

# DEPARTMENT OF ENERGY

# ENERGY TRENDS

## A Statistical Bulletin

January 1977

## UK ENERGY PROSPECTS FOR 1977

Although final figures for 1976 are not yet available it is expected that UK primary energy consumption will have been about 325 million tons of coal equivalent (mtce), (about 195 million tonnes of oil equivalent (mtoe)). This represents an increase of about 5 mtce (3.5 mtoe) on 1975, but is still over 6 per cent down on the consumption of 348 mtce which was reached in 1973. The recession, higher prices and conservation all played a part.

In 1977, with economic growth being resumed in the economy, energy consumption is currently estimated to rise by about 3½ per cent to around 336 mtce (201 mtoe). In terms of final demand for *useful energy* however, (ie net of losses in conversion and appliances) consumption in 1977 is likely to come very close to the 1973 total and could exceed it. The reason for this apparent paradox is that the growth of gas consumption has led to less primary fuel being required to produce the same amount of useful energy.

### Inland energy consumption of primary fuels

	Million tons of coal or coal equivalent					Million tonnes of oil or oil equivalent					Percentage shares of total				
	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977	1973	1974	1975	1976	1977
	p	f				p	f				p	f			
Coal	131	116	118	121	122	78	69	71	72	73	38	35	37	37	36
Petroleum	162	150	134	132	135	97	90	80	79	80	47	45	42	40	40
Natural gas	44	52	55	58	63	26	31	33	35	38	12	16	17	18	19
Nuclear and hydro electricity	12	14	13	15	16	7	8	8	9	10	3	4	4	5	5
Total	348	332	320	325	336	208	199	191	195	201	100	100	100	100	100

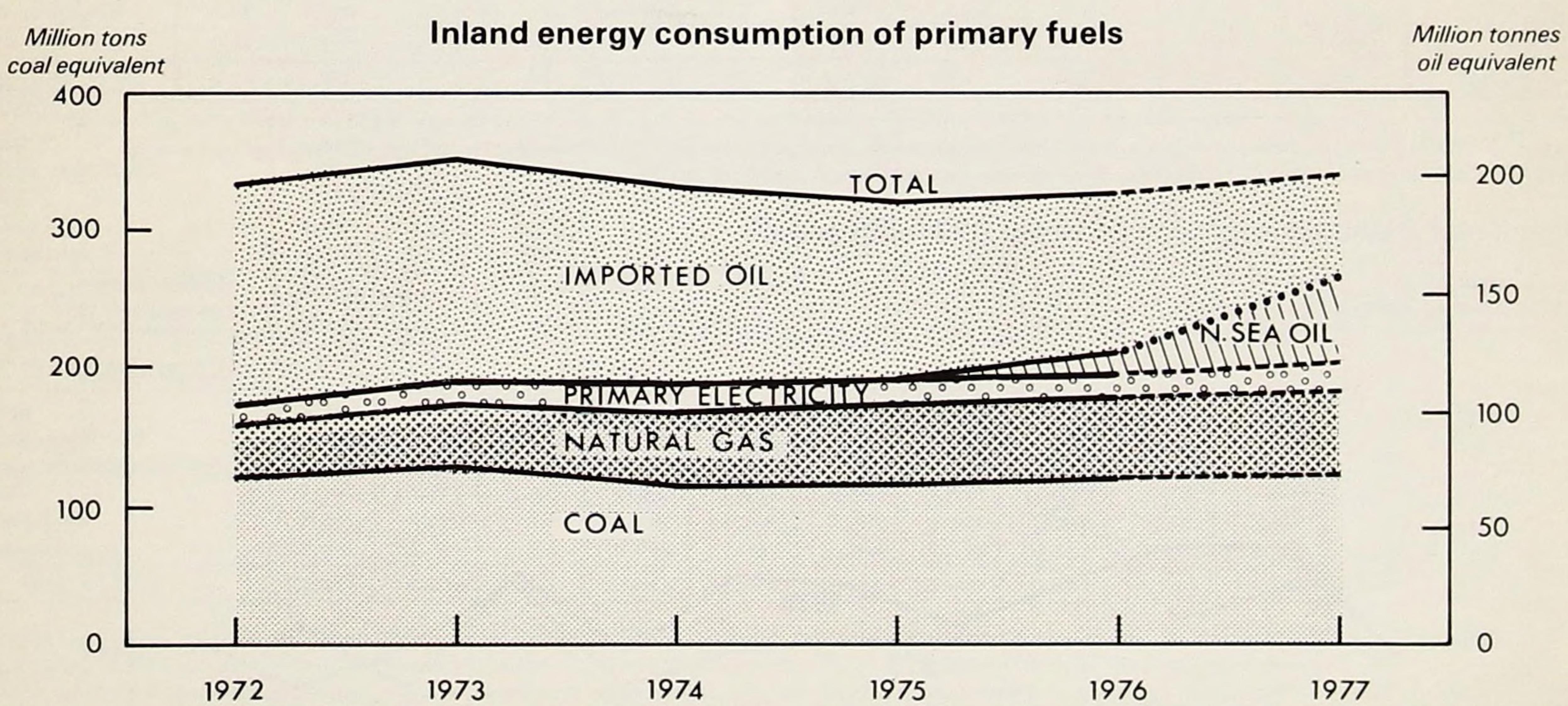
Items may not add to totals due to rounding. p = provisional f = forecast.

**Coal** is likely to hold most of its share of total demand, but production is expected to rise only very slowly until output from new pits and other major investments become available. Stocks of coal at the beginning of this winter were nearly 34m tons, an increase of about 5½ millions on a year earlier, but there is not expected to be an increase during 1977.

**Oil** production from the North Sea during 1976 fell slightly below earlier expectations and totalled about 12m tonnes (20 mtce). A rapid expansion to between 35 and 45m tonnes (59—75 mtce) is possible in 1977. By the end of the year the rate of production should be sufficient to meet half or more of our crude oil requirements which are expected to show little increase in 1977.

**Gas** consumption which has continued to grow through the recession is likely to rise faster this year as total demand picks up and as increased supplies become available. By the end of 1977 gas could be providing a fifth of all our primary fuel consumption.

**Electricity** demand is estimated to show only a very small increase between 1976 and 1977, but should be coming close to the 1973 level. If the performance of the new Advanced Gas Cooled Reactors is maintained, nuclear power could be providing about 15 per cent of all electricity generated during the year.



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. 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 issue of *Energy Trends* and on the first page of the August 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 <sup>1</sup>	Petroleum <sup>2</sup>	Natural <sup>3</sup> gas	Nuclear electricity	Hydro- electricity	Total	Coal <sup>1</sup>	Petroleum <sup>2</sup>	Natural <sup>3</sup> gas	Nuclear electricity	Hydro- electricity	
<i>Million tons of coal or coal equivalent</i>													
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	
Per cent change	-3.8	+1.8	-10.5	+4.7	-9.7	-7.2	-3.8	+1.8	-10.5	+4.7	-9.7	-7.2	
1975 Jan-Nov	286.5	107.3	119.7	48.2	9.6	1.7	171.2	64.1	71.6	28.8	5.7	1.0	
1976 Jan-Nov p	288.1	107.4	116.9	50.8	11.3	1.7	172.2	64.1	69.9	30.4	6.8	1.0	
Per cent change	+0.5	+0.1	-2.4	+5.4	+18.4	-3.1	+0.5	+0.1	-2.4	+5.4	+18.4	-3.1	
1975 Sept*	26.7	10.3	11.8	3.5	1.0	0.1	16.0	6.2	7.1	2.1	0.5	0.1	
Oct	26.0	9.5	10.7	4.7	0.9	0.2	15.5	5.7	6.4	2.8	0.5	0.1	
Nov	27.6	10.0	10.8	5.8	0.9	0.1	16.5	6.0	6.4	3.5	0.5	0.1	
Total	80.3	29.8	33.3	14.0	2.8	0.4	48.0	17.9	19.9	8.4	1.5	0.3	
1976 Sept*	26.8	10.3	11.5	3.6	1.3	0.1	16.0	6.1	6.9	2.2	0.8	-	
Oct	25.0	9.3	9.8	4.8	1.0	0.1	14.9	5.6	5.8	2.8	0.6	0.1	
Nov p	28.8	10.4	11.1	6.0	1.1	0.2	17.2	6.2	6.6	3.6	0.7	0.1	
Total	80.6	30.0	32.4	14.4	3.4	0.4	48.1	17.9	19.3	8.6	2.1	0.2	
Per cent change	+0.3	+1.0	-2.8	+2.2	+26.5	-26.5	+0.3	+1.0	-2.8	+2.2	+26.5	-26.5	

Seasonally adjusted and temperature corrected<sup>4</sup> (annual rates)

1975 Jan-Nov	323.3	121.0	135.6	54.0	10.7	2.0	193.2	72.3	81.1	32.2	6.4	1.2
1976 Jan-Nov p	326.2	122.0	133.5	55.8	12.9	2.0	195.0	72.9	79.8	33.4	7.7	1.2
Per cent change	+0.9	+0.8	-1.5	+3.5	+19.7	+0.3	+0.9	+0.8	-1.5	+3.5	+19.7	+0.3
1975 Sept*	330.3	117.1	142.3	57.3	11.4	2.2	197.5	70.0	85.1	34.3	6.8	1.3
Oct	318.6	116.3	130.9	56.5	12.0	2.9	190.4	69.5	78.2	33.8	7.2	1.7
Nov	311.3	117.5	122.0	57.9	11.8	2.1	186.1	70.2	73.0	34.6	7.0	1.3
Average	320.9	117.0	132.6	57.2	11.7	2.4	191.8	69.9	79.3	34.2	7.0	1.4
1976 Sept*	331.9	117.3	138.9	58.5	16.1	1.1	198.4	70.1	83.0	35.0	9.6	0.7
Oct	311.3	117.8	120.9	56.7	14.0	1.9	186.0	70.4	72.2	33.8	8.4	1.2
Nov p	322.6	121.6	125.3	59.5	14.0	2.2	192.8	72.7	74.9	35.6	8.3	1.3
Average	322.7	118.8	129.2	58.2	14.8	1.7	192.9	71.0	77.2	34.8	8.9	1.0
Per cent change	+0.6	+1.5	-2.6	+1.8	+26.2	-28.1	+0.6	+1.5	-2.6	+1.8	+26.2	-28.1

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)<sup>1</sup>

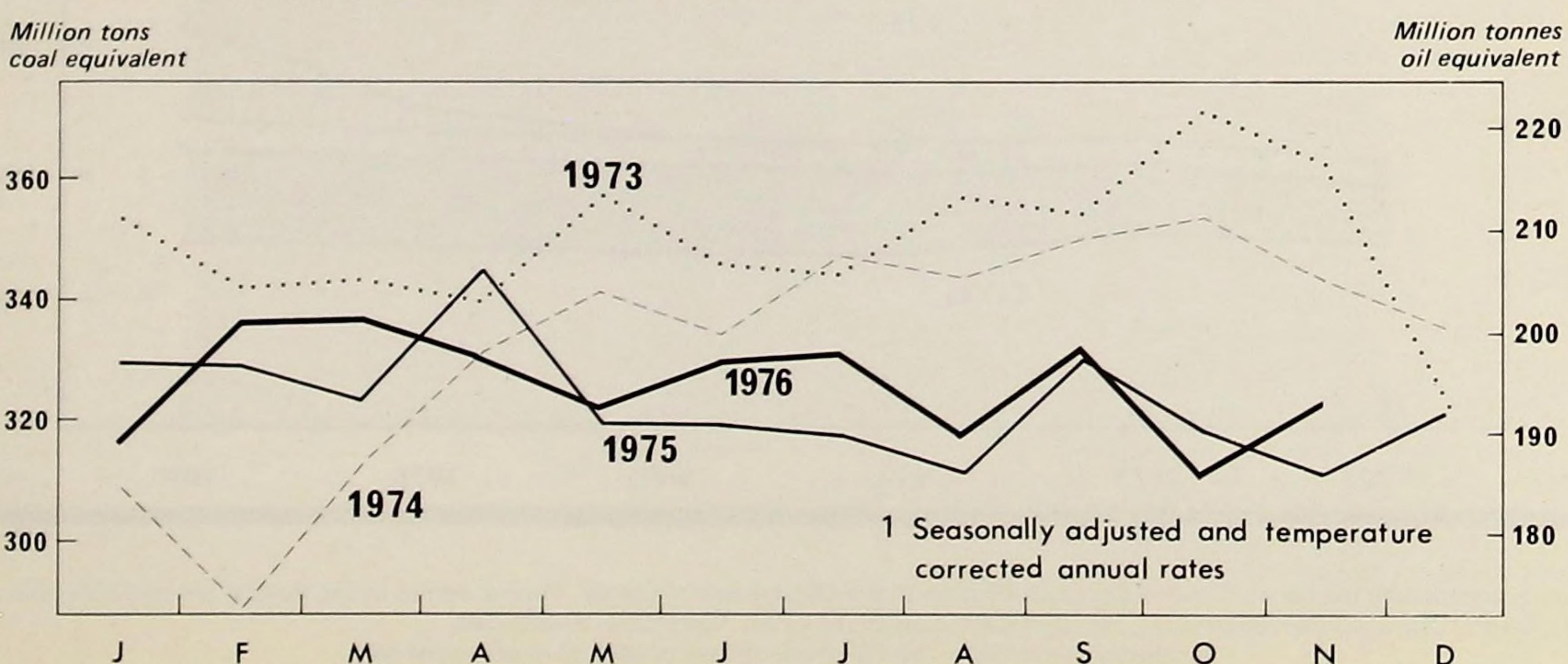


TABLE 2. Supply and use of fuels

Million therms

	1974	1975	Per cent change	1974		1975				1976p			Per <sup>1</sup> cent change
				3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	
<b>PRIMARY FUELS AND EQUIVALENTS:</b>													
Production of primary fuels													
Coal	27,245	31,430	+15.4	7,024	8,355	8,482	7,904	6,602	8,442	7,941	7,672	6,420	-2.8
Petroleum <sup>2</sup>	174	665	(+)	31	51	56	57	137	415	564	1,003	1,311	(+)
Natural gas <sup>3</sup>	13,040	13,578	+4.1	2,279	3,967	4,193	2,980	2,191	4,214	4,734	2,977	2,189	-0.1
Primary electricity	3,279	2,982	-9.1	657	867	944	617	580	841	925	779	767	+32.2
Total	43,738	48,655	+11.2	9,991	13,240	13,675	11,558	9,510	13,912	14,164	12,431	10,687	+12.4
Arrivals. Petroleum <sup>4</sup>	54,067	44,216	-18.2	12,300	13,394	11,378	11,200	10,521	11,117	10,967	10,924	10,200	-3.1
Other	1,171	1,616	+38.0	289	323	389	417	380	430	325	310	252	-33.7
Shipments	7,628	7,243	-5.0	2,230	2,051	1,730	1,638	1,993	1,882	1,724	2,044	2,478	+24.3
Bunkers	1,954	1,418	-27.4	499	450	375	345	354	344	372	346	381	+7.6
Stock change <sup>5</sup>													
Solid fuels	+1,921	-2,576	..	-159	+104	+103	-1,085	-891	-703	+323	-859	-395	..
Crude petroleum	-959	+475	..	-113	+256	+425	-248	+220	+78	+353	-196	-251	..
Petroleum products	-1,081	+978	..	-345	+349	+754	+20	-503	+707	+649	-431	-367	..
Non energy use	5,233	4,106	-21.5	1,306	1,146	1,055	956	960	1,135	1,132	1,111	1,122	+16.9
Statistical difference <sup>6</sup>	-203	-176	..	-41	-9	-168	+17	-13	-12	+83	+49	+61	..
Total primary <sup>7</sup> energy input	83,839	80,421	-4.1	17,887	24,010	23,396	18,940	15,917	22,168	23,636	18,727	16,206	+1.8
Conversion losses etc. <sup>8</sup>	25,550	24,547	-3.9	5,446	7,592	6,995	5,693	4,954	6,905	6,845	5,606	4,847	-2.2
<b>FINAL CONSUMPTION BY USER:</b>													
Iron and steel industry													
Coal	99	72	-27.3	16	26	25	18	10	19	23	15	9	-10.0
Other solid fuel <sup>9</sup>	2,681	2,374	-11.5	718	673	746	575	482	571	617	703	655	+35.9
Other coal-derived fuels <sup>10</sup>	374	372	-0.5	92	104	107	97	76	92	98	109	98	+28.9
Gas <sup>11</sup>	395	371	-6.1	86	97	101	91	79	100	108	112	99	+25.3
Electricity	345	344	-0.3	84	93	94	84	75	91	100	95	90	+20.0
Petroleum	1,648	1,357	-17.7	347	451	449	334	244	330	354	306	273	+11.9
Total	5,542	4,890	-11.8	1,343	1,444	1,522	1,199	966	1,203	1,300	1,340	1,224	+26.7
Other industries													
Coal	2,795	2,458	-12.1	733	746	660	613	528	657	547	564	470	-11.0
Other solid fuel <sup>9</sup>	193	164	-15.0	53	51	47	47	40	30	38	23	28	-30.0
Other coal-derived fuels <sup>10</sup>	63	78	+23.8	18	17	17	23	22	16	18	27	17	-22.7
Gas <sup>11</sup>	4,692	4,701	+0.2	1,041	1,273	1,295	1,091	1,007	1,308	1,457	1,236	1,083	+7.5
Electricity	2,247	2,234	-0.6	553	618	589	542	510	593	619	563	544	+6.7
Petroleum	8,264	7,426	-10.1	1,567	2,367	2,140	1,770	1,299	2,217	2,268	1,708	1,404	+8.1
Total	18,254	17,061	-6.5	3,965	5,072	4,748	4,086	3,406	4,821	4,947	4,121	3,546	+4.1
Transport sector													
Coal	24	19	-20.8	4	8	6	3	3	7	4	2	-33.3	
Electricity	92	99	+7.6	23	25	26	25	23	25	27	24	23	-
Petroleum	12,295	12,143	-1.2	3,289	3,136	2,771	3,104	3,225	3,043	2,889	3,198	3,333	+3.3
Total	12,411	12,261	-1.2	3,316	3,169	2,803	3,132	3,251	3,075	2,923	3,226	3,358	+3.3
Domestic sector													
Coal	3,957	3,381	-14.6	952	1,160	1,013	903	699	766	932	765	634	-9.3
Other solid fuel <sup>9</sup>	1,102	962	-12.7	282	297	270	231	260	201	284	202	213	-18.1
Gas <sup>11</sup>	5,384	5,891	+9.4	696	1,698	2,329	1,119	615	1,828	2,403	1,054	686	+11.5
Electricity	3,161	3,035	-4.0	536	915	1,037	678	484	836	987	596	469	-3.1
Petroleum	1,482	1,434	-3.2	188	501	473	306	194	461	519	268	176	-9.3
Total	15,086	14,703	-2.5	2,654	4,571	5,122	3,237	2,252	4,092	5,125	2,885	2,178	-3.3
Other final users <sup>12</sup>													
Coal	669	490	-26.8	125	213	129	123	78	160	172	112	73	-6.4
Other solid fuel <sup>9</sup>	276	219	-20.7	65	65	64	49	63	43	55	47	40	-36.5
Gas <sup>11</sup>	1,269	1,347	+6.1	173	387	472	310	171	394	570	320	177	+3.5
Electricity	1,447	1,548	+7.0	307	455	460	347	302	439	479	350	310	+2.6
Petroleum	3,335	3,355	+0.6	493	1,042	1,081	764	474	1,036	1,220	720	453	-4.4
Total	6,996	6,959	-0.5	1,163	2,162	2,206	1,593	1,088	2,072	2,496	1,549	1,053	-3.2
Total final users	58,289	55,874	-4.1	12,441	16,418	16,401	13,247	10,963	15,263	16,791	13,121	11,359	+3.6
<b>FINAL CONSUMPTION BY FUEL:</b>													
Coal	7,544	6,420	-14.9	1,830	2,153	1,833	1,660	1,318	1,609	1,681	1,460	1,188	-9.9

# Coal

TABLE 3. Supply

Thousand tons

	Net inland supply	Production			Net Imports	Imports <sup>2</sup>	Exports <sup>2</sup>	Tonnage lost (deep-mined) <sup>3</sup>	
		Total <sup>1</sup>	Deep-mined	Opencast				Recognised holidays and rest days	Disputes
1971	148,603	147,081	134,322	10,498	+1,522	4,174	2,652	11,045	4,734
1972	123,125	119,927	107,836	9,815	+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 p	123,197	121,818	108,521	11,755	+1,379	2,792	1,413	12,150	1,139
Per cent change	-4.9	-3.8	-6.1	+14.7	-51.7	-44.2	-34.2	+0.4	(+)
1975 Oct	11,124	10,836	9,839	850	+288	417	129	25	19
Nov	11,382	11,080	10,047	903	+302	425	123	—	31
Dec*	12,509	12,228	11,072	976	+281	435	154	1,434	23
Total	35,015	34,144	30,958	2,729	+871	1,277	406	1,459	73
1976 Oct	9,916	9,849	8,954	846	+67	197	130	34	132
Nov	10,629	10,546	9,438	961	+83	216	133	3	89
Dec p*	12,451	12,485	11,264	1,106	-34	115	149	572	38
Total	32,996	32,880	29,656	2,913	+116	528	412	609	259
Per cent change	-5.8	-3.7	-4.2	+6.7	-86.7	-58.7	+1.5	-58.3	(+)

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 <sup>1</sup>				
	Collieries	Colliery disposals				Industry <sup>4</sup>	Domestic <sup>5</sup>		Other <sup>8</sup>	
		Primary	Secondary	Coke ovens	Gas works		House Coal <sup>6</sup>	Other <sup>7</sup>		
1971	138,705	1,556	71,696	23,182	1,826	4,406	15,581	15,366	1,621	3,471
1972	120,945	1,383	65,611	20,152	566	4,475	11,478	12,569	1,756	2,955
1973	131,288	1,359	75,628	21,543	504	3,550	11,890	12,519	1,755	2,540
1974	116,043	1,236	65,967	18,169	105	3,728	10,902	11,848	1,623	2,465
1975	120,303	1,218	73,391	18,783	9	3,999	9,532	9,844	1,609	1,918
1976 p	121,776	1,114	76,629	19,163	8	3,357	8,828	9,377	1,287	2,013
Per cent change	+1.2	-8.5	+4.4	+2.0	-11.1	-16.1	-7.4	-4.7	-20.0	+5.0
1975 Oct	9,487	91	5,884	1,367	1	339	811	689	135	170
Nov	9,994	100	6,445	1,383	—	317	813	619	130	187
Dec*	13,002	133	8,572	1,709	1	375	922	886	133	271
Total	32,483	324	20,901	4,459	2	1,031	2,546	2,194	398	628
1976 Oct	9,318	86	5,757	1,461	—	235	785	726	106	162
Nov	10,466	98	6,774	1,547	1	230	837	686	116	177
Dec p*	14,419	128	9,656	1,884	1	275	1,075	999	121	280
Total	34,203	312	22,187	4,892	2	740	2,697	2,411	343	619
Per cent change	+5.3	-3.7	+6.2	+9.7	+4.8	-28.2	+5.9	+9.8	-13.8	-1.4

1. Disposals by collieries and opencast sites. 2. Public supply and railway and transport power stations. 3. Low temperature carbonisation & 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 & commerce.

TABLE 5. Stocks of coal<sup>1</sup> at end of period: Great Britain

Thousand tons

	Total	Distributed					Undistributed			Opencast sites and central stocking grounds
		Total distributed stocks	Power stations	Coke ovens	Gas works	Other	Total undistributed stocks	Collieries		
1971	28,211	17,982	15,712	1,777	72	421	10,229	6,973	3,256	
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 p	32,580	22,090	19,288	2,630	2	170	10,490	9,148	1,342	
1975 Oct	29,971	20,730	18,359	2,135	1	235	9,241	7,555	1,686	
Nov	31,310	21,221	18,609	2,331	1	280	10,089	8,358	1,731	
Dec	30,666	20,216	17,668	2,296	2	250	10,450	8,767	1,683	
1976 Oct	34,360	23,751	21,185	2,365	1	200	10,609	9,135	1,474	
Nov	34,466	23,610	20,927	2,502	1	180	10,856	9,451	1,405	
Dec p	32,580	22,090	19,288	2,630	2	170	10,490	9,148	1,342	
Absolute change:										
In latest month	-1,886	-1,520	-1,639	+128	+1	-10	-366	-303	-63	
On a year ago	+1,914	+1,874	+1,620	+334	-	-80	+40	+381	-341	

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 <sup>1</sup>		Recruitment	Wastage	Absence percentage <sup>2</sup>			Average output per manshift <sup>3</sup>	
	Total	Underground			Total	Voluntary	Involuntary	Overall	At the face
	Thousands		Number		Per cent			Cwt.	
1971	279	218	28,010	32,309	18.1	4.4	13.7	43.94	143.08
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 p	241	192	17,057	21,235	17.4	3.7	13.7	43.81	152.58
1975 Oct	247	195	1,014	1,655	17.5	4.0	13.5	46.24	156.60
Nov	246	195	1,112	1,700	16.9	4.0	12.9	46.35	157.14
Dec*	245	194	874	2,151	16.2	3.9	12.3	45.24	156.22
1976 Oct	242	192	1,451	1,884	17.9	3.9	14.0	43.29	149.36
Nov	241	191	1,538	1,806	17.8	4.1	13.7	44.94	155.60
Dec p*	241	192	1,408	1,877	17.9	4.1	13.8	44.55	155.38

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			Natural gas for direct supply	
	Total into system	Source <sup>1</sup>		Coal	Oil <sup>2</sup>	Total	Town gas			
		Indigenous	Imported							
	Million therms			Thousand tons		Million therms				
1971	6,977	6,660	317	1,770	2,547	8,061	4,069	3,992		
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 p	14,420	14,029	391	8	242	14,445	226	14,219		
Per cent change	+5.3	+5.0	+20.3	-11.1	-58.2	+4.5	-69.9	+8.8		
1975 Oct	1,050	1,017	33	1	19	1,052	38	1,014		
Nov	1,305	1,274	31	-	21	1,316	42	1,274		
Dec*	1,827	1,794	33	1	35	1,848	55	1,793		
Total	4,182	4,085	97	2	75	4,216	135	4,081		
1976 Oct	997	980	17	-	15	1,003	11	992		
Nov	1,346	1,324	22	1	24	1,346	11	1,335		
Dec p*	2,006	1,975	31	1	25	2,001	14	1,987		
Total	4,349	4,279	70	2	64	4,350	36	4,314		
Per cent change	+4.0	+4.7	-27.8	+4.8	-14.7	+3.2	-73.3	+5.7		

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), liquid petroleum gases and refinery gases.

TABLE 8. Sales of gas by the public supply system

	Total	Power stations <sup>1</sup>	Iron and steel industry	Other industries	Domestic	Million therms	
						Other <sup>2</sup>	
1970	5,780	60	244	1,172	3,542	762	
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	
Per cent change	+3.5	-12.9	-6.1	+0.2	+9.4	+6.1	
1974 3rd quarter	2,181	198	86	1,028	696	173	
4th quarter	3,653	211	97	1,260	1,698	387	
1975 1st quarter	4,390	207	101	1,281	2,329	472	
2nd quarter	2,798	200	91	1,078	1,119	310	
3rd quarter	2,067	208	79	994	615	171	
4th quarter	3,857	243	100	1,292	1,823	394	
1976 1st quarter p	4,765	240	108	1,444	2,403	570	
2nd quarter	2,864	158	112	1,220	1,054	320	
3rd quarter	2,150	122	99	1,066	686	177	
Per cent change	+4.0	-41.3	+25.3	+7.2	+11.5	+3.5	

1. Public supply power stations only. 2. Public administration &amp; commerce.

# Electricity

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

	Primary fuel used						Electricity generated			Own <sup>5</sup> use	Electricity supplied	Total <sup>6</sup> electricity available			
	Total <sup>1</sup>	Coal <sup>2</sup>	Oil <sup>2,3</sup>	Natural gas	Nuclear electricity	Hydro electricity	Total <sup>4</sup>	By steam plant							
	Million tons of coal or coal equivalent						Nuclear	Other							
United Kingdom															
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	237.26			
Per cent change	-1.4	+11.3	-25.9	-12.7	-9.6	-9.4	+0.3	-9.8	+1.8	-0.3	+0.4	+0.2			
1975 Jan-Nov	96.53	64.82	18.88	2.98	8.24	1.48	222.30	23.52	194.27	16.09	206.21	209.64			
1976 Jan-Nov p	95.36	66.97	14.53	2.35	10.01	1.46	223.56	28.91	190.23	16.87	206.69	209.93			
Percent change	-1.2	+3.3	-23.1	-21.1	+21.5	-1.6	+0.6	+22.9	-2.1	+4.8	+0.2	+0.1			
1975 Sept*	8.77	6.05	1.51	0.29	0.77	0.13	20.01	2.20	17.38	1.56	18.45	18.80			
Oct	8.46	5.88	1.41	0.23	0.74	0.18	19.20	2.11	16.58	1.40	17.80	18.11			
Nov	9.35	6.44	1.64	0.33	0.81	0.12	21.55	2.29	18.87	1.53	20.02	20.27			
Total	26.58	18.37	4.56	0.85	2.32	0.43	60.76	6.60	52.83	4.49	56.27	57.18			
1976 Sept*	8.77	6.12	1.25	0.20	1.15	0.05	20.58	3.31	17.02	1.66	18.92	19.24			
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 p	9.45	6.77	1.39	0.15	1.00	0.13	22.18	2.86	18.90	1.63	20.55	20.82			
Total	26.32	18.65	3.81	0.51	3.06	0.28	61.76	8.80	51.95	4.74	57.02	57.88			
Percent change	-1.0	+1.5	-16.4	-40.0	+31.9	-34.9	+1.6	+33.3	-1.7	+5.6	+1.3	+1.2			
England and Wales															
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	15.90	202.95	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			
Per cent change	-1.5	+10.3	-25.2	-12.7	-10.9	-25.0	+0.2	-11.1	+2.0	-3.6	+0.5	+0.4			
1975 Jan-Nov	83.86	57.18	16.06	2.98	7.44	0.07	194.07	21.22	171.98	13.64	180.43	181.66			
1976 Jan-Nov p	82.70	59.49	12.01	2.35	8.74	0.07	194.90	25.16	169.14	14.06	180.84	182.26			
Percent change	-1.4	+4.0	-25.2	-21.1	+17.5	-10.7	+0.4	+18.5	-1.7	+3.1	+0.2	+0.3			
1975 Sept*	7.59	5.34	1.25	0.29	0.69	-	17.35	1.96	15.33	1.27	16.08	16.26			
Oct	7.34	5.24	1.17	0.23	0.67	0.01	16.71	1.90	14.72	1.19	15.52	15.67			
Nov	8.14	5.68	1.37	0.33	0.74	0.01	18.85	2.08	16.71	1.29	17.56	17.56			
Total	23.07	16.26	3.79	0.85	2.10	0.02	52.91	5.94	46.76	3.75	49.16	49.49			
1976 Sept*	7.61	5.42	1.02	0.20	0.97	-	17.90	2.78	15.08	1.35	16.55	16.77			
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 p	8.20	6.03	1.15	0.15	0.85	0.01	19.41	2.44	16.91	1.37	18.04	18.15			
Total	22.87	16.65	3.13	0.51	2.55	0.02	53.93	7.34	46.45	3.92	50.01	50.47			
Percent change	-0.9	+2.4	-17.4	-40.0	+21.4	+5.6	+1.9	+23.6	-0.7	+4.5	+1.7	+2.0			

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

	Total	Iron and steel industry	Other industries	Domestic	Other <sup>1</sup>
1970	197,751	12,004	67,573	77,038	41,136
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	217,765	11,164	70,916	88,938	46,747
Per cent change	-0.4	-1.1	-0.1	-4.0	+7.1
1974 3rd quarter	45,295	2,727	17,522	15,707	9,339
4th quarter	63,009	3,026	19,521	26,804	13,658
1975 1st quarter	65,993	3,103	18,643	30,389	13,858
2nd quarter	50,309	2,732	17,225	19,855	10,497
3rd quarter	42,009	2,407	16,215	14,194	9,193
4th quarter	59,454	2,922	18,833	24,500	13,199
1976 1st quarter p	66,099	3,199	19,578	28,906	14,416
2nd quarter p	48,978	3,062	17,874	17,475	10,567
3rd quarter p	43,235	2,866	17,253	13,745	9,371
Per cent change	+2.9	+19.1	+6.4	-3.2	+1.9

1. Mainly commerce, public administration & agriculture

# Petroleum

TABLE 11. Production, arrivals and shipments<sup>1</sup>

Thousand tonnes

	Crude Petroleum						Petroleum products				
	Gross <sup>2</sup> Indigenous Production	Refinery Receipts				Arrivals <sup>4,5</sup>	Shipments <sup>4,5</sup>	Arrivals <sup>4</sup>	Shipments <sup>4</sup>	Net Arrivals	Bunkers <sup>6</sup>
		Total	Indigenous <sup>2</sup>	Net arrivals	Other <sup>3</sup>						
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
Per cent change	(+)	-18.7	(+)	-19.3	-29.5	-19.0	+8.6	-12.6	-5.1	(+)	-27.6
1975 Jan-Nov	1,170	84,356	812	+82,382	1,162	83,768	1,386	10,973	12,569	-1,596	3,129
1976 Jan-Nov p	10,049	89,388	9,690	+79,024	674	82,610	3,586	9,385	14,137	-4,752	3,192
Per cent change	(+)	+6.0	(+)	-4.1	-41.9	-1.4	(+)	-14.5	+12.5	(+)	+2.0
1975 Sept	109	7,545	60	+7,348	137	7,440	92	737	1,243	-506	303
Oct	246	7,423	56	+7,215	152	7,467	252	1,034	1,444	-410	263
Nov	334	7,376	326	+6,954	96	7,169	215	1,322	934	+388	264
Total	689	22,344	442	+21,517	385	22,076	559	3,093	3,621	-528	830
1976 Sept	1,249	7,557	1,196	+6,383	-22	6,964	581	559	1,624	-1,065	274
Oct	1,637	8,796	1,630	+7,150	16	7,682	532	612	1,482	-870	245
Nov p	1,642	9,193	1,632	+7,564	-3	8,128	564	566	1,421	-855	279
Total	4,528	25,546	4,458	+21,097	-9	22,774	1,677	1,737	4,527	-2,790	798
Per cent change	(+)	+14.3	(+)	-1.9	(-)	+3.2	(+)	-43.8	+25.0	(+)	-3.7

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 products<sup>1</sup>

Thousand tonnes

Through-put of crude and process oils	Refinery use		Total output of petroleum products <sup>2</sup>	Gases		Naphtha (LDF)	Motor spirit	Kerosene		Gas/diesel oil	Fuel oil	Lubri-cating oils	Bitumen	
	Fuel	Losses		Butane and propane	Other petroleum			Aviation turbine fuel	Burning oil <sup>3</sup>					
	Fuel	Losses		Butane and propane	Other petroleum			Naphtha (LDF)	Motor spirit					
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
Per cent change	-15.9	-13.2	-25.6	-15.9	-9.7	-44.4	-38.5	-4.0	-11.5	-10.4	-15.6	-18.3	-21.6	-1.4
1975 Jan-Nov	85,421	5,487	839	79,095	1,305	137	3,592	12,725	3,654	2,050	21,227	29,913	1,076	1,956
1976 Jan-Nov p	88,951	5,781	974	82,196	1,424	145	4,098	13,934	3,871	2,166	22,093	29,614	1,190	1,788
Per cent change	+4.1	+5.4	+16.1	+3.9	+9.1	+6.3	+14.1	+9.5	+5.9	+5.6	+4.1	-1.0	+10.5	-8.5
1975 Sept	7,564	472	65	7,027	113	12	261	1,171	399	142	1,934	2,589	80	167
Oct	7,815	524	56	7,235	122	13	350	1,161	278	250	2,017	2,585	119	184
Nov	7,115	470	93	6,552	96	15	403	966	201	224	1,838	2,393	99	173
Total	22,494	1,466	214	20,814	331	40	1,014	3,298	878	616	5,789	7,567	298	524
1976 Sept	8,183	527	27	7,629	124	14	399	1,296	411	150	1,963	2,838	124	155
Oct	8,658	524	112	8,022	134	11	413	1,352	410	192	2,067	3,020	129	141
Nov p	8,582	518	84	7,980	143	11	419	1,299	300	287	1,970	3,151	107	167
Total	25,423	1,569	223	23,631	401	36	1,231	3,947	1,121	629	6,000	9,009	360	463
Per cent change	+13.0	+7.0	+4.1	+13.5	+21.0	-10.2	+21.4	+19.7	+27.6	+2.1	+3.7	+19.1	+20.6	-11.6

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 consumption<sup>1</sup>

Thousand tonnes

	Butane <sup>4</sup> and propane	Naphtha (LDF) <sup>5</sup>	Motor spirit	Kerosene			Premier	Burning oil		Derv fuel	Other	Fuel oil	Lubri-cating oils	Bitumen						
				Aviation turbine fuel	Standard			Domestic	Other <sup>6</sup>											
					Premier	Standard														
1973	99,344	1,600	8,373	16,927	4,202	778	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							

TABLE 14. Inland deliveries of petroleum products used for energy<sup>1, 2</sup>

Thousand tonnes

	Total	Power <sup>3</sup> Stations	Gas Works	Iron and steel industry	Other Industries	Transport <sup>4</sup>	Domestic	Other <sup>5</sup>
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
Per cent change	-10.0	-22.6	-48.2	-17.7	-12.4	-1.2	-3.2	-0.1
1975 Jan-Oct	60,017	10,907	600	2,773	13,830	23,176	2,523	6,208
1976 Jan-Oct p	57,689	8,247	311	2,545	13,941	23,884	2,455	6,306
Per cent change	-3.9	-24.4	-48.2	-8.2	+0.8	+3.1	-2.7	+1.6
1975 Aug	4,456	586	34	182	862	2,364	102	326
Sept	5,506	938	36	239	1,184	2,431	226	452
Oct	6,489	1,067	42	268	1,589	2,508	306	709
Total	16,451	2,591	112	689	3,635	7,303	634	1,487
1976 Aug	4,609	593	16	206	930	2,482	88	294
Sept	5,286	690	19	251	1,193	2,509	178	446
Oct p	5,820	739	29	265	1,413	2,497	260	617
Total	15,715	2,022	64	722	3,536	7,488	526	1,357
Per cent change	-4.5	-21.9	-43.3	+4.7	-2.7	+2.5	-17.0	-8.8

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 <sup>1</sup>		Power stations <sup>2</sup> Million tonnes
	Million tonnes	Estimated days' supply <sup>3</sup>	
1975 Oct	22.4	91	0.93
Nov	22.0	87	0.97
Dec	21.6	85	1.02
1976 Oct	21.8	84	0.98
Nov	22.4	85	0.91
Dec p	22.7	86	0.84

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 To	Million tons coal equiv.	Million tonnes oil equiv.	Million therms	TWh Electrical energy	TWh Electricity generated
Million tons coal equivalent	1	1.65	0.00390	0.135 <sup>1</sup>	0.500 <sup>2</sup>
Million tonnes oil equivalent	0.600	1	0.00235	0.0800 <sup>1</sup>	0.280 <sup>2</sup>
Million therms	255	425	1	34.0	115
TWh Electrical energy	7.45	12.5	0.0295	1	..
TWh Electricity generated	2.00 <sup>3</sup>	3.60 <sup>3</sup>	0.00880 <sup>3</sup>	..	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

Electricity generated outside the public electricity supply system in Great Britain (¹) GWh

	Total	Total Industry	Iron and Steel	Engin- eering and other metal trades	Food drink and tobacco	Coal mining	Industry		Textiles, leather and clothing	Paper, printing and stationery	Other industries (including gas and water works)	Transport under- takings
							Nuclear <sup>2</sup> power stations	Others <sup>3</sup>				
1970	20,702	20,038	2,700	1,508	375	301	4,142	6,846	564	2,965	637	664
1971	20,597	19,920	2,728	1,344	410	293	4,339	6,987	535	2,671	613	677
1972	20,727	20,034	2,587	1,320	409	323	4,098	7,408	458	2,786	645	693
1973	22,995	22,292	2,707	2,716	458	309	4,339	7,859	498	2,763	643	703
1974	22,588	21,939	2,180	3,139	521	251	4,222	7,904	450	2,598	674	649
1975	20,741	20,052	1,660	3,319	435	297	3,820	7,305	406	2,137	673	689
Per cent change	-8.2	-8.6	-23.9	+5.7	-16.5	+18.3	-9.5	-7.6	-9.8	-17.7	-0.1	+6.3
1974 3rd quarter	5,077	4,927	464	777	70	60	1,030	1,711	99	575	141	150
4th quarter	5,585	5,419	536	806	221	81	894	1,976	84	646	175	166
1975 1st quarter	5,777	5,599	586	873	110	83	1,088	1,998	106	570	185	178
2nd quarter	4,852	4,683	369	825	61	71	828	1,738	104	525	162	169
3rd quarter	4,586	4,423	294	802	67	64	829	1,670	98	453	146	163
4th quarter	5,526	5,347	411	819	197	79	1,075	1,899	98	589	180	179
1976 1st quarter p	5,957	5,770	480	852	100	74	1,098	2,263	115	599	189	187
2nd quarter p	5,252	5,083	409	857	78	63	833	2,019	105	567	152	169
3rd quarter p	4,953	4,792	367	790	72	57	812	1,982	96	479	137	161
Per cent change	+8.0	+8.3	+24.8	-1.5	+7.5	-10.9	-2.1	+18.7	-2.0	+5.7	-6.2	-1.2

1. Excludes electricity generated by commerce, public administration etc. 2. Generated by UKAEA and British Nuclear Fuels Ltd. for the public electricity supply system. 3. Including production by the oil refining industry.