

DEPARTMENT OF ENERGY

ENERGY

TRENDS

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Gas consumption up six per cent
in 1977

Total Energy

Consumption rises eight mtce in 1977

Total inland energy consumption during 1977 measured on a primary fuel input basis was 332.4 million tons coal equivalent, 7.7 mtce higher than in the previous year, with all primary fuels sharing in the increase. The provisional figures show that the largest increase in absolute terms was in natural gas with the six per cent rise accounting for almost half of the total increase in primary energy consumption. Nuclear electricity rose by 11 per cent contributing an additional 1.4 mtce to total consumption while petroleum deliveries rose by 1.3 per cent. Coal consumption (provisionally adjusted for net foreign trade and stock changes in other solid fuels) rose by one million tons to 121 million tons — its highest level since 1973.

The increase in total consumption was confined to the cool first three quarters of the year. During the last quarter when average temperatures were higher than a year previously, total consumption fell by 1.7 per cent compared with the fourth quarter of 1976.

Provisional figures, first issued last month, of energy consumption on a heat supplied basis by final users in the 3rd quarter of 1977 indicate that overall consumption was 4.8 per cent higher than in the comparable quarter of 1976. Higher consumption was recorded in all sectors except iron and steel, but by far the largest increase was in the domestic sector where, largely as a result of the poor summer in contrast to the previous year, total consumption rose by 11.3 per cent.

Coal

Deep-mined output down three million tons

Deep-mined coal production in 1977 was 2.8 per cent lower than in the previous year, but half the decline of over three million tons was offset by a rise of 1½ million tons in opencast output. Coal produced by opencast mining contributed nearly 11 per cent of total production for the year. Colliery manpower fell by nearly 2300 during the year and at the end of December there were 239,000 wage earners on colliery books.

Coal consumption during 1977 rose by 0.5 per cent in total with power station use up by 2.8 per cent while consumption at coke-ovens, largely influenced by the low level of activity in the steel industry, declined by 9.4 per cent to 17.3 million tons, the lowest figure recorded since the second world war.

During January total coal stocks fell by 2.1 million tons, 1.7 million tons of which were power station stocks. These were, however, still 0.7 million tons higher than a year ago.

Gas

Faster growth in 1977

Total gas sent out in 1977 was nearly 900 million therms greater than in the previous year, an increase of 6.1 per cent, the fastest rate of growth achieved since 1974. Most of the growth occurred between April and September and the rate of increase fell away sharply in the last quarter, which was considerably warmer than that of the previous year.

Electricity

Growing nuclear contribution

Total electricity supplied in the United Kingdom in 1977 was nearly three per cent higher than in 1976 and greater than in 1973, the previous peak year. Approximately half the additional electricity supplied was provided by nuclear stations.

Fuel used for generation also increased by about three per cent, half the additional 3.4 mtce consumed being coal. The fossil fuel equivalent input of nuclear electricity accounted for a further 1.5 mtce and oil use increased by 0.9 mtce above last year's low level. Consumption of natural gas was reduced by over 30 per cent, the quantity consumed being well under half of that used in the peak year, 1974.

Petroleum

North Sea production 37½ million tonnes

Total indigenous supply of crude oil in 1977, including condensates and the small amount of on-land production, was 37½ million tonnes. Net arrivals of overseas crude oil totalled 54 million tonnes some 32 million tonnes less than in 1976.

Deliveries of petroleum products for inland consumption in 1977 were 82 million tonnes, 1.7 million tonnes more than in 1976, an increase of 2.2 per cent. Of the individual products, the largest increase was in gas/diesel oil, deliveries of which rose by nearly a million tonnes to 7.03 per cent above last year's level. Deliveries of all transport fuels were higher, aviation turbine fuel, motor spirit and derv fuel increasing by 4.4, 2.7 and 2.2 per cent respectively. Following substantial successive falls in each year since 1972, fuel oil deliveries in 1977 stabilised at only marginally below the level of last year.

Supplementary Data

Value of fuel imports and exports

The total value of imports of crude petroleum during the 4th quarter of 1977 was £898 million, £340 million less than in the comparable quarter of 1976, a drop of 27½ per cent; the actual volume of imports fell by 36 per cent, the difference being due to the higher average price of imported crude oil in 1977.

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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 Table 1. Monthly figures relate to four week periods except where otherwise indicated.

Percentage changes relate to the corresponding period a year ago. These comparisons can be affected by calendar differences, especially during periods of rapid change. They are calculated from unrounded figures but are shown only as (+) or (–) when the percentage change is very large. All figures relate to the United Kingdom unless otherwise indicated.

Explanatory notes on the definitions and concepts used in the tables and on the relationship between some of the main series are given in the Supplement to the March 1976 issue of *Energy Trends* and on the first page of the August 1976 issue. Extra copies of that Supplement may be obtained from the Department of Energy.

Symbols used in the tables

- .. not available.
- nil or less than half the final digit shown.
- * five-week period.
- p provisional.

Total energy

TABLE 1. Inland energy consumption: primary fuel input basis

	Total	Coal ¹	Petroleum ²	Natural gas ³	Nuclear electricity	Hydro-electricity	Total	Coal ¹	Petroleum ²	Natural gas ³	Nuclear electricity	Hydro-electricity
	<i>Million tons of coal or coal equivalent</i>						<i>Million metric tonnes of oil or oil equivalent</i>					
1972	332.7	120.5	159.6	40.3	10.5	1.8	198.8	72.0	95.4	24.0	6.3	1.1
1973	347.9	130.8	161.6	43.6	9.9	2.0	207.9	78.2	96.6	26.0	5.9	1.2
1974	332.2	116.0	150.1	52.1	11.9	2.1	198.6	69.3	89.7	31.2	7.1	1.3
1975	319.7	118.1	134.4	54.5	10.8	1.9	191.1	70.6	80.3	32.6	6.4	1.2
1976	324.7	120.1	132.1	57.9	12.7	1.9	194.0	71.8	78.9	34.6	7.6	1.1
1977 p	332.4	121.1	133.9	61.3	14.1	2.0	198.7	72.4	80.0	36.7	8.4	1.2
Per cent change	+2.4	+0.9	+1.3	+6.0	+11.0	+6.3	+2.4	+0.9	+1.3	+6.0	+11.0	+6.3
1976 Oct	25.1	9.4	9.8	4.8	1.0	0.1	14.9	5.6	5.8	2.8	0.6	0.1
Nov	28.7	10.4	11.0	6.0	1.1	0.2	17.2	6.2	6.6	3.6	0.7	0.1
Dec	38.3	14.3	15.3	7.2	1.3	0.2	22.9	8.6	9.1	4.3	0.8	0.1
Total	92.1	34.1	36.1	18.0	3.4	0.5	55.0	20.4	21.5	10.7	2.1	0.3
1977 Oct	24.8	9.2	9.7	4.7	1.0	0.2	14.8	5.5	5.8	2.8	0.6	0.1
Nov	28.9	9.3	12.0	6.4	0.9	0.3	17.2	5.6	7.1	3.8	0.5	0.2
Dec p	37.0	13.3	15.2	6.8	1.5	0.2	22.1	7.9	9.1	4.1	0.9	0.1
Total	90.7	31.8	36.9	17.9	3.4	0.7	54.1	19.0	22.0	10.7	2.0	0.4
Per cent change	–1.7	–6.6	+2.1	–0.9	–3.1	+48.0	–1.7	–6.6	+2.1	–0.9	–3.1	+48.0

Seasonally adjusted and temperature corrected⁴ (annual rates).

1976 Oct	314.8	120.0	122.1	57.4	13.6	1.7	188.1	71.7	73.0	34.3	8.1	1.0
Nov	324.4	121.8	126.1	61.3	13.4	1.8	193.8	72.8	75.3	36.6	8.0	1.1
Dec	338.3	130.4	126.1	67.8	12.7	1.3	202.2	77.9	75.4	40.5	7.6	0.8
Average	326.8	124.5	124.9	62.6	13.2	1.6	195.3	74.5	74.6	37.4	7.9	0.9
1977 Oct	315.0	119.8	123.6	55.9	13.4	2.3	188.2	71.6	73.8	33.4	8.0	1.4
Nov	329.3	114.3	138.2	62.8	10.5	3.5	196.8	68.3	82.6	37.6	6.2	2.1
Dec p	341.4	126.3	135.4	63.6	14.5	1.6	204.0	75.5	80.9	38.0	8.6	1.0
Average	329.5	120.6	132.6	61.0	12.9	2.4	197.0	72.1	79.3	36.5	7.7	1.4
Per cent change	+0.8	–3.2	+6.2	–2.6	–2.2	+53.1	+0.8	–3.2	+6.2	–2.6	–2.2	+53.1

1. Consumption by fuel producers plus colliery disposals to final users, plus (for annual figures only) net foreign trade and stock change in other solid fuels. 2. Refinery throughput of crude oil, plus net foreign trade and stock change in petroleum products, less deliveries of non-energy products. 3. Excluding gas flared or reinjected. 4. Only coal and petroleum are temperature corrected.

Energy: Total inland consumption (primary fuel input basis)¹

Million tons
coal equivalent

Million tonnes
oil equivalent

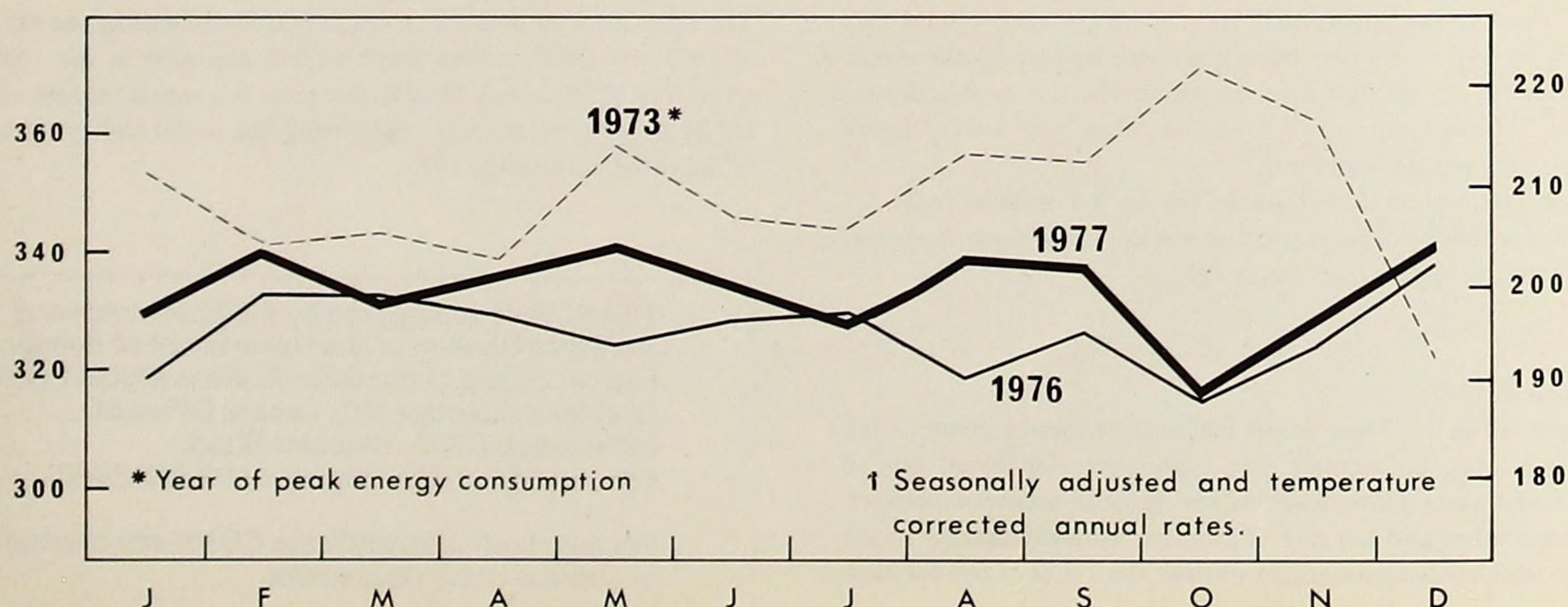


TABLE 2. Supply and use of fuels

Million therms

	1975	1976	Per cent change	1975		1976				1977 p			Per ¹ cent change
				3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	
PRIMARY FUELS AND EQUIVALENTS:													
Production of primary fuels													
Coal	31,430	30,166	−4.0	6,602	8,442	8,006	7,635	6,378	8,147	7,568	7,538	6,463	+1.3
Petroleum ²	665	5,206	(+)	137	415	574	1,020	1,335	2,277	3,295	4,209	4,341	(+)
Natural gas ³	13,578	14,379	+5.9	2,191	4,214	4,727	2,962	2,173	4,517	4,910	3,448	2,483	+14.3
Primary electricity	2,982	3,411	+14.4	580	841	926	786	770	929	1,070	877	852	+10.6
Total	48,655	53,162	+9.3	9,510	13,912	14,233	12,403	10,656	15,870	16,843	16,072	14,139	+32.7
Arrivals. Petroleum ⁴	44,216	43,174	−2.4	10,521	11,117	10,992	10,949	10,160	11,073	9,613	9,114	8,251	−18.8
Other	1,616	1,183	−26.8	380	430	351	336	270	226	193	197	366	+35.6
Shipments	7,243	9,176	+26.7	1,993	1,882	1,745	2,068	2,507	2,856	2,973	3,649	3,885	+55.0
Bunkers	1,418	1,468	+3.5	354	344	371	346	381	370	316	303	293	−23.1
Stock change ⁵													
Solid fuels	−2,576	−634	..	−891	−703	+312	−820	−388	+262	+1,195	−336	−191	..
Crude petroleum	+475	−378	..	+220	+78	+354	−196	−25	−511	+159	−231	+252	..
Petroleum products	+978	+240	..	−503	+707	+648	−431	−367	+390	+560	−222	−314	..
Non-energy use	4,106	4,448	+8.3	960	1,135	1,138	1,111	1,159	1,040	929	1,116	+1,119	−3.5
Statistical difference ⁶	−176	+54	..	−13	−12	+58	−23	−2	+21	−210	+126	−60	..
Total primary ⁷ energy input	80,421	81,709	+1.6	15,917	22,168	23,694	18,693	16,257	23,065	24,135	19,652	17,146	+5.5
Conversion losses etc. ⁸	24,545	24,380	−0.7	4,954	6,905	6,913	5,596	4,905	6,966	7,260	5,847	5,248	+7.0
FINAL CONSUMPTION BY USER:													
Iron and steel industry													
Coal	72	66	−8.3	10	19	23	14	9	20	23	15	9	−
Other solid fuel ⁹	2,374	2,723	+14.7	482	571	631	719	670	703	655	584	593	−11.5
Other coal-derived fuels ¹⁰	372	401	+7.8	76	92	98	109	97	97	95	90	97	−
Gas ¹¹	371	438	+18.1	79	100	108	112	99	119	128	125	113	+14.1
Electricity	344	395	+14.8	75	91	100	96	90	109	102	94	81	−10.0
Petroleum	1,357	1,279	−5.7	244	330	354	306	273	346	351	285	256	−6.2
Total	4,890	5,302	+8.4	966	1,203	1,314	1,356	1,238	1,394	1,354	1,193	1,149	−7.2
Other industries													
Coal	2,458	2,277	−7.4	528	657	547	564	470	696	617	530	483	+2.8
Other solid fuel ⁹	164	126	−23.2	40	30	38	24	27	37	39	39	30	+11.1
Other coal-derived fuels ¹⁰	78	76	−2.6	22	16	13	23	25	15	17	17	14	−44.0
Gas ¹¹	4,701	5,241	+11.5	1,007	1,308	1,456	1,236	1,083	1,466	1,431	1,373	1,172	+8.2
Electricity	2,228	2,364	+6.1	508	592	617	563	546	638	646	603	572	+4.8
Petroleum	7,434	7,441	+0.1	1,300	2,224	2,255	1,696	1,400	2,090	2,254	1,783	1,437	+2.6
Total	17,063	17,525	+2.7	3,405	4,827	4,926	4,106	3,551	4,942	5,004	4,345	3,708	+4.4
Transport sector													
Coal and other solid fuel	19	21	+10.5	3	7	7	4	2	8	6	4	2	−
Electricity	99	98	+1.0	23	25	26	24	22	26	27	26	24	+9.1
Petroleum	12,143	12,597	+3.7	3,225	3,043	2,889	3,198	3,333	3,177	2,988	3,218	3,421	+2.6
Total	12,261	12,716	+3.7	3,251	3,075	2,922	3,226	3,357	3,211	3,021	3,248	3,447	+2.7
Domestic sector													
Coal	3,381	3,143	−7.0	699	766	932	765	634	812	851	774	704	+11.0
Other solid fuel ⁹	962	869	−9.7	260	201	277	196	208	188	231	208	228	+9.6
Gas ¹¹	5,891	6,194	+5.1	615	1,828	2,403	1,055	686	2,050	2,412	1,370	770	+12.2
Electricity	3,045	2,905	−4.6	485	838	993	585	464	863	972	638	511	+10.1
Petroleum	1,434	1,435	−0.1	194	461	519	268	176	472	514	291	201	+14.2
Total	14,713	14,546	−1.1	2,253	4,094	5,124	2,869	2,168	4,385	4,980	3,281	2,414	+11.3
Other final users ¹²													
Coal	490	516	+5.3	78	160	172	113	73	158	166	118	82	+12.3
Other solid fuel ⁹	219	166	−24.2	63	43	51	44	37	34	52	39	48	+29.7
Gas ¹¹	1,347	1,521	+12.9	171	394	571	317	169	464	561	380	180	+6.5
Electricity	1,546	1,596	+3.2	300	437	478	345	308	405	497	381	339	+10.1
Petroleum	3,347	3,441	+2.8	474	1,028	1,223	721	451	1,046	1,240	820	531	+17.7
Total	6,949	7,240	+4.2	1,086	2,062	2,495	1,540	1,038	2,167	2,516	1,738	1,180	+13.7
Total final users	55,876	57,329	+2.6	10,961	15,261	16,781	13,097	11,352	16,099	16,875	13,805	11,898	+4.8
FINAL CONSUMPTION BY FUEL:													
Coal	6,420	6,022	−6.2	1,318	1,609	1,681	1,460	1,188	1,693	1,663	1,441	1,280	+7.7
Other solid fuel ⁹	3,719	3,885	+4.5	845	845	997	983	942	963	977	870	899	−4.6
Other coal-derived fuels ¹⁰	450	477	+6.0	98	108	111	132	122	112	112	107	111	−9.0
Gas ¹¹	12,310	13,394	+8.8	1,872	3,630	4,538	2,720	2,037	4,099	4,532	3,248	2,235	+9.7
Electricity	7,262	7,358	+1.3	1,391	1,983	2,214	1,613	1,430	2,101	2,244	1,742	1,527	+6.8
Petroleum	25,715	26,193	+1.9	5,437	7,086	7,240	6,189	5,633	7,131	7,347	6,397	5,846	+3.8
Total all fuels	55,876	57,329	+2.6	10,961	15,261	16,781	13,097	11,352	16,099	16,875	13,805	11,898	+4.8

1. Per cent change on the corresponding period of the previous year. 2. Crude petroleum and natural gas liquids. 3. Excluding gas flared or reinjected. 4. Crude petroleum, process oils and petroleum products. 5. Stock fall (+) stock rise (-). 6. Supply greater than recorded demand (-). 7. Thermal equivalent of total inland energy consumption in Table 1. A more detailed analysis of the annual figures is shown in the Digest of United Kingdom Energy Statistics 1977 Tables 8 and 10. 8. Losses in conversion and distribution and used by fuel industries. 9. Coke and other manufactured solid fuels. 10. Coke oven gas, creosote/pitch mixtures and other liquid fuels derived from coal. 11. Natural gas supplied direct, and town gas. 12. Mainly public administration, commerce and agriculture.

Coal

TABLE 3. Supply

Thousand tons

	Net inland supply	Production			Net Imports	Imports ²	Exports ²	Tonnage lost (deep-mined) ³	
		Total ¹	Deep-mined	Opencast				Recognised holidays and rest days	Disputes
1972	123,125	119,927	107,390	10,261	+3,198	4,919	1,721	10,244	22,400
1973	128,904	129,906	118,140	9,964	-1,002	1,649	2,651	10,313	5,569
1974	110,362	108,707	98,413	9,085	+1,655	3,491	1,836	10,352	15,996
1975	129,505	126,650	115,557	10,249	+2,855	5,003	2,148	12,105	347
1976	123,224	121,845	108,523	11,755	+1,379	2,792	1,413	12,150	1,140
1977 p	120,687	120,221	105,432	13,336	+466	2,376	1,910	12,260	801
Per cent change	-2.1	-1.3	-2.8	+13.4	-66.2	-14.9	+35.2	+0.9	-29.7
1976 Nov	10,629	10,546	9,438	961	+83	216	133	3	89
Dec*	12,476	12,510	11,264	1,106	-34	115	149	573	38
1977 Jan	7,472	7,285	6,638	608	+187	277	90	2,619	79
Total	30,577	30,341	27,340	2,675	+236	608	372	3,195	206
1977 Nov	10,366	10,202	8,896	1,149	+164	246	82	-	86
Dec*	12,866	12,780	11,179	1,378	+86	264	178	89	68
1978 Jan p	7,439	7,286	6,550	687	+153	308	155	2,573	53
Total	30,671	30,268	26,625	3,214	+403	818	415	2,662	207
Per cent change	+0.3	-0.2	-2.6	+20.1	+70.8	+34.5	+11.6	-16.7	+0.5

1. Includes an estimate for slurry, etc., recovered and disposed of otherwise than by the National Coal Board. 2. As recorded in the "Overseas Trade Statistics of the United Kingdom". 3. NCB mines only.

TABLE 4. Inland consumption of coal

Thousand tons

	Total inland consumption	Fuel producers					Final users ¹			
		Primary	Secondary				Colliery disposals			
		Collieries	Power stations ²	Coke ovens	Gas works	Other ³ conversion industries	Industry ⁴	Domestic ⁵		Other ⁸
								House Coal ⁶	Other ⁷	
1972	120,945	1,383	65,611	20,152	566	4,475	11,478	12,569	1,756	2,955
1973	131,270	1,359	75,628	21,543	504	3,550	11,890	12,466	1,790	2,540
1974	116,025	1,236	65,967	18,169	105	3,728	10,902	11,793	1,660	2,465
1975	120,286	1,218	73,391	18,783	9	3,999	9,532	9,759	1,677	1,918
1976	121,651	1,114	76,589	19,095	8	3,351	8,828	9,301	1,352	2,013
1977 p	122,203	1,106	78,701	17,303	7	3,116	8,890	9,483	1,482	2,115
Per cent change	+0.5	-0.7	+2.8	-9.4	-12.5	-7.0	+0.7	+2.0	+9.6	+5.1
1976 Nov	10,412	98	6,756	1,514	1	228	837	680	121	177
Dec*	14,318	128	9,633	1,808	1	272	1,076	991	129	280
1977 Jan	10,943	74	7,711	1,454	1	213	602	641	75	172
Total	35,673	300	24,100	4,776	3	713	2,515	2,312	325	629
1977 Nov	9,334	89	5,746	1,344	1	243	804	780	136	191
Dec*	13,265	130	8,829	1,412	1	342	1,032	1,020	171	328
1978 Jan p	9,677	71	6,868	1,121	1	246	582	551	94	143
Total	32,276	290	21,443	3,877	3	831	2,418	2,351	401	662
Per cent change	-9.5	-3.3	-11.0	-18.8	-	+16.5	-3.9	+1.7	+23.4	+5.2

1. Disposals by collieries and opencast sites. 2. Public supply and railway and transport power stations. 3. Low temperature carbonisation and patent fuel plants. 4. Prior to October 1973 the figures relate to actual consumption. 5. Prior to April 1973 the figures relate to merchants' disposals to the domestic market. 6. Including miners' coal. 7. Anthracite, dry steam coal and imported naturally smokeless fuels. 8. Mainly public administration and commerce.

TABLE 5. Stocks of coal¹ at end of period: Great Britain

Thousand tons

	Total	Distributed					Undistributed		
		Total distributed stocks	Power stations	Coke ovens	Gas works	Other	Total undistributed stocks	Collieries	Opencast sites and central stocking grounds
1972	29,979	19,045	16,791	1,890	50	314	10,934	7,558	3,376
1973	27,445	16,766	14,537	1,937	27	265	10,679	7,529	3,150
1974	21,462	15,577	13,414	1,822	3	338	5,885	3,946	1,939
1975	30,666	20,216	17,668	2,296	2	250	10,450	8,767	1,683
1976	32,592	22,102	19,288	2,642	2	170	10,490	9,148	1,342
1977 p	31,039	21,364	18,826	2,333	2	203	9,675	8,159	1,516
1976 Nov	34,500	23,644	20,927	2,536	1	180	10,856	9,451	1,405
Dec	32,592	22,102	19,288	2,642	2	170	10,490	9,148	1,342
1977 Jan	29,147	18,984	16,463	2,355	3	163	10,163	8,919	1,244
1977 Nov	31,570	21,484	19,083	2,161	1	239	10,086	8,545	1,541
Dec	31,039	21,364	18,826	2,333	2	203	9,675	8,159	1,516
1978 Jan p	28,927	19,472	17,162	2,108	2	200	9,455	7,944	1,511
Absolute change: In latest month	-2,112	-1,892	-1,664	-225	-	-3	-220	-215	-5
On a year ago	-220	+488	+699	-247	-1	+37	-708	-975	+267

1. Excluding distributed stocks held in merchants' yards, etc., mainly for the domestic market, and stocks held by the industrial sector.

TABLE 6. Colliery manpower and productivity at NCB mines

	Wage earners on colliery books ¹		Recruitment	Wastage	Absence percentage ²			Average output per manshift ³	
	Total	Underground			Total	Voluntary	Involuntary	Overall	At the face
	Thousands		Number		Per cent			Cwt.	
1972	266	210	13,255	26,114	16.6	3.9	12.7	43.60	144.35
1973	245	193	17,402	37,961	18.0	4.1	13.9	45.00	150.00
1974	246	194	26,436	25,133	16.3	4.1	12.2	42.83	..
1975	245	194	21,347	22,451	16.2	4.0	12.2	44.92	155.85
1976	241	192	17,061	21,239	17.4	3.7	13.7	43.81	152.59
1977 p	239	189	29,361	31,647	17.6	3.9	13.7	42.91	152.91
1976 Nov	241	191	1,536	1,804	17.8	4.1	13.7	44.94	155.61
Dec*	241	192	1,408	1,877	18.0	4.1	13.9	44.55	155.38
1977 Jan	241	191	1,412	1,607	18.0	3.6	14.4	43.09	153.85
1977 Nov	239	189	2,114	1,885	17.5	4.2	13.3	42.57	150.64
Dec*	239	189	1,816	2,044	18.5	4.8	13.7	43.12	153.76
1978 Jan p	238	189	1,367	1,610	17.5	3.8	13.7	43.00	158.32

1. At end of period. 2. The definition was changed from 1973. 3. Excluding capital working and tip coal.

Gas

TABLE 7. Sources of supply and send-out by the public gas supply system

	Natural gas supply			Other fuel used		Gas sent out		
	Total into system	Source ¹		Coal	Oil ²	Total	Town gas	Natural ³ gas for direct supply
		Indigenous	Imported					
		Million therms			Thousand tons		Million therms	
1972	10,071	9,775	296	559	2,170	10,614	3,415	7,199
1973	10,916	10,639	277	503	2,286	11,620	2,434	9,186
1974	13,102	12,861	241	105	1,256	13,451	1,598	11,853
1975	13,692	13,367	325	9	579	13,822	752	13,070
1976	14,420	14,030	390	8	241	14,445	226	14,219
1977 p	15,373	14,734	639	7	162	15,322	74	15,248
Per cent change	+ 6.6	+ 5.0	+ 63.8	− 5.3	− 32.8	+ 6.1	− 67.3	+ 7.2
1976 Nov	1,346	1,324	22	1	24	1,346	11	1,335
Dec*	2,006	1,975	31	1	24	2,001	14	1,987
1977 Jan	1,647	1,623	24	1	28	1,644	12	1,632
Total	4,999	4,922	77	3	76	4,991	37	4,954
1977 Nov	1,434	1,316	118	1	19	1,432	4	1,428
Dec*	1,948	1,770	178	1	20	1,940	3	1,937
1978 Jan p	1,740	1,589	151	1	31	1,746	4	1,742
Total	5,122	4,675	447	3	70	5,118	11	5,107
Per cent change	+ 2.5	− 5.0	(+)	− 30.8	− 7.9	+ 2.5	− 70.3	+ 3.1

1. Figures differ from production and imports respectively because of stock changes and small quantities not entering the public supply system. 2. Mainly naphtha (LDF), liquefied petroleum gases (LPG) and refinery gases. 3. Includes Substitute Natural Gas (SNG).

TABLE 8. Sales of gas by the public supply system

Million therms

	Total	Power stations ¹	Iron and steel industry	Other industries	Domestic	Other ²
1971	7,520	263	343	2,118	3,930	866
1972	9,787	630	437	3,215	4,509	996
1973	10,729	285	396	4,150	4,815	1,083
1974	12,668	985	395	4,635	5,384	1,269
1975	13,112	858	371	4,645	5,891	1,347
1976	13,997	662	438	5,182	6,194	1,521
Per cent change	+6.8	-22.8	+18.1	+11.6	+5.1	+12.9
1975 3rd quarter	2,067	208	79	994	615	171
4th quarter	3,857	243	100	1,292	1,828	394
1976 1st quarter	4,765	240	108	1,443	2,403	571
2nd quarter	2,865	160	112	1,221	1,055	317
3rd quarter	2,149	129	99	1,066	686	169
4th quarter	4,218	133	119	1,452	2,050	464
1977 1st quarter p	4,633	118	128	1,414	2,412	561
2nd quarter p	3,316	82	125	1,359	1,370	380
3rd quarter p	2,372	153	113	1,156	770	180
Per cent change	+10.4	+18.6	+14.1	+8.4	+12.2	+6.5

1. Public supply and transport power stations. 2. Public administration and commerce.

Electricity

TABLE 9. Fuel used and electricity generated by the public supply system

	Fuel used						Electricity generated			Own ⁵ use	Electricity supplied	Total ⁶ electricity available
	Total ¹	Coal ²	Oil ^{2 3}	Natural gas	Nuclear electricity	Hydro electricity	Total ⁴	By steam plant				
								Nuclear	Other			
Million tons of coal or coal equivalent							TWh					
United Kingdom												
1972	109.37	65.25	31.25	2.48	8.89	1.47	242.75	25.30	212.20	18.05	224.70	229.23
1973	114.68	75.57	28.04	1.13	8.22	1.66	258.80	23.66	229.89	18.43	240.37	244.76
1974	110.49	65.97	28.51	3.86	10.28	1.81	250.47	29.40	215.70	18.07	232.40	236.68
1975	108.97	73.39	21.14	3.37	9.29	1.64	251.26	26.52	219.69	18.02	233.24	237.30
1976	108.76	76.59	16.78	2.51	11.22	1.61	254.92	32.42	217.50	19.16	235.76	239.47
1977 p	112.18	78.31	17.69	1.73	12.68	1.70	262.02	36.42	220.04	19.55	242.47	246.01
Per cent change	+3.1	+2.2	+5.4	−31.1	+13.0	+5.6	+2.8	+12.3	+1.2	+2.0	+2.8	+2.7
1976 Oct	8.10	5.76	1.17	0.16	0.91	0.10	19.00	2.63	16.03	1.45	17.55	17.82
Nov	9.46	6.76	1.41	0.15	1.00	0.13	22.20	2.86	18.93	1.63	20.57	20.85
Dec*	13.40	9.63	2.23	0.16	1.22	0.15	31.33	3.51	27.27	2.28	29.05	29.44
Total	30.96	22.15	4.81	0.47	3.13	0.38	72.53	9.00	62.23	5.36	67.17	68.11
1977 Oct	8.35	5.81	1.33	0.15	0.90	0.15	19.33	2.62	16.25	1.47	17.86	18.12
Nov	9.69	6.12	2.35	0.18	0.75	0.28	22.09	2.20	18.94	1.54	20.55	20.85
Dec* p	12.37	8.42	2.12	0.24	1.38	0.20	28.82	3.95	24.28	2.08	26.74	27.12
Total	30.41	20.35	5.80	0.57	3.03	0.63	70.24	8.77	59.47	5.09	65.15	66.09
Per cent change	−1.8	−8.1	+20.6	+21.3	−3.2	+65.8	−3.2	−2.6	−4.4	−5.0	−3.0	−3.0
England and Wales												
1972	95.63	58.21	26.74	2.48	8.08	0.09	212.91	23.01	187.95	15.71	197.20	200.24
1973	99.43	67.14	23.56	1.13	7.45	0.09	225.24	21.42	202.18	16.24	209.00	212.72
1974	96.09	58.63	24.00	3.86	9.43	0.12	218.85	26.93	190.43	15.89	202.96	205.55
1975	94.62	64.67	17.95	3.37	8.40	0.09	219.25	23.94	194.33	15.32	203.93	206.39
1976	94.29	67.97	13.84	2.51	9.84	0.08	222.12	28.30	193.11	15.94	206.18	207.62
1977 p	96.79	69.48	14.69	1.73	10.71	0.11	226.99	30.71	195.10	16.26	210.73	213.19
Per cent change	+2.7	+2.2	+6.1	−31.1	+8.8	+37.5	+2.2	+8.5	+1.0	+2.0	+2.2	+2.7
1976 Oct	7.06	5.20	0.96	0.16	0.73	0.01	16.62	2.12	14.46	1.20	15.42	15.55
Nov	8.20	6.03	1.15	0.15	0.85	0.01	19.41	2.44	16.91	1.37	18.04	18.15
Dec*	11.58	8.49	1.82	0.16	1.09	0.01	27.22	3.14	23.97	1.88	25.34	25.36
Total	26.84	19.72	3.93	0.47	2.67	0.03	63.25	7.70	55.34	4.45	58.80	59.06
1977 Oct	7.20	5.12	1.08	0.15	0.83	0.01	16.79	2.40	14.27	1.25	15.54	15.75
Nov	8.22	5.35	2.01	0.18	0.65	0.02	18.83	1.88	16.63	1.29	17.54	17.98
Dec* p	10.56	7.34	1.77	0.24	1.19	0.01	24.75	3.38	21.26	1.73	23.02	23.28
Total	25.98	17.81	4.86	0.57	2.67	0.04	60.37	7.66	52.16	4.27	56.10	57.01
Per cent change	−3.2	−9.7	+23.7	+21.3	−0.5	+33.3	−4.6	−0.5	−5.7	−4.0	−4.6	−3.5

1. Including coke. 2. Including quantities used in the production of steam for sale. 3. Including oil used in gas turbine and diesel plant and for lighting up coal fired boilers. 4. Including generation by gas turbine, diesel and hydro-electric plant. 5. Used on works and for pumping at pumped storage stations. 6. Includes net imports and purchases from outside sources mainly UKAEA and British Nuclear Fuels Ltd. The England and Wales figures include net exchanges with Scotland.

TABLE 10. Sales of electricity by the public supply system

GWh

	Total	Iron and steel industry	Other industries	Domestic	Other ¹
1971	203,433	10,837	69,337	80,674	42,585
1972	210,417	10,774	68,967	86,889	43,787
1973	225,267	11,646	75,327	91,299	46,995
1974	218,552	11,292	70,967	92,626	43,667
1975	217,924	11,164	70,854	89,214	46,692
1976	220,841	12,607	74,986	85,117	48,131
Per cent change	+1.3	+12.9	+5.8	-4.6	+3.1
1975 3rd quarter	42,042	2,407	16,219	14,218	9,198
4th quarter	59,498	2,922	18,838	24,545	13,193
1976 1st quarter	66,235	3,208	19,559	29,089	14,379
2nd quarter	48,537	3,071	17,910	17,148	10,408
3rd quarter	43,112	2,875	17,314	13,584	9,339
4th quarter	62,957	3,453	20,203	25,296	14,005
1977 1st quarter p	67,165	3,268	20,445	28,488	14,964
2nd quarter p	52,346	3,050 ²	19,064 ²	18,686	11,546
3rd quarter p	46,030	2,645 ²	18,153 ²	14,966	10,266
Per cent change	+6.8	-8.0	+4.8	+10.2	+9.9

1. Mainly commerce, public administration and agriculture. 2. Contains a small degree of estimation.

Petroleum

TABLE 11. Production, arrivals and shipments¹

Thousand tonnes

	Crude Petroleum						Petroleum products				
	Gross ² Indigenous Production	Supply				Arrivals ^{4,5}	Shipments ^{4,5}	Arrivals ⁴	Shipments ⁴	Net Arrivals	Bunkers ⁶
		Total	Indigenous ²	Net arrivals	Other ³						
1972	333	105,641	226	+104,148	1,267	107,706	3,558	20,440	15,775	+4,665	5,225
1973	373	114,032	235	+112,237	1,560	115,472	3,235	17,808	16,681	+1,127	5,499
1974	410	113,478	250	+111,418	1,810	112,822	1,404	14,256	14,396	-140	4,759
1975	1,564	92,273	1,156	+89,842	1,275	91,366	1,524	12,461	13,664	-1,203	3,444
1976	12,036	98,384	11,511	+86,181	692	90,466	4,285	10,422	15,726	-5,304	3,569
1977 p	37,878	92,260	37,540	+54,038	682	70,697	16,659	12,716	13,928	-1,212	2,860
Per cent change	(+)	-6.2	(+)	-37.3	-1.4	-21.9	(+)	+22.0	-11.4	(-)	-19.9
1976 Oct	1,637	8,796	1,630	+7,150	16	7,682	532	595	1,507	-912	251
Nov	1,640	9,193	1,632	+7,564	-3	8,128	564	592	1,441	-849	322
Dec	1,989	8,995	1,821	+7,156	18	7,855	699	1,028	1,544	-516	328
Total	5,266	26,984	5,083	+21,870	31	23,665	1,795	2,215	4,492	-2,277	901
1977 Oct	3,517	8,163	3,586	+4,513	64	5,993	1,480	920	1,214	-294	216
Nov	3,279	6,357	3,343	+2,911	103	4,461	1,550	1,303	887	+416	193
Dec p	3,585	8,289	3,381	+4,771	137	6,167	1,396	1,597	880	+717	230
Total	10,381	22,809	10,310	+12,195	304	16,621	4,426	3,820	2,981	+839	639
Per cent change	+97.2	-13.5	(+)	-44.2	(+)	-29.8	(+)	+72.5	-33.6	(+)	-29.1

1. Calendar months. 2. Including natural gas liquids (condensates). 3. Mainly recycled products. 4. Foreign trade as recorded by the Petroleum Industry and may differ from figures published in Overseas Trade Statistics. 5. Including process (partly refined) oils. 6. International bunkers.

TABLE 12. Refinery throughput and output of petroleum products¹

Thousand tonnes

	Through- put of crude and process oils	Refinery use		Total output of petrol- eum prod- ucts ²	Gases		Naphtha (LDF)	Motor spirit	Kerosene		Gas/ diesel oil	Fuel oil	Lubri- cating oils	Bitumen
		Fuel	Losses		Butane and propane	Other petro- leum			Aviation turbine fuel	Burning oil ³				
1972	106,980	6,420	1,192	99,368	1,463	369	5,728	13,632	4,180	2,649	25,536	41,002	1,333	2,004
1973	114,338	7,053	1,331	105,954	1,655	394	6,607	14,842	4,550	2,717	27,853	42,026	1,477	2,225
1974	111,217	6,946	1,211	103,060	1,602	272	6,448	14,520	4,475	2,564	27,641	40,022	1,455	2,129
1975	93,579	6,031	901	86,647	1,447	151	3,968	13,940	3,959	2,299	23,324	32,711	1,141	2,099
1976	97,784	6,342	1,158	90,284	1,575	158	4,583	15,232	4,163	2,458	24,198	32,696	1,310	1,897
1977 p	93,611	6,238	1,035	86,338	1,539	142	4,488	14,805	4,004	2,462	23,476	30,481	1,380	1,882
Per cent change	-4.3	-1.6	-10.6	-4.4	-2.3	-10.1	-2.1	-2.8	-3.8	+0.2	-3.0	-6.8	+5.3	-0.8
1976 Oct	8,658	524	112	8,022	134	11	413	1,352	410	192	2,067	3,020	129	141
Nov	8,583	519	84	7,980	143	11	419	1,299	300	287	1,970	3,151	107	167
Dec	8,833	561	184	8,088	151	13	485	1,298	292	292	2,105	3,081	120	108
Total	26,074	1,604	380	24,090	428	35	1,317	3,949	1,002	771	6,142	9,252	356	416
1977 Oct	7,506	527	34	6,945	142	11	349	1,237	273	251	1,901	2,354	118	179
Nov	7,341	527	70	6,744	110	9	361	1,144	281	224	1,875	2,355	121	148
Dec p	8,617	566	107	7,944	154	15	419	1,332	302	303	2,102	2,922	120	133
Total	23,464	1,620	211	21,633	406	35	1,129	3,713	856	778	5,878	7,631	359	460
Per cent change	-10.0	+1.1	-44.5	-10.2	-5.3	+2.4	-14.3	-6.0	-14.1	+1.0	-4.3	-17.5	+0.7	+10.2

1. Calendar months. 2. Including output of products not shown separately, namely, aviation spirit, wide-cut gasoline, industrial and white spirits, paraffin wax and miscellaneous products. 3. Including vaporising oil.

TABLE 13. Deliveries of petroleum products for inland consumption¹

Thousand tonnes

	Total ^{2,3}	Butane ⁴ and propane	Naphtha (LDF) ⁵	Motor spirit	Kerosene				Gas/diesel oil		Fuel oil	Lubri- cating oils	Bitumen
					Aviation turbine fuel	Burning oil							
						Premier	Standard						
							Domestic	Other ⁶					
1972	97,700	1,455	7,391	15,899	3,929	778	1,663	528	5,254	15,113	41,307	1,113	2,203
1973	99,344	1,600	8,373	16,927	4,202	788	1,931	501	5,658	15,100	39,447	1,185	2,458
1974	92,342	1,414	7,700	16,484	3,690	603	1,770	436	5,518	13,581	36,810	1,045	2,241
1975	81,667	1,275	5,116	16,125	3,834	538	1,707	400	5,414	13,050	30,470	992	2,089
1976	80,291	1,330	5,404	16,879	3,989	576	1,686	372	5,594	12,984	27,825	1,011	1,867
1977 p	82,023	1,318	5,263	17,339	4,165	558	1,683	387	5,715	13,932	27,775	1,029	1,847
Per cent change	+2.2	−0.8	−2.6	+2.7	+4.4	−3.1	−0.2	+4.0	+2.2	+7.3	−0.2	+1.8	−1.0
1976 Oct	6,555	109	471	1,472	340	36	144	30	505	1,025	2,141	88	142
Nov	7,192	131	429	1,363	275	72	159	36	488	1,343	2,588	92	159
Dec	7,936	134	413	1,447	284	113	232	42	467	1,530	3,031	84	99
Total	21,683	374	1,313	4,282	899	221	535	108	1,460	3,898	7,760	264	400
1977 Oct	6,563	109	369	1,468	369	31	120	31	488	1,080	2,157	85	165
Nov	7,787	119	392	1,470	316	71	159	41	518	1,445	2,924	85	158
Dec p	8,065	123	489	1,535	312	81	209	39	491	1,532	2,952	80	118
Total	22,415	351	1,250	4,473	997	183	488	111	1,497	4,057	8,033	250	441
Per cent change	+3.4	−6.2	−4.8	+4.5	+10.9	−17.6	−8.7	+3.8	+2.6	+4.1	+3.5	−5.3	+10.1

1. Calendar months. 2. Including other petroleum gases, aviation spirit, wide-cut gasoline, industrial and white spirits, and paraffin wax. 3. Excluding refinery fuel and miscellaneous products. 4. Including very small amounts for petro-chemicals. 5. Now mainly for petro-chemical feedstock. 6. Including vaporising oil.

TABLE 14. Inland deliveries of petroleum products used for energy^{1, 2}

Thousand tonnes

	Total	Power ³ Stations	Gas Works	Iron and steel industry	Other Industries	Transport ⁴	Domestic	Other ⁵
1973	88,196	16,993	2,355	4,995	22,045	28,971	3,812	9,025
1974	81,547	17,240	1,339	4,019	19,695	27,930	3,378	7,946
1975	73,385	13,345	693	3,309	17,251	27,582	3,270	7,935
1976	71,473	10,441	366	3,128	17,487	28,599	3,269	8,183
Per cent change	-2.6	-21.8	-47.3	-5.5	+1.4	+3.7	-0.0	+3.1
1976 Jan-Nov	64,178	9,181	335	2,844	15,644	26,208	2,797	7,169
1977 Jan-Nov p	65,779	9,586	256	2,693	15,909	26,845	2,853	7,637
Per cent change	+2.5	+4.4	-23.5	-5.3	+1.7	+2.4	+2.0	+6.5
1976 Sept	5,286	690	19	250	1,191	2,511	179	446
Oct	5,820	739	29	263	1,413	2,497	262	617
Nov	6,471	914	25	301	1,722	2,323	330	856
Total	17,577	2,343	73	814	4,326	7,331	771	1,919
1977 Sept	5,609	757	16	244	1,248	2,576	221	547
Oct	5,876	853	31	244	1,365	2,511	234	638
Nov p	7,088	1,381	33	271	1,738	2,480	334	851
Total	18,573	2,991	80	759	4,351	7,567	789	2,036
Per cent change	+5.7	+27.6	+10.7	-6.8	+0.6	+3.2	+2.3	+6.1

1. Calendar months. 2. Excludes non-energy products and non-energy use of naphtha (LDF). 3. Public supply, railway and transport power stations. 4. Including fishing, coastal and inland shipping. 5. Mainly public administration, commerce and agriculture.

TABLE 15. Stocks of petroleum at end of month

	Held by oil companies ¹		Power stations ²
	Million tonnes	Estimated days' supply ³	Million tonnes
1976 Nov	22.1	86	0.91
Dec	21.6	83	0.84
1977 Jan	20.6	81	0.90
1977 Nov	19.3	75	0.82
Dec	19.1	74	1.02
1978 Jan p	19.1	75	1.05

1. Stocks of petroleum products plus the product equivalent of crude and process oils held at refineries, and products in the wholesale distribution system. 2. Fuel oil held at main oil burning stations in Great Britain. 3. Latest three months calculated on forecast deliveries for the ensuing months. Figures for earlier period calculated on actual deliveries.

APPROXIMATE CONVERSION FACTORS (last digit rounded to nought or five) To convert from one fuel to another, multiply by the factor shown					
From	Million tons coal equiv.	Million tonnes oil equiv.	Million therms	TWh Electrical energy	TWh Electricity generated
To					
Million tons coal equivalent	1	1.65	0.00390	0.135 ¹	0.500 ²
Million tonnes oil equivalent	0.600	1	0.00235	0.0800 ¹	0.280 ²
Million therms	255	425	1	34.0	115
TWh Electrical energy	7.45	12.5	0.0295	1	..
TWh Electricity generated	2.00 ³	3.60 ³	0.00880 ³	..	1

1. The amount of fuel (average grade) equivalent to 1 TWh of energy.
2. The amount of primary fuel (power station grade) to generate 1 TWh.
3. The amount of electricity generated by one million units of the fuel shown.
The Digest of UK Energy Statistics 1976 gives more detailed factors.

SUPPLEMENTARY DATA

Value of fuel imports and exports¹

£ million

	Imports (c.i.f.)						Exports (f.o.b.)				
	Coal	Other solid fuel ²	Crude Petroleum	Refined Petroleum and natural gas ³	Electricity	Total	Coal	Other solid fuel ²	Petroleum ³	Electricity	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1972	48.9	11.3	947.0	232.6	1.7	1,241.5	9.7	9.2	219.7	—	238.6
1973	21.3	7.9	1,336.3	357.7	0.4	1,723.6	15.2	13.8	341.0	—	370.0
1974	62.1	7.2	3,856.3	710.0	0.4	4,636.0	20.8	46.9	701.0	—	768.7
1975	105.6	7.8	3,461.2	725.9	1.1	4,301.6	36.1	54.6	722.9	0.1	813.7
1976	82.7	9.0	4,585.8	974.4	—	5,651.9	30.6	47.7	1,175.4	1.1	1,254.8
1977	78.1	11.5	4,094.1	1044.8	—	5,228.5	43.7	45.6	1,977.4	—	2,066.7
Per cent change	— 5.5	+ 27.9	— 10.7	+ 7.2	(—)	— 7.5	+ 42.7	— 4.4	+ 68.2	(—)	+ 64.7
1975 4th quarter	30.0	2.2	905.8	234.1	—	1,172.1	8.1	12.5	204.1	—	224.7
1976 1st quarter	19.7	2.3	1,096.7	250.6	—	1,369.3	6.5	11.8	222.9	—	241.2
2nd quarter	25.6	1.8	1,107.3	252.2	—	1,386.9	6.0	11.6	247.2	0.3	265.1
3rd quarter	18.7	2.7	1,143.5	235.5	—	1,400.4	8.5	11.4	324.6	0.1	344.6
4th quarter	18.7	2.2	1,238.3	236.1	—	1,495.3	9.6	12.9	380.7	0.7	403.9
1977 1st quarter	15.3	2.3	1,173.1	257.5	—	1,448.2	11.3	13.8	454.9	—	480.0
2nd quarter	14.4	3.2	1,099.4	267.7	—	1,384.7	11.3	12.1	498.2	—	521.6
3rd quarter	27.6	3.1	923.7	240.5	—	1,194.9	11.6	10.1	586.2	—	607.9
4th quarter	20.8	2.9	897.9	279.1	—	1,200.7	9.5	9.6	438.1	—	457.2
Per cent change	+ 11.3	+ 31.5	— 27.5	+ 18.2	—	— 19.7	— 0.9	— 25.8	+ 15.1	(—)	+ 13.2

1. The figures correspond to those published in Section 3 of the "Overseas Trade Statistics".

2. Including coke, breeze, briquettes and pitch. 3. Including liquefied gases and petroleum products not used as fuel e.g., lubricants.