

# Energy Trends

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*The cover illustration used for Energy Trends and other 2003-2004 DTI energy statistics publications is from a photograph by David Askew. It was a winning entry in the DTI News Photographic Competition in 2002.*

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# 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 September editions cover the second quarter of the year.

Energy Trends includes information on energy as a whole and by individual fuels. The text and charts provide an analysis of the data in the tables. The tables are mainly in commodity balance format, as used in the DTI's annual Digest of UK Energy Statistics. The 2003 edition of the Digest was published on 31 July 2003. 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/](http://www.dti.gov.uk/energy/). 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 published in the previous version of monthly Energy Trends (last edition May 2001) continue to be updated and are also available on our web site. Both sets of tables can be obtained from [www.dti.gov.uk/energy/](http://www.dti.gov.uk/energy/).

The quarterly Energy Trends does not contain information on Foreign Trade, Temperatures and Prices. The Foreign Trade and Temperatures tables are however available on our web site and information on Prices can be found in the Quarterly Energy Prices publication. This 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:

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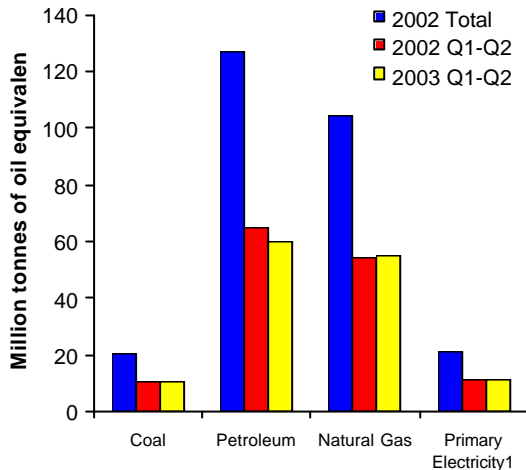
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## The main points for the second quarter of 2003:

- Total energy production was 7½ per cent lower than the second quarter of 2002.
- Oil production fell by 12 per cent compared to 2002 as production from older established fields continued to decline.
- Gas production fell by 4½ per cent with lower demand for space heating and electricity generation.
- Total primary energy consumption for energy uses increased by 3 per cent, but this is equivalent to a rise of 4½ per cent when milder weather is taken into account.
- Final energy consumption fell by 2½ per cent, with decreases in each of the industrial, service, and domestic sectors of 3 per cent, 3½ per cent, and 5 per cent respectively; there was little change in final energy consumption in the transport sector.
- Coal production in the second quarter of 2003 was 3 per cent down on the second quarter of 2002 while coal imports were 17½ per cent higher. Generators' demand for coal was 24 per cent higher.
- Coal supplied 23½ per cent more electricity during the second quarter of 2003 than during the second quarter of 2002 while gas supplied 9½ per cent less. Electricity supplied from nuclear sources was 4 per cent higher. Net imports of electricity were down by 89 per cent.
- Total deliveries of transport fuels were about the same as in 2002. Whilst demand for motor spirit was 5½ per cent lower, demand for derv fuel was 3 per cent higher. Demand for aviation turbine fuel increased by 5 per cent.

## Section 1 - Total Energy

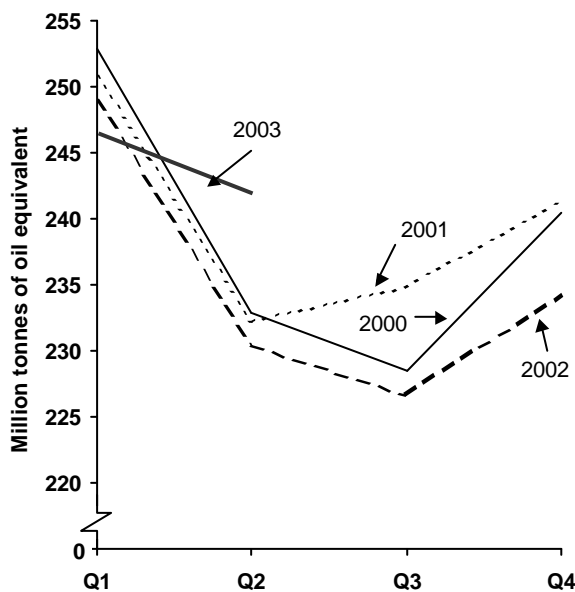
**Chart 1.1 Production of indigenous primary fuels**



<sup>1</sup> Nuclear and natural flow hydro electricity.

- Total production in the second quarter of 2003 was 7.5 per cent lower than in the second quarter of 2002.
- Production of natural gas fell by 4.7 per cent, between the second quarter of 2002 and the second quarter of 2003 resulting from milder weather in 2003, which reduced demand for space heating.
- Production of petroleum fell by 12.2 per cent over the same time period, due to a decline in production from older established fields.
- Primary electricity output was 4.1 per cent higher, within which nuclear electricity output was 5.2 per cent higher but output from natural flow hydro decreased by 33.1 per cent because of dry weather.
- Production of coal and other solid fuel was 2.8 per cent lower mainly due to two colliery closures.

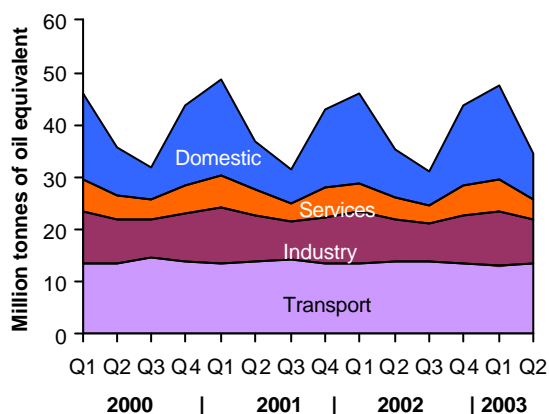
**Chart 1.2 Total inland consumption (primary fuel input basis)<sup>1</sup>**



<sup>1</sup> Seasonally adjusted and temperature corrected annual rates.

- Total inland consumption on a primary fuel input basis was 240.5 million tonnes of oil equivalent in the second quarter of 2003 (temperature corrected, seasonally adjusted annualised rate). The average temperature during the second quarter of 2003 was 0.7 degrees Celsius warmer than the second quarter of 2002.
- The 2003 quarter two level was 4.4 per cent higher than the same period a year ago and 4.0 per cent higher than the same period in 2001.
- Between the second quarter of 2003 and the second quarter of 2002 (on a seasonally adjusted and temperature corrected basis) coal and other solid fuel consumption increased by 23.9 per cent, as a result of greater coal use for electricity generation.
- Also on a seasonally adjusted and temperature corrected basis, oil consumption rose by 7.4 per cent.
- On the same basis, gas consumption fell by 4.0 per cent due to less gas being used for electricity generation as a result of increased gas prices.

**Chart 1.3 Final energy consumption by user**



- Total final energy consumption fell by 2.5 per cent between the second quarter of 2003 and the same quarter in 2002.
- Service sector energy consumption decreased by 3.4 per cent.
- Domestic sector energy consumption decreased by 4.7 per cent.
- Transport energy consumption fell by 0.2 per cent.
- Industrial energy consumption fell by 3.2 per cent.

## 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 1.7 per cent lower in 2002 than in 2001, continuing a year on year decline for each year since 1999. Coal and other solid fuel production was lower by 5.1 per cent, nuclear output by 3.1 per cent, gas production by 2.0 per cent and petroleum production by 0.6 per cent.

Petroleum accounted for 45.1 per cent of total indigenous production in the second quarter of 2003 while coal and other solid fuels accounted for 7.8 per cent, and natural gas 38.9 per cent.

### Total inland consumption

In 2002 consumption of primary fuels was lower than in any of the four preceding years and 3.4 per cent down on 2001. The largest contributions to this fall in absolute terms were from coal and other solid fuels (which declined by 8.0 per cent) and from petroleum (4.2 per cent down). Part of the decline was due to milder temperatures in 2002 and on a temperature corrected basis consumption in 2002 was only 1.5 per cent lower than in 2001.

Total inland energy consumption, on a primary fuel input basis (not temperature corrected or seasonally adjusted), in the second quarter of 2003 was 53.6 million tonnes of oil equivalent. This was 2.8 per cent higher than in the corresponding period a year ago and 0.9 per cent higher than in the corresponding period two years ago.

### Consumption by final users

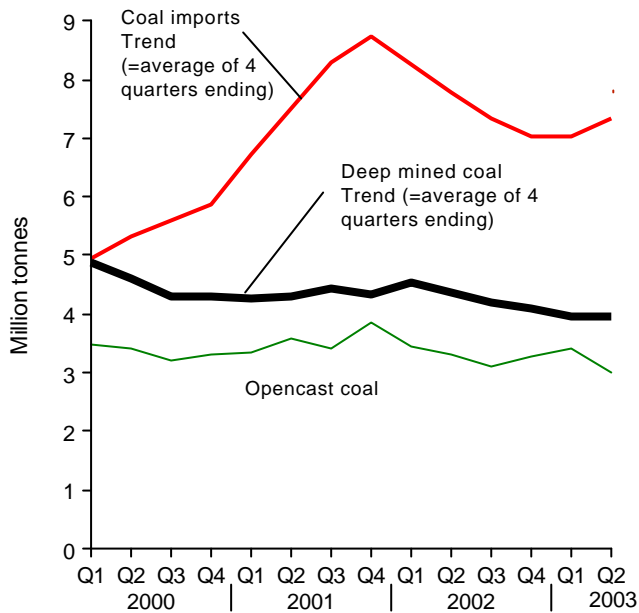
Final energy consumption shows a strong seasonal pattern with more energy being consumed in the winter months and less in the summer, particularly in the domestic and service sectors.

As with primary fuel input, final consumption of energy was lower in 2002 than in 2001 (by 2.2 per cent), but this trend has not continued into the first half of 2003 where consumption was 0.8 per cent higher than in the first half of 2002.

In the second quarter of 2003 the transport sector was responsible for the largest share of final consumption at 37 per cent of all energy consumed by final users. The domestic sector was responsible for a further 23 per cent, the industrial sector for another 22 per cent and the service industries, including agriculture, consumed 11 per cent. The remaining 7 per cent was fuel use for non-energy purposes.

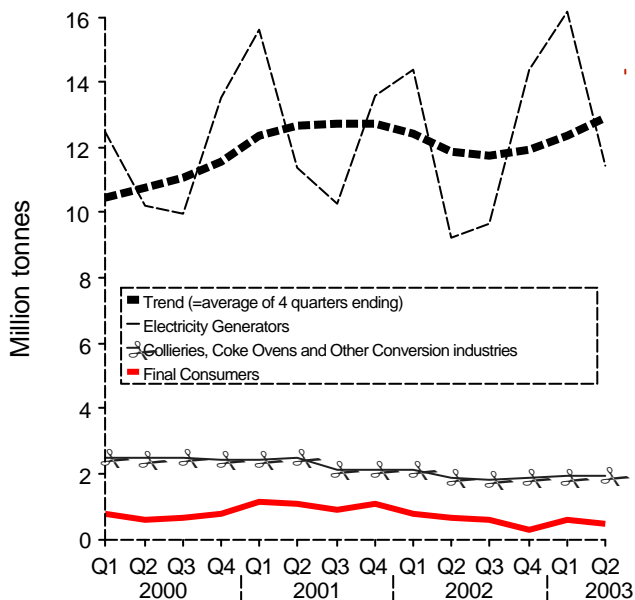
## Section 2 - Solid Fuels and Derived Gases

Chart 2.1 Coal production and imports



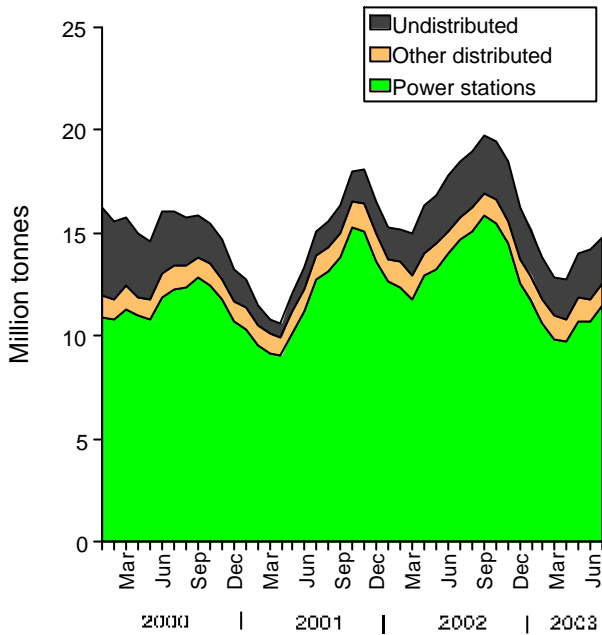
- Provisional figures for the second quarter of 2003 show that coal production (including an estimate for slurry) was 3.0 per cent down on the second quarter of 2002 at 7.1 million tonnes, with deep mined production up 2.2 per cent but opencast production down 9.5 per cent.
- Imports of coal in the second quarter of 2003 were 17.3 per cent higher than in the second quarter of 2002 at 8.5 million tonnes. Compared with the record import levels of two years earlier, imports were down by 7.2 per cent.
- 78 per cent of the imported coal in the second quarter of 2003 (6.6 million tonnes) was steam coal, largely for the power stations market.

Chart 2.2 Coal consumption



- Demand for coal in the second quarter of 2003, at 13.9 million tonnes was 18.1 per cent up on consumption in the second quarter of 2002; consumption by electricity generators was up by 24.1 per cent.
- Electricity generators accounted for 83 per cent of total coal use in the second quarter of 2003, compared with 79 per cent a year earlier and 76 per cent two years earlier.
- Final consumption fell by 24 per cent, within which domestic sector consumption was 18 per cent lower. Given that the data are disposals to the domestic market and that last winter was particularly mild, consumers may not have needed to replace high domestic stocks.

Chart 2.3 Coal stocks



- Coal stocks showed a seasonal rise of 1.4 million tonnes during the second quarter of 2003 and at the end of the quarter stood at 14.2 million tonnes, 3.8 million tonnes lower than at the end of the second quarter of 2002. By the end of July 2003 there had been a further small rise to 14.8 million tonnes.
- The level of coal stocks at power stations rose by 0.8 million tonnes in the second quarter of 2003 to 10.7 million tonnes. This is 3.4 million tonnes lower than the corresponding level a year earlier.
- The level of stocks held by producers rose by 0.6 million tonnes in the second quarter of 2003 to stand at 2.4 million tonnes. This is 0.3 million tonnes lower than the corresponding level a year earlier.

## 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 2002 indigenous production of coal fell by 1.9 million tonnes to a new record low level for deep mined coal and the lowest level since 1979 for opencast coal. At first the upward trend in coal production seen during 2001 continued into the first quarter of 2002 when production was 845 thousand tonnes higher than in the first quarter of 2001 but in the following quarters this was reversed with production down by around 900 thousand tonnes on a year earlier in each quarter. Longannet colliery closed in March 2002 and Prince of Wales in August 2002. A number of mines faced geological problems or had gaps in production while they moved to new faces. Geological problems eased in the first and second quarters of 2003 and production was down by only 660 thousand tonnes in the first quarter and up by 85 thousand tonnes in the second quarter, despite the closure of Clipstone colliery. Imports of coal in 2002 were 6.9 million tonnes lower than the record level in 2001, but still recorded the second highest ever annual volume. Exports in 2002 were 3 per cent lower at 537 thousand tonnes.

### Coal consumption

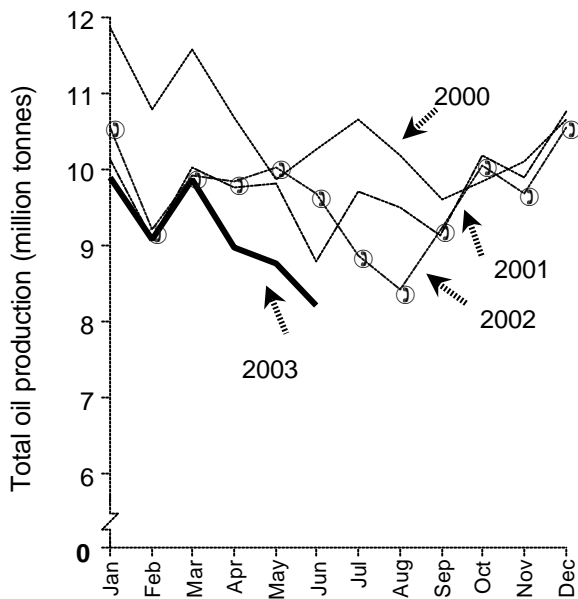
Coal use by electricity generators was 3.2 million tonnes lower in 2002 as a whole than it was in 2001. In the winter quarters of 2001 and 2002 and the first half of 2003 high gas prices have led to coal fired generation being used in preference to gas fired generation. When gas prices eased in the second and third quarters of 2002 coal use for generation fell back. In the fourth quarter of 2002 reduced output from nuclear stations prompted increased use of coal fired generation. Reductions in UK steel making capacity led to a reduction of 1.4 million tonnes in the use of coal for coke making and at blast furnaces in 2002.

### Stocks

Following the seasonal rise during the summer of 2002, which added 4 million tonnes to coal, stocks, the seasonal fall over the winter 2002/03 period reduced stocks by 6 million tonnes as power station demand for coal rose. Since March 1.9 million tonnes of coal have been added to stocks.

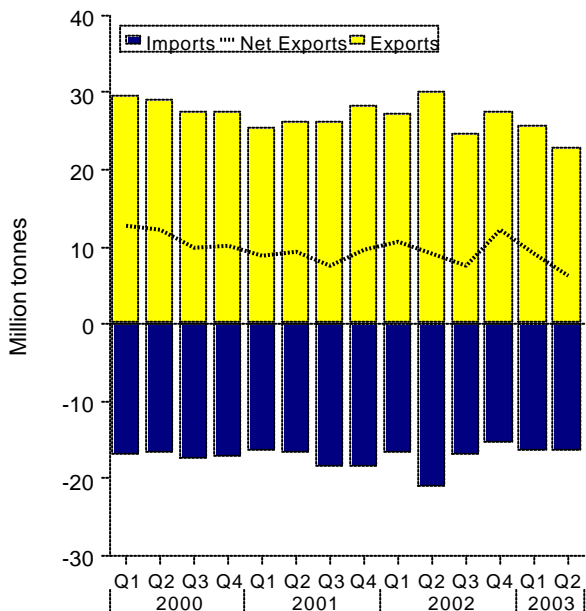
## Section 3 - Oil and Oil Products

**Chart 3.1 Production of crude oil and NGLs**



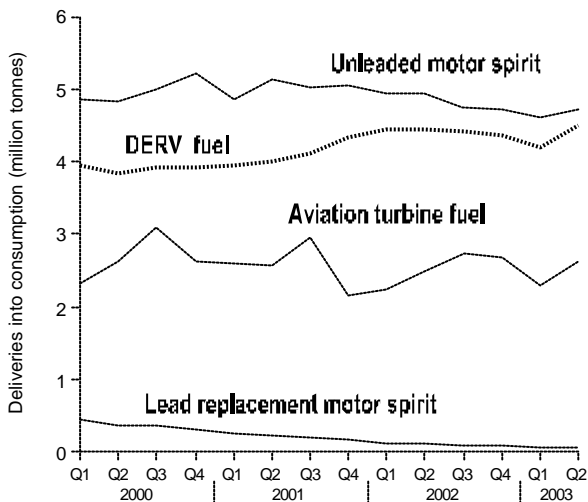
- Total indigenous UK production of crude oil and NGLs in the second quarter of 2003 fell by 12.2 per cent to 25.9 million tonnes when compared with the second quarter of 2002.
- There is a general decline in production from older established fields. Twelve new fields started production after June 2002. Without these new fields production would have been 18.4 per cent lower.

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



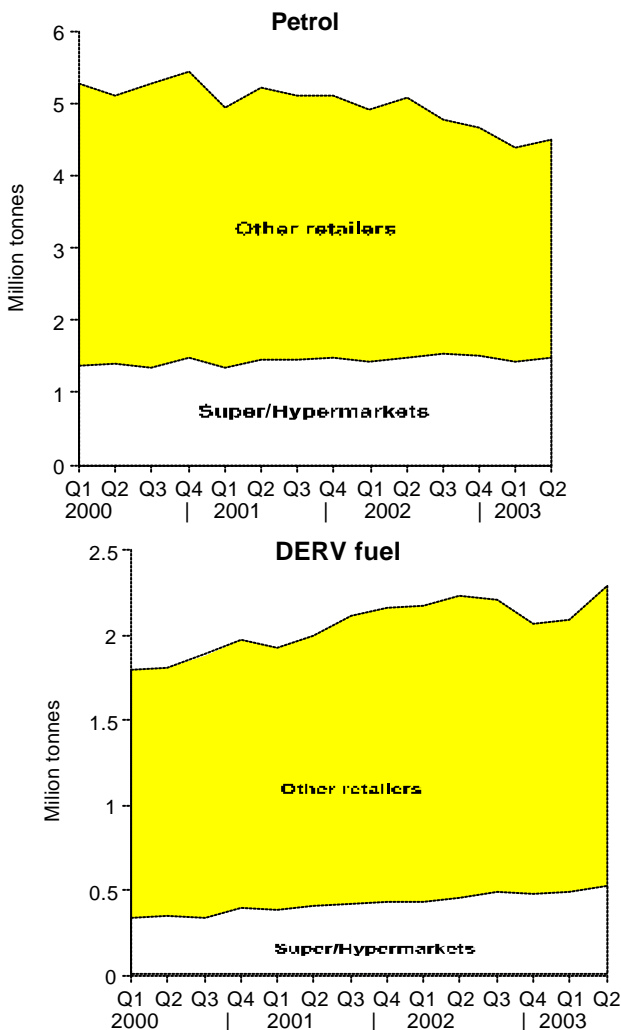
- Net exports fell by 31 per cent, to 6.3 million tonnes, when compared with the second quarter of 2002. Nevertheless the UK retained its position as a net exporter of oil and oil products.
- Net exports of crude oil and NGLs decreased by 43.6 per cent to 4.3 million tonnes.
- Exports of crude oil and NGLs decreased by 31.8 per cent while imports decreased by 26.2 per cent.
- Net exports of petroleum products rose by 40 per cent when compared with the second quarter of 2002.
- Exports of petroleum products rose by 4.1 per cent whilst imports fell by 16.5 per cent.

**Chart 3.3 Demand for transport fuels**



- Total deliveries of transport fuels were 0.8 per cent lower in the second quarter of 2003 than in the second quarter of 2002.
- Motor spirit deliveries fell by 5.7 per cent.
- Deliveries of unleaded motor spirit fell by 4.6 per cent. Unleaded petrol represented 98.9 per cent of total motor spirit deliveries during the second quarter of 2003, compared with 97.7 per cent in the second quarter of 2002.
- Deliveries of DERV fuel were 1.6 per cent higher than in the second quarter of 2002. Deliveries of aviation turbine fuel were 5.1 per cent higher.
- DERV fuel's share of road transport fuels was 48.6 per cent compared to 46.8 per cent in the same period a year earlier.

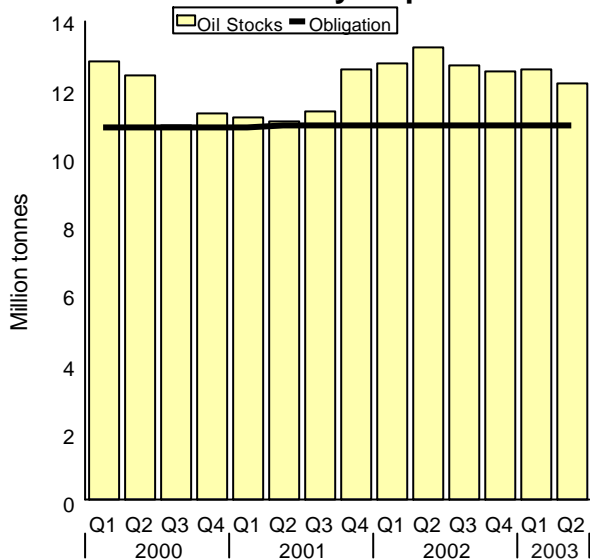
**Chart 3.4 Super/hypermarket shares of retail deliveries**



- Sales of motor spirit by super/hypermarket companies accounted for 32.8 per cent of retail sales of petrol in the second quarter 2003, up from 29.4 per cent a year earlier.
- Sales of DERV by super/hypermarket companies accounted for 22.7 per cent of retail sales of DERV in the second quarter 2003, up from 20.4 per cent a year earlier.

## Oil and oil products

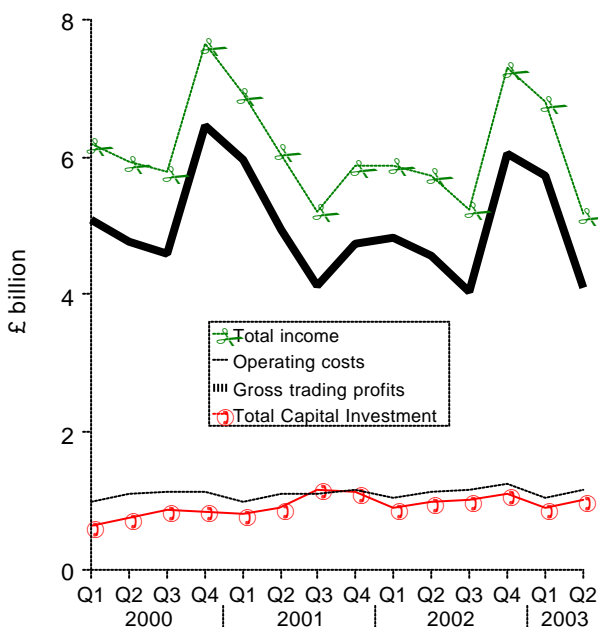
### Chart 3.5 Stocks of key oil products<sup>(1)</sup>



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

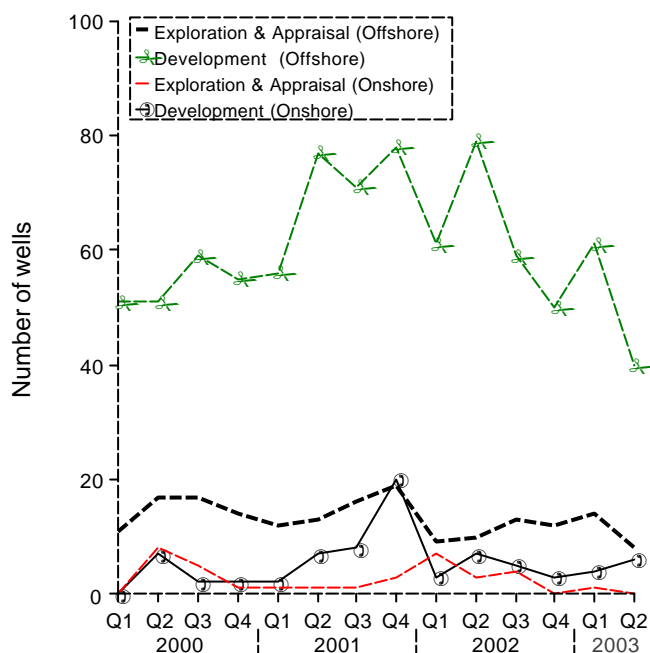
- Overall, stocks of crude oil and petroleum products were 10.7 per cent lower at the end of the second quarter of 2003 than at the end of the second quarter of 2002.
- Compared with a year earlier crude oil and refinery process oil stocks were 9.7 per cent lower while stocks of products were 9.8 per cent lower.
- Stocks at UKCS pipeline terminals fell by 23.1 per cent (581 thousand tonnes).
- 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 second quarter of 2003, the UK held stocks equal to 75 days of consumption of these key products, compared with an obligation of 67½ days (see Background for more details).

### Chart 3.6 Value of UKCS production & investment by operators and licensees



Provisional figures for the second quarter of 2003 compared with the same period of 2002 showed that:

- Gross trading profits fell by 10.2 per cent, as oil prices fell 6.7 per cent and oil production fell by 13.2 per cent.
- Total income fell by 9.9 per cent.
- Operating costs rose by 1.0 per cent.
- Total capital investment rose by 2.2 per cent.
- Exploration expenditure fell sharply by 32.2 per cent.
- Other capital investment rose by 6.3 per cent.

**Chart 3.7 Drilling activity on the UKCS**

- Provisional drilling figures for the second quarter of 2003 showed a fall in the number of exploration and appraisal wells started offshore to 8 against 10 in the same quarter of 2002.
- The number of development wells drilled offshore fell to 40 in the second quarter of 2003, compared to 79 in the same quarter of 2002.
- 6 development wells were drilled onshore in the second quarter of 2003, compared to 7 in the second quarter of 2002.
- No exploration and appraisal wells were started onshore in the second quarter of 2003, compared to 3 in the second quarter of 2002.

## 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](#)
- [3.8: Value of UKCS production & investment by operators and licensees](#)
- [3.9: Indicative tariff rates offered in the UKCS for the handling of oil and gas](#)

### Crude oil production and trade

Total UK production of crude oil and NGL's decreased in the second quarter of 2003 by 12.2 per cent (3.6 million tonnes) when compared to the same period last year. Without the twelve new fields that have started production since June 2002, production would be 18.4 per cent lower than the second quarter of 2002. The UK remains a net exporter of oil and oil products despite declining production. The majority of UK production of crude oil and NGL's is exported (70 per cent in the second quarter of 2003) 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. As such the economics of crude oil markets results in significant volumes of crude oil being imported into the UK.

### Refinery production of petroleum products and trade

The net refinery output in the second quarter of 2003 was 20.4 million tonnes, 0.8 million tonnes higher than the same period in 2002. Refinery operations have developed over the last two years to allow for the production of Ultra Low Sulphur Petrol. The switch to Ultra Low Sulphur Petrol is a contributory reason for the reduction of exports of UK produced crude oil as a higher-grade (i.e.

## *Oil and oil products*

lower sulphur content) input is needed, and so crude oil from the North Sea is used instead of cheaper, lower-grade imports from other areas of the world.

### **Demand for petroleum products**

Overall deliveries of petroleum products for final consumption in the second quarter of 2003 were 2.1 per cent lower than in 2002. Deliveries of motor spirit were lower by 4.6 per cent and 10.2 per cent whilst DERV deliveries increased by 1.6 per cent.

### **Aviation turbine fuel kerosene**

Consumption of ATF Kerosene fell following 11<sup>th</sup> September 2001 terrorist attacks and the subsequent impact on the global aviation industry. Data for the second quarter of 2002 showed deliveries to be 3.4 per cent lower than in the same period of 2001 (prior to the attacks). However the second quarter of 2003, which occurred after the start of the invasion of Iraq in March, shows signs of recovery with a 5.1 per cent increase over 2002 and 1.5 per cent when compared with 2001.

### **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 1<sup>st</sup> 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 2002 consumption data are 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**

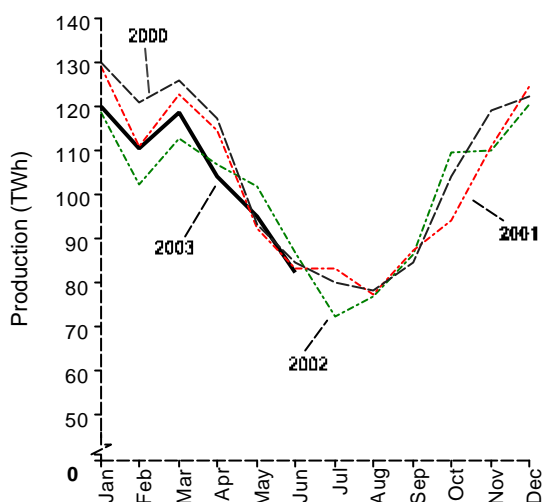
The data given in Table 3.8 are compiled from the Quarterly Inquiry into Oil and Natural Gas carried out by the DTI. This inquiry collects information from operators and other production licence holders. The information collected covers all income and expenditure directly related to the production of oil and natural gas, including exploration, development and other capital expenditures together with operating costs and the value of sales.

#### **Advance Notice:**

Because of the Christmas and New Year holidays, the December 2003 issue of Energy Trends will be published on Thursday 8<sup>th</sup> January 2004 and available on the DTI Energy web site on the same day.

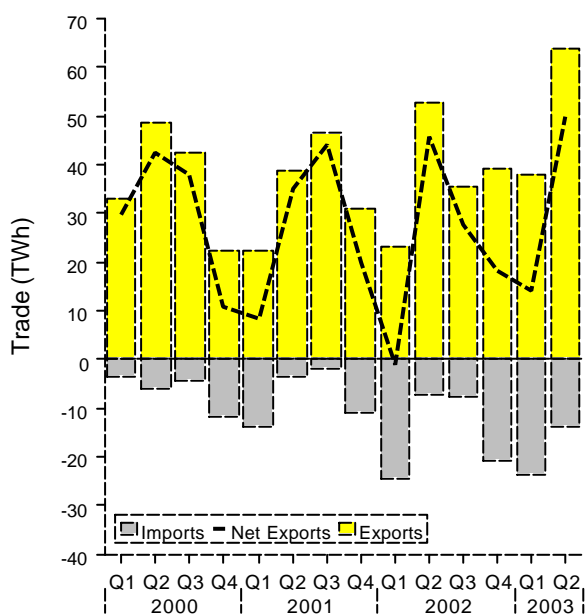
## Section 4 - Gas

Chart 4.1 Production of natural gas



- Total indigenous UK production of natural gas in the second quarter of 2003 was 4.7 per cent lower than in the same period a year earlier.
- The main reasons for the fall in production were the reduced demand for gas for electricity generation and the milder weather in 2003 that reduced demand for space-heating.

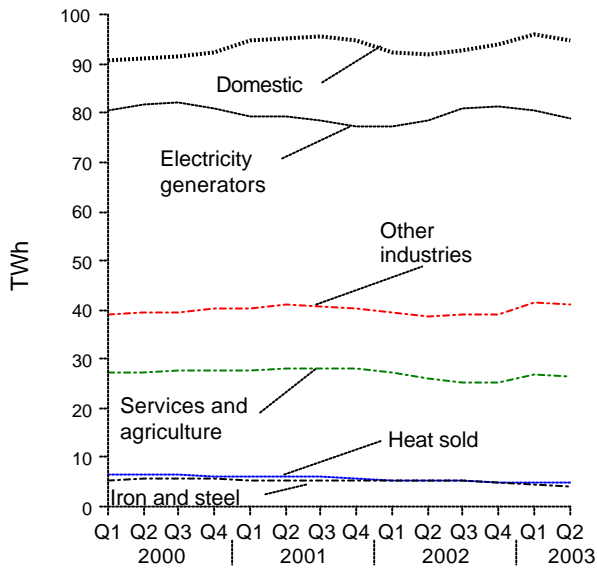
Chart 4.2 UK trade in natural gas



- Compared with the same period in 2002, exports of natural gas in the second quarter of 2003 increased by 20.7 per cent and imports increased by 88.2 per cent.
- Imports from Norway via the Vesterled pipeline more than quadrupled. This increase in supplies from Norway to Scotland freed the Bacton-Zeebrugge interconnector in the south east of England to increase exports to the continent.

## Gas

**Chart 4.3 Natural gas consumption - average of four quarters ending**



- Demand for gas in the second quarter of 2003 was 8.0 per cent lower than the level in the second quarter of 2002.
- Gas use for electricity generation was 8.6 per cent lower than in the second quarter of 2002. High gas prices meant that some generators continued to find it more profitable to sell gas than use it for generation.
- Provisionally, consumption in the domestic sector fell by 7.1 per cent, mainly because temperatures were warmer than during the second quarter of 2002.
- In public administration, commerce and agriculture consumption fell by 6.6 per cent compared with a year earlier. In the industrial sector gas sales were provisionally 8.6 per cent lower than in the second quarter of 2002.

## Background

### Relevant table

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

### Gas production and trade

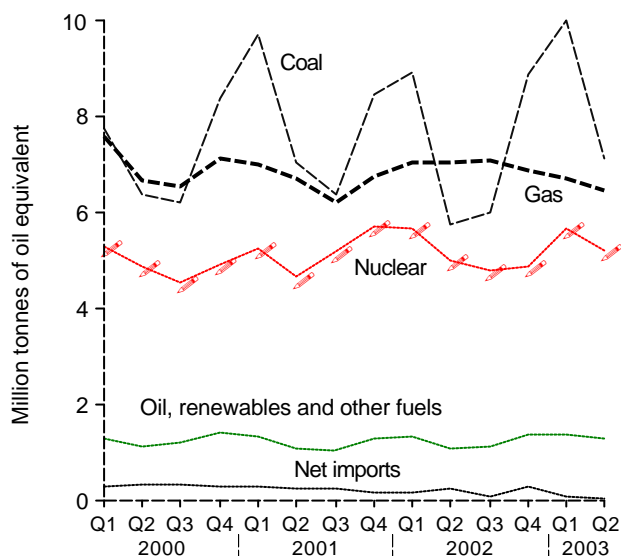
Chart 4.1 shows a decrease in production throughout the second quarter of 2003 compared to 2002. The UK currently exports gas to the Netherlands via the Markham and Windermere fields, the Irish Republic and Belgium through the Bacton-Zeebrugge interconnector. During the second quarter of 2003 imports to the UK were mainly from Norway via the Frigg and Vesterled pipelines. Indigenous UK production accounted for 93.5 per cent of gas available for consumption in the UK in the second quarter 2003.

### 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 following a downward trend until the end of 2001, but in summer 2002 gas prices fell back and gas use for generation rose again. In 2003 high prices again deterred use for generation. Gas use in the domestic sector is particularly dependent on temperatures during the heating season. With very mild temperatures in the first three months of 2002, domestic gas consumption declined. Mild temperatures also affected services sector consumption. With temperatures in the first quarter of 2003 being less mild, consumption increased again but warm weather in the second quarter of 2003 has again suppressed demand. The closure of an integrated steel plant accounts for the reduced gas use in the iron and steel sector.

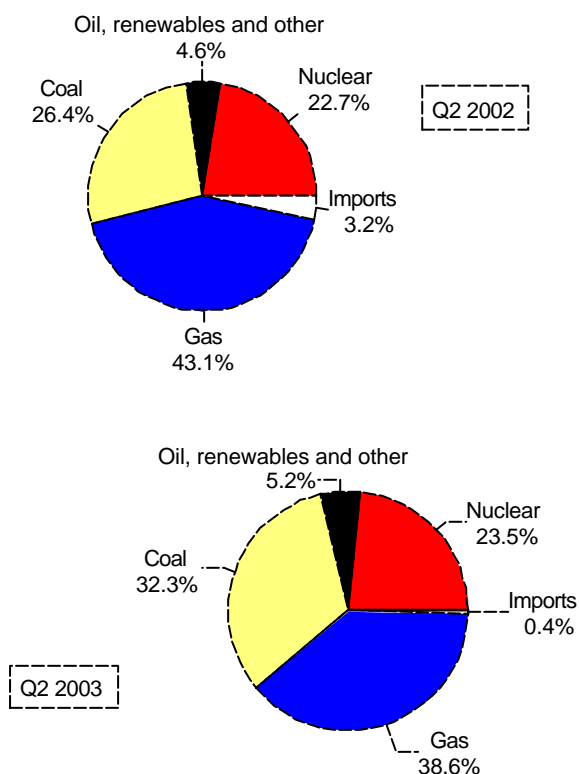
## Section 5 - Electricity

**Chart 5.1 Fuel used for electricity generation**



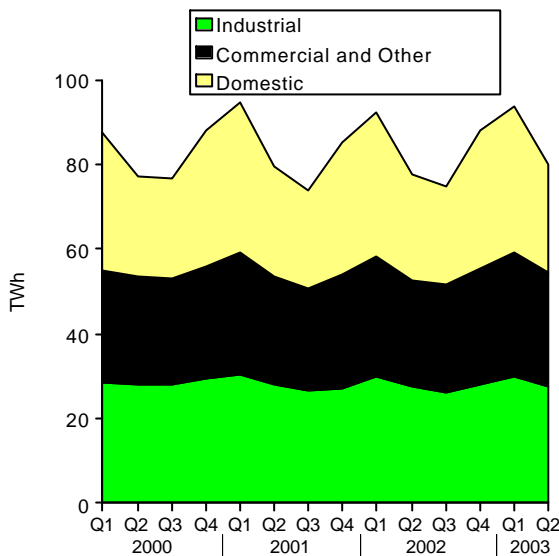
- Fuel used by generators in the second quarter of 2003 was, in total, 5.0 per cent higher than in the second quarter of 2002.
- Coal use during the quarter was significantly higher than a year earlier with 24.1 per cent more coal being consumed.
- Gas use was 8.6 per cent down on the second quarter of 2002 with high gas prices discouraging generation.
- Nuclear sources were up 4.2 per cent on the second quarter of 2002.
- Hydro sources were down 37.4 per cent on the second quarter of 2002 because of continuing low rainfall in the catchment areas.

**Chart 5.2 Electricity supplied**



- Total electricity supplied by all generators in the second quarter of 2003 was 0.8 per cent higher (+ $\frac{3}{4}$  TWh) than a year earlier.
- Indigenous supply was 3.7 per cent higher while net imports were down by 89 per cent (-2 $\frac{1}{2}$  TWh). Imports from France have been on a downward trend since NETA was introduced in March 2001, while a record 935 GWh of electricity were exported during the quarter. In June, for the first time, more electricity was exported than imported.
- The supply from coal rose by 23.3 per cent (+5 $\frac{1}{2}$  TWh), while from gas fired stations supply fell by 9.6 per cent (-3 $\frac{1}{2}$  TWh).
- The supply from nuclear stations rose by 4.2 per cent (+ $\frac{3}{4}$  TWh).
- Between the second quarter of 2002 and the second quarter of 2003 coal's share of the electricity supplied rose by 6 percentage points to 32 per cent. Gas' share fell by 4 $\frac{1}{2}$  percentage points to 38 $\frac{1}{2}$  per cent and nuclear's share was 1 percentage point higher at 23 $\frac{1}{2}$  per cent. Imports' share fell by 2 $\frac{3}{4}$  percentage points to  $\frac{1}{2}$  per cent.

**Chart 5.3 Electricity consumption**



- Final consumption of electricity rose by 2.8 per cent in the second quarter of 2003 compared with the second quarter of 2002. Domestic use was up by 1.3 per cent while consumption by commercial, public administration, transport and agricultural customers was up by 6.9 per cent. Industrial use of electricity was rose by 0.6 per cent.
- In this period temperatures were ½ degree Celsius milder than in the second quarter of 2002.

**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 brought a temporary halt to the rising trend in gas use at power stations, but during summer 2002 lower gas prices led to a resumption of growth in gas use. At the end of 2002 and in the first half of 2003 high gas prices have again restricted gas use for generation. The downward trend in generation from nuclear sources since 1998 was reversed during 2001 and nuclear’s recovery continued during the first half of 2002. However, in the third and fourth quarters outages at British Energy stations produced a further downturn before recovering in the first half of 2003.

**Supply**

Supply from the coal fired power stations of major power producers rose by 15 per cent in 2000 having fallen at an average rate of 9½ per cent a year over the previous four years. Supply from coal rose by a further 8½ per cent in 2001 but slipped back by 5½ per cent during 2002. This was mainly due to resumed competition from gas-fired stations which recorded a 7 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 the first half of 2003 coal has again been the preferred fuel. Supplies from hydro sources were 24 per cent higher in 2002 than in the previous year which was affected by low rainfall levels, although the winter of 2002/3 and summer 2003 were also low rainfall periods. 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 the last year both very hot and very cold weather have increased exports to continental Europe.

**Consumption**

Electricity demand has been rising at a trend rate of 1½ to 2 per cent a year over the five years to 2001 so the absence of growth in 2002 was unusual. Electricity demand in 2002 was divided 29 per cent to the domestic sector, 28½ per cent to industry and 18 per cent to the commercial sector leaving a further 17 per cent of demand shared by public administration, transport, agriculture and the fuel industries. The remaining 7½ per cent was accounted for by transmission and distribution losses. In recent years these proportions have changed very little with fuel industries’ share falling and services sector share rising. Because electricity is used for heating and lighting in the domestic sector, and heating and lighting uses are also prominent in the commercial sector, domestic and commercial sector shares of consumption rise in the winter and fall in the summer.

## **Detailed industrial energy consumption data for 2001**

Detailed industrial energy consumption data can help to identify the main drivers of overall energy consumption enabling changes in structure within the industrial sector to be monitored. Industrial consumption figures for 11 industrial sub-sectors up to 2002 were published in the Digest of UK Energy Statistics in July 2003. Detailed industrial figures for 2000 and earlier years were published on the Internet as part of Energy Consumption in the UK, a publication that brings together statistics from a variety of sources to produce a comprehensive review of energy consumption in the UK. While the booklet describes the key trends in energy consumption and the factors driving those trends, detailed statistics can be found on DTI's website. The detailed industrial consumption figures have now been updated to include data for 2001 and can be found in Table 4.6 of Energy Consumption in the UK at

[http://www.dti.gov.uk/energy/inform/energy\\_consumption/table4\\_6.xls](http://www.dti.gov.uk/energy/inform/energy_consumption/table4_6.xls)

### **Purchases Inquiry**

Like the 1990 to 2000 estimates, the 2001 estimates of detailed industrial energy consumption have been derived from value data that were collected in the Purchases Inquiry (PI), which forms part of the Annual Business Inquiry.

In 2001, the PI went out to around 6,000 contributors in the production sectors, and achieved a response rate of 85 per cent. Because different companies are surveyed each year, this can lead to large changes in the data from one year to the next, so there can be a danger in placing too much weight on year-to-year changes.

### **Methodology**

The value information from the PI is transformed into volumes using data from DTI's Quarterly Energy Prices. This shows the average annual prices paid by industrial consumers per unit of volume for coal, petroleum gases, gas oil and fuel oil. Where prices have changed considerably over the course of a year, the error in this derived volume information will be higher since there is no information within the PI about when the fuel was bought. For electricity and gas, unit price information (pence per kWh) is collected in the Purchases Inquiry and this is used to derive volumes for these fuels for each industry.

The figures for 2001, like the estimates for 1990 to 2000, have been constrained to the energy balance totals that appear in the Digest of UK Energy Statistics, 2003.

### **Future work**

The PI started to collect information for the service industries in 1999 and so the analysis that has been undertaken for the industrial sector may be extended to the service sector in the future. Just a third of the service sector was covered in 1999, two thirds in 2000 and the whole of the service sector was covered in the 2001 Inquiry. The Department will look to publish detailed industry breakdowns of the Service Sector data once it has assured the validity and reliability of the new data, and insured that it is comparable with data obtained from other sources.

Following an internal evaluation of the Purchases Inquiry information, the Department is following up a number of methodological improvements with ONS, relating to the purchases of energy. These will further improve the quality of the data feeding into the 2004 Annual Business Inquiry with results processed by 2006.

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## **Energy – Its Impact on the Environment and Society**

In July 2002, the DTI published for the first time a booklet that examined the environmental and social impacts of energy, including the interaction between economic, social and environmental trends. It included information on emissions and other environmental consequences from energy production and supply, and the social impacts of domestic competition, service quality issues and fuel poverty.

In order to ensure that information remains current, an update was made available on the DTI web site in July 2003. It is the DTI's intention to carry out this updating as follows:

- An annual overview of social and environmental impacts, covering the main trends and developments, with signposts to more detailed information. This will be mainly made available to readers online.
- DTI will also make available through the website in-depth analyses of social and environmental impacts, like the Annexes to each chapter of 'Energy – Its Impact on the Environment and Society' 2002, as we produce them. They will also be included in the annual update.
- Every three years (next version 2005), a fuller assessment of social and environmental impacts akin to 'Energy – Its Impact on the Environment and Society' as issued in 2002, will be made available in hard-copy, as well as on the Internet. It will also include a selection of in-depth analyses.

Copies of the original booklet and the 2003 update can be found on the DTI website at:  
[http://www.dti.gov.uk/energy/environment/energy\\_impact/index.shtml](http://www.dti.gov.uk/energy/environment/energy_impact/index.shtml)

We would welcome suggestions for improvements to the format and content of the annual update, and also suggestions for in-depth analyses that readers would like to see included.

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### **Update of long term trends spreadsheets available on the DTI Energy Statistics web site**

The following spreadsheets have been updated to include 2002 data and at the same time the file names and web addresses have been changed:

Gas: [www.dti.gov.uk/energy/inform/energy\\_trends/gassince1982.xls](http://www.dti.gov.uk/energy/inform/energy_trends/gassince1982.xls)

Electricity: [www.dti.gov.uk/energy/inform/energy\\_trends/electricitysince1920.xls](http://www.dti.gov.uk/energy/inform/energy_trends/electricitysince1920.xls)

Coal: [www.dti.gov.uk/energy/inform/energy\\_trends/coalsince1853.xls](http://www.dti.gov.uk/energy/inform/energy_trends/coalsince1853.xls)

## **Regional and Local Energy Consumption Data**

During 2002, the Department of Trade and Industry consulted on the need for sub-national information on energy consumption, establishing a wide-ranging demand for such statistics. The Energy White Paper, issued in February 2003, emphasised the importance of local and regional decision-making for energy policy in delivering a number of national energy policy objectives. It confirmed the DTI's commitment to "collect and make available data on the pattern of energy use in local areas, to enable local authorities and regional bodies to target activity more effectively".

### **Gas data**

In the June 2003 issue of Energy Trends, DTI published regional and local information on gas consumption supplied through Transco pipes. At that time we announced our intention to publish regional and local gas consumption estimates for 2002 and revised estimates for 2001, along the same lines as the 2001 estimates. We expect to be able to make this information available on the DTI's web site by the end of December. We also intend to publish regional and local gas consumption estimates for the gas consumption not covered in the Transco dataset.

### **Electricity data**

Earlier this year, the Department carried out a consultation on how to collect regional and local information on electricity use. Details of the consultation exercise can be found on the DTI web site at: [http://www.dti.gov.uk/energy/inform/regional\\_energy/index.shtml](http://www.dti.gov.uk/energy/inform/regional_energy/index.shtml). In general there was a positive response to the consultation exercise, with both data suppliers and data users recognising the need for this information. There were a number of comments on the practical viability of the proposal, as well as suggestions of alternative approaches to the method of data collection. The DTI are currently exploring the issues raised with energy companies in order to determine the most appropriate methodology.

Detailed information on the consultation will be made available shortly on the DTI web site, which will include details of individual organisations' responses.

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## Renewable energy in Scotland, Wales, Northern Ireland and the regions of England in 2002

### Background

This article updates that presented in September 2002 on the amount of electricity from renewable sources disaggregated below the national level. As before, it has been necessary to combine renewable sources into four categories so that information about individual sites provided to Future Energy Solutions (FES) and the DTI in confidence is not disclosed. For landfill gas it has been necessary to combine London and the South East for the same reason.

Solar photovoltaics have not been included in the tables below because they are estimated on a UK-wide basis that cannot readily be broken down into regional components. In total solar PV amounts to only 4.2 MWe capacity and 2.7 GWh of generation. Otherwise, figures in Tables 2 and 3 below correspond to the totals shown in Table 7.4 of the Digest of United Kingdom Energy Statistics 2003. Thus the data in this article cover all renewables, including renewables that are not eligible for the Renewables Obligation.

Table 1: Number of sites generating electricity from renewable sources<sup>1</sup>

	Hydro	Wind and wave	Landfill Gas	Other Biofuels and wastes	Total
<b>England</b>	<b>36</b>	<b>48</b>	<b>184</b>	<b>145</b>	<b>413</b>
East Midlands	8	...	18	10	36
East	-	6	37	15	58
North East	...	9	5	6	20
North West	7	15	34	25	81
London	-	-	}31	8	}56
South East	...	...		17	
South West	15	10	22	33	80
West Midlands	6	-	20	14	40
Yorkshire and the Humber	...	8	17	17	42
Wales	27	20	10	4	61
Scotland	128	36	12	5	181
Northern Ireland	28	10	...	6 <sup>3</sup>	44
<i>Other sites</i> <sup>2</sup>	3	4	-	-	7
<b>UK Total</b>	<b>222</b>	<b>118</b>	<b>206</b>	<b>160</b>	<b>706</b>

Table 2: Installed capacity of sites generating electricity from renewable sources<sup>1</sup>

	Hydro	Wind and wave	Landfill Gas	Other Biofuels and wastes	Total
<b>England</b>	<b>38.3</b>	<b>145.6</b>	<b>419.9</b>	<b>508.0</b>	<b>1,111.7</b>
East Midlands	7.1	...	33.6	34.6	75.3
East	-	5.9	114.6	104.7	225.2
North East	...	11.5	7.3	25.5	44.3
North West	2.5	49.3	77.5	36.8	166.0
London	-	-	}72.8	92.5	}175.7
South East	...	...		10.4	
South West	26.8	42.3	42.9	49.6	161.5
West Midlands	2.0	-	38.0	104.4	144.4
Yorkshire and the Humber	...	36.6	33.2	49.5	119.3
Wales	168.5	161.3	20.6	3.2	353.7
Scotland	1,354.1	185.7	26.2	28.6	1,594.5
Northern Ireland	10.1	41.5	...	7.1 <sup>3</sup>	58.8
<i>Other sites</i> <sup>2</sup>	6.3	0.8	-	-	7.1
<b>Total</b>	<b>1,577.3</b>	<b>534.9</b>	<b>466.6</b>	<b>546.9</b>	<b>3,125.7</b>
Solar photovoltaics					4.2
<b>UK Total</b>					<b>3,129.9</b>

For notes to Tables 1 and 2 see below Table 3, overleaf.

Table 3: Generation of electricity from renewable sources, 2002					GWh
	Hydro	Wind/Wave	Landfill Gas	Other Biofuels	Total
<b>England</b>	<b>41.1</b>	<b>346.5</b>	<b>2,362.0</b>	<b>2,618.1</b>	<b>5,367.6</b>
East Midlands	7.4	...	161.1	107.1	275.6
East	-	14.7	650.7	650.4	1,315.9
North East	...	20.4	42.2	136.5	199.1
North West	3.0	116.8	451.3	91.2	662.3
London	-	-	}412.6	625.1	}1,094.3
South East	...	...		56.6	
South West	28.3	104.6	255.9	125.8	514.6
West Midlands	2.4	-	207.5	543.9	753.9
Yorkshire and the Humber	...	90.0	180.5	281.5	552.0
Wales	276.2	376.3	113.0	19.1	784.6
Scotland	4,455.4	406.1	157.0	80.1	5,098.7
Northern Ireland	10.9	125.3	...	47.7 <sup>3</sup>	183.9
Other sites <sup>2</sup>	4.3	1.9	-	-	6.2
<b>Total</b>	<b>4,788.0</b>	<b>1,256.1</b>	<b>2,632.0</b>	<b>2,765.0</b>	<b>11,441.1</b>
Solar photovoltaics					2.7
<b>UK Total</b>					<b>11,443.8</b>

Notes to Tables 1 to 3

... Data cannot be shown because of the small number of sites providing information for these cells. Instead the data are included under "Other sites" (see note 2).

- Nil or less than half the final digit shown.

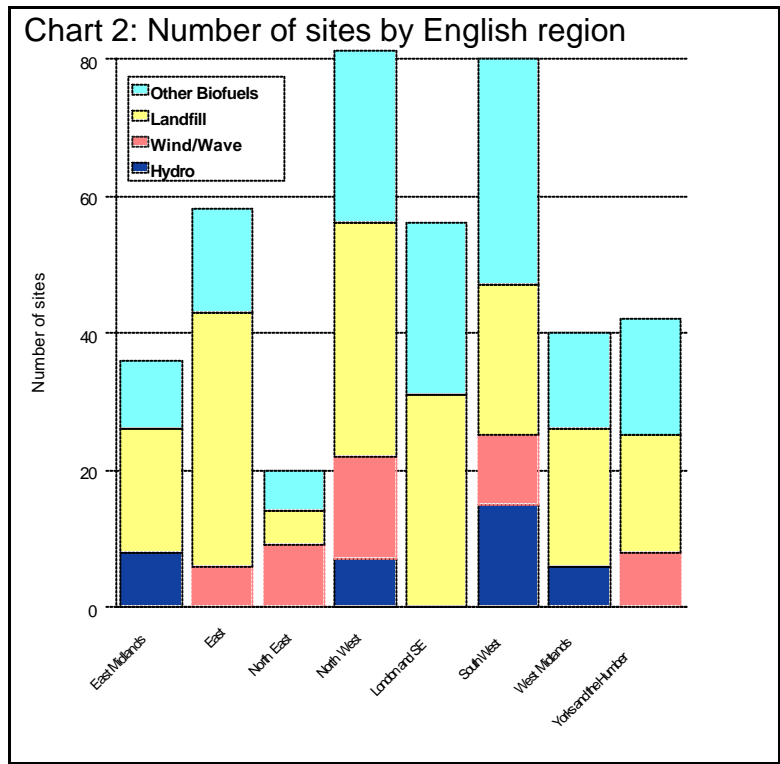
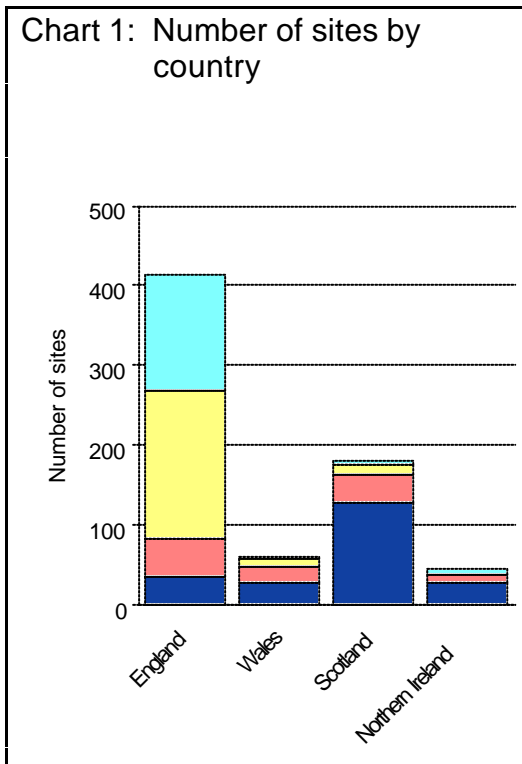
<sup>1</sup> At the end of December 2002.

<sup>2</sup> "Other sites" are sites that have not been attributed to a region so that data related to individual companies are not disclosed.

<sup>3</sup> For Northern Ireland the small number of landfill gas sites have been included under Other biofuels and wastes.

### What the figures show

There were 413 sites in England generating electricity from renewable sources, compared with 181 in Scotland, 61 in Wales and 44 in Northern Ireland. In capacity terms Scotland had the ability to generate 43 per cent more electricity from renewable sources than England (Charts 1 and 3). This was because of Scotland's considerable hydro resources (86 per cent of the UK's total hydro capacity). Hydro accounted for 87 per cent of generation from renewables in Scotland (Chart 5).

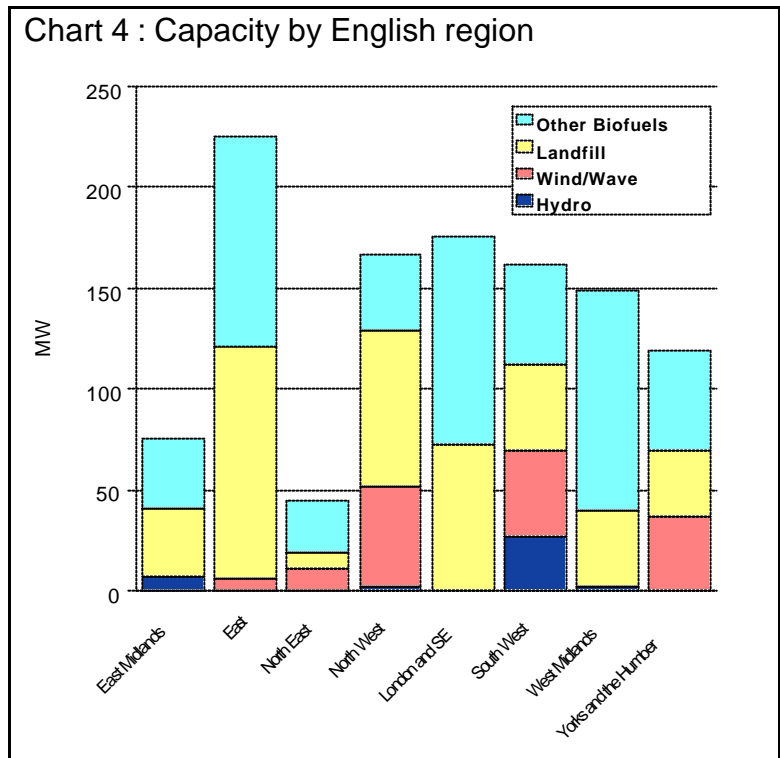
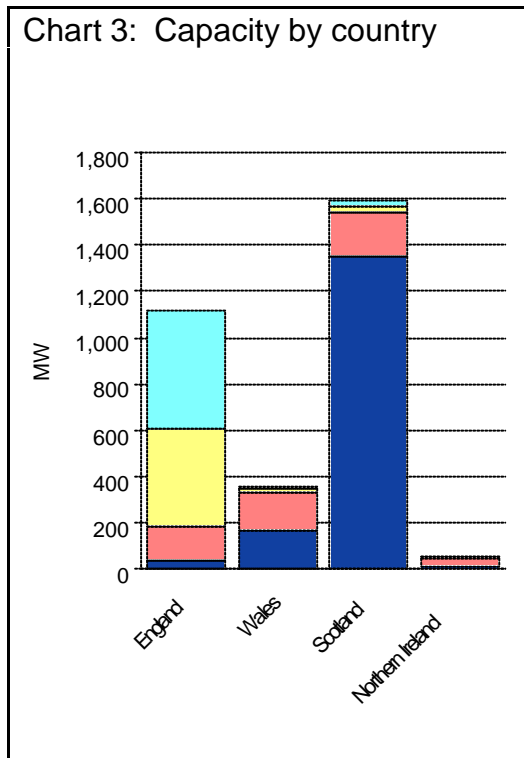


### Special feature - Renewable energy

However, because biofuels based capacity was used more intensively than hydro (which is subject to seasonal variation in precipitation in the catchment areas) generation from renewable sources in England in 2002 was over 5 per cent higher than generation in Scotland.

In England the number of sites varies from 8<sup>4</sup> in London to 81 in the North West (Chart 2), but in capacity terms East has the greatest ability to generate while the West Midlands is second largest and the North West third largest (Chart 4). This is because in East region the predominant technologies tend to be those that have large capacity plants; 25 per cent of the UK's landfill gas sourced generating capacity and 24 per cent of the UK's capacity to generate from other biofuels and wastes are to be found in East region.

The only English region to generate more than 10 GWh from hydro in 2002 was the South West (28.3 GWh).

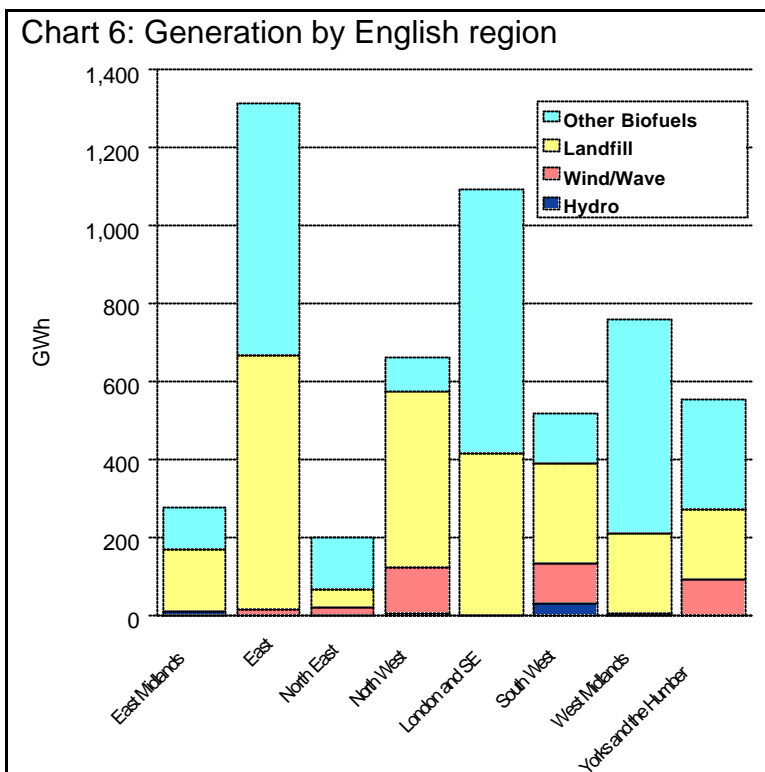
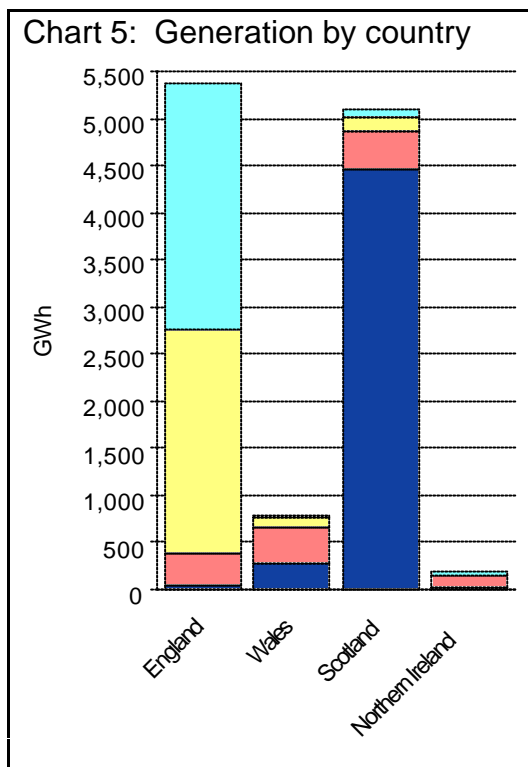


Scotland had 35 per cent of the capacity to generate from wind and in 2002 produced 32 per cent of the output from wind (Charts 3 and 5). Wales was the next largest (30 per cent of capacity and 30 per cent of generation) followed by the North West of England (9 per cent of both capacity and output), South West of England (8 per cent of both capacity and output) and Yorkshire and the Humber (7 per cent of both capacity and output) (Charts 4 and 6).

East, North West and London and the South East together accounted for 58 per cent of UK generation from landfill gas.

95 per cent of the generation from other biofuels and wastes took place in England with East (24 per cent) the largest producer, mainly from biomass. London was the next largest (23 per cent) mainly from municipal and industrial waste. The West Midlands (20 per cent, mainly municipal and industrial waste) was the third largest producer.

<sup>4</sup> Excluding landfill gas sites



It should be noted that this article and the preceding articles in September 2002 and December 2001 are snapshots of the position as seen at the time and these three articles do not constitute a time series. This is because changes include revisions due to an improved statistical base as well as actual changes to generation and capacity.

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## Combined Heat and Power in Scotland, Wales, Northern Ireland and the regions of England in 2002

### Background

Combined Heat and Power (CHP) is the simultaneous generation of usable heat and power (usually electricity) in a single process. In the September 2002 edition of Energy Trends, data were presented on the breakdown of CHP in 2001 in the devolved administrations and English regions<sup>1</sup>. This article updates the analysis presented in that article, to provide data for 2002.

Table 1 below shows an overview of CHP plants in the English regions and in the devolved administrations. During 2002, there was a net loss of 23 schemes and 11 MWe of capacity. However, the generation of electricity from CHP in 2002 was 7.5 per cent higher than in 2001. Table 2 shows a comparison of the number of schemes and capacity in the regions for the period 2000-2002. The main reduction in the number of schemes and capacity between 2001 and 2002 was in London and Yorkshire and the Humber. These regions and the South East show most activity as the number of schemes increased in these regions between 2000 and 2001. Additional schemes commenced operation in the North West region over the whole period.

Table 1: Overview of CHP schemes in 2002

	Number of Schemes	Electrical Capacity MWe	Heat Capacity MWth	Fuel Used GWh	Electricity Generated GWh	Heat Generated GWh
<b>England</b>	<b>1,331</b>	<b>3,832</b>	<b>7,789</b>	<b>86,219</b>	<b>19,048</b>	<b>42,910</b>
East Midlands	83	258	419	5,105	1,320	2,313
East	83	249	413	4,263	1,064	2,188
London	180	205	575	5,371	986	2,826
North East	90	536	1,145	11,110	2,867	5,532
North West	219	1,016	1,967	20,926	3,979	11,240
South East	262	785	1,749	20,585	4,444	9,536
South West	133	102	234	2,260	397	1,434
West Midlands	129	96	256	2,476	437	1,217
Yorkshire and the Humber	152	585	1,030	14,124	3,554	6,624
Scotland	85	743	3,164	25,876	4,214	14,180
Wales	95	143	440	5,175	852	3,334
Northern Ireland	32	25	91	617	122	314
<b>UK total</b>	<b>1,538</b>	<b>4,742</b>	<b>11,484</b>	<b>117,887</b>	<b>24,236</b>	<b>60,738</b>

### What the figures show:

Chart 1 shows the distribution of electricity and heat generation from CHP. The largest contributions to electricity generation are from the South East (18 per cent), Scotland (17 per cent) and North West (16 per cent). The same three regions contribute most to heat generation but Scotland contributes 23 per cent, then the North West 19 per cent and South East 16 per cent. The heat to power ratio of CHP schemes is higher in the North West and Scotland than in the South East.

Because the regions and administrations vary in size, the densities of CHP heat capacity and electrical capacity per head of population have been examined (Chart 2 and Table 3). Scotland has the highest heat capacity density, but the third lowest electrical capacity density. This reflects the high heat to power ratio for CHP in Scotland which in turn is mainly due to the type of industry

<sup>1</sup> A similar article on CHP in 2000 appeared in Energy Trends September 2001. However, these are snapshots of the position as seen at the time and figures in these three articles do not constitute a time series.

CHP serves in Scotland. The North East and North West have the next highest heat capacities per head of population and these three areas also have the highest electrical capacities per head of population.

Table 2: Change in number of CHP schemes and their electrical capacity in the period 2000-2002

	Number of schemes			Electrical Capacity MWe		
	2000	2001	2002	2000	2001	2002
<b>England</b>	<b>1,312</b>	<b>1,348</b>	<b>1,331</b>	<b>3,789</b>	<b>3,835</b>	<b>3,832</b>
East Midlands	83	82	83	251	255	258
East	80	85	83	249	254	249
London	182	188	180	204	215	205
North East	90	90	90	512	536	536
North West	206	214	219	931	954	1,016
South East	259	267	262	820	800	785
South West	128	130	133	102	103	102
West Midlands	127	130	129	98	98	96
Yorkshire and the Humber	155	159	152	622	621	585
Scotland	82	85	85	744	743	743
Wales	95	95	95	172	150	143
Northern Ireland	32	32	32	25	25	25
<b>UK total</b>	<b>1,522</b>	<b>1,561</b>	<b>1,538</b>	<b>4,730</b>	<b>4,753</b>	<b>4,742</b>

Chart 1: CHP generation by area

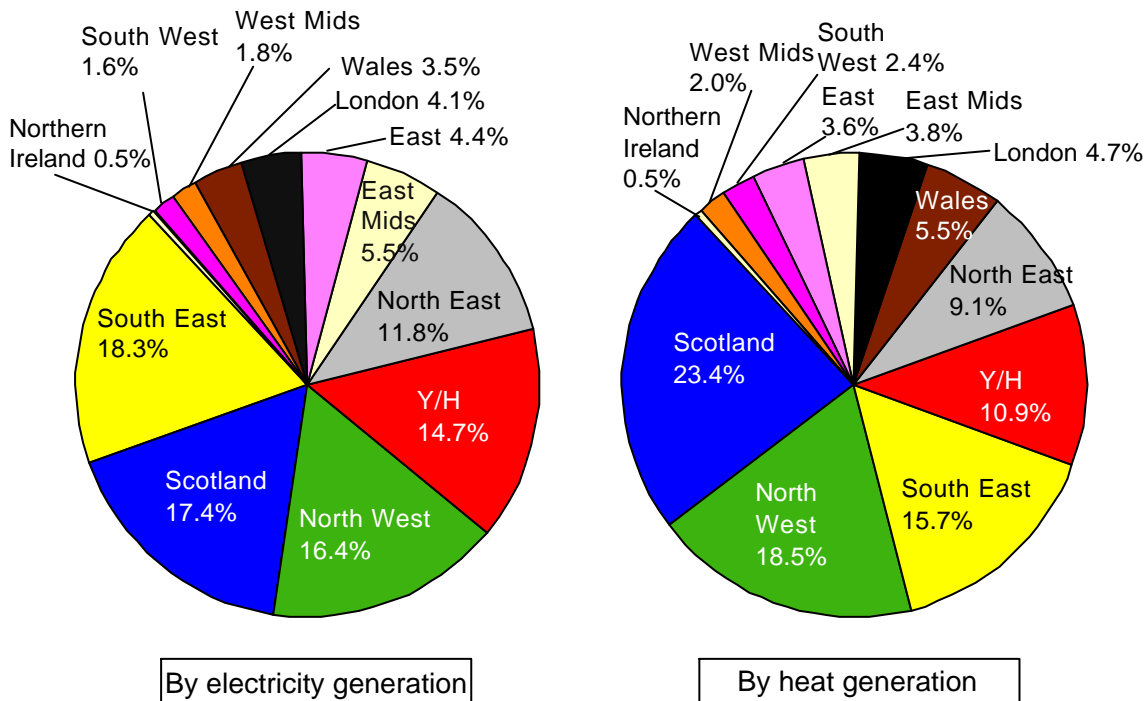
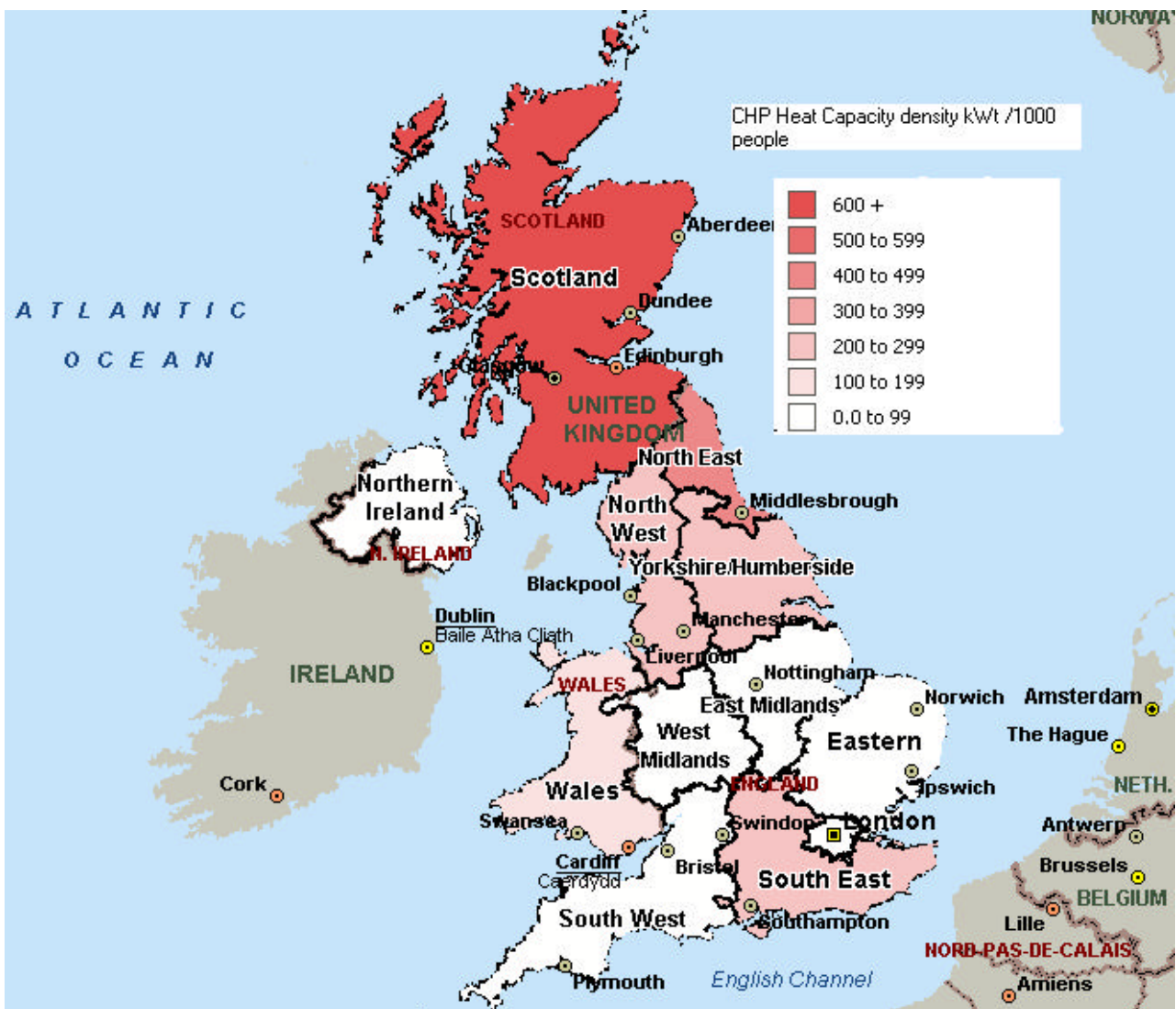


Table 3: Density of CHP in different areas

	Heat capacity kWt/ 1000 head of population	Electrical capacity kWe/ 1000 head of population
North East	444.4	207.8
North West	285.3	147.4
Scotland	618.6	145.2
Yorkshire and the Humber	203.6	115.7
South East	215.6	96.7
East Midlands	99.6	61.4
Wales	149.3	48.4
East	75.7	45.7
London	78.0	27.8
South West	47.0	20.4
West Midlands	47.9	17.9
Northern Ireland	53.7	14.8
<b>UK total</b>	<b>192.2</b>	<b>79.4</b>

Chart 2: Map of CHP density in terms of heat capacity per head of population



Tables 4 and 5 show the split by prime mover and by size range, respectively. In London, the East of England, the North East and Northern Ireland, disaggregation of the data by prime mover could result in the disclosure of confidential information and for these areas only totals are shown. In the South East, Yorkshire and the Humber, East of England and East Midlands regions the proportion of gas turbines is highest at over 70 per cent of total capacity. Steam turbines make up a relatively large proportion in the North West and Wales (over 35 per cent). In Wales, this reflects the importance of the iron and steel sector. The larger size schemes dominate most areas in terms of capacity. Only Wales has a significant proportion of capacity in the other size ranges. Wales, Northern Ireland and the South West have limited number of schemes over 10 MWe and in Table 5 the data are combined with the data for 1-10MWe.

**Table 4: CHP electrical capacity (MWe) by area and prime mover in 2002**

	Gas turbines*	Steam Turbines	Reciprocating engines	Total
<b>England</b>	..	..	..	<b>3,832</b>
East Midlands	189	42	27	258
East	..	..	..	249
London	..	..	..	205
North East	..	..	..	536
North West	572	366	79	1,016
South East	672	16	97	785
South West	19	45	38	102
West Midlands	29	23	44	96
Yorkshire and the Humber	479	27	80	585
Scotland	502	229	12	743
Wales	62	55	26	143
Northern Ireland	..	..	..	25
<b>UK total</b>	<b>3,092</b>	<b>1,079</b>	<b>574</b>	<b>4,742</b>

\*Includes combined cycle gas turbines

**Table 5: CHP electrical capacity (MWe) by area and size in 2002**

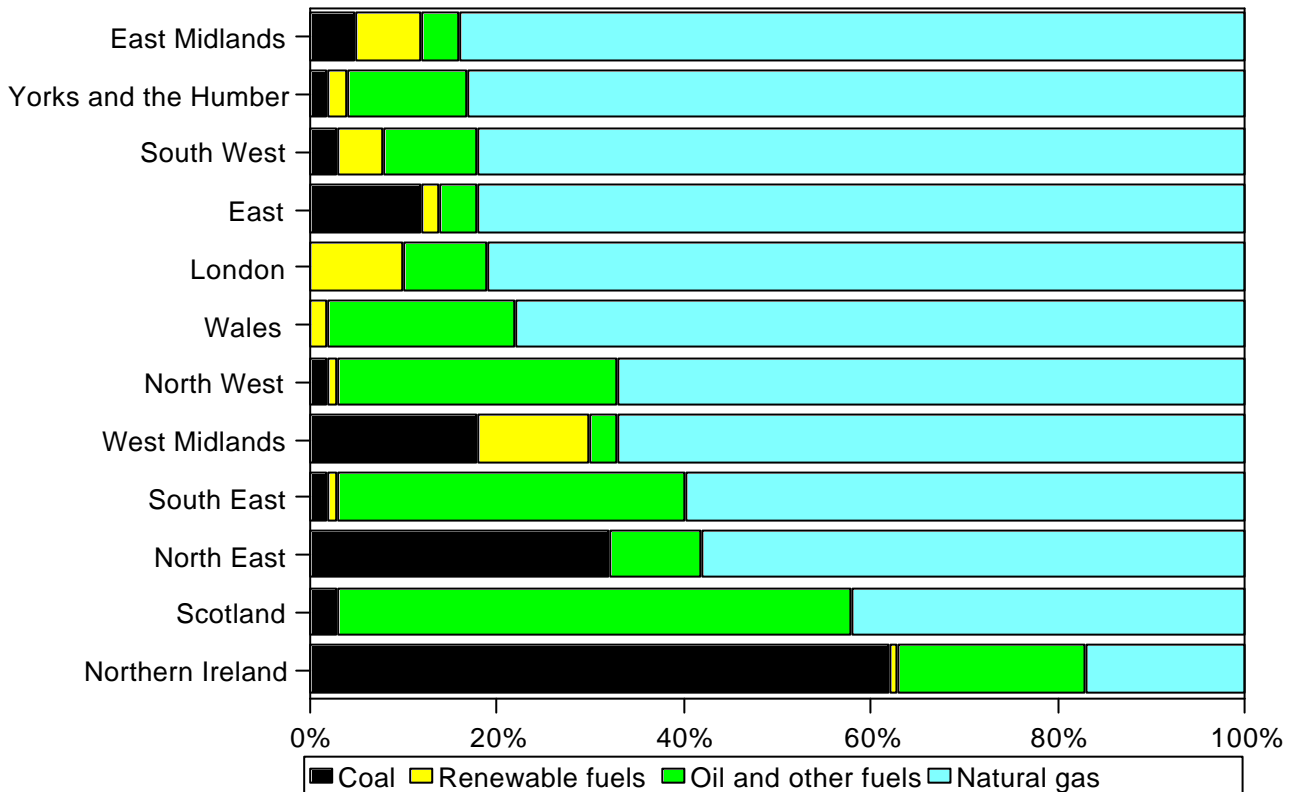
	Less than 100 kWe	100 kWe - 999 kWe	1 MWe - 9.9 MWe	Greater than 10 MWe	Total
<b>England</b>	35.3	131.1		3665.4	3,832
East Midlands	1.9	8.6	27.6	220.5	258
East	2.3	8.2	34.7	204.4	249
London	4.6	19.5	90.4	90.3	205
North East	2.1	6.8	48.5	478.1	536
North West	6.1	20.3	114.8	875.3	1,016
South East	7.0	27.9	98.7	651.3	785
South West	3.8	13.8		84.3	102
West Midlands	3.6	9.4	82.7	-	96
Yorkshire and the Humber	4.0	16.5	92.6	472.2	585
Scotland	1.6	7.3	50.7	683.1	743
Wales	2.8	9.2		130.7	143
Northern Ireland	0.8	3.3		20.8	25
<b>UK total</b>	<b>40.5</b>	<b>150.9</b>	<b>759.9</b>	<b>3,790.8</b>	<b>4,742</b>

The proportion of four fuels (coal, gas, renewables and oil and other fuels) in the fuel mix for each region is shown in Chart 3. The proportion of natural gas is high in most regions. The exceptions are Northern Ireland, where gas makes up only 17 per cent of the mix, and Scotland where gas comprises only 42 per cent. In Northern Ireland, the availability of a gas supply has been limited. This has contributed to the relatively low capacity of CHP in Northern Ireland. The largest part of the fuel mix in Northern Ireland is coal. Coal also contributes significantly in the North East of England, due to the type of industry and the availability of coal historically. In Scotland, oil and

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other fuels make up 50 per cent of the mix. The category 'oil and other fuels' includes oil products, refinery gases, blast furnace gas and other industrial wastes. The largest proportions of renewable fuels are in the West Midlands and London. This is due to the use of CHP in sewage treatment works in these regions.

Chart 3: Proportion of different fuels in the fuel mix for CHP in 2002 for each area



### Summary

While this analysis shows that there are large differences between the various areas of the UK in the heat capacity and electrical capacity per head of population and also some differences in the types of fuel used, regional policy initiative to encourage CHP have been limited. As a result the differences are largely related to the distribution of industry and the availability of a gas network.

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## **Energy statistics – Revisions policy**

Statistics on energy contained in Energy Trends, Quarterly Energy Prices, the Digest of UK Energy Statistics, and related publications are classified as National Statistics. This means that they are produced to the professional standards set out in the National Statistics Code of Practice and relevant protocols. The National Statistics protocol on revisions has not yet been published but exists in a near-final draft form. There the first principle on revisions requires that “Each organisation responsible for producing National Statistics will publish and maintain a general statement describing its practice on revisions”. The following statement outlines the policy on revisions for energy statistics.

### **Revisions to data published in the Digest of UK Energy Statistics.**

It is intended that any revisions should be made to previous years' data only at the time of the publication of the Digest (i.e. in July 2004 – when the 2004 Digest is planned for publication - revisions can be made to 2002 and earlier years). In exceptional circumstances previous years' data can be amended between Digest publication dates, but this will only take place when quarterly Energy Trends is published. The reasons for substantial revisions will be explained in the 'Highlights' sheet of the Internet version of the table concerned. Valid reasons for revisions of Digest data include:

- revised and validated data received from a data supplier;
- the figure in the Digest was wrong because of a typographical or similar error.

### **Revisions to current years data published in Energy Trends but not in the Digest of UK Energy Statistics.**

- All validated amendments from data suppliers will be updated when received and published in the next statistical release.
- All errors will be amended as soon as identified and published in the next statistical release.
- Data in energy and commodity balances format will be revised on a quarterly basis, to coincide with the publication of Energy Trends.

The draft National Statistics revisions' protocol includes a number of other provisions. Two in particular are worth listing:

- Methodological changes will be announced before figures based on them are published.
- Substantial revisions will be accompanied by an explanation of their nature and extent.

The DTI will also follow these and all the other provisions of the National Statistics revisions protocol in its Energy statistics' publications.

Further details on National Statistics Code of Practice and related protocols can be found at:

[http://www.statistics.gov.uk/about\\_ns/cop/default.asp](http://www.statistics.gov.uk/about_ns/cop/default.asp)

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