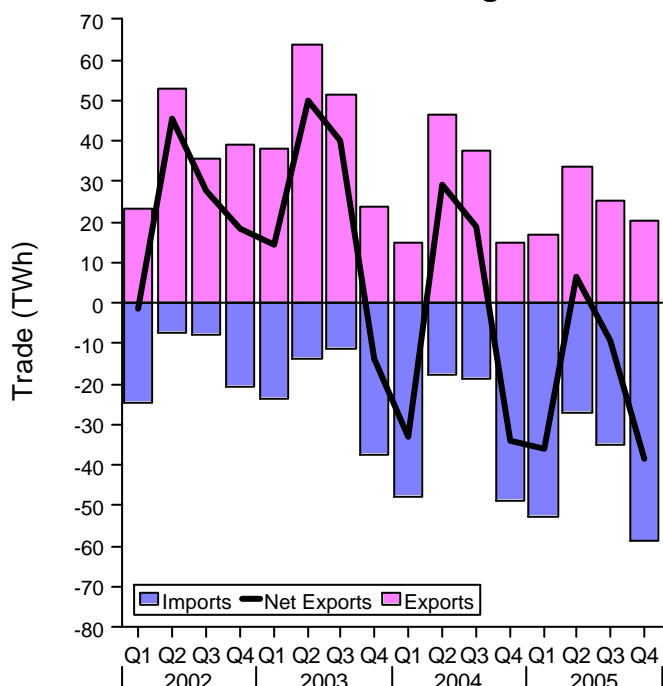
Section 4 – Gas

Chart 4.1 Production of natural gas



- Total indigenous UK production of natural gas in 2005 was 8.3 per cent lower than in 2004.
- Total indigenous UK production of natural gas in the fourth quarter of 2005 was 8.9 per cent lower than in the corresponding quarter a year earlier.
- Gas production from the UKCS is in general decline as reserves deplete.

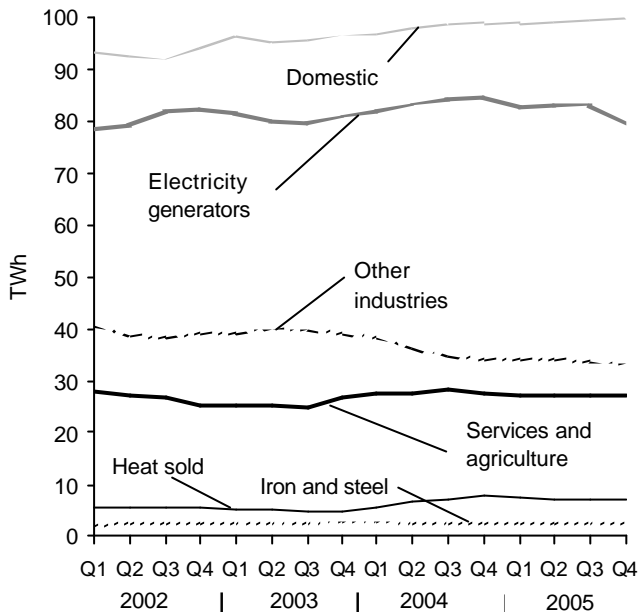
Chart 4.2 UK trade in natural gas



- Exports of natural gas in 2005 fell by 15.9 per cent compared with 2004 while imports increased by 30.3 per cent.
- In the fourth quarter of 2005 exports of natural gas increased by 36.0 per cent and imports increased by 20.3 per cent compared with the fourth quarter of 2004.
- Net imports of gas in 2005 at 77.4 TWh were four times higher than in 2004 (18.9 TWh).
- Net imports of gas in the fourth quarter of 2005, at 39.0 TWh, were 13.5 per cent higher than in the fourth quarter of 2004.
- Overall, these figures highlight the decline in UK production.

Gas

Chart 4.3 Natural gas consumption - average of four quarters ending



- Demand for gas in 2005 as a whole was 2.3 per cent lower than in 2004.
- Demand for gas in the fourth quarter of 2005 was 8.9 per cent lower than the level in the fourth quarter of 2004.
- Gas use for electricity generation in 2005 was 5.7 per cent lower than in 2004.
- In the fourth quarter of 2005 gas use for electricity generation was 14.3 per cent lower than a year earlier, with high gas prices discouraging the use of gas for generation.
- Provisionally, consumption in the domestic sector rose by 1.0 per cent in 2005 as a whole while public administration, commerce and agriculture consumption fell by 1.4 per cent. Consumption in the industrial sector fell by 3.2 per cent.
- In the fourth quarter of 2005, consumption in the domestic sector rose by 1.7 per cent. In public administration, commerce and agriculture consumption fell by 2.8 per cent compared with a year earlier. In the industrial sector gas sales were provisionally 10.0 per cent lower than in the fourth quarter of 2004.

Background

Relevant table

[4.1: Natural gas supply and consumption](#)

Gas production and trade

Indigenous production of natural gas peaked in 2000 at 1,261 TWh. Since then production has been in decline and in 2005 was 19 per cent below the 2000 peak. Production in 2005 was 8 per cent lower than in 2004. In 2004 the UK became a net importer of gas for the first time since 1996. Because of declining gas production net imports of gas in 2005, at 77 TWh, were four times higher than the 19 TWh seen in 2004.

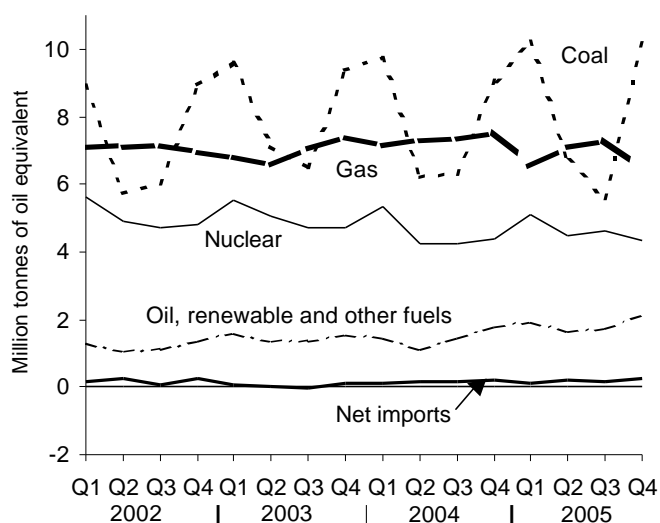
The UK currently exports gas to the Netherlands from the Markham and Windermere fields, to the Irish Republic via the Irish – UK gas interconnector and to Belgium through the Bacton-Zeebrugge interconnector. Imports to the UK are from Belgium, via the interconnector, Norway, via the Statfjord and Vesterled pipelines, and liquefied natural gas from various sources. In the fourth quarter of 2005, Norwegian gas accounted for 60 per cent of UK natural gas imports, compared to 70 per cent a year ago.

Gas consumption

Until the middle of 2000 the growth in consumption of natural gas was dominated by growth in consumption for electricity generation, mainly in Combined Cycle Gas Turbine stations. However, high gas prices led to the use of gas for generation levelling off after 2000, rising slightly in some years and falling back in others. While much of this switchback pattern is the result of the relative prices of gas and coal, the 2004 growth can also be attributed to the three newest CCGT stations operating at high levels throughout the year, while the downturn in 2005 results from generators preferring coal when prices reached very high levels at the end of the year. Gas use in the domestic sector is particularly dependent on temperatures not only during the heating season, but also in summer very hot weather deters use for cooking and hot water. Colder weather at the end of 2005 boosted domestic gas consumption.

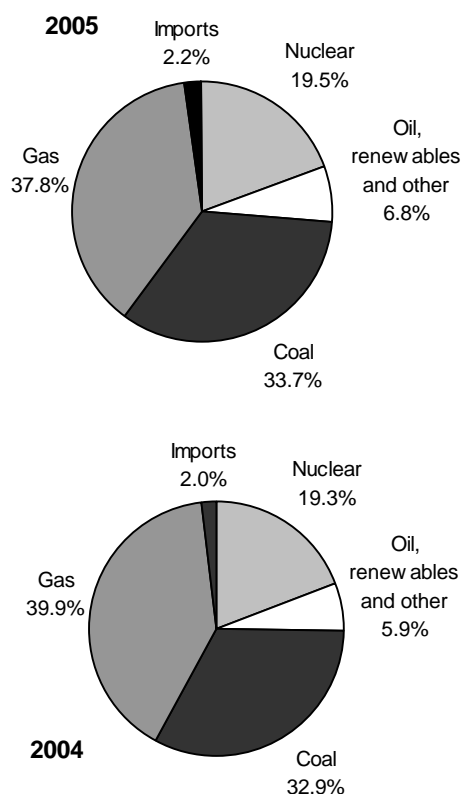
Section 5 - Electricity

Chart 5.1 Fuel used for electricity generation



- Fuel used by generators in 2005 as a whole was, in total, 1.7 per cent higher than in 2004.
- Fuel used by generators in the fourth quarter of 2005 was, in total, greater by 1.8 per cent higher than in the fourth quarter of 2004.
- Overall coal use during 2005 was 4.2 per cent higher than in 2004. Coal use in the fourth quarter of 2005, was 12.5 per cent higher than a year earlier.
- Gas use over 2005 was lower than 2004 by 5.7 per cent. In the fourth quarter of 2005 gas use was 14.3 per cent lower than a year earlier.
- Generation by nuclear sources in 2005 as a whole was up 2.0 per cent on 2004. In the fourth quarter of 2005 there was a fall of 1.1 per cent on the fourth quarter of 2004.
- Hydro sources in 2005 were 4.1 per cent lower than the levels of 2004.

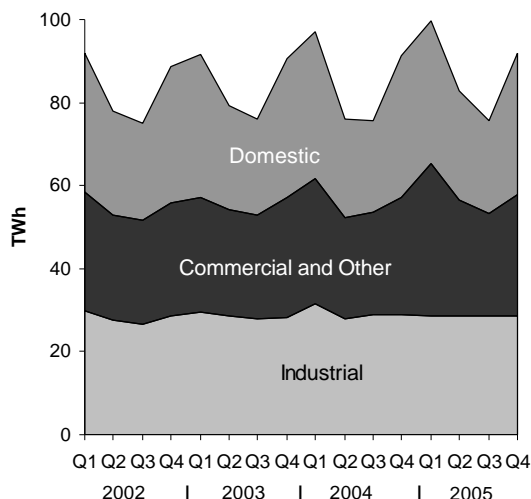
Chart 5.2 Electricity supplied



- Total electricity supplied by all generators in 2005 was 0.9 per cent higher (+3.4 TWh) than in 2004.
- Total electricity supplied by all generators in the fourth quarter of 2005 was 0.6 per cent higher (-0.7 TWh) than a year earlier.
- Indigenous supply in 2005 was only 0.7 per cent higher, (2½ TWh) than in 2004 because there were net imports of 8.3 TWh in 2005 compared with net imports of 7.5 TWh in 2004.
- The supply from coal in 2005 increased by 3.5 per cent (+4.4 TWh), while from gas fired stations supply fell by 4.5 per cent (-7 TWh). The supply from nuclear stations increased by 2.0 per cent (+1.5 TWh).
- In the fourth quarter of 2005 the supply from coal rose by 11.4 per cent (+4.2 TWh), while from gas fired stations supply fell by 14.1 per cent (-5.6 TWh). The supply from nuclear stations fell by 1.1 per cent (-0.2 TWh).
- In 2005 coal's share of electricity supplied rose by 1 percentage point to 34 per cent. Gas' share fell by 2 percentage points to 38 per cent. Nuclear's share remained at the same level as in 2004 at 19½ per cent.

Electricity

Chart 5.3 Electricity consumption



- Final consumption of electricity rose by 1.4 per cent in 2005 as a whole compared with 2004. Domestic use was up by 1.6 per cent and consumption by commercial, public administration, transport and agricultural customers was up by 5.9 per cent. Industrial use of electricity was 2.9 per cent lower.
- Final consumption of electricity rose by 0.8 per cent in the fourth quarter of 2005. Domestic use was down by 0.1 per cent but consumption by commercial, public administration, transport and agricultural customers was up by 2.9 per cent. Industrial use of electricity was 0.5 per cent lower.
- On average in 2005 temperatures were at the same level as in 2004. Similarly, temperatures in the fourth quarter of 2005 were on average about the same as in the fourth quarter of 2004, but with October much milder than a year earlier but November and December both colder.

Background

Relevant tables

[5.1: Fuel used in electricity generation and electricity supplied](#)

[5.2: Supply and consumption of electricity](#)

Fuel use

In 2001 higher gas prices and strong competition from coal, especially imported coal, brought a temporary halt to the rising trend in gas use at power stations, and gas use maintained a fairly flat profile until the second half of 2003. As coal prices rose so gas use became more attractive and gas use for generation increased again to reach a new record level in 2004, 3 per cent higher than 2002's previous record. Rising gas prices over the later part of 2005 have led to a preference for coal as the main fuel source for electricity generation. Unplanned outages led to reduction in generation from nuclear sources in 2004 and despite a small recovery in 2005 nuclear output was 17 per cent lower than its 1998 peak.

Supply

Supply from the coal fired power stations of all generating companies fell by 5½ per cent during 2002, rose by 11 per cent in 2003, fell back again by 4½ per cent in 2004 and rose by 3½ per cent in 2005. The 2002 decline was mainly due to resumed competition from gas-fired stations which recorded a 7½ per cent increase in electricity supplied during 2002, although the 2½ per cent fall in supply from nuclear stations also helped in gas' moderate resurgence. In 2003 coal was again the preferred fuel with electricity supplied from gas declining by 2½ per cent and nuclear by 1 per cent. In 2004 electricity supplied from gas increased by 9½ per cent while supply from nuclear fell by 10 per cent. In 2005 coal was the main fuel source for electricity generation with electricity supplied from gas falling 4½ per cent. Imports and exports of electricity from and to continental Europe have been volatile with suppliers taking advantage of price differentials that have arisen during periods of extreme weather. In 2003 both very hot and very cold weather increased exports to continental Europe to record levels. Imports rose in 2004 and again in 2005 to levels comparable with 2001 and 2002.

Consumption

After the near absence of growth in 2002, electricity demand by final consumers grew by 1¼ per cent in 2003 but only ¾ per cent in 2004 (although this rises to just above the 1½ per cent per year trend rate of growth when allowance is made for the change to reporting on a calendar year basis in 2004). In 2005, first estimates of electricity demand show it was divided 29 per cent to the domestic sector, 28 per cent to industry, and 28 per cent to commerce, public administration, transport and agriculture. Fuel industries accounted for a further 7½ per cent with the remaining 7½ per cent accounted for by transmission and distribution losses.

Carbon dioxide emissions and energy consumption in the UK

The UK is committed under the United Nations Framework Convention on Climate Change (UN-FCCC) and by agreement with the European Union to provide annual data on greenhouse gas emissions. This information is compiled by the National Environmental Technology Centre (NETCEN) under contract to Defra and the Devolved Administrations; data for the latest year (2004) was published by Defra on 23 January 2005. DTI is able to produce provisional estimates for 2005 based on energy consumption data that are published in this edition of Energy Trends. These provisional estimates will be subject to revision when final estimates are published next year, but they provide an indication of the emissions in the most recent calendar year. The majority of provisional estimates are within 1 per cent of the final figures. Emissions data are expressed in terms of millions of tonnes of carbon emitted per year (MtC/yr); they can be converted to million tonnes of carbon dioxide by multiplying by the relative molecular weights (44/12).

The key points to note are:

- Total UK CO₂ measured as emissions by sources minus removals by sinks¹ in 2005 were provisionally 153 MtC/yr, or 5½ per cent below 1990 levels. This is ½ MtC/yr (¼ per cent) higher than in 2004.
- Without accounting for removals by sinks, emissions were provisionally 157½ MtC/yr, or some 5 per cent below 1990 levels.
- The fall in emissions since 1990 is despite an overall increase of 10½ per cent in energy consumption over the same period. The increase in emissions between 2004 and 2005 resulted from an overall increase in energy consumption combined with fuel switching from natural gas to coal for electricity generation.
- CO₂ emissions from use of coal and other solid fuels rose by 4 per cent between 2004 and 2005 – resulting from increased demand for electricity generation due to high gas prices; emissions from gas fell by 2 per cent; emissions from oil were by ½ per cent higher mainly due to increased transport use.
- CO₂ emissions from power stations decreased by 16 per cent between 1990 and 2005. They increased by ½ per cent in 2005. Emissions from power stations are driven by changes in both the fuel mix used for generation and generation efficiency; more coal and oil but less gas was used to generate electricity in 2005 compared with 2004.
- Over the period 1990 to 2005 there were also falls in industrial emissions, in the commercial and public service sectors, and from land use change and agriculture. However emissions from fossil fuels delivered to both the domestic and transport sectors increased.

Why are CO₂ emissions important?

CO₂ emissions are important because, on a global basis, they contribute about 70 per cent of the potential global warming effect of anthropogenic emissions of greenhouse gases. Carbon dioxide is naturally emitted by living organisms and absorbed by plants during photosynthesis. However, the burning of fossil fuels releases CO₂ fixed by plants many millions of years ago, and increases its concentration in the atmosphere. The UK contributes about 2 per cent to global man-made emissions of CO₂; within the UK energy consumption accounts for about 95 per cent of all CO₂ emissions.

Policy targets

The UK met its commitment under the UN-FCCC to return emissions of CO₂ and other greenhouse gases to their 1990 level by the year 2000. The Kyoto Protocol to the Convention was agreed in December 1997. It committed the then 15 EU member states (including the UK) to a collective target of reducing EU emissions of a basket of 6 greenhouse gases, including CO₂, of 8 per cent relative to the 1990 level over the period 2008-2012. The UK undertook to reduce its emissions by 12½ per cent as its contribution to the target. The Kyoto Protocol became legally binding in February 2005 and to date has been ratified by 157 countries.

¹ Carbon sinks remove atmospheric carbon dioxide and store the carbon in wood, roots, leaves and the soil.

Special feature – Carbon dioxide emissions

The UK Government has also committed itself to moving towards a domestic goal of reducing UK CO₂ to 20 per cent below their 1990 level by 2010. This will be measured by total emissions by sources minus removals from sinks. The UK Climate Change Programme was published in November 2000. The Programme contained a package of measures aimed at meeting the UK's Kyoto target and move towards our domestic goal. A review has taken place to examine how existing policies were performing, and the range of policies that could be implemented to further reduce emissions.

The Energy White Paper², published in February 2003, defined four goals for energy policy, the first of which was to put ourselves on a long term path to reduce the UK's CO₂ emissions by 60 per cent by 2050. In reducing CO₂ emissions from the energy supply sector the priority is to increase the amount of energy generated from renewable energy sources and strengthen the contribution of energy efficiency; to support this "Energy Efficiency – The Government's Plan for Action" was published in April 2004³ – this sets out how improvements to energy efficiency can deliver a reduction of 12 million tonnes of carbon emissions by 2010. The EU Emissions Trading Scheme⁴ forms a key part of the "Plan for Action".

Estimates of CO₂ emissions

The measurement of CO₂ emissions presented in this article is based on the international methodology agreed by the Intergovernmental Panel on Climate Change, under which the UN-FCCC, and Kyoto Protocol commitments, and the UK's domestic targets for greenhouse gases are measured. This article refers to total emissions both with and without removals by sinks; annual figures since 1990 are shown in Table 1. Progress towards the 20 per cent domestic goal is measured using emissions by sources minus removals by sinks. The 2005 provisional estimates are based on provisional energy consumption data, contained in this edition of Energy Trends.

Total and net CO₂ emissions

CO₂ emissions by sources minus removals by sinks ("net emissions") fell provisionally by 5.3 per cent between 1990 and 2005; over the same period CO₂ emissions by sources ("total emissions") fell by 4.8 per cent. These falls in emissions occurred despite an overall increase of 10½ per cent in energy consumption. A number of factors explain these contrary movements, such as changes in efficiency in generation of electricity and switching to less carbon intensive fuels such as gas. Chart 1 shows total UK CO₂ emissions with the 20 per cent UK domestic goal. The Kyoto commitment is not shown because it relates to a basket of greenhouse gases, not just to CO₂.

Chart 1: CO₂ emissions

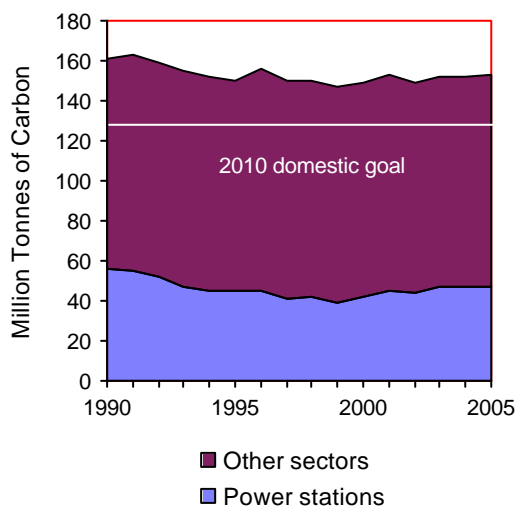
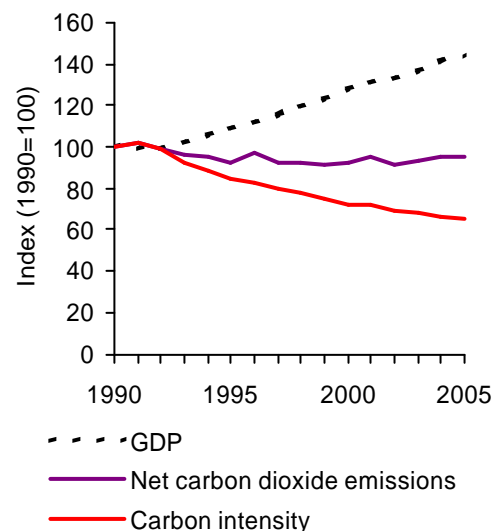


Chart 2: Carbon intensity



² "Our energy future – creating a low carbon economy". Available at www.dti.gov.uk/energy/whitepaper/index.shtml.

³ See www.defra.gov.uk/environment/energy/review/index.htm for more information.

⁴ See www.dti.gov.uk/energy/sepn/euets.shtml for more information.

CO₂ intensity

Chart 2 shows the trends in Gross Domestic Product (GDP) and CO₂ emissions since 1990 to show the relationship between carbon dioxide emissions and the economy. Overall, GDP has increased by around 43 per cent while CO₂ emissions have fallen. The ratio of CO₂ emissions to GDP is also shown in Chart 2. This ratio is known as the carbon intensity of the economy. The overall decline in carbon intensity of around 35 per cent has occurred because increased GDP has not resulted in overall increases in emissions of CO₂.

CO₂ emissions and removals by source

Chart 3 shows that between 1990 and 2005 emissions from services and agriculture have slowly declined, and emissions from industrial use have fallen since the late 1990s. The most substantial fall – in terms of reduced CO₂ emissions – occurred in the power stations sector, which fell by 16 per cent (9 MtC), despite rises during 5 of the last 6 years. The main sources are discussed in the following sections.

CO₂ emissions from electricity generation

CO₂ emissions from power stations currently account for 29½ per cent of total CO₂ emissions. Consumption of electricity increased between 1990 and 2005 by 25½ per cent but overall emissions from electricity generation have decreased by 16 per cent. Emissions from electricity generation rose by ½ per cent between 2004 and 2005 as a result of using less gas and more coal and oil during generation. Chart 4 illustrates the changing fuel mix in electricity generation between 1990 and 2005.

Chart 3: CO₂ emissions and removals by source

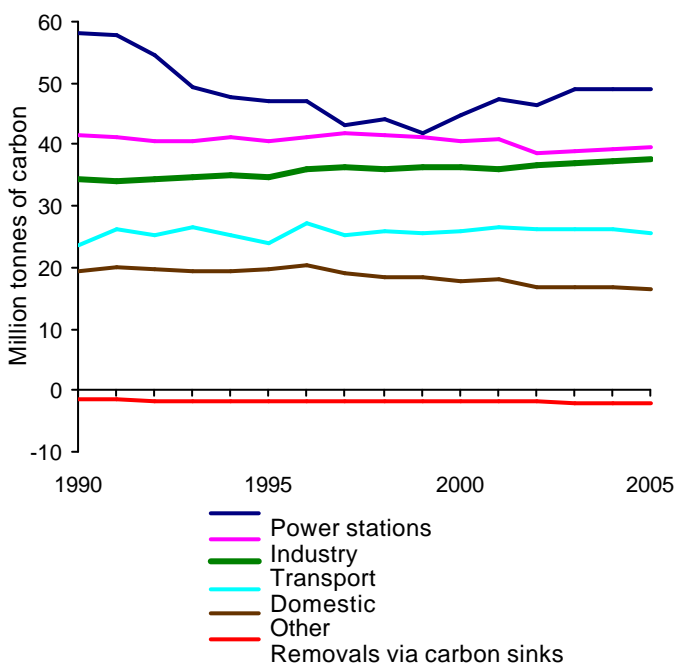


Chart 4: Fuel used in electricity generation

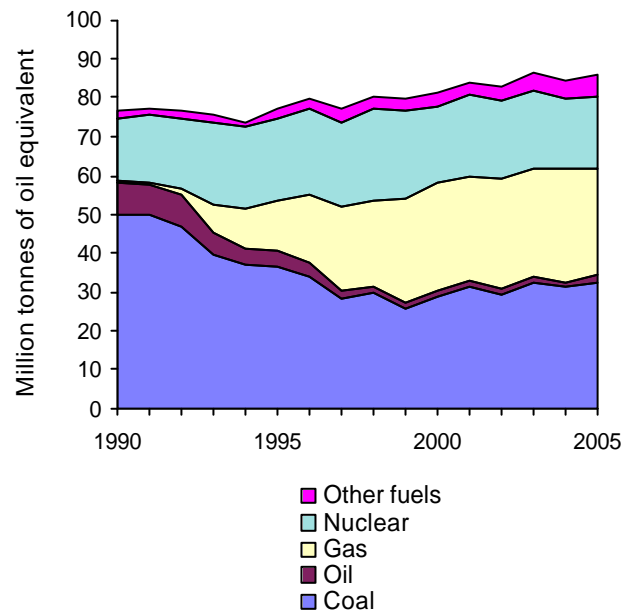


Chart 5 shows the actual level of CO₂ emissions from electricity generation. It also shows what emissions would have been had improvements in technology and changes in generating fuel mix not been made. Since 1990 savings due to increased efficiency and fuel switching have led to a reduction in CO₂ emissions of 33 per cent by 2005 compared with what they would have been (taking into account increased electricity demand). Of this 33 per cent saving, 19 per cent was due to fuel switching between 1990 and 2005 (a combination of an increased use of gas and nuclear energy). Improved efficiency was responsible for the remaining 14 per cent of the saving. The

Special feature – Carbon dioxide emissions

increase in the electricity supply over the period was not reflected in an equivalent increase in emissions due to this increased efficiency and fuel switching.

Chart 5: CO₂ emissions from electricity generation

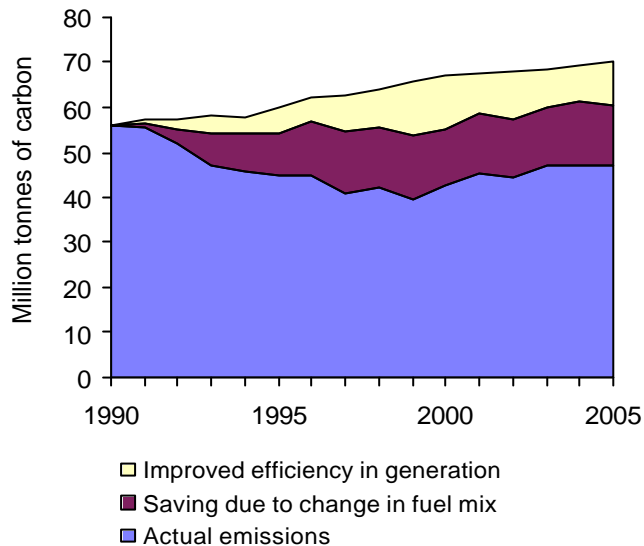
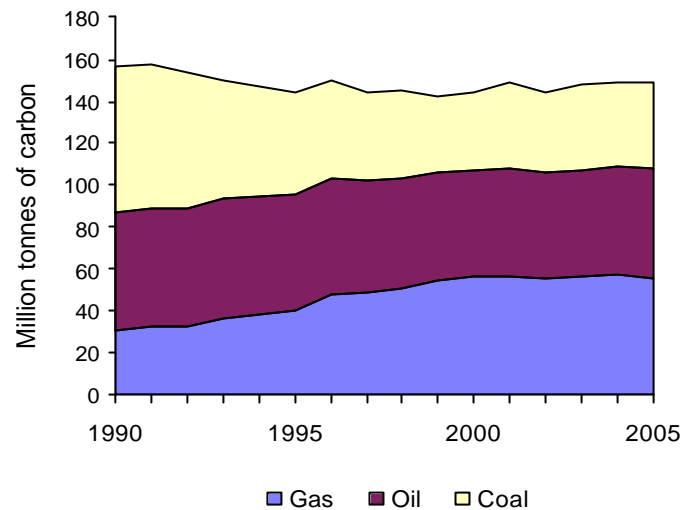


Chart 6: CO₂ emissions by fossil fuels



The emissions from power stations can be reallocated to the sector consuming the electricity. Around 29 per cent of electricity was consumed by the domestic sector in 2005, implying that 13½ MtC from the total of 47 MtC was attributable to that sector. Similarly 20 MtC can be allocated to the industrial sector, with 13½ MtC to the commercial and public service sector, and 1 MtC to the transport sector.

CO₂ emissions from the industrial sector

Emissions in the industrial sector remained unchanged in 2005 compared with a year earlier. Within this sectoral change emissions from the energy industry fell marginally, whilst other industries increased slightly. Overall industrial emissions were 5½ per cent lower than 1990 levels.

CO₂ emissions by transport

The transport sector accounted for 22½ per cent of CO₂ emissions in 2005, of which 93 per cent was road transport. Between 2004 and 2005, transport emissions rose by ½ per cent; emissions are now 10 per cent higher than during 1990. It is estimated that since 1990 emissions from vans and HGVs increased at a higher rate than emissions from cars, and that changes reflect traffic growth. Emissions from international aviation and shipping are excluded from the internationally agreed reporting framework.

CO₂ emissions from the domestic sector

CO₂ emissions from the domestic sector rose by ½ per cent between 2004 and 2005, resulting from increased (non-electricity) energy consumption in this sector. Since 1990 emissions have increased by 13 per cent, with non-electricity energy consumption for the domestic sector increasing by 19½ per cent over the same period. This is largely a result of the increase in the number of households - energy use per household is only slightly higher than in 1990. These emissions estimates do not include emissions from power stations as a result of domestic electricity consumption; domestic electricity consumption was 25 per cent higher in 2005 than during 1990.

CO₂ emissions by the commercial and public service sector

CO₂ emissions in these sectors fell by 10½ per cent between 1990 and 2005; there was a ½ per cent fall between 2004 and 2005.

CO₂ emissions from land use change & agriculture and removals from sinks

Emissions from land use change and agriculture are estimated to have been some 15 per cent (0.9MtC) lower than in 1990. Carbon sinks have removed 14 per cent (0.6MtC) more emissions over the same period.

CO₂ emissions by fuel

It is estimated that 149 MtC were emitted in 2005 from the use of fossil fuels. CO₂ emissions from fossil fuels, including fuel used for generating electricity, decreased by 4½ per cent over the period 1990 to 2005. Over the same period, overall inland consumption of fossil fuels increased by 8½ per cent. The increased use of gas (from 26 per cent of fossil fuels used in 1990 to 44 per cent in 2005) rather than coal and other solid fuels (whose share decreased from 34½ per cent to 19 per cent) resulted in a decrease in emissions. Oil accounted for 39½ per cent of fossil fuels used in 1990 and 37 per cent in 2005.

The amount of CO₂ released by the consumption of one unit of energy depends on the type of fuel consumed. For example, more CO₂ emissions are emitted from one unit of coal than from one unit of gas. Emissions per unit of electricity supplied from fossil fuels are estimated to have been 167 tonnes of carbon per GWh in 2005 overall. The figures for coal, oil and gas vary, with coal (238 tonnes per GWh) producing more carbon emissions per unit of electricity supplied than gas (99 tonnes per GWh) in 2005 and oil (207 tonnes per GWh of electricity supplied). For all sources (including nuclear and renewables) the overall amount of carbon emitted amounted to 124 tonnes per GWh of electricity generated.

Temperature correction

Temperature corrected figures show what emissions might have been if the average temperature during the year had been the same as the UK average for the years 1971 to 2000, which has been calculated at 9.5 degrees Celsius. Targets set at Kyoto are not based on temperature corrected data. Average temperatures in 2005 were very similar to 2004, but were 1.0 degree Celsius higher than the long-run average temperature. On a temperature corrected basis, total emissions of CO₂ for fuel combustion in 2005 was about ½ per cent lower than in 2004 and 6½ per cent less than in 1990.

Julian Prime

Energy Demand Analysis

Tel: 020 7215 6178

Email: julian.prime@dti.gsi.gov.uk

Chris Michaels

Tel: 020 7215 2710

Email: chris.michaels@dti.gsi.gov.uk

Shelley Milford

Tel: 020 7215 2703

Email: shelley.milford@dti.gsi.gov.uk

Special feature – Carbon dioxide emissions

Table 1: CO₂ emissions by source Million tonnes of carbon

	1990	1991	1992	1993	1994	1995	1996	1997
Power stations	55.6	55.3	52.1	46.8	45.5	44.6	44.6	40.7
Other energy industry	8.7	8.8	9.1	9.5	9.6	9.6	10.0	10.4
Other industrial	30.6	30.0	29.0	28.8	29.3	28.5	29.0	29.2
Domestic	21.4	23.7	23.0	24.1	22.9	21.7	24.8	22.8
Commercial and public service	6.9	7.7	7.5	7.4	7.3	7.3	7.8	7.3
Land use change and agriculture	6.1	6.1	6.1	5.9	5.9	5.9	5.9	5.8
Transport	32.0	31.8	32.1	32.5	32.5	32.2	33.6	34.0
Other sectors ¹	4.1	3.7	3.7	3.8	3.8	4.2	4.3	3.6
Total CO₂ emissions all sources	165.4	167.3	162.8	158.8	156.7	154.1	160.0	153.8
Total CO₂ removals all sinks	-3.9	-4.0	-4.1	-4.1	-4.2	-4.2	-4.2	-4.2
Net CO₂ emissions	161.5	163.3	158.7	154.6	152.5	149.9	155.8	149.6

<i>continued</i>	1998	1999	2000	2001	2002	2003	2004	2005p
Power stations	41.9	39.4	42.4	45.2	44.0	46.5	46.5	46.8
Other energy industry	10.2	9.9	9.7	9.6	10.3	10.1	10.0	9.9
Other industrial	28.8	29.1	28.4	28.9	25.8	26.5	27.1	27.1
Domestic	23.4	23.2	23.4	24.3	23.9	23.8	24.0	24.1
Commercial and public service	7.3	7.3	7.1	7.3	6.2	6.3	6.3	6.2
Land use change and agriculture	5.6	5.5	5.4	5.4	5.3	5.3	5.2	5.2
Transport	33.8	34.0	33.8	33.6	34.3	34.6	35.0	35.1
Other sectors ¹	3.3	3.2	3.0	3.0	3.1	2.9	2.9	2.9
Total CO₂ emissions all sources	154.2	151.7	153.2	157.3	152.9	156.1	156.9	157.4
Total CO₂ removals all sinks	-4.2	-4.2	-4.2	-4.2	-4.3	-4.4	-4.5	-4.5
Net CO₂ emissions	150.0	147.5	149.0	153.1	148.6	151.8	152.5	153.0

¹ Includes waste, fugitive emissions from fuels.

Table 2: CO₂ emissions by fuel Million tonnes of carbon

	1990	1991	1992	1993	1994	1995	1996	1997
Gas	30.0	32.2	32.5	36.6	38.7	40.8	47.3	48.8
Oil	57.1	57.1	56.7	56.8	55.6	54.2	55.6	53.4
Coal and other solid fuels	68.6	68.7	64.4	56.3	52.9	49.0	46.9	41.8
Non-fuel	9.6	9.3	9.2	9.1	9.6	10.1	10.2	9.7
Total	165.4	167.3	162.8	158.8	156.7	154.1	160.0	153.8

<i>continued</i>	1998	1999	2000	2001	2002	2003	2004	2005p
Gas	50.6	54.4	55.9	55.8	55.4	55.8	56.7	55.5
Oil	52.4	51.2	50.4	51.2	50.5	50.8	51.7	52.1
Coal and other solid fuels	41.7	37.0	38.1	41.7	38.5	41.0	40.1	41.7
Non-fuel	9.4	9.2	8.8	8.6	8.5	8.5	8.4	8.2
Total	154.2	151.7	153.2	157.3	152.9	156.1	156.9	157.4

Table 3: CO₂ emissions (unadjusted and temperature corrected)

	Million tonnes of carbon							
	1990	1991	1992	1993	1994	1995	1996	1997
Total CO₂ emissions	165.4	167.3	162.8	158.8	156.7	154.1	160.0	153.8
Percentage change (year on year)		1.2%	-2.7%	-2.4%	-1.3%	-1.6%	3.8%	-3.9%
Cumulative change since 1990		1.2%	-1.6%	-4.0%	-5.2%	-6.8%	-3.2%	-7.0%
Net CO₂ emissions	161.5	163.3	158.7	154.6	152.5	149.9	155.8	149.6
Percentage change (year on year)		1.1%	-2.8%	-2.6%	-1.4%	-1.7%	3.9%	-4.0%
Cumulative change since 1990		1.1%	-1.7%	-4.2%	-5.6%	-7.2%	-3.5%	-7.4%
Estimated total CO₂ emissions² (temperature corrected)	170.2	170.2	165.2	160.1	160.0	155.7	157.7	156.9
Percentage change (year on year)		-	-2.9%	-3.1%	-0.1%	-2.7%	1.3%	-0.6%
Cumulative change since 1990		-	-2.9%	-5.9%	-6.0%	-8.5%	-7.3%	-7.8%

<i>continued</i>	1998	1999	2000	2001	2002	2003	2004	2005p
Total CO₂ emissions	154.2	151.7	153.2	157.3	152.9	156.1	156.9	157.4
Percentage change (year on year)	0.3%	-1.6%	1.0%	2.7%	-2.8%	2.1%	0.5%	0.3%
Cumulative change since 1990	-6.7%	-8.3%	-7.4%	-4.9%	-7.6%	-5.6%	-5.1%	-4.8%
Net CO₂ emissions	150.0	147.5	149.0	153.1	148.6	151.8	152.5	153.0
Percentage change (year on year)	0.3%	-1.7%	1.0%	2.8%	-3.0%	2.1%	0.5%	0.3%
Cumulative change since 1990	-7.1%	-8.7%	-7.7%	-5.2%	-8.0%	-6.0%	-5.6%	-5.3%
Estimated total CO₂ emissions² (temperature corrected)	157.3	154.8	155.7	158.2	156.4	158.8	159.5	158.9
Percentage change (year on year)	0.3%	-1.6%	0.6%	1.6%	-1.1%	1.6%	0.4%	-0.4%
Cumulative change since 1990	-7.5%	-9.0%	-8.5%	-7.0%	-8.1%	-6.7%	-6.3%	-6.6%

² The energy component of total emissions has been temperature corrected and combined with unadjusted non-energy emissions. Targets are not based on temperature corrected figures.

Table 4: Fuel used in electricity generation

Million tonnes of oil equivalent

	1990	1991	1992	1993	1994	1995	1996	1997
Coal	49.8	50.0	46.9	39.6	37.1	36.3	33.6	28.3
Oil	8.4	7.6	8.1	5.8	4.1	4.2	4.0	2.0
Gas	0.6	0.6	1.5	7.0	10.1	13.3	17.4	21.7
Nuclear	16.3	17.4	18.5	21.6	21.2	21.3	22.2	22.0
Other fuels ³	1.3	1.3	1.6	1.4	1.5	2.2	2.5	2.7
Total	76.3	76.9	76.6	75.4	74.0	77.2	79.6	76.8

<i>continued</i>	1998	1999	2000	2001	2002	2003	2004	2005p
Coal	29.9	25.5	28.7	31.6	29.6	32.5	31.3	32.7
Oil	1.5	1.5	1.5	1.4	1.3	1.2	1.1	1.5
Gas	22.0	27.1	27.9	26.9	28.4	27.9	29.1	27.5
Nuclear	23.4	22.2	19.6	20.8	20.1	20.0	18.2	18.5
Other fuels ³	3.0	3.3	3.5	3.3	3.7	4.7	5.0	5.9
Total	80.0	79.7	81.2	84.0	83.0	86.4	84.7	86.1

³ Includes natural flow hydro, coke oven gas, blast furnace gas, waste products from chemical processes, sludge gas, refuse derived fuels and other renewable sources including wind

UKCS Capital Expenditure Survey 2005

A survey of activity relating to oil and gas fields on the UK Continental Shelf (UKCS) was conducted in autumn 2005. The annual joint DTI-UKOOA field survey was conducted by the UK Offshore Operators Association (UKOOA) under the auspices of PILOT, the joint Government–oil and gas industry taskforce. The survey covered operators' intentions to invest in UKCS oil and gas production. It also collected information on projected operating and decommissioning costs and on oil and gas production. The survey excluded exploration and appraisal activity. This note is restricted to development capital expenditure in the period up to 2010.

Summary of results

The survey indicates total development capital expenditure relating to existing fields and significant discoveries (excluding expenditure on exploration, appraisal and decommissioning) of £4.4 billion in 2005 (by some margin the highest level since 1998 and close to the level indicated by the 2004 field activity survey), rising to £4.8 billion or more in 2006 (both figures in 2005 prices). By contrast, outturn total development capital expenditure in 2004 was £3.3 billion.

After 2006, the survey indicates significant year on year falls in development capital expenditure but the extent of the fall is inherently uncertain. On the one hand, it is very unlikely that all of the possible projects will go ahead as reported, at least on the timeframe indicated. On the other hand, the survey excludes activity relating to new (or even some recent) discoveries and extends beyond the time horizon for planning many projects, so total expenditure in the later years of the survey period is likely to be higher than indicated.

It should be noted that the survey was conducted at a time when oil and gas prices were high and were generally not expected to fall significantly in the near future. The results also do not reflect any impact from the changes to North Sea taxation announced by the Chancellor of the Exchequer in his Pre-Budget Statement on 5 December 2005.

Background

Operators were asked to report their investment intentions for all oil and gas field developments and projects where development data were available. They placed each field or project in one of the following categories:

Sanctioned fields - fields, including sanctioned incremental investments, which are in production or under development assuming minimum ongoing investment (eg mandatory environmental or safety projects, etc)

'Probable' incremental projects - projects which are not yet sanctioned but with at least 50 per cent probability of being technically and economically developable.

Probable new field developments - new fields which are not yet sanctioned but with at least 50 per cent probability of being technically and economically producible.

'Possible' incremental projects - projects which are not yet sanctioned with a significant but less than 50 per cent probability of being technically and economically developable.

Possible new field developments - new fields which are not yet sanctioned with a significant but less than 50 per cent probability of being technically and economically producible.

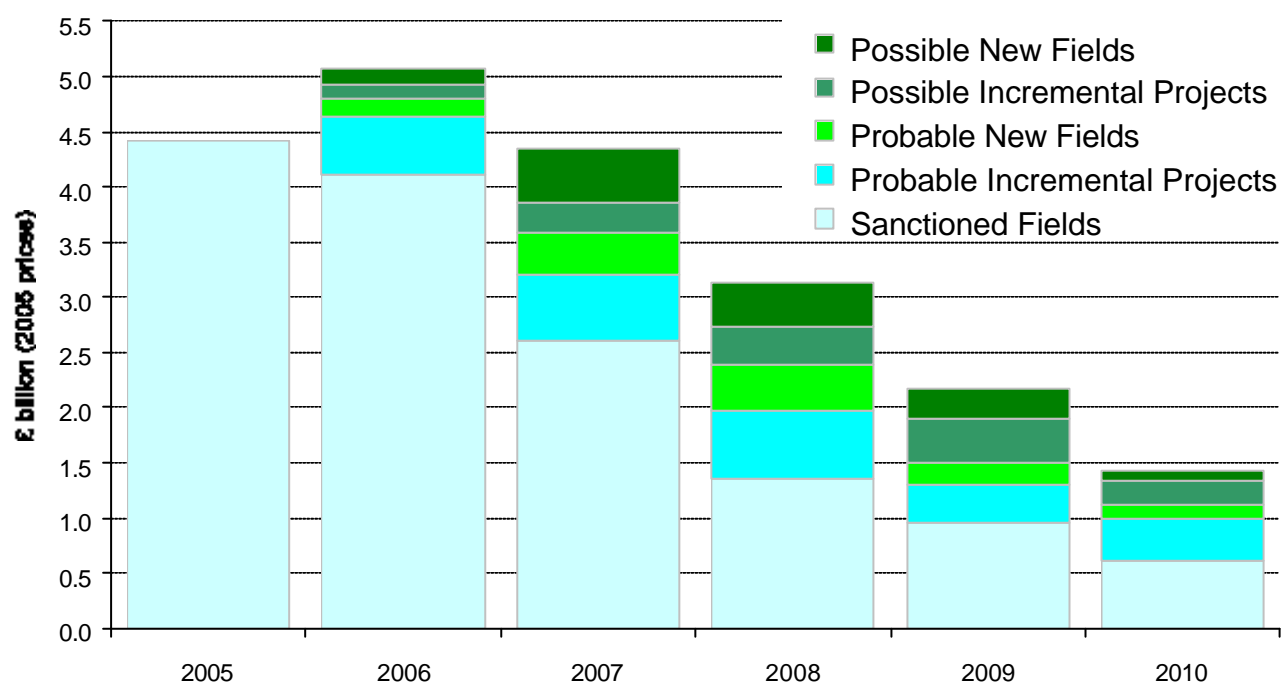
Operators were asked to include any developments that have the potential to become commercial at some time in the next 10 years. They were asked to indicate the probability of each new field or project going ahead and to use the central (most likely) case in the event that there was uncertainty about the timing of expenditure. Operators' estimates (of costs and production) were meant to be consistent with commercial development.

Capital expenditure plans by category

The results of the survey summarised in Tables 1 to 3 and illustrated in Chart 1. The tables also include weighted totals, which reflect the probabilities assigned by the operators. For total development capital expenditure (Table 1) the resultant profile is very close to that for sanctioned fields and probable projects.

	2005	2006	2007	2008	2009	2010	Total for 2006–2010
Sanctioned Fields	4.42	4.11	2.60	1.36	0.96	0.62	9.65
Probable Incremental Projects	-	0.52	0.60	0.62	0.34	0.37	2.45
Probable New Fields	-	0.17	0.39	0.40	0.21	0.12	1.29
Sanctioned plus Probable	4.42	4.80	3.59	2.38	1.50	1.11	13.39
Possible Incremental Projects	-	0.12	0.26	0.35	0.40	0.23	1.36
Possible New Fields	-	0.15	0.50	0.39	0.28	0.08	1.40
Sanctioned plus Probable plus Possible	4.42	5.07	4.35	3.12	2.18	1.43	16.15
Weighted Total	4.42	4.78	3.65	2.37	1.51	1.04	13.36

Chart 1: Total development capital expenditure plans by category



Compared with the intentions over the five years following the year of the survey indicated by the survey conducted in 2004, the 2005 survey indicates a significant increase in sanctioned expenditure, both absolutely and as a proportion of the total. There is also an increase in expenditure on possible projects. There is a smaller increase at the proven plus probable level.

Table 2 separates out capital expenditure on development wells while Table 3 shows the share of such expenditure in total development capital expenditure. The projections reflect operators' expectations of drilling rig rates, which in turn are heavily influenced by current and expected future oil and gas prices.

	2005	2006	2007	2008	2009	2010	Total for 2006–2010
Sanctioned Fields	2.13	2.05	1.54	0.71	0.50	0.29	4.57
Probable Incremental Projects	-	0.36	0.49	0.49	0.23	0.18	1.75
Probable New Fields	-	0.07	0.18	0.12	0.04	0.05	0.47
Sanctioned plus Probable	2.13	2.48	2.21	1.32	0.77	0.52	7.31
Possible Incremental Projects	-	0.10	0.24	0.29	0.35	0.20	1.18
Possible New Fields	-	0.09	0.21	0.16	0.21	0.08	0.75
Sanctioned plus Probable plus Possible	2.13	2.68	2.67	1.76	1.32	0.80	9.23
Weighted Total	2.13	2.48	2.22	1.32	0.84	0.53	7.39

Table 3 shows high shares of expenditure on development wells in incremental projects which contrasts with the lower shares for new fields, especially probable new fields.

	2005	2006	2007	2008	2009	2010	Total for 2006–2010
Sanctioned Fields	48%	50%	59%	52%	52%	47%	47%
Probable Incremental Projects		70%	82%	79%	68%	48%	72%
Probable New Fields		43%	46%	31%	21%	43%	37%
Sanctioned plus Probable	48%	52%	62%	55%	51%	47%	55%
Possible Incremental Projects		83%	93%	83%	87%	88%	87%
Possible New Fields		62%	43%	40%	74%	89%	53%
Sanctioned plus Probable plus Possible	48%	53%	61%	56%	61%	56%	57%
Weighted Total	48%	52%	61%	56%	55%	51%	55%

Mike Earp and Mattias Björnfors
 Energy Markets Unit
 Tel: 020 7215 5271
 Email: mike.earp@dti.gsi.gov.uk

Local gas consumption statistics update

In the analysis of the local gas consumption statistics for 2004 (published in December 2005's Energy Trends pages 30 to 34) further examination of the data has shown that the final stage of scaling to National Grid's standard 35-year trend had been omitted from the published data. Corrected data has now been placed on the DTI's energy web site at:

www.dti.gov.uk/energy/inform/energy_trends/gas2004nuts4regions.xls

Additionally the web site version of the article has been amended and substituted for the original article at:

www.dti.gov.uk/energy/inform/energy_trends/dec_05.pdf .

UK onshore wind capacity factors 1998-2004

Background

In recent years there has been considerable interest in the performance of wind schemes; this article presents a definitive account of an analysis of the capacity factors for UK wind farms between 1998 and 2004 in relation to annual average wind speed. The capacity factors calculated were based on actual metered generation data for the UK and for different regions where possible. This involved analysing RESTATS data from 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) together with additional data from the Renewables Obligation Certificates (ROCs) databases, incorporating additional metered output¹ (AMO) data where necessary. RESTATS, the UK's renewable energy statistics database, is a project that has been running since 1989 and over this period has become the primary source of accurate, up-to-date statistics of UK renewable energy sources.

Capacity Factor and Load Factor

DTI publishes in Table 7.4 of the Digest of United Kingdom Energy Statistics the aggregate load factor for on-shore wind farms calculated in the same way as for load factors of other generating technologies ie:

$$\text{Load Factor} = \frac{\text{Electricity generated during the period [kWh]}}{(\text{Installed capacity at beginning of the period} + \text{Installed capacity at end of period [kW]}) \times 0.5 \times \text{number of hours in the period [h]}}$$

However, because installed capacities have been growing rapidly as onshore wind generation expands, the average installed capacity calculated in the denominator of the formula above may understate or overstate the true average capacity available during a calendar year according to whether the new capacity began to generate early or late in the calendar year.

DTI therefore commissioned Future Energy Solutions to calculate *capacity factors*. The definition of a capacity factor is essentially similar to that for a load factor in that it is the energy produced during a given period divided by the energy that would have been produced had the wind farm been running continually and at maximum output, ie

$$\text{Capacity Factor} = \frac{\text{Electricity generated during the period [kWh]}}{\text{Installed capacity}^2 \text{ [kW]} \times \text{number of hours in the period}^3 \text{ [h]}}$$

But only those wind farms operating throughout the period and with an unchanged configuration are included in the calculation. Hence the following rule-base was used to collate and analyse the data and produce capacity factors:

- Data were only included where a wind farm operated for a complete calendar year. This is because the use of part-year generation would make the calculated capacity factor lower than is actually the case. For example, if a new wind farm started operating in May 2003 it would only be included in the analysis in the calendar year of 2004.
- For a re-powered wind farm, data were only included where a wind farm operated in the same configuration for a complete calendar year.
- Only aggregated figures can be released publicly under the confidentiality requirements of 'National Statistics'. Therefore, where there were only 1 or 2 wind farms in operation within a particular region, data for these regions were excluded; eg the South East is not reported. These regional capacity factors were calculated using the total capacity and generation within each region.

¹ Additional metered output is that generated over and above that contracted under a NFFO contract

² Where the installed capacity is the name plate rated power of the wind farm

³ Where the period is calendar years

- The UK capacity factor was calculated using the total capacity and generation within the UK (including data for regions that could not be reported at a regional level).
- As this study was looking at commercial scale wind power and not small/micro generation, turbines under 100 kW were excluded. For the purposes of this study any single turbine above 100 kW is considered as 1 wind farm.
- The generation figures include any additional metered output (AMO) where it occurred.

As a result of the above approach, it was only possible to analyse data for the UK in terms of the following areas:

England

*East of England and Lincolnshire
South West
North East
North West
Yorkshire and the Humber*

Scotland

Wales
Northern Ireland

Results

Table 1 shows the regional capacity factors, expressed as a decimal, with ‘.’ indicating where there were insufficient data to publish the regional capacity factor.

Table 1: Regional capacity factors

	1998	1999	2000	2001	2002	2003	2004	Average 1998-2004
East of England	0.23	..	..	..	..	0.23	0.26	0.24
North East	..	..	..	..	0.23	0.19	0.22	0.21
North West	0.30	0.29	0.27	0.23	0.27	0.24	0.26	0.27
Yorkshire and The Humber	0.32	..	..	..	..	0.28	0.27	0.29
South West	0.30	..	..	..	..	0.24	0.24	0.26
England	0.30	0.28	0.27	0.23	0.27	0.24	0.25	0.26
Northern Ireland	0.40	0.39	0.37	0.32	0.35	0.34	0.36	0.36
Scotland	0.34	0.29	0.29	0.27	0.29	0.28	0.34	0.30
Wales	0.29	0.29	0.26	0.23	0.26	0.25	0.26	0.26
UK average	0.31	0.31	0.29	0.26	0.28	0.26	0.29	0.29
UK aggregate load factor	0.31	0.28	0.28	0.26	0.30	0.24	0.27	0.28

Regional average capacity factors are only reported where the region contained 3 or more operational wind farms. The figure for England includes data from all English wind farms regardless of how many operational wind farms were in each English region. Likewise the UK yearly average figure includes all the operational wind farms regardless of how many operational wind farms were in each area.

Table 2 shows the number of wind farms in each region. In some cases a wind farm may have two NFFO contracts awarded, where this is the case, and NFFO data are used in the analysis, this is presented as two separate wind farms.

Discussion

Historically, the RESTATS dataset relied heavily on data from NFFO contracted projects. As such, the expiry of NFFO 1 and 2 contracts in 1998 meant that generation data after this date were no longer available for 24 wind farms. Fortunately, since the introduction of the Renewable Obligation in 2002, NFFO data are now not the only source of generation figures. These former NFFO1 and 2 wind farms are still operational and now claim ROCs and so the 2003 figures (the first full year of the Renewables Obligation) include these sites (as do the 2004 figures).

Table 2: The number of wind farms in each region used in the analysis

	1998	1999	2000	2001	2002	2003	2004
East of England	3	-	1	2	2	3	8
North East	2	1	1	2	4	5	5
North West	7	4	10	11	11	15	14*
Yorkshire and the Humber	5	-	-	-	1	5**	5
South West	7	1	1	1	2	8	9
South East	-	-	-	-	-	-	2
England	24	6	13	16	20	36	43
Northern Ireland	6	6	8	8	8	8	8
Scotland	6	6	7	11	14	20	26
Wales	13	7	7	8	9	21	20***
United Kingdom	49	25	35	43	51	85	97

* Haverigg wind farm was repowered 2004

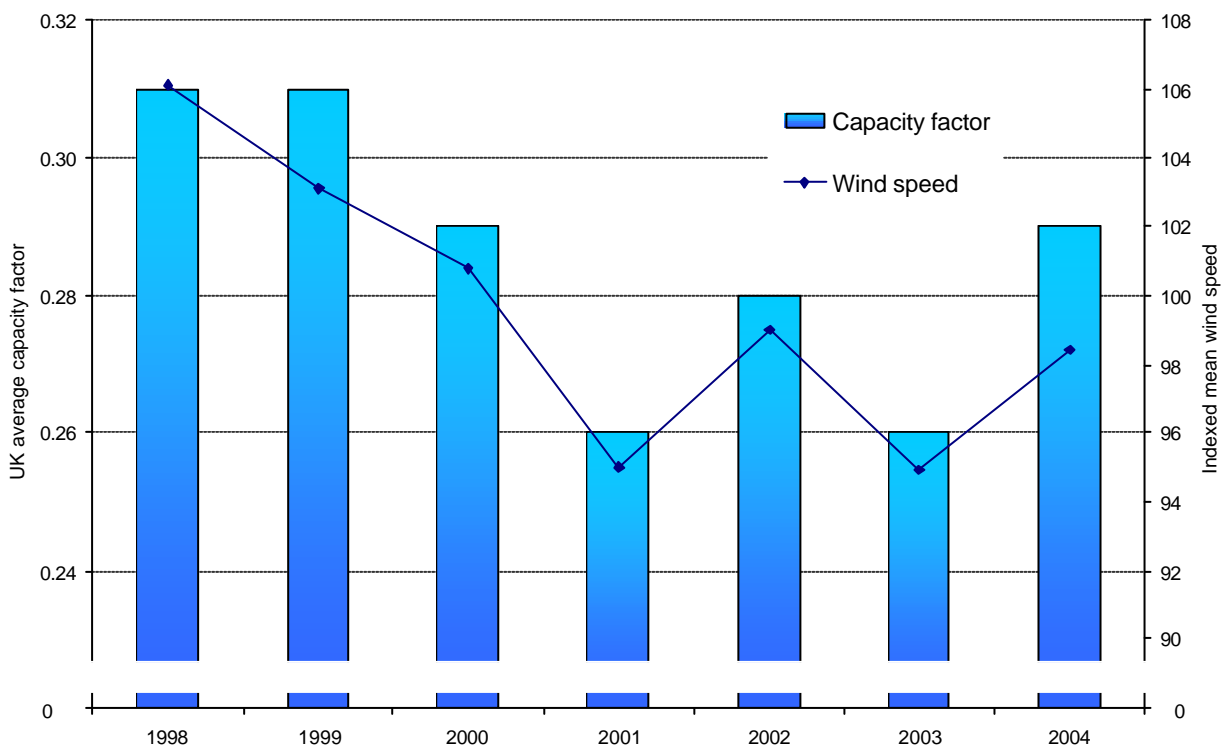
** Chelker Reservoir wind farm was a NFFO 1 project and only ROCs accredited in 2004 therefore is not included in this analysis although it is still operating.

*** Llangwryfon wind farm was repowered in 2003/2004

At least 3 operational wind farms are required in each region for capacity factors to be released and post 1998, due to the unavailability of data from NFFO 1 and 2 wind farms, there are a number of years where there is not enough data available for certain regions to be reported.

Where data from only a few wind farms were available, the capacity factor was particularly sensitive to individual wind farm performance. In some regions where this was the case, technical issues on some older wind farms have meant that capacity factors are lower than one would expect for the wind resource. Wind farm/turbine availability varies between wind farms and that affects the capacity factor at both a regional and national level. As this is a real effect, no upward adjustment has been made to the capacity factor figures to compensate for this.

Chart 1: Wind speed and capacity factor in the UK 1998-2004

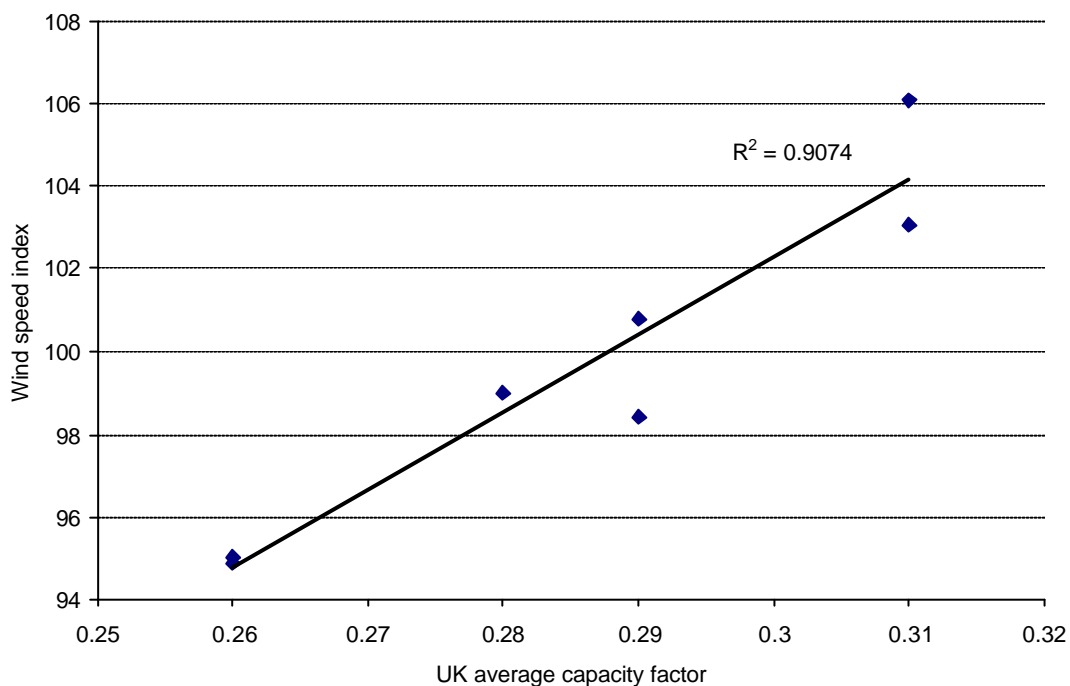


Correlation with wind speed

Chart 1 shows the annual variation in the UK capacity factor and wind speed. This uses a wind speed index⁴ that provides an indication of the mean wind speed relative to that of the long-term average across the UK. This wind speed index is calculated from a sample of 10 meteorological stations that have sufficient data quality in terms of consistency, accuracy and exposure and a long-term, 10-year record. The windiness of any given year is expressed as a percentage relative to the mean where 100 per cent is equal to the 10-year mean wind speed for the years 1995 to 2004.

1998 was the windiest year and 2003 the least windy over the 7-year period from 1998 to 2004. The relationship between wind speed and capacity factor is shown in Chart 2.

Chart 2: Correlation between capacity factor and indexed UK average wind speed



There is a strong correlation between UK average capacity factor and UK average wind speed in any given year with an R^2 value of just under 0.91; R^2 is a measure of 'goodness of fit' and if there was exact correlation the R^2 value would be 1.

Conclusions

The regional onshore wind capacity factors in the UK between 1998 and 2004 ranged from 19 per cent in one of the least windy regions in a year when the wind speed index was low, to 40 per cent in one of the most windy regions in a year when the wind speed index was high, with the overall UK average being 29 per cent. The quality of the data varies over this period but with ROCs data available from 2003 the quality and consistency of the data improved from this point. Using figures from both NFFO and ROCs data streams increases the data coverage/capture and means this analysis encompasses all wind farms in the UK.

The correlation between average UK wind speed and capacity factor in any given year is good with an R^2 value of 0.91.

⁴ UK Wind Speed Index, Garrad Hassan and Partners Ltd, 2005

Special feature - Renewables

It is proposed to carry out this detailed analysis for wind schemes on an annual basis and present the findings as part of the regular reporting of UK statistics on renewable energy.

Mike Janes (Statistician)

DTI Energy Information and Statistics

Telephone 020-7215 5186

E-mail mike.janes@dti.gsi.gov.uk

<http://www.dti.gov.uk/energy/inform/dukes/index.shtml>

Andrew Tipping and Steve Dagnall

Future Energy Solutions

Telephone 0870 190 6092

E-mail steve.dagnall@aeat.co.uk or

andrew.tipping@aeat.co.uk

<http://www.restats.org.uk>

Recent and forthcoming publications of interest to users of energy statistics

Our Energy Challenge – securing clean, affordable energy for the long term

On 23 January 2005, the Secretary of State for Trade and Industry and the Minister for Energy launched this consultation document. The consultation has a broad scope and considers all aspects of the energy system including both energy supply and demand. It sets out the energy challenges the UK is currently facing, and invites responses to the evidence presented and to what should be done to secure clean, affordable energy for the long term. The consultation period lasts until 14 April 2006. The document can be found at:

<http://www.dti.gov.uk/energy/review/index.shtml> .

Updated emissions projections to 2020

This report presents the latest UK energy and CO₂ emissions projections prepared by the DTI. Projections were previously published in November 2004. This update includes revisions to assumptions on economic growth, future fossil fuel prices and the most recent evaluation of carbon savings from existing measures. This latest work, when combined with emissions projections of greenhouse gases other than CO₂, indicates that the UK remains on track to comfortably exceed its Kyoto commitment to reduce emissions of a basket of greenhouse gases. The report illustrates the historic and projected trends in final energy demand and carbon intensity and the impact of the current Climate Change Programme measures. The report includes assessment of outputs from the UK 's energy supply industries and of fuel mix within the electricity-generating sector. The projections document is available at:

www.dti.gov.uk/energy/sepn/uep_feb2006.pdf .

Climate Change Programme Review

The Climate Change Programme Review was published by the Department for Environment, Food and Rural Affairs at the end of March 2006. It sets out the Government's commitments at international and domestic levels to meet the challenge of climate change. The review has looked at how existing policies have performed and outlines the new programme that will take the UK close to its domestic target to reduce carbon emissions by 20 per cent below 1990 levels by 2010:

<http://www.defra.gov.uk/environment/climatechange/uk/ukccp/index.htm> .

Sixth Joint Energy Security of Supply Working Group (JESS) Report, March 2006

The JESS group, chaired jointly by DTI and Ofgem, brings together contributions from DTI, Ofgem, National Grid and the Foreign and Commonwealth Office (FCO) on energy security. The work that JESS undertakes on security of supply is focused on the medium- to long- term, at least seven years ahead, rather than the short-term. The sixth report covers the work of JESS between November 2004 and January 2006 and sets out how the group's work has developed since its fifth report (November 2004). JESS reports are available on the DTI website at

www.dti.gov.uk/energy/jess, or in hard copy from:

DTI Publications Orderline

Web: www.dti.gov.uk/publications

Phone: 0845 0150 0010

Address: ADMAIL, 528, London, SW1W 0YT

Email: publications@dti.gsi.gov.uk

EU Green Paper on Energy Policy - Fuelling our future

The basis for a European Energy Policy has been set out by the European Commission in a major new Green Paper published on 8 March 2006. The Green Paper invites comments on six specific priority areas and contains over 20 concrete suggestions for possible new action. It outlines how a European Energy Policy could meet the three core objectives of energy policy: sustainable development, competitiveness, and security of supply. The Commission will propose a series of concrete measures based on the conclusions of the European Council and Parliament and replies and comments from what will be a very widespread public consultation. The document can be found at:

http://europa.eu.int:8082/comm/energy/green-paper-energy/index_en.htm .

Energy Sector Indicators 2006

Energy Sector Indicators for 2006 are expected to be published at the end of April 2006 as a supplement to the Third Annual Report on the Energy White Paper which is due to be published at that time. The printed report will this year cover just the four key indicators used in the Report, and 28 supporting indicators. However, the full range of background indicators that have been published in the corresponding booklet for earlier years will be made on the DTI web site at:

www.dti.gov.uk/energy/inform/energy_indicators/index.shtml .

The key indicators and supporting indicators will also be available on this web site, but for the printed copy contact the DTI Publications Orderline at the address given at the foot of the previous page.

Forthcoming changes to DTI web site addresses

During May 2006 the DTI will be launching a new web site. This means that web addresses given in this edition of Energy Trends will change before the next Energy Trends is published in June 2006. However, if you use the links from this edition you should be re-directed to the corresponding page on the new site. Furthermore, the DTI home page (www.dti.gov.uk) will not change and will contain details of how to locate the references listed in this edition and previous editions.

1 TOTAL ENERGY

TABLE 1.1. Indigenous production of primary fuels

Million tonnes of oil equivalent

		Primary electricity					
		Wind and natural flow					hydro ⁵
		Total	Coal ¹	Petroleum ^{2,3}	Natural gas ⁴	Nuclear	
2001		277.4	21.5	127.8	106.9	20.77	0.43
2002		272.9	20.5	127.0	104.7	20.10	0.52
2003		260.4	19.5	116.3	104.2	20.04	0.39
2004		238.4	17.5	104.5	97.5	18.29	0.52
2005		216.1	14.7	92.8	89.5	18.53	0.50
<i>Per cent change</i>		-9.3	-16.0	-11.2	-8.2	+1.3	-3.6
2004	Quarter 4	60.6	4.6	25.8	25.6	4.38	0.17
2005	Quarter 1	59.9r	3.7	24.9r	26.0	5.10	0.16
	Quarter 2	55.5r	3.5	24.1r	23.2	4.50	0.11
	Quarter 3	46.2	3.5	21.2r	16.9	4.63	0.08
	Quarter 4	54.6	4.1	22.6	23.4	4.31	0.15
<i>Per cent change</i> ⁶		-9.9	-11.7	-12.2	-8.8	-1.6	-10.4

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. Calendar months.

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 fourth quarter of 2005 compared with a year earlier.

1 TOTAL ENERGY

TABLE 1.2 Inland energy consumption: primary fuel input basis

Million tonnes of oil equivalent

	Unadjusted ⁵							Seasonally adjusted and temperature corrected ^{6,7,8} (annualised rates)							
	Total	Coal ¹	Petroleum ²	Primary electricity			Net imports	Total	Coal	Petroleum	Primary electricity			Net imports	
				Natural gas ³	Nuclear	Wind and natural flow hydro ⁴					Natural gas	Nuclear	Wind and natural flow hydro		
2001	237.4	42.7	76.1	96.6	20.8	0.43	0.89	238.6	43.1	76.6	96.7	20.8	0.44	0.89	
2002	229.9	39.3	73.9	95.4	20.1	0.52	0.72	235.3	40.0	75.3	98.7	20.0	0.54	0.72	
2003	232.2	41.9	73.9	95.8	20.0	0.39	0.19	236.1	42.9	74.9	97.7	20.0	0.41	0.19	
2004	234.9r	41.5	76.3r	97.7	18.2r	0.59r	0.64	238.9r	42.0	77.4r	100.0	18.1r	0.62r	0.64	
2005	235.7	42.2	78.3	95.5	18.5	0.50	0.72	237.8	42.6	79.3	96.0	18.6	0.52	0.72	
<i>Per cent change</i>	<i>+0.3</i>	<i>+1.6</i>	<i>+2.6</i>	<i>-2.3</i>	<i>+2.0</i>	<i>-14.9</i>	<i>+11.1</i>	<i>-0.4</i>	<i>+1.5</i>	<i>+2.5</i>	<i>-4.0</i>	<i>+2.4</i>	<i>-16.0</i>	<i>+11.1</i>	
2004	Quarter 4	65.2r	12.0	20.1r	28.3	4.4	0.18r	0.21	248.8r	42.9	82.1r	105.1	17.3r	0.59r	0.85
2005	Quarter 1	68.5r	12.5r	19.5r	31.0	5.1	0.16	0.12	253.4r	45.7	79.1r	108.3r	19.3	0.50	0.48
	Quarter 2	54.1r	8.9	19.4r	21.0	4.5	0.11	0.18	233.5r	40.6	79.8r	93.5r	18.3	0.57	0.73
	Quarter 3	48.4r	7.9	19.3r	16.4	4.6	0.08	0.17	220.7r	38.1	77.3r	84.5r	19.6	0.52	0.67
	Quarter 4	64.6	12.8	20.1	27.0	4.3	0.15	0.25	243.7	46.0	81.2	98.0	17.1	0.48	0.98
<i>Per cent change</i> ⁹		<i>-0.9</i>	<i>+6.6</i>	<i>-0.2</i>	<i>-4.6</i>	<i>-1.1</i>	<i>-18.8</i>	<i>+15.9</i>	<i>-2.0</i>	<i>+7.4</i>	<i>-1.2</i>	<i>-6.7</i>	<i>-1.3</i>	<i>-18.7</i>	<i>+15.9</i>

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. Excludes non-energy use.

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 DTI energy statistics website at www.dti.gov.uk/energy/inform/dukes/dukes2005/01longterm.pdf

8. The seasonal adjustment factor used in the seasonal adjustment process have been revised since the last publication.

9. Percentage change in the fourth quarter of 2005 compared with a year earlier.

1 TOTAL ENERGY

Table 1.3a Supply and use of fuels

Thousand tonnes of oil equivalent

	2004	2005	per cent change	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	per cent change ¹
SUPPLY													
Indigenous production	238,333	216,220	-9.3	66,624	65,451	59,838	52,366	60,679	60,001r	55,434r	46,181r	54,604	-10.0
Imports	126,211	134,268	+6.4	28,912	32,081	30,209	31,057	32,864	32,788r	32,900r	33,693r	34,887	+6.2
Exports	-113,953	-99,954	-12.3	-28,756	-28,705	-30,205	-28,156	-26,888	-25,576r	-27,376r	-22,770r	-24,231	-9.9
Marine bunkers	-2,220	-2,223	+0.1	-430	-401	-630	-622	-568	-493	-566	-600	-564	-0.5
Stock change ²	-1,000	-355		+845	+3,446r	-2,932r	-2,859r	+1,344r	+4,843r	-3,375r	-4,855r	+3,032	
Primary supply	247,371	247,956	+0.2	67,194	71,873r	56,280r	51,786r	67,432r	71,562r	57,016r	51,649r	67,728	+0.4
Statistical difference ³	+170	+43		-172	+43r	+540r	-364r	-48r	+287r	+360r	-414r	-189	
Primary demand	247,201	247,913	+0.3	67,366	71,830	55,740	52,151	67,480	71,276r	56,657r	52,063r	67,918	+0.6
Transfers ⁴	-104	+282		-60	124	+2	-140	-91	292r	+108r	6r	-124	
TRANSFORMATION	-53,404	-53,307	-0.2	-14,325	-14,870	-11,927	-12,205	-14,402	-14,614r	-12,565r	-12,066r	-14,063	-2.4
Electricity generation	-50,077	-49,827	-0.5	-13,599	-13,945	-11,221	-11,530	-13,381	-13,841r	-11,513r	-11,221r	-13,252	-1.0
Heat generation	-1,031	-611	-40.8	-169	-300	-237	-216	-279	-176	-141r	-130r	-164	-41.4
Petroleum refineries	217	-342	(-)	109	-25	158	160	-77	1r	-276r	-104r	37	(-)
Coke manufacture	-18	-37	(+)	10	-7	16	-4	-23	5	10	-24	-28	+18.0
Blast furnaces	-2,502	-2,494	-0.3	-677	-598	-644	-617	-643	-602r	-647	-590r	-655	+1.9
Patent fuel manufacture	8	4	-51.4	1	5	-	-	-	-	3	-	-1	(+)
Energy industry use	16,691	16,597	-0.6	4,319	4,266	4,226	3,848	4,351	4,261r	4,234r	3,845r	4,257	-2.2
Losses	3,546	3,688	+4.0	936	1,022	762	774	989	1,080	815	772r	1,021	+3.2
FINAL CONSUMPTION	173,456	174,603	+0.7	47,716	51,851	38,800	35,128	47,677	51,668r	39,123r	35,330r	48,482	+1.7
Iron & steel	1,828	1,854	+1.4	495	480	474	431	443	487r	481r	437r	449	+1.4
Other industries	32,258	31,729	-1.6	8,443	9,674	7,480	6,852	8,252	9,592r	7,431r	6,536r	8,170	-1.0
Transport	57,449	58,959	+2.6	13,923	13,765	14,396	14,987	14,301	13,892r	14,605r	15,421r	15,040	+5.2
Domestic	48,731	49,139	+0.8	15,832	18,343	8,676	5,894	15,819	18,187r	9,066r	5,946r	15,941	+0.8
Public administration	7,256	7,311	+0.8	2,131	2,394	1,551	1,201	2,110	2,422r	1,576r	1,217r	2,097	-0.6
Commercial	10,334	10,599	+2.6	3,010	3,117	2,229	2,078	2,910	3,173r	2,396r	2,182r	2,849	-2.1
Agriculture	920	1,173	+27.5	255	238	241	228	213	339r	289r	241r	305	+43.1
Miscellaneous	2,251	2,464	+9.5	621	725	558	320	647	772r	621r	344r	727	+12.3
Non energy use	12,429	11,375	-8.5	3,006	3,115	3,196	3,136	2,982	2,805r	2,658r	3,006r	2,906	-2.6

1. Percentage change between the most recent quarter and the same quarter 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

	2004 Quarter 4									2005 Quarter 4 p								
	Coal	Manufactured fuels ⁴	Primary oil	Petroleum Products	Natural gas ⁵	Renewables & waste ⁶	Primary electricity	Electricity	Heat sold	Coal	Manufactured fuels ⁴	Primary oil	Petroleum Products	Natural gas ⁵	Renewables & waste ⁶	Primary electricity	Electricity	Heat sold
SUPPLY																		
Indigenous production	4,139	-	25,775	-	25,270	942	4,553	-	-	3,590	-	22,638	-	23,018	863	4,495	-	-
Imports	5,822	163	16,854	5,471	4,209	84	-	260	-	7,705	178	15,344	6,202	5,065	100	-	293	-
Exports	-129	-34	-16,449	-8,941	-1,286	-	-	-49	-	-85	-19	-13,998	-8,332	-1,749	-	-	-48	-
Marine bunkers	-	-	-	-568	-	-	-	-	-	-	-	-	-564	-	-	-	-	-
Stock change ¹	+1,542	+79	+355	-596	-36	-	-	-	-	+981	+13	+605	+902	+531	-	-	-	-
Primary supply	11,374	208	26,535	-4,633	28,157	1,026	4,553	212	-	12,191	172	24,589	-1,792	26,865	963	4,495	245	-
Statistical difference ²	+269	+39	+135	-355	-225	-	-	+89	-	+74	-7	+40	-337	-14	-	-	+56	-
Primary demand	11,105	169	26,400	-4,278	28,381	1,026	4,553	123	-	12,117	179	24,549	-1,454	26,879	963	4,495	190	-
Transfers ³	-	-29	-1,086	+1,024	-	-	-196	+196	-	-	-29	-1,136	+1,042	-	-	-205	+205	-
TRANSFORMATION	-10,422	357	-25,314	24,977	-8,316	-803	-4,357	8,877	599	-11,589	469	-23,413	23,179	-7,126	-740	-4,290	8,848	599
Electricity generation	-9,138	-243	-	-156	-7,561	-803	-4,357	8,877	-	-10,197	-236	-	-152	-6,485	-740	-4,290	8,848	-
Heat generation	-85	-18	-	-21	-754	-	-	-	599	-83	-18	-	-20	-641	-	-	-	599
Petroleum refineries	-	-	-25,314	25,238	-	-	-	-	-	-	-	-23,413	23,449	-	-	-	-	-
Coke manufacture	-977	954	-	-	-	-	-	-	-	-1,085	1,058	-	-	-	-	-	-	-
Blast furnaces	-169	-390	-	-83	-	-	-	-	-	-177	-381	-	-	-	-	-	-	-
Patent fuel manufacture	-53	54	-	-	-	-	-	-	-	-48	47	-	-	-	-	-	-	-
Energy industry use	-	205	-	1,548	1,960	-	-	634	3	-	212	-	1,559	1,832	-	-	649	3
Losses	-	58	-	-	214	-	-	717	-	-	49	-	-	287	-	-	685	-
FINAL CONSUMPTION	682	233	-	20,176	17,891	223	-	7,846	625	527	358	-	21,207	17,632	223	-	7,909	625
Iron & steel	-	136	-	8	182	-	-	117	-	-	170	-	4	158	-	-	116	-
Other industries	335	33	-	1,912	3,234	73	-	2,355	309	279	82	-	2,164	2,917	73	-	2,345	309
Transport	-	-	-	14,126	-	-	-	175	-	-	-	-	14,868	-	-	-	172	-
Domestic	329	64	-	994	11,396	84	-	2,935	17	227	106	-	984	11,585	84	-	2,937	17
Other final users	19	-	-	370	2,863	66	-	2,264	299	20	-	-	472	2,782	66	-	2,338	299
Non energy use	-	-	-	2,767	215	-	-	-	-	-	-	-	2,716	190	-	-	-	-

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. Includes colliery methane.

6. Includes geothermal and solar heat. Latest quarter is estimated from the previous year and adjusted according to average annual rate of change over the last three years.

2 SOLID FUEL AND DERIVED GASES

Table 2.1 Supply and consumption of coal

Thousand tonnes

	2004	2005	per cent change ¹	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	per cent change ²
SUPPLY													
Indigenous production	25,097	20,624	-17.8	7,371	6,382	6,091	6,001	6,623	5,144	4,891	4,826	5,763	-13.0
Deepmined	12,543	9,563	-23.8	4,223	3,349	2,984	2,947	3,263	2,324	1,908	2,132	3,199	-2.0
Opencast	11,993	10,445	-12.9	3,029	2,906	2,969	2,886	3,232	2,691	2,821	2,521	2,412	-25.4
Other sources	561	616	+10	118	128	139	167	127	129	162	173	152	+20
Imports	36,153	43,813	+21.2	8,545	9,272	8,995	8,975	8,911	10,185r	10,903r	10,931r	11,793	+32.3
Exports	621	550	-11	163	153	163	125	179	135	176	121r	118	-34
Stock change ³	+176	-1,789		+1,981	+2,334	-2,091	-2,479	+2,412	+3,389	-2,639	-4,114	+1,576	
Total supply	60,805	62,098	+2.1	17,733	17,835	12,832	12,371	17,767	18,583r	12,979r	11,523r	19,013	+7.0
Statistical difference	+126	-133		+7	-353	+310	-232	+401	-185r	-94r	+89r	+58	
Total demand	60,679	62,231	+2.6	17,726	18,187	12,522	12,604	17,366	18,768r	13,073r	11,434r	18,956	+9.2
TRANSFORMATION													
Electricity generation	57,755	59,620	+3.2	17,115	17,528	11,868	11,958	16,401	18,041	12,472	10,862	18,246	+11.2
Heat generation	50,503	52,208	+3.4	15,109	15,703	10,018	10,164	14,618	16,329	10,657	8,910	16,312	+11.6
Heat generation	543	543	-	163	137	135	135	136	137	135	135	136	-
Coke manufacture	5,487	5,564	+1.4	1,499	1,387	1,396	1,363	1,341	1,262	1,331	1,481	1,490	+11.1
Blast furnaces	895	1,039	+16	237	211	230	222	232	247	281	268	243	+5
Patent fuel manufacture	327	266	-19	107	91	88	74	74	65	67	68	66	-11
Energy industry use	8	6		2	2	2	2	2	2	1	1	1	
FINAL CONSUMPTION													
Iron & steel	2,916	2,605	-10.7	609	657	653	643	963	725r	600r	571r	709	-26
Other industries	-	-		-	-	-	-	-	-	-	-	-	
Domestic	1,482	1,410	-4.8	257	263	351	361	507	403r	323r	300r	384	-24
Other final users	1,359	1,106	-18.6	341	377	287	266	429	292r	258r	260r	297	-31
Other final users	76	87	+15	11	17	16	16	27	31r	18r	10r	28	+3
Stocks at end of period													
Distributed stocks	12,325	14,151	+14.8	12,070	9,705	12,072	14,451	12,325	8,989	11,804	15,924	14,151	+14.8
Of which:													
Major power producers	11,019	12,696	+15.2	10,971	8,729	10,947	13,141	11,019	7,419	9,990	14,211	12,696	+15.2
Coke ovens	1,291	1,444	+11.8	1,086	967	1,119	1,306	1,291	1,558	1,801	1,706	1,444	+11.8
Undistributed stocks	1,192	1,156	-3.1	1,624	1,655	1,379	1,479	1,192	1,140	965	958	1,156	-3.1
Total stocks	13,518	15,307	+13.2	13,694	11,360	13,451	15,930	13,518	10,129	12,768	16,882	15,307	+13.2

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in the fourth quarter of 2005 compared with a year earlier.

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

2 SOLID FUEL AND DERIVED GASES

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

Thousand tonnes

	2004	2005	per cent change ¹	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	per cent change ²
SUPPLY													
Indigenous production	4,654	4,622	-0.7	1,305	1,190	1,214	1,145	1,105	1,061	1,136	1,213	1,212	+9.6
Coke oven coke	4,038	4,105	+1.7	1,128	1,017	1,053	1,003	965	949	992	1,078	1,086	+12.5
Coke breeze	298	259	-13	73	80	79	70	69	51	77	67	64	-7
Other MSF	318	258	-19	104	93	82	72	71	61	67	68	62	-13
Imports	1,051	1,247	+19	224	237	321	257	236	304r	353r	324r	267	+13
Exports	181	134	-26	49	48	41	41	51	41	34	29	29	-42
Stock change ³	-130	-147		+24	-65	-121	-55	+111	+79	-49	-187	+10	
Transfers	-	-		-	-	-	-	-	-	-	-	-	
Total supply	5,394	5,588	+3.6	1,504	1,314	1,372	1,306	1,401	1,403r	1,405r	1,321r	1,459	+4.1
Statistical difference	-71	-4		-21	-27	-42	-18	+15	10r	-2r	-6r	-5	
Total demand	5,465	5,592	+2.3	1,525	1,340	1,415	1,324	1,386	1,393r	1,408r	1,327r	1,464	+5.6
TRANSFORMATION	4,171	4,067	-2.5	1,141	1,005	1,074	1,028	1,064	987	1,040	982	1,058	-0.5
Coke manufacture	-	-		-	-	-	-	-	-	-	-	-	
Blast furnaces	4,171	4,067	-2.5	1,141	1,005	1,074	1,028	1,064	987	1,040	982	1,058	-0.5
Energy industry use	4	-	(-)	1	2	2	-	-	-	-	-	-	
FINAL CONSUMPTION	1,290	1,524	+18.2	383	333	339	296	322	406r	368r	345r	406	+26
Iron & steel	810	821	+1	208	196	207	198	209	199	213	206	203	-3
Other industries	126	199	+58	38	28	42	28	28	57r	43r	40r	59	(+)
Domestic	354	505	+43	137	109	90	70	85	150r	113r	99r	143	+68
Stocks at end of period	708	855	+21	578	642	764	819	708	628	677	864	855	+21

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in the fourth quarter of 2005 compared with a year earlier.

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

2 SOLID FUEL AND DERIVED GASES

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

	<i>GWh</i>												
	2004	2005	<i>per cent change¹</i>	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	<i>per cent change²</i>
SUPPLY													
Indigenous production	26,606	27,294	+2.6	7,037	6,473	6,814	6,620	6,699	6,551	6,850	6,816	7,077	+5.6
Coke oven gas	9,076	9,290	+2.4	2,483	2,273	2,310	2,284	2,209	2,151	2,252	2,436	2,451	+11.0
Blast furnace gas	15,770	16,199	+2.7	4,069	3,755	4,054	3,897	4,064	3,972	4,159	3,890	4,179	+2.8
Benzole & tars	1,722	1,754	+1.9	475	429	439	432	422	412	426	475	442	+5
Transfers	+39	+50	+29	+10	+17	+11	+7	+4	+17	+13	+15	+5	+20.0
Total supply	26,606	27,294	+2.6	7,037	6,473	6,814	6,620	6,699	6,551	6,850	6,816	7,077	+5.6
Statistical difference	-38	-38		-22	-17	-15	-4	-2	-14	-7	-11	-6	
Total demand	26,644	27,332	+2.6	7,059	6,490	6,829	6,624	6,701	6,566	6,857	6,827	7,083	+5.7
TRANSFORMATION	11,566	11,538	-0.2	3,081	2,664	2,895	2,973	3,034	2,845r	2,866r	2,867r	2,960	-2.5
Electricity generation	10,718	10,691	-0.3	2,742	2,452	2,683	2,761	2,822	2,633r	2,654r	2,655r	2,748	-2.6
Heat generation	848	848	-	339	212	212	212	212	212	212	212	212	-
Energy industry use	9,843	9,538	-3.1	2,733	2,510	2,516	2,433	2,384	2,305	2,380	2,383	2,469	+3.6
Losses	2,340	2,456	+4.9	509	446	652	565	677	625	700	564	567	-16
FINAL CONSUMPTION	2,895	3,800	+31.3	736	870	766	653	606	791r	910r	1,013r	1,086	+79
Iron & steel	995	1,771	+78.0	247	401	288	172	134	329r	411r	462r	568	(+)
Other industries	1,900	2,030	+7	489	469	478	481	472	462	499	550	519	+10

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in the fourth quarter of 2005 compared with a year earlier.

3 OIL AND OIL PRODUCTS

Table 3.1 Supply and use of crude oil, natural gas liquids and feedstocks¹

Thousand tonnes

	2004	2005 p	per cent change	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter p	per cent change ⁸
SUPPLY													
Indigenous production	95,374	84,665	-11.2	26,410	25,434	24,345	22,078	23,516	22,714r	21,990r	19,309	20,652	-12.2
Crude oil	87,516	77,122	-11.9	24,424	23,315	22,319	20,376	21,507	20,546r	20,071r	17,664	18,841	-12.4
NGLs ³	7,858	7,543	-4.0	1,986	2,120	2,026	1,703	2,009	2,168r	1,919r	1,645	1,811	-9.9
Imports ⁴	62,516	59,231	-5.3	13,340	14,963	15,666	16,440	15,448	13,924r	15,696r	15,552	14,060	-9.0
Crude oil & NGLs	55,858	52,210	-6.5	12,065	13,357	14,064	14,446	13,991	12,469r	13,896r	13,656	12,190	-12.9
Feedstocks	6,659	7,021	+5.4	1,275	1,606	1,602	1,994	1,457	1,455r	1,800r	1,896	1,870	+28.4
Exports ⁴	64,504	54,098	-16.1	18,362	17,758	16,619	15,075	15,052	14,547r	15,345r	11,404	12,801	-14.9
Crude Oil & NGLs	63,413	52,106	-17.8	17,869	17,374	16,387	14,794	14,858	14,039r	15,039r	10,900	12,128	-18.4
Feedstocks	1,091	1,992	(-)	494	385	232	282	194	508r	306r	504	673	(+)
Stock change ⁵	-133	-385		-290	-381	-335	+255	+329	-329r	-376r	-235	+556	
Transfers ⁶	-3,543	-3,154		-326	-984	-871	-759	-929	-636r	-889r	-655	-975	
Total supply	89,710	86,259	-3.8	20,772	21,274	22,186	22,938	23,312	21,126r	21,076r	22,567	21,491	-7.8
Statistical difference ⁷	-111	+93		-59	-140	-31	-67	+128	+269r	-47r	-167	+37	
Total demand	89,821	86,166	-4.1	20,831	21,414	22,217	23,006	23,184	20,856r	21,122r	22,734	21,453	-7.5
TRANSFORMATION	89,821	86,166	-4.1	20,831	21,414	22,217	23,006	23,184	20,856r	21,122r	22,734	21,453	-7.5
Petroleum refineries	89,821	86,166	-4.1	20,831	21,414	22,217	23,006	23,184	20,856r	21,122r	22,734	21,453	-7.5
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. 2005 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 backflows from petrochemical plants to refineries.
7. Total supply minus total demand.
8. Percentage change between the most recent quarter and the same quarter a year earlier.

3 OIL AND OIL PRODUCTS

Table 3.2 Supply and use of petroleum products

Thousand tonnes

	2004	2005 p	per cent change	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter p	per cent change ¹
SUPPLY													
Indigenous production ²	93,552	89,043	-4.8	21,588	22,372	23,239	23,941	24,000	21,762r	21,708r	23,308	22265	-7.2
Imports ³	19,485	22,036	+13.1	4,808	4,812	4,862	4,784	5,027	5,470r	5,318r	5,535	5,712	+13.6
Exports ³	30,270	29,256	-3.3	5,975	7,184	7,201	7,645	8,240	7,375r	6,924r	7,303	7,654	-7.1
Marine bunkers	2,085	2,097	+0.6	406	377	592	584	533	464	533	566	534	+0.2
Stock change ⁴	-289	+1046		-197	+407	+96	-260	-531	+815	+131	-727	+827	
Transfers ⁵	-203	+117		-370	+28	-31	-127	-73	-24	+142	-42	+42	
Total supply	80,191	80,889	+0.9	19,449	20,057	20,374	20,109	19,651	20,184r	19,841r	20,206	20,658	+5.1
Statistical difference ⁶	-35	-291		-243	+198	+295	-196	-332	+243	+122	-357	-299	
Total demand	80,226	81,180	+1.2	19,691	19,859	20,078	20,305	19,983	19,941r	19,719r	20,563	20,957	+4.9
TRANSFORMATION	1,006	1,067	+6.1	247	239	236	286	244	298r	211	304	253	+3.7
Electricity generation	631	699	+10.8	145	154	138	194	145	203r	116	240	140	-3.1
Heat generation	78	78	-	42	20	19	19	20	20r	19r	19	20	-
Blast furnaces	297	290	-	59	65	79	73	80	76	76	45	93	+16.6
Energy industry use	5,455	5,634	+3.3	1,345	1,262	1,423	1,325	1,446	1,298r	1,458r	1,413	1,464	+1.3
Petroleum Refineries	5,453	5,634	+3.3	1,345	1,261	1,422	1,325	1,445	1,298r	1,458r	1,413	1,464	+1.3
Blast Furnaces	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-
FINAL CONSUMPTION	73,765	74,479	+1.0	18,100	18,358	18,420	18,694	18,293	18,344r	18,050r	18,846	19,239	+5.2
Iron & steel	33	9	-73.3	4	10	9	7	7	2r	1	1	4	-45.7
Other industries	7,593	7,518	-1.0	1,848	2,078	1,931	1,833	1,752	2,092r	1,804r	1,648	1,974	+12.7
Transport	51,301	52,711	+2.7	12,421	12,229	12,865	13,424	12,783	12,409r	13,056r	13,791	13,455	+5.3
Domestic	2,788	2,783	-0.2	1,015	987	479	428	894	970r	505r	422	885	-0.9
Public administration	435	500	+14.8	128	135	99	97	105	188r	102r	94	115	+9.6
Commercial	385	549	+42.4	87	112	93	97	84	129r	99r	197	124	+47.8
Agriculture	245	318	+30.0	75	68	59	58	59	68r	93r	69	88	+49.1
Miscellaneous	401	434	+8.2	20	77	167	67	90	91r	153r	80	110	+21.3
Non energy use	10,584	9,658	-8.7	2,502	2,663	2,719	2,683	2,519	2,394r	2,235r	2,543	2,485	-1.4

1. Percentage change between the most recent quarter and the same quarter 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.

2005 data are subject to further revision as revised information on imports and exports becomes available.

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

5. Mainly backflows from petrochemical plants to refineries.

6. Total supply minus total demand.

3 OIL AND OIL PRODUCTS

Table 3.3 Supply and use of petroleum products - annual data

Thousand tonnes

	2004								2005 p							
	Total Petroleum Products	Motor spirit	Gas diesel Oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³	Total Petroleum Products	Motor spirit	Gas diesel Oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³
SUPPLY																
Indigenous production ⁴	93,552	24,589	28,773	5,615	12,988	8,087	3,613	9,886	89,043	22,424	28,690	5,167	11,728	8,218	3,325	9,491
Imports ⁵	19,485	2,175	4,216	7,658	1,552	524	360	3,000	22,036	2,377	4,934	9,117	2,454	397	407	2,350
Exports ⁵	30,270	7,334	6,623	758	8,936	1,032	413	5,173	29,256	6,586	6,314	1,171	8,367	1,177	282	5,359
Marine bunkers	2,085	-	942	-	1,012	-	-	131	2,097	-	740	-	1,209	-	-	148
Stock change ⁶	-289	-40	-268	-112	-46	-34	-58	+269	+1046	+366	+284	+96	+136	+22	+24	+119
Transfers ⁷	-203	-11	-576	-345	-19	+4	+413	+331	+117	+136	-554	-343	+208	-3	+333	+341
Total supply	80,191	19,380	24,581	12,059	4,527	7,549	3,915	8,181	80,889	18,716	26,299	12,866	4,949	7,457	3,807	6,794
Statistical difference ⁸	-35	-105	-30	+197	-159	-10	-35	+107	-291	+45	+12	+109	+237	-239	-63	-391
Total demand	80,226	19,484	24,611	11,862	4,685	7,559	3,950	8,074	81,180	18,671	26,287	12,757	4,711	7,696	3,871	7,186
TRANSFORMATION	1,006	-	67	-	793	145	-	-	1,067	-	94	-	827	145	-	-
Electricity generation	631	-	59	-	427	145	-	-	699	-	86	-	468	145	-	-
Heat generation	78	-	9	-	69	-	-	-	78	-	9	-	69	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	297	-	-	-	297	-	-	-	290	-	-	-	290	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy industry use	5,455	-	192	-	1,681	2,562	-	1,019	5,634	-	106	-	1,793	2,649	-	1,086
FINAL CONSUMPTION	73,765	19,484	24,352	11,862	2,211	4,852	3,950	7,055	74,479	18,671	26,087	12,757	2,091	4,902	3,870	6,100
Iron & steel	33	-	2	-	31	-	-	-	9	-	-	-	8	-	-	-
Other industries	7,593	-	3,486	-	1,783	858	1,465	-	7,518	-	3,706	-	1,492	831	1,490	-
Transport	51,301	19,484	19,399	11,862	266	112	12	167	52,711	18,671	20,586	12,757	354	120	12	209
Domestic	2,788	-	10	-	-	330	2,448	-	2,783	-	141	-	-	298	2,344	-
Other final users	1,466	-	1,206	-	130	106	24	-	1,801	-	1,425	-	237	115	24	-
Non energy use	10,584	-	249	-	-	3,447	-	6,888	9,658	-	229	-	-	3,538	-	5,891

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.

2005 data are subject to further revision as revised information on imports and exports becomes available.

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

7. Mainly backflows from petrochemical plants to refineries.

8. Total supply minus total demand.

3 OIL AND OIL PRODUCTS

Table 3.4 Supply and use of petroleum products - latest quarter

Thousand tonnes

	2004 4th quarter								2005 4th quarter p							
	Total Petroleum Products	Motor spirit	Gas diesel Oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³	Total Petroleum Products	Motor spirit	Gas diesel Oil ¹	Aviation turbine fuel	Fuel oils	Petroleum gases ²	Burning oil	Other products ³
SUPPLY																
Indigenous Production ⁴	24,000	6,314	7,695	1,193	3,039	2,001	1,035	2,723	22,265	5,782	7,319	1,178	2,786	1,989	1,022	2,190
Imports ⁵	5,027	401	960	2,122	487	152	98	807	5,712	601	1,352	2,285	538	79	131	727
Exports ⁵	8,240	1,985	1,753	182	2,536	236	139	1,408	7,654	1,847	1,683	395	2,019	285	71	1,354
Marine bunkers	533	-	261	-	250	-	-	22	534	-	182	-	332	-	-	19
Stock change ⁶	-531	-172	-293	-26	+90	+2	-58	-75	+827	+9	+200	+203	+210	+69	+24	+111
Transfers ⁷	-73	-9	-144	-148	+11	+1	+145	+72	+42	+20	-139	-88	+68	-	+84	+97
Total supply	19,651	4,549	6,203	2,958	841	1,920	1,080	2,098	20,658	4,565	6,866	3,183	1,251	1,853	1,189	1,750
Statistical difference ⁸	-332	-258	-92	+123	-246	+110	-66	+96	-299	-192	+41	+98	+14	-132	-40	-88
Total demand	19,983	4,807	6,296	2,835	1,087	1,810	1,146	2,002	20,957	4,758	6,825	3,085	1,237	1,985	1,229	1,838
TRANSFORMATION	244	-	16	-	191	38	-	-	253	-	33	-	184	36	-	-
Electricity generation	145	-	14	-	93	38	-	-	140	-	31	-	73	36	-	-
Heat generation	20	-	2	-	17	-	-	-	20	-	2	-	17	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blast furnaces	80	-	-	-	80	-	-	-	93	-	-	-	93	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Energy industry use	1,446	-	86	-	428	651	-	280	1,464	-	87	-	473	652	-	252
FINAL CONSUMPTION	18,293	4,807	6,193	2,835	468	1,122	1,146	1,722	19,239	4,758	6,705	3,085	580	1,296	1,229	1,586
Iron & steel	7	-	1	-	7	-	-	-	-	-	-	-	4	-	-	-
Other industries	1,752	-	914	-	334	165	339	-	1,974	-	976	-	286	230	482	-
Transport	12,773	4,807	4,955	2,835	103	29	3	42	13,455	4,758	5,338	3,085	169	-	3	70
Domestic	894	-	2	-	-	93	798	-	885	-	53	-	-	94	737	-
Other final users	338	-	281	-	25	26	6	-	436	-	278	-	121	31	6	-
Non energy use	2,519	-	40	-	-	809	-	1,670	2,485	-	60	-	-	909	-	1,516

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.

2005 data are subject to further revision as revised information on imports and exports becomes available.

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

7. Mainly backflows from petrochemical plants to refineries.

8. Total supply minus total demand.

3 OIL AND OIL PRODUCTS

Table 3.5 Demand for key petroleum products¹

Thousand tonnes

	2004	2005 p	per cent change	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter p	per cent change ²
MOTOR SPIRIT													
Total sales	19,484	18,671	-4.2	4,778	4,798	4,908	4,971	4,807	4,547r	4,640r	4,727	4,758	-1.0
By seller:													
Retail sales: ³	18,679	17,843	-4.5	4,623	4,600	4,712	4,772	4,595	4,344r	4,426r	4,537	4,536	-1.3
hypermarkets ⁴	6,137	6,710	+9.3	1,514	1,519	1,574	1,580	1,464	1,542r	1,683r	1,754	1,730	+18.2
refiners/other traders	12,542	11,183	-10.8	3,109	3,081	3,138	3,192	3,131	2,802r	2,743r	2,782	2,805	-10.4
Commercial sales ⁵	805	828	+2.9	155	198	196	199	212	203r	214r	190	222	+4.7
By grade:													
4-Star/Leaded/LRP ⁶	88	23	(-)	47	24	19	36	9	5	6	7	5	-42.7
Super Premium Unleaded	836	816	-2.4	210	196	235	196	209	188r	201	226	200	-4.1
Premium Unleaded/ULSP ⁷	18,560	17,833	-3.9	4,460	4,579	4,654	4,739	4,588	4,354r	4,433r	4,494	4,552	-0.8
GAS DIESEL OIL													
Total sales	24,419	26,286	+7.6	6,143	5,898	6,137	6,097	6,287	6,327r	6,563r	6,572	6,824	+8.5
DERV fuel	18,514	19,448	+5.0	4,563	4,459	4,648	4,598	4,809	4,594r	4,919r	4,905	5,030	+4.6
Retail sales: ³	9,517	10,685	+12.3	2,401	2,258	2,338	2,432	2,489	2,374r	2,734r	2,695	2,881	+15.8
hypermarkets ⁴	2,474	3,091	+24.9	557	586	611	649	628	676r	755r	815	845	+34.6
refiners/other traders	7,043	7,594	+7.8	1,844	1,672	1,727	1,783	1,861	1,698r	1,979r	1,881	2,036	+9.4
Commercial sales ⁵	8,998	8,763	-2.6	2,162	2,204	2,313	2,162	2,319	2,220r	2,184r	2,210	2,149	-7.3
Other gas diesel oil ⁸	5,905	6,838	+15.8	1,580	1,439	1,489	1,499	1,478	1,733r	1,644r	1,667	1,794	+21.3
AVIATION FUELS													
Total sales	11,911	12,810	+7.5	2,646	2,715	2,941	3,410	2,844	2,879r	3,085r	3,752	3,094	+8.8
Aviation spirit	48	52	+8.8	11	9	12	18	9	9	16r	18	9	+4.8
Aviation turbine fuel	11,862	12,757	+7.5	2,635	2,706	2,929	3,391	2,835	2,870r	3,069r	3,734	3,085	+8.8
FUEL OIL													
Total Sales	2,833	2,091	-26.2	640	585	805	784	659	542r	516r	453	580	-12.0
Light	215	197	-8.4	46	27	36	123	29	51r	49r	43	55	+88.3
Medium	1,460	970	-33.6	250	333	339	414	374	252r	239r	210	269	-28.1
Heavy	1,158	924	-20.2	344	225	430	247	256	240r	228r	200	256	+0.1

1. Monthly data for inland deliveries of oil products are available - See DTI web-site. www.dti.gov.uk/energy/inform/energy_stats/.

2. Percentage change between the most recent quarter and the same quarter 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 petroleum¹ at end of period

		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 ⁸	Other products ⁹	Total products	Net bilaterals ¹⁰	Stocks in UK ¹¹	Total stocks
2001		4,183	2,526	828	7,637	1,372	3,303	1,180	2,598	8,453	614	15,476	16,090
2002		4,503	2,126	760	7,499	1,282	3,173	1,196	2,061	7,712	1,118	14,093	15,211
2003		4,670	1,509	741	7,030	1,490	3,640	1,237	2,166	8,533	1,610	13,954	15,563
2004		4,440	1,261	736	6,648	1,504	3,790	987	2,141	8,422	1,545	13,525	15,070
2005 p		4,875	1,129	798	7,067	1,051	3,911	1,057	1,548	7,567	1,587	13,047	14,634
<i>Per cent change</i>		+9.8	-10.4	+8.4	+6.3	-30.1	+3.2	+7.1	-27.7	-10.1	+2.8	-3.5	-2.9
2003	4th quarter	4,670	1,509	741	7,030	1,490	3,640	1,237	2,166	8,533	1,610	13,954	15,563
2004	1st quarter	4,703	1,124	757	6,674	1,551	3,012	1,011	2,387	7,961	1,269	13,367	14,635
	2nd quarter	4,413	1,505	968	6,985	1,149	3,538	986	1,977	7,650	1,316	13,320	14,635
	3rd quarter	4,660	1,049	955	6,844	1,268	3,624	1,090	2,029	8,012	1,462	13,394	14,856
	4th quarter	4,440	1,261	736	6,648	1,504	3,790	987	2,141	8,422	1,545	13,525	15,070
2005	1st quarter	4,567r	1,169r	982r	7,038r	1,204r	3,904r	1,335r	1,650r	8,093r	1,937r	13,193r	15,131r
	2nd quarter	4,862r	1,459r	772r	7,478r	993r	3,907r	1,352r	1,650r	7,903r	1,943r	13,438r	15,381r
	3rd quarter	4,698	1,875	773	7,646	909	4,170	1,243	1,889	8,211	1,440	14,418	15,857
	4th quarter p	4,875	1,129	798	7,067	1,051	3,911	1,057	1,548	7,567	1,587	13,047	14,634
<i>Per cent change</i>		+9.8	-10.4	+8.4	+6.3	-30.1	+3.2	+7.1	-27.7	-10.1	+2.8	-3.5	-2.9

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. From April 1994 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 feestock (mdf) and marine diesel oil.

8. Including Orimulsion.

9. Ethane, propane, butane, other petroleum gases, naphtha (ldf), industrial white spirit, bitumen, petroleum wax, lubricating oil, petroleum coke and miscellaneous products.

10. 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.

11. Stocks held in the national territory or elsewhere on the UKCS.

3 OIL AND OIL PRODUCTS

Table 3.7 Drilling activity¹ on the UKCS

		<i>Number of wells started</i>					
		Offshore			Onshore		
		Exploration &		Development ²	Exploration &		
		Exploration	Appraisal		Appraisal	Development ²	
2003		26	19	45	204	4	17
2004		29	34	63	166	3	14
2005		41	37	78	227	8	21
<i>Per cent change</i>		<i>+41.4</i>	<i>+8.8</i>	<i>+23.8</i>	<i>+36.7</i>	<i>(+)</i>	<i>+50.0</i>
2003	4th quarter	7	8	15	64	1	4
2004	1st quarter	8	5	13	38	1	1
	2nd quarter	5	9	14	48	-	7
	3rd quarter	8	8	16	39	-	1
	4th quarter	8	12	20	41	2	5
2005	1st quarter	6	8	14	43	-	7r
	2nd quarter	8	9	17	73r	2r	6r
	3rd quarter	19	11	30	65r	3	5
	4th quarter	8	9	17	46	3	3
<i>Per cent change³</i>		<i>-</i>	<i>-25.0</i>	<i>-15.0</i>	<i>+12.2</i>	<i>+50.0</i>	<i>-40.0</i>

1. Including sidetracked wells

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

3. Percentage change in the fourth quarter of 2005 compared with a year earlier

4 GAS

Table 4.1. Natural gas supply and consumption

GWh

	2004	2005	per cent change ¹	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	per cent change ²
SUPPLY													
Indigenous production	1,115,744	1,023,122	-8.3	318,142	316,716	280,857	224,481	293,690	298,266	265,681r	191,703r	267,472	-8.9
Imports	133,035	173,328	+30.3	37,310	47,721	17,542	18,822	48,950	52,597	26,952	34,873r	58,906	+20.3
Exports	114,111	95,958	-15.9	23,539	14,877	46,560	37,714	14,960	16,726	33,517	25,370r	20,345	+36.0
Stock change ³	-6,235	+1,321		+1,074	+22,956	-14,424	-14,348	-419	+24,768	-16,688	-12,932	+6,173	
Transfers	-39	-51		-10	-17	-11	-7	-4	-17	-13	-15	-5	
Total supply	1,128,394	1,101,762	-2.4	332,977	372,499	237,404	191,234	327,257	358,888	242,414r	188,259r	312,200	-4.6
Statistical difference	+1,201	+1,030		+2,169	+1,576	+1,825	+413	-2,613	-1,452r	+2,785r	-136r	-167	
Total demand	1,127,193	1,100,732	-2.3	330,807	370,922	235,580	190,821	329,870	360,341r	239,629r	188,395r	312,367	-5.3
TRANSFORMATION													
Electricity generation	370,002	346,007	-6.5	92,126	92,637	88,897	91,905	96,563	83,924r	88,901r	90,465r	82,717	-14.3
Heat generation	338,153	318,935	-5.7	86,133	83,192	81,692	85,478	87,791	75,896	82,777	85,002	75,261	-14.3
Energy industry use	31,849	27,072	-15.0	5,994	9,445	7,205	6,427	8,772	8,028r	6,124r	5,463r	7,456	-15.0
Losses	87,313	84,828	-2.8	22,899	23,372	22,161	19,025	22,755	23,182	22,104r	18,278r	21,265	-6.5
Losses	8,174	10,711	+31.0	1,959	2,640	1,563	1,480	2,491	2,637	2,737	1,995r	3,342	+34.2
FINAL CONSUMPTION													
Iron & steel	661,704	659,186	-0.4	213,823	252,273	122,959	78,411	208,061	250,598r	125,887r	77,657r	205,044	-1.5
Other industries	8,837	8,557	-3.2	2,712	2,353	2,340	2,028	2,116	2,560r	2,338r	1,817r	1,842	-12.9
Domestic	136,330	131,997	-3.2	40,885	48,831	28,419	21,478	37,602	48,790r	29,066r	20,235r	33,906	-9.8
Other final users	396,411	400,372	+1.0	131,802	159,663	66,867	37,341	132,540	159,069r	68,949r	37,617r	134,737	+1.7
Non energy use	110,105	108,539	-1.4	35,919	38,921	22,827	15,059	33,298	37,674r	23,028r	15,483r	32,354	-2.8
Non energy use	10,021	9,721	-3.0	2,505	2,506	2,505	2,505	2,505	2,505	2,505	2,505	2,205	-12.0

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in the fourth quarter of 2005 compared with a year earlier

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

5 ELECTRICITY

Table 5.1. Fuel used in electricity generation and electricity supplied

	2004	2005	per cent change ¹	2003 4th quarter	2004 1st quarter	2004 2nd quarter ³	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	per cent change ²
FUEL USED IN GENERATION													
										Million tonnes of oil equivalent			
Major power producers													
Coal	30.38	31.65	+4.2	9.11	9.48	5.97	6.10	8.82	9.95	6.42	5.35	9.93	+12.6
Oil	0.57	0.86	+49.9	0.19	0.17	0.12	0.12	0.16	0.25	0.09	0.12	0.40	(+)
Gas	26.18	25.41	-2.9	6.41	6.47	6.26	6.62	6.83	5.96	6.59	6.84	6.02	-11.8
Nuclear	18.16	18.53	+2.0	4.72	5.34	4.22	4.24	4.36	5.10	4.50	4.63	4.31	-1.1
Hydro (natural flow)	0.37	0.35	-4.4	0.08	0.12	0.05	0.07	0.13	0.12	0.07	0.05	0.11	-13.5
Other renewables	0.56	0.82	+46.9	0.12	0.10	0.12	0.15	0.19	0.23	0.18	0.19	0.22	+14.8
Net imports	0.65	0.72	+10.9	0.11	0.11	0.15	0.18	0.21	0.12	0.18	0.17	0.25	+15.8
Total major power producers	76.86	78.34	+1.9	20.73	21.80	16.88	17.47	20.70	21.74	18.02	17.34	21.24	+2.6
Other generators													
Coal	0.96	1.01	+4.8	0.27	0.26	0.25	0.21	0.25	0.26	0.25	0.22	0.27	+10.3
Oil	0.56	0.63	+11.2	0.09	0.16	0.16	0.11	0.13	0.18	0.14	0.15	0.15	+18.1
Gas	2.95	2.06	-30.0	1.01	0.69	0.78	0.74	0.74	0.58	0.54	0.48	0.47	-36.7
Hydro (natural flow)	0.06	0.06	-2.2	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.02	-
Other renewables	2.45	2.69	+10.2	0.60	0.58	0.58	0.61	0.67	0.65	0.64	0.68	0.73	+8.1
Other fuels	1.55	2.02	+30.6	0.49	0.36	0.35	0.36	0.48	0.49	0.49	0.53	0.52	+7.6
Total other generators	8.53	8.47	-0.6	2.46	2.07	2.13	2.05	2.28	2.17	2.09	2.07	2.15	-5.7
All generating companies													
Coal	31.34	32.66	+4.2	9.37	9.74	6.22	6.31	9.07	10.22	6.67	5.57	10.21	+12.5
Oil	1.14	1.49	+30.7	0.28	0.34	0.28	0.23	0.29	0.43	0.23	0.27	0.55	+89.0
Gas	29.13	27.47	-5.7	7.42	7.17	7.04	7.36	7.56	6.54	7.13	7.32	6.48	-14.3
Nuclear	18.16	18.53	+2.0	4.72	5.34	4.22	4.24	4.36	5.10	4.50	4.63	4.31	-1.1
Hydro (natural flow)	0.42	0.41	-4.1	0.09	0.13	0.06	0.08	0.14	0.14	0.08	0.06	0.13	-12.0
Other renewables	3.00	3.51	+17.0	0.72	0.68	0.70	0.76	0.87	0.87	0.83	0.86	0.95	+9.6
Other fuels	1.55	2.02	+30.6	0.49	0.36	0.35	0.36	0.48	0.49	0.49	0.53	0.52	+7.6
Net imports	0.65	0.72	+10.9	0.11	0.11	0.15	0.18	0.21	0.12	0.18	0.17	0.25	+15.8
Total all generating companies	85.39	86.82	+1.7	23.19	23.88	19.01	19.52	22.98	23.91	20.11	19.41	23.38	+1.8
ELECTRICITY SUPPLIED													
												TWh	
All generating companies													
Coal	125.90	130.26	+3.5	38.41	39.63	24.61	24.83	36.83	41.14	26.63	21.44r	41.04	+11.4
Oil	4.34	4.99	+14.9	1.15	1.23	1.03	0.91	1.18	1.53	0.95	0.97	1.54	+30.7
Gas	152.80	145.87	-4.5	38.10	38.20	36.87	38.20	39.53	34.94r	37.93	39.02r	33.97	-14.1
Nuclear	73.68	75.17	+2.0	19.30	21.68	17.13	17.20	17.67	20.69	18.24	18.76	17.48	-1.1
Hydro (natural flow and net supply by pumped storage stations)	3.98	3.75	-5.7	0.81	1.29	0.52	0.75	1.41	1.36	0.72	0.49	1.18	-16.0
Other renewables	9.26	11.52	+24.4	2.14	2.16	1.86	2.43	2.81	2.85r	2.61	2.82	3.24	+15.3
Other fuels	4.99	5.94	+19.0	0.95	1.09	1.25	1.09	1.56	1.51	1.45	1.51	1.47	-5.4
Net imports	7.49	8.32	+11.1	1.28	1.29	1.69	2.05	2.46	1.40	2.13	1.94	2.85	+15.9
Total all generating companies	382.45	385.82	+0.9	102.13	106.56	84.96	87.46	103.46	105.42	90.64	86.96r	102.79	-0.6

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in fourth quarter of 2005 compared with a year earlier.

3. See note on page 14 of September 2005 Energy Trends regarding calendar differences

5 ELECTRICITY

Table 5.2 Supply and consumption of electricity

	<i>GWh</i>												
	2004	2005	<i>Per cent change¹</i>	2003 4th quarter	2004 1st quarter	2004 2nd quarter	2004 3rd quarter	2004 4th quarter	2005 1st quarter	2005 2nd quarter	2005 3rd quarter	2005 4th quarter	<i>Per cent change²</i>
SUPPLY													
Indigenous production	395,627	399,350	+0.9	106,569	111,384	88,019	90,010	106,214	110,025	93,386	89,739r	106,200	-
Major power producers ³	356,010	359,512	+1.0	96,154	100,980	78,336	80,833	95,861	99,607	83,977	80,064r	95,865	-
Auto producers	36,968	36,909	-0.2	9,693	9,689	9,055	8,563	9,661	9,652	8,847	8,985	9,425	-2.4
Other sources	2,649	2,930r	+10.6	722	715	628	614	692	766	563	691r	910	+31.6
Imports	9,784	11,160	+14.1	1,831	2,024	2,232	2,501	3,027	2,299	2,716	2,734	3,410	+12.6
Exports	2,294	2,839	+23.8	553	737	546	446	565	900	590	793	556	-1.6
Transfers	-	-	-	-	-	-	-	-	-	-	-	-	-
Total supply	403,116	407,671	+1.1	107,848	112,670	89,705	92,065	108,676	111,424	95,512	91,681r	109,054	+0.3
Statistical difference	+1,306	+1,745		+422	+357	-661	+558	+1,053	-564	+609r	+1,052r	+648	
Total demand	401,810	405,926	+1.0	107,426	112,313	90,367	91,507	107,623	111,988	94,903r	90,629r	108,406	+0.7
TRANSFORMATION													
Energy industry use	31,040	31,385	+1.1	8,363	8,497	7,259	7,245	8,038	8,539	7,277	7,110r	8,460	+5.2
Losses	30,728	29,726	-3.3	8,415	8,794	6,645	6,955	8,333	9,298	6,047	6,418r	7,963	-4.4
FINAL CONSUMPTION	340,043	344,815	+1.4	90,649	95,022	76,462	77,307	91,251	94,152r	81,579r	77,101r	91,983	+0.8
Iron & steel	5,412	5,425	+0.2	1,348	1,347	1,347	1,352	1,365	1,364r	1,348r	1,359r	1,353	-0.9
Other industries	111,737	108,281	-3.1	27,046	30,182	26,567	27,603	27,385	27,152r	26,586r	27,267r	27,275	-0.4
Transport	8,035	7,968	-0.8	2,122	2,017	2,011	1,976	2,030	1,984	1,983	1,996	2,006	-1.2
Domestic	115,526	117,393	+1.6	33,475	35,210	23,832	22,348	34,136	34,637	26,046	22,548r	34,162	+0.1
Other final users	99,333	105,748	+6.5	26,658	26,266	22,705	24,027	26,334	29,015r	25,616r	23,930r	27,187	+3.2
Non energy use	-	-	-	-	-	-	-	-	-	-	-	-	-

1. Percentage change in 2005 compared with a year earlier.

2. Percentage change in the fourth quarter of 2005 compared with a year earlier.

3. 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 2004 they were:

AES Electric Ltd., Anglian Power Generators Ltd, Baglan Generation Ltd., BNFL Magnox., British Energy plc., Centrica plc., Coolkeeragh Power Ltd., Corby Power Ltd., Coryton Energy Company Ltd., Derwent Cogeneration Ltd., Drax Power Ltd., EDF Energy plc., Edison Mission Energy Ltd., Enfield Energy Centre Ltd., E.ON UK plc., Fellside Heat and Power Ltd., Fibrogen Ltd., Fibropower Ltd., Fibrotheford Ltd., Great Yarmouth Power Ltd, Humber Power Ltd., Immingham CHP, International Power plc., NIGEN, Peterborough Power Ltd., Premier Power Ltd., Regional Power Generators Ltd., Rocksavage Power Company Ltd., RWE Innogy plc, Saltend Co-generation Company Ltd., Scottish Power plc., Scottish and Southern Energy plc., Seabank Power Ltd., SELCHP Ltd., Sita Tyre Recycling Ltd., Spalding Energy Company Ltd., Teesside Power Ltd, Thames Power Services Ltd., Western Power Generation Ltd.

Since then E.ON has acquired Enfield Energy Centre and RWE Innogy has acquired Great Yarmouth.

List of special feature articles published in Energy Trends between March 2004 and December 2005

Energy

June	2005	Energy statistics - revisions policy
December	2005	Regional and local use of non gas, non electricity and non road transport Fuels for 2003
December	2005	Regional and local total energy consumption statistics for 2003

Petroleum (Oil and oil products)

March	2004	DTI exploration and appraisal (E&A) drilling survey 2004
March	2005	UKCS Capital Expenditure Survey 2004
March	2005	DTI/UKOOA exploration and appraisal drilling survey 2005
June	2005	Regional and local use of road transport fuels for 2003
December	2005	Regional and local use of road transport fuels for 2002 and 2003 update

Gas

December	2004	Regional and local gas consumption statistics for 2003
March	2005	Local gas consumption statistics update
December	2005	Regional and local gas consumption statistics for 2004

Electricity

March	2004	Review of electricity surveys
December	2004	Experimental regional and local electricity consumption statistics for 2003
December	2004	Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2002 and 2003
March	2005	Regional and local electricity consumption data for 2003-an update
September	2005	Regional and local electricity consumption data for 2003-a further update
December	2005	Regional and local electricity consumption statistics for 2004
December	2005	Electricity generation and supply figures for Scotland, Wales, Northern Ireland and England, 2003 and 2004

Renewables

June	2004	Renewable energy in 2003
September	2004	Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2003
June	2005	Renewable energy in 2004
September	2005	Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2004

Combined Heat and Power

June	2004	Ownership and operation of Combined Heat and Power plants in the UK in 2002
September	2004	CHP in Scotland, Wales, Northern Ireland and the regions of England in 2003
June	2005	Comparison of United Kingdom and European reporting of Combined Heat and Power (CHP) Statistics
September	2005	CHP in Scotland, Wales, Northern Ireland and the regions of England in 2004

CO₂

March	2004	Carbon dioxide emissions and energy consumption in the UK
March	2005	Carbon dioxide emissions and energy consumption in the UK