ENERGY Trends

A Statistical Bulletin from the Department of Energy

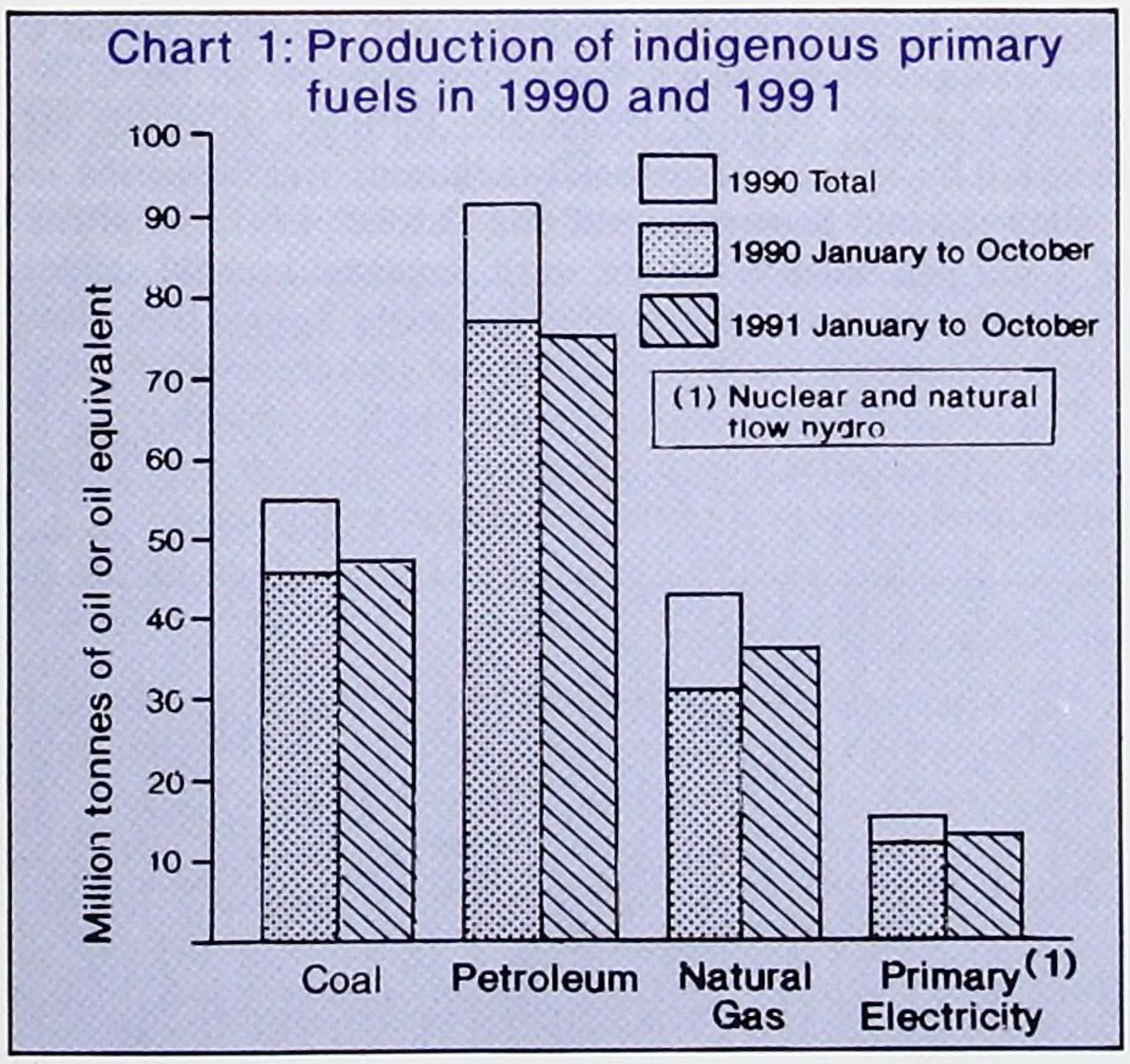
DECEMBER 1991

MAIN POINTS

- ★ *Crude oil production increased in October and rose to its highest monthly total in 1991.*
- ★ *Energy consumption in the three months, August to October, was similar to a year ago but 1.5 per cent lower after temperature correction.*
- ★ *Exports of oil products were over 50 per cent higher than a year earlier, with the UK making good supply differences in Western Europe caused by problems in Eastern Europe.*
- ★ *Capital investment in the North Sea in the first three quarters of 1991 was considerably higher than a year ago.*

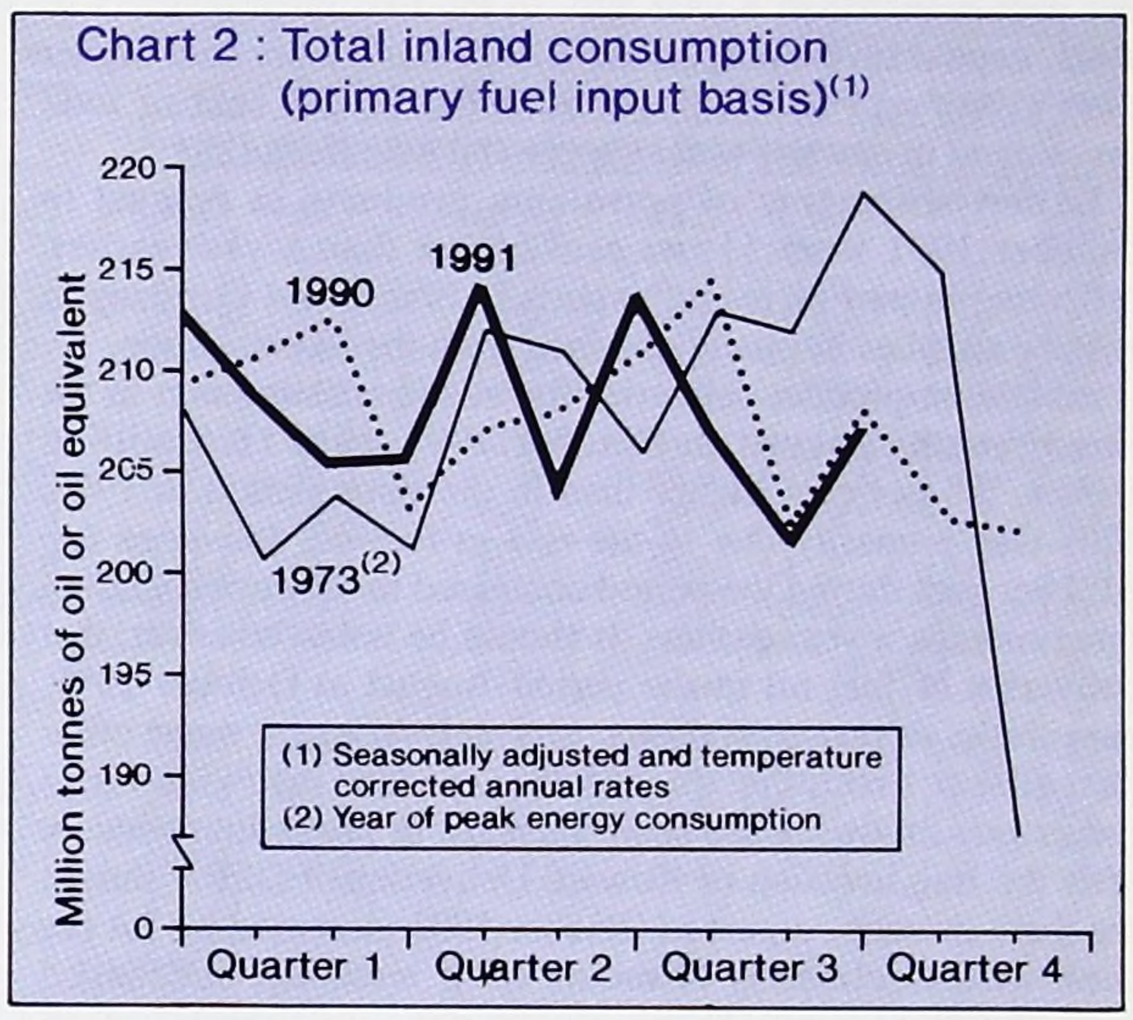
TOTAL ENERGY PRODUCTION (Table 1)

Indigenous production of primary fuels during the period August to October 1991, at 49.5 million tonnes of oil equivalent, was 6.5 per cent more than in the same period a year ago. Production of petroleum was 12.0 per cent higher, production no longer being 'depressed' by the installation of emergency shutdown valves. Production of natural gas increased by 5.1 per cent whilst production of coal was down by 2.2 per cent. Production of electricity from natural flow hydro stations fell by 13.2 per cent but nuclear production during the period August to October 1991, was up 12.2 per cent when compared with a year ago, due to improved Advanced Gas-cooled Reactor (AGR) performance.



TOTAL ENERGY CONSUMPTION (Table 2)

Total inland energy consumption, on a primary basis, in the three months August to October 1991 was 0.1 per cent lower than in the corresponding months of 1990. Consumption of nuclear electricity, petroleum and natural gas rose by 12.2 per cent, three per cent and 0.5 per cent respectively. Consumption of coal fell by 6.8 per cent. The average temperature during the period was lower than a year ago, making total consumption on a seasonally adjusted and temperature corrected basis 1.5 per cent lower than in August to October 1990. On this basis, consumption of petroleum increased by 2.9 per cent, whilst consumption of coal and natural gas decreased by 7.2 per cent and 3.8 per cent respectively.



COAL (Tables 4 to 7)

Provisional figures for the three months August to October 1991 show that total production was 23.0 million tonnes, 1.9 per cent less than in the corresponding months of 1990.

Use of home produced and imported coal in the period August to October 1991 was 23.5 million tonnes, 6.8 per cent

Continued on next page

less than in the same months a year earlier. Consumption at power stations and coke ovens fell by 8.8 per cent and 8.1 per cent respectively. Disposals by collieries and opencast sites to industry fell by 4.3 per cent, whilst disposals to the domestic sector rose by 22 per cent.

Total stocks of coal at the end of October 1991 were 44.7 million tonnes, one million tonnes higher than at the end of September and 4.7 million tonnes higher than at the end of October 1990.

Overall productivity in British Coal's mines was 9.7 per cent higher in October 1991, compared with October 1990, and in the first ten months of 1991 was nearly 13 per cent higher than in the same months of 1990.

GAS (Tables 8 and 9)

Provisional data for the period August to October 1991 show that 3.8 per cent less gas was sent out compared with a year ago. Indigenous supplies increased by 4.5 per cent whilst imported supplies fell by 19.6 per cent.

Revised data show that sales in the second quarter of 1991 increased by 14.9 per cent compared with a year earlier, mainly as a result of the cooler weather in May and June.

PETROLEUM (Tables 10 to 16)

Capital investment in the UK Continental Shelf (UKCS) continued to increase in the third quarter of 1991 and was 45 per cent higher than a year ago. In the first three quarters of 1991, capital investment in the UKCS was 37 per cent higher than a year ago and represented about 20 per cent of total investment in energy, water supply and manufacturing.

Export shipments of petroleum products in August to October 1991 were 51 per cent higher than a year earlier, reflecting in part increased exports to France and Germany to replace supplies normally obtained from the Soviet Union.

Petroleum product deliveries for inland consumption in the three months August to October 1991 were 18.6 million tonnes, 5.8 per cent higher than in the same period in 1990. This was primarily due to the rise in fuel oil deliveries (up 31.2 per cent during the period compared to the corresponding three months a year earlier). It should be noted however, that deliveries of fuel oil in the period August to October 1990, especially to power stations, and deliveries of most other petroleum products during this period showed large reductions following the sharp increase in prices immediately after the Iraq invasion of Kuwait. Deliveries of DERV during the three months August to October 1991 increased by 2.4 per cent, whilst deliveries of motor spirit remained unchanged from the 1990 level. There were increased deliveries of all other major product categories with the exception of butane and propane and lubricating oils. Deliveries of unleaded petrol in October 1991 represented 43 per cent of total motor spirit deliveries.

Stocks of petroleum products decreased by 1.8 per cent during October, but at the end of the month were 0.3 per cent more than at the end of October 1990. Stocks of crude oil and refinery process oils rose by 4.9 per cent during October, and at the end of the month were 2.9 per cent more than a year earlier.

ELECTRICITY (Tables 17 to 22)

Total electricity supplied decreased by 1.2 per cent during the third quarter of 1991 when compared to the same period a year ago. Within the total, supply from other generating companies fell by 0.3 per cent.

Electricity supplied by the major generating companies in the period August to October 1991 was 0.8 per cent lower than a year earlier. The supply from conventional steam stations fell by 4.5 per cent, but that from nuclear stations rose by 13.6 per cent. When imports and electricity available from other UK sources are included, total electricity available through the public distribution system fell by 0.6 per cent when compared with the corresponding period a year earlier.

Fuel used by the major generating companies in the three months August to October 1991 fell by 2.6 per cent compared to the corresponding period a year ago. Within this total, a reduction in the use of coal was partly offset by an increase in generation from nuclear sources. Oil consumption in the period August to October 1991 was higher than in August to October 1990 due to the switch from oil to coal usage in power stations which occurred in August/October last year as a result of oil price increases when Iraq invaded Kuwait.

Sales of electricity by the public distribution system during the third quarter of 1991 were 0.7 per cent lower than a year earlier, with sales to commercial consumers up by 1.5 per cent, but sales to domestic consumers remaining at the same level. Sales to industrial consumers were down by 3.3 per cent, but those to other consumers were up by 5.6 per cent. Consumption of electricity available from other generators was 1.8 per cent more than in the third quarter of 1990. Thus total consumption of electricity during the third quarter of 1991 was 0.6 per cent lower than a year earlier.

PRICES (Tables 25 to 29)

This month's issue contains third quarter 1991 data for the prices of fuels purchased by manufacturing industry in Great Britain. Prices of the main oil products (heavy fuel oil and gas oil) showed only small changes, and coal prices remained stable when compared to second quarter 1991 levels. Prices of electricity exhibited small increases. Gas prices showed seasonal falls for contract customers, but for the small sizeband, where customers are usually on tariffs, prices rose as the 1 April tariff increase fed through.

Industrial sector fuel prices indices for the third quarter of 1991 are also shown, in Table 27. The current price index for all fuels for the third quarter of 1991 on a seasonally adjusted basis rose by three per cent compared with the same period a year earlier. There was a 7 per cent increase in the GDP (market prices) deflator. Hence, the deflated index for all fuels fell by 4 per cent (seasonally adjusted) over the period.

Between mid-September and mid-October 1991, the prices of 4 star and unleaded motor spirit remained broadly stable, whilst the price of DERV rose by nearly 1p per litre. The prices of standard grade burning oil and gas oil rose slightly.

The crude oil price index shows that the average cost of crude oil acquired by refineries in October rose by a provisional one per cent from the September level.

Technical note on statistical calendar aspects

The statistical calendar determines which weeks are included in the 4 or 5 week statistical months. Notes in previous editions of Energy Trends have referred to British Coal's (BCC) new statistical calendar which commenced on 1 April 1990. This change resulted from the inclusion of an additional (sixth) week in BCC's statistical month of March 1990. For comparison purposes in Energy Trends, this six week March 1990 data was adjusted at the time to show the equivalent of a 5 week statistical month. However, in order to avoid a distortion to 1990 annual (calendar year) data, arising from the inclusion of two similar public holiday weeks in a single year, further adjustments have now been made to British Coal's reported data for the months of January, February and March 1990. The March 1990 period now covers the 5 weeks to 31 March. Figures for January and February 1990 now end one week later and cover the 4 week periods to 27 January and 24 February respectively. These changes affect production, consumption and stocks and have been incorporated in Tables 1 to 6 inclusive.

TOTAL ENERGY

TABLE 1. Indigenous production of primary fuels

Million tonnes of oil or oil equivalent

	Total	Coal[1]	Petroleum[2,3]	Natural gas[4]	Primary electricity: Nuclear	Primary electricity: Natural flow hydro
1986	243.5	63.6	127.0	39.0	12.56	1.41
1987	238.4	61.4	123.3	40.8	11.67	1.23
1988	229.7	61.1	114.5	39.3	13.45	1.42
1989	206.2	59.5	91.8	38.3	15.35	1.38
1990	204.5	54.7	91.6	42.5	14.19	1.53
Per cent change	*–0.9*	*–8.1*	*–0.2*	*+10.7*	*–7.5*	*+10.9*
1990 Jan-Oct	166.8	45.6	77.0	31.4	11.41	1.29
1991 Jan-Oct p	171.3	47.2	74.6	36.1	12.44	1.03
Per cent change	*+2.8*	*+3.5*	*–3.1*	*+14.8*	*+9.0*	*–20.1*
1990 Aug	13.3	3.7	7.0	1.5	1.04	0.07
Sep*	16.3	5.5	6.8	2.6	1.29	0.11
Oct	16.9	4.7	8.0	3.0	1.02	0.15
Total	46.5	13.9	21.9	7.0	3.35	0.33
1991 Aug	14.4	3.6	7.9	1.6	1.16	0.07
Sep*	17.0 r	5.4	7.9 r	2.3	1.33	0.09
Oct p	18.1	4.6	8.7	3.4	1.26	0.13
Total	49.5	13.5	24.5	7.4	3.76	0.29
Per cent change	*+6.5*	*–2.2*	*+12.0*	*+5.0*	*+12.2*	*–13.3*

1. Includes an estimate for slurry, etc recovered and disposed of otherwise than by the British Coal Corporation (BCC). 2. Calendar months. 3. Crude oil, offshore and land, plus condensates and petroleum gases derived at onshore treatment plants. 4. Including colliery methane. Excluding gas flared or re-injected.

TABLE 2. Inland energy consumption: primary fuel input basis

Million tonnes of oil or oil equivalent

	Total	Coal[1,2]	Petroleum[3]	Natural gas[4]	Primary electricity: Nuclear	Primary electricity: Natural flow hydro[5]	Primary electricity: Net imports
	Unadjusted[6]						
1986	197.2	66.8	66.2	49.2	12.56	1.41	1.02
1987	198.9	68.3	64.3	50.5	11.67	1.23	2.79
1988	200.1	65.9	68.3	47.9	13.45	1.42	3.08
1989	200.1	63.6	69.5	47.4	15.35	1.38	3.03
1990	202.5	63.7	71.3	49.0	14.19	1.53	2.87
Per cent change	*+1.2*	*+0.1*	*+2.5*	*+3.4*	*–7.5*	*+10.9*	*–5.4*
1990 Jan-Oct	162.1	51.4	59.4	36.4	11.41	1.29	2.15
1991 Jan-Oct p	166.2	51.2	58.0	40.3	12.44	1.03	3.22
Per cent change	*+2.5*	*–0.5*	*–2.3*	*+10.6*	*+9.0*	*–20.1*	*+50.0*
1990 Aug	12.6	4.1	5.4	1.7	1.04	0.07	0.28
Sep*	16.9	5.7	6.5	3.0	1.29	0.11	0.38
Oct	14.8	5.0	5.0	3.3	1.02	0.15	0.32
Total	44.4	14.8	16.8	8.1	3.35	0.33	0.98
1991 Aug	12.4	3.8	5.3	1.8	1.16	0.07	0.31
Sep*	16.3	5.2	6.6	2.6	1.33	0.09	0.39
Oct p	15.6	4.7	5.5	3.7	1.26	0.13	0.31
Total	44.3	13.8	17.4	8.1	3.76	0.29	1.02
Per cent change	*–0.1*	*–6.8*	*+3.0*	*+0.5*	*+12.2*	*–13.2*	*+3.7*

	Total	Coal[1,2]	Petroleum[3]	Natural gas[4]	Primary electricity: Nuclear	Primary electricity: Natural flow hydro[5]	Primary electricity: Net imports
	Seasonally adjusted and temperature corrected[7] *(annualised rates)*[8]						
1986	193.1	65.1	65.1	48.0	12.56	1.41	1.02
1987	196.1	67.2	63.5	49.6	11.67	1.23	2.79
1988	201.9	65.9	68.3	49.7	13.45	1.42	3.08
1989	204.8	64.5	70.2	50.5	15.35	1.38	3.03
1990	209.2	64.9	73.2	52.4	14.19	1.53	2.87
Per cent change	*+2.1*	*+0.6*	*+4.4*	*+3.9*	*–7.5*	*+10.9*	*–5.4*
1990 Jan-Oct	209.1	65.2	74.3	51.5	13.90	1.58	2.60
1991 Jan-Oct p	207.9	63.8	71.8	52.0	15.20	1.31	3.90
Per cent change	*–0.6*	*–2.2*	*–3.4*	*+0.9*	*+9.4*	*–16.7*	*+50.0*
1990 Aug	214.6	68.2	76.3	50.1	14.76	1.56	3.70
Sep*	202.6	66.7	65.3	51.2	13.95	1.54	3.98
Oct	208.6	69.7	67.0	52.2	14.01	1.58	4.11
Total Average	208.6	68.2	69.5	51.2	14.24	1.56	3.93
1991 Aug	207.3	63.2	74.5	47.6	16.54	1.32	4.07
Sep*	201.7	63.6	68.9	49.4	14.43	1.30	4.08
Oct p	207.6	63.0	71.2	50.7	17.29	1.31	4.09
Total Average	205.5	63.3	71.6	49.2	16.09	1.31	4.08

1. Consumption by fuel producers plus disposals (including imports) to final users, plus (for annual unadjusted figures only) net foreign trade and stock change in other solid fuels. 2. See Technical Note on Statistical Calendar in June 1990 edition. 3. Inland deliveries for energy use plus refinery fuel and losses minus the differences between deliveries and actual consumption at power stations and gas works. 4. Including non-energy use and excluding gas flared or re-injected. 5. Excludes generation from pumped storage stations. 6. Not seasonally adjusted or temperature corrected. 7. Coal, petroleum and natural gas are temperature corrected. 8. For hydro the estimated annual out-turn.

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 27.
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. These comparisons can be affected by calendar differences.
Monthly figures relate to four week periods except where otherwise indicated. Figures in the Petroleum section relate to calendar months.

All figures relate to the United Kingdom unless otherwise indicated.
Approximate conversion factors are shown after Table 23.
Definitions and abbreviations are shown below Table 29.

Symbols used in the tables

. . not available
— Nil or less than half the final digit shown
* five-week period
p provisional
r revised
e estimated; totals of which the figures form a constituent part are therefore partly estimated.

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

Million therms

	1989	1990	Per cent change	1989 3rd quarter	1989 4th quarter	1990 1st quarter	1990 2nd quarter	1990 3rd quarter	1990 4th quarter	1991p 1st quarter	1991p 2nd quarter	Per[1] cent change
PRIMARY FUELS AND EQUIVALENTS												
Production of primary fuels												
Coal	24,492	22,798 r	*–6.9*	5,319	6,332	5,939 r	5,740 r	5,572 r	5,545 r	5,902	5,927	*+3.3*
Petroleum[1]	39,972	39,836	*–0.8*	10,342	10,934	10,527	10,416	9,074	9,819	10,108	8,267	*–20.6*
Natural gas[2]	16,341	18,042	*+10.4*	2,138	5,305	6,064	3,711	2,421	5,846	7,110	4,333	*+16.8*
Primary electricity	6,491	6,145	*–5.3*	1,414	1,566	1,739	1,400	1,359	1,647	1,898	1,402	*+0.1*
Total	87,296	86,821 r	*–0.5*	19,213	24,137	24,269 r	21,267 r	18,426 r	22,857 r	25,018	19,929	*–6.3*
Arrivals, Petroleum[3]	25,520	27,547	*+7.9*	6,142	6,847	7,348	6,964	7,245	5,987	6,811	7,768	*+11.5*
Other	8,771	8,163	*–6.9*	1,719	2,290	2,019	1,930	1,757	2,455	2,741	2,394	*+24.0*
Shipments	29,710	32,090	*+8.0*	7,616	8,278	8,797 r	8,298	7,185	7,820	7,614	7,485	*–9.7*
Marine Bunkers	1,002	1,058	*+5.6*	274	227	249	287	276	246	246	291	*+1.4*
Stock changes[4]												
Solid fuels	–707	+391		–152	+544	+1,185	–583	–562	+349	+381	–829	
Crude Petroleum	–417	+196		–322	+55	–324	+190	–57	+387	–439	+104	
Petroleum products	–107	–68		–121	–52	+77	–120	–148	+123	–160	+129	
Natural gas	–52	+46		–133	+22	+33	–50	–59	+120	+289	–300	
Non–energy use	4,298	3,968	*–7.7*	1,065	1,115	1,075	951	1,027	917	966	1,055	*+11.0*
Statistical difference[5]	–444	–3		+256	–934	+495	–240	–15	–234	+20	–5	
Total primary energy input[6]	84,849	85,968 r	*+1.3*	17,647	23,291	24,981 r	19,822 r	18,099 r	23,061 r	25,835	20,346	*+2.6*
Conversion losses etc.[7]	25,799	26,457 r	*+2.6*	5,745	6,983	7,782 r	6,123 r	5,798 r	6,746 r	7,603	6,143	*–0.3*
Final energy consumption[8]	59,050	59,511 r	*+0.8*	11,902	16,308	17,199 r	13,699 r	12,301 r	16,315 r	18,232	14,203	*+3.7*
FINAL CONSUMPTION BY USER[8]												
Iron and steel industry												
Coal	5	4	*–20.0*	1	1	1	1	1	1	1	1	*–33.3*
Other solid fuel[9]	1,815	1,690	*–6.9*	443	431	440	429	404	417	430	425	*–0.9*
Coke oven gas	269	270	*+0.4*	67	67	67	67	67	67	65	64	*–4.5*
Gas[10]	471	465	*–1.3*	98	130	132	116	94	123	128	110	*–5.2*
Electricity	281	268	*–4.6*	67	69	70	69	64	66	70	69	—
Petroleum	351	322	*–8.3*	80	80	78	95	98	50	63	75	*–21.1*
Total	3,192	3,019	*–5.4*	756	779	788	777	728	724	757	744	*–4.2*
Other industries												
Coal	1,917	1,938 r	*+1.1*	431	486	531 r	506 r	445 r	455 r	555	450	*–11.1*
Other solid fuel[9]	97	88	*–9.3*	26	23	23	22	19	23	16	6	*–72.7*
Coke oven gas	27	19	*–29.6*	6	7	7	6	3	3	7	6	—
Gas[10]	5,075	5,233	*+3.1*	990	1,448	1,583	1,151	1,005	1,492	1,574	1,180	*+2.5*
Electricity	2,772	2,830	*+2.1*	668	703	716	701	676	738	726	662	*–5.6*
Petroleum	3,400	3,209	*–5.6*	654	892	909	786	725	790	962	808	*+2.8*
Total	13,285	13,317 r	*+0.2*	2,775	3,559	3,769 r	3,172 r	2,873 r	3,501 r	3,841	3,112	*–1.9*
Transport sector												
Coal and other solid fuel	1	1	—	—	—	—	—	—	—	1	—	—
Electricity[11]	108	199	*+84.3*	25	28	53	48	47	51	54	51	*+5.6*
Petroleum	18,727	19,126	*+2.1*	4,891	4,709	4,617	4,856	4,968	4,687	4,406	4,708	*–3.0*
Total	18,836	19,326	*+2.6*	4,916	4,737	4,670	4,904	5,015	4,738	4,461	4,759	*–2.9*
Domestic sector												
Coal	1,642	1,363 r	*–17.0*	319	398	376 r	361 r	306 r	320 r	533	418	*+15.8*
Other solid fuel[9]	418	398	*–4.8*	102	94	108	105	100	85	108	106	*+1.0*
Gas[10]	9,914	10,189	*+2.8*	962	3,305	3,742	1,827	1,098	3,523	4,393	2,240	*+22.6*
Electricity	3,148	3,200	*+1.7*	587	916	967	688	608	937	1,050	749	*+8.8*
Petroleum	951	989	*+4.0*	170	294	303	203	217	267	339	228	*+12.2*
Total	16,073	16,139 r	*+0.4*	2,140	5,007	5,496 r	3,184 r	2,329 r	5,138 r	6,423	3,740	*+17.5*
Other final users[12]												
Coal	277	315 r	*+13.7*	44	84	105 r	79	56 r	76 r	90	63	*–19.3*
Other solid fuel[9]	108	108	—	27	26	28	31	27	22	24	23	*–25.8*
Gas[10]	2,919	2,983	*+2.2*	308	933	1,106	580	340	957	1,345	750	*+29.3*
Electricity	2,577	2,552	*–1.0*	607	708	709	579	573	691	728	616	*+6.4*
Petroleum	1,784	1,750	*–1.9*	327	475	528	393	360	468	564	395	*+0.5*
Total	7,665	7,710 r	*+0.6*	1,313	2,226	2,476 r	1,662	1,356 r	2,214 r	2,751	1,848	*+11.2*
Total final users	59,050	59,511 r	*+0.8*	11,902	16,308	17,199 r	13,699 r	12,301 r	16,315 r	18,232	14,203	*+3.7*
FINAL CONSUMPTION BY FUEL[8]												
Coal	3,842	3,619 r	*–5.8*	795	969	1,021 r	947 r	807 r	858 r	1,180	931	*+0.2*
Other solid fuel[9]	2,438	2,285	*–6.3*	598	574	599	586	548	547	578	561	*–4.3*
Coke oven gas	295	289	*–2.0*	73	74	74	73	71	71	72	70	*–4.1*
Gas[10]	18,380	18,870	*+2.7*	2,358	5,816	6,563	3,676	2,540	6,095	7,440	4,280	*+16.4*
Electricity	8,886	9,051	*+1.9*	1,954	2,424	2,515	2,085	1,968	2,483	2,628	2,146	*+2.9*
Petroleum	25,209	25,397	*+0.7*	6,122	6,450	6,435	6,333	6,368	6,262	6,335	6,215	*–1.9*
Total all fuels	59,050	59,511 r	*+0.8*	11,902	16,308	17,199 r	13,699 r	12,301 r	16,315 r	18,232	14,203	*+3.7*

1. Crude petroleum and natural gas liquids. Annual data include extended well-test production. 2. Excluding gas flared or re-injected. 3. Crude petroleum, process oils and petroleum products. 4. Stock fall (+) and stock rise (–). 5. Supply greater than recorded demand (—). 6. Thermal equivalent of total inland energy consumption in Table 2. A more detailed analysis of the 1990 figures is shown in the Digest of United Kingdom Energy Statistics 1991 Tables 4 and 5. 7. Losses in conversion and distribution and used by fuel industries. 8. Deliveries, except for natural gas, electricity and iron and steel industry use of solid fuels. 9. Coke and other manufactured solid fuels. 10.Includes colliery methane. Also includes non-energy use of natural gas. 11. Data prior to 1st quarter 1990 relates to use for traction only. From 1st quarter 1990, data includes use in transport-related premises, eg. airports, warehouses, etc. 12. Mainly public administration, commerce and agriculture.

COAL

TABLE 4. Coal production, foreign trade and deep-mined tonnage lost

Thousand tonnes

	Production						Tonnage lost (deep-mined)[2 5]	
	Total[1 2]	Deep-mined	Opencast	Net imports	Imports[3]	Shipments[4]	Recognised holidays and rest days	Disputes
1986	108,099	90,366	14,275	+7,877	10,554	2,677	9,643	893
1987	104,533	85,957	15,786	+7,428	9,781	2,353	9,799	1,724
1988	104,066	83,762	17,899	+9,864	11,685	1,822	9,153	3,633
1989	101,135	79,628	18,657	+10,088	12,137	2,049	7,593	506
1990	94,397 r	72,899 r	18,134 r	+12,250 r	14,783	2,533 r	4,557 r	410 r
Per cent change	*–6.7*	*–8.5*	*–2.8*		*+21.8*	*+23.7*	*–40.0*	*–19.1*
1990 Jan-Oct	79,026	60,790	15,131	+9,400	11,581	2,181	3,101	394
1991 Jan-Oct p	80,152	61,325	15,513	+14,930	16,341	1,411	2,556	251
Per cent change	*+1.4*	*+0.9*	*+2.5*		*+41.1*	*–35.3*	*–17.6*	*–36.2*
1990 Aug	6,261 r	4,676	1,444	+1,196	1,374	177	775	7
Sep*	9,278 r	6,952	1,891	+670	882	213	272	31
Oct	7,858	6,140	1,535	+1,372	1,515	143	10	14
Total	23,397	17,767	4,870	+3,238	3,771	533	1,057	52
1991 Aug	6,057 r	4,477	1,321	+1,137	1,255	118	565	80
Sep*	9,102	6,725	1,966	+1,653	1,821	168	296	20
Oct p	7,797	5,929	1,614	+1,332	1,451	120	10	70
Total	22,957	17,131	4,900	4,121	4,527	405	870	170
Per cent change	*–1.9*	*–3.6*	*+0.6*		*+20.0*	*–24.0*	*–17.7*	*(+)*

1. Includes an estimate for slurry, etc., recovered and disposed of otherwise than by BCC. 2. See the Technical Note on Statistical Calendar inside front cover. 3. As recorded in the Overseas Trade Statistics of the United Kingdom (OTS). 4. Shipments as recorded by BCC; the figures may differ from those published in OTS. 5. BCC only.

TABLE 5. Inland coal use

Thousand tonnes

	Fuel producers (consumption)					Final users (disposals by collieries and opencast sites)			
		Primary	Secondary				Domestic		
	Total[1]	Collieries	Power stations[2]	Coke ovens	Other[3] conversion industries	Industry[4]	House coal[4 5]	Other[6]	Other[7]
1986	114,234	306	82,652	11,122	1,959	8,170	6,989	1,537	1,500
1987	115,894	235	86,176	10,859	2,052	7,986	5,685	1,475	1,425
1988	111,498	196	82,465	10,902	2,006	8,083	5,112	1,469	1,265
1989	107,581	146	80,633	10,792	1,717	7,514	4,344	1,368	1,066
1990	108,256 r	117 r	82,555	10,852 r	1,544 r	7,356 r	3,372 r	1,250 r	1,211 r
Per cent change	*+0.6*	*–20.0*	*+2.4*	*+0.6*	*–10.1*	*–2.1*	*–22.4*	*–8.7*	*+13.6*
1990 Jan-Oct	87,432	99	65,944	9,030	1,310	6,131	2,897	1,030	991
1991 Jan-Oct p	87,012	93	65,578	8,334	1,263	5,887	3,530	1,441	888
Per cent change	*–0.5*	*–6.5*	*–0.6*	*–7.7*	*–3.6*	*–4.0*	*+21.8*	*+39.9*	*–10.4*
1990 Aug	6,976 r	6	5,212	823	110	482	204	81	59
Sep*	9,691 r	6	7,436	1,016	121	669	266 r	85	93
Oct	8,505	12	6,575	839	118	503	279	107	73
Total	25,173	24	19,223	2,677	348	1,654	749	273	226
1991 Aug	6,506 r	6	4,705	748	121	485 r	260 r	125	56
Sep*	8,905 r	7	6,772 r	947 r	136	570	252	129 r	92 r
Oct p	8,042	9	6,051	765	117	528	323	160	91
Total	23,453	22	17,527	2,460	374	1,583	835	414	238
Per cent change	*–6.8*	*–6.8*	*–8.8*	*–8.1*	*+7.4*	*–4.3*	*+11.6*	*+51.6*	*+5.7*

1. See the Technical Note on Statistical Calendar inside front cover. 2. Coal-fired power stations belonging to major electricity generating companies (see definitions below Table 29). 3. Low temperature carbonisation and patent fuel plants. 4. Includes estimated proportion of total imports. 5. Including miners' coal. 6. Anthracite, dry steam coal and imported naturally smokeless fuels. 7. Includes public administration and commerce.

TABLE 6. Stocks of coal[1] at end of period: Great Britain

Thousand tonnes

		Distributed				Undistributed		
	Total[2]	Total distributed stocks	Power stations	Coke ovens	Other	Total undistributed stocks	Collieries	Opencast sites
1986	38,481	29,776	27,983	1,619	175	8,704	5,996	2,708
1987	33,157	27,015	25,292	1,550	173	6,142	4,903	1,239
1988	35,999	28,667	27,004	1,512	150	7,332	5,621	1,170
1989	39,083	29,030	27,351	1,566	113	10,053	6,872	3,182
1990	37,553	28,540	26,905	1,564	70	9,013	5,980	3,033
1990 Aug	38,648	30,665	28,871	1,727	67	7,983	4,835	3,148
Sep*	39,130	30,874	29,363	1,452	59	8,256	4,918	3,338
Oct	39,948	31,257	29,583	1,612	62	8,691	5,348	3,343
1991 Aug	42,285	32,001	30,347	1,611	43	10,283	7,982	2,302
Sep*	43,657	33,058	31,328	1,681	49	10,599	8,173	2,426
Oct p	44,662	33,459	31,831	1,578	50	11,203	8,676	2,527
Absolute change:								
in latest month	+1,005	+401	+503	–103	+1	+604	+503	+101
on a year ago	+4,714	+2,202	+2,248	–34	–12	+2,513	+3,328	–815

1. Excluding distributed stocks held in merchants' yards, etc., mainly for the domestic market, and stocks held by the industrial sector. 2. See Technical Note on Statistical Calendar inside front cover.

TABLE 7. Colliery manpower and productivity at BCC mines[1]

	Wage earners on colliery books				Absence percentage			Average output per manshift worked[5]		
									Underground	
	Total[2]	Underground[2]	Recruitment	Wastage	Total	Voluntary[3]	Involuntary[4]	Overall	Total	Production[6]
	Thousands		*Number*		*Per cent*			*Tonnes*		
1986	119	98	1,401	30,617	10.8	3.6	7.2	3.15	3.92	13.82
1987	102	85	2,514	19,067	10.1[7]	3.5	6.6[7]	3.59	4.42	15.81
1988	86	72	625	17,061	9.1[7]	3.1	6.0[7]	3.97	4.85	18.25
1989	66	56	761	20,509	8.8[7]	3.1	5.7[7]	4.33	5.21	20.41
1990	59	50	712 r	7,279 r	8.3[7]	3.0	5.3[7]	4.53	5.40	21.86
Per cent change	*–9.9*	*–9.8*	*–6.4*	*–64.5*				*+4.6*	*+3.6*	*+7.1*
1990 Jan-Oct	64[8]	54[8]	495	5,682	8.4	3.1	5.4	4.51	5.39	21.69
1991 Jan-Oct p	56[8]	48[8]	1,051	7.521	7.9	2.8	5.1	5.10	6.06	24.27
Per cent change	*–11.9*	*–11.4*	*(+)*	*+32.4*				*+12.9*	*+12.5*	*+11.9*
1990 Aug	62	52	125	745	7.2	2.7	4.5	4.37	5.24	21.57
Sep*	61	52	82	518	8.1	2.9	5.2	4.69	5.58	22.25
Oct	61	52	94	551	9.0	3.0	5.9	4.83	5.72	22.99
1991 Aug	55	47	82	664	7.0	2.5	4.5	4.65	5.59	22.61
Sep*	54	46	66	916	7.7	2.7	5.1	5.11	6.09	23.66
Oct p	53	45	68	1,123	8.2	2.8	5.4	5.30	6.28	25.25

1. See the Technical Note on Statistical Calendar inside front cover. 2. At the end of period. 3. Absence for which no reason has been given (ie excludes absence through industrial disputes). 4. Absence mainly for sickness or injury. 5. Saleable deep-mined revenue coal. 6. Output from production faces divided by production manshifts. 7. From July 1987 the priority given to sickness over holidays when recording the causes of non-deployment has been reversed. This will tend to reduce the calculated absence percentage, particularly during the summer months. 8. Average numbers during the period.

GAS

TABLE 8. Sources of supply and gas sent out

	Natural gas supply					Gas sent out[1]
		Source				
	Gas input[1,2]	Indigenous	Imported	Indigenous	Imported	
	Million therms			*Percentage of total*		*Million therms*
1986	19,871	15,188	4,683	76.4	23.6	19,370
1987	20,319	15,904	4,416	78.3	21.7	19,935
1988	19,211	15,314	3,897	79.7	20.3	18,783
1989	18,976	15,095	3,882	79.5	20.5	18,748
1990	19,404	16,674	2,730	8.59	14.1	19,382
Per cent change	*+2.3*	*+10.5*	*–29.7*			*+3.4*
1990 Jan-Oct	14,567	12,366	2,201	84.9	15.1	14,450
1991 Jan-Oct p	16,274	14,321	1,953	88.0	12.0	16,009
Per cent change	*+11.7*	*+15.8*	*–11.3*			*+10.8*
1990 Aug	706	543	163	76.9	23.1	670
Sep*	1,199	1,007	192	84.0	16.0	1,195
Oct	1,316	1,165	151	88.5	11.5	1,307
Total	3,221	2,715	506	84.3	15.7	3,172
1991 Aug	701	604	97	86.2	13.8	653
Sep*	1,032	883	149	85.6	14.4	947
Oct p	1,510	1,349	161	89.3	10.7	1,453
Total	3,243	2,836	407	87.4	12.6	3,053
Per cent change	*+0.7*	*+4.5*	*–19.6*			*–3.8*

1. Figures include third party carriage gas. 2. Figures differ from **Gas sent out** because of stock changes and the inclusion of small quantities of Substitute natural gas and Town gas in **Gas sent out.** They include gas put to storage, but to avoid double counting, exclude gas withdrawn from storage to the system. The figures also differ from total consumption (expressed in oil equivalent in Table 2) because they exclude producers' own use and losses.

TABLE 9. Gas sales

Million therms

	Total[1]	Power stations[2]	Iron and steel industry	Other industries	Domestic	Other[3]
1986	18,497	75	419	4,853	10,242	2,908
1987	19,373	79	468	5,335	10,500	2,990
1988	18,639	83	449	4,856	10,254	2,996
1989	18,349	82	471	4,964	9,914	2,919
1990	18,832	86	465	5,108	10,189	2,983
Per cent change	*+2.6*	*+4.9*	*–1.3*	*+2.9*	*+2.8*	*+2.2*
1989 2nd quarter	3,844	20	120	1,216	1,881	606
3rd quarter	2,346	19	98	960	962	308
4th quarter	5,805	21	130	1,417	3,305	933
1990 1st quarter	6,558	22	132	1,556	3,742	1,106
2nd quarter	3,666	22	116	1,122	1,827	580
3rd quarter	2,525	21	94	973	1,098	340
4th quarter	6,082	22	123	1,457	3,523	957
1991 1st quarter	7,416	22	128	1,529	4,393	1,344
2nd quarter	4,211	21	109	1,114	2,253	714
Per cent change	*+14.9*	*–4.5*	*–6.0*	*–0.7*	*+23.3*	*+23.1*

1. Includes sales to the non-tariff sector by independent gas suppliers. 2. Power stations belonging to major generating companies (see definitions below Table 29) and transport undertakings. 3. Public administration, commerce and agriculture.

PETROLEUM

TABLE 10. Drilling Activity

Number of wells started[1]

	Offshore				Onshore	
	Exploration	Appraisal	Exploration & appraisal	Development[2]	Exploration & appraisal	Development[2]
1986	77	46	123	96	55	13
1987	75	72	147	138	38	2
1988	93	84	177	166	19	30
1989	94	89	183	154	17	28
1990	159	65	224	124	13	23
Per cent change	*+69.1*	*–27.0*	*+22.4*	*–19.5*	*–23.5*	*–17.9*
1990 1st quarter	21	15	36	33	4	8
2nd quarter	35	17	52	37	3	7
3rd quarter	52	22	74	26	5	5
4th quarter	51	11	62	28	1	3
1991 1st quarter	38	19	57	33	2	2
2nd quarter	28	21	49	36	3	—
3rd quarter	23	14	37	29	2	—
Per cent change	*–55.8*	*–36.4*	*–50.0*	*+11.5*	*–60.0*	—

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

TABLE 11. Value of, and investment in, UKCS oil and gas production

£ million

	Total income[1]	Operating costs	Exploration expenditure	Gross trading profits[2] (net of stock appreciation)	Percentage contribution to GDP[3]	Capital investment	Percentage contribution to industrial investment[4]
1986	11,947	2,144	1,039	8,202	2.5	2,574	16
1987	12,610	2,107	816	9,510	2.7	2,041	12
1988	10,387	2,061	1,129	6,884	1.7	2,136	11
1989	10,344	2,330	1,182	6,583	1.5	2,705	12
1990	12,024	2,908	1,637	7,040	1.5	3,528	14
Per cent change	*+16.2*	*+24.8*	*+38.5*	*+6.9*		*+30.4*	
1990 1st quarter	3,252	641	287	2,240	2.0	764	12
2nd quarter	2,439	713	385	1,293	1.1	899	15
3rd quarter	2,706	708	425	1,306	1.1	960	16
4th quarter	3,627	846	541	2,201	1.8	906	14
1991 1st quarter	3,196	722	422	2,034	1.7	1,022	17
2nd quarter	2,656	891	516	1,076	0.9	1,171	20
3rd quarter	2,739	812	480	1,323	1.1	1,390	23
Per cent change	*+1.2*	*+14.7*	*+12.9*	*+1.3*		*+44.8*	

1. Includes sales of crude oil, NGLs and natural gas plus other income associated with oil and gas production. 2. Gross trading profits are equal to income *less* operating costs, *less* exploration expenditure *less* other expenses (not shown in the table) and are calculated net of stock appreciation. 3. GDP at factor cost. 4. Energy, water supply and the manufacturing sector (inclusive of leasing).

TABLE 12. Indigenous production, refinery receipts, arrivals and shipments

	Indigenous production[1]			Refinery receipts			Foreign trade[6]						
							Crude oil and NGLs		Process oils		Petroleum products		
	Total	Crude oil	NGLs[2]	Indigenous[3]	Other[4]	Net foreign arrivals[5]	Arrivals	Shipments	Arrivals	Shipments	Arrivals	Shipments	Bunkers[7]
	Million tonnes			*Thousand tonnes*									
1986	127.0	121.2	5.8	38,780	1,006	39,880	30,844	83,660	10,365	1,316	11,767	17,726	2,091
1987	123.3	117.6	5.7	38,794	939	40,630	31,713	80,273	9,827	883	8,570	17,056	1,668
1988	114.4	109.4	5.0	40,582	730	42,613	34,495	70,274	9,777	1,658	9,219	17,176	1,831
1989	91.6	87.2	4.4	39.585	904	48,351	38,676	49,328	10,824	1,134	9,479	17,873	2,396
1990	91.6	88.0	3.6	37,754	916	51,065	42,074	54,131	10,636	1,769	11,005	18,002	2,538
Per cent change	—	*+0.9*	*–18.2*	*–4.6*	*+1.3*	*+5.6*	*+8.8*	*+9.7*	*–1.7*	*+56.0*	*+16.1*	*+0.7*	*+5.9*
1990 Jan-Oct	77.0	73.9	3.1	31,164	775	43,514	35,967	45,847	8,922	1,508	9,688	14,758	2,150
1991 Jan-Oct p	74.6	71.3	3.3	30,467	656	46,202	37,530	42,566	9,592	898	7,943	16,892	2,207
Per cent change	*–3.1*	*–3.5*	*+6.5*	*–2.2*	*–15.3*	*+6.2*	*+4.3*	*–7.2*	*+7.5*	*–40.4*	*–18.0*	*+14.5*	*+2.7*
1990 Aug	7.0	6.9	0.2	2,892	33	4,884	3,787	3,952	1,196	99	804	1,222	202
Sep	6.8	6.6	0.2	2,991	63	3,789	3,162	3,970	874	246	943	1,305	221
Oct	8.0	7.8	0.2	2,956	–14	3,187	2,954	4,745	672	439	1,047	1,378	202
Total	21.9	21.3	0.6	8,839	82	11,860	9,902	12,667	2,742	784	2,795	3,905	625
1991 Aug	7.9	7.6	0.4	3,637	70	4,677	3,445	4,062	1,268	35	742	1,956	231
Sep	7.9	7.6	0.3	3,170	49	4,467	3,693	4,950	912	137	879	1,963	206
Oct p	8.7	8.3	0.4	3,829	81	4,260	3,213	4,538	1,174	123	759	1,988	248
Total	24.6	23.4	1.1	10,636	200	13,405	10,351	13,550	3,353	296	2,381	5,907	685
Per cent change	*+12.3*	*+9.9*	*+83.3*	*+20.3*	*(+)*	*+13.0*	*+4.5*	*+7.0*	*+22.3*	*–62.2*	*–14.8*	*+51.3*	*+9.6*

1. Includes for convenience offshore and land production. 2. Condensates and petroleum gases derived at onshore treatment plants. 3. Crude oil plus NGLs. 4. Mainly recycled products (backflows to refineries). 5. Total arrivals less refinery shipments of crude oil, NGL's and process oils (ie partly refined oils). 6. Foreign trade recorded by the Petroleum Industry and may differ from figures published in the OTS. 7. International marine bunkers.

TABLE 13. **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
1986	80,155	5,404	662	74,089	1,328	93	2,652	23,360	5,813	2,147	22,409	12,523	909	1,887.
1987	80,449	5,216	577	74,656	1,422	52	2,014	24,680	6,063	2,270	21,424	12,797	886	2,056
1988	85,662	5,484	340	79,837	1,580	68	1,856	26,409	6,725	2,289	23,925	12,495	970	2,295
1989	87,699	5,816	491	81,392	1,569	90	2,073	27,237	7,092	2,344	23,292	13,020	1,050	2,393
1990	88,749	5,838	625	82,286	1,514	106	2,139	26,724	7,541	2,309	23,402	13,805	974	2,454
Per cent change	*+1.2*	*+0.4*	*+27.3*	*+1.1*	*–3.5*	*+17.8*	*+3.2*	*–1.9*	*+6.3*	*–1.5*	*+0.5*	*+6.0*	*–7.2*	*+2.5*
1990 Jan- Oct	74,216	4,828	615	68,773	1,288	96	1,711	22,444	6,396	1,867	19,311	11,670	811	2,094
1991 Jan-Oct p	76,518	5,041	422	71,055	1,384	116	2,008	23,095	5,935	1,927	21,596	11,134	809	1,934
Per cent change	*+3.1*	*+4.4*	*–31.4*	*+3.3*	*+7.5*	*+20.8*	*+17.4*	*+2.9*	*–7.2*	*+3.2*	*+11.8*	*–4.6*	*–0.2*	*–7.6*
1990 Aug	7,792	501	61	7,229	152	8	165	2,405	617	237	1,937	1,304	86	208
Sep	6,586	439	96	6,051	117	9	154	1,950	607	140	1,728	983	64	195
Oct	6,574	420	81	6,073	89	7	199	1,878	677	218	1,724	875	79	219
Total	20,953	1,360	239	19,354	358	24	518	6,233	1,901	595	5,389	3,163	228	622
1991 Aug	8,111	525	38	7,547	159	18	133	2,546	708	120	2,248	1,163	98	219
Sep	7,694	496	50	7,149	117	14	188	2,363	692	125	2,130	1,134	64	213
Oct p	7,759	518	11	7,230	125	13	216	2,435	540	243	2,190	1,077	78	202
Total	23,564	1,539	99	21,926	401	45	537	7,344	1,940	487	6,568	3,374	240	633
Per cent change	*+12.5*	*+13.2*	*–58.6*	*+13.3*	*+12.0*	*+87.5*	*+3.7*	*+17.8*	*+2.1*	*–18.2*	*+21.9*	*+6.7*	*+5.3*	*+1.8*

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

TABLE 14. **Deliveries of petroleum products for inland consumption**

Thousand tonnes

	Total[1 2]	Butane[3] and propane	Naphtha[4] (LDF) 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	Lubri-cating oils	Bitumen
1986	69,227	1,885	3,786	21,470	—	5,497	114	1,418	7,866	9,241	12,514	803	2,019
1987	67,701	1,838	3,640	22,184	—	5,815	100	1,390	8,469	8,608	9,935	828	2,162
1988	72,317	1,912	3,866	23,249	258	6,200	68	1,415	9,370	8,456	11,865	849	2,342
1989	73,028	1,893	3,932	23,924	4,648	6,564	55	1,417	10,118	8,323	11,125	839	2,423
1990	73,943	1,969	3,477	24,312	8,255	6,589	41	1,526	10,652	8,046	11,997	822	2,491
Per cent change	*+1.3*	*+4.0*	*–11.6*	*+1.6*	*+77.6*	*+0.4*	*–25.5*	*+7.7*	*+5.3*	*–3.3*	*+7.8*	*–2.0*	*+2.8*
1990 Jan-Oct	62,366	1,597	2,878	20,338	6,769	5,646	31	1,194	8,907	6,610	10,590	703	2,143
1991 Jan-Oct p	61,833	1,517	3,230	20,026	8,144	5,212	36	1,392	8,929	6,636	10,194	642	2,163
Per cent change	*–0.9*	*–5.0*	*+12.2*	*–1.5*	*+20.3*	*–7.7*	*+16.1*	*+16.6*	*+0.2*	*+0.4*	*–3.7*	*–8.7*	*+0.9*
1990 Aug	6,320	145	310	2,179	762	653	1	139	930	623	882	75	234
Sep	5,597	164	279	1,920	700	589	3	95	850	591	691	75	199
Oct	5,693	189	190	2,041	767	563	2	85	906	626	629	78	262
Total	17,609	497	779	6,140	2,229	1,805	7	319	2,686	1,840	2,202	227	694
1991 Aug	6,342	149	264	2,100	871	636	1	96	868	605	1,109	58	253
Sep	5,918	143	278	1,957	828	614	4	118	896	563	875	63	229
Oct p	6,373	161	319	2,084	896	559	4	167	987	676	905	72	249
Total	18,633	452	860	6,141	2,596	1,810	10	381	2,751	1,845	2,888	193	730
Per cent change	*+5.8*	*–9.1*	*+10.4*	—	*+16.5*	*+0.3*	*+42.9*	*+19.4*	*+2.4*	*+0.3*	*+31.2*	*–15.0*	*+5.2*

1. Including other petroleum gases, aviation spirit, wide-cut gasoline, industrial and white spirits, petroleum wax, non-domestic standard burning oil and miscellaneous products. 2. Excluding refinery fuel. 3. Including amounts for petro-chemicals. 4. Now mainly for petro-chemical feedstock. Prior to the September 1986 issue of Energy Trends, Middle distillate feedstock was included in the **Gas/diesel oil (other)** column.

TABLE 15. **Deliveries of petroleum products for inland consumption: energy uses** [1]

Thousand tonnes

	Total	Power[2] stations	Gas works	Iron and Steel industry	Other industries	Transport[3]	Domestic	Other[4]
1986	59,864	5,665	164	693	9,000	36,665	2,317	5,360
1987	58,298	4,497	86	628	7,995	38,220	2,211	4,661
1988	62,317	5,155	59	824	8,807	40,621	2,183	4,666
1989	63,146	5,332	52	851	8,032	42,535	2,141	4,204
1990	64,774	6,557	52	781	7,583	43,454	2,229	4,117
Per cent change	*+2.6*	*+23.0*	—	*–8.2*	*–5.6*	*+2.2*	*+4.1*	*–2.1*
1990 Jan- Sep	49,628	5,763	36	658	5,722	32,806	1,628	3,015
1991 Jan-Sep p	48,226	4,991	37	521	5,897	31,998	1,727	3,056
Per cent change	*–2.8*	*–13.4*	*+2.8*	*–20.8*	*+3.1*	*–2.5*	*+6.1*	*+1.4*
1990 July	5,804	809	3	83	626	3,851	149	284
Aug	5,524	476	4	54	591	3,921	191	287
Sep	4,843	303	4	99	504	3,514	147	273
Total	16,172	1,588	10	236	1,721	11,286	487	844
1991 July	5,508	579	2	54	587	3,896	130	260
Aug	5,520	689	2	52	594	3,765	145	273
Sep p	5,135	479	3	73	516	3,626	173	265
Total	16,164	1,747	7	179	1,697	11,288	448	798
Per cent change	—	*+10.0*	*–30.0*	*–24.2*	*–1.4*	—	*–8.0*	*–5.5*

1. Excludes non-energy use. 2. Major generating companies (see definitions below Table 29) and transport power stations. 3. Includes coastal shipping and fishing. 4. Mainly public administration, commerce and agriculture.

TABLE 16. **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	Light[5] distillates	Kerosene & gas/diesel[6]	Fuel oil	Other products[7]	Total	Net bilaterals[8]	Stocks in UK[9]	Total
1986	5,852	1,201	556	7,609	2,421	3,078	3,888	1,370	10,757	1,265	17,101	18,366
1987	5,433	1,809	653	7,895	2,513	3,017	3,603	1,380	10,513	1,549	16,859	18,408
1988	4,927	1,030	670	6,687[10]	2,878	3,139	3,396	1,353	10,766	1,854	15,599	17,453
1989	5,464	1,456	473	7,393	2,445	3,333	3,552	1,291	10,621	1,751	16,263	18,014
1990	5,484	982	424	6,890	2,424	3,039	3,206	1,224	9,892	1,539	15,243	16,782
Per cent changes	*+0.4*	*–32.6*	*–10.4*	*–6.8*	*–0.9*	*–8.8*	*–9.7*	*–5.2*	*–6.9*	*–12.1*	*–6.3*	*–6.8*
1990 Aug	6,219	883	516	7,618	2,640	3,167	3,680	1,380	10,866	1,718	16,766	18,484
Sep	6,299	1,061	506	7,866	2,665	3,220	3,411	1,329	10,625	1,693	16,798	18,491
Oct	5,817	1,058	476	7,351	2,688	3,034	3,469	1,297	10,488	1,501	16,338	17,839
1991 Aug	5,669	951	378	6,998	2,712	2,788	3,530	1,343	10,373	1,423	15,948	17,371
Sep	5,570	1,042	596	7,208	2,795	2,784	3,737	1,392	10,708	1,423	16,493	17,916
Oct p	5,892	1,131	540	7,563	2,703	2,886	3,642	1,288	10,519	1,728	16,354	18,082
Per cent change	*+1.3*	*+6.9*	*+13.4*	*+2.9*	*+0.6*	*–4.9*	*+5.0*	*–0.7*	*+0.3*	*+15.1*	*+0.1*	*+1.4*

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. Motor spirit and aviation spirit. 6. Aviation turbine fuel, burning oil, gas oil, Derv fuel, middle distillate feedstock (mdf) and marine diesel oil. 7. Ethane, propane, butane, other petroleum gases, naphtha (ldf), industrial and white spirits, bitumen, petroleum wax, lubricating oil, petroleum coke and miscellaneous products. 8. The difference between stocks held abroad for UK use under approved bilateral agreements and the equivalent stocks held in the UK for foreign use. 9. Stocks held in the national territory or elsewhere on the UKCS. 10. Includes 60 thousand tonnes held under approved bilateral agreements.

ELECTRICITY

TABLE 17. **Electricity generation, supply and availability**

TWh

	Major generating companies[1]			Other generating companies[1]			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
1986	282.26	21.10	261.16	18.81	1.50	17.32	301.07	22.60	278.48	4.26	282.73
1987	282.74	20.85	261.90	19.37	1.56	17.81	302.11	22.40	279.71	11.64	291.34
1988	288.51	21.58	266.93	19.59	1.50	18.09	308.10	23.09	285.02	12.83	297.85
1989	292.90	21.18	271.71	20.93	1.62	19.31	313.83	22.81	291.02	12.63	303.65
1990	298.50	20.52	277.98	20.48	1.67	18.82	318.98	22.19	296.80	11.94	308.74
Per cent change	*+1.9*	*–3.1*	*+2.3*	*–2.1*	*+2.6*	*–2.5*	*+1.6*	*–2.7*	*+2.0*	*–5.4*	*+1.7*
1990 1st quarter	86.96	5.95	81.01	5.71	0.46	5.25	92.67	6.41	86.26	—	86.26
2nd quarter	67.86	4.68	63.18	4.86	0.40	4.47	72.72	5.08	67.64	3.54	71.18
3rd quarter	63.27	4.46	58.81	4.60	0.38	4.22	67.87	4.84	63.03	4.10	67.13
4th quarter	80.41	5.43	74.98	5.31	0.43	4.88	85.72	5.86	79.86	4.31	84.17
1991 1st quarter	86.98	6.02	80.96	5.57	0.45	5.12	92.55	6.47	86.08	4.29	90.37
2nd quarter	69.77 e	4.70 e	65.07	4.96 r	0.41	4.56 r	74.74 r	5.11	69.63 r	3.72	73.35 r
3rd quarter p	62.39 e	4.33 e	58.07	4.59	0.38	4.21	66.99	4.71	62.28	4.11	66.38
Per cent change	*–1.4*	*–3.1*	*–1.3*	*–0.1*	*+2.0*	*–0.3*	*–1.3*	*–2.7*	*–1.2*	*+0.3*	*–1.1*

1. See definitions below Table 29. 2. Used in works and for pumping at pumped storage stations.

TABLE 18. **Electricity supplied by other generating companies[1]**

GWh

		Industry									
	Total	Total industry	Nuclear power stations[2]	Petroleum refineries	Iron and steel	Chemicals	Engineering and other metal trades	Food, drink and tobacco	Paper, printing and stationery	Other[3]	Transport under-takings
Electricity supplied (net)											
1986	17,316	16,708	4,359	1,798	1,239	4,197	3,356	452	769	538	607
1987	17,809	17,217	4,257	1,742	1,452	4,457	3,497	431	807	574	592
1988	18,089	17,447	3,942	2,014	1,653	4,327	3,466	462	928	655	642
1989	19,305	18,680	4,290	2,539	1,743	4,044	3,821	534	990	720	626
1990	18,817	18,162	3,700	2,468	1,668	4,218	3,929	597	866	717	655
Per cent change	*–2.5*	*–2.8*	*–13.8*	*–2.8*	*–4.3*	*+4.3*	*+2.8*	*+11.8*	*–12.5*	*–0.4*	*+4.7*
1990 1st quarter	5,246	5,079	1,248	637	439	1,142	1,041	145	230	197	167
2nd quarter	4,467	4,303	820	561	411	1,061	980	76	217	177	164
3rd quarter	4,223	4,064	795	618	397	963	849	80	192	170	159
4th quarter	4,881	4,716	837	651	420	1,052	1,059	297	227	173	165
1991 1st quarter	5,117	4,950	1,211	633	416	1,100	1,040	150	238	162	167
2nd quarter	4,555 r	4,396 r	963	563	468	950 r	967	87	233	164 r	159
3rd quarter p	4,209	4,056	667	629	415	956	892	85	211	201	153
Per cent change	*–0.3*	*–0.2*	*–16.1*	*+1.8*	*+4.5*	*–0.7*	*+5.1*	*+6.3*	*+9.9*	*+18.2*	*–3.8*

1.Excludes electricity generated by commerce, public administration, etc. Industrial groupings are based on the Standard Industrial Classification 1980. 2. Generated by UKAEA and British Nuclear Fuels (BNF) for the public electricity supply system. 3. Including water-works and energy supply companies other than major generating companies (see definitions below Table 29).

TABLE 19. **Electricity production and availability from the public supply system**[1]

TWh

	Electricity Generated	Own Use[2]	Electricity supplied (net)					Net Imports	Purchases from other sources (net)[6,7]	Total electricity available[7]
				By type of plant						
			Total	Conventional steam plant[3]	Nuclear	Hydro[4]	Other[5]			
1986	282.26	21.10	261.16	209.98	47.48	3.22	0.48	4.26	5.46	270.88
1987	282.74	20.85	261.90	214.84	43.95	2.66	0.45	11.64	5.58	279.12
1988	288.51	21.58	266.93	211.50	51.70	3.30	0.43	12.83	5.40	285.16
1989	292.89	21.18	271.71	208.68	59.31	3.23	0.50	12.63	6.49	290.84
1990	298.50	20.52	277.98	218.96	54.96	3.65	0.41	11.94	5.90	295.82
Per cent change	*+1.9*	*–3.1*	*+2.3*	*+4.9*	*–7.3*	*+13.0*	*–18.0*	*–5.4*	*–9.2*	*+1.7*
1990 Jan-Oct	240.49	16.61	223.88	176.39	44.12	3.04	0.34	8.96	4.83	237.66
1991 Jan-Oct p	242.23	16.58	225.65	174.72	48.41	2.26	0.26	13.43	5.60	244.68
Per cent change	*+0.7*	*–0.2*	*+0.8*	*–0.9*	*+9.7*	*–25.4*	*–22.7*	*+49.9*	*+15.9*	*+3.0*
1990 Aug	18.83	1.39	17.45	13.26	4.04	0.12	0.04	1.19	0.46	19.10
Sep*	25.58	1.76	23.82	18.51	5.05	0.23	0.03	1.59	0.55	25.96
Oct	22.40	1.52	20.88	16.43	4.05	0.38	0.03	1.32	0.42	22.62
Total	66.81	4.67	62.14	48.20	13.13	0.72	0.09	4.10	1.44	67.67
1991 Aug	18.62 e	1.32 e	17.31	12.53	4.64	0.13	0.01	1.30	0.41 r	19.02 r
Sep*	24.46 e	1.68 e	22.78	17.35	5.24	0.16	0.02	1.63	0.58 r	24.99 r
Oct p	23.08 e	1.53 e	21.56	16.15	5.04	0.35	0.02	1.31	0.40	23.27
Total	66.17	4.52	61.64	46.03	14.92	0.64	0.05	4.25	1.39	67.28
Per cent change	*–1.0*	*–3.1*	*–0.8*	*–4.5*	*+13.6*	*–11.4*	*–44.3*	*+3.7*	*–3.3*	*–0.6*

1. Electricity generated by major generating companies (see definitions below Table 29) 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. Coal, oil (including Orimulsion) and mixed or dual fired (including gas). 4. Natural flow and net supply by pumped storage stations. 5. Including diesel and oil engines, gas turbines and wind power. 6. Purchases from the UKAEA, BNF and other generators. 7. Net of supplies direct from generators to final consumers.

TABLE 20. **Fuel used in electricity generation**

Million tonnes of oil or oil equivalent

	Major generating companies[1]				Other generating companies[1]				All generating companies					
	Coal	Nuclear	Other[2]	Total	Coal	Nuclear	Other[2,3]	Total	Coal	Nuclear	Other[2,3]	Total	Net Imports	Total incl. imports
1986	48.6	11.4	7.4	67.4	. .	1.2	0.4	. .	. .	12.6	. .	. .	1.0	. .
1987	50.7	10.6	5.9	67.1	. .	1.1	0.4	. .	. .	11.7	. .	. .	2.8	. .
1988	48.5	12.4	6.7	67.6	. .	1.1	0.4	. .	. .	13.5	. .	. .	3.1	. .
1989	47.4	14.2	6.7	68.4	. .	1.2	0.4	. .	. .	15.4	. .	. .	3.0	. .
1990	48.6	13.2	8.0	69.8	1.2	1.0	3.1	5.3	49.7	14.2	11.1	75.1	2.9	78.0
Per cent change	*+2.4*	*–7.2*	*+19.4*	*+2.0*	. .	*–13.7*	*(+)*	. .	. .	*–13.7*	. .	. .	*–5.4*	. .
1990 1st quarter	14.4	3.6	2.6	20.6	0.3 e	0.3	0.8 e	1.5 e	14.7	3.9	3.4	22.1	—	22.1
2nd quarter	10.2	3.1	2.4	15.7	0.3 e	0.2	0.7 e	1.2 e	10.5	3.3	3.1	16.9	0.9	17.8
3rd quarter	10.3	3.0	1.5	14.8	0.2 e	0.2	0.7 e	1.2 e	10.5	3.2	2.2	16.0	1.0	17.0
4th quarter	13.6	3.6	1.5	18.7	0.3 e	0.2	0.8 e	1.4 e	13.9	3.8	2.3	20.1	1.0	21.1
1991 1st quarter	14.0	4.0	1.9	20.0	0.3	0.3	0.9 r	1.5	14.4	4.3	2.8 r	21.5 r	1.0	22.5 r
2nd quarter	11.3	3.0	1.8	16.1	0.3	0.3	0.8 r	1.4 r	11.6	3.2	2.6 r	17.4	0.9 r	18.3
3rd quarter p	9.7	3.4	1.4	14.5	0.3	0.2	0.7	1.2	9.9	3.6	2.2	15.7	1.0	16.7
Per cent change	*–6.0*	*+13.4*	*–4.0*	*–1.9*	*+7.1*	*–16.1*	*+1.0*	*–1.0*	*–5.7*	*+11.4*	*–2.4*	*–1.8*	*+0.3*	*–1.7*

1. See definitions below Table 29. 2. Oil including oil used in gas turbine and diesel plant or for lighting up coal fired boilers, and Orimulsion, hydro, gas, wind and refuse derived fuel. 3. Prior to 1990 other fuels used by other generating companies only includes hydro for industrial undertakings and gas used by transport undertakings.

TABLE 21. **Fuel used in electricity generation by major generating companies**[1]

Million tonnes of oil or oil equivalent

	Total[2]	Coal[3]	Oil[3,4]	Gas[5]	Nuclear	Hydro
1986	67.31	48.62	6.08	—	11.40	1.20
1987	67.06	50.69	4.81	—	10.55	1.01
1988	67.53	48.51	5.39	0.01	12.41	1.21
1989	68.37	47.43	5.52	0.01	14.24	1.18
1990	69.80	48.56	6.69	. .	13.22	1.29
Per cent change	*+2.0*	*+2.4*	*+21.2*	. .	*–7.2*	*+10.0*
1990 Jan-Oct	56.36	38.79	5.86	. .	10.62	1.09
1991 Jan-Oct p	55.80	38.58	4.73	. .	11.62	0.86
Per cent change	*–1.0*	*–0.6*	*–19.2*	. .	*+9.4*	*–21.0*
1990 Aug	4.40	3.07	0.31	. .	0.97	0.05 r
Sep*	5.99	4.37	0.31	. .	1.21	0.09
Oct	5.27	3.87	0.29	. .	0.97	0.14
Total	15.65	11.31	0.91	. .	3.15	0.28
1991 Aug	4.32	2.77	0.38	. .	1.11	0.05
Sep*	5.70	3.98	0.38	. .	1.26	0.07
Oct p	5.24	3.56	0.35	. .	1.21	0.12
Total	15.25	10.31	1.11	. .	3.58	0.24
Per cent change	*–2.6*	*–8.8*	*+22.3*	. .	*+13.6*	*–12.2*

1. See definitions below Table 29. 2. Including wind power and refuse derived fuel. 3. Including quantities used in the production of steam for sale.4. Including oil used in gas turbine and diesel plant or for lighting up coal fired boilers, and Orimulsion. 5. Including sour gas, refinery gas, etc. From April 1990, figures are not available for reasons of confidentiality but are included in total fuel used.

TABLE 22. **Availability and consumption of electricity**

TWh

	Public distribution system							Other generators			All electricity suppliers		
	Electricity available	Transmission distribution and other losses[2]	Sales of electricity to consumers[1]					Electricity available[6]	Losses and statistical differences	Consumption of electricity[7]	Electricity available	Losses and statistical differences	Consumption of electricity
			Total	Industrial[3]	Commercial[4]	Domestic	Other[5]						
1986	270.88	22.82	248.09	86.97	61.44	91.83	7.86	11.86	0.10	11.76	282.73	22.91	259.82
1987	279.12	22.96	256.19	90.77	64.18	93.25	7.98	12.23	—	12.23	291.34	22.96	268.39
1988	285.16	23.40	261.79	94.13	67.31	92.36	7.99	12.69	–0.06	12.75	297.85	23.34	274.51
1989	290.84	24.12	266.72	96.26	70.29	92.27	7.90	12.81	0.13	12.68	303.65	24.25	279.40
1990	295.82	23.88	271.94	98.10	71.64	93.79	8.41	12.92	0.05	12.87	308.74	23.93	284.81
Per cent change	*+1.7*	*–1.0*	*+2.0*	*+1.9*	*+1.9*	*+1.7*	*+6.5*	*+0.8*		*+1.5*	*+1.7*		*+1.9*
1990 1st Quarter	82.37	6.90	75.47	24.96	19.86	28.33	2.32	3.89	0.02 e	3.87	86.26	6.92	79.34
2nd Quarter	68.29	5.48	62.81	24.42	16.38	20.16	1.85	2.89	0.01 e	2.88	71.18	5.49	65.69
3rd Quarter	64.38	5.17 r	59.22	23.38	16.20	17.82	1.83	2.75	0.01 e	2.74	67.13	5.18 r	61.95
4th Quarter	80.77	6.32	74.46 r	25.36 r	19.19	27.49	2.41	3.39	0.01 e	3.38	84.17	6.33	77.83
1991 1st Quarter	87.14	8.36	78.79 r	25.25 r	20.56	30.78	2.20 r	3.23	0.01 e	3.22	90.37	8.37	82.00
2nd Quarter	70.69	6.19	64.50	23.18	17.60	21.94	1.78	2.66 r	0.01 e	2.65 r	73.35 r	6.20	67.14 r
3rd Quarter p	63.59	4.79	58.79	22.60	16.44	17.83	1.93	2.80	0.01 e	2.79	66.38	4.80	61.58
Per cent change	*–1.2*	*–7.2*	*–0.7*	*–3.3*	*+1.5*	—	*+5.6*	*+1.9*	—	*+1.8*	*–1.1*	*–7.2*	*–0.6*

1. Until 1st quarter 1990 some electricity suppliers provided sales figures on a sales billed rather than a sales sent out basis. The quarterly pattern of sales from 2nd quarter 1990 onwards may therefore have changed. 2. Losses on the grid system and local networks and other differences between data collected on sales and data collected on availability. 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 businesses in the industrial sector (95% in 1990).

TEMPERATURES

TABLE 23. **Average temperatures and deviations from the long term mean[1]**

Degrees celsius

	Long term mean	Average daily temperature			Deviation from the long term mean		
	1951 to 1980	1989	1990	1991	1989	1990	1991
Statistical month[2]							
January	3.7	6.7	5.9	4.1	+3.0	+2.2	+0.5
February	3.9	6.3	6.2	1.4	+2.4	+2.3	–2.5
March*	5.6	5.9	8.1	7.7	+0.3	+2.5	+2.1
April	7.9	7.0	7.3	8.2	–0.9	–0.6	+0.3
May	10.7	10.1	12.0	10.4	–0.6	+1.3	–0.3
June*	13.8	13.9	13.3	12.1	+0.1	–0.5	–1.7
July	15.7	16.4	16.1	17.0	+0.7	+0.4	+1.3
August	15.8	17.0	17.7	17.4	+1.2	+1.9	+1.6
September*	14.0	14.8	13.8	15.6	+0.8	–0.2	+1.6
October	11.0	11.9	12.7		+0.9	+1.7	–0.5
November	7.5	9.1	7.8		+1.6	+0.3	
December*	5.1	4.4	5.1		–0.7	—	
Calendar month							
January	3.7	6.1	6.3	3.7	+2.4	+2.6	—
February	3.9	5.8	7.0	2.4	+1.9	+3.1	–1.5
March	5.7	7.0	8.0	7.9	+1.3	+2.3	+2.2
April	8.1	6.1	7.7	8.1	–2.0	–0.4	—
May	11.2	12.5	12.1	11.0	+1.3	+0.9	–0.2
June	14.2	14.0	13.3	12.2	–0.2	–0.9	–2.0
July	15.9	17.4	16.3	17.3	+1.5	+0.4	+1.4
August	15.7	16.1	17.6	17.2	+0.4	+1.9	+1.5
September	13.7	14.1	13.1	14.8	+0.4	–0.6	+1.1
October	10.7	11.5	12.0		+0.8	+1.3	–0.3
November	6.6	6.4	7.2		–0.2	+0.6	
December	4.8	4.5	5.1		–0.3	+0.3	

1. Based on data provided by the Meteorological Office. Information on the methodology used is given in Table 1 of the Digest of UK Energy Statistics 1991. 2. Months with 4 or 5 weeks. Months marked * contain 5 weeks.

STANDARD CONVERSION FACTORS AND APPROXIMATE EQUIVALENTS[1]

1 tonne of oil	=	1.7 tonnes of coal	1 kiloWatt (kW)	=	1,000 Watts
	=	425 therms	1 MegaWatt (MW)	=	1,000 kiloWatts
1 therm	=	29.3071 kiloWatt hours (kWh)	1 GigaWatt (GW)	=	1,000 MegaWatts
1 Gigajoule (GJ)	=	9.4781 therms	1 TeraWatt (TW)	=	1,000 GigaWatts
1 tonne of UK crude oil	=	7.55 barrels	1 PetaWatt (PW)	=	1,000 TeraWatts
1 gallon (UK)	=	4.54609 litres			

1. More detailed information on conversion factors, approximate equivalents, and calorific values of fuels, is given on pages 111 and 112 of the Digest of UK Energy Statistics 1991.

FOREIGN TRADE

TABLE 24. Imports and exports of fuels and related materials[1]

	Coal and other solid fuel	Petroleum: Crude	Petroleum: Products[2]	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 or oil equivalent						*Value – £ million*						
IMPORTS: (cif)													
1986	6.3	32.2	24.2	11.1	1.0	74.9	456	2,440	2,080	1,320	80	6377	5,983
1987	5.9	33.1	20.8	10.2	2.8	72.9	390	2,703	1880	878	242	6,094	5,818
1988	7.5	32.8	21.4	9.1	3.1	74.0	472	2,044	1,546	692	268	5,022	4,675
1989	7.5	36.3	21.7	8.9	3.4	77.8	513	3,079	1,889	615	305	6,400	6,071
1990	8.9	43.5	24.5	6.4	3.1	86.4	630	4,006	2,424	498	225	7,783	7,358
Per cent change	*+18.9*	*+19.8*	*+12.5*	*–27.4*	*–8.6*	*+11.1*	*+22.9*	*+30.1*	*+28.3*	*–19.0*	*–26.2*	*+21.6*	*+21.2*
1989 4th quarter	2.2	11.4	5.9	2.1	0.8	22.4	149	976	538	155	70	1,888	1,805
1990 1st quarter	1.9	12.2	6.4	2.5	0.3	23.2	137	1,084	594	187	26	2,028	1,912
2nd quarter	2.3	11.5	5.6	1.5	0.8	21.8	168	836	448	123	61	1,636	1,530
3rd quarter	1.8	9.8	6.9	1.1	1.0	20.6	130	824	612	94	63	1,721	1,611
4th quarter	2.9	9.9	5.7	1.3	1.0	20.9	195	1,262	771	94	76	2,398	2,287
1991 1st quarter p	3.2	11.0	5.5	2.0	1.0	22.8	199	966	579	160	85	1,988	1,869
2nd quarter p	2.8	11.9	5.7	1.4	0.9	22.7	170	942	463	130	77	1,784	1,701
3rd quarter p	2.9	11.7	6.5	0.9	1.0	23.0	178	986	520	76	84	1,843	1,743
Per cent change	*+63.6*	*+19.6*	*–6.7*	*–40.2*	*—*	*+11.5*	*+37.0*	*+19.6*	*–15.0*	*–19.1*	*+33.0*	*+7.1*	*+8.1*
EXPORTS: (fob)													
1986	2.4	81.9	21.1	—	—	105.4	190	6,281	2,199	—	—	8,670	8,670
1987	1.6	80.6	19.2	—	—	101.5	109	6,765	1,893	—	—	8,767	8,767
1988	1.3	70.5	19.4	—	—	91.2	96	4,515	1,646	—	—	6,257	6,257
1989	1.5	49.2	20.5	—	—	71.2	109	4,024	2,039	—	—	6,172	6,172
1990	1.6	54.2	21.0	—	0.3	77.1	119	5,172	2,455	—	25	7,771	7,771
Per cent change	*+6.1*	*+10.2*	*+2.7*	*—*	*(+)*	*+8.3*	*+8.9*	*+28.5*	*+20.4*	*—*	*(+)*	*+25.9*	*+25.9*
1989 4th quarter	0.5	14.9	5.1	—	—	20.4	33	1,326	536	—	—	1,895	1,895
1990 1st quarter	0.5	15.0	5.7	—	0.3	21.4	36	1,340	657	—	25	2,056	2,056
2nd quarter	0.4	14.5	5.1	—	—	20.1	28	1,080	533	—	—	1,641	1,641
3rd quarter	0.4	11.7	5.0	—	—	17.0	26	1,186	520	—	—	1,732	1,732
4th quarter	0.4	13.0	5.2	—	—	18.6	29	1,566	746	—	—	2,341	2,341
1991 1st quarter p	0.3	12.9	4.8	—	—	18.0	25	1,058	621	—	—	1,706	1,706
2nd quarter p	0.3	11.3	6.1	—	—	17.8	24	962	647	—	—	1,633	1,633
3rd quarter p	0.3	13.5	5.9	—	—	19.7	20	1,149	641	—	—	1,812	1,812
Per cent change	*–21.1*	*+15.5*	*+18.3*	*-*	*—*	*+15.9*	*–23.1*	*–3.1*	*+23.3*	*—*	*—*	*+4.6*	*+4.6*
NET EXPORTS:													
1986	–3.9	49.7	–3.2	–11.1	–1.0	30.5	–267	3,841	120	–1,320	–80	2,294	2,687
1987	–4.2	47.5	–1.6	–10.2	–2.8	28.6	–281	4,061	12	–878	–242	2,673	2,949
1988	–6.2	37.6	–2.2	–9.1	–3.1	17.9	–376	2,471	100	–692	–268	1,235	1,582
1989	–6.0	12.9	–1.2	–8.9	–3.4	–6.6	–403	945	146	–615	–305	–228	101
1990	–7.3	10.8	–3.5	–6.4	–2.9	–9.6	–511	1,166	31	–498	–200	–12 r	413
1989 4th quarter	–1.7	3.5	–0.8	–2.1	–0.8	–1.9	–116	351	–2	–155	–70	8	90
1990 1st quarter	–1.4	2.8	–0.7	–2.5	—	–1.9	–102	256	63	–187	–1	28	144
2nd quarter	–1.9	3.0	–0.5	–1.5	–0.8	0.7	–140	244	85	–123	–61	5	111
3rd quarter	–1.4	1.9	–1.9	–1.1	–1.0	–3.6	–103	362	–92	–94	–63	11	121
4th quarter	–2.5	–3.1	–0.5	–1.3	–1.0	–2.3	–165	304	–25	–94	–76	–57	54
1991 1st quarter p	–2.9	1.9	–0.7	–2.0	–1.0	–4.8	–174	92	42	–160	–85	–285	–163
2nd quarter p	–2.5	–0.6	0.4	–1.4	–0.9	–4.9	–146	20	184	–130	–77 r	–151	–68
3rd quarter p	–2.6	1.8	–0.6	–0.9	–1.0	–3.3	–158	201	121	–76	–84	–30	70

1. The figures generally correspond to those published in Section 3 of the OTS. They may differ from figures shown elsewhere in Energy Trends, which come from other sources. Figures for crude oil from 1988, natural gas prior to 1986 and electricity from 1990 may include unpublished revisions. 2. Prior to 1988 the figures correspond to items 334, 335 and 341 (excluding natural gas imports) of the Standard International Trade Classification (S.I.T.C.) (Revision 2) and include liquefied gases other than natural gas and petroleum products not used as fuel, e.g. lubricants. For 1988 and 1989 they correspond to items 334, 335, 342, 343 (excluding imports of natural gas) and 344 of S.I.T.C. (Rev.3). 3. Value of imports adjusted to exclude the cost of freight, insurance etc.

PRICES

TABLE 25. Prices of fuels purchased by manufacturing industry in Great Britain[1]

Fuel	Size of Consumer	1989 2nd Quarter	1989 3rd Quarter	1989 4th Quarter	1990 1st Quarter	1990 2nd Quarter	1990 3rd Quarter	1990 4th Quarter	1991 1st Quarter	1991 2nd Quarter	1991 3rd Quarter p
COAL (£ per GJ)	Small	2.44	2.42	2.30	2.44	2.35	2.46	2.41	2.39	2.35 r	2.32
	Medium	1.79	1.80	1.95	2.02	1.91	1.98	1.99	2.04	2.02 r	1.97
	Large	1.47	1.47	1.54	1.55	1.52	1.55	1.52	1.55	1.48	1.49
All consumers —	average	1.54	1.53	1.61	1.62	1.58	1.62	1.59	1.63	1.56	1.57
—	10% decile[2]	1.42	1.43	1.52	1.46	1.48	1.52	1.57	1.56	1.49 r	1.47
—	median[2]	2.30	2.28	2.28	2.34	2.26	2.20	2.24	2.26	2.29 r	2.19
—	90% decile[2]	2.66	2.56	2.58	2.67	2.49	2.53	2.54	2.52	2.69 r	2.48
HEAVY FUEL OIL (£ per tonne)[3]	Small	79.7	85.6	85.0	82.5	72.1	88.1	99.3	78.8	68.6	70.2
	Medium	72.5	74.9	81.2	80.5	70.0	72.7	92.3	76.7	63.6	65.3
	Large	68.4	66.7	79.2	75.5	64.0	63.9	86.1	72.7	58.5 r	60.9
	Of which:										
	Extra large	65.6	64.1	77.0	71.9	61.1	63.1	86.0	71.3	57.3	59.5
	Moderately large	73.5	71.4	83.2	82.1	69.3	65.5	86.4	75.3	60.8 r	63.4
All consumers —	average	71.3	72.0	80.7	78.2	67.2	70.1	90.0	74.9	61.6	63.6
—	10% decile[2]	65.3	69.2	72.6	73.1	61.0	59.4	81.8	64.2	58.7 r	60.4
—	median[2]	72.5	74.1	83.4	80.8	70.0	76.1	93.0	79.5	65.0 r	64.7
—	90% decile[2]	81.5	85.6	93.4	93.0	90.7	97.8	113.4	97.0	80.4	83.1
GAS OIL (£ per tonne)[3]	Small	132.5	135.3	153.1	156.8	142.1	159.9	193.1	188.4	154.3 r	150.3
	Medium	122.9	127.5	144.1	143.9	133.8	147.6	184.3	176.7	150.5 r	148.1
	Large	115.2	117.7	136.6	134.2	119.4	144.0	177.5	163.7	137.9 r	138.6
All consumers —	average	116.8	119.6	138.1	136.2	122.1	144.9	178.9	166.3	140.2 r	140.3
—	10% decile[2]	109.2	109.9	123.8	123.4	113.1	118.9	157.0	145.2	126.7 r	129.6
—	median[2]	123.1	127.3	146.7	149.6	133.8	151.7	187.8	176.7	146.3	144.8
—	90% decile[2]	145.2	149.2	167.3	176.3	159.8	200.9	212.3	205.2	183.0 r	171.5
ELECTRICITY (Pence per KWh)	Small	4.93	5.04	6.26	6.46	5.45	5.67	6.74	6.74	6.19 r	6.35
	Medium	4.19	4.20	4.94	4.88	4.04	4.08	4.66	4.58	4.28	4.34
	Large	3.28	3.17	3.51	3.54	3.12	3.11	3.22	3.23	3.22	3.28
	Of which:										
	Extra large	2.88	2.61	2.82	2.86	2.74	2.74	2.77	2.83	2.96 r	3.03
	Moderately large	3.60	3.59	4.05	4.06	3.41	3.39	3.57	3.55	3.42	3.48
All consumers —	average	3.61	3.54	4.03	4.05	3.49	3.50	3.79	3.78	3.66	3.73
—	10% decile[2]	3.90	3.92	4.39	4.41	3.58	3.60	3.92	3.91	3.67 r	3.75
—	median[2]	4.80	4.64	5.90	5.89	5.20	5.36	6.35	6.30	5.76 r	5.91
—	90% decile[2]	6.06	6.29	7.43	7.28	6.38	7.04	8.00	8.07	7.23 r	7.50
GAS (Pence per therm)[4]	Small	35.41	35.25	35.19	35.16	36.24	36.70	37.95	39.76	39.48 r	41.31
	Medium	27.48	26.96	29.01	29.09	29.49	27.51	29.90	30.67	30.44	26.44
	Large	20.00	20.21	20.59	21.21	20.46	20.89	21.03	21.68	20.56 r	19.37
All consumers —	average	21.51	21.24	22.20	23.05	21.84	21.99	22.78	23.94	22.23	20.43
—	10% decile[2]	26.74	25.85	27.39	27.10	26.57	25.38	26.60	26.63	24.87	23.74
—	median[2]	34.25	33.92	34.00	33.99	33.49	34.50	36.34	38.52	37.31	39.44
—	90% decile[2]	39.93	40.94	40.53	40.64	43.19	45.54	44.40	44.68	45.62	49.13
MEDIUM FUEL OIL (£ per tonne)[3]											
All consumers —	average[5]	74.5	73.3	85.4	82.0	73.1	73.4	100.2	91.8	81.2 r	73.7
LIQUEFIED PETROLEUM GASES (£ per tonne)											
All consumers –	average[5]	113.3	118.1	117.9	129.8	121.2	119.4	172.3	194.9	147.9 r	128.1
HARD COKE (£ per tonne)[6]											
All consumers –	average[5]	92.0	94.3	106.7	104.3	108.4	105.8	101.0	103.7	100.4 r	106.4
Realised in new and renewed contracts											
HEAVY FUEL OIL (£ per tonne)[3 7]		95.3	100.9	112.3	103.4	72.2	91.3	108.6	107.2	65.4 r	62.7
GAS OIL (£ per tonne)[3 7]		131.7	140.8	165.0	144.3	123.3	170.2	189.0	164.3	131.3	142.0

1. Average prices paid by respondents (exclusive of VAT) to a Department of Energy 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". 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 the prices occur. The median is 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. 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. No further details of prices can be given owing to the small number of respondents purchasing this fuel. 6. Excludes breeze and blast furnace supplies. 7. Derived from prices reported by nine main oil marketing companies and relate to average net prices realised on medium sized new contracts or contracts renewed at a changed price.

Note on sizebands used in Table 25

For coal, heavy fuel oil, gas oil, electricity and gas prices are shown in table 25 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: Large (Greater than)	of which: Extra large (Greater than)	of which: Moderately large	Medium	Small (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 therms)	300	n/a	n/a	50 to 300	50

*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.

TABLE 26. Average prices of fuels purchased by the major UK electricity generating companies[1] and by British Gas

	Major electricity generating companies[1]			British Gas	
	Coal[2]	Oil[3]	Gas[4]	Natural gas[5]	
	£ per tonne	£ per tonne	pence per therm	pence per therm	
1986	46.23	79.60	26.85	15.32	1986/87
1987	43.76	74.63	21.54	14.00	1987/88
1988	47.11	54.58	17.88	14.66	1988/89
1989	45.81	61.19	19.49	15.48	1989/90
1990	43.77	54.82	. .	16.85	1990/91
1990 1st quarter	44.60	63.20	. .	15.50	
2nd quarter	42.72	41.56	. .	16.20	
3rd quarter	43.55	51.96	. .	15.33	
4th quarter	44.21	84.04	. .	17.97	
1991 1st quarter	42.18	63.71	. .	18.20	
2nd quarter	43.12	42.77	. .	18.17	
3rd quarter p	42.61	55.13	. .	18.10	

1. See definitions below Table 29. 2. Includes slurry. 3. 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. 4. From 1990 gas prices are not available for reasons of confidentiality. 5. Quarterly figures are estimates. The prices exclude the Government's levy on indigenous supplies. The Gas Levy Act 1981 imposed this with effect from 1 April 1980. Including this levy, the average prices were as follows:

	pence per therm
1986/87	17.85
1987/88	16.37
1988/89	16.67
1989/90	17.26
1990/91	18.19

TABLE 27. Fuel price indices for the industrial sector[1] 1985=100

	Coal[2]	Heavy fuel oil[2]	Gas[3]	Electricity[3]	Total fuel					
	Current fuel price index numbers									
1986	95	48	87	101	83					
1987	91	51	82	98	81					
1988	81	38	78	103	78					
1989	79	41	76	111	81					
1990	81	45	77	111	82					
Per cent change	*+3*	*+9*	*+2*	—	*+2*					
			Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted		
1990 1st quarter	82	46	80	76	121	114	88	84		
2nd quarter	80	40	77	77	104	107	78	80		
3rd quarter	82	41	72	76	103	108	77	80		
4th quarter	81	53	79	78	115	109	87	84		
1991 1st quarter	82	44	85	81	115	111	86	84		
2nd quarter	79	36	79 r	79 r	110	114	80	82		
3rd quarter p	79	38	74 e	78 e	110	116	79	83		
Per cent change	*–4*	*–9*	*+2 e*	*+2 e*	*+7*	*+7*	*+3*	*+3*		
	Fuel price index numbers relative to the GDP deflator								**GDP deflator[4]**	**PPI[5]**
1986	92	46	84	98	80				104	94
1987	84	47	76	90	75				109	97
1988	70	33	68	89	67				116	102
1989	64	33	61	90	66				124	107
1990	62	34	58	84	63 r				132	107
Per cent change	*–4*	*+2*	*–5*	*–6 r*	*–5*				*+7*	*–1*
			Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted		
1990 1st quarter	64	36	62	59	94	89	68	65	129	108
2nd quarter	62	30	59	59	80 r	82	60	61	130	108
3rd quarter	62	31	54	57	77	81	58	60	133 r	106
4th quarter	60	39	58	58	85	81	64	62	135	105
1991 1st quarter	60	32	62	59	84	82	63	61	136	104
2nd quarter	56	26	56 r	56 r	78	81	57	58	141	107
3rd quarter p	56	26	52 e	55 e	77	81	56 e	58 e	142	105
Per cent change	*–9*	*–15*	*–4 e*	*–4 e*	—	—	*–4 e*	*–4 e*	*+7*	*–1*

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 25. 3. Indices based on the average unit value of sales to industrial consumers. 4. GDP deflator at market prices and seasonally adjusted. 5. PPI of materials.

Note on fuel price indices (Tables 27 and 28)

Since February 1990 both the domestic and industrial fuel price index numbers have been shown relative to the gross domestic product (GDP) deflator, which has been used as an indicator of how prices in general have moved. The previous index numbers, with domestic price indices shown relative to the RPI excluding fuels, and the industrial price indices relative to the PPI of materials, have now been discontinued. The two comparators (the RPI excluding fuels and the PPI of materials) are still published in the tables so that users can calculate the old indices if they wish. More accurate figures can be obtained on request from Margaret Gibbs, Room 3.3.13, 1 Palace Street, London SW1E 5HE. (Telephone 071-238 3566).

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

1985=100

	Coal and coke	Gas	Electricity	Heating oils[2]	Fuel and light	Petrol and oil	Fuel, light, petrol and oil	GDP deflator[3]	RPI (excl. fuels)[4]
	Current fuel price index numbers								
1986	103	102	102	86	101	87	95		
1987	104	101	102	80	101	88	96		
1988	105	102	107	72	103	87	97		
1989	107	106	115	78	109	93	103		
1990	111	113	124	102	118	104	112		
Per cent change	*+4*	*+7*	*+8*	*+31*	*+8*	*+12*	*+9*		
1990 1st quarter	111	108	118	92	112	95	105		
2nd quarter	107	114	123	84	116	101	110		
3rd quarter	108	115	128	100	120	108	115		
4th quarter	116	116	128	130	123	112	119		
1991 1st quarter	118	119	128	112	123	103	114		
2nd quarter	114	121	135	93	125	115	121		
3rd quarter	116	123	142	92	129	115	123		
Percent change	*+7*	*+6*	*+11*	*−7*	*+8*	*+7*	*+7*		
	Fuel price index numbers relative to the GDP deflator								
1986	100	98	99	83	98	84	92	104	104
1987	96	93	94	73	93	81	88	109	109
1988	91	88	93	62	89	75	83	116	115
1989	86	86	93	63	88	75	83	124	124
1990	84	86	94	77	89	79	85	132	135
Per cent change	*–3*	—	*+1*	*+22*	*+1*	*+5*	*+2*	*+7*	*+9*
1990 1st quarter	86	84	91	72	87	73	81	129	129
2nd quarter	82	87	94	65	89	78	84	130	135
3rd quarter	81	87 r	96	75	90	81	86	133 r	137
4th quarter	86 r	86	95	96	91	83	88	135	139
1991 1st quarter	87	87	94	82	90	75	84	136	140
2nd quarter	81	86	96	66	89	81 r	86	141	143
3rd quarter	81 r	86 r	100	65	91	81 r	87	142 r	143
Per cent change	*— r*	*— r*	*+4 r*	*–13 r*	*+1 r*	—	—	*+7 r*	*+5*

1. Index numbers shown represent the average for the period specified. 2. Bottled gas and oil fuel. 3. GDP deflator (market prices, seasonally adjusted). 4. Index numbers relative to the RPI (excluding fuels).

TABLE 29. Typical retail prices of petroleum products and a crude oil price index

	Motor spirit[1] 2 star	Motor spirit[1] 4 star	Motor spirit[1] Unleaded[2]	Derv[1]	Standard Grade burning Oil[1 3]	Gas oil[1 4]	Crude oil acquired by refineries[5]
	Pence per litre						**1985 = 100**
1986 January	40.81	41.63	—	41.13	19.48	19.47	82.0
1987 January	37.57	38.42	. .	35.00	13.52	14.70	50.7
1988 January	35.98	36.79	. .	33.94	11.97	12.29	44.8
1989 January	36.36	37.14	36.02	34.17	11.41	11.15	41.8
1990 January	. .	40.92	38.37	39.21	15.45	15.46	57.5
1990 June	. .	43.73	40.83	38.13	11.84	11.51	43.1
July	. .	43.26	40.33	37.58	12.17	11.90	42.4
August	. .	46.82	43.89	40.26	15.39	14.93	57.1
September	. .	50.64	47.71	42.67	18.31	16.94	70.6
October	. .	51.45	48.52	45.85	23.91	19.66	84.3
November	. .	47.53	44.55	44.52	20.64	18.11	84.1
December	. .	44.28	41.29	43.70	17.67	17.35	76.3
1991 January	. .	45.13	42.14	43.31	17.52	17.13	65.9
February	. .	43.62	40.61	43.19	16.68	15.39	58.6
March	. .	44.56	41.53	40.18	13.54	13.40	53.0
April	. .	49.03	45.41	43.41	12.49	12.16	51.6
May	. .	50.16	46.64	43.64	13.15	12.91	54.6
June	. .	50.04	46.53	43.64	13.38	13.05	51.8
July	. .	50.65	47.08	44.26	13.67	12.97	52.8
August	. .	50.23	46.71	44.17	13.33	12.71	53.6
September	. .	50.11	46.58	44.24	13.64	13.01	55.9
October	. .	49.99	46.48	45.10	14.18	13.66	56.4 p

These approximate 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.The January 1989 price for unleaded motor spirit is based on information from fewer companies and is therefore less reliable than the other estimates given. 2. Price for premium unleaded with minimum octane rating of 95. 3. These estimates are for deliveries of up to 1,000 litres; such deliveries are zero rated for VAT. 4. These estimates are for deliveries of 2,000 to 5,000 litres; such deliveries are zero rated for VAT. 5. 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.

DEFINITIONS AND ABBREVIATIONS

Major generating companies — National Power, PowerGen, Nuclear Electric, National Grid Company, ScottishPower, Hydro-Electric, Scottish Nuclear, Northern Ireland Electricity, Midlands Electricity and South Western Electricity.

Other generating companies — Industrial establishments, including those in the energy sector (other than major generating companies), and transport undertakings generating 1 Gigawatt hour or more a year.

BCC — British Coal Corporation
CHP — Combined heat and power
LDF — Light distillate feedstock
OTS — Overseas Trade Statistics of the United Kingdom
PPI — Producer price index
UKAEA — United Kingdom Atomic Energy Authority
BNF — British Nuclear Fuels plc
GDP — Gross domestic product
NGL — Natural gas liquids
RPI — Retail prices index
UKCS — United Kingdom Continental Shelf
VAT — Value added tax

Supplement: "Challenges in Energy Statistics"

This was the title of a one-day seminar on 12th November 1991, organised by the Institute of Energy in association with the Royal Statistical Society. The Hon. Colin Moynihan MP, Parliamentary Under Secretary of State for Energy opened the seminar, referring to five areas of rapidly-evolving policy, where high quality statistics and analyses were increasingly important — privatisation and the benefits of competition; diversity of supply; development of the United Kingdom's oil and gas resources; environmental issues including energy efficiency; and finally international aspects of energy policy. Although coal, oil, gas and nuclear power would remain by far the largest primary energy sources for at least the rest of the decade, prices of all forms of energy were increasingly likely to reflect their long-term environmental costs. Statistics provision would need to reflect developments such as the increase in the use of gas (an environmentally clean fuel compared with coal and oil) in power generation; a gradual increase in the contribution of renewable energy sources; and a substantially bigger emphasis on energy efficiency and environmentally-friendly technology. Speakers went on to cover most topics of current interest in the energy sector, drawing attention to the varied uses of statistics in monitoring developments.

The challenge of privatisation

The first session considered the effect of privatisation on the provision of statistics, concentrating on the electricity industry with papers presented by the Department of Energy, the Office of Electricity Regulation and NGC Settlements Ltd. Privatised companies were likely to be more sensitive about the supply of data than their predecessors in the public sector had been. The Electricity Act contained provisions to ensure that the Government could take statutory powers to require companies to provide data to meet its needs — for monitoring the United Kingdom energy market as a whole, for input to the main economic aggregates and for supply to international organisations. At present, these powers, however, were not being used, as a voluntary system of questionnaires was providing a satisfactory response.

Concern was expressed about the availability of information to the wider public. With the market developing rapidly, there was a need for more not less data to inform decision-making. Certain items of data could be sensitive. Nevertheless companies were urged to publish as much information as possible.

The seminar then considered the operation of the "pool" (the wholesale electricity market which determines electricity prices). Clearly the"pool" needed a considerable amount of data to operate effectively — viz on prices, availability of plant, and on forecast demand.

New challenges internationally

Papers in the second session focussed on the needs of operators in the international oil and coal markets. Data were needed not only by companies within the energy sector, but also by associated sectors —e.g. shipping companies. The many problems that arose when dealing with statistics from different international sources were stressed. Reconciliation of such data was a thankless task. Lack of timeliness, and revisions to published figures, also caused difficulties.

Statistics for Eastern Europe were considered. The International Energy Agency (IEA) had taken the lead in compiling energy statistics for these countries, putting them on a basis consistent with that used in member states. The IEA had been able to compile relatively reliable statistics for recent years, during which central planners collected and aggregated data to monitor progress towards production targets, but the move towards freer and more fragmented markets in Eastern Europe could lead to a decline in the quality of statistics.

Statistical challenges of the greenhouse effect

The third session considered renewable energy and gas emissions — both areas of considerable public interest where statistics play an important role in understanding developments.

On renewable statistics, the Energy Technology Support Unit, on behalf of the Department of Energy, had started to compile a database containing details of individual renewables projects, where energy had been produced in the last three years. Sources covered were solar power, wind power, hydro-electric schemes and biofuels. Information on individual projects was commercially confidential but aggregate statistics could be published. Renewable sources, mainly large scale hydro schemes, provided about 2 per cent of electricity available in the United Kingdom in 1990.

In order to understand the effects of pollution, and the possible greenhouse effect, a comprehensive emission inventory which covers all emissions from a range of pollutants is required. Emission inventories can be used to devise policies to reduce emissions, and to monitor progress towards specific targets. In the United Kingdom Warren Spring Laboratory compile the national emission inventory using data on fuels burnt and emission factors, calculated from experiments. Because of the importance of emission inventories, considerable efforts were being devoted to refining and updating the methods, but a base of good energy statistics would always be needed.

A subsequent paper on setting targets, specifically for carbon dioxide (CO_2) emissions posed many interesting problems concerning international targets. Should the targets be based on cumulative emissions, or just current emissions? Should emissions be calculated on a per capita basis or per unit of output? Should countries be allowed to meet targets by importing electricity or by importing energy-intensive goods? How should exogenous factors, such as the weather, be taken into account?

New energy data services, methods and technologies

The final session looked at energy statistics in general, considering data availability, forecasting and modelling and concluding with a summary of the importance of statistics to operators in energy markets.

There was now more data available than ever before and developments in computer technology made such data and analyses readily accessible. It was generally thought that the resulting increase in transparency in the markets had led to increased trading. So far oil had been the main fuel traded, but spot, forward, and futures markets were also likely to develop for other fuels.

Forecasting of energy supply and demand was a complex process and had necessitated the development of appropriate models. There were numerous factors affecting the demand for energy, including climatic conditions, public holidays and special events. The effects of some of these factors were quite dramatic. All factors had to be taken into account in the models used.

The last presentation, entitled "Making sense of statistics" made the point that in an ideal world statistics would be both reliable and prompt and changes would be evolutionary rather than revolutionary. Planning would then proceed in an orderly fashion. The world was not, however, ideal and the oil price shocks in the 1970s exemplified this. Users of statistics therefore have to make do with the data available and use their own judgement when working with statistics.

Summary

It was generally agreed that practitioners in the energy field had been well served by statistics provision in the past. However, the 'challenges' referred to, and the pace of developments, were such that there was no room for complacency if such provision was to be adequate in the future.

Papers and synopses of presentations given at the conference are available in a bound volume. This can be obtained from Judith Higgins at the Institute of Energy, 18 Devonshire Street, London W1N 2AU (Price £15 non-members, £9 members, plus £2 post and packing in UK).

Enquiries about the data in, or subscriptions to, this bulletin should be addressed to: Economics & Statistics Division, (attention: David Clark) Room 3.3.26, Department of Energy, 1 Palace Street, London SW1E 5HE (tel: 071-238 3606).
Suggestions about changes to the content or scope of the bulletin should be sent to the same address, (attention Mike Ward).

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