ENERGY trends

A monthly statistical bulletin from the Department of Trade & Industry

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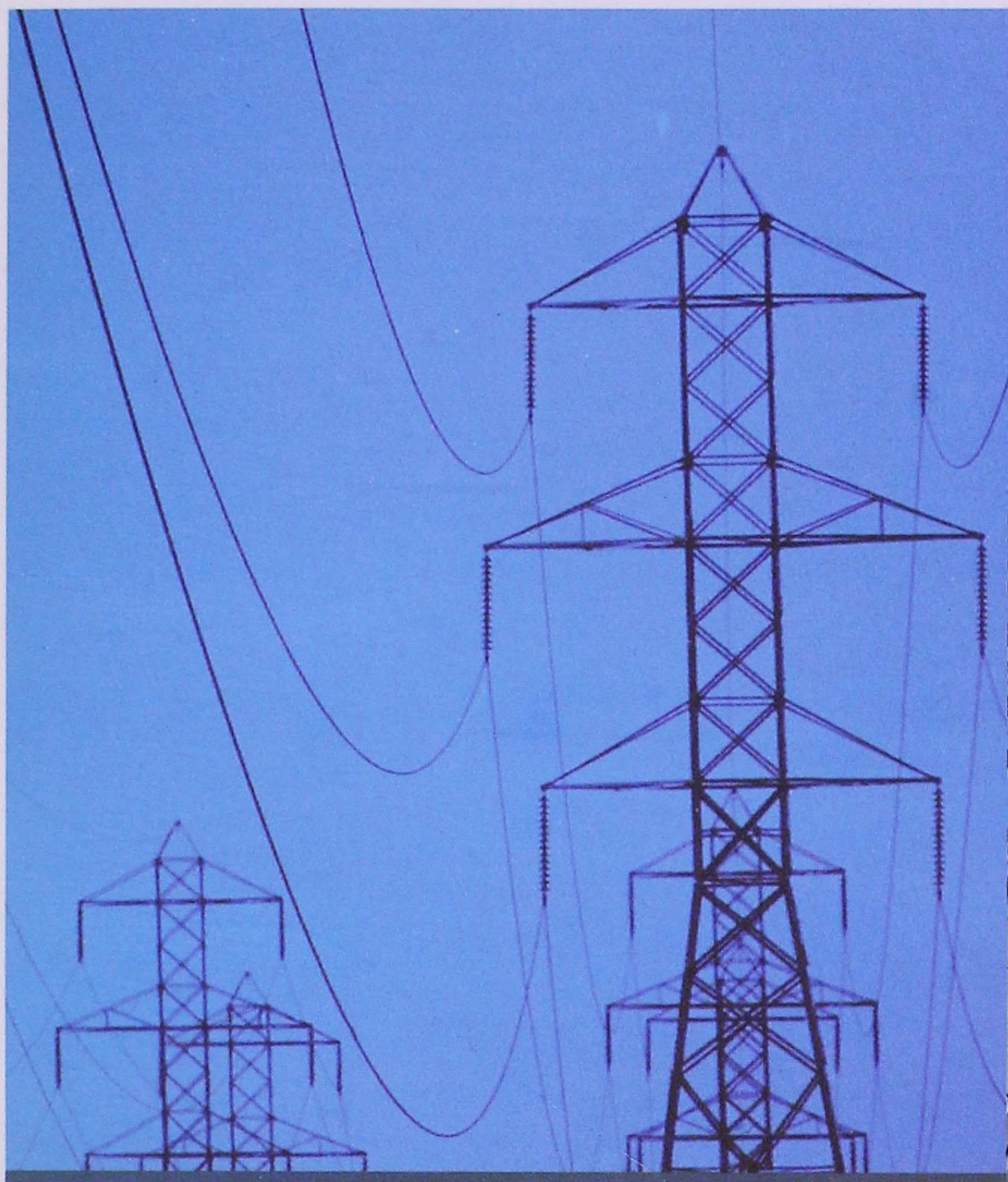

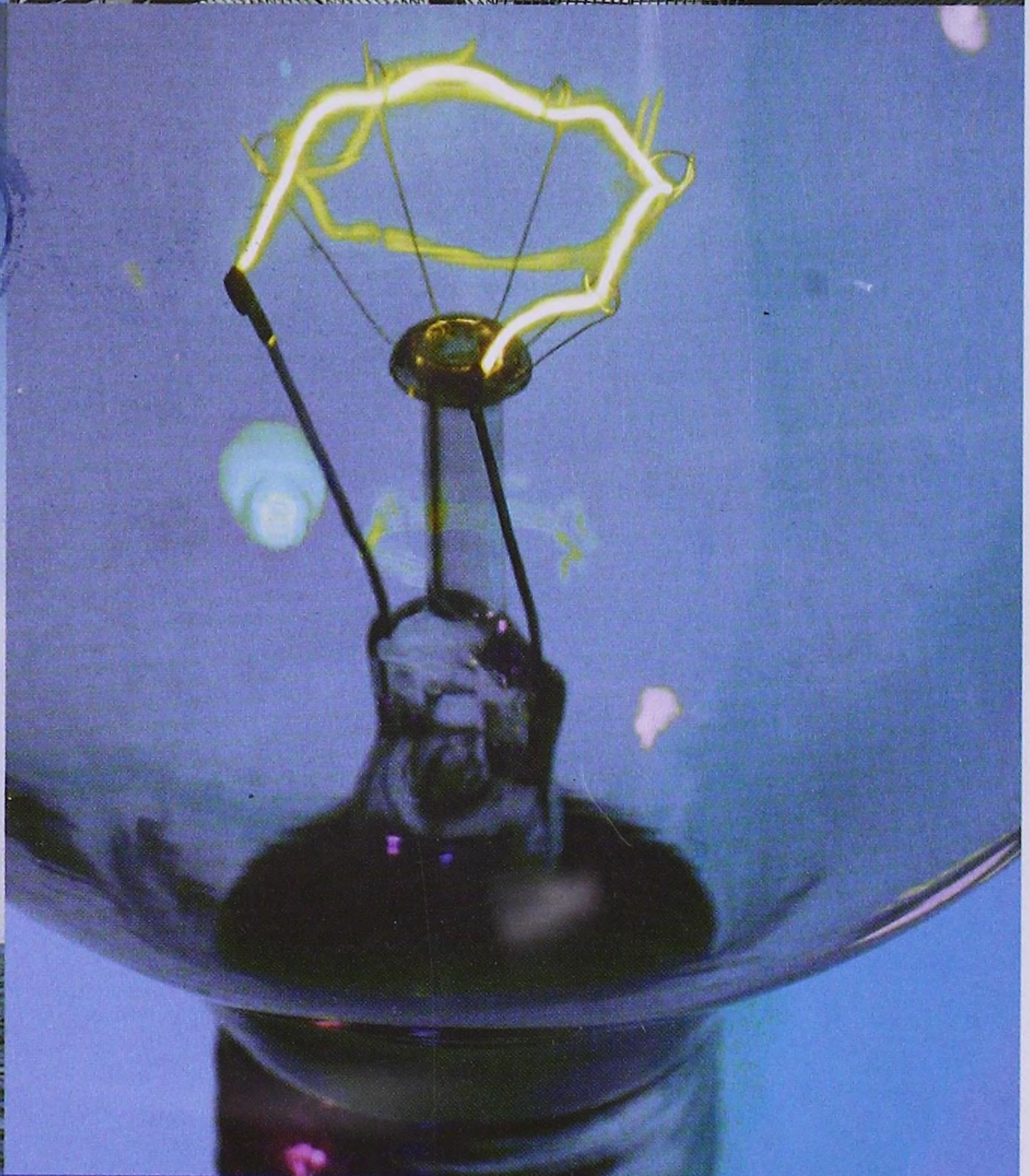

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EXPLANATORY NOTES ARE NOW ON THE BACK PAGE

Cover photographs courtesy of British Petroleum.
Top right: BP Exploration - Wytch Farm Project, Dorset Gathering centres at Wytch Heath.
Bottom left: Production platform in BP's Magnus oilfield north-east of Shetland.

MAIN POINTS

* *Energy production in the second quarter of 1998 was 3 per cent higher than a year earlier. Coal and other solid fuels, and primary electricity fell by 17 per cent and 7 per cent respectively, whilst petroleum and gas production rose by 8½ per cent and 6 per cent respectively.*

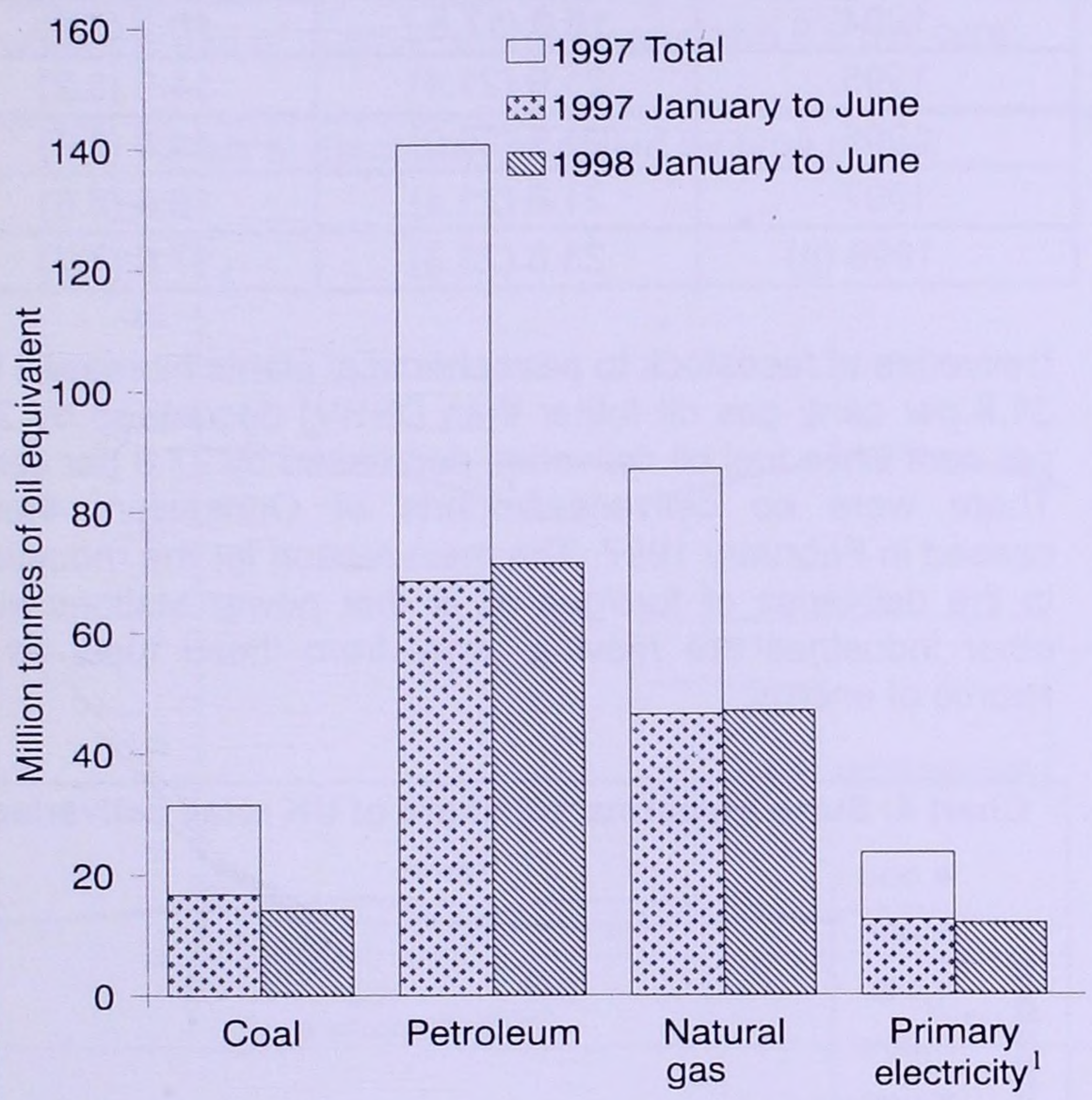
* *Primary energy consumption in the second quarter of 1998, after temperature correction and seasonal adjustment was 1½ per cent higher than in the same quarter of 1997.*

* *Average domestic prices for gas and electricity fell by 6 and 7½ per cent respectively in real terms between the second quarter of 1997 and the second quarter of 1998.*

* *An extended article, beginning on page 20, looks at combined heat and power (CHP) in the UK in 1997.*

TOTAL ENERGY PRODUCTION (Table 1)

Chart 1: Production of indigenous primary fuels



1 Nuclear and natural flow hydro.

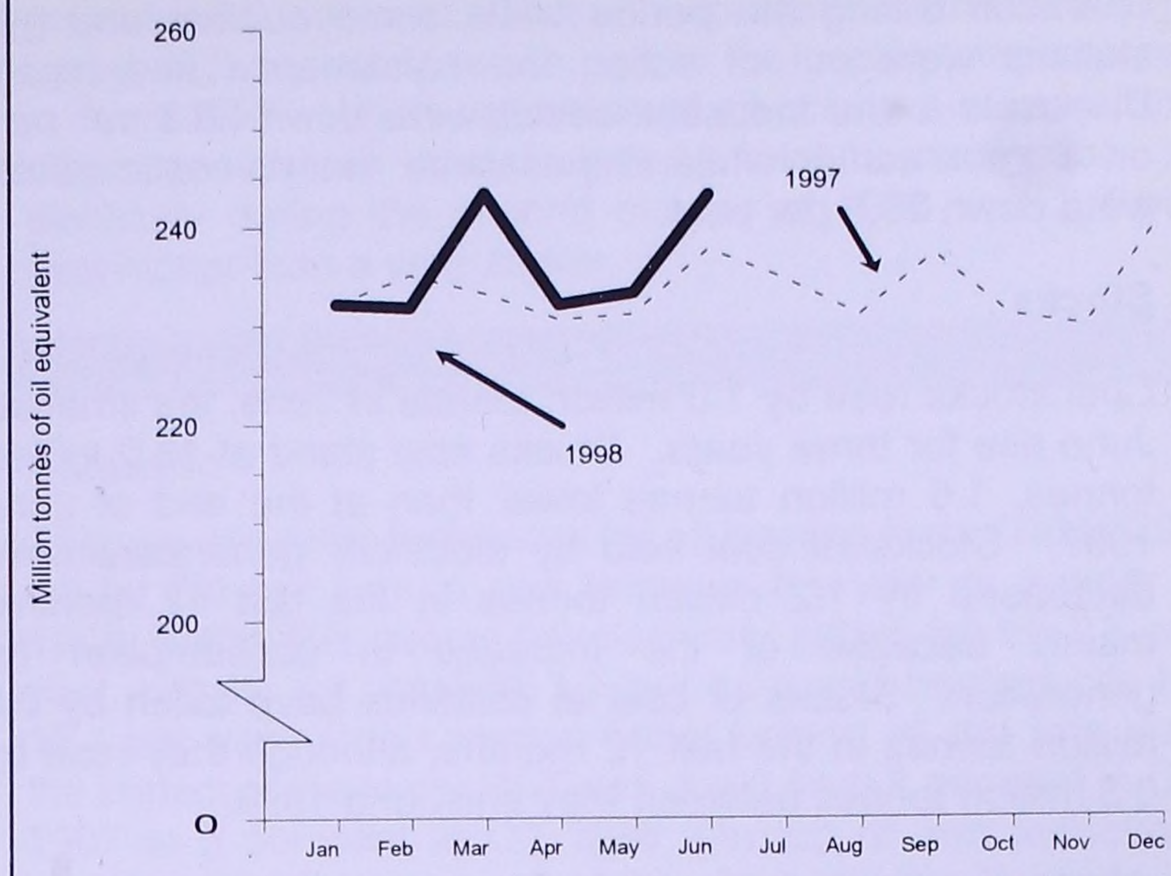
Indigenous production of primary fuels in the second quarter of 1998 at 66.9 million tonnes of oil equivalent, was 3.1 per cent higher than in the corresponding period a year ago.

Production of coal and other solid fuels, and nuclear production fell by 17.0 per cent and 6.9 per cent compared to a year ago, whilst petroleum and gas rose by 8.3 per cent and 6.1 per cent respectively.

TOTAL ENERGY CONSUMPTION (Table 2)

Total inland energy consumption, on a primary fuel input basis, during the second quarter of 1998 was 52.7 million tonnes of oil equivalent, 1.5 per cent higher than in the corresponding quarter a year ago. Consumption of coal and other solid fuels and natural gas rose by 9.2 per cent and 6.2 per cent respectively, whilst petroleum consumption and nuclear consumption fell by 4.0 per cent and 6.9 per cent respectively.

Chart 2: Total inland consumption (primary fuel input basis)[1]

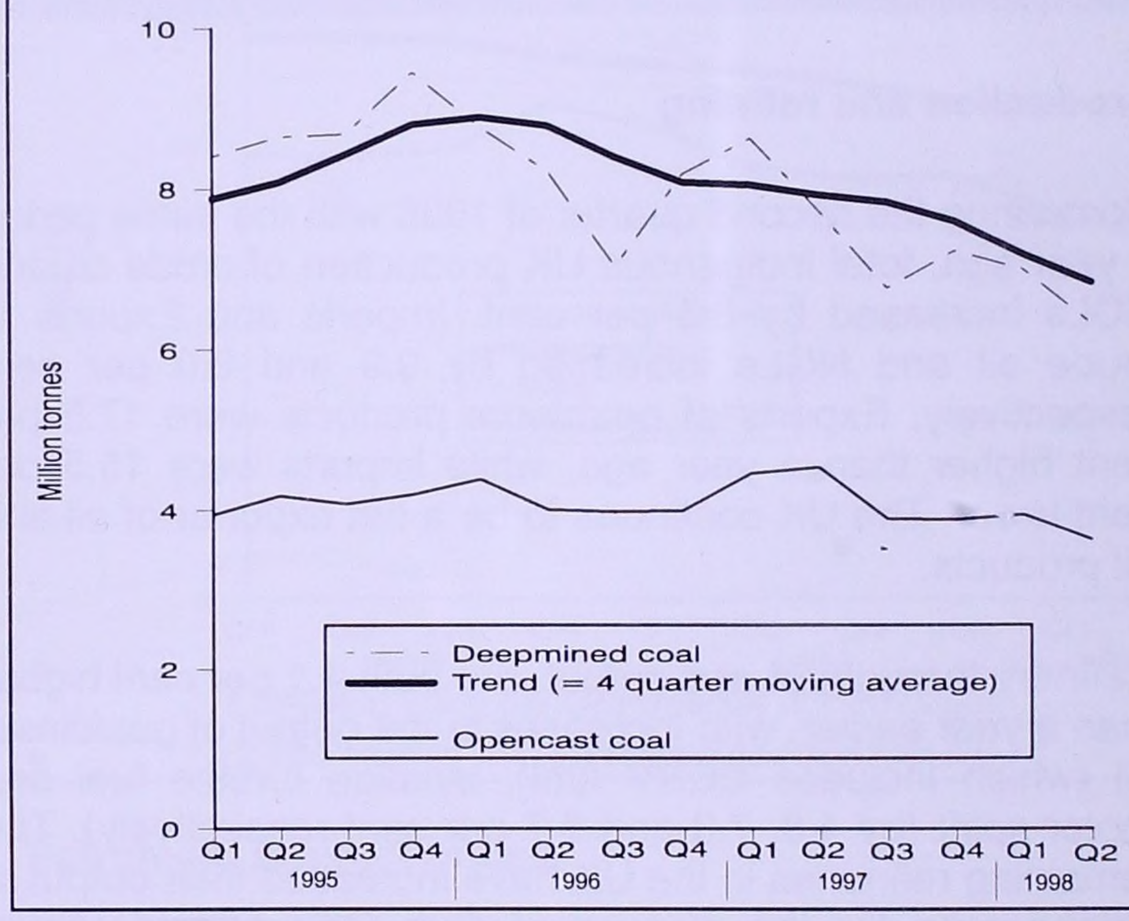


1 Seasonally adjusted and temperature corrected annual rates.

The average temperature during the period was 0.1 degrees celsius warmer than a year ago and total energy consumption, on a seasonally adjusted and temperature corrected basis, was 1.3 per cent higher than in the same period a year earlier. On this basis, consumption of gas and coal (including other solid fuels) rose by 4.3 per cent and 10.2 per cent respectively, whilst petroleum and nuclear consumption fell by 4.2 per cent and 7.2 per cent respectively.

COAL AND OTHER SOLID FUELS (Tables 4 to 7)

Chart 3: Coal production



Production and imports

Provisional figures for the second quarter of 1998 show that coal production (including an estimate for slurry) was 18.3 per cent lower than in the corresponding period a year earlier at 10.3 million tonnes. Deep mined production was down 18.4 per cent and opencast production was down 20.0 per cent. Imports of coal were 10.6 per cent higher than a year earlier with 5.4 million tonnes imported during the three month period. Exports of coal were 27.0 per cent lower than a year earlier at just under 0.2 million tonnes. Recent trends in coal production are shown in Chart 3.

Consumption

Use of home produced and imported coal in second quarter of 1998 was 14.6 million tonnes. This was 10.8 per cent higher than in the second quarter of 1997. Consumption by electricity generators, who accounted for 76 per cent of total

coal use in the period, rose by 20.4 per cent. This increase was because more coal-fired power stations were in operation during the period while some nuclear and gas stations were out of action for maintenance and repair. Disposals to the industrial sector were down 26.8 per cent on a year earlier while disposals to the domestic sector were down 20.6 per cent.

Stocks

Coal stocks rose by 1.0 million tonnes in June, the smallest June rise for three years. Stocks now stand at 18.0 million tonnes, 1.6 million tonnes lower than at the end of June 1997. Stocks of coal held by electricity generators have decreased by 1.2 million tonnes in the last 12 months, mainly because of the increase in consumption for generation. Stocks of coal at collieries have fallen by 0.6 million tonnes in the last 12 months, although they rose by 0.3 million tonnes between May and June 1998.

GAS (Tables 11 and 12)

Production

Provisional data for the period April to June 1998 show that indigenous production of natural gas increased by 6.2 per cent compared to the same period a year earlier. Exports of gas increased by 37.5 per cent while imports fell by 41.2 per cent. Indigenous production accounted for 98.7 per cent of gas available for consumption in the UK for the period April to June 1998. Gas output from the inland transmission system into the local distribution network was 5.1 per cent higher than a year ago.

PETROLEUM (Tables 13 to 17)

Production and refining

Comparing the second quarter of 1998 with the same period a year ago, total indigenous UK production of crude oil and NGLs increased by 8.3 per cent. Imports and Exports of crude oil and NGLs increased by 9.9 and 9.0 per cent respectively. Exports of petroleum products were 17.5 per cent higher than a year ago, while imports were 15.5 per cent lower. The UK continues to be a net exporter of oil and oil products.

Refinery throughput and output are both 4.1 per cent higher than a year earlier, with increases in the output of gas/diesel oil (which includes DERV fuel), aviation turbine fuel and motor spirit (by 4.8, 7.0 and 3.7 per cent respectively). The remaining refineries in the UK have increased their output to compensate for the closure of Gulf Oil's Milford Haven refinery in December 1997. If the closure of the Gulf refinery is adjusted for, refinery output would have been 11.3 per cent higher than a year earlier, illustrating how there has been significant surplus capacity in the UK refining industry.

Deliveries of products (consumption)

Overall deliveries of petroleum products for inland consumption for the period April 1998 to June 1998 were 3.6 per cent lower than in the same period a year earlier. Total deliveries of transport fuels were 4.7 per cent lower, with decreases in deliveries of DERV fuel (6.7 per cent) and motor spirit (7.5 per cent). Within the motor spirit total, unleaded petrol represented 78.0 per cent of total motor spirit deliveries over the period, compared with 71.0 per cent a year ago. DERV fuel's share of road transport fuels fell to 40 per cent compared to 48 per cent in the same period last year. Aviation turbine fuel increased by 6.6 per cent.

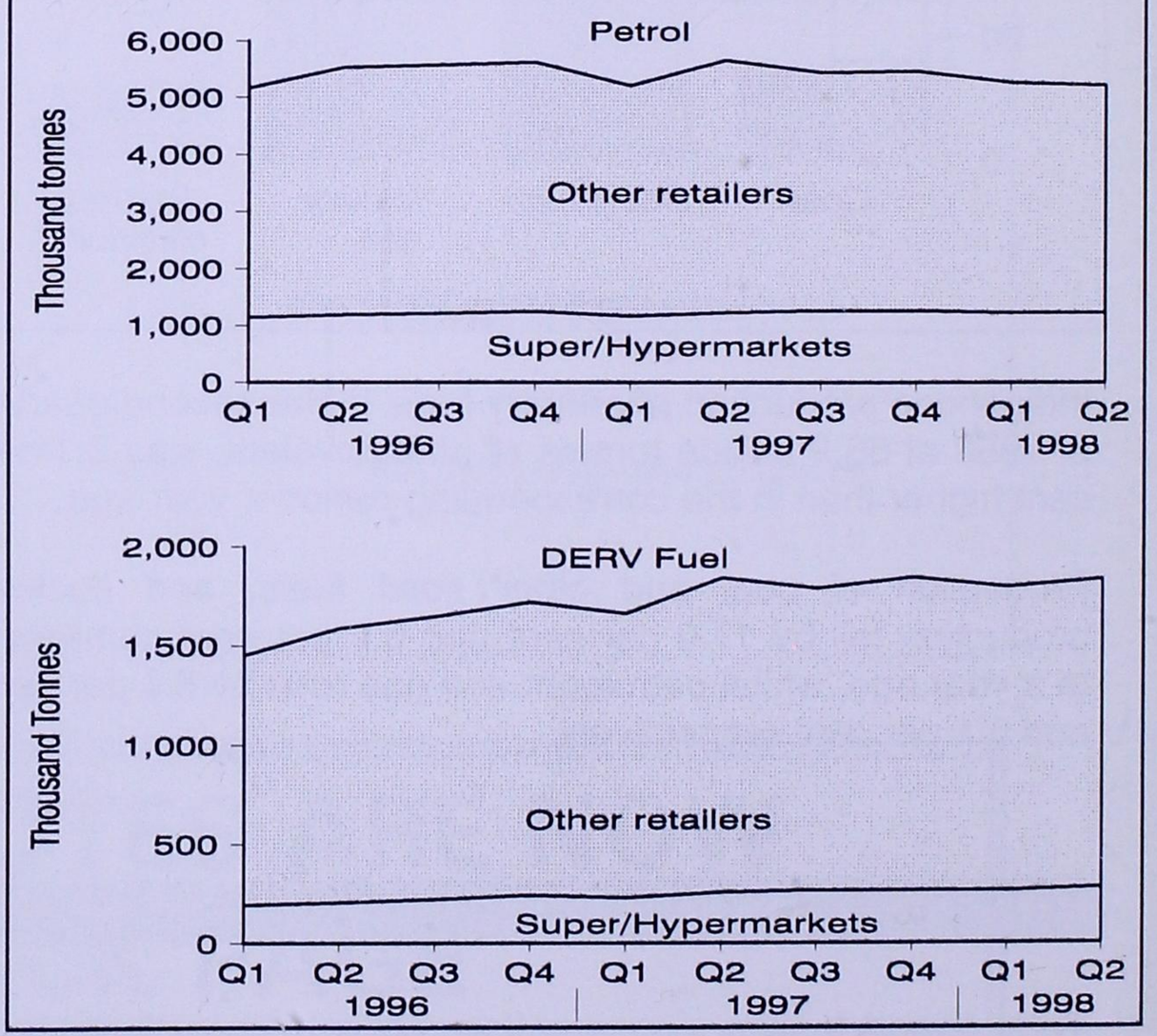
The table below shows the share of second quarter 1998 UK retail deliveries (and total UK deliveries) of the motor spirit and DERV accounted for by Super/hypermarkets. In the second quarter of 1998, these outlets accounted for 23.8 per cent of retail deliveries of motor spirit and 17.8 per cent of DERV, an increase on their shares in the second quarter 1997 (21.8 per cent 16.0 per cent respectively). Chart 4 shows the levels of these deliveries in recent quarters. This increase in market shares is not due to any significant increase in the level of sales by super/hypermarket companies. Rather, they have maintained the level of their sales while the overall level of sales of these road transport fuels are reduced compared to a year earlier, as shown by the decreases in level of overall deliveries of motor spirit and DERV fuels detailed above, and as illustrated in Chart 4.

Super/Hypermarket share of UK Retail Deliveries
(Share of total UK deliveries given in brackets)

Second Quarter	Motor Spirit	DERV Fuel
1993	15.1 (14.9)	6.4 (2.0)
1994	18.0 (17.6)	10.9 (3.6)
1995	21.9 (21.4)	14.5 (5.2)
1996	21.3 (20.9)	14.8 (5.7)
1997	21.8 (21.4)	16.0 (6.6)
1998 (p)	23.8 (23.3)	17.8 (7.7)

Deliveries of feedstock to petrochemical plants increased by 31.9 per cent, gas oil (other than DERV) decreased by 2.9 per cent while fuel oil deliveries decreased by 27.8 per cent. There were no deliveries/imports of Orimulsion, these ceased in February 1997. The main reason for the reduction in the deliveries of fuel/gas oil is that power stations and other industries are moving away from these fuels as a source of energy.

Chart 4: Super/Hypermarket share of UK retail deliveries



Stocks

During the month of June 1998 total stocks of petroleum decreased by 3.2 per cent, with stocks of crude oil and refinery process oils decreasing by 3.6 per cent and stocks of petroleum products decreasing by 2.9 per cent. On a year on year basis crude oil and refinery process oil stocks

increased by 2.7 per cent whilst total products increased by 0.5 per cent. Overall stocks increased by 1.5 per cent.

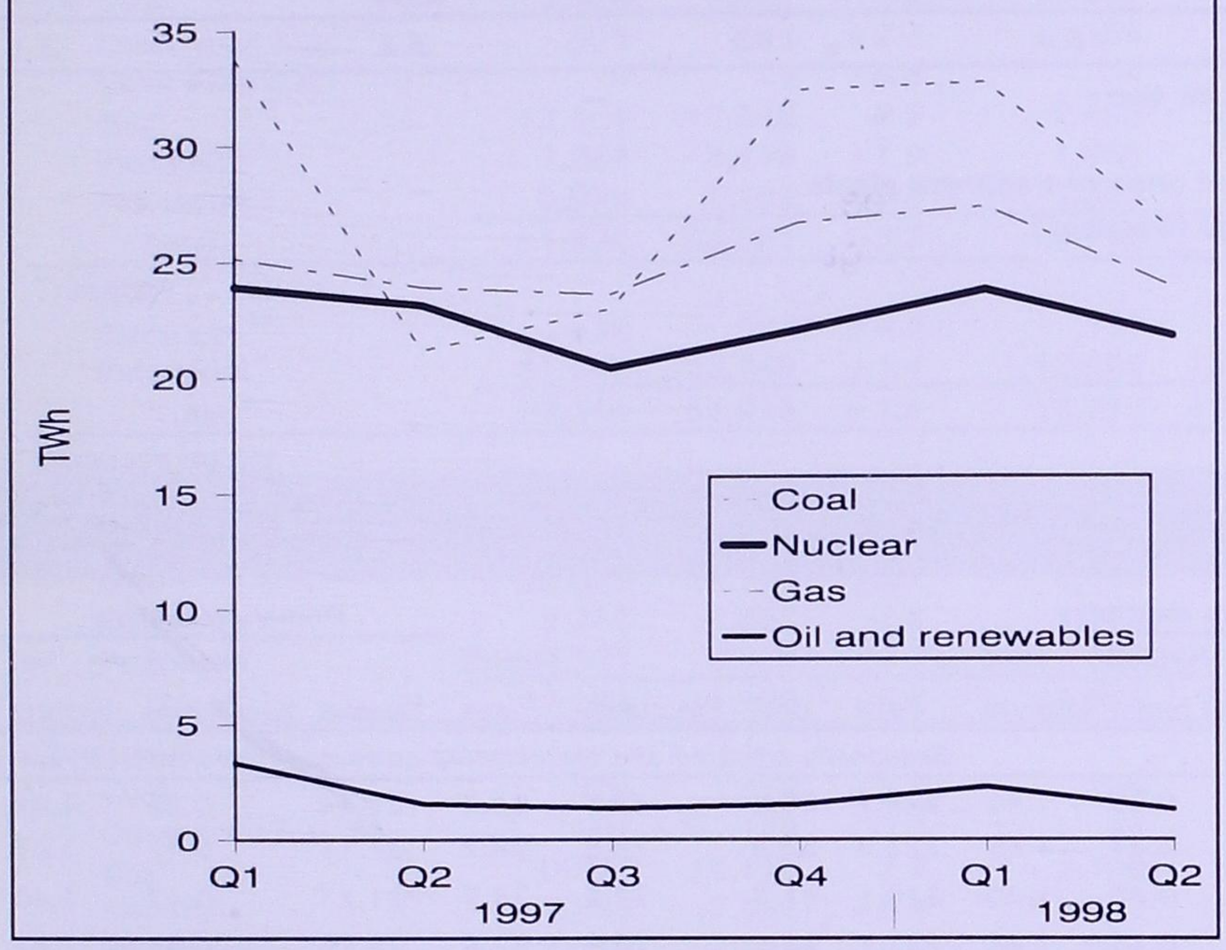
During the month of June stocks of kerosene and gas diesel decreased by 6.3 per cent (258 thousand tonnes). In spite of this fall the stocks still stand 57.7 per cent higher than at the end of June 1997. This can be attributed to the rise in stocks of these products held abroad by UK companies under bilateral arrangements as part of their national stocking obligations.

ELECTRICITY (Tables 18 to 23)

Fuel use

Fuel used by the major power producers in the second quarter of 1998 was, in total, 4.1 per cent higher than in the second quarter of 1997. Temperatures in the second quarter of 1998 were on average slightly above those of the second quarter of 1997 but April was cooler while May and June (when there is a lower seasonal demand for electricity for heating) were warmer. Coal use was 21.6 per cent higher than a year earlier with coal being used to make up for the non-availability of some nuclear and gas stations which were under maintenance and repair. The volume of gas used was only 1.0 per cent higher than a year earlier, while the use of nuclear sources was down 6.9 per cent.

Chart 5: Electricity supplied by type of fuel



Supplied

Electricity supplied by the major power producers in the second quarter of 1998 was 4.5 per cent higher than a year earlier. The supply from coal rose by 23.7 per cent (+5 TWh), while the supply from oil fell by 21.2 per cent (less than ½ TWh). The supply from gas fired stations was 0.5 per cent down on a year earlier with new stations that were not in full production a year ago not completely compensating for the stations that were out of use for maintenance and repair. Supply from nuclear stations in this three month period was 6.3 per cent (-1½ TWh) lower than in the second quarter of 1997 because of outages at several stations. When electricity available from other UK sources (unchanged from a year earlier) and net imports (down 1.9 per cent) are included, total electricity available through the public distribution system was 4.1 per cent lower than a year earlier. Chart 5 shows recent trends in supply by type of fuel. Supplies from coal fired generation exceeded gas and nuclear sourced supplies in the second quarter of 1998 whereas in the second quarter of 1997 coal took third place.

Sales

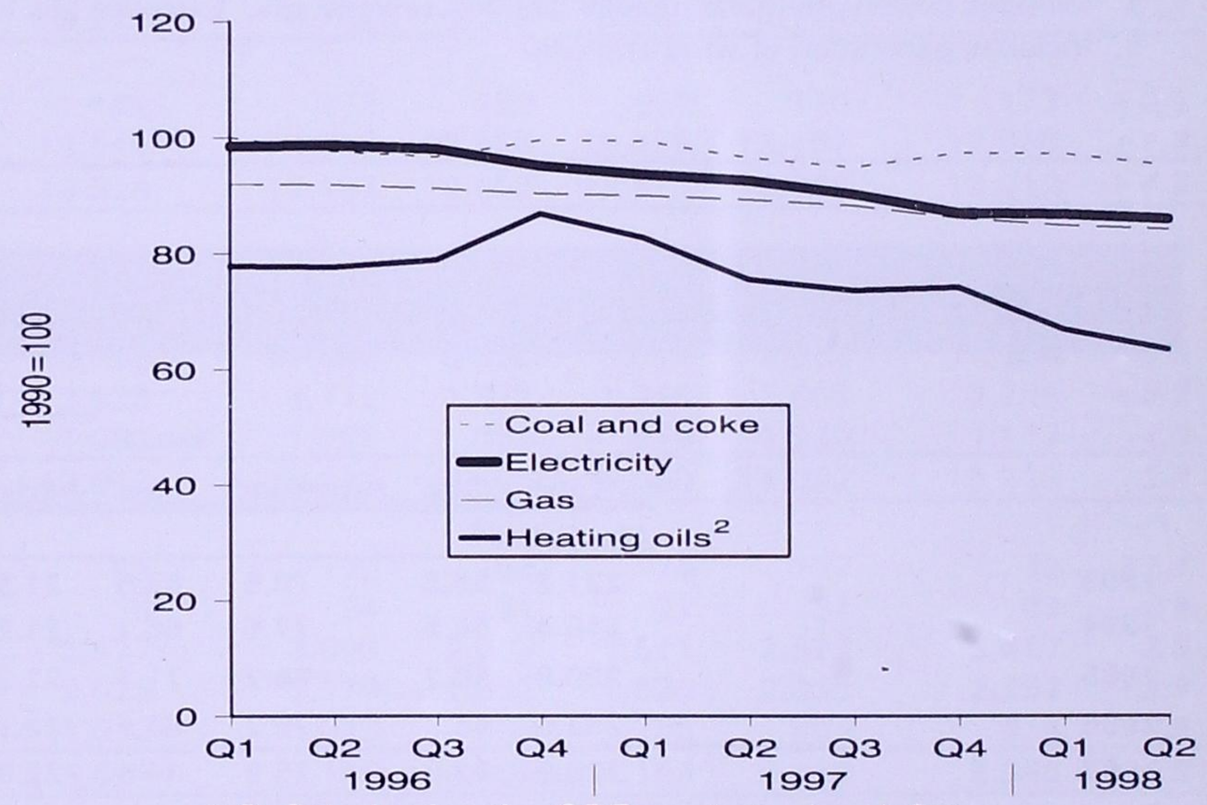
In the second quarter of 1998, sales of electricity through the public distribution system were provisionally 2.9 per cent higher than a year earlier. Commercial sector sales were 1.4 per cent lower and sales to industrial customers were down by 0.3 per cent. Sales to domestic customers were up by 10.0 per cent, due in part to the cooler temperatures in April 1998. When estimates of electricity available from other generators are included, total consumption of electricity during the second quarter of 1998 was 2.7 per cent higher than a year earlier.

PRICES (Tables 26 to 30)

Domestic

Average domestic fuel prices for all heating fuels (Table 29), fell by 7.0 per cent in real terms in the year to quarter 2 1998. Within this overall fall electricity prices fell by 7.5 per cent, gas by 6.1, coal by 1.7 per cent and heating oils by 16.1 per cent. One common factor behind all the falls was the impact of the lower VAT rate down from 8 per cent in Q2 1997 to 5 per cent in Q2 1998. On top of that reduction, heating oils fell as a result of the sharp decline in crude oil prices, whilst reductions in the Fossil Fuel Levy and new tariffs announced in April 1998 contributed to falls in electricity prices with lower British Gas tariffs combined with competition doing the same for gas. As a result of these factors all heating and lighting fuels were lower in cash terms, in Q2 1998 than in Q1 1998 with cash term gas prices being lower than in any quarter since VAT was introduced in Q2 1994 and electricity since Q2 1991. The index for petrol and oil shows an overall real term rise of 8.3 per cent since quarter 2 1997 as a result of the increase in Duty in the two Budgets during that period.

Chart 6: Fuel prices for the domestic sector in real terms[1]



1 Deflated using the GDP market price deflator.

2 The heating oils are bottled gas and fuel oil.

Petroleum product prices

Prices have remained broadly static since the impact of the duty increases seen in the March Budget (Table 30). Between mid-June and mid-July a litre of 4-star has increased by an average of 0.3 pence per litre, whilst unleaded petrol and diesel have both risen by 0.5 pence per litre. The year to mid-July has seen increases of 4.3, 3.5 and 3.7 pence per litre for 4-star, unleaded and diesel respectively, adding around 6 per cent to the cost of a litre of fuel. In the month to mid-June the price of super unleaded fell by 0.3 pence per litre. In the year to mid-June the price of super unleaded rose by 13.6 per cent, an actual increase of 9.4 pence per litre

The crude oil price index (which is calculated in sterling terms) showed that the average cost of crude oil acquired by refineries in July 1998 was 2 per cent lower than in June 1998 and 34.2 per cent lower than July 1997. The fall in the price of crude oil is reflected in retail prices of standard grade burning oil and gas oil which have fallen by 4.2 and 4.7 per cent respectively during June 1998.

TOTAL ENERGY

TABLE 1. Indigenous production of primary fuels

Million tonnes of oil equivalent

	Total	Coal[1]	Petroleum[2,3]	Natural gas[4]	Primary electricity: Nuclear	Primary electricity: Natural flow hydro[5]
1993	234.9	42.4	109.6	60.9	21.58	0.39
1994	256.6	30.9	138.9	65.0	21.20	0.47
1995	269.7	34.1	142.7	71.2	21.25	0.49
1996	281.8	32.2	142.4	84.8	22.18	0.33
1997	281.9	31.5	140.4	86.6	22.99	0.41
Per cent change	-	*-2.0*	*-1.4*	*+2.2*	*+3.7*	*+24.5*
1997 January - June	143.7	16.7	68.4	46.3	12.11	0.22
1998 January - June p	144.0	14.1	71.3	46.8	11.62	0.23
Per cent change	*+0.2*	*-16.0*	*+4.3*	*+1.1*	*-4.1*	*+5.3*
1997 April	22.7	2.6	11.6	6.6	1.84	0.03
May	20.8	2.6	10.6	5.6	1.92	0.02
June*	21.4	2.9	9.9	6.4	2.20	0.02
Total	64.9	8.1	32.1	18.6	5.95	0.07
1998 April	23.4	2.1	12.1r	7.4	1.75	0.03
May	21.2	2.2	11.7	5.6	1.70	0.02
June* p	22.4	2.4	11.0	6.8	2.09	0.02
Total	66.9	6.7	34.8	19.8	5.54	0.07
Per cent change	*+3.1*	*-17.0*	*+8.3*	*+6.1*	*-6.9*	*-3.1*

1. Includes solid renewable sources (wood, straw and waste), 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 at wind stations.

TABLE 2. Inland energy consumption: primary fuel input basis

Million tonnes of oil equivalent

	Unadjusted[5] Total	Coal[1]	Petroleum[2]	Natural gas[3]	Primary electricity: Nuclear	Primary electricity: Natural flow hydro[4]	Net imports	*Seasonally adjusted and temperature corrected*[6,7] *(annualised rates)* Total	Coal	Petroleum	Natural gas	Primary electricity: Nuclear	Primary electricity: Natural flow hydro	Net imports
1993	221.2	55.8	78.5	63.5	21.58	0.39	1.44	222.7	55.9	79.1	64.3	21.44	0.39	1.44
1994	219.4	52.5	77.6	66.1	21.20	0.47	1.45	223.9	53.3	78.8	68.7	21.19	0.47	1.45
1995	220.8	50.2	75.7	71.7	21.25	0.49	1.40	226.1	51.2	77.2	74.5	21.27	0.47	1.40
1996	233.0	46.9	78.2	83.9	22.18	0.33	1.44	232.1	46.9	78.6	82.8	22.10	0.34	1.43
1997	226.9	42.0	75.6	84.5	22.99	0.41	1.43	233.5	42.9	77.0	88.7	22.99	0.42	1.42
Per cent change	*-2.6*	*-10.5*	*-3.3*	*+0.7*	*+3.7*	*+24.5*	*-0.8*	*+0.6*	*-8.4*	*-2.1*	*+7.2*	*+4.0*	*+25.8*	*-0.8*
1997 January - June	118.5	21.5	37.9	46.1	12.11	0.22	0.72	233.4	42.9	76.7	88.2	23.78	0.38	1.43
1998 January - June p	117.5	21.5	36.8	46.6	11.62	0.23	0.71	235.9	44.1	75.3	91.9	22.75	0.39	1.41
Per cent change	*-0.8*	*+0.1*	*-2.8*	*+1.1*	*-4.1*	*+5.3*	*-1.5*	*+1.0*	*+2.7*	*-1.8*	*+4.2*	*-4.3*	*+4.4*	*-1.5*
1997 April	17.4	3.0	5.8	6.6	1.84	0.03	0.11	230.4	41.4	77.3	86.5	23.53	0.32	1.36
May	15.9	2.7	5.6	5.5	1.92	0.02	0.11	230.9	40.7	76.6	87.7	24.19	0.34	1.32
June*	18.7	3.3	7.1	5.9	2.20	0.02	0.13	237.5	42.5	76.9	92.4	23.88	0.30	1.50
Total	52.0	9.0	18.6	18.0	5.95	0.07	0.35	232.9	41.5	76.9	88.9	23.87	0.32	1.39
1998 April	18.2	3.4	5.5	7.5	1.75	0.03	0.11	231.9	47.0	70.2	90.8	22.36	0.34	1.30
May	15.6	3.0	5.3	5.4	1.70	0.02	0.11	233.1	47.1	74.2	88.7	21.40	0.33	1.33
June* p	18.9	3.4	7.0	6.3	2.09	0.02	0.12	243.0	43.1	76.8	98.6	22.72	0.26	1.46
Total	52.7	9.8	17.8	19.2	5.54	0.07	0.34	236.0	45.8	73.7	92.7	22.16	0.31	1.37
Per cent change	*+1.5*	*+9.2*	*-4.0*	*+6.2*	*-6.9*	*-3.1*	*-2.0*	*+1.3*	*+10.2*	*-4.2*	*+4.3*	*-7.2*	*-3.8*	*-2.0*

1. Includes solid renewable sources (wood, straw and waste), and net foreign trade and stock changes in other solid fuels.
2. Inland deliveries for energy use, plus refinery fuel and losses, minus the differences between deliveries and actual consumption at power stations.
3. Includes gas used during production, colliery methane, landfill gas and sewage gas. Excludes gas flared or re-injected and non-energy use of gas.
4. Includes generation at wind stations. 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 Digest of United Kingdom Energy Statistics 1998, paragraphs 1.46 - 1.47.

TABLE 3. **Supply and use of fuels**

Thousand tonnes of oil equivalent

	1996	1997	Per cent change	1996 2nd quarter	1996 3rd quarter	1996 4th quarter	1997 1st quarter	1997 2nd quarter	1997 3rd quarter	1997 4th quarter	1998 p 1st quarter	Per cent change
PRIMARY FUELS AND EQUIVALENTS												
Production of primary fuels												
Coal[1]	32,172	31,524	-2.0	8,091	7,393	8,046	8,603	8,061	7,289	7,571	7,346	-14.6
Petroleum[2]	142,353	140,392	-1.4	34,347	34,368	37,895	36,246	32,149	34,612	37,385	36,475	+0.6
Natural gas[3,4]	84,776	86,604	+2.2	17,794	13,821	25,402	27,758	18,685	15,271	24,891	27,376	-1.4
Primary electricity[5]	22,510	23,405	+4.0	5,597	4,958	6,284	6,297	6,042	5,315	5,752	6,243	-0.9
Total[6]	281,821	281,935	-	65,831	60,542	77,629	78,906	64,939	62,490	75,600	77,443	-1.9
Imports	80,178	80,422	+0.3	24,133	16,811	17,067	20,493	20,465	20,143	19,321	19,757	-3.6
Exports	117,122	118,324	+1.0	28,998	28,194	30,472	30,284	26,978	29,994	31,067	30,210	-0.2
Marine bunkers	2,813	3,121	+11.0	676	795	731	647	836	851	787	766	+18.5
Stock changes[7]	+1,778	-2,635		-593	-1,472	+95	+1	-3,008	-1,586	+1,958	+960	
Non-energy use[8]	13,417	13,071	-2.6	3,284	3,415	3,456	3,246	3,040	3,390	3,394	3,262	+0.5
Statistical difference[9]	+2,530	+1,696		-3,143	+3,545	+3,105	+1,526	+604	-115	-319	+1,592	
Total primary energy input[10]	232,956	226,904	-2.6	53,269	47,021	63,238	66,750	52,146	46,697	61,312	65,513	-1.9
Conversion losses etc.[11]	70,947	69,038	-2.7	16,298	14,483	19,254	20,064	16,398	14,919	17,657	19,354	-3.5
Final energy consumption[12]	162,009	157,866	-2.6	36,971	32,539	43,984	46,686	35,748	31,778	43,655	46,159	-1.1
FINAL CONSUMPTION BY USER												
Iron and steel industry												
Coal	2	-	-	1	-	-	-	-	-	-	1	-
Other solid fuel[13]	3,805	3,749	-1.5	971	918	1,010	955	959	926	910	896	-6.1
Coke oven gas	626	655	+4.7	156	156	156	164	164	164	164	163	-0.2
Gas	1,889	1,800	-4.7	459	379	555	511	393	294	603	591	+15.8
Electricity	905	891	-1.6	231	213	226	232	227	209	223	232	-
Petroleum	771	765	-0.7	207	201	164	196	158	157	254	163	-16.9
Total	7,998	7,860	-1.7	2,026	1,867	2,113	2,057	1,900	1,749	2,153	2,047	-0.5
Other industries												
Coal	2,486	2,172	-12.6	622	503	728	613	534	437	589	503	-17.9
Other solid fuel[1,13]	603	626	+3.7	154	150	154	153	155	154	164	151	-1.8
Coke oven gas	18	19	+5.8	4	4	4	5	5	5	5	5	+9.1
Gas[4]	13,154	12,845	-2.3	2,493	2,856	4,600	3,849	2,808	2,462	3,727	4,198	+9.1
Electricity	7,964	8,118	+1.9	1,885	1,957	2,003	2,107	1,947	1,993	2,070	2,114	+0.3
Petroleum	6,999	6,282	-10.2	1,619	1,463	1,822	2,006	1,433	1,273	1,569	1,706	-15.0
Total	31,223	30,061	-3.7	6,778	6,934	9,312	8,732	6,883	6,323	8,124	8,677	-0.6
Transport												
Electricity[14]	639	667	+4.5	162	151	161	172	168	157	170	173	+0.5
Petroleum	51,605	52,349	+1.4	12,929	13,419	13,145	12,310	13,484	13,355	13,199	12,838	+4.3
Total[15]	52,245	53,018	+1.5	13,090	13,571	13,306	12,483	13,652	13,513	13,369	13,012	+4.2
Domestic sector												
Coal	2,085	1,991	-4.5	476	357	622	544	449	443	556	402	-26.1
Other solid fuel[1,13]	855	705	-17.5	244	219	187	195	172	163	175	161	-17.2
Gas	32,322	29,716	-8.1	6,190	3,169	9,150	11,662	5,320	3,071	9,663	11,256	-3.5
Electricity	9,246	8,983	-2.8	1,972	1,730	2,628	2,712	1,921	1,745	2,606	2,799	+3.2
Petroleum	3,521	3,393	-3.6	690	586	1,023	1,159	638	576	1,020	1,112	-4.0
Total[6]	48,039	44,798	-6.7	9,575	6,064	13,612	16,273	8,503	6,000	14,022	15,733	-3.3
Other final users[17]												
Coal	425	448	+5.6	106	46	88	170	87	74	117	72	-57.4
Other solid fuel[1,13]	161	128	-20.7	47	41	36	34	31	31	31	33	-1.9
Gas[4]	10,372	10,118	-2.4	2,708	1,428	2,477	3,693	2,037	1,511	2,877	3,417	-7.5
Electricity	7,533	7,937	+5.4	1,727	1,729	2,028	2,170	1,852	1,820	2,095	2,252	+3.8
Petroleum	4,013	3,496	-12.9	914	858	1,012	1,073	803	755	865	914	-14.8
Total	22,504	22,128	-1.7	5,502	4,103	5,641	7,140	4,809	4,193	5,986	6,689	-6.3
Total final consumption	162,009	157,866	-2.6	36,971	32,539	43,984	46,686	35,748	31,778	43,655	46,159	-1.1
FINAL CONSUMPTION BY FUEL												
Coal	4,998	4,613	-7.7	1,205	907	1,438	1,326	1,070	954	1,262	979	-26.2
Other solid fuel[1,13]	5,424	5,208	-4.0	1,416	1,329	1,386	1,337	1,316	1,274	1,281	1,242	-7.1
Coke oven gas	644	674	+4.7	161	161	161	168	168	168	168	169	+0.1
Gas[4,15,16]	57,739	54,480	-5.6	11,851	7,831	16,783	19,714	10,558	7,339	16,870	19,463	-1.3
Electricity	26,286	26,596	+1.2	5,977	5,780	7,047	7,393	6,115	5,924	7,163	7,571	+2.4
Petroleum	66,909	66,286	-0.9	16,359	16,528	17,167	16,744	16,517	16,116	16,908	16,733	-0.1
Total all fuels[6]	162,009	157,866	-2.6	36,971	32,539	43,984	46,686	35,748	31,778	43,655	46,159	-1.1

1. Includes solid renewable sources (wood, straw, waste etc).
2. Crude petroleum and natural gas liguids. Annual data includes extended well-test production.
3. Excludes gas flared or re-injected.
4. Includes landfill gas and sewage gas. Excludes non -energy use of gas
5. Nuclear, natural flow hydro and generation at wind stations.
6. Includes small amounts of solar and geothermal heat.
7. Stock fall (+) or stock rise (-).
8. Petroleum and natural gas.
9. Recorded demand minus supply.
10. More detailed analyses of the 1996 and 1997 figures are given in the Digest of UK Energy Statistics 1998.
11. Losses in conversion and distribution, and use by fuel industries.
12. Measured as deliveries, except for natural gas and electricity, and for solid fuels used by the iron and steel industry.
13. Coke and other manufactured solid fuels.
14. Includes use in transport-related premises, eg. airports, warehouses.
15. Includes small quantities of gas used for road transport.
16. Due to late invoicing of gas sales adjustments have been made to each quarter of 1996.
17. Mainly public adminstration, commerce and agriculture.

COAL & OTHER SOLID FUELS

TABLE 4. Coal production and foreign trade

Thousand tonnes

		Production					
		Total[1]	Deep-mined	Opencast	Net imports	Imports[2]	Exports
1993		68,199	50,457	17,006	+17,286	18,400	1,114
1994		48,971	31,854	16,804	+13,852	15,088	1,236
1995		53,037	35,150	16,369	+15,037	15,896	859
1996		50,197	32,223	16,315	+16,811	17,799	988
1997		48,495	30,281	16,700	+18,610	19,756	1,147
Per cent change		*-3.4*	*-6.0*	*+2.4*	*+10.7*	*+11.0*	*+16.0*
1997	January - June	26,016	16,340	8,959	+10,334	10,968	635
1998	January - June p	21,529	13,259	7,539	+9,623e	10,045e	422e
Per cent change		*-17.2*	*-18.9*	*-15.8*	*-6.9*	*-8.4*	*-33.5*
1997	April	4,100	2,591	1,410	+1,656	1,733	77
	May	3,976	2,402	1,461	+1,239	1,331	92
	June*	4,491	2,715	1,645	+1,743	1,807	64
Total		12,567	7,709	4,516	+4,638	4,871	234
1998	April	3,241	2,058	1,076	+1,757	1,813	56
	May	3,290	1,964	1,203	+1,499r	1,553r	54r
	June* p	3,734	2,270	1,335	+1,961e	2,021e	60e
Total		10,265	6,291	3,614	+5,217	5,387	171
Per cent change		*-18.3*	*-18.4*	*-20.0*	*+12.5*	*+10.6*	*-27.0*

1. Includes an estimate for slurry.
2. In 1993 import figures include an additional estimate for recorded trade. In other years figures are as recorded in the Overseas Trade Statistics of the United Kingdom (OTS) except that import and export figures for recent months are estimated on the basis of information available for extra-EC trade until monthly statistics for intra-EC trade become available from HM Customs and Excise.

TABLE 5. Inland coal use

Thousand tonnes

		Fuel producers' consumption					Final users (disposals by collieries and opencast sites)		
			Primary	Secondary					
		Total	Collieries	Electricity generators	Coke ovens	Other conversion industries[1]	Industry[2]	Domestic[2]	Other[3]
1993		86,727	48	66,106	8,479	1,329	5,300	4,638	826
1994		81,783	22	62,406	8,595	1,190	4,948	3,901	721
1995		76,948	8	59,588	8,664	982	4,493	2,690	523
1996		71,403	8	54,893	8,635	946	3,639	2,705	577
1997		63,092	8	47,058	8,750	863	3,174	2,587	651
Per cent change		*-11.6*	*-2.3*	*-14.3*	*+1.3*	*-8.8*	*-12.8*	*-4.4*	*+12.7*
1997	January - June	31,617	4	23,433	4,394	446	1,676	1,290	373
1998	January - June p	32,169	4	25,080	4,352	278	1,308	989	157
Per cent change		*+1.7*	*-0.7*	*+7.0*	*-1.0*	*-37.7*	*-22.0*	*-23.3*	*-57.9*
1997	April	4,310	1	3,092	678	67	265	162	46
	May	3,917	-	2,713	678	68	228	189	41
	June*	4,913	1	3,426	849	78	288	232	39
Total		13,141	2	9,231	2,205	213	781	583	126
1998	April	5,062	1	3,980	666	57	193	140	24
	May	4,488r	1	3,447	678	48	149r	152r	12
	June* p	5,009	1	3,689	859	45	229	170	15
Total		14,559	3	11,116	2,203	150	571	463	52
Per cent change		*+10.8*	*+48.6*	*+20.4*	*-0.1*	*-29.4*	*-26.8*	*-20.6*	*-59.1*

1. Low temperature carbonisation and patent fuel plants.
2. Includes estimates of imports.
3. Public adminstration, commerce and agriculture.

TABLE 6. **Stocks of coal at end of period**

Thousand tonnes

			Distribution				
		Total[1]	Total distributed stocks	Electricity generators[2]	Coke ovens	Other	Total undistributed stocks
1993		45,860	29,872	28,579	1,218	75	15,989
1994		27,272	16,001	14,802	1,098	101	11,271
1995		18,730	11,626	10,587	961	77	7,104
1996		14,905	10,752	9,495	1,228	29	4,153
1997		18,881	14,064	12,897	1,128	39	4,817
1997	April	16,200	11,696	10,540	1,128	29	4,504
	May	18,116	13,270	11,991	1,253	26	4,846
	June*	19,530	14,492	13,333	1,134	26	5,038
1998	April	16,873	13,254	11,887	1,345	21	3,619
	May	16,985	12,863	11,645	1,201	17	4,122
	June* p	17,961	13,535	12,155	1,361	19	4,426
Absolute change:							
in latest month		*+976*	*+672*	*+510*	*+161*	*+2*	*+304*
on a year ago		*-1,569*	*-957*	*-1,178*	*+228*	*-6*	*-613*

1. Excluding distributed stocks held in merchants' yards, etc., mainly for the domestic market, and stocks held by the industrial sector.
2. Coal-fired power stations belonging to major power producers (see inside back cover).

TABLE 7. **Other solid fuel production, foreign trade and use**

Thousand tonnes

		Coke and breeze						Other manufactured solid fuels[1]				
				Consumption						Consumption		
		Production	Net imports[2]	Iron and steel industry[3]	Other industry[4,5]	Domestic[5]	Total use	Production	Net imports[2]	Domestic	Industry[4]	Total use
1993		6,093	+527	5,968	423	329	6,721	1,111	+9	1,127	33	1,160
1994		6,202	+218	6,168	237	150	6,555	1,034	-27	904	69	973
1995		6,228	+376	6,234	129	174	6,537	841	-58	708	63	771
1996		6,222	+557	6,611	183	181	6,975	862	-41	815	54	868
1997		6,233	+637	6,519	197	92	6,808	814	-59	677	58	735
Per cent change		*+0.2*	*+14.3*	*-1.4*	*+7.7*	*-49.0*	*-2.4*	*-5.6*	*+43.9*	*-17.0*	*+7.4*	*-15.3*
1996	2nd quarter	1,568	+236	1,685	53	77	1,815	238	-11	220	14	234
	3rd quarter	1,562	+155	1,601	46	51	1,698	220	-8	195	13	208
	4th quarter	1,556	+139	1,742	51	24	1,817	220	-5	183	15	198
1997	1st quarter	1,564	+142	1,663	46	34	1,743	223	4	187	15	202
	2nd quarter	1,566	+155	1,666	49	17	1,732	197	-29	169	14	183
	3rd quarter	1,553	+167	1,625	47	20	1,692	211	-19	150	12	162
	4th quarter	1,549	+173	1,565	54	21	1,640	182	-15	171	17	188
1998	1st quarter	1,537	+65	1,566	21	30	1,617	120	-7	134	16	150
	2nd quarter p	1,567	+285	1,679	31	118	1,827	146	10	157	13	170
Per cent change		-	*+84.1*	*+0.8*	*-38.1*	*(+)*	*+5.5*	*-26.0*	*(-)*	*-7.1*	*-7.1*	*-7.1*

1. These include solid fuels used in open fires and closed appliances and fuel produced by low temperature carbonisation.
2. The latest quarter's import figures are estimated. They will be revised when the intra-EC trade data becomes available from HM Customs and Excise.
3. Includes an estimate of iron foundries' consumption.
4. Includes own use by fuel producers.
5. Includes an estimate of imports.

UK CONTINENTAL SHELF

TABLE 8. Drilling activity[1]

Number of wells started

		Offshore				Onshore	
		Exploration	Appraisal	Exploration & Appraisal	Development[2]	Exploration & Appraisal	Development
1993		51	59	110	162	2	9
1994		62	37	99	202	3	13
1995		60	38	98	244	2	19
1996		77	35	112	261r	7	27r
1997		63	35	98	256	13	29
Per cent change		*-18.2*	-	*-12.5*	*-1.9*	*+85.7*	*+7.4*
1996	2nd quarter	15	7	22	81	2	12
	3rd quarter	19	9	28	52	-	7
	4th quarter	22	9	31	62	2	4
1997	1st quarter	22	15	37	64	1	8
	2nd quarter	11	8	19	72	4	8
	3rd quarter	14	8	22	59	4	7
	4th quarter	16	4	20	61	4	6
1998	1st quarter	13	8	21	77	4	7
	2nd quarter p	8	7	15	54	3	9
Per cent change		*-27.3*	*-12.5*	*-21.1*	*-25.0*		

1. Including sidetracked wells.
2. Development wells are production and appraisal wells drilled after development approval has been granted.

TABLE 9. Value of, and investment in, UKCS oil and gas production

£ million

		Total income[1]	Operating costs	Exploration expenditure	Gross trading profits (net of stock appreciation)	Percentage contribution to GDP[2]	Capital investment	Percentage contribution to industrial investment[3]
1993		13,827	3,661	1,213	8,111	1.7	4,664	20
1994		15,936	3,860	939	9,723	2.0	3,751	17
1995		17,791	3,913	1,085	10,949	2.0	4,438	18
1996		21,052	3,978	1,097	14,387	2.4	4,440	18
1997		18,955	4,150	1,194	12,638	2.1	4,336	16
Per cent change		*-10.0*	*+4.3*	*+8.9*	*-12.2*		*-2.3*	
1996	1st quarter	5,417	942	297	3,789	2.6	958	15
	2nd quarter	4,683	976	242	3,051	2.1	1,192	22
	3rd quarter	4,733	956	279	3,076	2.1	1,188	20
	4th quarter	6,219	1,104	278	4,471	2.9	1,101	16
1997	1st quarter	5,581	953	296	4,097	2.6	949	16
	2nd quarter	4,060	1,039	376	2,456	1.6	1,146	18
	3rd quarter	4,115	1,037	288	2,528	1.7	1,203	18
	4th quarter	5,200	1,121	235	3,557	2.3	1,037	14
1998	1st quarter p	4,705r	990r	153	3,306r	2.1	1,382r	22
Per cent change		*-15.7*	*+3.9*	*-48.2*	*-19.3*		*+45.7*	

1. Including sales of crude oil, NGLs and natural gas plus other income associated with oil and gas production.
2. GDP at factor cost.
3. Investment by energy, water supply and the manufacturing sectors.

TABLE 10. Indicative tariff rates offered in the UKCS for the handling of oil and gas

	Tariff rate (pence/thousand cubic feet)			Annual Capacity[1]	Number of years	Start date	Conditions the tariff allows for:												
	Processing	Transport	Bundled services																
Gas systems																			
1 Caister / Murdoch			39.5	Large	16	2000	b		e	f	g	h					n		a - Priority rights
2 Hewett Bacton Plant	12.0			Large	8	1998	b			f	g	h			l				b - Send or pay
3 CATS			0.75	Small	4-Jun	1999	b			f	g								c - Annual charge
4 Dimlington Terminal	15			Large	10+	Q4 99	b			f	g	h					o		d - New capital expense
5 Cleeton Platform			35	Large	10+	Q4 99	b		e	f	g	h					o		e - Processing offshore
6 Cleeton & Dimlington			35	Large	9	1999	b			f	g	h					o		f - Processing onshore
7 Dimlington Terminal			15	Large	9	1999	b			f	g	h					o		g - NGLs
8 Easington Terminal			25	Large	9	1999	b	d		f	g	h					o		h - Water
9 Ravensprun North Transportation System			15.47	Large	9	1999	b		e			h					o		i - Salt
																			j - Sulphur
																			k - CO2
Oil systems	(pounds sterling/barrel)																		l - H2S
																			m - N_2
10 Fulmar Processing and Export systems	0.75	1.25		Large	N/A	1999		b	e			h					n		n - Compression
11 Ninian Pipeline System	0.15-0.25	0.30-0.40		Large	10	1999		b	e	f	g	h			l				o - Other
12 Beryl			2.75	Large	5-7	1999	a	b	e			h					o		
13 Forties Pipeline System			1.20	Small	11	2000				f	g	h	i		k	l			
14 Forties Pipeline System			1.70	Large	12	1999				f	g	h	i		k	l			
15 Forties Pipeline System			1.20	Large	6	1999		b		f	g	h	i		k	l			
16 Ninian Platform	1.00	0.27		Large	10	1998			e			h					n		
17 Ninian Pipeline System			0.75	Large	10	1998		b		f	g	h	i						
18 Forties Platform	2.00			Large	9	1999			e		g	h			k	l			

1. Small annual capacity is less than 7.5 billion cubic foot of gas or 0.5 million tonnes of oil.

Additional comments on the conditions applying to the above indicative tariffs

Gas systems

1. No comments.
2. No comments.
3. Firm transportation and processing service until 30 September year 2001. Interruptible transportation service from 1 October 2001 (processing remains a firm service throughout).
4. Onshore processing at Dimlington terminal.
5. Offshore processing at Cleeton Platform, transportation in the Southern North Sea pipeline and Onshore processing at Dimlington.
6. No comments.
7. No comments.
8. Additional tariffs for compression services of 0.11 p/kcf.
9. No comments.

Oil systems

10. Offer includes operational expense sharing for processing and transportation services.
11. To 31/8/2000, 15p/bbl transportation, +30p/bbl SCO processing, +£40/tonne LPG processing. Post 1/9/2000, 25p/bbl transportation, +40p/bbl SCO processing, +£50/tonne LPG processing.
12. Includes storage, operation of subsea facilities, gas lift.
13. No comments.
14. Bundled tariff includes transportation through another field group's pipeline to enter the Forties Pipeline System. FPS and the other field group will share the total bundled tariff.
15. No comments.
16. Processing fee increased after certain cumulative throughput volume thresholds.
17. Tariff fee increased after certain cumulative throughput volume thresholds.
18. No comments.

The above table records the indicative tariffs offered in recent months for transportation and/or processing of offshore hydrocarbon resources, from wellhead to terminal or part thereof. The services on offer can be either processing (e.g. 'cleaning' or compression of the hydrocarbons), transport of the hydrocarbons, or a combination of the two, where the price is dependant on the 'bundling' of the services on offer. The prices themselves are not firm prices, but an indication of the type of price that could be expected by someone seeking a similar service from that system.

Prices will vary according to a large number of factors. Some of these are reflected in the main table. These include the date from which the services are required, the length of the contract, the volume of hydrocarbons involved (whether large or small), and the various types of processing involved. Other variables to take into consideration are whether the customer will have priority rights to use the services, whether they will be expected to pay even if the services booked are not utilised, and whether new infrastructure will be required (such as additional lengths of pipeline, new receiving facilities, etc.) to accommodate the customer's hydrocarbons. In some cases comments have been provided to give a more accurate picture of the conditions under which the indicative tariff has beer made.

The above table appears monthly in Energy Trends. Sometimes only a small number of indicative tariffs will be reported in the month, in which case entries from the previous month will be re-printed.

Enquiries regarding the publication of tariff rates should be directed to Mr S R Siddiqui at room 2.H.4, Department of Trade and Industry, 1 Victoria Street, London SW1H 0ET (Tel: 0171-215 5262).

GAS

TABLE 11. Natural gas production and supply

GWh

	Upstream gas industry						Downstream gas industry				
	Gross gas production[1]	*Less* Producers own use[2]	*Less* Exports[3]	*Less* Stock change and other net losses[4 5]	*Plus* Imports	Gas available at terminals[6]	Gas input into transmission system[7]	*Less* Operators own use[8]	*Less* Stock changes[9]	*Less* Metering differences[10]	Gas output from transmission system[11]
1993	703,166	40,669	6,824	+623	48,528	703,578	700,337	2,930	-950	-693	699,050
1994	750,860	48,260	9,557	+1,980	33,053	724,116	727,350	3,090	-3,067	2,495	724,832
1995	822,726	49,249	11,232	+4,278	19,457	777,424	778,874	3,311	-9,927	7,535	777,955
1996	980,064	55,825	15,203	+5,580	19,804	923,260	927,374	4,576	+3,632	10,519	908,647
1997	1,000,676	58,693	21,666	+5,127	14,062	929,252	929,917	4,066	+6,339	6,668	912,844
Per cent change	*+2.1*	*+5.1*	*+42.5*		*-29.0*	*+0.6*	*+0.3*	*-11.1*			*+0.5*
1997 January - June	528,010	28,419	9,602	+2,474	9,849	497,364	494,711	2,373	-2,576	4,480	490,434
1998 January - June p	534,947	34,050	14,059	+1,053	6,339	492,124	493,048	2,118	-11,086	-62	502,078
Per cent change	*+1.3*	*+19.8*	*+46.4*		*-35.6*	*-1.1*	*-0.3*	*-10.7*			*+2.4*
1997 April	81,294	4,793	1,502	+832	1,838	76,005	76,532	320	-389	386	76,215
May	69,946	4,136	1,769	+392	1,200	64,849	63,020	177	+95	575	62,173
June	61,879	4,039	1,319	-330	1,068	57,919	57,570	145	+4,043	259	53,123
Total	213,119	12,968	4,590	+894	4,106	198,773	197,122	642	+3,749	1,220	191,511
1998 April	91,069	5,701	2,399	+458	866r	83,377r	82,847	325	-3,536	5	86,053
May	68,058	4,803	2,242	+514	781	61,280	61,544	164	+1,064	99	60,217
June p	67,228	6,982	1,671	+628	768	58,715	58,338	185	+3,127	101	54,925
Total	226,355	17,486	6,312	+1,600	2,415	203,372	202,729	674	+655	205	201,195
Per cent change	*+6.2*	*+34.8*	*+37.5*		*-41.2*	*+2.3*	*+2.8*	*+5.0*			*+5.1*

1. Includes waste and producers own use, but excludes gas flared.
2. Gas used for drilling, production and pumping operations.
3. Includes exports direct from the UKCS as well as others carried out by the downstream gas industry from the national transmission system.
4. Stock changes are changes in the volume of gas held within the UKCS pipeline system. Net losses include waste through venting of gas as well as losses due to pipeline leakage.
5. Includes the effect of the different methods of measurement of gas volumes used at various points along the production and transmission process. More detail on the reasons for these differences is given in the Digest of United Kingdom Energy Statistics 1998, Chapter 5, paragraphs 5.58 to 5.60 and Table 53.
6. Gas available at terminals for consumption in the UK as recorded by the terminal operators.
7. Gas received as reported by the pipeline operators. This differs from gas available atterminals due to different methods for calculating the volumes of gas involved being used by the terminal and pipeline operators. Pipeline operators include Transco, who run the national pipeline network, and other pipelines that take North Sea gas supplies direct to consumers.
8. Gas consumed by pipeline operators in pumping operations and on their own sites, offices etc.
9. Stocks of gas held in specific storage sites, either as liquefied natural gas, pumped into salt cavities or stored by pumping the gas back into an offshore field.
10. When the volume of gas output from the transmission is calculated, although the calorific value of gas varies fro day-to-day, when recording the gas supplied to customers a single calorific value is used. This is the lowest of the range of calorific values for the actual gas being supplied, resulting in a loss of gas in energy terms.
11. Including public gas supply, direct supplies by North Sea producers, third party supplies and stock changes. These figures differ from those for total consumption in Table 2 which include producers and operators own use of gas excluded in this table.

TABLE 12. Natural gas consumption[1,2]

GWh

	Total	Electricity generators[2]	Iron and steel industry	Other industries	Domestic	Other[3]
1993	672,953	81,778	15,577	136,517	340,162	98,919
1994	712,590	114,574	20,327	146,843	329,710	101,136
1995	755,615	145,790	20,689	153,207	326,010	109,920
1996	877,721	190,691	21,961	169,293	375,841	119,935
1997	892,543	243,361	20,934	165,746	345,532	116,970
Per cent change	*+1.7*	*+27.6*	*-4.7*	*-2.1*	*-8.1*	*-2.5*
1996 1st quarter	299,121	47,869	5,757	41,325	160,624	43,546
2nd quarter	183,434	41,999	5,338	32,794	71,981	31,322
3rd quarter	141,105	46,280	4,408	37,141	36,844	16,432
4th quarter	254,058	54,542	6,457	58,032	106,392	28,635
1997 1st quarter	295,509	62,128	5,938	49,075	135,601	42,767
2nd quarter	184,232	57,684	4,567	36,603	61,865	23,513
3rd quarter	150,939	61,954	3,419	32,454	35,709	17,403
4th quarter	261,863	61,595	7,011	47,614	112,356	33,287
1998 1st quarter p	293,425	64,345	6,875	51,759	130,883	39,563
Per cent change	*-0.7*	*+3.6*	*+15.8*	*+5.5*	*-3.5*	*-7.5*

1. Gas consumption is generally less than gas transmitted (Table 11) on an annual basis because of own use and losses in transmission.
2. Major power producers and auto generators (see defintions inside back cover).
3. Public administration, commerce and agriculture.

PETROLEUM

TABLE 13. Indigenous production, refinery receipts, imports and exports

Thousand tonnes

	Indigenous production[1]			Refinery receipts			Foreign trade[6,7]						
							Crude oil and NGLs		Process oils		Petroleum products		
	Total	Crude oil	NGLs[2]	Indigenous[3]	Other[4]	Net foreign imports[5]	Imports	Exports	Imports	Exports	Imports	Exports	Bunkers[8]
1993	100,189	93,950	6,239	36,680	852	59,868	50,601	60,556	11,100	1,834	10,064	24,890	2,478
1994	126,939	119,032	7,907	42,174	427	51,170	42,898	77,899	10,198	1,926	10,441	24,644	2,313
1995	130,324	121,794	8,530	44,872	1,110	47,590	40,920	78,337	7,829	1,350	9,878	24,418	2,465
1996	130,007	121,930	8,077	49,449	997	48,275	41,896	77,332	8,203	1,824	9,316	26,018	2,664
1997	128,205	120,116	8,089	47,589	794	48,649	41,333	75,169	8,661	1,345	8,706	29,118	2,962
Per cent change	*-1.4*	*-1.5*	*+0.1*	*-3.8*	*-20.4*	*+0.8*	*-1.3*	*-2.8*	*+5.6*	*-26.3*	*-6.5*	*+11.9*	*+11.2*
1997 January - June	62,428	58,505	3,924	23,080	247	24,023	20,533	37,247	4,382	892	4,330	12,967	1,408
1998 January - June p	65,093	60,861	4,236	21,850	697	25,293	21,325	39,416	4,549	580	4,644	13,754	1,537
Per cent change	*+4.3*	*+4.0*	*+8.0*	*-5.3*	*(+)*	*+5.3*	*+3.9*	*+5.8*	*+3.8*	*-35.0*	*+7.2*	*+6.1*	*+9.2*
1997 April	10,610	9,968	642	4,326	90	3,660	3,230	5,896	656	226	612	2,345	249
May	9,662	9,102	560	3,485	-18	4,269	3,727	5,877	659	117	601	2,338	269
June	9,072	8,533	539	3,320	59	4,548	3,755	5,416	802	9	946	1,913	277
Total	29,344	27,603	1,741	11,131	131	12,477	10,712	17,190	2,117	352	2,159	6,596	794
1998 April	11,054r	10,313r	741r	3,664	103	4,178	3,332	6,935	998	152	596	2,718	230
May	10,652	9,985	667	4,346	88	4,513	3,866	5,234	718	71	721	2,628	283
June p	10,087	9,578	510	2,709	83	5,234	4,571	6,566	784	120	507	2,402	300
Total	31,793	29,876	1,918	10,719	274	13,925	11,769	18,735	2,500	343	1,824	7,748	813
Per cent change	*+8.3*	*+8.2*	*+10.2*	*-3.7*	*(+)*	*+11.6*	*+9.9*	*+9.0*	*+18.1*	*-2.7*	*-15.5*	*+17.5*	*+2.3*

1. Includes for convenience offshore and land production.
2. Condensates and petroleum gases derived at onshore treatment plants.
3. Crude oil plus Natural gas liquids (NGLs).
4. Mainly recycled products (backflows to refineries).
5. Total arrivals less refinery shipments of crude oil, NGLs and process oils (ie partly refined oils).
6. Foreign trade recorded by the Petroleum Industry and may differ from figures published in the Overseas Trade Statistics.
7. 1996 data are subject to further revision as additional information on imports and exports of petroleum porducts becomes available.
8. International marine bunkers.

TABLE 14. Stocks of petroleum[1] at end of period

Thousand tonnes

	Crude oil and refinery process oil				Petroleum products					Total stocks		
	Refineries[2]	Terminals[3]	Offshore[4]	Total[5]	Light distiillates[6]	Kerosene & gas/diesel[7]	Fuel oils[8]	Other products[9]	Total products	Net bilaterals[10]	Stocks in UK[11]	Total stocks
1993	5,573	1,642	457	7,672	2,734	2,906	3,346	1,419	10,406	2,024	16,053	18,077
1994	5,402	1,720	428	7,650	2,515	2,650	2,884	1,464	9,513	1,543	15,620	17,163
1995	5,075	1,003	588	6,741	2,482	2,444	2,974	1,611	9,511	1,534	14,718	16,252
1996	4,970	1,461	590	7,065	2,509	2,534	2,962	1,441	9,447	1,527	14,984	16,511
1997	4,977	1,463	790	7,390	2,224	2,500	2,880	1,535	9,138	1,858	14,670	16,528
Per cent change	*+0.1*	*+0.1*	*+33.9*	*+4.6*	*-11.4*	*-1.3*	*-2.8*	*+6.5*	*-3.3*	*+21.7*	*-2.1*	*+0.1*
1997 April	5,537	1,184	740	7,501	2,307	2,433	2,894	1,436	9,069	1,472	15,099	16,570
May	5,522	1,045	544	7,151	2,269	2,480	2,929	1,470	9,228	1,472	14,907	16,379
June	5,353	1,409	610	7,412	2,386	2,436	2,975	1,556	9,353	1,472	15,293	16,765
1998 April	5,397	1,153	655	7,265	2,200	3,769	2,172	1,438	9,578	2,166	14,678	16,844
May	5,472	1,775	589	7,896	2,167	4,085	1,899	1,529	9,680	2,231	15,344	17,575
June p	5,774	1,311	465	7,610	2,056	3,827	2,009	1,510	9,402	2,231	14,782	17,013
Per cent change	*+7.9*	*-7.0*	*-23.8*	*+2.7*	*-13.8*	*+57.1*	*-32.5*	*-3.0*	*+0.5*	*+51.6*	*-3.3*	*+1.5*

1. Stocks held at refineries, terminals and power stations. Stocks in the wholesale distribution system and certain stocks at offshore fields (UK Continental Shelf [UKCS]), and others held under approved bilateral agreements are also included.
2. Stocks of crude oil, NGLs and process oil at UK refineries.
3. Stocks of crude oil and NGLs at UKCS pipeline terminals.
4. Stocks of crude oil in tanks and partially loaded tankers at offshore fields (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 feedstock (mdf) and marine diesel oil.
8. Including Orimulsion.
9. Ethane, propane, butane, other petroleum gases, naphtha (ldf), industrial and white spirits, bitumen, petroleum wax, lubricating oil, petroleum coke and miscellaneous products.
10. The difference between 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.

TABLE 15. Refinery throughput and output of petroleum products

Thousand tonnes

	Throughput of crude and process oil	Refinery use: Fuel	Refinery use: Losses/ (gains)	Total[1] output of petroleum products	Gases: Butane and propane	Gases: Other petro-leum	Naphtha (LDF)	Motor spirit	Kerosene: Aviation turbine fuel	Kerosene: Burning oil	Gas/ diesel oil	Fuel oil	Lubricating oils	Bitumen
1993	96,274	6,383	308	89,584	1,575	162	2,696	28,394	8,341	2,707	27,361	13,183	1,264	2,450
1994	93,162	6,256	261	86,644	1,605	132	2,794	27,562	7,697	2,967	27,137	11,378	1,296	2,569
1995	92,743	6,481	129	86,133	1,815	133	2,711	27,254	7,837	2,924	27,169	10,969	1,261	2,459
1996	96,661	6,623	152	89,885	1,828	144	2,824	28,046	8,305	3,510	28,903	11,479	1,111	2,189
1997	97,024	6,572	86	90,366	1,950	139	2,854	28,260	8,342	3,336	28,778	11,747	1,231	2,258
Per cent change	*+0.4*	*-0.8*	*-43.1*	*+0.5*	*+6.7*	*-3.8*	*+1.1*	*+0.8*	*+0.4*	*-5.0*	*-0.4*	*+2.3*	*+10.8*	*+3.2*
1997 January - June	47,019	3,196	49	43,774	968	61	1,485	13,556	4,121	1,659	13,959	5,625	587	1,082
1998 January - June p	47,194	3,238	84	43,871	979	78	1,262	13,771	3,936	1,778	14,135	5,523	584	1,062
Per cent change	*+0.4*	*+1.3*	*+72.6*	*+0.2*	*+1.2*	*+28.5*	*-15.0*	*+1.6*	*-4.5*	*+7.1*	*+1.3*	*-1.8*	*-0.4*	*-1.8*
1997 April	8,045	518	23	7,503	153	9	250	2,318	664	236	2,500	953	110	200
May	7,891	512	15	7,364	165	8	279	2,243	678	252	2,304	1,033	111	204
June	7,731	515	45	7,171	166	10	223	2,241	740	185	2,275	926	92	232
Total	23,666	1,545	83	22,038	484	26	752	6,802	2,082	673	7,079	2,912	312	636
1998 April	8,197	552	5	7,639	169	18	240	2,303	699	358	2,418	1,013	105	191
May	8,250	560	-17	7,706	183	20	212	2,402	773	231	2,503	933	99	227
June p	8,188	555	26	7,607	178	9	216	2,346	756	218	2,497	946	94	215
Total	24,635	1,667	14	22,952	530	47	668	7,051	2,228	807	7,418	2,892	298	633
Per cent change	*+4.1*	*+7.9*	*-83.3*	*+4.1*	*+9.7*	*+76.3*	*-11.2*	*+3.7*	*+7.0*	*+20.0*	*+4.8*	*-0.7*	*-4.6*	*-0.4*

1. Including aviation spirit, wide cut gasoline industrial and white spirit, petroleum wax and miscellaneous products.

TABLE 16. Deliveries of petroleum products for inland consumption[1,2]

Thousand tonnes

	Total[1,2,3]	Butane[4] and propane	Naphtha (LDF)[5] and middle distillate feedstock	Motor Spirit: Total	Motor Spirit: of which Unleaded	Kerosene: Aviation turbine fuel	Kerosene: Burning oil: Premier	Kerosene: Burning oil: Standard domestic	Gas/diesel oil: Derv fuel	Gas/diesel oil: Other	Fuel oil[6]	Orimulsion	Bitumen	Lubricating oils
1993	75,790	1,992	3,777	23,766	12,503	7,106	35	2,002	11,806	7,782	9,355	1,416	2,523	806
1994	74,957	2,486	3,525	22,843	13,162	7,284	29	2,029	12,914	7,491	8,048	1,227	2,595	795
1995	73,695	2,500	3,531	21,953	13,831	7,660	26	2,075	13,457	7,227	6,709	1,266	2,420	895
1996	75,390	2,502	3,665	22,409	15,231	8,049	39	2,515	14,365	7,631	5,982	872	2,146	864
1997	72,501	2,426	3,367	22,252	16,002	8,411	28	2,496	14,976	7,325	3,754	182	2,015	872
Per cent change	*-3.8*	*-3.1*	*-8.1*	*-0.7*	*+5.1*	*+4.5*	*-27.8*	*-0.8*	*+4.3*	*-4.0*	*-37.2*	*-79.1*	*-6.1*	*+1.0*
1997 January - June	36,302	1,202	1,570	11,096	7,823	3,940	16	1,314	7,426	3,760	1,985	182	994	442
1998 January - June p	35,227	1,203	1,843	10,710	8,240	4,202	14	1,353	7,432	3,577	1,460	0	974	422
Per cent change	*-3.0*	*-*	*+17.4*	*-3.5*	*+5.3*	*+6.6*	*-13.2*	*+3.0*	*+0.1*	*-4.9*	*-26.4*	*-100.0*	*-2.0*	*-4.6*
1997 April	5,990	208	242	1,903	1,349	652	2	210	1,278	629	276	0	175	79
May	5,903	187	196	1,959	1,388	716	1	147	1,252	546	303	0	182	76
June	5,902	187	227	1,922	1,372	757	1	118	1,321	516	274	0	185	74
Total	17,795	582	665	5,784	4,109	2,125	4	475	3,851	1,692	853	0	542	229
1998 April	5,593	189	272	1,678	1,303	688	3	252	1,116	596	230	0	152	72
May	5,661	192	303	1,827	1,425	775	1	138	1,175	505	194	0	164	65
June p	5,898	175	302	1,843	1,445	803	1	147	1,302	541	192	0	182	70
Total	17,152	556	877	5,348	4,173	2,266	5	537	3,593	1,642	616	0	498	207
Per cent change	*-3.6*	*-4.5*	*+31.9*	*-7.5*	*+1.6*	*+6.6*	*+19.6*	*+13.0*	*-6.7*	*-2.9*	*-27.8*	*-*	*-8.2*	*-9.5*

1. Including other petroleum gases, aviation spirit, industrial and white spirits, petroleum wax, non-domestic standard burning oil and miscellaneous products.
2. 1997 data are subject to futher revision as additional information on imports of petroleum products contributes to deliveries.
3. Excluding refinery fuel.
4. Including amounts for petro-chemicals.
5. Now mainly for petro-chemical feedstock.
6. Excludes Orimulsion.

TABLE 17. Deliveries of petroleum products for inland consumption: energy uses[1]

Thousand tonnes

	Total	Electricity[2] generators	Gas works	Iron and steel[2] industry	Other[2] industries	Transport[3]	Domestic	Other[4]
1993	65,065	5,522	44	855	7,207	44,568	2,713	4,156
1994	63,779	3,831	50	892	7,465	44,830	2,701	4,010
1995	62,374	3,694	47	881	6,487	44,818	2,696	3,751
1996	64,097	3,316	50	737	6,447	46,633	3,170	3,744
1997	61,547	1,393	46	730	5,751	47,317	3,057	3,253
Per cent change	*-4.0*	*-58.0*	*-8.0*	*-0.9*	*-10.8*	*+1.5*	*-3.6*	*-13.1*
1996 1st quarter	16,165	839	16	189	1,925	10,947	1,099	1,151
2nd quarter	15,649	766	11	199	1,517	11,681	621	855
3rd quarter	15,774	779	8	192	1,338	12,128	529	800
4th quarter	16,508	932	15	157	1,667	11,878	922	938
1997 1st quarter	15,797	695	18	185	1,749	11,118	1,047	999
2nd quarter	15,250	246	7	149	1,341	12,176	579	748
3rd quarter	14,864	202	6	150	1,218	12,060	521	702
4th quarter	15,637	250	15	246	1,443	11,964	910	804
1998 1st quarter p	15,365	206	16	161	1,546	11,587	980	850
Per cent change	*-2.7*	*-70.4*	*-11.1*	*-13.0*	*-11.6*	*+4.2*	*-6.4*	*-14.9*

1. 1997 data are subject to further revision as additional information on imports of petroleum products, which contributes to deliveries for energy uses becomes available.
2. For coverage of electricity generators see inside front cover .
3. Includes coastal shipping and fishing.
4. Mainly public administration, commerce and agriculture.

ELECTRICITY

TABLE 18. Fuel used in electricity generation

Million tonnes of oil equivalent

	Major power producers[1]				Other generators			All generating companies						
	Coal	Gas	Nuclear	Total[2]	Coal	Gas	Total[2]	Coal	Oil	Gas	Nuclear	Hydro	Other	Total[3]
1993	38.3	6.3	21.6	70.9	1.3	0.8	4.5	39.6	5.8	7.0	21.6	0.4	1.0	75.4
1994	35.9	9.1	21.2	70.2	1.2	0.8	3.5	37.1	4.1	9.9	21.2	0.4	1.1	73.7
1995	35.0	11.4	21.3	71.3	1.1	1.1	3.9	36.1	3.6	12.5	21.3	0.5	1.2	75.1
1996	32.0	15.2	22.2	72.8	1.0	1.2	3.8	33.0	3.5	16.4	22.2	0.3	1.2	76.6
1997	27.4	19.3	23.0	71.4	1.2	1.6	4.6	28.6	1.9	20.9	23.0	0.4	1.4	76.1
Per cent change	*-14.5*	*+27.2*	*+3.7*	*-1.9*	*+16.8*	*+32.5*	*+23.4*	*-13.5*	*-46.6*	*+27.6*	*+3.7*	*+22.6*	*+13.1*	*-0.7*
1996 1st quarter	10.6	3.7	5.6	20.9	0.2	0.4	0.9	10.8	1.1	4.1	5.6	0.1	0.2	21.9
2nd quarter	7.1	3.4	5.5	16.7	0.2	0.3	0.9	7.3	0.7	3.7	5.5	0.1	0.3	17.6
3rd quarter	6.4	3.7	4.9	15.9	0.2	0.3	0.8	6.7	0.8	4.0	4.9	0.0	0.2	16.7
4th quarter	8.0	4.4	6.1	19.4	0.3	0.3	1.1	8.2	0.8	4.6	6.1	0.1	0.5	20.5
1997 1st quarter	8.3	5.0	6.2	20.2	0.3	0.5	1.3	8.7	0.8	5.5	6.2	0.1	0.3	21.5
2nd quarter	5.3	4.7	6.0	16.4	0.3	0.4	1.3	5.6	0.4	5.1	6.0	0.1	0.5	17.6
3rd quarter	5.7	4.6	5.2	15.8	0.2	0.4	1.0	5.9	0.4	5.0	5.2	0.1	0.3	16.8
4th quarter	8.0	5.1	5.6	19.1	0.3	0.4	1.1	8.3	0.3	5.4	5.6	0.1	0.4	20.2
1998 1st quarter p	8.2	5.3	6.1	20.0	0.2	0.4	1.1	8.4	0.2	5.7	6.1	0.2	0.4	21.0
Per cent change	*-1.5*	*+5.6*	*-1.4*	*-1.2*	*-28.5*	*-2.6*	*-15.5*	*-2.6*	*-68.1*	*+4.9*	*-1.4*	*+17.7*	*+39.8*	*-2.0*

1. See definitions inside back cover.
2. Total includes oil, (including oil used in gas turbine and diesel plant or for lighting up coal fired boilers), Orimulsion, hydro, wind and refuse derived fuel.
3. Does **not** include imports of electricity from France.

TABLE 19. Fuel used in electricity generation by major producers[1]

Million tonnes of oil equivalent

	Total[2]	Coal	Oil[3]	Gas	Nuclear[4]	Hydro
1993	70.88	38.26	4.41	6.27	21.58	0.30
1994	70.20	35.89	3.58	9.08	21.20	0.37
1995	71.31	35.02	3.13	11.44	21.25	0.34
1996	72.84	32.02	3.02	15.19	22.18	0.25
1997	71.44	27.39	1.23	19.32	22.99	0.31
Per cent change	*-1.9*	*-14.5*	*-59.3*	*+27.2*	*+3.7*	*+22.9*
1997 January - June*	36.55	13.64	0.79	9.69	12.11	0.19
1998 January - June* p	36.98	14.66	0.44	10.01	11.62	0.19
Per cent change	*+1.2*	*+7.5*	*-44.1*	*+3.4*	*-4.1*	*+1.2*
1997 April	5.17	1.79	0.06	1.45	1.84	0.03
May	5.07	1.56	0.06	1.50	1.92	0.02
June*	6.11	1.97	0.11	1.73	2.20	0.02
Total	16.35	5.32	0.23	4.68	5.95	0.06
1998 April	5.67	2.33	0.05	1.51	1.75	0.03
May	5.21r	2.01	0.07	1.41	1.70r	0.02
June* p	6.13	2.13	0.08	1.81	2.09	0.01
Total	17.02	6.47	0.20	4.72	5.54	0.05
Per cent change	*+4.1*	*+21.6*	*-11.6*	*+1.0*	*-6.9*	*-11.8*

1. See definitions inside back cover
2. Including wind power, and refuse derived fuel and other renewables.
3. Including oil used in gas turbine and diesel plant or for lighting up coal fired boilers, and Orimulsion.
4. Includes nuclear from British Nuclear Fuels Plc.

TABLE 20. Electricity generation, supply and availability

TWh

	Major power producers[1]			Other generators			All generating companies				
	Electricity generation	Own use[2]	Electricity supplied (net)	Electricity generation	Own use[2]	Electricity supplied (net)	Electricity generation	Own use[2]	Electricity supplied (net)	Net imports	Electricity available
1993	305.43	20.12	285.32	17.67	1.12	16.55	323.10	21.23	301.87	16.72	318.58
1994	306.73	18.75	287.98	18.25	0.80	17.46	324.98	19.55	305.44	16.89	322.32
1995	313.96	18.79	295.17	20.09	0.88	19.21	334.05	19.67	314.37	16.31	330.69
1996	326.29	19.11	307.18	21.10	1.07	20.03	347.39	20.18	327.21	16.68	343.89
1997	324.14	17.88	306.26	21.20	0.97	20.23	345.34	18.85	326.50	16.57	343.07
Per cent change	*-0.7*	*-6.4*	*-0.3*	*+0.5*	*-9.9*	*+1.0*	*-0.6*	*-6.6*	*-0.2*	*-0.6*	*-0.2*
1996 1st quarter	93.64	5.63	88.02	5.60	0.34	5.26	99.25	5.97	93.28	4.28	97.56
2nd quarter	74.38	4.41	69.97	5.16	0.38	4.79	79.54	4.78	74.76	4.30	79.06
3rd quarter	71.26	4.18	67.07	4.74	0.21	4.53	75.99	4.39	71.60	4.03	75.63
4th quarter	87.01	4.89	82.12	5.60	0.15	5.45	92.60	5.04	87.57	4.07	91.64
1997 1st quarter	91.25	5.13	86.12	5.23	0.24	4.99	96.48	5.36	91.12	4.27	95.38
2nd quarter	73.81	4.11	69.69	4.94	0.20	4.74	78.74	4.31	74.43	4.06	78.49
3rd quarter	72.18	4.02	68.16	5.08	0.29	4.79	77.26	4.30	72.96	4.00	76.95
4th quarter	86.91	4.63	82.28	5.95	0.24	5.71	92.86	4.87	87.99	4.25	92.25
1998 1st quarter p	90.98	5.14	85.84	5.37	0.36	5.01	96.35	5.51	90.85	3.92	94.77
Per cent change	*-0.3*	*+0.3*	*-0.3*	*+2.7*	*+54.5*	*+0.3*	*-0.1*	*+2.7*	*-0.3*	*-8.1*	*-0.6*

1. See definitions inside back cover.
2. Used in works and for pumping at pumped storage stations.

TABLE 21. **Electricity supplied by other generating companies**

GWh

		Electricity supplied (net) [1] Total	Industry: Total industry	Petroleum refineries	Iron and steel	Chemicals	Engineering and other metal trades	Food, drink and tobacco	Paper, printing and stationery	Other [2,3]	Transport under-takings
1993		16,552	15,793	2,754	1,752	4,156	3,461	725	1,253	1,692	759
1994		17,457	16,751	2,932	1,693	4,258	3,620	771	1,300	2,177	706
1995		19,208	18,397	3,150	2,032	4,342	4,243	908	1,763	1,959	811
1996		20,028	19,180	3,292	2,116	4,733	4,235	890	2,110	1,804	848
1997		20,234	19,355	3,153	2,095	4,717	4,521	904	2,116	1,849	879
Per cent change		*+1.0*	*+0.9*	*-4.2*	*-1.0*	*-0.3*	*+6.7*	*+1.5*	*+0.3*	*+2.5*	*+3.7*
1996	1st quarter	5,263	5,061	827	479	1,305	1,084	341	539	486	202
	2nd quarter	4,785	4,588	808	494	1,182	918	154	562	470	196
	3rd quarter	4,531	4,312	817	556	1,068	816	117	553	384	219
	4th quarter	5,449	5,219	840	587	1,179	1,417	278	456	463	230
1997	1st quarter	4,994	4,781	709	533	1,050	1,248	249	444	548	213
	2nd quarter	4,736	4,549	735	511	1,268	980	130	491	434	188
	3rd quarter	4,794	4,579	815	538	1,147	936	156	606	379	216
	4th quarter	5,710	5,447	894	513	1,252	1,357	369	574	488	263
1998	1st quarter p	5,008	4,795	735	407	1,050	1,230	256	534	583	213
Per cent change		*+0.3*	*+0.3*	*+3.7*	*-23.7*	*-*	*-1.5*	*+3.1*	*+20.2*	*+6.4*	*+0.3*

1. Nuclear power stations are included within the public supply system on Table 22 now that the merger of BNFL and Magnox Electric is underway.
2. Including water-works and companies within the service sector.
3. Includes electricity supplied from renewable sources that cannot be attributed to any of the other industrial groups.

TABLE 22. **Electricity production and availability from the public supply system[1]**

TWh

		Electricity generated	Own use[2]	Electricity supplied (net) By type of fuel: Total	Coal[3]	Oil[4]	Gas	Nuclear[6]	Hydro[7]	Other[8]	of which Conventional Steam Stations	CCGT[5] Stations	Net imports	Purchases from other sources (net)	Total Electricity available
1993		305.43	20.12	285.32	157.29	14.11	29.84	80.98	2.95	0.14	178.31	22.61	16.72	3.17	305.21
1994		306.73	18.75	287.98	148.40	10.72	44.82	79.96	3.63	0.46	166.88	36.82	16.89	3.92	308.78
1995		313.96	18.79	295.17	144.73	9.24	56.82	80.60	3.27	0.51	162.08	48.53	16.31	3.20	314.67
1996		326.29	19.11	307.18	134.29	10.33	74.36	85.82	1.84	0.53	153.17	65.60	16.68	3.25	327.11
1997		324.14	17.88	306.26	110.15	4.89	99.08	89.34	2.26	0.54	127.08	86.61	16.57	3.35	326.19
Per cent change		*-0.7*	*-6.4*	*-0.3*	*-18.0*	*-52.7*	*+33.2*	*+4.1*	*+23.0*	*+1.3*	*-17.0*	*+32.0*	*-0.6*	*+3.1*	*-0.3*
1997	January - June*	165.06	9.17	155.88	54.96	3.16	49.03	47.03	1.43	0.27	63.82	42.98	8.32	1.75	165.96
1998	January - June* p	167.90	9.17	158.02	57.99	1.59	51.01	45.47	1.72	0.25	66.97	44.25	8.20	1.68	167.89
Per cent change		*+1.7*	*-0.1*	*+1.4*	*+5.5*	*-49.9*	*+4.0*	*-3.3*	*+20.4*	*-9.8*	*+4.9*	*+2.9*	*-1.5*	*-4.2*	*+1.2*
1997	April	23.78	1.31	22.46	7.22	0.22	7.64	7.13	0.22	0.04	8.62	6.42	1.32	0.23	24.01
	May	23.01	1.28	21.74	6.23	0.26	7.58	7.48	0.15	0.05	7.59	6.45	1.28	0.23	23.25
	June*	27.02	1.48	25.53	7.72	0.51	8.67	8.51	0.07	0.04	8.86	7.93	1.46	0.29	27.28
Total		73.81	4.07	69.73	21.17	0.99	23.89	23.12	0.44	0.13	25.07	20.80	4.06	0.76	74.55
1998	April	25.92	1.50	24.41	9.47	0.20	7.63	6.85	0.22	0.04	10.65	6.64	1.26	0.23	25.91
	May	23.56	1.41	22.15	8.15	0.28	6.94	6.63	0.13	0.04	9.48	5.87	1.30	0.23	23.68
	June* p	27.44	1.10	26.33	8.56	0.30	9.21	8.19	0.04	0.03	10.12	7.93	1.42	0.29	28.04
Total		76.92	4.02	72.89	26.18	0.78	23.77	21.67	0.38	0.11	30.24	20.44	3.98	0.75	77.63
Per cent change		*+4.2*	*-1.2*	*+4.5*	*+23.7*	*-21.2*	*-0.5*	*-6.3*	*-12.5*	*-17.4*	*+20.6*	*-1.7*	*-1.9*		*+4.1*

1. Electricity generated by major power producers (see definitions inside back cover) and available through the grid in England and Wales and from distribution companies in Scotland and Northern Ireland.
2. Used in works and for pumping at pumped storage stations.
3. Including Slurry.
4. Including orimulsion.
5. Combined Cycle Gas Turbine Stations.
6. Includes nuclear generated by UKAEA and BNFL. The UKAEA has ceased to contribute with the closure of its power station in 1994.
7. Natural flow and net supply by pumped storage stations.
8. Wastes and renewable sources other than hydro.

TABLE 23. **Availability and consumption of electricity**

TWh

	Public distribution system							Other generators			All electricity suppliers		
			Sales of electricity to consumers										
	Electricity available	Transmission distribution and other losses[1]	Total[2]	Industrial[3]	Commercial[4]	Domestic	Other[5]	Electricity available[6]	Losses and statistical differences	Consumption of electricity[7]	Electricity available	Losses and statistical differences	Consumption of electricity
1993	305.21	22.20	283.00	94.59	79.89	100.46	8.07	13.38	0.64	12.75	318.58	22.84	295.75
1994	308.78	29.10	280.03	91.79	77.96	101.41	8.86	13.54r	1.85	11.76	322.32	30.95	291.78
1995	314.68	27.05	287.61	92.73	83.71	102.21	8.96	16.01	1.01	14.62	330.69	28.46	302.23
1996	327.11	28.23	298.88	94.59	87.35	107.51	9.42	16.78	1.37	15.41	343.89	29.60	314.29
1997	326.19	24.93	301.26	94.62	93.50	104.46	8.68	16.88	0.66	16.23	343.07	25.58	317.49
Per cent change	*-0.3*	*-11.7*	*+0.8*	*-*	*+7.0*	*-2.8*	*-7.9*	*+0.6*	*-52.0*	*+5.3*	*-0.2*	*-13.6*	*+1.0*
1997 January - Jun	165.96	12.82	153.14	47.33	47.70	53.87	4.24	8.19	0.19	8.00	174.14	13.00	161.14
1998 January - June p	167.97	12.51	155.46	47.51	46.30	57.12	4.52	8.10	0.32	7.77	176.06	12.83	163.23
Per cent change	*+1.2*	*-2.4*	*+1.5*	*+0.4*	*-2.9*	*+6.0*	*+6.5*	*-1.1*	*+73.9*	*-2.9*	*+1.1*	*-1.3*	*+1.3*
1997 April	24.01	2.03	21.98	6.97	6.92	7.51	0.58	1.22	0.04	1.18	25.23	2.06	23.17
May	23.25	1.50	21.75	7.37	6.92	6.92	0.54	1.22	0.05	1.17	24.48	1.56	22.92
June*	27.28	1.72	25.56	8.58	8.41	7.90	0.67	1.62	0.04	1.59	28.90	1.76	27.15
Total	74.55	5.25	69.29	22.92	22.25	22.33	1.79	4.07	0.13	3.94	78.61	5.38	73.23
1998 April	25.91	1.80	24.10	7.25	7.15	9.07	0.63	1.19	0.08	1.11	27.10	1.88	25.22
May	23.68	2.81	20.87	6.86	6.55	6.88	0.58	1.20	0.07	1.13	24.88	2.88	22.00
June	28.04	1.71	26.33	8.74	8.25	8.62	0.72	1.69	0.04	1.65	29.73	1.75	27.98
Total	77.63	6.33	71.30	22.85	21.95	24.57	1.93	4.08	0.19	3.89	81.71	6.51	75.20
Per cent change	*+4.1*	*+20.4*	*+2.9*	*-0.3*	*-1.4*	*+10.0*	*+8.3*	*+0.4*	*+48.3*	*-1.2*	*+3.9*	*+21.1*	*+2.7*

1. Losses on the grid system and local netwoks and other differences between data collected on sales and data collected on availability. The increases in losses and statistical differences in 1994 reflect the temporary reduction in data quality accompanying the metering and billing procedures that followed the reduction of the franchise limit from 1MW to 100kW in April 1994.
2. The allocation of sales between the four constituent sectors is highly provisional and subject to change in the two months after initial publication.
3. Manufacturing industry, construction, energy and water supply industries.
4. Commercial premises, transport and other service sector consumers.
5. Agriculture, public lighting and combined domestic/commercial premises.
6. Net electricity supplied less transfers to the public distribution system.
7. The majority of this consumption is by the industrial and fuel sectors (89% in 1997).

TEMPERATURES

TABLE 24. **Average temperatures and deviations from the long term mean[1]**

Degrees Celsius

	Long term mean	Average daily temperature			Deviation from the long term mean		
	1961 to 1990	1996	1997	1998	1996	1997	1998
Statistical month[2]							
January	3.8	5.2	2.4	6.2	+1.4	-1.4	+2.4
February	4.0	2.6	6.1	6.6	-1.4	+2.1	+2.6
March*	5.4	3.7	8.3	7.7	-1.7	+2.9	+2.3
April	7.6	8.6	8.5	7.9	+1.0	+0.9	+0.3
May	10.2	8.3	11.2	12.4	-1.9	+1.0	+2.2
June*	13.4	14.0	13.9	13.7	+0.6	+0.5	+0.3
July	15.7	16.1	16.6		+0.4	+0.9	
August	15.9	17.5	19.0		+1.6	+3.1	
September*	14.0	13.9	15.3		-0.1	+1.3	
October	11.1	12.2	11.8		+1.1	+0.7	
November	7.6	7.4	8.5		-0.2	+0.9	
December*	4.9	3.9	6.6		-1.0	+1.7	
Year[3]	9.5	9.4	10.7		-0.1	+1.2	
Calendar month							
January	3.9	4.8	2.9	5.5	+0.9	-1.0	+1.6
February	3.9	3.1	6.9	7.7	-0.8	+3.0	+3.8
March	5.7	4.6	8.4	8.0	-1.1	+2.7	+2.3
April	7.8	8.7	9.1	7.8	+0.9	+1.3	-
May	10.9	9.3	11.5	12.9	-1.6	+0.6	+2.0
June	13.9	14.4	14.0	14.1	+0.5	+0.1	+0.2
July	15.8	16.4	16.9		+0.6	+1.1	
August	15.6	16.7	18.6		+1.1	+3.0	
September	13.5	13.7	14.5		+0.2	+1.0	
October	10.6	11.8	10.5		+1.2	-0.1	
November	6.6	6.2	8.9		-0.4	+2.3	
December	4.7	3.5	6.1		-1.2	+1.4	
Year	9.5	9.5	10.7		-0.1	+1.2	

1. Based on data provided by the Meteorological Office. Information on the methodology used is given in footnotes to Table 11 of the Digest of UK Energy Statistics 1997.
2. Months with 4 or 5 weeks. Months marked * contain 5 weeks.
3. Weighted average (based on 52 weeks).

FOREIGN TRADE

TABLE 25. Imports and exports of fuels and related materials[1]

	Coal and other solid fuel	Petroleum: Crude	Petroleum: Products	Natural gas	Electricity	Total	Coal and other solid fuel	Petroleum: Crude	Petroleum: Products[2]	Natural gas	Electricity	Total	Total fob[3]
	Quantity - million tonnes of oil equivalent						*Value - £ million*						
IMPORTS (cif):													
1993	13.0	53.6	21.8	4.3	1.4	94.2	731	4,078	1,766	327	426	7,328	6,997
1994	10.8	46.7	20.9	3.0	1.5	82.9	598	3,241	1,689	231	388	6,148	5,810
1995	11.5	44.1	17.4	1.3	1.4	75.7	601	3,236	1,542	105	408	5,892	5,571
1996	12.7	44.8	17.8	1.4	1.4	78.2	694	4,035	1,821	117	391	7,058	6,604
1997	14.2	45.3	15.3	1.3	1.4	77.6	714	3,647	1,442	103	406	6,312	5,875
Per cent change	*+11.6*	*+1.1*	*-14.1*	*-2.1*	*-0.8*	*-0.8*	*+2.9*	*-9.6*	*-20.9*	*-11.7*	*+3.9*	*-10.6*	*-11.1*
1996 2nd quarter	3.3	11.5	4.7	0.4	0.4	20.3	189	1,027	480	37	83	1,816	1,700
3rd quarter	3.0	11.7	4.3	0.2	0.4	19.5	159	1,028	408	21	94	1,709	1,593
4th quarter	3.5	10.9	4.3	0.2	0.3	19.3	181	1,098	503	19	101	1,902	1,786
1997 1st quarter	4.3	10.0	4.0	0.4	0.4	19.1	208	902	376	32	118	1,636	1,529
2nd quarter	3.6	12.9	3.8	0.4	0.3	21.0	181	995	342	28	98	1,644	1,521
3rd quarter	3.2	12.1	3.4	0.2	0.3	19.2	166	924	302	12	73	1,477	1,365
4th quarter	3.0	10.3	4.2	0.4	0.4	18.3	159	825	422	31	118	1,555	1,460
1998 1st quarter p	3.2	10.2	3.7	0.2	0.3	17.6	156	667	341	12	144	1,320	1,210
Per cent change	*-26.3*	*+2.0*	*-7.6*	*-60.7*	*-5.7*	*-7.9*	*-25.2*	*-26.1*	*-9.3*	*-61.7*	*+22.5*	*-19.3*	*-20.9*
EXPORTS (fob):													
1993	1.0	67.0	30.9	0.6	-	99.5	73	5,147	3,149	28	-	8,397	8,397
1994	1.2	86.0	30.1	1.0	-	118.3	75	6,095	2,776	45	-	8,991	8,991
1995	0.9	86.4	25.7	0.9	-	113.9	70	6,428	2,621	54	-	9,174	9,174
1996	1.0	83.4	27.8	1.4	-	113.5	82	7,426	3,268	65	2	10,843	10,843
1997p	1.1	76.7	29.2	1.7	-	108.6	82	6,334	3,214	80	1	9,712	9,712
Per cent change	*+10.1*	*-8.0*	*+5.1*	*+22.5*	-	*-4.3*	*+0.8*	*-14.7*	*-1.6*	*+22.9*	-	*-10.4*	*-10.4*
1996 2nd quarter	0.2	19.9	6.9	0.4	-	27.4	17	1,746	791	20	-	2,575	2,575
3rd quarter	0.2	19.9	7.2	0.2	-	27.6	18	1,738	818	12	1	2,586	2,586
4th quarter	0.3	21.6	7.3	0.3	-	29.6	26	2,135	924	17	1	3,102	3,102
1997 1st quarter	0.4	20.5	6.6	0.4	-	27.9	27	1,930	787	20	-	2,764	2,764
2nd quarter	0.2	18.7	6.9	0.5	-	26.3	18	1,447	759	20	-	2,244	2,244
3rd quarter	0.2	18.9	7.7	0.3	-	27.1	17	1,475	853	15	-	2,360	2,360
4th quarter	0.3	18.6	8.0	0.5	-	27.4	21	1,482	815	25	-	2,344	2,344
1998 1st quarter p	0.3	21.7	5.7	0.4	-	28.0	20	1,308	504	17	-	1,849	1,849
Per cent change	*-26.0*	*+5.7*	*-13.5*	*-8.7*	-	*+0.5*	*-23.8*	*-32.2*	*-36.0*	*-15.1*	-	*-33.1*	*-33.1*
NET EXPORTS:													
1993	-12.0	13.4	9.1	-3.7	-1.4	5.3	-658	1,069	1,383	-299	-426	1,069	1,400
1994	-9.7	39.3	9.2	-2.1	-1.5	35.4	-523	2,853	1,087	-185	-388	2,843	3,181
1995	-10.6	42.4	8.2	-0.4	-1.4	38.2	-531	3,192	1,080	-51	-408	3,281	3,602
1996	-11.8	38.6	10.0	-	-1.4	35.3	-612	3,391	1,446	-52	-389	3,784	4,238
1997p	-13.2	31.4	13.9	0.3	-1.4	31.1	-632	2,687	1,773	-23	-405	3,400	3,837
1996 2nd quarter	-3.1	8.4	2.2	-	-0.4	7.1	-172	720	311	-18	-83	759	875
3rd quarter	-2.8	8.3	2.9	-	-0.4	8.0	-141	710	410	-9	-94	877	993
4th quarter	-3.2	10.8	3.0	0.1	-0.3	10.3	-155	1,038	421	-2	-100	1,200	1,316
1997 1st quarter	-4.0	10.5	2.6	-	-0.4	8.8	-181	1,027	411	-12	-117	1,128	1,235
2nd quarter	-3.4	5.8	3.1	0.1	-0.3	5.3	-163	452	417	-8	-98	600	723
3rd quarter	-3.0	6.8	4.3	0.2	-0.3	7.9	-149	551	551	3	-72	883	995
4th quarter	-2.8	8.3	3.9	0.1	-0.4	9.1	-137	657	393	-6	-118	789	884
1998 1st quarter p	-2.9	11.5	2.0	0.2	-0.3	10.4	-135	641	163	4	-144	529	639

1. The figures generally correspond to those published under SITC section 3 of the OTS. They do however include some unpublished revisions and additional amendments. The quantity figures differ from those in Table 3, which are partly based on other sources of information.
2. SITC divisions 334, 335, 342, 344, plus Orimulsion from division 278.
3. 'Free on board'- imports adjusted to exclude estimated costs of insurance, freight etc.

NOTE ON SIZEBANDS USED IN TABLE 26

For coal, heavy fuel oil, gas oil, electricity and gas prices are shown in table 26 for various sizes of consumers. These sizebands are defined in terms of the approximate annual purchases by the consumers within them. These are shown below.

Fuel	Range of annual purchases of which: Large	Extra large	Moderately large	Medium	Small
	Greater than	Greater than			Less than
Coal (tonnes)	7,600	n/a	n/a	760 to 7,600	760
Heavy fuel oil (tonnes)	4,900	15,000	4,900 to 15,000	490 to 4,900	490
Gas oil (tonnes)	175	n/a	n/a	35 to 175	35
Electricity (thousand kWh)	8,800	150,000	8,800 to 150,000	880 to 8,800	880
Gas* (thousand kWh)	8,800	n/a	n/a	1,500 to 8,800	1,500

* Respondents purchasing more than one type of supply (tariff, firm contract and interruptible contract) are treated as separate entities in respect of each type of supply.

PRICES

TABLE 26. Prices of fuels purchased by manufacturing industry in Great Britain[1]

Fuel	Size of consumer	1995 4th quarter	1996 1st quarter	1996 2nd quarter	1996 3rd quarter	1996 4th quarter	1997 1st quarter	1997 2nd quarter	1997 3rd quarter	1997 4th quarter	1998 1st quarter p
COAL	Small	2.12	2.15	2.07	2.19	2.09	2.09	2.04	2.05	2.17	2.07
(£per GJ)	Medium	1.89	1.90	1.82	1.80	1.71	1.67	1.63	1.59	1.68	1.67
	Large	1.21	1.25	1.24	1.23	1.23	1.24	1.19	1.22	1.26	1.22
All consumers:	Average	1.31	1.35	1.33	1.32	1.30	1.31	1.26	1.28	1.33	1.30
	10% decile[2]	1.43	1.48	1.46	1.42	1.44	1.44	1.42	1.42	1.42	1.43
	median[2]	1.87	1.85	1.86	1.85	1.86	1.83	1.83	1.78	1.90	1.88
	90% decile[2]	2.65	2.75	2.63	2.37	2.49	2.46	2.47	2.48	2.57	2.57
HEAVY FUEL OIL	Small	93.6	101.8	106.0	102.7	110.2	106.2	98.5	95.7	100.6	94.6
(£ per tonne)[3]	Medium	87.4	98.5	97.6	95.3	102.1	99.8	91.4	90.8	95.6	88.9
	Large	77.3	86.8	90.7	86.1	100.2	92.1	81.1	82.7	89.0	72.4
Of which:	Extra large	72.8	83.6	87.7	83.0	99.4	90.8	79.5	80.9	87.1	68.8
	Moderately large	85.5	92.7	96.3	91.7	101.6	94.4	84.1	86.0	92.5	79.0
All consumers:	Average	83.0	92.8	95.1	91.5	102.2	96.6	87.0	87.3	92.8	81.1
	10% decile[2]	81.9	91.7	88.0	87.0	98.4	89.5	81.4	81.7	86.1	72.5
	median[2]	90.3	101.8	101.9	100.9	106.3	102.4	94.9	93.0	96.5	91.5
	90% decile[2]	111.2	121.3	125.0	113.5	127.5	120.8	114.4	108.7	112.0	108.0
GAS OIL	Small	157.0	164.7	171.0	172.9	186.0	184.3	169.0	167.0	168.1	163.7
(£ per tonne)[3]	Medium	150.3	156.9	161.2	163.5	177.9	175.3	159.5	157.3	159.4	149.3
	Large	137.3	149.8	152.3	156.7	171.9	167.5	150.9	145.2	146.2	131.4
All consumers:	Average	139.7	151.2	154.1	158.1	173.1	169.1	152.6	147.6	148.7	134.9
	10% decile[2]	131.0	139.7	140.6	140.6	152.1	154.5	142.3	140.3	142.1	128.0
	median[2]	147.0	161.7	163.7	165.1	183.3	177.7	159.4	157.3	159.4	147.2
	90% decile[2]	167.7	175.7	184.2	190.7	200.0	196.7	186.0	183.2	184.7	176.0
ELECTRICITY	Small	6.36	6.34	5.84	5.93	6.08	6.14	5.50	5.45	5.77	5.72
(Pence per kWh)	Medium	4.83	4.83	4.49	4.43	4.52	4.50	4.17	4.08	4.38	4.42
	Large	3.67	3.80	3.32	3.31	3.55	3.58	3.12	3.03	3.46	3.57
Of which:	Extra large	3.14	3.35	2.86	2.85	3.12	3.22	2.69	2.58	3.12	3.29
	Moderately large	4.08	4.15	3.68	3.66	3.88	3.86	3.45	3.39	3.72	3.79
All consumers:	Average	4.12	4.21	3.76	3.74	3.94	3.96	3.52	3.44	3.82	3.91
	10% decile[2]	4.32	4.35	4.04	4.01	4.16	4.19	3.72	3.70	3.91	3.94
	median[2]	5.98	5.92	5.45	5.53	5.61	5.68	5.11	5.13	5.49	5.46
	90% decile[2]	8.23	7.93	7.09	7.23	7.63	7.75	6.73	6.66	7.04	7.02
GAS	Small	1.038	0.960	0.949	0.960	0.882	0.881	0.884	0.904	0.922	0.924
(Pence per kWh)[4]	Medium	0.758	0.673	0.664	0.639	0.654	0.687	0.674	0.696	0.723	0.748
	Large	0.564	0.451	0.427	0.420	0.432	0.459	0.467	0.471	0.517	0.529
All consumers:	Average	0.600	0.494	0.455	0.437	0.462	0.497	0.493	0.492	0.549	0.569
	Firm[5]	0.714	0.546	0.504	0.480	0.507	0.560	0.554	0.540	0.593	0.640
	Interruptible	0.503	0.433	0.409	0.402	0.417	0.428	0.440	0.452	0.495	0.510
	Tariff[5]	1.330	1.373	1.298	1.393	1.334	1.345	1.289	1.257	1.208	..
	10% decile[2]	0.601	0.542	0.516	0.495	0.510	0.517	0.523	0.538	0.576	0.590
	median[2]	0.980	0.883	0.815	0.786	0.790	0.812	0.812	0.835	0.864	0.878
	90% decile[2]	1.496	1.434	1.449	1.425	1.441	1.368	1.309	1.300	1.315	1.265
MEDIUM FUEL OIL (£ per tonne)[3]											
All consumers:	Average[6]	91.0	98.4	101.3	89.9	104.5	98.7	84.1	87.2	92.2	87.3
LIQUEFIED PETROLEUM GASES (£ per tonne)											
All consumers:	Average[6]	144.9	154.5	151.0	148.1	172.9	194.1	168.7	167.1	169.0	168.3
HARD COKE (£ per tonne)[7]											
All consumers:	Average[6]	119.6	128.5	128.5	122.9	125.6	121.3	117.6	118.5	118.7	117.1

1. Average prices paid (exclusive of VAT) by respondents to a Department of Trade and Industry survey of some 1,200 manufacturing sites. The average price for each size of consumer is obtained by dividing the total quantity of purchases, for each fuel, into their total value. Prices vary widely around the average values shown (see footnote 2). Purchases of fuels used as raw materials in manufacturing are excluded. For further details, see the annual "Digest of United Kingdom Energy Statistics" available from the Stationery Office.
2. The 10% decile is the point within the complete range of prices below which the bottom 10% of those prices fall. Similarly the 90% decile is the point above which the top 10% of prices occur. The median in the midway point. Thus, these values show the spread of prices paid. The deciles and the median are calculated by giving equal 'weight' to each purchaser, whereas the average prices, for each size-band and all consumers are given 'weight' according to the quantity purchased.
3. Oil product prices include hydrocarbon oil duty. From the 17 March 1998 the effective duty rates per tonne are £22.02 for Heavy Fuel Oil, £22.41 for Medium Fuel Oil and £32.99 for Gas Oil.
4. Covers all supplies of natural gas including, for example, those purchased direct from onshore/offshore gas fields. Respondents purchasing more than one type of supply (tariff, firm contract and interruptible contract) are treated as separate entities in respect of each type of supply.
5. From quarter one 1998 tariff gas prices are not collected separately and are included in the firm contract prices. In quarter four 1997 tariff gas represented a weight of around 1% of the sample.
6. No further details of prices can be given to the small number of respondents purchasing this fuel.
7. Excludes breeze and blast furnace supplies.

FOR NOTE ON SIZEBANDS USED IN TABLE 26 PLEASE SEE PREVIOUS PAGE

TABLE 27. Average prices of fuels purchased by the major UK power producers[1] and of gas at UK delivery points[2]

		Major power producers[1]			Natural gas at UK delivery points[8]	
		Coal[3]	Oil[4,5]	Natural gas[6,7]	Including levy[9]	Excluding levy[9]
		£ per tonne	£ per tonne	pence per kWh	pence per kWh	pence per kWh
1993		42.44	55.91	0.706	0.556	0.523
1994		36.35	67.90	0.667	0.588	0.564
1995		35.11	81.12	0.643	0.584	0.561
1996		35.22	84.15	0.628	0.592	0.571
1997		33.74	89.75	0.647	0.596	0.576
1996	1st quarter	35.45	85.12	0.686	0.582	0.559
	2nd quarter	36.02	79.69	0.578	0.567	0.548
	3rd quarter	35.25	80.05	0.568	0.591	0.573
	4th quarter	34.41	88.98	0.665	0.620	0.597
1997	1st quarter	33.48	90.86	0.707	0.618	0.593
	2nd quarter	33.20	79.99	0.610	0.558	0.540
	3rd quarter	34.62	94.20	0.564	0.564	0.547
	4th quarter	33.80	93.82	0.705	0.619	0.600
1998	1st quarter p	32.94	77.48	0.696	0.610	0.588

1. See definitons inside front cover; Humber Power Ltd and Indian Queens Power Ltd should additionally be included in the list of major power producers.
2. The series represents gas supplied by UKCS licensees to the UK (i.e exports are excluded) and gas imported from the Norwegian sector of the continental shelf.
3. Includes slurry.
4. Includes oil for burning, for gas turbines and for internal combustion engines (other than for use in road vehicles). Excludes any natural gas liquids burnt at Peterhead power station.
5. Includes hydrocarbon oil duty.
6. Prior to 1993 gas prices are not available for reasons of confidentiality.
7. Includes sour gas.
8. A quarterly series consistent with the annual series is available back to quarter two 1987. An article describing this series was published in *Energy Trends* in November 1996.
9. The levy is the Goverment's tax on indigenous supplies introduced in 1981.

TABLE 28. Fuel price indices for the industrial sector[1]

1990=100

		Unadjusted					*Seasonally adjusted*			
		Coal[2]	Heavy fuel oil[2]	Gas[3]	Electricity[3]	Total fuel	Gas[3]	Electricity[3]	Total fuel	
		Current fuel price index numbers								
1993		93.6	90.1	102.7	114.2	107.6				
1994		92.5	97.4	103.6	110.1	106.3				
1995		86.8	113.8	90.4	109.1	105.1				
1996		82.6	125.7	66.1	105.3	99.5				
1997		80.6	120.2	68.2	99.3	95.4				
Per cent change		*-2.3*	*-4.3*	*+3.1*	*-5.7*	*-4.2*				
1996	1st quarter	83.8	121.9	72.3	113.6	105.4	69.6	106.8	100.6	
	2nd quarter	82.7	124.9	64.5	100.8	96.3	65.4	106.0	99.7	
	3rd quarter	82.2	120.1	61.5	98.4	93.6	64.5	105.3	98.4	
	4th quarter	81.2	134.2	66.2	107.7	102.2	65.1	102.5	98.7	
1997	1st quarter	81.5	126.9	68.6	108.6	102.2	66.0	101.9	97.5	
	2nd quarter	78.6	114.2	67.2	93.3	90.5	68.0	98.3	93.8	
	3rd quarter	79.9	114.6	65.9	90.4	88.6	69.0	97.0	93.3	
	4th quarter	82.8	121.9	71.2	104.4	99.4	69.8	99.5	96.1	
1998	1st quarter p	80.7	106.4	73.2	107.3	99.3	70.5	100.5	94.6	
Per cent change		*-1.0*	*-16.1*	*+6.8*	*-1.2*	*-2.8*	*+6.8*	*-1.3*	*-3.0*	
		Fuel price index numbers relative to the GDP deflator								GDP deflator[4]
1993		81.4	78.3	89.3	99.3	93.6				115.0
1994		79.2	83.4	88.7	94.2	90.9				116.9
1995		72.5	95.0	75.4	91.0	87.7				119.8
1996		66.9	101.7	53.6	85.3	80.6				123.5
1997		63.6	94.9	53.8	78.4	75.3				126.7
Per cent change		*-4.8*	*-6.7*	*+0.5*	*-8.1*	*-6.6*				*+2.6*
1996	1st quarter	68.4	99.5	59.0	92.7	86.0	56.8	87.2	82.2	122.5
	2nd quarter	67.3	101.7	52.6	82.1	78.5	53.2	86.3	81.2	122.8
	3rd quarter	66.4	97.1	49.8	79.6	75.6	52.1	85.1	79.5	123.7
	4th quarter	65.0	107.3	52.9	86.2	81.7	52.1	82.0	79.0	125.0
1997	1st quarter	64.9	101.0	54.6	86.5	81.3	52.6	81.1	77.6	125.6
	2nd quarter	62.2	90.4	53.2	73.8	71.6	53.8	77.8	74.2	126.4
	3rd quarter	63.0	90.3	52.0	71.2	69.8	54.4	76.5	73.5	126.9
	4th quarter	64.8	95.4	55.7	81.8	77.9	54.7	77.9	75.3	127.7
1998	1st quarter p	63.0	83.2	57.2	83.8	77.6	55.1	78.5	73.9	128.0
Per cent change		*-2.8*	*-17.7*	*+4.7*	*-3.0*	*-4.6*	*+4.8*	*-3.2*	*-4.8*	*+1.9*

1. Index numbers shown represent the average for the period specified. VAT is excluded.
2. Indices based on a survey of the prices of fuels delivered to industrial consumers in Great Britain only as shown in Table 26.
3. Indices based on the average unit value of sales to industrial consumers.
4. GDP deflator at market prices and seasonally adjusted.

TABLE 29. Fuel price indices for the domestic sector[1,2]

1990 = 100

	Coal and coke	Gas	Electricity	Heating oils[3]	Fuel and light	Petrol and oil	Fuel, light petrol and oil	
	Current fuel price index numbers							
1993	111.1	102.7	115.4	89.9	108.9	119.3	113.4	
1994	118.2	108.9	119.2	90.0	113.7	124.8	118.7	
1995	120.2	112.5	120.8	89.9	116.1	131.2	122.9	
1996	121.4	112.7	120.3	99.1	116.4	137.8	126.3	
1997	122.4	111.6	114.5	96.5	112.7	151.5	131.6	
Per cent change	*+0.9*	*-1.0*	*-4.8*	*-2.6*	*-3.1*	*+9.9*	*+4.2*	
1996 2nd quarter	119.7	112.7	121.0	95.3	116.5	134.5	124.8	
3rd quarter	119.3	112.6	121.0	97.5	116.6	136.8	125.9	
4th quarter	124.1	112.6	118.6	108.2	115.9	145.6	129.6	
1997 1st quarter	124.6	112.6	117.1	103.6	114.9	147.6	130.8	
2nd quarter	121.6	112.6	116.7	95.1	114.1	146.2	129.8	
3rd quarter	119.9	111.5	113.9	93.0	112.2	155.9	133.5	
4th quarter	123.7	109.5	110.4	94.3	109.7	156.4	132.4	
1998 1st quarter	123.8	108.0	110.4	85.2	108.6	153.6	132.0	
2nd quarter p	122.0	107.8	110.1	81.4	108.2	161.5	135.9	
Per cent change	*+0.3*	*-4.3*	*-5.7*	*-14.5*	*-5.2*	*+10.5*	*+4.7*	
	Fuel price index numbers relative to the GDP deflator							GDP deflator[4]
1993	96.6	89.3	100.3	78.2	94.7	103.7	98.6	115.0
1994	101.1	93.1	102.0	77.0	97.2	106.7	101.5	116.9
1995	100.4	93.9	100.9	75.1	96.9	109.5	102.6	119.8
1996	98.3	91.2	97.4	80.2	94.2	111.6	102.3	123.5
1997	96.6	88.0	90.4	76.2	89.0	119.6	103.9	126.7
Per cent change	*-1.7*	*-3.5*	*-7.2*	*-5.0*	*-5.6*	*+7.1*	*+1.6*	*+2.6*
1996 2nd quarter	97.5	91.8	98.6	77.6	94.9	109.5	101.6	122.8
3rd quarter	96.5	91.1	97.9	78.8	94.2	110.6	101.8	123.7
4th quarter	99.3	90.1	94.9	86.6	92.7	116.5	103.7	125.0
1997 1st quarter	99.2	89.7	93.3	82.5	91.5	117.5	104.2	125.6
2nd quarter	96.2	89.0	92.3	75.3	90.3	115.7	102.7	126.4
3rd quarter	94.5	87.9	89.8	73.3	88.4	122.8	105.2	126.9
4th quarter	96.9	85.7	86.5	73.8	85.9	122.5	103.7	127.7
1998 1st quarter	96.7	84.4	86.2	66.5	84.9	120.0	103.1	128.0
2nd quarter p	94.6	83.6	85.4	63.1	84.0	125.3	105.5	128.9
Per cent change	*-1.7*	*-6.1*	*-7.5*	*-16.1*	*-7.0*	*+8.3*	*+2.7*	*+2.0*

1. Index numbers shown represent the average for the period specified.
2. Figures from the 2nd quarter of 1994 for coal and coke, gas, electricity and heating oils include VAT at 8 per cent. With effect from September 1997 the rate of VAT has been reduced to 5 per cent, hence 3rd quarter data contains both rates. Data from quarter 4 1997 is shown inclusive of VAT at 5%.
3. Bottled gas and oil fuel.
4. GDP deflator (market prices, seasonally adjusted).

TABLE 30. Typical retail prices of petroleum products and a crude oil price index[1]

		Motor spirit[1]				Standard grade		
		4 star	Super unleaded	Premium unleaded	Derv[1]	burning oil[1,2]	Gas oil[1,3]	Crude oil acquired by refineries[4]
		Pence per litre						*1990 = 100*
1993	January	51.27	49.76	47.13	47.05	14.10	13.52	98.7
1994	January	55.50	54.48	50.83	51.72	12.94	12.72	72.0
1995	January	59.11	58.00	53.44	54.13	13.32	13.93	83.7
1996	January	61.97	61.26	55.93	57.43	15.38	15.86	96.1
1997	January	65.46	69.24	61.09	62.02	17.13	18.14	113.8
1997	May	64.91	68.98	59.41	60.30	13.94	15.44	90.9
1997	June	65.39	69.37	59.86	60.60	13.77	14.88	87.0
	July	68.20	72.68	62.69	63.44	13.25	14.61	87.5
	August	69.51	73.58	64.07	64.48	13.86	15.20	92.3
	September	70.28	74.23	64.72	64.76	13.48	14.69	91.8
	October	69.75	73.71	64.21	64.31	14.27	15.10	96.0
	November	69.55	74.02	63.89	64.06	14.18	15.28	90.8
	December	69.29	74.10	63.53	63.76	13.60	14.48	83.8
1998	January	69.03	73.96	63.13	63.34	12.92	13.67	74.7
	February	68.64	73.79	62.63	62.84	12.53	13.68	69.1
	March	68.20	73.77	62.09	62.30	11.61	12.72	63.1
	April	72.38	78.74	65.77	66.81	11.67	12.94	63.6
	May	72.41	79.06	65.72	66.71	11.64	12.95	67.9
	June	72.21r	78.80	65.62r	66.59r	11.15	12.34	58.8r
	July p	72.47	n/a	66.16	67.10	n/a	n/a	57.6

1. These estimates are generally representative of prices paid on or about the 15th of the month. Estimates are based on information provided by oil marketing companies until December 1994. From January 1995 data from super/hypermarket chains have been included. The very latest data for motor spirit and Derv are provisional, based on a smaller sample than used for preceding months.
2. These estimates are for deliveries of up to 1,000 litres; such deliveries attract 8 per cent VAT from 1 April 1994. With effect from 1 September 1997 the rate of VAT has been reduced to 5 per cent.
3. These estimates are for deliveries of 2,000 to 5,000 litres; such deliveries attract 8 per cent VAT from 1 April 1994. With effect from 1 September 1997 the rate of VAT has been reduced to 5 per cent.
4. Price index for supplies received by refineries in the UK from both indigenous and imported sources. It represents the average for the month calculated in sterling on a cif basis.

Combined heat and power in the UK in 1997

A CHP plant is an installation where there is simultaneous generation of usable heat and power (usually electricity) in a single process. The term CHP is used throughout this article, and is synonymous with cogeneration and total energy, which are terms often used in the United States or other Member States of the European Union. The basic elements of a CHP plant comprise one or more prime movers usually driving electrical generators, where the steam or hot water generated in the process is utilised via suitable heat recovery equipment for a variety of purposes including: industrial processes, community heating and space heating.

CHP can provide a secure and highly efficient method of generating electricity and heat at the point of use. Due to the utilisation of heat from electricity generation and the avoidance of transmission losses because electricity is generated on site, substantial energy costs and emissions savings can be made where there is both a heat and a power load.

Savings from new CHP schemes will depend on what boilers and what power generation are displaced. This is particularly difficult to measure because CHP uses and displaces a variety of fuels and technologies. In addition, what will be displaced in the future will depend to an extent on the outcome of a number of Government reviews currently in train. New CHP schemes reduce primary energy use by a third over conventional separate generation of heat from heat only boilers and electricity from steam turbine plant. Savings would be lower at around a quarter if CCGT plant are assumed to be displaced. In reality CHP displaces a portfolio of plant.

This article uses the results of a project carried out by ETSU (a division of AEA Technology plc) for the Department of Trade and Industry and the Statistical Office of the European Communities (Eurostat). The project was overseen by a Steering Group of officials from the Department of Trade and Industry, the Department of the Environment, Transport and the Regions, the Office of Electricity Regulation and the Combined Heat and Power Association, all of whom have an interest in the collection of information on CHP schemes and the promotion of the wider use of CHP throughout the UK.

Further information on CHP statistics has been published in Chapter 7, "Combined Heat and Power" in the 1998 Digest of UK Energy Statistics (DUKES). The information contained in DUKES provides a detailed analysis of installations in the UK, in time series format. This article picks out a number of specific trends in the use of CHP. The main points to note are:

- Growth in CHP continues in the UK, with an increase in capacity of 5 per cent (170 MWe) in 1997.
- Most new CHP plants are powered by natural gas. Older installations based on back pressure steam plant continue to be replaced by combined cycle and simple cycle (gas turbine) plant.
- CHP schemes accounted for about 6 per cent of all electricity generated in the UK in 1997 and 6½ per cent of UK natural gas consumption.
- There has been a modest increase in the electrical capacity of CHP in buildings, mainly in the community heating and leisure sectors. This increase is predominately in small engine plant.
- The energy savings due to CHP continue to emphasise this technology's importance in stabilising emission levels, and helping to meet national environmental targets.

Overview of CHP in the UK in 1997

The number of CHP installations is dominated by schemes with an installed electrical capacity of less than 100 kWe (50 per cent of sites), and between 100 kWe and 999 kWe (34½ per cent of sites). However, schemes larger than 10 MWe represent 79½ per cent of the total electrical capacity. It is estimated that the total number of sites with CHP in the UK in 1997 was 1,360 with a total installed capacity of 3,732 MWe (see Table

Table 1 Summary of published CHP surveys

	Unit	1993	1994	1995	1996	1997
Number of sites		996	1,167	1,277	1,336	1,360
Electrical capacity	MWe	2,893	3,141	3,487	3,562	3,732
Electricity generation	GWh	14,171	12,152	17,761	19,081	19,465
Average Load factor	%	55.9	53.1*(1)*	58.1	61.1	59.5
Overall efficiency	%	71.4	75.1	74.8	74.6	72.9
	Capacity of plant by sector					**MWe**
Chemicals		919	965	1,228	1,147	1,227
Refineries		433	441	460	495	496
Paper and board		211	277	331	337	438
Food and drink		201	211	196	207	218
Iron and steel		130	130	130	130	130
Other industrial sectors		702	750	750	752	761
Other sectors		297	367	392	494	463

(1) Excluding electricity supply industry.

Table 2 CHP usage by sector in 1997

Sector	Electrical capacity (MWe)	Heat capacity (MWth)	Load factor (%)	Electrical output (GWh)	Heat output (GWh)
Chemicals industry	1,226	6,602	57.4	6,172	21,738
Oil refineries	496	2,930	58.6	2,547	14,553
Paper, publishing and printing	438	1,565	56.0	2,150	7,755
Food, beverages and tobacco	218	1,424	52.3	997	5,061
Iron and steel and non ferrous metals	130	871	84.6	961	3,453
Extraction, mining & agglomeration of solid fuels	37	196	44.8	147	875
Metal products, machinery and equipment	37	84	56.9	183	434
Other industrial branches*(1)*	687	871	71.5	4,300	4,989
Transport, commerce and administration etc	191	411	55.2	921	1,678
Other sectors*(2)*	272	760	45.6	1,086	2,141
Total	**3,732**	**15,714**	**59.5**	**19,465**	**62,677**

(1) Including electricity supply industry.
(2) Sectors included under other are community heating; leisure; landfill and incineration.

1). Of these 312 sites (88 per cent of capacity) are in the industrial sector and 1,048 sites (12 per cent of capacity) are in the commercial, public and residential sectors.

The electricity generated by CHP schemes in 1997 was 19,465 GWh. This represents 6 per cent of the electricity used by the fuel industries and final users in 1997. CHP plants supplied 62,677 GWh of heat, at a heat to power ratio (in capacity terms) of 4.21:1. The annual load factor of CHP capacity of 59½ per cent covers both electricity and heat production and is a result of part load operation of plant, site operational hours (usually between 6,000 and 8,500 hours per annum) and maintenance down time. The 1997 average load factor is lower than that recorded in 1996 (61 per cent), due primarily to lower utilisation of some of the large CHP schemes, but it is 1½ percentage points higher than in 1995 and 3½ percentage points higher than in 1993. Overall plant efficiency slipped back from 74½ per cent in 1996 to 73 per cent in 1997.

Sectoral breakdown of CHP installations

Table 2 shows that the industrial sectors accounted for 88 per cent of total installed CHP electrical capacity with chemicals, oil refining, paper, publishing and printing, food beverages and tobacco sectors jointly having 64 per cent of the installed capacity. 'Other industrial branches' includes the public electricity supply industry.

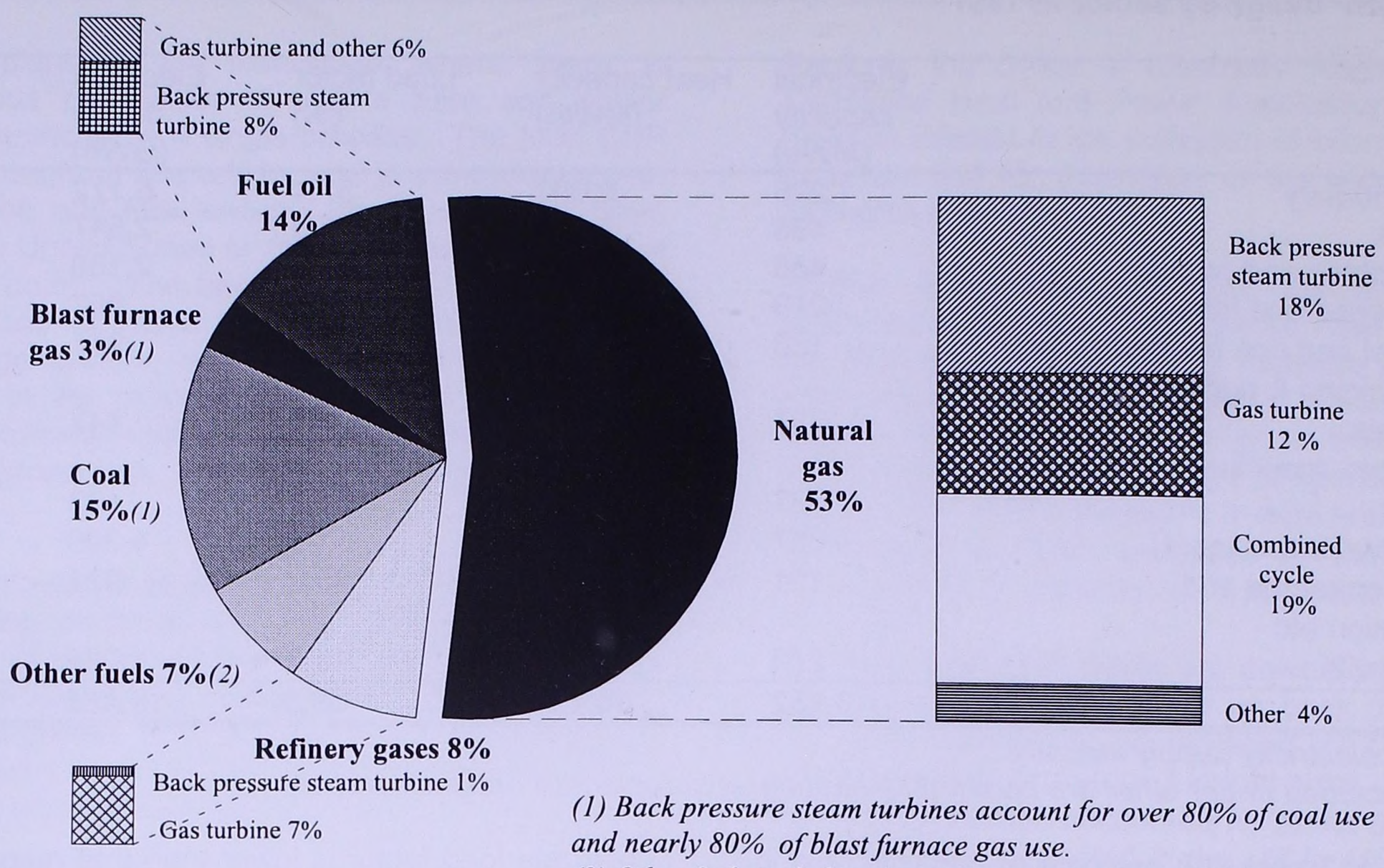
Table 3 Fuel used by CHP plant in 1997

GWh

	Prime mover					
	BP steam turbine *(1)*	POCO *(2)* steam turbine	Gas turbine	Reciprocating engine	Combined Cycle	Total
Fuel Type *(3)*						
Natural gas	20,261	640	13,819	3,707	21,442	59,869
Coal	14,625	1,623	46	62	896	17,252
Fuel oil	8,173	31	5,132	355	1,225	14,916
Refinery gas	350	-	8,584	-	-	8,934
Blast furnace gas	2,967	801	-	-	-	3,768
Renewable fuels *(4)*	239	-	-	1,522	-	1,761
Coke oven gas	784	283	123	-	-	1,190
Gas oil	-	-	183	238	4	425
Other fuels *(5)*	1,932	-	1,231	250	1,100	4,513
Total	**49,331**	**3,378**	**29,118**	**6,134**	**24,667**	**112,628**

(1) Back pressure steam turbine.
(2) Pass-out condensing steam turbine.
(3) In the cases where the CHP installation uses a number of fuels and where individual fuel consumption data are not available, the quantities consumed have been proportioned equally between fuels. In some installations additional fuel is consumed in the exhaust steam of the prime mover (e.g. supplementary firing of gas turbines) and this fuel is included within the table.
(4) Renewable fuels include: sewage gas; other biogases; clinical waste; municipal waste.
(5) Other fuels include: process by-products; uranium.

Chart 1 Types of fuel used by CHP plants in 1997



(1) Back pressure steam turbines account for over 80% of coal use and nearly 80% of blast furnace gas use.
(2) Other fuels include coke oven gas, gas oil, renewable fuels and process by-products.

CHP installation by type

In 1997 combined cycle installations generated a larger proportion of electricity generated by CHP (34 per cent) than installations based on back pressure steam turbine plant (30 per cent). Back pressure steam turbine plant decreased from 31½ per cent of generation in 1996 while combined cycle plant increased from 32½ per cent in 1996. In terms of heat generation only 17 per cent came from combined cycle plant in 1997 compared with 49 per cent from back pressure steam turbine plant and 26 per cent from gas turbines, reflecting the lower heat to power ratios found in combined cycle plant. Over the last ten years the statistics have shown a trend to replace steam plant with gas turbine based units. In terms of heat capacity the back pressure steam turbines predominate with 56 per cent of total heat capacity. In terms of numbers, the largest segment is for reciprocating engines, though the average size of these installations is less than 1 MWe.

Fuel use

Chart 1 shows the fuel types used by CHP plant and split by prime mover. In 1997 natural gas use increased by 18 per cent to take the gas share to over 50 per cent. This mirrors the increase in gas turbine based CHP schemes. Coal's share of CHP fuel use fell from 18 per cent to 15 per cent and fuel oil's from 16 per cent to 14 per cent.

CHP in buildings

Table 4 gives a summary of the 1,007 schemes installed in commercial, public sector and residential buildings. The installed electrical capacity was 280

Table 4 Number and capacity of CHP schemes installed in buildings by sector in 1997

	Number of sites	Electrical capacity (MWe)	Heat capacity (MWth)
Sector			
Leisure	337	26.2	45.1
Hotel	271	29.9	49.3
Health	235	85.9	179.7
Residential group heating	48	63.0	181.3
Offices	42	14.2	21.4
Education	30	2.1	3.4
Universities	18	21.4	54.7
Government estate	12	5.2	9.0
Retail	4	5.2	7.1
Other *(1)*	10	27.2	84.9
Total	**1,007**	**280.1**	**635.9**

(1) Other includes: agriculture; airports; domestic buildings.

Table 5 CHP fired from renewable sources, 1997

	Number of sites	Electricity capacity (MWe)	Heat Capacity (MWth)	Renewable fuel input (GWh)	Electricity output (GWh)	Heat output (GWh)
Renewable energy						
Sewage treatment	122	92.7	159.9	1,503	400	700
Municipal solid waste community heating	2	19.1	88.2	239	92	184
Other fuels *(1)*	2	1.1	0.9	19	9	6
Total	**126**	**113.0**	**249.0**	**1,761**	**501**	**890**

(1) Includes landfill gas and sewage disposal on industrial sites.

MWe in 1997 with an average heat to power ratio of 2.3:1. The majority of these schemes (98 per cent) are based on spark ignition reciprocating engines fuelled with natural gas, though the larger schemes use compression ignition reciprocating engines and gas turbines. In terms of capacity the largest sectors are health and residential heating with 31 per cent and 22 per cent of electrical capacity respectively. In terms of number of sites the market is dominated by three sectors: health with 23 per cent of sites; hotels with 27 per cent of sites (11 per cent of capacity); and leisure with 33 per cent of sites (9 per cent of capacity).

CHP fired from renewable sources

In 1997 two renewable fuel sources were predominant, these being: sewage gas fired CHP in waste water treatment works and Municipal Solid Waste (MSW) for Community Heating schemes. Table 5 shows that a total of 92.7 MWe of electrical capacity was installed on 122 sewage treatment sites in the UK. Together these sites had a plant load factor of around 49 per cent and a heat to power ratio of 1.72:1. A total of 19.1 MWe of electrical capacity is installed in MSW fired Community Heating CHP schemes. The average load factor (utilisation) of these plants in 1997 was 55 per cent with a heat to power ratio of 4.61:1. The electrical capacity of CHP sites using 'Other fuels' has reduced in 1997, primarily due a change of fuel use from landfill gas fired to natural gas.

In CHP schemes that use sewage waste, it is the heat output from the generation of electricity that is used in the digestion process to produce the sewage gas.

Table 6 Estimated emissions from operational CHP plants, 1997

Fuel type	Primary fuel (GWh)	CO_2 (Thousand tonnes of carbon)	NO_X (Thousand tonnes)	SO_2 (Thousand tonnes)
Coal	17,252	1,566	11	71
Heavy fuel oil	14,916	1,084	9	63
Natural gas	59,869	2,939	10	-
Renewables	1,761	86	-	-
Other fuels	18,830	924	3	-
Total	**112,628**	**6,599**	**33**	**134**

Note: Renewables and 'Other' fuels are assumed to generate the same emissions as natural gas.
CO_2 emissions are expressed in terms of carbon emitted.

Table 7 Illustrative emissions savings in comparison to centralised generation and heat-only boilers *(1)*

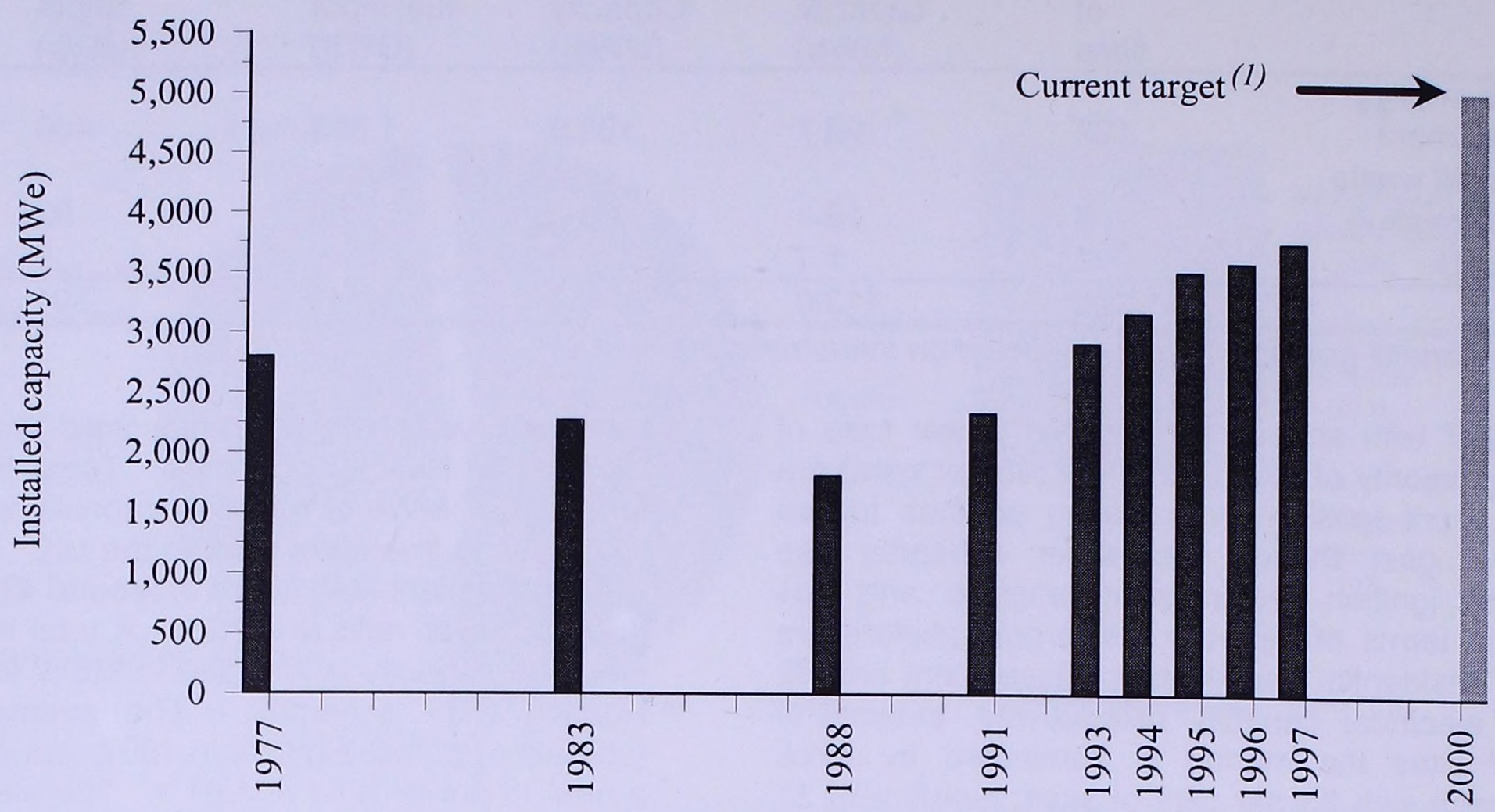
	CO_2 (Thousand tonnes of carbon)	NO_X (Thousand tonnes)	SO_2 (Thousand tonnes)
E1 - Emissions equivalent to electricity generated by major power producers' burning coal	5,256	53	292
E2 - Emissions equivalent from boiler using same fuel as CHP	4,661	25	105
Sum E1 and E2	9,917	78	397
E3 - Emissions from CHP plants	6,599	33	134
Emissions savings from operational plants	**3,318**	**45**	**263**

(1) To estimate the amount of emissions saved through the installation of CHP the following assumptions were made:

- *All the electricity generated by CHP plants replaced the equivalent of that generated by coal burning power stations operated by major power producers.*
- *All the heat generated by CHP replaced the equivalent from boilers using the same fuel.*
- *Any non-traded fuels (e.g. fuels derived from wastes and by products arising within the site) used by CHP plants are assumed to have emissions equivalent to those for natural gas.*

Using these assumptions emission savings are calculated as:
Emissions equivalent to electricity generated by CHP being generated by a conventional coal fired station (E1 in Table 7) ***plus*** *Emissions equivalent from boilers using the same fuel as CHP (E2 in Table 7)* ***minus*** *Emissions from CHP plants (E3 in Table 7).*

Chart 2: Installed CHP capacity by year



(1) This is the target for installed CHP capacity set in 1993 by the previous administration. A revised target is currently under consideration.

Some definitions of CHP would exclude such schemes since the heat is not being put to a beneficial use outside the power station itself. However, since in many cases some of the heat is used in space heating buildings on the site, all sewage waste fired plant are included in CHP statistics for the UK.

Emissions savings from CHP

Emissions savings from CHP are significant to the UK as a whole, and this technology has a central role in the UK's commitment to stabilise emissions. As Table 7 shows, in 1997 estimated savings due to CHP were 3,318 thousand tonnes of CO_2, 45 thousand tonnes of NO_X, and 263 thousand tonnes of SO_2 based on the assumption that electricity from CHP displaced electricity generated from conventional coal fired stations. The savings would be less if CHP displaced generation by CCGT's. Any estimates of emissions savings depend on assumptions about fuels and technologies displaced and, as already mentioned above, in reality CHP displaces a portfolio of plant.

CHP target

Chart 2 shows the change in installed CHP capacity over the last twenty years. Since 1988, capacity has doubled, representing an average growth rate over the period of 8½ per cent per annum. Growth over the last year has been lower than this at 5 per cent with an increase of 170 MWe. Growth in any one year depends on the rate of retirement of old plant as well as the rate at which new plant are built. The level of energy prices and uncertainties about their future trends will affect decisions to invest in new plant or retire old plant.

The previous Government's target for CHP was for the installation of 5,000 MWe of electrical capacity by the year 2000 and Chart 2 shows the increases in capacity by year in relation to this target. To fulfil its manifesto objective for CHP this Government is currently reviewing both the potential for CHP and the UK's commitments in the area of climate change with a view to setting a target for 2010. A detailed study of the CHP potential in industry, commerce and the public sector was carried out for the Department of the Environment, Transport and the Regions (DETR) by ETSU and that study has now been published. This study estimates that the cost effective potential for CHP in industry, commerce and the public sector is between 10,000 and 17,000 MWe, depending on assumptions made about future energy prices, users' required rate of return on investment, and other factors. DETR has commissioned the Building Research Energy Conservation Support Unit (BRECSU) to assess the potential for CHP in the housing and community heating sectors. The results of this work are expected in the autumn of 1998.

Further information

For further information about CHP, the following are the people to contact:

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EXPLANATORY NOTES

GENERAL

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

NOTES TO TABLES

- Figures for the latest periods and the corresponding averages or totals are provisional and are liable to subsequent revision.
- The figures have not been adjusted for temperature or seasonal factors except where noted in Tables 2 and 28. Due to rounding the sum of the constituent items may not equal the totals.
- Percentage changes relate to the corresponding period a year ago. They are calculated from unrounded figures but are shown only as (+) or (-) when the percentage change is very large.
- Monthly figures relate to four week periods except where otherwise indicated. Figures in the Gas and Petroleum sections relate to calendar months.
- All figures relate to the United Kingdom unless otherwise indicated.

ABBREVIATIONS

CCGT	-	Combined Cycle Gas Turbine
LDF	-	Light distillate feedstock
OTS	-	Overseas Trade Statistics of the United Kingdom
UKAEA	-	United Kingdom Atomic Energy Authority
BNF	-	British Nuclear Fuels plc
GDP	-	Gross domestic product
NGLs	-	Natural gas liquids
UKCS	-	United Kingdom Continental Shelf
VAT	-	Value added tax

SYMBOLS USED IN THE TABLES

..	not available.
-	nil or less than half the final digit shown.
*	five-week period.
p	provisional.
r	revised; where a column or row shows 'r' at the beginning, most, but not necessarily all, of the data have been revised.
e	estimated; totals of which the figures form a constituent part are therefore partly estimated.

CONVERSION FACTORS

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

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

CONVERSION MATRIX

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

	To: *multiply*	Thousand toe	Terajoules	Gigawatt hours	Million therms
From:	Thousand tonne of oil equivalent	1	41.87	11.63	0.3968
	Terajoules (TJ)	0.02388	1	0.2778	0.009478
	Gigawatt hours (GWh)	0.08598	3.6	1	0.03412
	Million therms	2.52	105.5	29.31	1

GENERATION OF ELECTRICITY

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". They are :

Anglian Power Generation, Barking Power Ltd., British Nuclear Fuels plc., Coolkeeragh Power Ltd., Corby Power Ltd., Derwent Cogeneration Ltd., Eastern Merchant Generation Ltd., Elm Energy & Recycling (UK) Ltd., Fellside Heat and Power Ltd., Fibrogen Ltd., Fibropower Ltd., First Hydro Ltd., Humber Power Ltd., Hydro-Electric, Indian Queens Power Ltd., Keadby Generation Ltd., Lakeland Power Ltd., Magnox Electric Plc, Medway Power Ltd., Midlands Power (UK) Ltd., National Power, NIGEN, Nuclear Electric, Peterborough Power Ltd., PowerGen, Premier Power Ltd., Regional Power Generators Ltd., Rocksavage Power Company Ltd., Scottish Nuclear, Scottish Power, South East London Combined Heat & Power Ltd., South Western Electricity, Teesside Power Ltd.

The term "Other Generators" is used for companies who produce electricity as part of their manufacturing or other commercial activities, but whose main business is not electricity generation. Because in most cases the majority of this electricity is used by the businesses themselves the term "autogenerators" is sometimes used to describe "Other Generators". Electricity consumed by industry and commerce from its own generation is included as part of final consumption, in line with the practice in international energy statistics.

SECTORIAL BREAKDOWNS

The categories for final consumption by user are defined by the Standard Industrial Classification 1992, as follows :

Fuel producers	10-12, 23, 40	Other final users	
		Agriculture	01, 02, 05
Final consumers:		Commercial	50-52, 55, 64-67, 70-74
Iron and steel	27, *excluding* 27.4, 27.53 and 27.54	Public administration	75, 80, 85
Other industry	13 to 22, 24 to 37, 41 and 45 excluding those parts of 27 relating to Iron and Steel.	Other services	90-93, 99
		Domestic	Not covered by SIC 1992
Transport	60-63		

ENERGY*trends*

Energy is a major natural resource and a key factor in the economy and environment of the United Kingdom. Data on energy supply and demand, energy prices and values and trade in energy are essential components of this country's main economic and environmental indicators.

ENERGY*trends* is a monthly publication produced by the Department of Trade and Industry which began in the 1960s. With tables, charts and commentary covering all the major aspects of energy, it provides a comprehensive picture of energy production and use over recent months. It allows readers to monitor trends during the year and as such complements the annual publications "Digest of United Kingdom Energy Statistics" and "The Energy Report" volumes 1 and 2. The **'Digest of United Kingdom Energy Statistics'** provides detailed annual data and analysis, going back, in some cases, to before 1960. The **'Energy Report Volume 1'** provides an update on Government policy and details the evolution of the energy sector towards full competition whilst **Volume 2,** often referred to as the **'Brown Book'**, gives details of oil and gas resources in the United Kingdom.

ENERGY*trends* provides essential information for everyone, from economists to environmentalists, and from energy suppliers to energy users.

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