

DEPARTMENT OF ENERGY

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# Digest of United Kingdom Energy Statistics 1979

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DEPARTMENT OF ENERGY

# Digest of United Kingdom Energy Statistics 1979

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The following tables have been omitted from this issue (as numbered in Digest of United Kingdom Energy Statistics, 1978).

Table

- 2 Growth rates. Primary energy consumption.
- 3 " " Gross domestic product.
- 4 Energy coefficient. Ratio.
- 37 Coke ovens. Summary of operations by Region.

Symbols employed

The following symbols are used:—  
.. Not available  
— Nil or negligible.

Acknowledgements

Acknowledgement is made to the National Coal Board, the Electricity Council, Electricity Boards, the British Gas Corporation, the United Kingdom Petroleum Industry Advisory Committee, the British Steel Corporation and the British Independent Steel Producers' Association for certain of the statistics.

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# Introduction

This issue of the Digest of United Kingdom Energy Statistics continues a series which commenced with the Ministry of Power Statistical Digest for the years 1948 and 1949 published in 1950. The Ministry of Power Statistical Digest was previously published as a Command Paper, the first being that for the years 1938 to 1943, published in July, 1944 (Cmd. 6538).

The current issue brings up-to-date the figures given in the Department of Energy Digest of United Kingdom Energy Statistics 1978 published in August 1978. It contains revisions to some of the previously published figures and it may be necessary to make further revisions in the next issue, particularly to the figures for 1978 and the financial year 1978/79.

The first section covers general energy statistics and includes tables showing each fuel in original units of measurement, in coal equivalent, in oil equivalent and in terms of the thermal content of fuels. Other tables show the estimated value of purchases of fuels, energy consumption by final users and an analysis of energy consumption by main industrial groups. The section also contains charts showing the trends of primary fuel consumption and demand by final consumers of energy in graphical form. Many of the statistics have the same coverage as those in later sections and where this is so the explanatory notes in these sections are applicable. Other sections deal separately with individual fuels, prices and values of fuels, the finances of nationalised fuel industries and foreign trade in fuels. Fuel production and consumption statistics are derived mainly from the records of fuel producers and suppliers and foreign trade statistics from returns made to HM Customs and Excise and published in the Overseas Trade Statistics of the United Kingdom.

Besides this publication the principal sources of official statistics for the fuel and power industries are the annual Reports and Accounts of the National Coal Board, the Electricity Council, Electricity Boards, the British Gas Corporation and the publications of the Institute of Petroleum.

Short-period statistics are published by the Department in a monthly statistical bulletin under the heading of *Energy Trends*, and in the *Central Statistical Office Monthly Digest of Statistics*.

## Geographical definitions

The geographical coverage of the statistics is indicated on each table. All of the national tables in the Energy and Petroleum sections relate to the United Kingdom and most other sections have figures for the United Kingdom as a whole at least in summary tables. Production of coal in Northern Ireland is very small and there are no coke ovens, so no figures for Northern Ireland appear under coal production and in the tables on coke ovens. Shipments to the Channel Islands and the Isle of Man from the United Kingdom are not classed as exports, and supplies of solid fuel and petroleum to these Islands are therefore included as part of United Kingdom inland consumption or deliveries.

The geographical analysis of gas and electricity statistics and of coal production statistics is given on the basis of the area organisations of the national authorities. The maps at the beginning of the appropriate sections illustrate these different geographical classifications as they were during 1978. The populations and areas of the Electricity Boards and Gas Regions are indicated on the maps.

## Other definitions

Explanatory notes about the main statistics are given at the commencement of each section and further qualifications are shown, where appropriate, in footnotes to the tables.

## Metrication

It has been the Department's practice to use the same units of measurement as those currently employed by the individual fuel industries; thus petroleum and oil equivalent statistics were metricated in 1976. The coal industry commenced working in metric units in April 1978. Consequently all statistics relating to weights of coal, other solid fuels and coal equivalent are quoted in metric terms (tonnes) and use of the statute ton is now discontinued in official publications of energy statistics. Figures relating to past periods have been converted to ensure comparability. A similar procedure will be followed in other official publications containing energy statistics for the United Kingdom, and readers are advised to bear the changes in mind when using statistics published before May 1978.

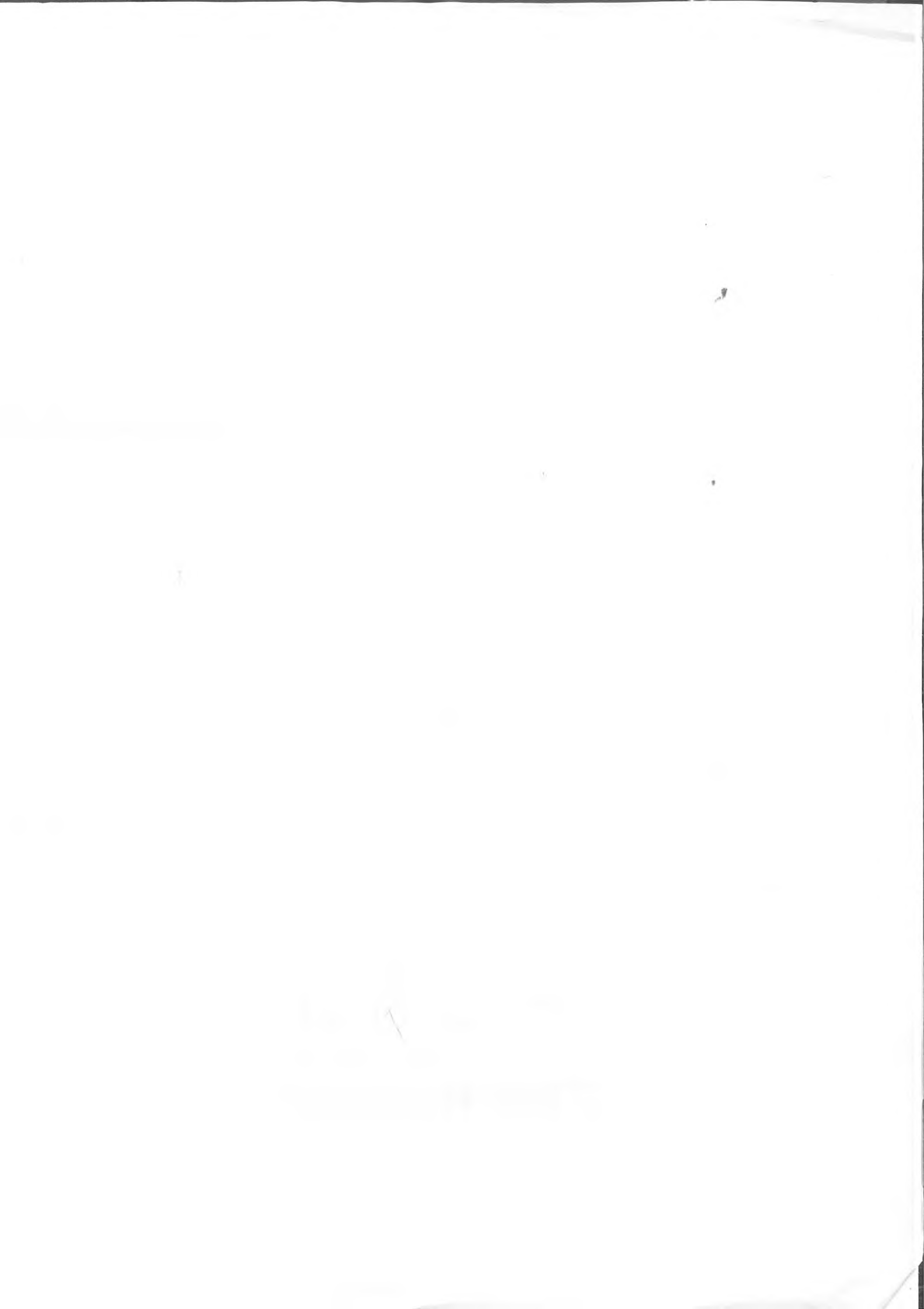
## Changes in content

The following are new tables which have been introduced in this edition and tables where the content has been substantially altered from previous editions (marked with an \*):

### Table

- 2 Growth rates: Primary energy consumption, the gross domestic product and energy coefficient.
- \*10 Estimated expenditure on energy by final users.
- \*35 Estimated gas reserves on United Kingdom Continental Shelf.
- \*36 Estimated oil reserves on United Kingdom Continental Shelf.
- 39 Oil. Offshore production.
- \*40 Gas and liquid products. Supply and disposal.
- \*43 Refineries. Crude oil distillation capacity.
- 62 Commercial gas sales.
- 94 Financial Statistics. British National Oil Corporation.







# Energy

The relationships between primary energy consumption and gross domestic product are shown in Tables 1 and 2 and estimated expenditure on fuel and energy is shown in Tables 9 and 10. Explanatory notes about the methods used for the compilation of these tables are given on following pages. The remaining tables in this section bring together the main statistics for supply and demand of the various fuels. The statistics are expressed in the original units of measurement appropriate for each fuel in Tables 3, 13 and 15 and in other tables in common measures by which the different fuels can be directly compared and which permit aggregation to arrive at statistics for energy as a whole. The common units employed are coal or coal equivalent (Table 5), oil or oil equivalent (Table 6) and thermal contents of fuels (Tables 7, 8, 11, 12, 14 and 16). The first two are approximate measures using fixed average conversion factors whereas the last is a more rigorous treatment which takes full account of the calorific values of fuels consumed for different purposes in each year. In Tables 8 and 12 the figures expressed in Petajoules (joules  $\times 10^{15}$ ) are a direct conversion from million therms in Tables 7 and 11. The conversion factors used for calculating coal or oil equivalent and the methodology used for the thermal content of fuels are given on page 3.

Energy production and consumption is usually measured in one of three different ways. The first assesses total *primary fuel and equivalents* and although it is not done in this Digest, this system of measurement can be employed right through a fully detailed energy balance sheet. However, the figures of consumption of secondary fuels then relate not to the quantities of those fuels actually consumed or purchased by user sectors but to the estimated amounts of primary fuel necessary to produce them. The second measures the *heat or energy content* of the different fuels as supplied and allows the heat content of secondary fuels to be shown as such and for the losses incurred in the conversion of primary fuels to secondary fuels and in the distribution of primary and secondary fuels to be shown. Neither of these measures deducts the additional losses that occur e.g. during further conversion into space or process heat or motive power by final users. What would effectively be available after these losses have been deducted is *useful energy*. Such losses depend not only on the type and quality of fuel and the appliances and equipment in which the fuel is used but also on the purpose, conditions, duration and intensity of their use. Statistics on useful energy are not given in this Digest as they are not felt to be sufficiently reliable owing to lack of robust data on average utilisation efficiencies and on the different purposes for which fuels are used within consuming sectors. The following table gives a broad indication of the range of efficiencies (per cent).

<i>Fuel</i>	<i>Range</i>	<i>Mean</i>
Solid	20–80	55
Liquid	15–90	45
Gases	60–65	65
Electricity (excluding use for lighting)	80–95	90

[Useful energy tables used by the Department for forecasting purposes are published in Energy Paper Number 29—“Energy forecasting methodology” (HMSO)].

The relative weights of the fuels contributing to total energy vary according to the method of measurement adopted. When based on primary fuel equivalents, the weights are necessarily different from those which arise when the types of fuel actually consumed in final use are taken into account. Which is the most appropriate method to use depends on the purpose in view.

## Energy balance

Energy statistics can most conveniently be analysed and presented in the form of energy balances, which may be either *partial* or *complete*. Partial balances in this sense are those which do not trace the energy flows beyond primary fuels and do not therefore attempt to follow each fuel from supply through conversion into alternative secondary forms and final use, either in the original form or after conversion into another fuel. Complete balances provide for the conversion process from one fuel to another. Tables 5–8 are partial balances for the United Kingdom showing figures for the latest eleven years and variously expressed in coal or coal equivalent (Table 5), oil or oil equivalent (Table 6) or as thermal content in million therms (Table 7) and Petajoules (Table 8). Tables 11 and 12 are fairly fully disaggregated complete balances for the latest year, again expressed as thermal content. In both partial and complete balances the balance for primary fuels and equivalents is established in the row *gross inland consumption*. This row can be derived in one of two ways. Either as the algebraic sum of production, net arrivals or shipments, bunkers and stockchanges or as the sum of all fuel consumed, either for conversion into alternative forms or by final users and the energy industries themselves for the operation of their plants, and of any fuel lost in distribution. Since in practice a precise balance between the two methods cannot be achieved, the tables provide for a row *statistical difference* to reconcile the two summations. In Tables 5–8, gross inland consumption is sub divided only into non-energy and energy use, but in the complete balance in Tables 11 and 12 there is a much fuller analysis of consumption for energy use which shows the fuel inputs for conversion and the outputs of secondary fuels and use of fuels, both primary and secondary, by the energy industries and by the main groups of final energy users. In the secondary fuel production section of this table, fuel inputs for conversion are entered with a negative sign while outputs of secondary fuels are positive. The entry in the total energy column for each secondary fuel industry is the algebraic sum of its conversion inputs and outputs and therefore indicates the thermal loss in the conversion process, including the thermal content of any by-products not included in the table e.g. tar from coke ovens. The final consuming groups shown in Tables 11 and 12 are analysed in greater detail in Tables 13 and 15, which show figures in the original units of measurement appropriate for each fuel, and in thermal content in Tables 14 and 16.

The systems of energy measurement described above are not the only ones that can be employed. For example, the Organisation for Economic Cooperation and Development uses a system of measurement similar in concept to the



United Kingdom's energy content measure, but it presents its statistics not in thermal units but as tonnes of oil equivalent defined as a given standard number of thermal units. A variant of this method was used up to the end of 1976 by the Statistical Office of the European Communities (SOEC) to produce statistics expressed as standardised tonnes of coal equivalent. Because of the different approaches and definitions used, such statistics are not directly comparable with those, also in coal equivalent (Table 5) or oil equivalent (Table 6), which conform to the definitions and conventions used in this Digest.

The United Nations, the Economic Commission for Europe and SOEC are all currently engaged in developing systems for energy balances for their areas (In the case of SOEC the development is to produce a revised system to replace that used up to the end of 1976). Each of these systems envisages balance sheets expressed in thermal units obtained by the application of average calorific values to the basic fuel statistics. The common thermal unit will be an appropriate multiple of the joule and in this respect these international balances will accord, with that for the United Kingdom in Table 14. There will, however, be two main important differences as compared with United Kingdom practice. Firstly, the calorific values used will be net and not gross. (Net calorific values exclude the latent heat of evaporation of any water present in the fuel before combustion together with water produced by the combustion process. The differences between gross and net calorific values are of the order of 5% for solid and liquid fuels and 10% for gases).

Secondly, the amounts of fuel used (estimated for combined heat/power plants) for thermal generation of electricity by industry mainly for its own use (and the output of electricity and the thermal losses incurred in generation) will be included in the secondary fuel production section of the balance sheet and not as part of final industrial energy consumption as is the practice in the United Kingdom. (See "Secondary electricity" on page 3). Electricity consumed by industry from its own generation will, however, be included as part of final consumption in the international balances. Under this method, the total energy consumption recorded for final industrial consumers will therefore be less than that given in United Kingdom statistics because conversion losses incurred in the production of electricity within the industrial sector will be excluded.

Energy Paper Number 19 – "Energy balances – some problems and recent developments" (HMSO) contains a fuller discussion of energy balances and descriptions of the methods employed in different countries and used by or under development by different international organisations.

## Primary fuels

### Coal

All grades of coal; slurry, whether recovered by the National Coal Board or by other operators, is included. In Tables 3–8 arrivals, shipments and stock changes of coke, breeze and other solid fuel are included under coal. These supplies of coal derived secondary fuels represent additions to or reductions in the available supply of energy in the United Kingdom and in this respect are equivalent to coal.

### Crude petroleum

All feedstocks and condensates ( $C_5$  or heavier) for distillation at oil refineries are included; direct supplies of condensates to consumers are included under petroleum in Tables 3–8 but in Tables 11 and 12 they are shown as primary fuel production under petroleum products. Consistent with the treatment of coal and other solid fuels, the figures of arrivals, shipments and stock changes in Tables 5–8 include petroleum products.

### Natural gas

Production relates to associated or non-associated methane ( $C_1$ ) from land and the UK sector of the Continental Shelf; includes that used for drilling, production and pumping operations but excludes gas flared to waste or re-injected; also includes colliery methane piped to the surface and consumed at collieries or disposed of to consumers. Natural gas supplied for non-energy purposes is included, but not separately distinguished in the consumption statistics. Other indigenous natural gases – ethane ( $C_2$ ), propane ( $C_3$ ) and butane ( $C_4$ ) – are included under petroleum in Tables 3–8 but in Tables 11 and 12 they are shown as primary fuel production under petroleum products.

## Primary electricity

### Nuclear electricity

Electricity generated by public supply nuclear power stations together with estimates of nuclear electricity generated for public supply by the United Kingdom Atomic Energy Authority and British Nuclear Fuels Ltd.

### Hydro electricity

Electricity generated by public supply and industrial natural flow hydro-electric power stations. Pumped storage stations are not included. In Table 3, the figures of hydro-electricity are adjusted to account for the quantities of electricity imported or exported. In Tables 5–8, 11 and 12, imports and exports of electricity are shown separately.

## Secondary fuels

### Coke and breeze

Coke oven coke and breeze and, until production ceased in 1974, gas coke (including premium cokes produced by the gas industry) and breeze. The consuming sectors are the same as those shown in the Coke and Other Manufactured Fuel section (Page 48 and Tables 30 and 33) except that separate estimates are given for consumption by public services and agriculture.

### Other solid fuel

Manufactured solid fuels produced at low temperature carbonization plants and other manufactured fuel and briquetting plants. The consumption statistics include estimates to cover the same sectors as for coal and coke (see Tables 31 and 32).

### Creosote/pitch mixtures

Creosote/pitch mixtures produced by coal tar distillers and refiners, both independent and attached to gas works and coke ovens. In Tables 13 and 14 separate figures are also given up to 1970 of other liquid fuels derived from coal and



used for road transport (coal derived benzole). From 1971 until 1973, when production ceased, consumption of this fuel was negligible.

#### *Petroleum products*

Petroleum products produced at refineries (see Tables 44 and 46); but in Tables 11 and 12 also includes other indigenous production of ethane (C<sub>2</sub>), propane (C<sub>3</sub>), butane (C<sub>4</sub>) and condensates (C<sub>5</sub> and heavier – for direct supply to consumers). Products for delivery for non energy use (see Table 50) are included in gross inland consumption and are distinguished from products used for energy purposes in Tables 5–8, 11 and 12. Consumption of products for energy purposes is further analysed in Table 52.

#### *Town gas*

Gas made at gas works together with reformed natural gas coke oven and refinery gases (see Tables 55 and 56), substitute natural gas made at gas works and other plant is excluded but is accounted for in Tables 11 and 12 by reducing the input of natural gas to town gas accordingly. The classes of consumer are defined (for Table 56) on page 79.

#### *Coke oven gas*

Gas produced at coke ovens, excluding low temperature carbonization plants. Gas bled or burnt to waste is included in production. (See Tables 55 and 56).

#### *Blast furnace gas*

Blast furnace gas does not appear as a fuel heading in the tables as it is mainly consumed within the iron and steel industry and the coke used for its production counted as part of the consumption of that industry. However, when the figures are expressed throughout in thermal units e.g. in Tables 11, 12 and 14, blast furnace gas consumed by coke ovens (see Table 56) is deducted from the thermal content of coke consumed at blast furnaces in the iron and steel industry. In Tables 11 and 12, such gas is included under coke and breeze as use by secondary fuel producers with the quantity so included given in a footnote.

#### *Secondary electricity*

Generation by conventional thermal stations (stations using coal, oil or natural gas as fuels) of the public electricity supply and generation by transport undertakings. Electricity purchased by the public supply from collieries is included. Generation by pumped storage stations does not add to the total annual electricity supply and is therefore excluded. There is an annual loss from pumped storage operations because more electricity than that generated is used for pumping. This net loss is included as part of the energy used by secondary electricity producers in Tables 11 and 12. The consumption statistics, which cover primary and secondary electricity taken together, are net purchases by consumers, i.e. purchases from the public electricity supply and from certain other classes of consumer less, in the case of collieries and the iron and steel industry, sales from own generation to other classes of consumer. Supplies from industrial hydro generation are included in the figures for other industries. Those for railways include electricity used from own generation. Other industrial generation is excluded except as noted in connection with sales by collieries and the iron and steel industry. (See Table 66 for an analysis of the consumption statistics.)

#### *Coal and oil equivalent*

The following factors are used:—

Petroleum (crude petroleum and petroleum products including petroleum gases)

1 tonne = 1.7 tonnes of coal equivalent

Natural gas

250 therms = 1 tonne of coal equivalent

These are standardised approximate conversion factors based on the weighted average gross calorific values of coal and petroleum consumed inland for energy purposes during the years 1968–1978. They do not necessarily reflect accurately the true thermal relationship between these fuels in any given year during that period.

Nuclear and hydro electricity is expressed in coal or oil equivalent as the notional amount of fossil fuel that would have been needed to produce the same quantities of electricity at the efficiency of contemporary conventional steam power stations.

#### *Thermal content of fuel*

The estimated gross average calorific values for 1978 used to convert the statistics for solid and liquid fuels to thermal content expressed in therms are given on page 133. These calorific values, which are only appropriate for 1978, are reviewed each year in collaboration with the fuel industries. Figures for earlier years can be found in previous editions of this Digest. The weighted averaged gross calorific value of all indigenous coal consumed is used for deriving the thermal content of coal production. The corresponding value appropriate for each year was also used for the conversion of coal arrivals, shipments and total stock changes up to 1975, but from 1976 the conversions take into account as far as possible the different qualities of coal included under these headings. From 1976 also, the thermal content of changes in distributed coal stocks i.e. changes in the stocks of coal held by power stations, coke ovens and manufactured fuel plants, are based on the average gross calorific values of the indigenous coal consumed by each of these sectors. The thermal content of changes in undistributed coal stocks is derived from the average calorific value used for coal production. For crude petroleum and refinery losses, the value used for the conversion is the weighted average of the gross calorific values of petroleum products produced at refineries in the United Kingdom. In calculating the weighted average a notional gross average calorific value of 400 therms per tonne is assumed for all non-energy petroleum products having no direct fuel counterpart (industrial and white spirits, lubricants, bitumen, waxes and other miscellaneous non-energy products). Statistics for gases (other than petroleum gases) are expressed in therms as the basic measure and no conversion is therefore necessary. Electricity output (including imports and exports) is converted at 29.3 kWh = 1 therm.

In Tables 7 and 8 primary electricity is represented by the notional fuel input to equivalent contemporary conventional steam stations (*see Coal and Oil Equivalent*) converted at 230 therms per tonne of coal equivalent. In Tables 11 and 12 figures using this convention are given separately for production of nuclear and hydro electricity and these are also shown as inputs (negative signs) in the electricity supply industry row of the secondary fuel production section of



the table. In the same row, electricity output (col. 17) relates to electricity generated (excluding generation at pumped storage stations) but including the thermal equivalent of nuclear and hydro electricity generated, converted at 29.3 kWh = 1 therm. The imputed conversion losses (i.e. the difference between notional fuel input and the thermal equivalent of electricity generated) are included with conversion losses at conventional power stations in col. 19.

### Temperature adjusted fuel consumption

The temperature adjusted series of total gross inland fuel consumption given in Tables 1, 5 and 6 indicates what annual consumption might have been if the average temperature each year had been the average for the years 1941–70. The corrections used per centigrade degree are:

Coal	2.1 per cent
Petroleum	0.7 per cent (June–August)
	1.8 per cent (September–May)

Natural gas is corrected from 1973 onwards, based on a method developed by the British Gas Corporation. Nuclear and hydro electricity are not corrected for temperature.

### The Energy ratio and the Energy coefficient

The relationship between energy consumption and economic activity may be studied by looking (at the 'micro' level) at the share of direct and indirect energy in the output of different activities, e.g. in the output of industries or of commodities, or (at the 'macro' level) at the ratio of total energy consumption to total Gross domestic product, and at changes in those ratios through time.

Table 1 shows how energy consumption and GDP have changed over the past twenty years both in absolute terms and as index numbers, together with the "Energy ratio". This ratio is shown firstly in the form of energy consumed per £1,000 of GDP and secondly as an index number. The GDP figures used for 1968–78 are consistent with the April 1979 issue of the *Economic Trends*. Figures for earlier years were supplied by the Central Statistical Office.

Table 1 shows that the energy ratio has fallen from about 131.7 in 1950 to 95.7 in 1978 (1975 = 100); implying an average decrease of about 1.1 per cent per annum.

Another 'macro' relationship, analogous to an elasticity coefficient in economic analysis, is also used. This is the "Energy coefficient" defined as:—

$$\frac{\text{Average rate of increase in primary energy consumption}}{\text{Average rate of increase in gross domestic product at factor cost and constant prices}}$$

The value of the energy coefficient can theoretically have any value between plus and minus infinity as the change in GDP passes through zero except when the increase in primary energy consumption is also zero, when the value of the energy coefficient becomes indeterminate.

Table 2 shows the annual average rate of growth in primary energy consumption and gross domestic product (measured at 1975 factor cost) over six year spans between 1950 and 1978 along with the energy coefficient derived from the

information. A six year time span has been selected because this is about the shortest time period which illustrates the stability of the energy coefficient over longer time periods. By contrast, for time periods of less than six years the energy coefficient has displayed marked fluctuations because of short term factors such as price changes, unmeasurable climatic variations (temperature effects have already been eliminated as far as possible) industrial disputes and short term changes in the distribution of GDP between more and less energy intensive sectors of the economy.

Despite the large fluctuations from one year to the next the average energy coefficient over longer periods has been more stable. For example, in the table the energy coefficient varied between (0.4) and (1.0) before 1973 and was on a slowly rising trend. This relative long term stability should be regarded with caution. The coefficient is influenced for example by the efficiency with which primary energy is used, so that the substitution of oil and gas for coal has tended to hold the growth of primary energy consumption below the growth of consumption of "useful" energy.

The increasing share of electricity has tended on the contrary to increase the ratio of primary to useful energy. For these reasons and because of long-term changes in the price of energy and in the pattern of energy demand in the economy, the energy coefficient may not be as stable in the future as it has been in the past. Furthermore, since 1974 the long term stability of the energy coefficient has been interrupted by two factors. First, the world secular recession has contributed to a depression of UK economic activity, and second, the contribution of North Sea oil and gas to the growth in the UK's domestic product has been quite large. Thus the increase in demand for energy has been relatively low considering the growth in GDP at 1975 factor cost implying very low values of the energy coefficient. For these reasons while the coefficient may be regarded as a useful *ex post* performance indicator it cannot be recommended as a tool of energy forecasting, and is not used as such in the Department of Energy. (The limitations of the energy coefficient concept are further discussed in an article published in the August 1976 issue of *Economic Trends*).

Although in the United Kingdom the energy coefficient has for many years been low compared with most other industrial countries, largely because of the fall in the formerly large UK coal market, the ratio of primary energy to GDP is still fairly high.

### Purchases of fuels in the energy sector (Tables 9 and 10)

Table 9 has been constructed to show estimated values of purchases of all forms of domestically produced and imported fuels, including purchases by final consumers (in the energy sense rather than the National Accounts sense) and by intermediate consumers of energy such as power stations. Fuel purchases in the main body of the table refer to purchases for consumption and are valued as sold by their respective producers, with imports valued "c.i.f.". Coal is valued at the pithead, petroleum is valued on a refinery net back basis (with lubricating oils and greases valued at the blenders), and other solid manufactured fuels valued at ex-works prices. Transactions in gas and electricity are



valued at purchasers' prices. The difference between producers' prices and purchasers' prices is accounted by distribution costs, margins and taxes which are shown separately. Taxes in the form of hydrocarbon duty and VAT are shown *net* since part of the taxes are reclaimed by industry, for example, VAT on motor spirit and derv for business use. Crude production includes indigenous production of natural gas liquids and are valued inclusive of royalty and petroleum revenue taxes.

Purchases of less than £2.5m are not shown and all intra-industry purchases are excluded so that, for example, purchases of electricity by the public electricity supply industry from the United Kingdom Atomic Energy Authority are not shown. Where two-way exchanges take place (such as electricity between the iron and steel industry and the public electricity supply industry), these are shown net. The consuming sectors (rows) do not necessarily match up with the consuming sectors elsewhere in the Digest. In the case of domestic consumers, for example, expenditure is on the same basis as in the National Accounts and therefore fits in with the general concept of personal expenditure as allowances are made for domestic premises used commercially and vice-versa.

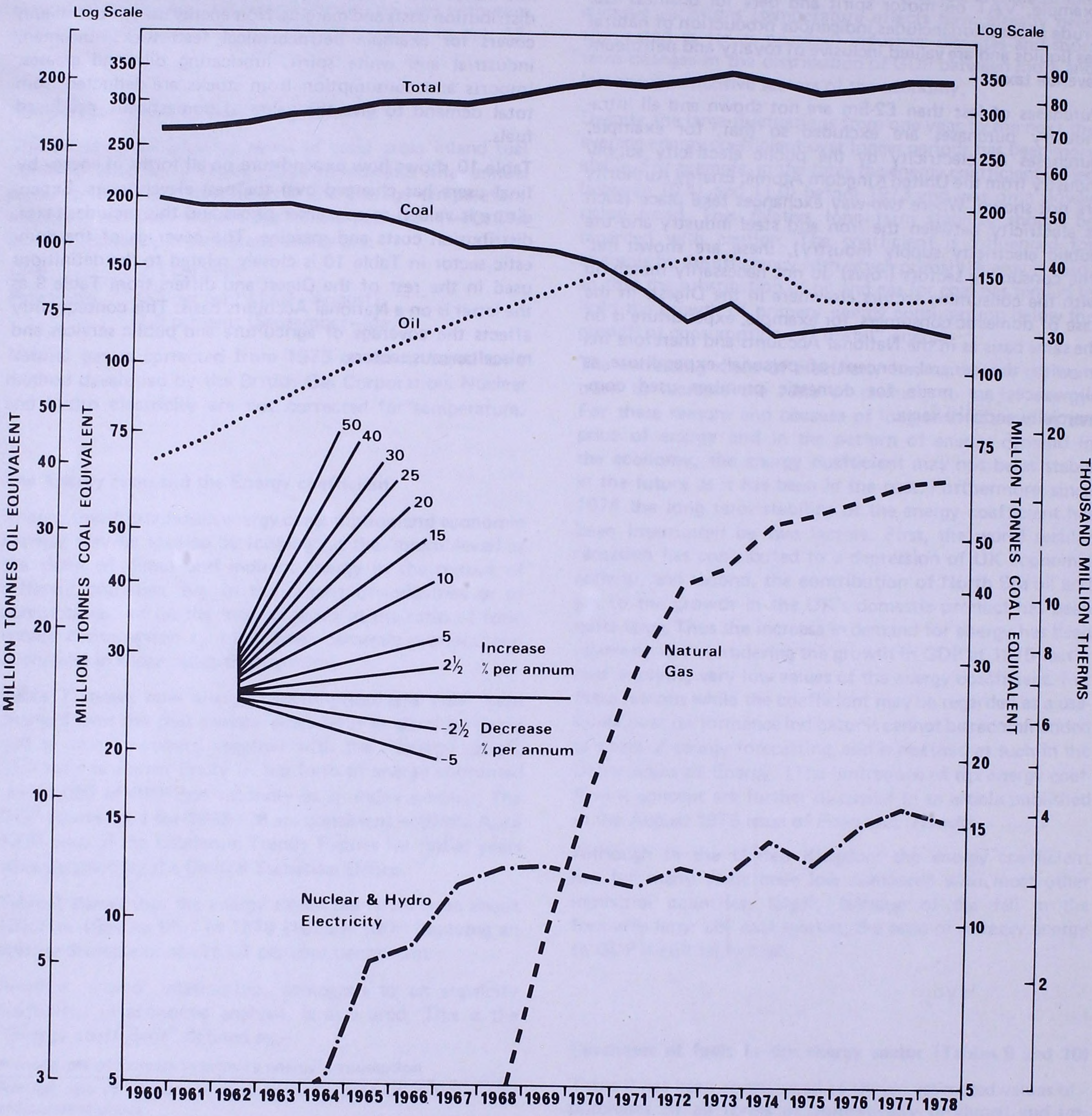
Additional rows give details of exports, stock changes and value of non-energy uses of petroleum, which are all valued at producers' prices. Stock formation includes the value of known stock changes of all fuels in industries such as the electricity and coke oven industries. The export values do not match the "f.o.b." export values as the latter includes distribution costs and margins. Non-energy uses of petroleum covers for example petrochemical feed-stocks, bitumen, industrial and white spirit, lubricating oils and greases. Imports and consumption from stocks are deducted from total demand to give the value of domestically produced fuels.

Table 10 shows how expenditure on all forms of energy by final users has changed over the past eleven years. Expenditure is valued at consumer prices and this includes taxes, distribution costs and margins. The coverage of the domestic sector in Table 10 is closely related to the definitions used in the rest of the Digest and differs from Table 9 as the latter is on a National Accounts basis. This consequently affects the coverage of agriculture and public services and miscellaneous sectors.



ENERGY

Total Inland Consumption of Primery Fuels  
(See Tables 5, 6 and 7)

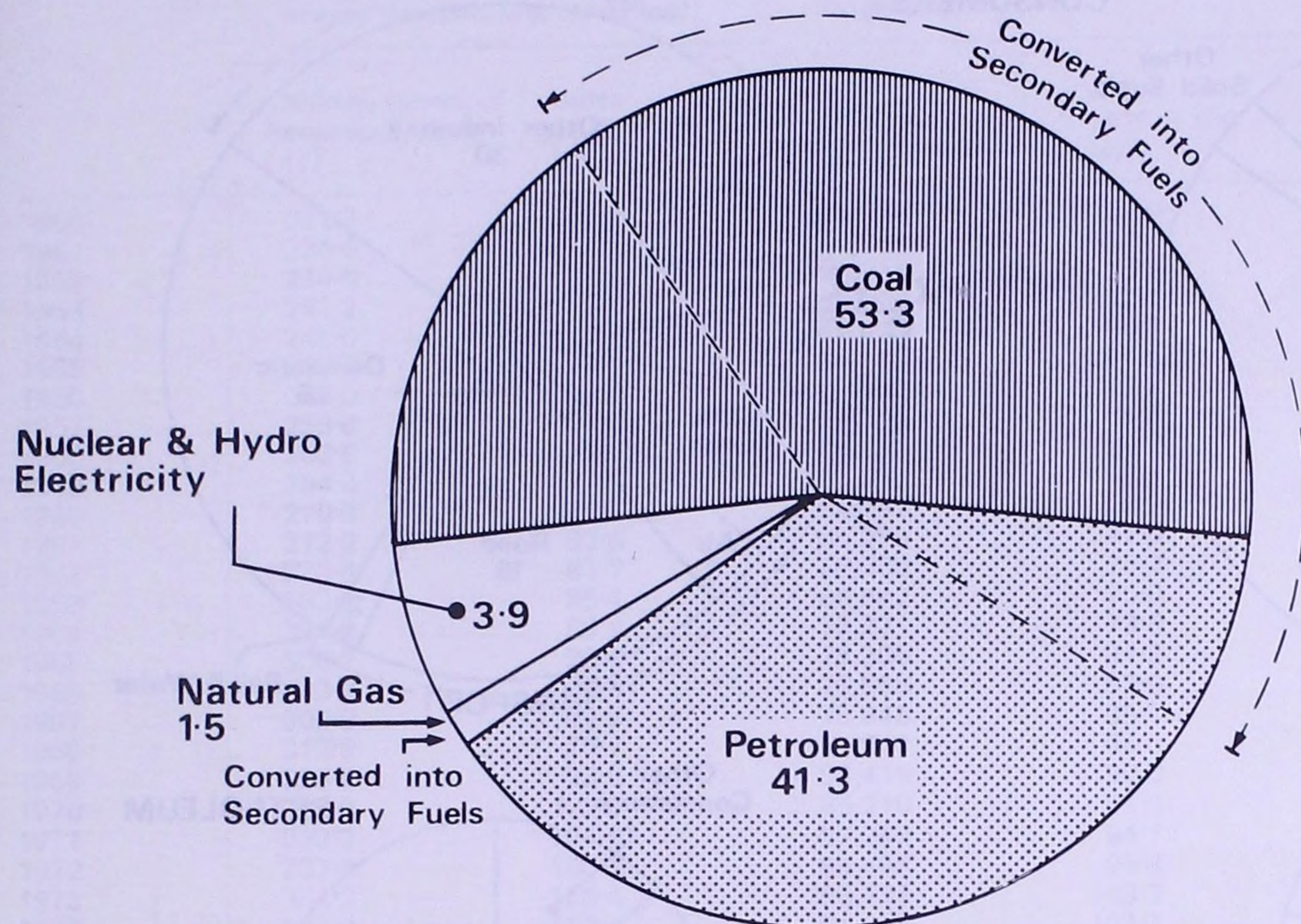




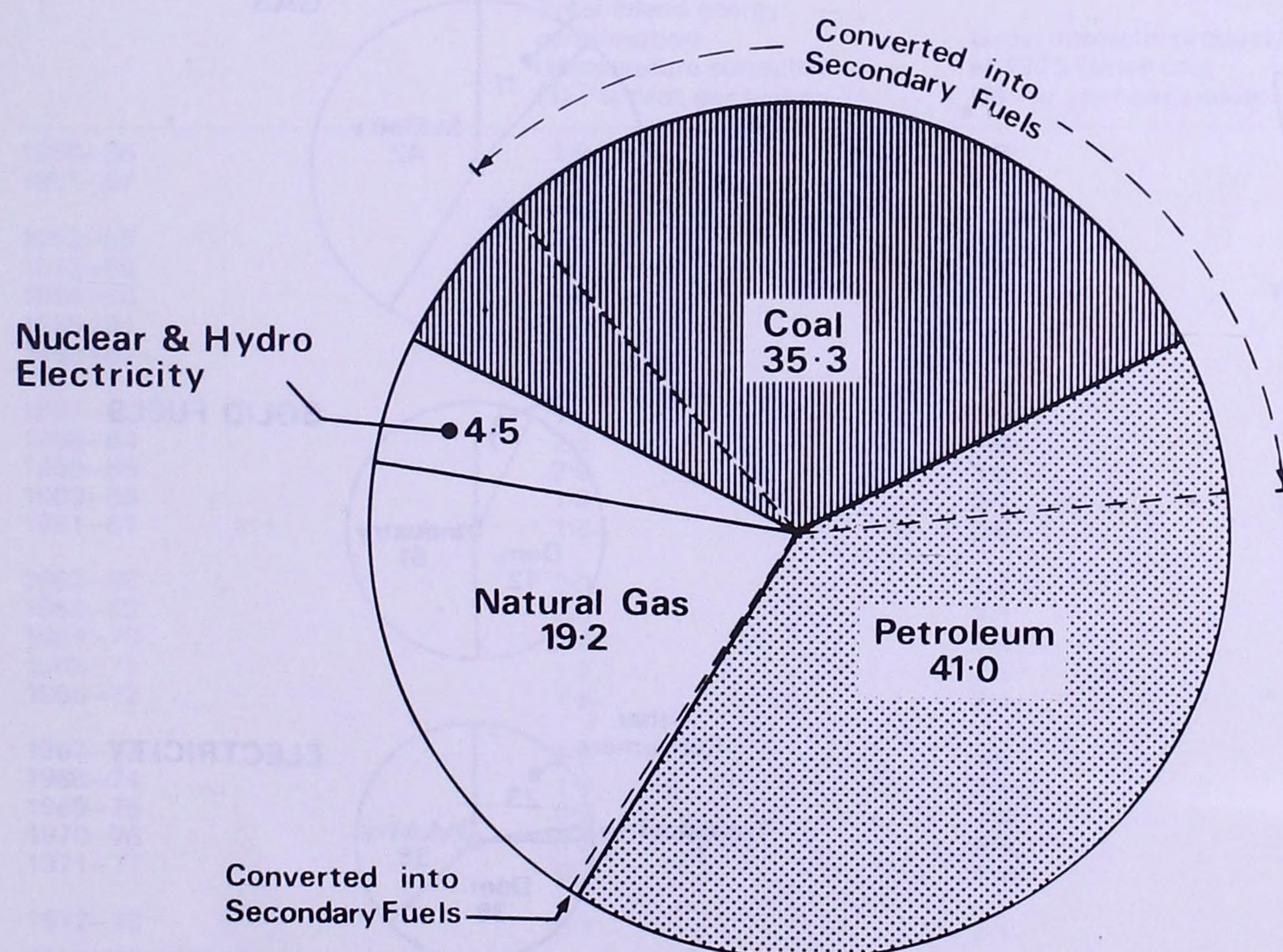
## Total Inland Consumption of Primary Fuels 1968 and 1978

(See Table 5)

1968 — 313.7 MILLION  
TONNES COAL  
EQUIVALENT



1978 — 339.8 MILLION  
TONNES COAL  
EQUIVALENT

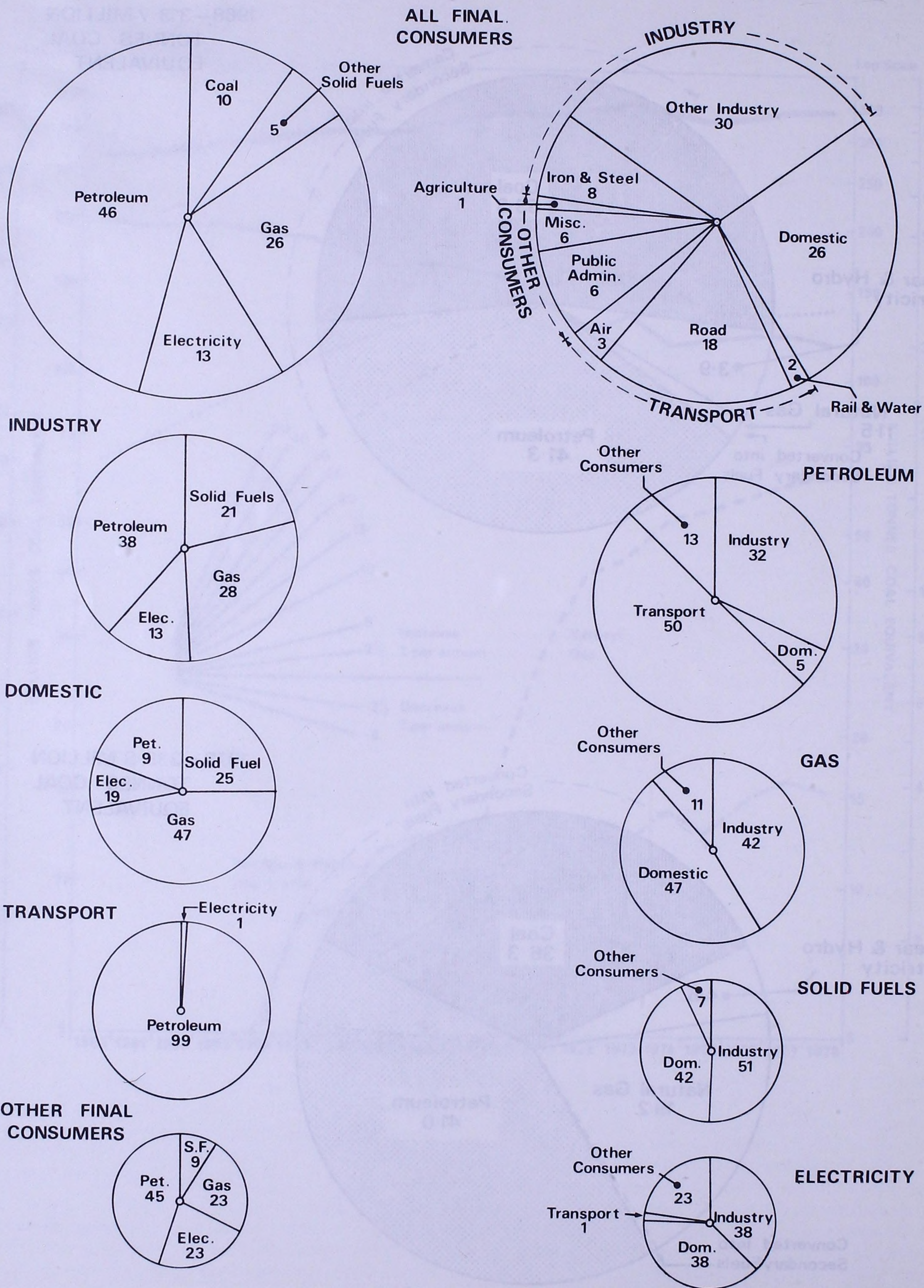




# ENERGY

## Energy Consumption of Final Users in 1978 (Heat Supplied Basis) Percentage Share by Sector and Form of Energy

(See Tables 11 and 14)





## 1

## Primary energy consumption, the gross domestic product and energy ratio

	Total inland consumption of primary energy (temperature corrected)		Gross domestic product at 1975 factor cost		Energy ratio (1)/(3)	
	Million tonnes of coal equivalent (1)	Index 1975 = 100 (2)	£ million (3)	Index 1975 = 100 (4)	Tonnes of coal equivalent per £1,000 (5)	Index 1975 = 100 (6)
1950	227.7	69.7	49,034	52.9	4.6	131.7
1951	235.5	72.0	50,807	54.8	4.6	131.5
1952	234.0	71.6	50,813	54.8	4.6	130.6
1953	241.2	73.8	53,200	57.4	4.5	128.6
1954	248.6	76.0	55,125	59.4	4.5	127.9
1955	253.0	77.4	57,129	61.6	4.4	125.6
1956	255.0	78.0	58,196	62.8	4.4	124.3
1957	253.6	77.6	59,324	64.0	4.3	121.2
1958	252.6	77.3	59,120	63.7	4.3	121.2
1959	254.6	77.9	61,156	65.9	4.2	118.1
1960	270.9	82.9	63,987	69.0	4.2	120.1
1961	272.2	83.3	66,286	71.5	4.1	116.5
1962	273.6	83.7	66,909	72.2	4.1	116.0
1963	282.3	86.4	69,542	75.0	4.1	115.1
1964	291.2	89.1	73,271	79.0	4.0	112.7
1965	300.7	92.0	75,305	81.2	4.0	113.3
1966	302.8	92.6	76,958	83.0	3.9	111.6
1967	303.2	92.8	78,945	85.1	3.8	108.9
1968	312.9	95.7	81,913	88.3	3.8	108.3
1969	323.0	98.8	83,415	90.0	3.9	109.8
1970	336.3	102.9	85,210	91.9	3.9	111.9
1971	332.9	101.8	87,242	94.1	3.8	108.2
1972	337.4	103.2	88,496	95.4	3.8	108.1
1973	354.2	108.4	95,775	103.3	3.7	104.9
1974	337.9	103.4	94,326	101.7	3.6	101.6
1975	326.9	100.0	92,720	100.0	3.5	100.0
1976	331.5	101.4	95,979	103.5	3.5	98.0
1977	338.2	103.5	97,504	105.1	3.5	98.4
1978	339.1	103.7	100,473	108.3	3.4	95.7

## 2

## Growth rates: primary energy consumption and gross domestic product: Energy coefficient

	Total inland energy consumption (temperature corrected) (1) Per cent per annum	Gross domestic product at 1975 factor cost (2) Per cent per annum	Energy co-efficient (3)
1950-56	1.9	2.9	0.7
1951-57	1.2	2.6	0.5
1952-58	1.3	2.6	0.5
1953-59	0.9	2.4	0.4
1954-60	1.4	2.5	0.6
1955-61	1.2	2.5	0.5
1956-62	1.2	2.4	0.5
1957-63	1.8	2.7	0.7
1958-64	2.4	3.6	0.7
1959-65	2.8	3.5	0.8
1960-66	1.9	3.1	0.6
1961-67	1.8	3.0	0.6
1962-68	2.3	3.4	0.7
1963-69	2.3	3.1	0.7
1964-70	2.4	2.5	1.0
1965-71	1.7	2.5	0.7
1966-72	1.8	2.4	0.8
1967-73	2.6	3.3	0.8
1968-74	1.3	2.4	0.5
1969-75	0.2	1.8	0.1
1970-76	-0.2	2.0	-0.1
1971-77	0.3	1.9	0.1
1972-78	0.1	2.1	0.0



## 3

# Inland consumption of primary fuels for energy use

Original units of measurement

United Kingdom

	Coal (1)	Petroleum (2)	Natural gas (3)	Nuclear electricity (4)	Hydro (1) electricity (5)
	Million tonnes	Million tonnes	Million therms	GWh	GWh
1968	167.3	76.1	1,208	27,710	4,328
1969	164.1	82.1	2,354	29,124	3,838
1970	156.9	88.2	4,486	26,022	5,087
1971	139.3	89.0	7,235	27,394	3,507
1972	122.4	95.4	10,264	29,378	3,912
1973	133.0	96.6	11,105	27,997	3,912
1974	117.9	89.7	13,283	33,617	4,149
1975	120.0	80.3	13,913	30,337	3,871
1976	122.0	78.9	14,763	36,155	3,641
1977	122.7	80.3	15,691	40,021	3,919
1978	119.9	82.0	16,276	37,224	3,963

(1) Including net imports of electricity.



## 4

Percentage shares of inland consumption of primary fuels for energy use<sup>(1)</sup>

	Inland coal consumption	Petroleum	Natural gas and colliery methane	Nuclear electricity	Hydro electricity
1968	53.9	40.9	1.5	3.0	0.7
1969	50.8	42.7	2.9	3.0	0.6
1970	46.7	44.7	5.3	2.6	0.7
1971	42.1	45.9	8.7	2.8	0.5
1972	36.1	48.2	12.2	2.9	0.6
1973	37.4	46.8	12.6	2.7	0.5
1974	34.7	45.5	15.9	3.3	0.6
1975	36.4	42.6	17.3	3.2	0.5
1976	36.5	41.3	18.1	3.6	0.5
1977	35.7	41.0	18.8	3.9	0.6
1978	34.6	41.7	19.4	3.7	0.6

(1) Based on inland consumption for energy use given in Table 7.



# Availability and consumption of primary fuels and equivalents (Million tonnes of coal or coal equivalent)

United Kingdom

	Million tonnes of coal or coal equivalent										
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Production:</b>											
Coal	169.9	155.7	147.1	149.4	121.8	132.0	110.5	128.7	123.8	122.1	123.6
Petroleum <sup>(1)</sup>	0.2	0.2	0.3	0.4	0.6	0.6	0.7	2.6	20.7	65.0	91.8
Natural gas	3.2	7.7	16.6	27.5	39.7	43.0	51.9	54.1	57.3	60.1	57.6
Primary electricity <sup>(2)</sup>	12.1	12.3	11.8	11.7	12.4	12.1	14.2	12.9	14.8	16.3	15.5
<b>Total</b>	<b>185.4</b>	<b>175.9</b>	<b>175.8</b>	<b>189.0</b>	<b>174.5</b>	<b>187.7</b>	<b>177.3</b>	<b>198.3</b>	<b>216.6</b>	<b>263.5</b>	<b>288.5</b>
<b>Arrivals:</b>											
Coal <sup>(3)</sup>	—	—	0.1	4.6	5.4	1.9	3.7	5.2	2.9	2.5	2.4
Petroleum <sup>(4)</sup>	180.2	193.7	208.4	216.1	218.5	227.3	216.5	177.1	172.0	142.4	135.4
Natural gas	1.6	1.7	1.3	1.3	1.2	1.2	1.0	1.3	1.5	2.7	7.5
Electricity	0.1	0.1	0.1	—	0.1	—	—	—	—	—	—
<b>Total</b>	<b>181.9</b>	<b>195.5</b>	<b>209.9</b>	<b>222.0</b>	<b>225.2</b>	<b>230.4</b>	<b>221.2</b>	<b>183.6</b>	<b>176.4</b>	<b>147.6</b>	<b>145.3</b>
<b>Shipments:</b>											
Coal <sup>(3)</sup>	3.6	4.5	4.1	3.2	2.3	3.4	3.3	3.1	2.2	2.5	3.3
Petroleum <sup>(4)</sup>	24.7	25.0	31.6	31.9	33.2	35.1	27.3	26.3	34.5	52.6	65.3
Electricity	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>28.3</b>	<b>29.5</b>	<b>35.7</b>	<b>35.1</b>	<b>35.5</b>	<b>38.5</b>	<b>30.6</b>	<b>29.4</b>	<b>36.7</b>	<b>55.1</b>	<b>68.6</b>
<b>Net arrivals (+) or shipments (—):</b>											
Coal <sup>(3)</sup>	—3.6	—4.5	—4.0	+1.4	+3.1	—1.5	+0.4	+2.1	+0.7	—	—0.9
Petroleum <sup>(4)</sup>	+155.5	+168.7	+176.8	+184.2	+185.3	+192.2	+189.2	+150.8	+137.5	+89.8	+70.1
Natural gas	+1.6	+1.7	+1.3	+1.3	+1.2	+1.2	+1.0	+1.3	+1.5	+2.7	+7.5
Electricity	+0.1	+0.1	+0.1	—	+0.1	—	—	—	—	—	—
<b>Total</b>	<b>+153.6</b>	<b>+166.0</b>	<b>+174.2</b>	<b>+186.9</b>	<b>+189.7</b>	<b>+191.9</b>	<b>+190.6</b>	<b>+154.2</b>	<b>+139.7</b>	<b>+92.5</b>	<b>+76.7</b>
<b>Marine bunkers:</b>											
Petroleum	9.1	9.5	9.4	9.6	8.9	9.3	8.1	5.9	6.1	4.8	4.9
<b>Stock changes<sup>(5)</sup>:</b>											
Coal <sup>(3)</sup>	+0.9	+12.7	+13.5	—11.1	—2.2	+2.3	+7.7	—10.5	—2.6	+1.0	—2.6
Petroleum	—1.6	—3.2	—1.2	—5.6	+4.6	+0.9	—8.2	+5.8	—0.5	+3.9	—1.3
<b>Total</b>	<b>—0.7</b>	<b>+9.5</b>	<b>+12.3</b>	<b>—16.7</b>	<b>+2.4</b>	<b>+3.2</b>	<b>—0.5</b>	<b>—4.7</b>	<b>—3.1</b>	<b>+4.9</b>	<b>—3.9</b>
<b>Statistical difference<sup>(6)</sup>:</b>											
Coal	+0.1	+0.2	+0.3	—0.4	—0.3	+0.2	—0.7	—0.3	+0.1	—0.4	—0.2
Petroleum	—0.3	+0.1	+0.5	—1.2	—1.4	—0.4	—0.9	—0.5	—0.2	—0.8	—0.4
<b>Total</b>	<b>—0.2</b>	<b>+0.3</b>	<b>+0.8</b>	<b>—1.6</b>	<b>—1.7</b>	<b>—0.2</b>	<b>—1.6</b>	<b>—0.8</b>	<b>—0.1</b>	<b>—1.2</b>	<b>—0.6</b>
<b>Gross inland consumption</b>	<b>329.0</b>	<b>342.2</b>	<b>353.7</b>	<b>348.0</b>	<b>356.0</b>	<b>373.3</b>	<b>357.7</b>	<b>341.1</b>	<b>347.0</b>	<b>354.9</b>	<b>355.8</b>
Petroleum for non-energy use <sup>(7)</sup>	15.3	16.7	17.0	17.0	18.0	19.8	20.2	16.3	17.2	16.5	16.0
<b>Inland consumption for energy use:</b>											
Coal	167.3	164.1	156.9	139.3	122.4	133.0	117.9	120.0	122.0	122.7	119.9
Petroleum	129.4	139.6	150.0	151.2	162.2	164.2	152.5	136.5	134.2	136.6	139.3
Natural gas	4.8	9.4	17.9	28.8	40.9	44.2	52.9	55.4	58.8	62.8	65.1
Primary electricity	12.2	12.4	11.9	11.7	12.5	12.1	14.2	12.9	14.8	16.3	15.5
<b>Total</b>	<b>313.7</b>	<b>325.5</b>	<b>336.7</b>	<b>331.0</b>	<b>338.0</b>	<b>353.5</b>	<b>337.5</b>	<b>324.8</b>	<b>329.8</b>	<b>338.4</b>	<b>339.8</b>
<b>Temperature corrected Total</b>	<b>312.9</b>	<b>323.0</b>	<b>336.3</b>	<b>332.9</b>	<b>337.4</b>	<b>354.2</b>	<b>337.9</b>	<b>326.9</b>	<b>331.5</b>	<b>338.2</b>	<b>339.1</b>

- (1) Crude petroleum plus all condensates and petroleum gases extracted at gas separation plants.  
 (2) Nuclear and hydro electricity excluding generation at pumped storage stations.  
 (3) Including other solid fuels.  
 (4) Crude and process oils and petroleum products.

- (5) Stock fall (+) stock rise (—).  
 (6) Supply greater than recorded demand (—).  
 (7) Feedstocks for petrochemical plants and industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.



## 6

# Availability and consumption of primary fuels and equivalents (Million tonnes of oil or oil equivalent)

United Kingdom

Million tonnes of oil or oil equivalent

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Production:</b>											
Coal	99.9	91.6	86.5	87.9	71.7	77.6	65.0	75.7	72.8	71.9	72.7
Petroleum <sup>(1)</sup>	0.1	0.1	0.2	0.2	0.3	0.4	0.4	1.6	12.1	38.2	54.0
Natural gas	1.9	4.5	9.7	16.2	23.3	25.3	30.6	31.8	33.7	35.3	33.9
Primary electricity <sup>(2)</sup>	7.1	7.2	7.0	6.9	7.4	7.1	8.4	7.6	8.7	9.6	9.1
<b>Total</b>	<b>109.0</b>	<b>103.4</b>	<b>103.4</b>	<b>111.2</b>	<b>102.7</b>	<b>110.4</b>	<b>104.4</b>	<b>116.7</b>	<b>127.3</b>	<b>155.0</b>	<b>169.7</b>
<b>Arrivals:</b>											
Coal <sup>(3)</sup>	—	—	0.1	2.7	3.2	1.1	2.2	3.1	1.7	1.5	1.4
Petroleum <sup>(4)</sup>	106.0	113.9	122.6	127.1	128.5	133.7	127.3	104.2	101.2	83.7	79.6
Natural gas	0.9	1.0	0.8	0.8	0.7	0.7	0.6	0.8	0.9	1.6	4.4
Electricity	0.1	0.1	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>107.0</b>	<b>115.0</b>	<b>123.5</b>	<b>130.6</b>	<b>132.4</b>	<b>135.5</b>	<b>130.1</b>	<b>108.1</b>	<b>103.8</b>	<b>86.8</b>	<b>85.4</b>
<b>Shipments:</b>											
Coal <sup>(3)</sup>	2.1	2.6	2.4	1.9	1.3	2.0	2.0	1.8	1.3	1.5	2.0
Petroleum <sup>(4)</sup>	14.5	14.7	18.6	18.7	19.5	20.6	16.0	15.5	20.3	30.9	38.4
Electricity	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>16.6</b>	<b>17.3</b>	<b>21.0</b>	<b>20.6</b>	<b>20.8</b>	<b>22.6</b>	<b>18.0</b>	<b>17.3</b>	<b>21.6</b>	<b>32.4</b>	<b>40.4</b>
<b>Net arrivals (+) or shipments (—):</b>											
Coal <sup>(3)</sup>	—2.1	—2.6	—2.3	+0.8	+1.9	—0.9	+0.2	+1.3	+0.4	—	—0.6
Petroleum <sup>(4)</sup>	+91.5	+99.2	+104.0	+108.4	+109.0	+113.1	+111.3	+88.7	+80.9	+52.8	+41.2
Natural gas	+0.9	+1.0	+0.8	+0.8	+0.7	+0.7	+0.6	+0.8	+0.9	+1.6	+4.4
Electricity	+0.1	+0.1	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>+90.4</b>	<b>+97.7</b>	<b>+102.5</b>	<b>+110.0</b>	<b>+111.6</b>	<b>+112.9</b>	<b>+112.1</b>	<b>+90.8</b>	<b>+82.2</b>	<b>+54.4</b>	<b>45.0</b>
<b>Marine bunkers:</b>											
Petroleum	5.3	5.6	5.5	5.7	5.3	5.5	4.8	3.4	3.5	2.8	2.9
<b>Stock changes<sup>(5)</sup>:</b>											
Coal <sup>(3)</sup>	+0.5	+7.4	+7.9	—6.5	—1.3	+1.4	+4.5	—6.2	—1.5	+0.6	—1.5
Petroleum	—1.0	—1.9	—0.7	—3.3	+2.7	+0.5	—4.8	+3.4	—0.3	+2.3	—0.7
<b>Total</b>	<b>—0.5</b>	<b>+5.5</b>	<b>+7.2</b>	<b>—9.8</b>	<b>+1.4</b>	<b>+1.9</b>	<b>—0.3</b>	<b>—2.8</b>	<b>—1.8</b>	<b>+2.9</b>	<b>—2.2</b>
<b>Statistical difference<sup>(6)</sup>:</b>											
Coal	+0.1	+0.1	+0.2	—0.2	—0.3	+0.1	—0.4	—0.2	+0.1	—0.3	—0.1
Petroleum	—0.2	+0.1	+0.2	—0.6	—0.7	—0.3	—0.5	—0.4	—0.2	—0.5	—0.2
<b>Total</b>	<b>—0.1</b>	<b>+0.2</b>	<b>+0.4</b>	<b>—0.8</b>	<b>—1.0</b>	<b>—0.2</b>	<b>—0.9</b>	<b>—0.6</b>	<b>—0.1</b>	<b>—0.8</b>	<b>—0.3</b>
<b>Gross inland consumption</b>	<b>193.5</b>	<b>201.2</b>	<b>208.0</b>	<b>204.9</b>	<b>209.4</b>	<b>219.5</b>	<b>210.5</b>	<b>200.7</b>	<b>204.1</b>	<b>208.7</b>	<b>209.3</b>
<b>Petroleum for non energy use<sup>(7)</sup></b>	<b>9.0</b>	<b>9.8</b>	<b>10.0</b>	<b>10.0</b>	<b>10.6</b>	<b>11.6</b>	<b>11.9</b>	<b>9.6</b>	<b>10.1</b>	<b>9.7</b>	<b>9.4</b>
<b>Inland consumption for energy use:</b>											
Coal <sup>(8)</sup>	98.4	96.5	92.3	82.0	72.0	78.2	69.3	70.6	71.8	72.2	70.5
Petroleum	76.1	82.1	88.2	89.0	95.4	96.6	89.7	80.3	78.9	80.3	82.0
Natural gas	2.8	5.5	10.5	17.0	24.0	26.0	31.2	32.6	34.6	36.9	38.3
Primary electricity	7.2	7.3	7.0	6.9	7.4	7.1	8.4	7.6	8.7	9.6	9.1
<b>Total</b>	<b>184.5</b>	<b>191.4</b>	<b>198.0</b>	<b>194.9</b>	<b>198.8</b>	<b>207.9</b>	<b>198.6</b>	<b>191.1</b>	<b>194.0</b>	<b>199.0</b>	<b>199.9</b>
<b>Temperature corrected Total</b>	<b>184.0</b>	<b>190.0</b>	<b>197.8</b>	<b>195.8</b>	<b>198.5</b>	<b>208.3</b>	<b>198.8</b>	<b>192.3</b>	<b>195.0</b>	<b>199.0</b>	<b>199.5</b>

(1) Crude petroleum plus all condensates and petroleum gases extracted at gas separation plants.

(2) Nuclear and hydro electricity excluding generation at pumped storage stations.

(3) Including other solid fuels.

(4) Crude and process oils and petroleum products.

(5) Stock fall (+) stock rise (—).

(6) Supply greater than recorded demand (—).

(7) Feedstocks for petrochemical plants and industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.



## Availability and consumption of primary fuels and equivalents

(Million therms)

United Kingdom

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Million therms											
Production:											
Coal	43,411	39,529	36,837	37,387	30,363	32,805	27,245	31,430	30,166	29,682	29,964
Petroleum <sup>(1)</sup>	35	45	66	90	142	159	174	665	5,206	16,350	23,098
Natural gas	812	1,938	4,153	6,901	9,958	10,812	13,040	13,578	14,379	15,024	14,387
Primary electricity <sup>(2)</sup>	2,793	2,848	2,727	2,682	2,862	2,783	3,279	2,982	3,411	3,761	3,567
Total	47,051	44,360	43,783	47,060	43,325	46,559	43,738	48,655	53,162	64,817	71,016
Arrivals:											
Coal <sup>(3)</sup>	—	—	32	1,146	1,353	482	920	1,274	798	699	689
Petroleum <sup>(4)</sup>	45,165	48,566	52,061	54,132	54,884	57,212	54,177	44,344	43,199	35,730	34,035
Natural gas	396	416	333	332	306	293	243	335	384	667	1,889
Electricity	25	20	19	4	17	6	8	7	1	—	—
Total	45,586	49,002	52,445	55,614	56,560	57,993	55,348	45,960	44,382	37,096	36,613
Shipments:											
Coal <sup>(3)</sup>	918	1,141	1,040	813	569	846	853	784	598	696	859
Petroleum <sup>(4)</sup>	5,999	6,198	7,845	7,949	8,400	8,744	6,861	6,557	8,603	13,145	16,391
Electricity	—	—	—	—	—	4	6	4	4	—	3
Total	6,917	7,339	8,885	8,762	8,969	9,594	7,720	7,345	9,205	13,841	17,253
Net arrivals (+) or shipments (—):											
Coal <sup>(3)</sup>	—918	—1,141	—1,008	+333	+784	—364	+67	+490	+200	+3	—170
Petroleum <sup>(4)</sup>	+39,166	+42,368	+44,216	+46,183	+46,484	+48,468	+47,316	+37,787	+34,596	+22,585	+17,644
Natural gas	+396	+416	+333	+332	+306	+293	+243	+335	+384	+667	1,889
Electricity	+25	+20	+19	+4	+17	+2	+2	+3	—3	—	—3
Total	+38,669	+41,663	+43,560	+46,852	+47,591	+48,399	+47,628	+38,615	+35,177	+23,255	19,360
Marine bunkers:											
Petroleum	2,304	2,299	2,271	2,332	2,090	2,290	1,954	1,418	1,468	1,168	1,190
Stock changes <sup>(5)</sup> :											
Coal <sup>(3)</sup>	+222	+3,227	+3,391	—2,797	—544	+578	+1,921	—2,576	—634	+238	—543
Petroleum	—413	—810	—270	—1,385	+1,153	+182	—2,040	+1,453	—138	+979	—323
Total	—191	+2,417	+3,121	—4,182	+609	+760	—119	—1,123	—772	+1,217	—866
Statistical difference <sup>(6)</sup> :											
Coal	+32	+52	+79	—95	—96	+24	—143	—80	+48	—45	—144
Petroleum	—100	+30	+185	—259	—352	—135	—204	—157	—101	—221	—106
Total	—68	+82	+264	—354	—448	—111	—347	—237	—53	—266	—250
Gross inland consumption	83,157	86,223	88,457	87,044	88,987	93,317	88,946	84,492	86,046	87,855	88,070
Petroleum for non-energy use <sup>(7)</sup>	3,864	4,231	4,311	4,303	4,555	5,016	5,107	4,071	4,337	4,175	4,067
Inland consumption for energy use:											
Coal <sup>(8)</sup>	42,747	41,667	39,299	34,828	30,507	33,043	29,090	29,264	29,780	29,878	29,107
Petroleum	32,520	35,103	37,615	37,994	40,782	41,368	38,185	34,259	33,758	34,350	35,056
Natural gas	1,208	2,354	4,486	7,233	10,264	11,105	13,283	13,913	14,763	15,691	16,276
Primary electricity	2,818	2,868	2,746	2,686	2,879	2,785	3,281	2,985	3,408	3,761	3,564
Total	79,293	81,992	84,146	82,741	84,432	88,301	83,839	80,421	81,709	83,680	84,003

- (1) Crude petroleum plus all condensates and petroleum gases extracted at gas separation plants.  
 (2) Nuclear and hydro electricity excluding generation at pumped storage stations.  
 (3) Including other solid fuels.  
 (4) Crude and process oils and petroleum products.

- (5) Stock fall (+), stock rise (—).  
 (6) Supply greater than recorded demand (—).  
 (7) Feedstocks for petrochemical plants and industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.



## 8

# Availability and consumption of primary fuels and equivalents (Petajoule) United Kingdom

Petajoule (Joules x 10<sup>15</sup>)<sup>(1)</sup>

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Production:</b>											
Coal	4,580.1	4,170.5	3,886.5	3,944.5	3,203.4	3,461.2	2,874.4	3,316.0	3,182.6	3,131.6	3,161.4
Petroleum <sup>(2)</sup>	3.7	4.7	7.0	9.5	15.0	16.8	18.4	70.2	549.3	1,725.1	2,437.0
Natural gas	85.7	204.5	438.2	728.1	1,050.6	1,140.7	1,375.8	1,432.6	1,517.1	1,585.1	1,517.9
Primary electricity <sup>(3)</sup>	294.7	300.5	287.7	283.0	302.0	293.6	346.0	314.6	359.9	396.8	376.3
<b>Total</b>	<b>4,964.2</b>	<b>4,680.2</b>	<b>4,619.4</b>	<b>4,965.1</b>	<b>4,571.0</b>	<b>4,912.3</b>	<b>4,614.6</b>	<b>5,133.4</b>	<b>5,608.9</b>	<b>6,838.6</b>	<b>7,492.6</b>
<b>Arrivals:</b>											
Coal <sup>(4)</sup>	—	—	3.4	120.9	142.7	50.9	97.1	134.4	84.2	73.7	72.7
Petroleum <sup>(5)</sup>	4,765.2	5,124.0	5,492.8	5,711.3	5,790.6	6,036.3	5,716.0	4,678.7	4,557.8	3,769.7	3,590.9
Natural gas	41.8	43.9	35.1	35.0	32.3	30.9	25.6	35.3	40.5	70.4	199.3
Electricity	2.6	2.1	2.0	0.4	1.8	0.6	0.8	0.7	0.1	—	—
<b>Total</b>	<b>4,809.6</b>	<b>5,170.0</b>	<b>5,533.3</b>	<b>5,867.6</b>	<b>5,967.4</b>	<b>6,118.7</b>	<b>5,839.5</b>	<b>4,849.1</b>	<b>4,682.6</b>	<b>3,913.8</b>	<b>3,862.9</b>
<b>Shipments:</b>											
Coal <sup>(4)</sup>	96.9	120.4	109.7	85.8	60.0	89.3	90.0	82.7	63.1	73.4	90.6
Petroleum <sup>(5)</sup>	632.9	653.9	827.7	838.6	886.3	922.5	723.9	691.8	907.7	1,386.9	1,729.4
Electricity	—	—	—	—	—	0.4	0.6	0.4	0.4	—	0.3
<b>Total</b>	<b>729.8</b>	<b>774.3</b>	<b>937.4</b>	<b>924.4</b>	<b>946.3</b>	<b>1,012.2</b>	<b>814.5</b>	<b>774.9</b>	<b>971.2</b>	<b>1,460.3</b>	<b>1,820.3</b>
<b>Net arrivals (+) or shipments (—):</b>											
Coal <sup>(4)</sup>	—96.9	—120.4	—106.3	+35.1	+82.7	—38.4	+7.1	+51.7	+21.1	+0.3	—17.9
Petroleum <sup>(5)</sup>	+4,132.3	+4,470.1	+4,665.1	+4,872.7	+4,904.3	+5,113.8	+4,992.1	+3,986.9	+3,650.1	+2,382.8	1,861.5
Natural gas	+41.8	+43.9	+35.1	+35.0	+32.3	+30.9	+25.6	+35.3	+40.5	+70.4	199.3
Electricity	+2.6	+2.1	+2.0	+0.4	+1.8	+0.2	+0.2	+0.3	—0.3	—	—0.3
<b>Total</b>	<b>+4,079.8</b>	<b>+4,395.7</b>	<b>+4,595.9</b>	<b>+4,943.2</b>	<b>+5,021.1</b>	<b>+5,106.5</b>	<b>+5,025.0</b>	<b>+4,074.2</b>	<b>+3,711.4</b>	<b>+2,453.5</b>	<b>2,042.6</b>
<b>Marine bunkers:</b>											
Petroleum	243.1	242.6	239.6	246.0	220.5	241.6	206.2	149.6	154.9	123.2	125.6
<b>Stock changes<sup>(6)</sup>:</b>											
Coal <sup>(4)</sup>	+23.4	+340.5	+357.8	—295.1	—57.4	+61.0	+202.6	—271.8	—66.9	+25.1	—57.3
Petroleum	—43.5	—85.5	—28.5	—146.1	+121.6	+19.2	—215.2	+153.3	—14.6	+103.3	—34.1
<b>Total</b>	<b>—20.1</b>	<b>+255.0</b>	<b>+329.3</b>	<b>—441.2</b>	<b>+64.2</b>	<b>+80.2</b>	<b>—12.6</b>	<b>—118.5</b>	<b>—81.5</b>	<b>+128.4</b>	<b>—91.4</b>
<b>Statistical difference<sup>(7)</sup>:</b>											
Coal	+3.4	+5.5	+8.3	—10.0	—10.1	+2.5	—15.1	—8.4	+5.1	—4.7	—15.2
Petroleum	—10.6	+3.2	+19.5	—27.3	—37.1	—14.2	—21.5	—16.6	—10.7	—23.4	—11.1
<b>Total</b>	<b>—7.2</b>	<b>+8.7</b>	<b>+27.8</b>	<b>—37.3</b>	<b>—47.2</b>	<b>—11.7</b>	<b>—36.6</b>	<b>—25.0</b>	<b>—5.6</b>	<b>—28.1</b>	<b>—26.3</b>
<b>Gross inland consumption</b>	<b>8,773.6</b>	<b>9,097.0</b>	<b>9,332.8</b>	<b>9,183.8</b>	<b>9,388.6</b>	<b>9,845.7</b>	<b>9,384.2</b>	<b>8,914.5</b>	<b>9,078.3</b>	<b>9,269.2</b>	<b>9,291.9</b>
<b>Petroleum for non-energy use<sup>(8)</sup></b>	<b>407.7</b>	<b>446.4</b>	<b>454.8</b>	<b>454.0</b>	<b>480.6</b>	<b>529.2</b>	<b>538.8</b>	<b>429.5</b>	<b>457.6</b>	<b>440.5</b>	<b>429.1</b>
<b>Inland consumption for energy use:</b>											
Coal	4,510.0	4,396.1	4,146.3	3,674.5	3,218.6	3,486.3	3,069.0	3,087.5	3,141.9	3,152.3	3,071.0
Petroleum	3,431.1	3,703.5	3,968.7	4,008.8	4,302.7	4,364.8	4,028.8	3,614.7	3,561.6	3,624.1	3,698.6
Natural gas	127.5	248.4	473.3	763.1	1,082.9	1,171.6	1,401.4	1,467.9	1,557.6	1,655.5	1,717.2
Primary electricity	297.3	302.6	289.7	283.4	303.8	293.8	346.2	314.9	359.6	396.8	376.0
<b>Total</b>	<b>8,365.9</b>	<b>8,650.6</b>	<b>8,878.0</b>	<b>8,729.8</b>	<b>8,908.0</b>	<b>9,316.5</b>	<b>8,845.4</b>	<b>8,485.0</b>	<b>8,620.7</b>	<b>8,828.7</b>	<b>8,862.8</b>

- (1) As with other tables in this Digest, the heat supplied is calculated using gross calorific values (see Page 3)
- (2) Crude petroleum plus all condensates and petroleum gases extracted at gas separation plants.
- (3) Nuclear and hydro electricity excluding generation at pumped storage stations.
- (4) Including other solid fuels.
- (5) Crude and process oils and petroleum products.

- (6) Stock fall (+), stock rise (—).
- (7) Supply greater than recorded demand (—).
- (8) Feedstocks for petrochemical plants and industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.



# Commodity analysis of purchases in the energy sector—1978 <sup>(1)</sup>

## United Kingdom

Sales by commodity group	Primary fuels				Secondary fuels		
	Coal (1)	Crude petroleum (2)	Natural gas (3)	Total primary fuels (4)	Coke and breeze (5)	Petroleum products <sup>(3)</sup> (6)	Manufactured gases <sup>(4)</sup> (7)
<b>Purchases by sector <sup>(2)</sup></b>							
Primary fuel producers:							
Coal <sup>(8)</sup>	—	—	—	—	—	—	—
Crude Petroleum	—	—	—	—	—	—	—
Natural gas	—	—	—	—	—	—	—
Total primary	—	—	—	—	—	—	—
Secondary fuel producers:							
Petroleum products	—	5,145	—	5,145	—	—	—
Electricity <sup>(9)</sup>	1,665	—	35	1,700	5	490	—
Coke oven products	425	—	—	425	—	—	—
Other fuels	70	—	—	70	—	15	—
Total secondary	2,160	5,145	35	7,340	5	505	—
Final users:							
Iron and steel	5	—	50	55	525	130	30
Other industries	195	—	645	840	30	890	5
Total industry	(200)	(—)	(695)	(895)	(555)	(1,020)	(35)
Railways	—	—	—	—	—	60	—
Road transport	—	—	—	—	—	1,880	—
Water transport	—	—	—	—	—	75	—
Air transport	—	—	—	—	—	340	—
Total transport	(—)	(—)	(—)	(—)	(—)	(2,355)	(—)
Agriculture	—	—	—	—	—	85	—
Domestic <sup>(2)</sup>	240 <sup>(10)</sup>	—	1,370	1,610	30	240	5
Public services and miscellaneous	80	—	290	370	10	395	—
Total final users	520	—	2,355	2,875	595	4,095	40
Total inland transactions	2,680	5,145	2,390	10,215	600	4,600	40
Non-energy use of petroleum	—	—	—	—	—	740 <sup>(11)</sup>	—
Stock changes <sup>(12)</sup>	70	20	—	90	—10	—15	—
Exports	50	1,240	—	1,210	—	1,305 <sup>(13)</sup>	—
Total fuel output	2,800	6,405	2,390	11,595	590	6,630	40
Less imports	75	3,530	190	3,795	30	960	—
Total domestic output	2,725	2,875	2,200	7,800	560	5,670	40
Allocation of distribution costs and margins by fuel	415	—	—	415	40	980	—

- (1) All figures are estimates and have been rounded to the nearest £5 million.  
 (2) See explanatory notes (page 4)  
 (3) Includes petroleum gases  
 (4) Town gas and coke oven gas.  
 (5) Includes nuclear and hydro electricity which contributes 14.2% of total public electricity supplies available.

- (6) Includes other manufactured solid fuels and creosote/pitch mixtures  
 (7) Net VAT payments (for rates see Table 89).  
 (8) Includes licensed mines, opencast production and non-vested sources.



9 (continued)

£ million

Electricity (5) (8)	Other (6) fuels (9)	Total secondary fuels (10)	Total primary and secondary fuels (11)	Distribution costs and margins		Taxes on petroleum products (7) (14)	Total Expenditure (15)	Sales by commodity group
				Solid fuels (12)	Petroleum products (13)			
105	—	105	105	—	—	—	105	Purchases by sector (2)
—	—	—	—	—	—	—	—	Primary fuel producers:
—	—	—	—	—	—	—	—	Coal <sup>(8)</sup>
								Crude petroleum
								Natural gas
105	—	105	105	—	—	—	105	Total primary
20	—	20	5,165	—	—	—	5,165	Secondary fuel producers:
—	—	495	2,195	150	20	65	2,430	Petroleum products
5	—	5	430	30	—	—	460	Electricity <sup>(9)</sup>
5	—	20	90	5	—	—	95	Coke oven products
								Other fuels
30	—	540	7,880	185	20	65	8,150	Total secondary
230	5	920	975	15	10	15	1,015	Final users:
1,440	5	2,370	3,210	25	110	100	3,445	Iron and steel
(1,670)	(10)	(3,290)	(4,185)	(40)	(120)	(115)	(4,460)	Other industries
60	—	120	120	—	5	5	130	Total industry
—	—	1,880	1,880	—	570	2,440	4,890	Railways
—	—	75	75	—	5	10	90	Road transport
—	—	340	340	—	50	15	405	Water transport
(60)	(—)	(2,415)	(2,415)	(—)	(630)	(2,470)	(5,515)	Air transport
80	—	165	165	—	15	10	190	Total transport
2,425	75	2,775	4,385	205	120	10	4,720	Agriculture
1,190	25	1,620	1,990	70	75	40	2,175	Domestic <sup>(2)</sup>
5,425	110	10,265	13,140	315	960	2,645	17,060	Public services and miscellaneous
5,560	110	10,910	21,125					Total final users
—	—	740	740					Total inland transactions
—	—	—25	65					Non-energy use of petroleum
—	15	1,320	2,610					Stock changes (12)
5,560	125	12,945	24,540					Exports
—	5	995	4,790					Total fuel output
5,560	120	11,950	19,750					Less imports
—	45	1,065	1,480					Total domestic output
								Allocation of distribution costs and margins by fuel

(9) Includes power stations operated by transport authorities, the United Kingdom Atomic Energy Authority and British Nuclear Fuels Ltd. Purchases of nuclear fuels are excluded.

(10) Including the estimated commercial value of coal supplied free or at concessionary prices to miners.

(11) Includes sales by lubricating oil blenders

(12) Stock fall (—); stock rise (+)

(13) Includes marine bunkers



Estimated expenditure on energy by final users<sup>(1)(2)</sup>  
United Kingdom

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
	£ million										
<b>Industry</b>											
Iron and Steel											
Coal	5	5	5	5	5	5	5	5	5	5	5
Coke and breeze	130	135	145	150	170	195	255	360	510	530	540
Coke oven gas	15	15	15	15	15	15	15	20	25	30	30
Town gas	10	5	5	5	5	—	—	—	—	—	—
Natural gas	—	—	5	5	10	10	15	20	30	45	50
Electricity	55	60	60	65	65	70	100	130	170	195	230
Petroleum	45	50	55	60	55	60	135	135	145	170	155
Creosote/pitch	5	5	5	5	5	5	5	5	5	5	5
<b>Total</b>	<b>265</b>	<b>275</b>	<b>295</b>	<b>310</b>	<b>330</b>	<b>360</b>	<b>530</b>	<b>675</b>	<b>890</b>	<b>980</b>	<b>1,015</b>
Other Industries											
Coal	135	130	120	120	95	105	130	155	180	210	220
Coke and breeze	10	10	15	10	10	15	20	20	20	30	30
Other solid fuels	—	—	—	—	—	—	—	5	5	5	5
Coke oven gas	—	—	—	—	—	—	—	5	5	5	5
Town gas	55	50	40	20	25	20	15	10	—	—	—
Natural gas	—	5	20	55	80	120	165	210	350	490	645
Electricity	370	395	415	465	475	525	675	885	1,090	1,275	1,440
Petroleum	205	215	245	290	290	330	745	785	920	1,135	1,100
<b>Total</b>	<b>775</b>	<b>805</b>	<b>855</b>	<b>960</b>	<b>975</b>	<b>1,115</b>	<b>1,750</b>	<b>2,075</b>	<b>2,570</b>	<b>3,150</b>	<b>3,445</b>
<b>Total industry</b>	<b>1,040</b>	<b>1,080</b>	<b>1,150</b>	<b>1,270</b>	<b>1,305</b>	<b>1,475</b>	<b>2,280</b>	<b>2,750</b>	<b>3,460</b>	<b>4,120</b>	<b>4,460</b>
<b>Transport</b>											
Rail											
Electricity	15	15	20	20	20	20	25	35	45	50	60
Petroleum	15	15	15	15	15	20	50	50	55	70	70
<b>Total</b>	<b>30</b>	<b>30</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>40</b>	<b>75</b>	<b>85</b>	<b>100</b>	<b>120</b>	<b>130</b>
Road											
Motor spirit											
Cars and motorcycles	890	1,005	1,095	1,210	1,360	1,535	2,115	2,705	3,010	3,305	3,325
Other	230	255	260	275	290	310	405	470	510	580	570
Derv											
Goods vehicles	230	270	285	315	330	365	510	545	660	785	825
Other	70	80	80	85	90	95	120	125	145	165	170
<b>Total</b>	<b>1,420</b>	<b>1,610</b>	<b>1,720</b>	<b>1,885</b>	<b>2,070</b>	<b>2,305</b>	<b>3,150</b>	<b>3,845</b>	<b>4,325</b>	<b>4,835</b>	<b>3,890</b>
Water											
Petroleum	10	10	10	10	10	15	60	70	75	90	90
Air											
Petroleum	45	50	55	70	80	90	230	295	340	380	405
<b>Total transport</b>	<b>1,505</b>	<b>1,700</b>	<b>1,820</b>	<b>2,000</b>	<b>2,195</b>	<b>2,450</b>	<b>3,515</b>	<b>4,295</b>	<b>4,840</b>	<b>5,425</b>	<b>5,515</b>
<b>Domestic</b>											
Coal <sup>(4)</sup>	270	270	275	265	245	255	280	300	345	420	440
Coke and breeze	60	55	55	40	30	30	35	35	40	45	45
Other solid fuels	50	60	65	80	85	85	90	105	115	130	135
Town gas	295	335	320	305	260	190	130	70	25	10	5
Natural gas	—	20	65	125	245	345	475	690	975	1,195	1,355
Electricity	590	620	645	730	830	885	1,070	1,495	1,825	2,135	2,380
Petroleum	70	75	85	90	110	140	200	235	295	360	370
<b>Total domestic</b>	<b>1,335</b>	<b>1,435</b>	<b>1,510</b>	<b>1,635</b>	<b>1,805</b>	<b>1,930</b>	<b>2,280</b>	<b>2,930</b>	<b>3,620</b>	<b>4,295</b>	<b>4,730</b>



£ million

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Other final consumers</b>											
Agriculture											
Electricity	30	30	30	35	40	40	50	65	80	100	115
Petroleum	15	15	20	20	25	30	65	75	80	110	110
<b>Total</b>	<b>45</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>65</b>	<b>70</b>	<b>115</b>	<b>140</b>	<b>160</b>	<b>210</b>	<b>225</b>
<b>Public Services and Miscellaneous</b>											
Coal	25	25	30	25	25	25	30	45	60	80	80
Coke and breeze	35	30	30	20	15	15	25	20	25	30	25
Other solid fuels	—	—	—	—	5	5	5	5	5	5	10
Town gas	60	65	60	60	45	40	30	15	5	—	—
Natural gas	—	5	10	20	35	50	75	125	195	250	305
Electricity	305	325	340	380	420	455	515	735	905	1,050	1,200
Petroleum	70	75	90	105	105	120	330	350	430	545	510
<b>Total</b>	<b>495</b>	<b>525</b>	<b>560</b>	<b>610</b>	<b>650</b>	<b>710</b>	<b>1,010</b>	<b>1,295</b>	<b>1,625</b>	<b>1,960</b>	<b>2,130</b>
<b>Total other final consumers</b>	<b>540</b>	<b>570</b>	<b>610</b>	<b>665</b>	<b>715</b>	<b>780</b>	<b>1,125</b>	<b>1,435</b>	<b>1,785</b>	<b>2,170</b>	<b>2,355</b>
<b>All final consumers</b>											
Coal	435	430	430	415	370	390	445	505	590	715	745
Coke and breeze	235	230	245	220	225	255	335	435	595	635	640
Other solid fuels	50	60	65	80	90	90	95	115	125	140	150
Coke oven gas	15	15	15	15	15	15	15	25	30	35	35
Town gas	420	455	425	390	335	250	175	95	30	10	5
Natural gas	—	30	100	205	370	525	730	1,045	1,550	1,980	2,355
Electricity	1,365	1,445	1,510	1,695	1,850	1,995	2,435	3,345	4,115	4,805	5,425
Petroleum	1,895	2,115	2,295	2,545	2,760	3,110	4,965	5,840	6,665	7,695	7,700
Creosote/pitch	5	5	5	5	5	5	5	5	5	5	5
<b>Total all final consumers</b>	<b>4,420</b>	<b>4,785</b>	<b>5,090</b>	<b>5,570</b>	<b>6,020</b>	<b>6,635</b>	<b>9,200</b>	<b>11,410</b>	<b>13,705</b>	<b>16,020</b>	<b>17,060</b>

(1) All figures are estimates and have been rounded to the nearest £5 million.

(2) See explanatory notes on page 4

(3) Including net VAT payments (for rates see Table 89).

(4) Includes the estimated commercial value of coal supplied free or at concessionary prices to miners.



# Energy balance for the United Kingdom—1978 (Heat supplied basis)

	Primary fuels						Secondary fuels		
	Coal (1)	Crude petroleum (2)	Natural gas (3)	Nuclear electricity (4)	Hydro electricity (5)	Total (6)	Coke and breeze (7)	Other solid fuel (8)	Creosote pitch mixtures (9)
<b>Primary fuel and equivalents</b>									
Production of primary fuels	29,964	22,781 <sup>(1)</sup>	14,387	3,085 <sup>(2)</sup>	482 <sup>(2)</sup>	70,699	—	—	—
Arrivals	665	29,101	1,889	—	—	31,655	4	20	—
Shipments	593	10,616	—	—	—	11,209	219	47	—
Marine bunkers	—	—	—	—	—	—	—	—	—
Stock changes <sup>(4)</sup>	-654	-492	—	—	—	-1,146	—	—	—
Statistical differences <sup>(5)</sup>	-144	+390	—	—	—	+246	+117	-6	—
<b>Gross inland consumption</b>	<b>29,238</b>	<b>41,164</b>	<b>16,276</b>	<b>3,085</b>	<b>482</b>	<b>90,245</b>	<b>-98</b>	<b>-33</b>	<b>—</b>
<b>Non energy use</b>									
Feedstock for petrochemical plants	..	—	..	—	—	—	—	—	—
Other	..	—	..	—	—	—	—	—	—
<b>Total</b>	<b>..</b>	<b>—</b>	<b>..</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Inland energy consumption of primary fuels and equivalents</b>	<b>29,238</b>	<b>41,164</b>	<b>16,276</b>	<b>3,085</b>	<b>482</b>	<b>90,245</b>	<b>-98</b>	<b>-33</b>	<b>—</b>
<b>Secondary fuel production [Fuel input for conversion(-), output of secondary fuels (+)]<sup>(7)</sup></b>									
Petroleum refineries	—	41,164	—	—	—	41,164	—	—	—
Electricity supply industry	-18,116 <sup>(8)</sup>	—	-338	-3,085	-482	-22,021	-30	—	—
Gas supply industry	-2	—	+73 <sup>(9)</sup>	—	—	+71	—	—	—
Coke ovens	-4,263	—	—	—	—	-4,263	+2,851	—	+31
Other manufactured fuel plants	-851	—	—	—	—	-851	+30	+685	—
<b>Total</b>	<b>-23,232</b>	<b>-41,164</b>	<b>-265</b>	<b>-3,085</b>	<b>-482</b>	<b>-68,228</b>	<b>+2,851</b>	<b>+685</b>	<b>+31</b>
<b>Used by energy industries</b>									
Primary fuel producers	-253 <sup>(11)</sup>	—	-233	—	—	-486	—	—	—
Secondary fuel producers	-15	—	-110	—	—	-125	-97 <sup>(12)</sup>	—	—
<b>Total</b>	<b>-268</b>	<b>—</b>	<b>-343</b>	<b>—</b>	<b>—</b>	<b>-611</b>	<b>-97</b>	<b>—</b>	<b>—</b>
<b>Losses in distribution</b>	<b>—</b>	<b>—</b>	<b>-675</b>	<b>—</b>	<b>—</b>	<b>-675</b>	<b>-4</b>	<b>—</b>	<b>—</b>
<b>Total final inland energy consumption</b>	<b>5,738</b>	<b>—</b>	<b>14,993</b>	<b>—</b>	<b>—</b>	<b>20,731</b>	<b>2,652</b>	<b>652</b>	<b>31</b>
<b>Final inland energy consumption by user</b>									
Iron and steel industry	50	—	446	—	—	496	2,239	—	22
Other industries	2,184	—	5,568	—	—	7,752	116	27	9
<b>Total industry</b>									
Transport	20	—	—	—	—	20	1	—	—
Domestic	2,968	—	7,242	—	—	10,210	187	581	—
Other final consumers	516	—	1,737	—	—	2,253	109	44	—

- (1) Crude petroleum (22,605 million therms) and condensate for distillation by refineries (176 million therms).  
 (2) Fossil fuel input required had primary electricity been produced at conventional stations.  
 (3) Petroleum gases and condensate extracted at gas separation plants for direct supply to consumers.  
 (4) Stock fall (+), stock rise (-).  
 (5) Supply greater than recorded demand (-).  
 (6) Industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.

- (7) Losses in conversion appear as negative figures in col. (19).  
 (8) Including coal derived electricity purchased from collieries (6 million therms).  
 (9) Synthetic natural gas made (81 million therms) less natural gas used in manufacture of town gas (8 million therms).  
 (10) Including petroleum gases (86 million therms).  
 (11) Excluding coal derived electricity sold by collieries to the electricity supply industry (6 million therms).  
 (12) Including blast furnace gas used at coke ovens (51 million therms).  
 (13) Including electricity used for pumping at pumped storage stations less the quantity of electricity generated by them.



11 (continued)

Million therms

## Petroleum products

Motor spirit (10)	Gas/ diesel oil (11)	Fuel oil (12)	Other products (13)	Total (14)	Town gas (15)	Coke oven gas (16)	Elec- tricity (17)	Total (18)	Total energy (19)
—	—	—	317 <sup>(3)</sup>	317	—	—	—	317	71,016
1,070	708	1,562	1,594	4,934	—	—	—	4,958	36,613
467	2,181	1,505	1,622	5,775	—	—	3	6,044	17,253
—	416	774	—	1,190	—	—	—	1,190	1,190
+36	-59	+104	+88	+169	—	—	—	+280	-866
+425	-29	-295	-597	-496	—	—	—	-496	-250
<b>+1,064</b>	<b>-1,977</b>	<b>-908</b>	<b>-220</b>	<b>-2,041</b>	—	—	<b>3</b>	<b>-2,175</b>	<b>88,070</b>
—	—	-17	-2,655	-2,672	—	—	—	-2,672	-2,672
—	—	—	-1,395 <sup>(6)</sup>	-1,395	—	—	—	-1,395	-1,395
—	—	-17	-4,050	-4,067	—	—	—	-4,067	-4,067
<b>+1,064</b>	<b>-1,977</b>	<b>-925</b>	<b>-4,270</b>	<b>-6,108</b>	—	—	<b>-3</b>	<b>-6,242</b>	<b>84,003</b>
+7,101	+10,372	+13,719	+9,626	+40,818	—	—	—	—	-346
—	-197	-4,485	—	-4,682	—	—	+9,250	—	-17,483
—	-3	-15	-117 <sup>(10)</sup>	-135	+39	—	—	—	-25
—	—	—	—	—	—	+814	—	—	-567
—	—	—	—	—	—	—	—	—	-136
<b>+7,101</b>	<b>+10,172</b>	<b>+9,219</b>	<b>+9,509</b>	<b>+36,001</b>	<b>+39</b>	<b>+814</b>	<b>+9,250</b>	—	<b>-18,557</b>
—	—	—	—	—	—	-2	-177	-179	-665
—	-17	-1,329	-1,487	-2,833	—	-421	-666 <sup>(13)</sup>	-4,017	-4,142
—	-17	-1,329	-1,487	-2,833	—	-423	-843	-4,196	-4,807
—	—	—	—	—	-7	-34	-728	-773	-1,448
<b>8,165</b>	<b>8,178</b>	<b>6,965</b>	<b>3,752</b>	<b>27,060</b>	<b>32</b>	<b>357</b>	<b>7,676</b>	<b>38,460</b>	<b>59,191</b>
—	131	1,002	28	1,161	—	296	411	4,129	4,625
—	2,017	4,725	654	7,396	6	61	2,455	10,070	17,822
									22,447
<b>8,165</b>	<b>3,367</b>	<b>59</b>	<b>2,011</b>	<b>13,602</b>	—	—	<b>102</b>	<b>13,705</b>	<b>13,725</b>
—	351	26	1,045	1,422	19	—	2,928	5,137	15,347
—	2,312	1,153	14	3,479	7	—	1,780	5,419	7,672

## Primary fuel and equivalents

Production of primary fuels  
Arrivals  
Shipments  
Marine bunkers  
Stock changes <sup>(4)</sup>  
Statistical differences <sup>(5)</sup>

## Gross inland consumption

## Non energy use

Feedstock for petrochemical  
plants  
Other

## Total

Inland energy consumption of  
primary fuels and equivalents

Secondary fuel production [Fuel  
input for conversion (-), out-  
put of secondary fuels (+)] <sup>(7)</sup>  
Petroleum refineries  
Electricity supply industry  
Gas supply industry  
Coke ovens  
Other manufactured fuel plants

## Total

## Used by energy industries

Primary fuel producers  
Secondary fuel producers

## Total

## Losses in distribution

Total final inland energy  
consumption

Final inland energy consump-  
tion by user  
Iron and steel industry  
Other industries

## Total industry

Transport  
Domestic  
Other final consumers



# Energy balance for the United Kingdom—1978 (Heat supplied basis)

	Primary fuels						Secondary fuels		
	Coal	Crude Petroleum	Natural gas	Nuclear electricity	Hydro electricity	Total	Coke and breeze	Other solid fuel	Creosote/pitch mixtures
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Primary fuel and equivalents</b>									
Production of primary fuels	3,161.4	2,403.6 <sup>(2)</sup>	1,517.9	325.5 <sup>(3)</sup>	50.8 <sup>(3)</sup>	7,459.2	—	—	—
Arrivals	70.2	3,070.3	199.3	—	—	3,339.8	0.4	2.1	—
Shipments	62.6	1,120.1	—	—	—	1,182.7	23.1	4.9	—
Marine bunkers	—	—	—	—	—	—	—	—	—
Stock changes (5)	-69.0	-51.9	—	—	—	-120.9	+12.3	-0.6	—
Statistical differences (6)	-15.2	+41.1	—	—	—	+25.9	—	—	—
<b>Gross inland consumption</b>	<b>3,084.8</b>	<b>4,343.0</b>	<b>1,717.2</b>	<b>325.5</b>	<b>50.8</b>	<b>9,521.3</b>	<b>-10.4</b>	<b>-3.4</b>	<b>—</b>
<b>Non energy use</b>									
Feedstock for Petrochemical plants	..	—	..	—	—	—	—	—	—
Other	..	—	..	—	—	—	—	—	—
<b>Total</b>	<b>..</b>	<b>—</b>	<b>..</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Inland energy consumption of primary fuels and equivalents</b>	<b>3,084.8</b>	<b>4,343.0</b>	<b>1,717.2</b>	<b>325.5</b>	<b>50.8</b>	<b>9,521.3</b>	<b>-10.4</b>	<b>-3.4</b>	<b>—</b>
<b>Secondary fuel production</b>									
[Fuel input for conversion (-), output of secondary fuels (+)] (8)									
Petroleum refineries	—	-4,343.0	—	—	—	-4,343.0	—	—	—
Electricity supply industry	-1,911.3 <sup>(9)</sup>	—	-35.7	-325.5	-50.8	-2,323.3	-3.2	—	—
Gas supply industry	-0.2	—	+7.7 <sup>(10)</sup>	—	—	+7.5	—	—	—
Coke ovens	-449.8	—	—	—	—	-449.8	+300.8	—	+3.3
Other manufactured fuel plants	-89.8	—	—	—	—	-89.8	+3.2	+72.3	—
<b>Total</b>	<b>-2,451.1</b>	<b>-4,343.0</b>	<b>-28.0</b>	<b>-325.5</b>	<b>-50.8</b>	<b>-7,198.4</b>	<b>+300.8</b>	<b>+72.3</b>	<b>+3.3</b>
<b>Used by energy industries</b>									
Primary fuel producers	-26.7 <sup>(12)</sup>	—	-24.6	—	—	-51.3	—	—	—
Secondary fuel producers	-1.6	—	-11.6	—	—	-13.2	-10.3 <sup>(13)</sup>	—	—
<b>Total</b>	<b>-28.3</b>	<b>—</b>	<b>-36.2</b>	<b>—</b>	<b>—</b>	<b>-64.5</b>	<b>-10.3</b>	<b>—</b>	<b>—</b>
<b>Losses in distribution</b>	<b>—</b>	<b>—</b>	<b>-71.2</b>	<b>—</b>	<b>—</b>	<b>-71.2</b>	<b>-0.4</b>	<b>—</b>	<b>—</b>
<b>Total final inland energy consumption</b>	<b>605.4</b>	<b>—</b>	<b>1,581.8</b>	<b>—</b>	<b>—</b>	<b>2,187.2</b>	<b>279.7</b>	<b>68.9</b>	<b>3.3</b>
<b>Final inland energy consumption by user</b>									
Iron and steel industry	5.3	—	47.1	—	—	52.4	236.2	—	2.3
Other industries	230.4	—	587.3	—	—	817.7	12.2	2.9	1.0
<b>Total industry</b>	<b>235.7</b>	<b>—</b>	<b>634.4</b>	<b>—</b>	<b>—</b>	<b>870.1</b>	<b>248.4</b>	<b>2.9</b>	<b>3.3</b>
<b>Transport</b>	<b>2.1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2.1</b>	<b>0.1</b>	<b>—</b>	<b>—</b>
Domestic	313.2	—	764.1	—	—	1,077.3	19.7	61.3	—
Other final consumers	54.4	—	183.3	—	—	237.7	11.5	4.7	—

- (1) As with other tables in this Digest, the heat supplied is calculated using gross calorific values (See page 3).  
 (2) Crude petroleum (2385.0 petajoule) and condensate for distillation by refineries (18.5 petajoule).  
 (3) Fossil fuel input required had primary electricity been produced at conventional stations.  
 (4) Petroleum gases and condensate extracted at gas separation plants for direct supply to consumers.  
 (5) Stock fall (+), stock rise (-).  
 (6) Supply greater than recorded demand (-).  
 (7) Industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumption but excludes small quantities derived from coal.

- (8) Losses in conversion appear as negative figures in col. (19).  
 (9) Including coal derived electricity purchased from collieries (0.6 petajoule).  
 (10) Synthetic natural gas made (8.5 petajoule) less natural gas used in manufacture of town gas (0.8 petajoule).  
 (11) Including petroleum gases (9.1 petajoule).  
 (12) Excluding coal derived electricity sold by collieries to the electricity supply industry (0.6 petajoule).  
 (13) Including blast furnace gas used at coke ovens (5.4 petajoule).  
 (14) Including electricity used for pumping at pumped storage stations less the quantity of electricity generated by them.



Petajoule (Joules x 10<sup>15</sup>)(1)

Petroleum products					Town gas	Coke oven gas	Electricity	Total	Total energy	
Motor spirit (10)	Gas/diesel oil (11)	Fuel oil (12)	Other products (13)	Total (14)	(15)	(16)	(17)	(18)	(19)	
—	—	—	33.4 <sup>(4)</sup>	33.4	—	—	—	33.4	7,492.6	Primary fuel and equivalents
112.9	74.7	164.8	168.2	520.6	—	—	—	523.1	3,862.9	Production of primary fuels
49.3	230.1	158.8	171.1	609.3	—	—	0.3	637.6	1,820.3	Arrivals
—	43.9	81.7	—	125.6	—	—	—	125.6	125.6	Shipments
+3.7	-6.2	+11.0	+9.3	+17.8	—	—	—	+29.5	-91.4	Marine bunkers
+45.0	-3.1	-31.1	-63.0	-52.2	—	—	—	-52.2	-26.3	Stock changes <sup>(5)</sup>
<b>+112.3</b>	<b>-208.6</b>	<b>-95.8</b>	<b>-23.2</b>	<b>-215.3</b>	<b>—</b>	<b>—</b>	<b>-0.3</b>	<b>-229.4</b>	<b>9,291.9</b>	Statistical differences <sup>(6)</sup>
										<b>Gross inland consumption</b>
—	—	-1.8	-208.1	-281.9	—	—	—	-281.9	-281.9	Non energy use
—	—	—	-147.2 <sup>(7)</sup>	-147.2	—	—	—	-147.2	-147.2	Feedstock for petrochemical plants
—	—	-1.8	-427.3	-429.1	—	—	—	-429.1	-429.1	Other
<b>+112.3</b>	<b>-208.6</b>	<b>-97.6</b>	<b>-450.5</b>	<b>-644.4</b>	<b>—</b>	<b>—</b>	<b>-0.3</b>	<b>-658.5</b>	<b>8,862.8</b>	<b>Total</b>
										<b>Inland energy consumption of primary fuels and equivalents</b>
+749.2	+1,094.3	+1,447.4	+1,015.6	+4,306.5	—	—	—	—	-36.5	Secondary fuel production
—	-20.8	-473.2	—	-494.0	—	—	+975.9	—	-1,844.6	[Fuel input for conversion (-), output of secondary fuels (+)] (8)
—	-0.3	-1.6	-12.3 <sup>(11)</sup>	-14.2	+4.1	—	—	—	-2.6	Petroleum refineries
—	—	—	—	—	—	+85.9	—	—	-59.8	Electricity supply industry
—	—	—	—	—	—	—	—	—	-14.3	Gas supply industry
+749.2	+1,073.2	+972.6	+1,003.3	+3,798.3	+4.1	+85.9	+975.9	—	-1,957.8	Coke ovens
—	—	—	—	—	—	—	—	—	—	Other manufactured fuel plants
—	-1.8	-140.2	-156.9	-298.9	—	-0.2	-18.7	-18.9	-70.2	Total
—	—	—	—	—	—	-44.4	-70.2 <sup>(14)</sup>	-423.8	-437.0	Used by energy industries
—	-1.8	-140.2	-156.9	-298.9	—	-44.6	-88.9	-442.7	-507.2	Primary fuel producers
—	—	—	—	—	-0.7	-3.6	-76.9	-81.6	-152.8	Secondary fuel producers
<b>861.5</b>	<b>862.8</b>	<b>734.8</b>	<b>395.9</b>	<b>2,855.0</b>	<b>3.4</b>	<b>37.7</b>	<b>809.8</b>	<b>4,057.8</b>	<b>6,245.0</b>	<b>Total</b>
										<b>Losses in distribution</b>
—	13.8	105.7	3.0	122.5	—	31.3	43.3	435.6	488.0	<b>Total final inland energy consumption</b>
—	212.9	498.6	68.9	780.4	0.7	6.4	259.0	1,062.6	1,880.3	Final inland energy consumption by user
—	226.7	604.3	71.9	902.9	0.7	37.7	302.3	1,498.2	2,368.3	Iron and steel industry
861.5	355.2	6.2	212.2	1,435.1	—	—	10.8	1,446.0	1,448.1	Other industries
—	37.0	2.7	110.3	150.0	2.0	—	308.9	541.9	1,619.2	Total industry
—	243.9	121.6	1.5	367.0	0.7	—	187.8	571.7	809.4	Transport
										Domestic
										Other final consumers



Energy consumption by final users  
(In original units of measurement)  
United Kingdom

	Unit of measurement	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Industry</b>										
<b>Iron and steel</b>										
Coal	Million tonnes	0.76	0.56	0.34	0.36	0.36	0.26	0.24	0.24	0.18
Coke and breeze	" "									
Blast furnaces	" "	10.79	9.42	8.98	9.96	8.36	7.25	8.38	7.36	6.71
Other purposes	" "	3.15	2.73	2.44	2.26	2.11	2.04	2.08	1.86	1.95
Coke oven gas	Million therms	439	422	405	466	337	346	371	337	296
Town gas	" "	129	112	76	13	7	4	2	1	—
Natural gas	" "	115	231	361	383	388	367	436	484	446
Electricity	TWh	10.94	9.95	9.80	10.47	10.11	10.08	11.56	11.39	12.05
Petroleum	Million tonnes	5.67	5.29	5.04	4.99	4.02	3.31	3.13	2.94	2.83
Creosote/pitch mixtures	" "	0.31	0.18	0.14	0.15	0.09	0.07	0.08	0.07	0.06
<b>Other industries</b>										
Coal	Million tonnes	18.85	15.27	11.32	11.72	10.72	9.42	8.73	8.79	8.37
Coke and breeze	" "	1.36	0.94	0.81	0.69	0.63	0.56	0.43	0.53	0.46
Other solid fuel	" "	0.10	0.08	0.07	0.07	0.11	0.08	0.07	0.08	0.10
Coke oven gas	Million therms	23	22	36	46	50	66	62	64	61
Town gas	" "	577	300	382	300	189	84	25	11	6
Natural gas	" "	595	1,831	2,869	3,901	4,503	4,617	5,216	5,447	5,568 <sup>(1)</sup>
Electricity	TWh	62.05	63.48	63.36	69.59	65.70	65.27	69.27	70.66	71.94
Petroleum	Million tonnes	21.55	21.55	22.14	22.18	19.82	17.89	17.88	18.06	17.75
Creosote/pitch mixtures	" "	0.11	0.08	0.05	0.05	0.04	0.03	0.04	0.03	0.03
<b>Transport</b>										
<b>Rail</b>										
Coal	Million tonnes	0.12	0.09	0.07	0.08	0.07	0.06	0.06	0.06	0.06
Coke and breeze	" "	0.05	0.02	—	—	—	—	—	—	—
Electricity (2)	TWh	2.72	2.76	2.67	2.61	2.71	2.90	2.87	2.93	2.97
Petroleum	Million tonnes	1.15	1.10	1.03	1.03	0.97	0.92	0.87	0.88	0.89
<b>Road</b>										
Electricity (2)	TWh	0.01	0.01	—	—	—	—	—	—	—
Petroleum	Million tonnes	19.27	20.15	21.15	22.59	22.00	21.53	22.47	23.05	24.22
Liquid fuels from coal	" "	0.01	—	—	—	—	—	—	—	—
<b>Water</b>										
Coal	Million tonnes	0.13	0.09	0.03	0.01	0.01	0.01	0.01	0.01	0.01
Petroleum	" "	1.11	1.01	0.89	1.01	1.15	1.21	1.22	1.22	1.20
<b>Air</b>										
Petroleum	Million tonnes	3.47	3.81	4.07	4.33	3.80	3.91	4.04	4.22	4.56



13 (continued)

	Unit of measurement	1970	1971	1972	1973	1974	1975	1976	1977	1978
Domestic										
Coal	Million tonnes	20.19	17.26	14.56	14.49	13.67	11.62	10.82	11.14	10.22
Coke and breeze	" "	2.63	1.70	1.27	1.16	1.23	0.97	0.89	0.86	0.76
Other solid fuel	" "	2.95	3.23	3.20	3.07	2.92	2.65	2.47	2.39	2.20
Town gas	Million therms	2,915	2,508	2,217	1,590	1,039	495	145	44	19
Natural gas	" "	627	1,422	2,292	3,225	4,345	5,396	6,049	6,546	7,242
Electricity	TWh	77.04	80.67	86.89	91.30	92.63	89.22	85.12	85.90	85.80
Petroleum	Million tonnes	3.05	3.01	3.48	3.80	3.38	3.27	3.27	3.31	3.24
Other final consumers										
Public administration										
Coal	Million tonnes	2.97	2.50	2.13	2.06	1.90	1.49	1.69	1.72	1.64
Coke and breeze	" "	1.08	0.66	0.60	0.55	0.59	0.47	0.43	0.42	0.37
Town gas	Million therms	189	160	181	175	100	47	15	6	3
Natural gas	" "	12	74	181	337	440	550	672	740	811
Electricity	TWh	11.87	12.25	12.65	13.16	12.18	13.27	13.95	14.32	14.99
Petroleum	Million tonnes	4.19	4.55	4.63	4.47	4.01	3.95	4.16	4.53	4.31
Agriculture										
Coal	Million tonnes	0.14	0.12	0.10	0.08	0.06	0.04	0.03	0.03	0.02
Coke and breeze	" "	0.08	0.06	0.04	0.05	0.04	0.03	0.03	0.02	0.01
Electricity	TWh	3.60	3.72	3.84	3.98	3.94	3.65	3.62	3.96	4.02
Petroleum	Million tonnes	1.33	1.44	1.58	1.66	1.37	1.39	1.30	1.38	1.38
Miscellaneous										
Coal	Million tonnes	0.80	0.72	0.67	0.35	0.46	0.35	0.26	0.33	0.31
Coke and breeze	" "	1.08	0.31	0.16	0.31	0.23	0.11	0.08	0.07	0.06
Other solid fuel	" "	0.21	0.18	0.31	0.27	0.19	0.21	0.13	0.16	0.17
Town gas	Million therms	456	446	357	245	188	83	25	7	4
Natural gas	" "	105	186	277	326	541	667	809	834	926
Electricity	TWh	24.18	25.12	25.97	28.70	26.25	28.39	29.20	31.22	33.13
Petroleum	Million tonnes	3.07	2.68	2.70	2.86	2.53	2.59	2.70	2.69	2.56
All classes of consumer										
Coal	Million tonnes	43.96	36.61	29.22	29.15	27.25	23.25	21.84	22.32	20.81
Coke and breeze	" "	20.22	15.84	14.30	14.98	13.19	11.43	12.32	11.13	10.33
Other solid fuel	" "	3.26	3.49	3.58	3.41	3.22	2.94	2.67	2.63	2.47
Coke oven gas	Million therms	462	444	441	512	387	412	433	401	357
Town gas	" "	4,266	3,526	3,213	2,323	1,523	713	212	69	32
Natural gas	" "	1,454	3,744	5,980	8,172	10,217	11,597	13,182	14,051	14,993 <sup>(1)</sup>
Electricity	TWh	192.41	197.96	205.18	219.81	213.52	212.78	215.59	220.38	224.90
Petroleum	Million tonnes	63.86	64.59	66.71	68.92	63.05	59.97	61.04	62.28	62.94
Creosote/pitch mixtures	" "	0.42	0.26	0.19	0.20	0.13	0.10	0.12	0.10	0.09
Liquid fuels from coal	" "	0.01	—	—	—	—	—	—	—	—

<sup>(1)</sup> Includes 4 million therms of colliery methane.<sup>(2)</sup> Electricity purchased from the public supply together with use from own generation.



Energy consumption by final users  
(Heat supplied basis)  
United Kingdom

Million therms

	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Industry</b>									
Iron and steel									
Coal	210	154	93	100	99	72	66	66	50
Coke and breeze									
Blast furnaces	2,752	2,412	2,328	2,605	2,178	1,893	2,218	1,941	1,767
Other purposes	733	637	571	528	503	481	505	453	472
Coke oven gas	439	422	405	466	337	346	371	337	296
Town gas	129	112	76	13	7	4	2	1	—
Natural gas	115	231	361	383	388	367	436	484	446
Electricity	373	340	335	357	345	344	395	389	411
Petroleum	2,328	2,185	2,089	2,066	1,648	1,357	1,279	1,205	1,161
Creosote/pitch mixtures	114	68	54	57	37	26	30	25	22
Total	7,193	6,561	6,312	6,575	5,542	4,890	5,302	4,901	4,625
Other industries									
Coal	4,824	3,908	2,954	3,056	2,795	2,458	2,277	2,295	2,184
Coke and breeze	348	245	210	178	164	142	107	134	116
Other solid fuel	27	22	19	18	29	22	19	22	27
Coke oven gas	23	22	36	46	50	66	62	64	61
Town gas	577	300	382	300	189	84	25	11	6
Natural gas (1)	595	1,831	2,869	3,901	4,503	4,617	5,216	5,447	5,568 <sup>(1)</sup>
Electricity	2,118	2,166	2,162	2,375	2,242	2,228	2,364	2,411	2,455
Petroleum	8,945	8,982	9,294	9,324	8,264	7,434	7,441	7,520	7,396
Creosote/pitch mixtures	39	30	18	17	13	12	14	10	9
Total	17,496	17,506	17,944	19,215	18,249	17,063	17,525	17,914	17,822
<b>Total industry</b>	<b>24,689</b>	<b>24,067</b>	<b>24,256</b>	<b>25,790</b>	<b>23,791</b>	<b>21,953</b>	<b>22,827</b>	<b>22,815</b>	<b>22,447</b>
<b>Transport</b>									
Rail									
Coal	35	27	21	23	20	16	17	16	18
Coke and breeze	14	5	2	—	—	—	1	1	1
Electricity (2)	93	94	91	89	92	99	98	100	102
Petroleum	498	471	445	446	416	397	375	377	384
Total	640	597	559	558	528	512	491	494	505
Road									
Electricity (2)	1	—	—	—	—	—	—	—	—
Petroleum	8,498	8,897	9,343	9,974	9,712	9,507	9,922	10,176	10,697
Liquid fuels from coal	6	—	—	—	—	—	—	—	—
Total	8,505	8,897	9,343	9,974	9,712	9,507	9,922	10,176	10,697
Water									
Coal	35	25	9	4	4	3	3	3	2
Petroleum	470	429	382	432	492	516	523	521	516
Total	505	454	391	436	496	519	526	524	518
Air									
Petroleum	1,536	1,686	1,792	1,908	1,675	1,723	1,777	1,857	2,005
<b>Total transport</b>	<b>11,186</b>	<b>11,634</b>	<b>12,085</b>	<b>12,876</b>	<b>12,411</b>	<b>12,261</b>	<b>12,716</b>	<b>13,051</b>	<b>13,725</b>



	Million therms								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Domestic</b>									
Coal	5,654	4,829	4,209	4,194	3,957	3,381	3,140	3,230	2,968
Coke and breeze	699	451	337	309	326	256	218	212	187
Other solid fuel	784	856	851	815	776	706	651	631	581
Town gas	2,915	2,508	2,217	1,590	1,039	495	145	44	19
Natural gas	627	1,422	2,292	3,225	4,345	5,396	6,049	6,546	7,242
Electricity	2,629	2,754	2,966	3,116	3,161	3,045	2,905	2,932	2,928
Petroleum	1,335	1,321	1,523	1,668	1,482	1,434	1,435	1,450	1,422
<b>Total domestic</b>	<b>14,643</b>	<b>14,141</b>	<b>14,395</b>	<b>14,917</b>	<b>15,086</b>	<b>14,713</b>	<b>14,543</b>	<b>15,045</b>	<b>15,347</b>
<b>Other final consumers</b>									
Public administration									
Coal	819	689	586	568	523	388	439	449	427
Coke and breeze	287	175	159	143	156	124	105	102	91
Town gas	189	160	181	175	100	47	15	6	3
Natural gas	12	74	181	337	440	550	672	740	811
Electricity	405	419	431	449	416	453	476	489	512
Petroleum	1,742	1,905	1,950	1,886	1,683	1,666	1,749	1,910	1,814
<b>Total</b>	<b>3,454</b>	<b>3,422</b>	<b>3,488</b>	<b>3,558</b>	<b>3,318</b>	<b>3,228</b>	<b>3,456</b>	<b>3,696</b>	<b>3,658</b>
Agriculture									
Coal	42	36	30	24	18	11	9	8	7
Coke and breeze	22	16	11	13	11	8	6	5	3
Electricity	123	127	131	136	135	124	124	135	137
Petroleum	563	613	677	710	583	588	556	587	585
<b>Total</b>	<b>750</b>	<b>792</b>	<b>849</b>	<b>883</b>	<b>747</b>	<b>731</b>	<b>695</b>	<b>735</b>	<b>732</b>
Miscellaneous									
Coal	220	199	183	95	128	91	68	87	82
Coke and breeze	286	82	43	83	58	30	22	18	15
Other solid fuel	56	48	81	72	51	57	33	41	44
Town gas	456	446	357	245	188	83	25	7	4
Natural gas	105	186	277	326	541	667	809	834	926
Electricity	825	857	887	980	896	969	997	1,065	1,131
Petroleum	1,283	1,128	1,139	1,209	1,069	1,093	1,136	1,138	1,080
<b>Total</b>	<b>3,231</b>	<b>2,946</b>	<b>2,967</b>	<b>3,010</b>	<b>2,931</b>	<b>2,990</b>	<b>3,090</b>	<b>3,190</b>	<b>3,282</b>
<b>Total other final consumers</b>	<b>7,435</b>	<b>7,160</b>	<b>7,304</b>	<b>7,451</b>	<b>6,996</b>	<b>6,949</b>	<b>7,241</b>	<b>7,621</b>	<b>7,672</b>
<b>All classes of consumer</b>									
Coal	11,839	9,867	8,085	8,064	7,544	6,420	6,019	6,154	5,738
Coke and breeze	5,141	4,023	3,661	3,859	3,396	2,934	3,182	2,866	2,652
Other solid fuel	867	926	951	905	856	785	703	694	652
Coke oven gas	462	444	441	512	387	412	433	401	357
Town gas	4,266	3,526	3,213	2,323	1,523	713	212	69	32
Natural gas	1,454	3,744	5,980	8,172	10,217	11,597	13,182	14,051	14,993 <sup>(1)</sup>
Electricity	6,567	6,757	7,003	7,502	7,287	7,262	7,359	7,521	7,676
Petroleum	27,198	27,617	28,634	29,623	27,024	25,715	26,193	26,741	27,060
Creosote/pitch mixtures	153	98	72	74	50	38	44	35	31
Liquid fuel from coal	6	—	—	—	—	—	—	—	—
<b>Total supplied to final consumers</b>	<b>57,953</b>	<b>57,002</b>	<b>58,040</b>	<b>61,034</b>	<b>58,284</b>	<b>55,876</b>	<b>57,327</b>	<b>58,532</b>	<b>59,191</b>

<sup>(1)</sup> Includes 4 million therms of colliery methane.<sup>(2)</sup> Electricity purchased from the public supply together with use from own generation.



# Energy consumption by main industrial groups <sup>(1)</sup>

(In original units of measurement)

United Kingdom

	Unit of measurement	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Engineering and other metal trades</b>										
Coal	Thousand tonnes	1,956	1,592	1,253	1,912	1,874	1,672	1,748	1,844	1,731
Coke and breeze	" "	594	399	340	268	246	220	169	211	179
Coke oven gas	Million therms	6	6	9	11	12	16	16	16	15
Town gas	" "	372	202	220	185	116	51	14	4	2
Natural gas	" "	209	433	586	881	1,031	1,103	1,255	1,316	1,340
Electricity	GWh	19,771	20,627	20,945	22,997	21,228	21,477	22,740	23,377	23,988
Petroleum	Thousand tonnes	4,630	4,253	4,160	4,195	3,868	3,690	3,515	3,529	3,343
Creosote/pitch mixtures	" "	7	3	4	4	4	4	4	4	3
<b>Food, drink and tobacco</b>										
Coal	Thousand tonnes	2,144	1,891	1,619	1,335	1,273	933	882	957	820
Coke and breeze	" "	138	92	78	62	57	51	40	50	42
Town gas	Million therms	53	42	44	32	23	12	5	3	2
Natural gas	" "	31	62	132	240	339	384	425	449	495
Electricity	GWh	5,178	5,319	5,499	6,029	6,134	6,277	6,788	6,517	6,621
Petroleum	Thousand tonnes	2,609	2,769	2,874	2,962	2,812	2,598	2,477	2,481	2,468
<b>Chemicals and allied trades</b>										
Coal	Thousand tonnes	4,123	2,650	1,029	745	673	563	613	612	533
Coke and breeze	" "	192	162	140	164	151	125	93	115	107
Coke oven gas	Million therms	11	11	18	23	25	33	31	32	31
Town gas	" "	36	13	27	20	10	3	1	2	2
Natural gas <sup>(2)</sup>	" "	223	876	1,325	1,721	1,929	1,935	2,183	2,227	2,265
Electricity	GWh	13,086	13,488	12,996	14,001	13,623	12,601	14,036	14,403	13,959
Petroleum	Thousand tonnes	2,919	3,343	3,699	4,205	3,653	3,275	3,406	3,644	3,477
Creosote/pitch mixtures	" "	92	77	44	42	32	30	34	24	20
<b>Textiles, leather and clothing</b>										
Coal	Thousand tonnes	2,006	1,643	1,157	1,147	1,032	790	805	730	695
Coke and breeze	" "	73	50	42	34	31	27	21	27	23
Town gas	Million therms	22	16	18	17	7	4	1	—	—
Natural gas	" "	15	35	104	146	172	178	197	194	197
Electricity	GWh	5,301	5,026	5,060	5,651	5,186	5,080	5,293	5,336	5,448
Petroleum	Thousand tonnes	1,897	1,693	1,784	1,793	1,595	1,494	1,587	1,587	1,542
<b>Paper, printing and stationery</b>										
Coal	Thousand tonnes	2,779	2,012	1,555	1,423	1,208	1,062	926	972	940
Coke and breeze	" "	57	38	33	25	23	21	16	20	17
Town gas	Million therms	16	..	12	14	12	5	1	—	—
Natural gas	" "	5	102	203	253	287	270	316	331	326
Electricity	GWh	3,050	2,972	2,915	3,207	3,151	3,262	3,473	3,600	3,844
Petroleum	Thousand tonnes	1,659	1,798	1,792	1,724	1,565	1,396	1,424	1,399	1,449



15 (continued)

	Unit of measurement	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Bricks, tiles, fireclay and other building material</b>										
Coal	Thousand tonnes	1,171	942	706	704	527	378	404	414	352
Coke and breeze	" "	179	120	103	81	74	66	53	66	55
Town gas	Million therms	—	—	4	4	1	—	—	—	—
Natural gas	" "	—	55	50	117	121	135	167	169	178
Electricity	GWh	581	618	630	646	424	459	555	520	475
Petroleum	Thousand tonnes	1,005	834	733	744	670	583	611	553	557
Creosote/pitch mixtures	" "	6	1	1	1	—	—	—	—	—
<b>China, earthenware and glass</b>										
Coal	Thousand tonnes	126	96	48	43	34	18	16	21	19
Coke and breeze	" "	31	20	17	13	12	11	6	8	7
Coke oven gas	Million therms	6	5	9	12	13	17	15	16	15
Town gas	" "	44	27	28	11	10	4	2	1	—
Natural gas	" "	79	93	130	173	226	233	253	282	289
Electricity	GWh	2,006	2,068	2,095	2,265	2,336	2,266	2,475	2,640	2,873
Petroleum	Thousand tonnes	1,106	1,185	1,050	987	899	698	703	662	647
<b>Cement</b>										
Coal	Thousand tonnes	2,848	2,972	2,812	3,257	2,971	3,131	2,530	2,531	2,718
Coke and breeze	" "	20	13	11	9	8	7	5	6	5
Natural gas	Million therms	—	40	191	182	161	133	111	96	102
Electricity	GWh	2,030	2,129	2,041	2,221	2,036	1,881	1,994	1,938	1,894
Petroleum	Thousand tonnes	854	654	593	478	489	236	197	203	156
<b>Other trades</b>										
Coal	Thousand tonnes	1,698	1,474	1,146	1,150	1,125	876	805	713	561
Coke and breeze	" "	74	50	43	34	32	28	22	27	23
Other solid fuel	" "	102	82	70	67	109	81	72	81	100
Town gas	Million therms	34	—	29	17	10	5	1	1	—
Natural gas	" "	33	135	148	188	237	246	309	383	376
Electricity	GWh	11,047	11,233	11,183	12,578	11,585	11,971	11,913	12,321	12,836
Petroleum	Thousand tonnes	4,866	5,026	5,457	5,094	4,269	3,914	3,959	3,998	4,112
<b>Total<sup>(1)</sup></b>										
Coal	Thousand tonnes	18,851	15,272	11,325	11,716	10,717	9,423	8,729	8,794	8,369
Coke and breeze	" "	1,358	944	807	690	634	556	425	530	458
Other solid fuel	" "	102	82	70	67	109	81	72	81	100
Coke oven gas	Million therms	23	22	36	46	50	66	62	64	61
Town gas	" "	577	300	382	300	189	84	25	11	6
Natural gas	" "	595	1,831	2,869	3,901	4,503	4,617	5,216	5,447	5,568
Electricity	GWh	62,050	63,480	63,364	69,595	65,703	65,274	69,267	70,652	71,938
Petroleum	Thousand tonnes	21,545	21,555	22,142	22,182	19,820	17,884	17,879	18,056	17,751
Creosote/pitch mixtures	" "	105	81	49	47	36	34	38	28	23

(1) Iron and steel is excluded, being shown separately in Table 13; the fuel industries are also excluded. The industries covered by this table correspond to the "Other industries" class in Table 13. The figures are partly estimated.

(2) From 1971, includes direct supply by the petroleum industry.



Energy consumption by main industrial groups<sup>(1)</sup>  
(Heat supplied basis)  
United Kingdom

Million therms

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Engineering and other metal trades									
Coal	515	417	334	510	500	448	467	492	464
Coke and breeze	153	104	89	68	64	57	42	53	45
Coke oven gas	6	6	9	11	12	16	16	16	15
Town gas	372	202	220	185	116	51	14	4	2
Natural gas	209	433	586	881	1,031	1,103	1,255	1,316	1,340
Electricity	675	704	714	785	725	733	776	798	819
Petroleum	1,924	1,773	1,748	1,769	1,621	1,540	1,469	1,475	1,398
Creosote/pitch mixtures	3	1	2	2	2	2	2	2	1
Total	3,857	3,640	3,702	4,211	4,071	3,950	4,041	4,156	4,084
Food, drink and tobacco									
Coal	577	511	444	366	350	257	243	263	226
Coke and breeze	35	24	20	17	15	13	10	13	11
Town gas	53	42	44	32	23	12	5	3	2
Natural gas	31	62	132	240	339	384	425	449	495
Electricity	177	181	187	206	209	214	232	222	226
Petroleum	1,078	1,148	1,200	1,238	1,166	1,074	1,025	1,027	1,022
Total	1,951	1,968	2,027	2,099	2,102	1,954	1,940	1,977	1,982
Chemicals and allied trades									
Coal	1,011	648	256	186	167	140	152	153	133
Coke and breeze	49	42	37	43	39	32	24	29	27
Coke oven gas	11	11	18	23	25	33	31	32	31
Town gas	36	13	27	20	10	3	1	2	2
Natural gas (2)	223	876	1,325	1,721	1,929	1,935	2,183	2,227	2,265
Electricity	447	461	444	478	465	430	479	492	476
Petroleum	1,205	1,383	1,539	1,751	1,507	1,347	1,402	1,501	1,432
Creosote/pitch mixtures	34	29	16	15	11	10	12	8	8
Total	3,016	3,463	3,662	4,237	4,153	3,930	4,284	4,444	4,374
Textiles, leather and clothing									
Coal	522	428	306	303	273	210	213	194	184
Coke and breeze	19	13	11	9	8	7	5	7	6
Town gas	22	16	18	17	7	4	1	—	—
Natural gas	15	35	104	146	172	178	197	194	197
Electricity	181	172	173	193	177	174	181	182	186
Petroleum	781	700	744	749	660	617	655	655	637
Total	1,540	1,364	1,356	1,417	1,297	1,190	1,252	1,232	1,210
Paper, printing and stationery									
Coal	698	504	396	362	307	271	236	248	241
Coke and breeze	15	10	8	6	6	5	3	5	4
Town gas	16	..	12	14	12	5	1	—	—
Natural gas	5	102	203	253	287	270	316	331	326
Electricity	104	101	100	109	108	111	118	123	131
Petroleum	683	743	745	718	645	574	586	577	597
Total	1,521	1,460	1,464	1,462	1,365	1,236	1,260	1,284	1,299



	Million therms								
	1970	1971	1972	1973	1974	1975	1976	1977	1978
Bricks, tiles, fireclay and other building materials									
Coal	310	248	190	189	142	102	109	112	95
Coke and breeze	46	31	27	22	19	17	14	16	14
Town gas	—	—	4	4	1	—	—	—	—
Natural gas	—	55	50	117	121	135	167	169	178
Electricity	20	21	21	22	14	16	19	18	16
Petroleum	419	349	310	315	282	245	256	232	234
Creosote/pitch mixtures	2	—	—	—	—	—	—	—	—
Total	797	704	602	669	579	515	565	547	537
China, earthenware and glass									
Coal	35	27	13	12	9	5	5	6	5
Coke and breeze	8	5	5	4	3	3	2	2	2
Coke oven gas	6	5	9	12	13	17	15	16	15
Town gas	44	27	28	11	10	4	2	1	—
Natural gas	79	93	130	173	226	233	253	282	289
Electricity	68	70	72	77	80	77	84	90	98
Petroleum	455	489	436	411	371	287	289	272	265
Total	695	716	693	700	712	626	650	669	674
Cement									
Coal	699	730	702	814	741	785	632	632	682
Coke and breeze	5	4	3	2	2	2	2	2	1
Natural gas	—	40	191	182	161	133	111	96	102
Electricity	69	73	70	76	69	64	68	66	65
Petroleum	351	270	247	199	202	98	82	84	64
Total	1,124	1,117	1,213	1,273	1,175	1,082	895	880	914
Other trades									
Coal	457	395	313	314	306	240	220	195	154
Coke and breeze	18	12	10	7	8	6	5	7	6
Other solid fuel	27	22	19	18	29	22	19	22	27
Town gas	34	—	29	17	10	5	1	1	—
Natural gas	33	135	148	188	237	246	309	383	376
Electricity	377	383	381	429	395	409	407	420	438
Petroleum	2,049	2,127	2,325	2,174	1,810	1,652	1,677	1,697	1,747
Total	2,995	3,074	3,225	3,147	2,795	2,580	2,638	2,725	2,748
Total <sup>(1)</sup>									
Coal	4,824	3,908	2,954	3,056	2,795	2,458	2,277	2,295	2,184
Coke and breeze	348	245	210	178	164	142	107	134	116
Other solid fuel	27	22	19	18	29	22	19	22	27
Coke oven gas	23	22	36	46	50	66	62	64	61
Town gas	577	300	382	300	189	84	25	11	6
Natural gas	595	1,831	2,869	3,901	4,503	4,617	5,216	5,447	5,568
Electricity	2,118	2,166	2,162	2,375	2,242	2,228	2,364	2,411	2,455
Petroleum	8,945	8,982	9,294	9,324	8,264	7,434	7,441	7,520	7,396
Creosote/pitch mixtures	39	30	18	17	13	12	14	10	9
Total	17,496	17,506	17,944	19,215	18,249	17,063	17,525	17,914	17,822

(1) Iron and steel is excluded, being shown separately in Table 14; the fuel industries are also excluded. The industries covered by this table correspond to the "Other industries" class in Table 14. The figures are partly estimated.

(2) From 1971, includes direct supply by the petroleum industry.



# Coal

## Period covered

All annual figures in this section relate to periods of 52 weeks except where otherwise stated. The precise periods covered by the 52 week calculations in recent years are shown:—

	52 weeks ended
1974	28th December, 1974
1975	27th December, 1975
1976	25th December, 1976
1977	24th December, 1977
1978	23rd December, 1978
1974/75	29th March, 1975
1975/76	27th March, 1976
1976/77	26th March, 1977
1977/78	25th March, 1978
1978/79	24th March, 1979 (week ended 31st March 1979, is omitted)

## Output (Tables 17, 18, 25, 26, 29)

The figures are of saleable output which, for NCB collieries, is the sum of coal sold commercially, consumed by the colliery, supplied to ancillary works and disposed of free and at concessionary prices, plus the increase or less the decrease in colliery stocks of saleable coal. Saleable output of National Coal Board collieries includes coal obtained from working on both revenue and capital account, slurry sold or used in colliery boilers and coal recovered by the Board from colliery tips and sold.

Licensed collieries include those where coal is only a subsidiary product.

Saleable output of opencast coal is the quantity of coal despatched from production sites after deducting screening losses plus the increase or less the decrease in stocks of saleable coal at sites. The figures include the output of sites worked by private operators under agency agreements and licenses and of sites licensed for the production of coal subsidiary to the working of other minerals.

## Wage earners on colliery books (Tables 24, 25, 26, 29)

These are the numbers of workers in industrial grades employed at collieries and in activities connected with the getting, raising, handling, preparation and transport of coal or other minerals (e.g. fireclay) which are got with coal, up to the point of despatch to consumers outside the colliery.

The activities mentioned include coal preparation plants, power stations forming part of the colliery, and landsale depots but exclude central workshops and central power stations.

Industrial grade workers include colliery under-officials up to the rank of overman, but exclude under-managers, other administrative staff and clerical workers.

Men absent with good reason and known to be intending to return are retained on books up to fifteen months. Men absent without good reason are normally excluded from colliery books at the end of the third consecutive week of absence.

## Tonnage lost (Table 25)

This is the estimated tonnage of saleable coal lost because of:—

- Recognized holidays and rest days. These are the annual holiday weeks, statutory holidays and colliery rest days, i.e. days on which the whole colliery is idle.
- Disputes causing stoppage of work involving all or part of the colliery and restriction of output by men involved in trade disputes.

## Manshifts (Table 25)

A manshift is the normal period of attendance at the colliery by one man in one day, i.e. in most cases 7½ hours plus one winding time underground or 8 hours on the surface, inclusive of mealtimes.

The number of manshifts worked is measured in terms of the time actually worked, including overtime. Week end, overtime and part shifts worked are counted as a proportion of the length of the worker's normal shift and included in total manshifts worked. Periods of attendance by trainees at training centres are excluded.

## Absence percentage (Table 25)

The percentage of authorised absences, mainly for reasons of sickness or injury, and unauthorised absences in the five-day week to the number of men on books multiplied by the number of days in the period excluding Saturdays and Sundays.

The absence percentage is based on all men on colliery books including long-term sickness and injury cases. Absentees do not, however, include men attending training classes, trade union or Consultative Committee meetings, or men who lose shifts on account of recognized holidays, disputes and other causes of stoppages of work.

## Output per manshift (Tables 25, 26, 29)

This is the output of saleable coal from revenue working divided by the number of manshifts worked on revenue account. Coal obtained from work on capital account, or recovered from colliery tips and the manshifts involved in such work as well as those taken up by training and other non-operational activities are excluded from the calculations.

## Output per man year (Table 25)

This is the output of saleable coal divided by the average number of men on colliery books.



### **Recruitment (Tables 27, 28)**

The number of men signed on at collieries during the period excluding men known to have transferred from another colliery without a break in their service.

### **Wastage (Tables 27, 28)**

The number of men struck off colliery books during the period less the number of men excluded from recruitment as transfers from other collieries.

### **Productive labour percentage (Table 25)**

The number of revenue manshifts worked per working day expressed as a percentage of the average number of men on colliery books. The productive labour percentage depends on attendance during the normal week; the figure is increased by overtime and Saturday working and reduced by stoppages, the number of men undergoing preliminary training and shifts worked on capital account.

### **Inland consumption (Tables 17, 18, 19)**

The figures for the main classes of consumer relate to Great Britain and Northern Ireland only, consumption in the Channel Islands being represented by shipments.

Explanatory notes about the figures for the main classes of consumer are given below:—

#### *Collieries*

Coal used for boilers, colliery power stations and other purposes.

#### *Electricity supply industry*

Coal used for all purposes at power stations of the public electricity supply industry and of railway and other public transport undertakings.

#### *Gas supply industry*

Coal used for all purposes at gas works making gas for public supply.

#### *Coke ovens*

Coal carbonized, consumed for other purposes or lost in cleaning at coke ovens. There are no coke ovens in Northern Ireland.

#### *Low temperature carbonization plants*

Coal used for all purposes. There are no plants in Northern Ireland.

#### *Patent fuel plants*

Coal used for the manufacture of briquetted fuels. The figures relate to Great Britain only; there is no production in Northern Ireland.

#### *Agriculture*

Excludes horticulture which is included under other industries. The figures are largely estimated. This sector is included in Miscellaneous in Table 19

#### *Iron and Steel Industry*

Coal used for all purposes (other than in coke ovens), including use for own production of electricity, at iron and steel works and at iron foundries having an annual output

of approximately 1,000 tonnes or more of iron castings. Some of the latter form part of engineering establishments.

#### *Other industry*

Prior to October, 1973, coal used (other than by the Iron and Steel Industry) by industrial establishments consuming 1,000 tonnes or more a year, plus estimates based on colliery and opencast disposals of consumption by industrial establishments using less than 1,000 tonnes a year. From October, 1973, the figures relate to colliery and opencast disposals. Includes use for production of own electricity.

#### *Railways*

Coal used for all purposes other than power stations.

#### *Water transport*

Estimates of coastwise bunkers and of consumption by dock and harbour undertakings and on inland waterways.

#### *Domestic*

House coal—Prior to April 1973 the figures relate to coal sold by merchants mainly to domestic consumers. A small proportion of house coal is sold to shops, offices, hotels and the like and to smaller industrial consumers. From April 1973 the figures relate to colliery and opencast disposals.

Anthracite and dry steam coal—Prior to April 1973 the figures relate to merchants' sales mainly to domestic consumers. From April 1973 the figures are of colliery and opencast disposals.

Also included are disposals of imported anthracite.

Miners' coal—Coal supplied free of charge or at reduced prices to miners, officials, etc. in the coalfields.

#### *Public administration*

Colliery and opencast disposals to National and Local Authorities.

#### *Miscellaneous*

Colliery and opencast disposals to commercial and non-industrial establishments, shipments to the Channel Islands, distribution losses and, in Table 19 only, agriculture.

### **Overseas shipments and foreign bunkers (Tables 17, 18, 19)**

The figures are actual shipments, including any coal for foreign bunkers, notified by the National Coal Board which, because they are not subject to a time lag between date of shipment and notification to HM Customs, may differ from the official trade figures given in the Foreign Trade section (page 125 et seq.).

### **Imports (Tables 17 and 18)**

The figures are derived from returns made to HM Customs and Excise and correspond to those published in the Annual Statement of Trade and the Overseas Trade Statistics of the United Kingdom.

### **Distributed stocks (Table 21)**

Coal held in stock in Great Britain by power stations of the electricity supply industry (as defined under 'Inland consumption'), coke ovens, gas works, low temperature carbonization plants, patent fuel plants, railways and the armed



forces, and, up to the end of the calendar year 1972 and fiscal year 1972/73, stocks held by the industrial sector and by merchants; the latter included special stocks held by coal factors and the National Coal Board, and also stocks of manufactured boiler fuels.

#### Undistributed stocks (Table 21)

Coal held at collieries, opencast sites and central stocking grounds in Great Britain.

#### Disposals (Table 22)

The figures relate to disposals from collieries and opencast disposal points; slurry, etc., recovered and disposed of by other than the National Coal Board is excluded. Owing to differences in coverage the classes of consumer are not directly comparable with those given in other tables in this section, in particular disposals to Northern Ireland are included in total only and not allocated to final sectors of consumption.

The grades of coal referred to are broadly defined as follows:—

- (a) Large: All coals with a lower limit of size greater than 38mm. (1½ inches) to 50mm. (2 inches) round hole (including large cobbles, cobbles and trebles, large nuts).
- (b) Graded: Coals for which the upper and lower sizes of screen aperture lie between the following maximum and minimum limits:—

Upper limit—10mm. ( $\frac{3}{8}$  inch) to 63mm. (2½ inches) round hole

Lower limit—5mm. ( $\frac{3}{16}$  inch) to 38mm. (1½ inches) round hole

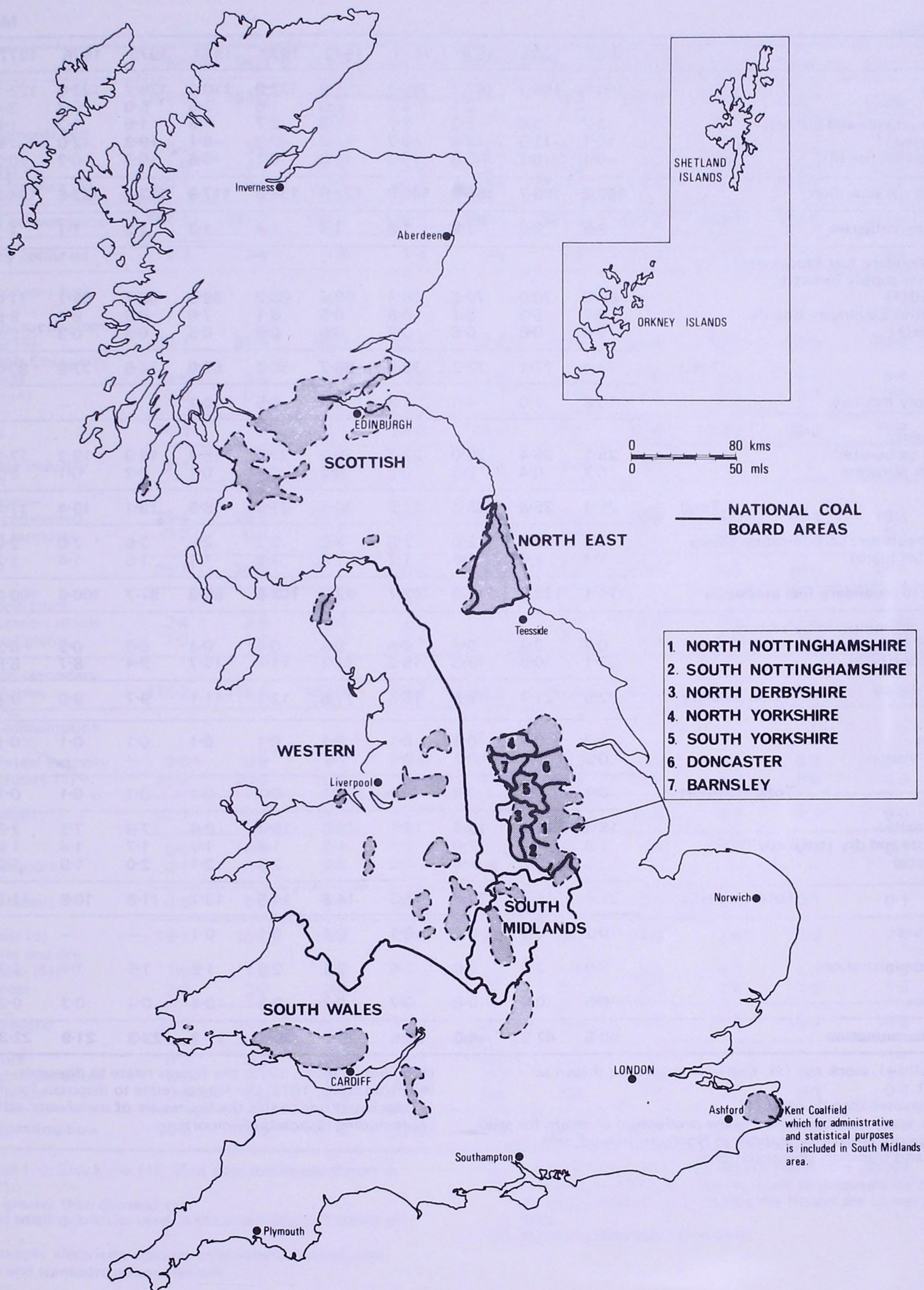
Doubles/nuts, singles, beans, peas and grains come within this category.

- (c) Smalls: All coals with no lower size limit and with a maximum upper limit of 50mm. (2 inches).
- (d) Unscreened: Coal containing all the size components from large coal to smalls.
- (e) Slurry: Coal and mineral matter normally not exceeding 1 mm. recovered from washery effluent.

Anthracite: In South Wales, all coal with a dry ash free volatile content of 10 per cent or less and in Scotland up to a slightly higher figure.



# BOUNDARIES OF NATIONAL COAL BOARD AREAS





# Total supply and demand United Kingdom

Million tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Production	169.9	155.7	147.1	149.4	121.8	132.0	110.5	128.7	123.8	122.1	123.6
Imports	—	—	0.1	4.2	5.0	1.6	3.5	5.0	2.8	2.4	2.4
Overseas shipments and bunkers	2.7	3.5	3.2	2.7	1.8	2.7	1.6	1.9	1.2	1.8	2.3
Stock changes(1)	+0.1	-11.3	-12.6	+9.7	+1.8	-2.3	-6.1	+9.3	+2.0	-1.6	+3.0
Statistical difference (2)	-0.1	-0.2	-0.3	+0.3	+0.3	-0.1	+0.6	+0.3	-0.2	+0.3	+0.2
<b>Total inland consumption</b>	<b>167.2</b>	<b>163.7</b>	<b>156.9</b>	<b>140.9</b>	<b>122.9</b>	<b>133.3</b>	<b>117.9</b>	<b>122.2</b>	<b>123.6</b>	<b>124.0</b>	<b>120.5</b>
<b>Consumed by collieries</b>	<b>2.5</b>	<b>2.0</b>	<b>1.9</b>	<b>1.6</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>1.0</b>
Input to secondary fuel producers:											
Electricity supply industry:											
CEGB(3)	67.9	70.0	70.5	66.4	59.6	68.2	59.5	65.7	69.1	71.0	71.9
Scottish Electricity Boards	5.7	6.3	6.1	5.8	6.5	8.1	7.0	8.6	8.4	8.5	8.2
Other(4)	0.8	0.8	0.6	0.6	0.6	0.5	0.5	0.3	0.3	0.5	0.5
<b>Total</b>	<b>74.4</b>	<b>77.1</b>	<b>77.2</b>	<b>72.8</b>	<b>66.7</b>	<b>76.8</b>	<b>67.0</b>	<b>74.6</b>	<b>77.8</b>	<b>80.0</b>	<b>80.6</b>
Gas supply industry	10.8	7.0	4.3	1.9	0.6	0.5	0.1	—	—	—	—
Coke ovens:											
Coal carbonized	25.1	25.4	25.0	23.3	20.3	21.8	18.4	18.9	19.3	17.2	14.9
Other purposes	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1
<b>Total</b>	<b>25.4</b>	<b>25.8</b>	<b>25.3</b>	<b>23.5</b>	<b>20.5</b>	<b>21.9</b>	<b>18.5</b>	<b>19.1</b>	<b>19.4</b>	<b>17.4</b>	<b>15.0</b>
Low temperature carbonization plants	2.2	2.5	2.6	2.8	3.0	2.2	2.6	2.5	2.0	2.0	1.9
Patent fuel plants	1.3	1.4	1.6	1.7	1.5	1.4	1.1	1.5	1.4	1.2	1.2
<b>Total input to secondary fuel producers</b>	<b>114.1</b>	<b>113.8</b>	<b>111.0</b>	<b>102.7</b>	<b>92.3</b>	<b>102.8</b>	<b>89.3</b>	<b>97.7</b>	<b>100.6</b>	<b>100.6</b>	<b>98.7</b>
Direct final consumption by sectors:											
Iron and steel industry	0.8	0.9	0.8	0.6	0.3	0.4	0.4	0.3	0.3	0.2	0.2
Other industry(5)	22.1	20.8	18.8	15.2	11.3	11.7	10.7	9.4	8.7	8.8	8.4
<b>Total industry</b>	<b>22.9</b>	<b>21.7</b>	<b>19.6</b>	<b>15.8</b>	<b>11.6</b>	<b>12.1</b>	<b>11.1</b>	<b>9.7</b>	<b>9.0</b>	<b>9.0</b>	<b>8.6</b>
Railways	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Water transport	0.2	0.1	0.1	0.1	—	—	—	—	—	—	—
<b>Total transport</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
House coal(6)	18.4	17.0	15.4	13.1	10.6	10.4	9.9	7.9	7.5	7.8	6.9
Anthracite and dry steam coal(6)(7)	1.9	1.9	2.0	1.7	1.8	1.8	1.7	1.7	1.4	1.5	1.5
Miners' coal	3.3	3.0	2.8	2.5	2.2	2.3	2.1	2.0	1.9	1.9	1.8
<b>Total domestic</b>	<b>23.6</b>	<b>21.9</b>	<b>20.2</b>	<b>17.3</b>	<b>14.6</b>	<b>14.5</b>	<b>13.7</b>	<b>11.6</b>	<b>10.8</b>	<b>11.2</b>	<b>10.2</b>
Agriculture	0.2	0.2	0.2	0.1	0.1	0.1	0.1	—	—	—	—
Public administration	3.0	3.2	3.0	2.5	2.1	2.0	1.9	1.5	1.7	1.7	1.6
Miscellaneous	0.5	0.6	0.8	0.7	0.7	0.3	0.4	0.4	0.3	0.3	0.3
<b>Total final consumption</b>	<b>50.6</b>	<b>47.9</b>	<b>44.0</b>	<b>36.6</b>	<b>29.2</b>	<b>29.1</b>	<b>27.3</b>	<b>23.3</b>	<b>21.9</b>	<b>22.3</b>	<b>20.8</b>

(1) Stock fall (—), stock rise (+), End year stocks are shown in Table 21.

(2) Supply greater than demand (+).

(3) Includes small quantities used in the production of steam for sale.

(4) Public supply electricity stations in Northern Ireland, and railway and transport power stations.

(5) From October, 1973, the figures relate to disposals.

(6) From April, 1973, the figures relate to disposals for the domestic market—Prior to this the figures are of merchants' sales.

(7) Including disposals of imports.



Million tonnes

	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79
Production	165.8	152.5	147.5	124.5	142.7	110.2	128.6	126.9	122.2	122.6	121.5
Imports	—	—	1.2	5.2	3.3	2.0	3.9	4.7	2.5	2.7	2.1
Overseas shipments and bunkers	3.1	3.6	3.0	2.1	2.3	2.2	2.1	1.4	1.5	1.9	2.1
Stock changes (1)	-4.9	-12.2	-4.6	-1.2	+13.7	-11.9	+2.5	+8.2	-2.0	+1.7	-0.6
Statistical difference (2)	-0.1	-0.6	-0.3	+0.4	-0.1	+0.1	+0.7	-0.3	+0.6	+0.1	-0.4
<b>Total inland consumption</b>	<b>167.7</b>	<b>161.7</b>	<b>150.6</b>	<b>128.4</b>	<b>130.1</b>	<b>121.8</b>	<b>127.2</b>	<b>122.3</b>	<b>124.6</b>	<b>121.6</b>	<b>122.5</b>
<b>Consumed by collieries</b>	<b>2.3</b>	<b>2.0</b>	<b>1.8</b>	<b>1.4</b>	<b>1.5</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>1.0</b>
Input to secondary fuel producers:											
Electricity supply industry											
CEGB (3)	69.7	69.9	68.3	62.4	62.4	63.4	64.6	66.7	70.2	70.0	74.9
Scottish Electricity Boards	5.9	6.6	5.8	5.8	7.0	7.6	7.5	8.9	8.5	8.4	7.9
Other (4)	0.8	0.7	0.6	0.6	0.7	0.4	0.5	0.3	0.3	0.5	0.5
Total	76.4	77.2	74.7	68.8	70.1	71.4	72.6	75.9	79.0	78.9	83.3
Gas supply industry	9.4	6.1	3.5	1.1	0.6	0.4	0.1	—	—	—	—
Coke ovens:—											
Coal carbonised	25.4	25.5	24.8	20.4	22.6	19.2	20.5	18.4	19.4	16.3	14.6
Other purposes	0.3	0.4	0.3	0.2	0.2	0.1	—	0.2	0.2	0.1	0.1
Total	25.7	25.9	25.1	20.6	22.8	19.3	20.5	18.6	19.6	16.4	14.7
Low temperature carbonization plants	2.4	2.5	2.6	2.5	3.1	2.1	2.9	2.4	1.8	2.0	1.8
Patent fuel plants	1.3	1.4	1.6	1.4	1.7	1.1	1.4	1.5	1.3	1.2	1.1
<b>Total input to secondary fuel producers</b>	<b>115.2</b>	<b>113.1</b>	<b>107.5</b>	<b>94.4</b>	<b>98.3</b>	<b>94.3</b>	<b>97.5</b>	<b>98.4</b>	<b>101.7</b>	<b>98.5</b>	<b>100.9</b>
Direct final consumption by sectors:											
Iron and steel industry	0.8	0.9	0.7	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.2
Other industry (5)	21.9	20.2	18.0	13.5	11.6	10.5	11.2	9.0	9.0	8.8	8.3
Total industry	22.7	21.1	18.7	14.0	12.0	10.8	11.6	9.3	9.2	9.0	8.5
Railways	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Water transport	0.1	0.1	0.1	0.1	—	—	—	—	—	—	—
Total transport	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
House coal (6)	18.1	16.6	14.2	11.5	11.0	9.3	10.3	7.8	7.3	7.4	6.8
Anthracite and dry steam coal (6)(7)	1.9	1.9	1.8	1.8	1.8	1.5	2.0	1.5	1.3	1.5	1.5
Miners' coal	3.2	2.9	2.8	2.1	2.5	2.1	2.2	2.0	1.9	1.9	1.8
Total domestic	23.2	21.4	18.8	15.4	15.3	12.9	14.5	11.3	10.5	10.8	10.1
Agriculture	0.2	0.2	0.1	0.1	0.1	0.1	—	—	—	—	—
Public administration	3.2	3.1	2.7	2.2	2.2	1.9	1.6	1.7	1.7	1.7	1.6
Miscellaneous	0.6	0.6	0.8	0.7	0.6	0.4	0.6	0.3	0.3	0.4	0.3
<b>Total final consumption</b>	<b>50.2</b>	<b>46.6</b>	<b>41.3</b>	<b>32.6</b>	<b>30.3</b>	<b>26.2</b>	<b>28.4</b>	<b>22.7</b>	<b>21.8</b>	<b>22.0</b>	<b>20.6</b>

(1) Stock fall (—), Stock rise (+). End year stocks are shown in Table 21.

(2) Supply greater than demand (+).

(3) Includes small quantities used in the production of steam for sale.

(4) Public supply electricity stations in Northern Ireland, and railway and transport power stations.

(5) From October, 1973, the figures relate to disposals.

(6) From April, 1973, the figures relate to disposals for the domestic market—prior to this the figures are of merchants' sales.

(7) Including disposals of imports.



# Analysis of consumption according to countries

## United Kingdom

Million tonnes

	England		Wales		Scotland		Northern Ireland		Total	
	1977	1978	1977	1978	1977	1978	1977	1978	1977	1978
<b>Collieries</b>	0.98	0.85	0.09	0.11	0.05	0.05	—	—	1.12	1.01
Input to secondary fuel producers:										
Electricity supply industry (1)	68.04	68.74	2.89	3.23	8.57	8.17	0.46	0.50	79.96	80.64
Gas supply industry	—	—	—	—	0.01	—	—	—	0.01	—
Coke ovens:										
Coal carbonized	10.97	9.57	5.06	4.29	1.22	1.05	—	—	17.25	14.91
Other purposes	0.10	0.02	0.05	0.01	0.01	0.01	—	—	0.16	0.04
Total coke ovens	11.07	9.59	5.11	4.30	1.23	1.06	—	—	17.41	14.95
Manufactured fuel plants(2)	2.20	2.12	0.88	0.87	0.09	0.08	—	—	3.17	3.07
<b>Total input to secondary fuel producers</b>	<b>81.31</b>	<b>80.45</b>	<b>8.88</b>	<b>8.40</b>	<b>9.90</b>	<b>9.31</b>	<b>0.46</b>	<b>0.50</b>	<b>100.55</b>	<b>98.66</b>
Direct final consumption:										
Industry:										
Iron and steel industry	0.22	0.15	0.02	0.03	—	—	—	—	0.24	0.18
Other industry	7.81	7.56	0.25	0.20	0.57	0.51	0.16	0.10	8.79	8.37
Total industry	8.03	7.71	0.27	0.23	0.57	0.51	0.16	0.10	9.03	8.55
Railways	0.06	0.06	—	—	—	—	—	—	0.06	0.06
Water transport	0.01	0.01	—	—	—	—	—	—	0.01	0.01
Domestic										
House coal	5.23	4.54	0.68	0.62	1.08	1.01	0.78	0.70	7.77	6.87
Anthracite and dry steam coal(3)	1.00	0.95	0.34	0.36	0.07	0.06	0.09	0.15	1.50	1.52
Miners' coal	1.33	1.29	0.32	0.34	0.22	0.20	—	—	1.87	1.83
Total domestic	7.56	6.78	1.34	1.32	1.37	1.27	0.87	0.85	11.14	10.22
Public administration	1.27	1.19	0.07	0.08	0.38	0.37	—	—	1.72	1.64
Miscellaneous(4)	0.31	0.29	0.02	0.01	0.01	0.01	—	—	0.34	0.31
<b>Total direct final consumption</b>	<b>17.24</b>	<b>16.04</b>	<b>1.70</b>	<b>1.64</b>	<b>2.33</b>	<b>2.16</b>	<b>1.03</b>	<b>0.95</b>	<b>22.30</b>	<b>20.79</b>
<b>Total inland consumption</b>	<b>99.53</b>	<b>97.34</b>	<b>10.67</b>	<b>10.15</b>	<b>12.28</b>	<b>11.52</b>	<b>1.49</b>	<b>1.45</b>	<b>123.97</b>	<b>120.46</b>
Overseas shipments and bunkers	1.18	1.75	0.66	0.50	—	—	—	—	1.84	2.25
<b>Total consumption and shipments</b>	<b>100.71</b>	<b>99.09</b>	<b>11.33</b>	<b>10.65</b>	<b>12.28</b>	<b>11.52</b>	<b>1.49</b>	<b>1.45</b>	<b>125.83(5)</b>	<b>122.73(5)</b>

- (1) Includes quantities used in the production of steam for sale.  
 (2) Low temperature carbonization plants and patent fuel plants.  
 (3) Including disposals of imports.

- (4) Includes agriculture.  
 (5) Includes shipments to the Channel Islands (0.02 million tonnes in both 1977 and 1978).



# Total production Great Britain

Million tonnes

## Deep-mined production

## National Coal Board collieries

	Revenue output (1)	Capital output (1) (2)	Other output (2) (3)	Total (4)	Licensed collieries (5)	Total (6)	Opencast coal (7)	Recovered slurry, fines, etc (3) (8)	Total production (9)
1968	158.3	0.1	0.3	158.7	1.0	159.7	7.0	3.2	169.9
1969	145.1	0.2	0.4	145.7	0.9	146.6	6.4	2.7	155.7
1970	135.4	0.1	0.4	135.9	0.8	136.7	7.9	2.5	147.1
1971	135.4	—	0.3	135.7	0.8	136.5	10.6	2.3	149.4
1972	108.1	—	0.3	108.4	0.7	109.1	10.4	2.3	121.8
1973	119.0	—	0.4	119.4	0.7	120.1	10.1	1.8	132.0
1974	99.0	—	0.4	99.4	0.6	100.0	9.3	1.2	110.5
1975	116.6	—	0.2	116.8	0.6	117.4	10.4	0.9	128.7
1976	109.5	—	0.2	109.7	0.6	110.3	11.9	1.6	123.8
1977	106.3	0.1	0.1	106.5	0.6	107.1	13.5	1.5	122.1
1978	106.7	0.1	0.1	106.9	0.6	107.5	14.2	1.9	123.6
1968/69	155.0	0.1	0.4	155.5	1.0	156.5	6.7	2.6	165.8
1969/70	141.6	0.3	0.4	142.3	0.8	143.1	6.7	2.7	152.5
1970/71	135.1	—	0.4	135.5	0.7	136.2	8.5	2.8	147.5
1971/72	110.7	—	0.3	111.0	0.7	111.7	10.5	2.3	124.5
1972/73	128.7	—	0.3	129.0	0.8	129.8	10.6	2.3	142.7
1973/74	98.3	—	0.4	98.7	0.6	99.3	9.6	1.3	110.2
1974/75	116.5	—	0.4	116.9	0.6	117.5	9.7	1.4	128.6
1975/76	114.3	—	0.2	114.5	0.6	115.1	10.7	1.1	126.9
1976/77	108.2	0.1	0.2	108.5	0.6	109.1	11.7	1.4	122.2
1977/78	106.0	0.1	0.2	106.3	0.6	106.9	14.0	1.7	122.6
1978/79	105.2	0.1	0.2	105.5	0.6	106.1	13.8	1.6	121.5

(1) Coal extracted in work on capital account.

(2) Coal recovered from colliery tips and sold.

(3) Estimate of slurry etc. recovered and disposed of other than by the National Coal Board from dumps, ponds, rivers, etc.



# Stocks of coal at end of period Great Britain

million tonnes

	Undistributed stocks			Distributed stocks					Total stock (9)
	Collieries (1)	Opencast sites and central stocking grounds (2)	Total (3)	Power stations (4)	Coke ovens (5)	Gas works (6)	Other (7)	Total (8)	
1968	24.2	4.3	28.5	12.7	1.1	0.7	2.8	17.3	45.8
1969	15.6	3.2	18.8	11.2	1.2	0.5	2.8	15.7	34.5
1970	5.3	1.9	7.2	9.7	1.5	0.3	3.2	14.7	21.9
1971	7.1	3.3	10.4	16.0	1.8	0.1	3.3	21.2	31.6
1972(1)	7.7	3.4	11.1	17.1	1.9	0.1	3.2	22.3	33.4
1972(2)	7.6	3.3	10.9	16.5	1.7	0.1	3.1	21.4	32.3
1973	7.7	3.2	10.9	14.8	1.9	—	0.3	17.0	27.9 (5)
1974	4.0	2.0	6.0	13.6	1.9	—	0.3	15.8	21.8
1975	8.9	1.7	10.6	18.0	2.3	—	0.2	20.5	31.1
1976	9.3	1.4	10.7	19.6	2.6	—	0.2	22.4	33.1
1977	8.3	1.5	9.8	19.1	2.4	—	0.2	21.7	31.5
1978	9.9	2.6	12.5	20.2	1.6	—	0.2	22.0	34.5
1968/69	21.4	3.9	25.3	8.0	1.2	0.5	1.9	11.6	36.9
1969/70	11.9	2.7	14.6	6.6	1.5	0.2	1.8	10.1	24.7
1970/71	4.5	1.8	6.3	9.5	1.7	0.1	2.5	13.8	20.1
1971/72	4.3	3.2	7.5	8.6	1.4	—	1.4	11.4	18.9
1972/73(3)	8.8	3.3	12.1	15.9	2.2	—	2.4	20.5	32.6
1972/73(4)	8.9	3.3	12.2	16.3	2.2	—	2.4	20.9	33.1
1973/74	5.3	3.2	8.5	8.7	1.6	—	0.3	10.6	19.1 (5)
1974/75	4.0	1.6	5.6	13.4	2.4	—	0.3	16.1	21.7
1975/76	9.7	1.4	11.1	16.0	2.5	—	0.3	18.8	29.9
1976/77	8.4	1.1	9.5	15.8	2.4	—	0.2	18.4	27.9
1977/78	8.6	1.6	10.2	17.4	1.8	—	0.2	19.4	29.6
1978/79	11.7	2.7	14.4	12.4	2.0	—	0.2	14.6	29.0

For footnotes (1) to (4), see table below:

No.	Stock at:	Used for calculating stock changes in:
(1)	23rd December, 1972	1972
(2)	30th December, 1972	1973
(3)	24th March, 1973	1972/73
(4)	31st March, 1973	1973/74

(5) Later figures exclude distributed stocks held in merchants' yards, etc., mainly for the domestic market, and stocks held by the industrial sector.



# Disposals of indigenous coal by grade and mode of transport in 1978

## United Kingdom

Thousand tonnes

	Large (1)	Unscreened (2)	Graded (3)	Smalls		Anthracite (6)	Slurry (7)	Total (8)	Opencast (included in cols. (1)–(8)) <sup>(1)</sup> (9)
				Treated (4)	Part-treated and untreated (5)				
Electricity supply industry	—	102	168	4,483	72,821	208	794	78,576	8,630
Gas supply industry	—	—	14	1	—	—	—	15	—
Coke ovens	26	114	2	12,151	577	1	—	12,871	1,019
Railways and coastwise bunkers	8	—	10	48	—	1	—	67	1
Industry	17	1	1,883	1,811	4,455	185	96	8,448	1,416
Merchants (2)	4,682	1	1,725	—	9	913	—	7,330	764
Miscellaneous <sup>(3)</sup>	962	1	2,108	2,431	549	434	16	6,501	810
<b>Total</b>	<b>5,695</b>	<b>219</b>	<b>5,910</b>	<b>20,925</b>	<b>78,411</b>	<b>1,742</b>	<b>906</b>	<b>113,808</b>	<b>12,640</b>
Miners' coal	882	—	806	—	—	140	—	1,828	12
Colliery consumption	10	1	205	351	293	18	132	1,010	23
<b>Total inland</b>	<b>6,587</b>	<b>220</b>	<b>6,921</b>	<b>21,276</b>	<b>78,704</b>	<b>1,900</b>	<b>1,038</b>	<b>116,646</b>	<b>12,675</b>
Overseas shipments and bunkers	87	13	98	75	1,491	489	—	2,253	389
<b>Total disposals</b>	<b>6,674</b>	<b>233</b>	<b>7,019</b>	<b>21,351</b>	<b>80,195</b>	<b>2,389</b>	<b>1,038</b>	<b>118,899</b>	<b>13,064</b>

Inland transport<sup>(4)</sup>Shipments<sup>(5)</sup>

Railways							
Main line (1)	Private line (2)	Road (3)	Waterways (4)	Other methods <sup>(6)</sup> (5)	Total (6)	Coastwise (7)	Overseas (8)
84,387	3,363	19,647	1,814	6,850	116,061	5,307	2,253

(1) Excludes disposals from licensed opencast sites. The tonnages disposed of from these sites are, however, included in cols. (1)–(8).

(2) Mainly for domestic purposes.

(3) Includes Northern Ireland, Defence Departments, waterworks and non-industrial establishments.

(4) Excluding miners' coal and colliery consumption.

(5) Also included under inland transport cols. (1)–(6).

(6) Aerial ropeways, etc.



Costs, proceeds and earnings (1)  
Great Britain: NCB coal mining operations (2)

	Unit	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7	1977/8
<b>NCB — all coal mining operations:</b>												
Costs	£m.	825.0	766.8	755.6	810.9	905.2	1,049.7	1,028.6	1,486.9	1,973.5	2,226.5	2,563.8
Proceeds(3)	"	854.0	784.3	751.1	832.8	784.8	995.7	897.9	1,488.2	1,994.4	2,310.9	2,638.5
Profit (+) or loss (—) (before charging interest)	"	+29.0	+17.5	—4.5	+21.9	—120.4	—54.0	—130.7	+1.3	+20.9	+84.4	+74.7
<b>NCB collieries:</b>												
Costs												
Wages (inc. allowances in kind)	"	353.9	312.7	297.4	308.1	306.6	392.3	355.6	534.9	672.5	712.7	780.9
Wages charges(4)	"	34.8	31.7	30.1	68.6	82.0	97.4	130.6	192.5	296.3	330.5	369.9
Materials and repairs	"	149.4	142.8	147.9	166.9	187.9	212.2	208.6	313.1	410.9	469.9	557.7
Power, heat and lights (5)	"	42.7	38.5	36.7	35.9	37.1	40.8	38.6	61.1	79.5	92.2	105.9
Other costs (including depreciation)	"	215.5	213.4	215.2	194.0	241.6	252.2	238.3	310.4	395.4	458.1	531.0
Total	"	796.3	739.1	727.3	773.5	855.2	994.9	971.7	1,412.0	1,854.6	2,063.4	2,345.4
Proceeds(3)	"	819.0	751.5	715.6	779.0	720.5	921.5	825.3	1,366.7	1,812.4	2,082.4	2,332.0
Profit (+) or loss (—) (before charging interest)	"	+22.7	+12.4	—11.7	+5.5	—134.7	—73.4	—146.4	—45.3	—42.2	+19.0	—13.4
Costs per tonne												
Wages (incl. allowances in kind)	£	2.10	2.01	2.09	2.27	2.76	2.97	3.60	4.58	5.88	6.57	7.35
Wages charges(4)	"	0.21	0.20	0.21	0.51	0.74	0.74	1.32	1.64	2.59	3.05	3.48
Materials and repairs	"	0.88	0.92	1.04	1.23	1.69	1.61	2.12	2.68	3.59	4.33	5.25
Power, heat and light(5)	"	0.25	0.25	0.26	0.27	0.34	0.30	0.39	0.52	0.70	0.85	0.99
Other costs (including depreciation)	"	1.28	1.37	1.52	1.43	2.18	1.92	2.42	2.67	3.44	4.23	5.01
Total	"	4.72	4.75	5.12	5.71	7.71	7.54	9.85	12.09	16.20	19.03	22.08
Proceeds per tonne(3)	"	4.85	4.83	5.04	5.75	6.50	6.99	8.36	11.70	15.84	19.21	21.95
Profit (+) or loss (—) per tonne (before charging interest)	"	+0.13	+0.08	—0.08	+0.04	—1.21	—0.55	—1.49	—0.39	—0.36	+0.18	—0.13
Earnings per manshift worked(6)												
All ages:												
Excluding allowances in kind:												
Underground	"	4.69	4.90	5.18	5.75	6.57	7.70	9.11	12.41	15.74	16.95	18.67
Surface	"	3.35	3.57	3.82	4.37	5.09	6.21	7.41	10.24	12.83	13.96	15.11
All workers	"	4.39	4.60	4.87	5.43	6.23	7.36	8.73	11.92	15.10	16.30	17.90
Including allowances in kind:												
All workers	"	4.68	4.90	5.20	5.81	6.65	7.88	9.33	12.54	15.98	17.40	19.18
Adult male workers(7)	"	4.80	5.01	5.25	5.88	6.77	8.01	9.43	12.61	16.09	17.51	19.31
Including allowances in kind	"											
Earnings per week												
All ages:												
Excluding allowances in kind:												
Underground	"											
Surface	"											
All workers	"											
Including allowances in kind:												
All workers	"											
Adult male workers(7)	"											
Including allowances in kind	"											
Statistical practices concerning holidays varied between the Areas up to 1975/76 and comparable figures to those shown from 1976/77, where the treatment of holidays is on a common basis, are not available.										77.63	85.83	
										70.03	77.15	
										76.10	84.10	
										81.23	90.12	
										82.01	91.05	

(1) The figures for 1967/68 and 1972/73 relate to a 53 week period.

(2) Colliery and opencast operations.

(3) Including grants under the Coal Industry Acts.

(4) Prior to 1970/71 the figures relate to holiday pay and sick pay only. From 1970/71 they include also National Insurance, pensions and other charges directly related to wages.

(5) Including from 1967/68 to 1969/70 wages disbursed under this heading (£2.1 million in 1970/71).

(6) Earnings per manshift worked include payment for overtime.

(7) Up to end March, 1972, aged 21 years and over. For 1972/73, 1973/74 and from 1974/75, aged 20 years and over, 19 years and over and 18 years and over respectively.



# Employment in coal production and numbers of N.C.B. collieries Great Britain

Employees engaged in production at end of year						Total number of N.C.B. employees in the coal min- ing industry (1) (6)	N.C.B. collieries at end of year (2) (7)
Wage-earners on colliery books							
At N.C.B. collieries (1)	At licensed collieries (2)	Total collieries (3)	At open- cast sites (4)	Total (5)			
	Thousand						Number
1968	324.5	2.5	327.0	3.9	330.9		330
1969	299.6	2.3	301.9	3.8	305.7		304
1970	283.1	2.0	285.1	4.9	290.0		293
1971	278.8	1.9	280.7	5.4	286.1		289
1972	266.0	2.1	268.1	5.5	273.6		282
1973	245.1	1.6	246.7	5.1	251.8		261
1974	246.3	1.3	247.6	5.2	252.8		250
1975	245.2	1.5	246.7	5.3	252.0		241
1976	241.0	1.5	242.5	7.2	249.7		239
1977	238.7	1.4	240.1	7.8	247.9		231
1978	231.7	1.2	232.9	7.5	240.4		223
1968/69	318.7	2.4	321.1	3.9	325.0	390.4	317
1969/70	295.7	2.1	297.8	4.1	301.9	355.7	299
1970/71	286.4	1.9	288.3	5.2	293.5	335.0	292
1971/72	274.0	1.8	275.8	5.5	281.3	329.7	289
1972/73	263.8	2.0	265.8	5.5	271.3	314.8	281
1973/74	242.5	1.5	244.0	5.3	249.3	302.8	259
1974/75	248.8	1.6	250.4	5.4	255.8	296.5	246
1975/76	243.7	1.4	245.1	6.0	251.1	298.8	241
1976/77	242.1	1.4	243.5	7.1	250.6	293.3	238
1977/78	239.3	1.4	240.7	7.3	248.0	291.5	231
1978/79	232.4	1.4	233.8	7.8	241.6	286.0	223

(1) Average for year.

(2) At the end of 1978 there were 139 licensed collieries in production.



# Tonnage lost, manpower, attendance, productivity and power loading at collieries

## Great Britain: NCB collieries

	Tonnage lost through		Average number of wage-earners on colliery books		Pro-ductive labour per-centage (5)	Average number of shifts per week per wage-earner (6)	Absence percentage			Output per manshift		Output per man year (12)	Per-centage of output power loaded (13)
	Hol-idays(1) (1)	Dis-putes (2)	Man-shifts(2) (3)	Man-shifts(2) (4)			Volun-tary (7)	Involun-tary (8)	Total (9)	Overall (10)	At the face (11)		
	Million tonnes		Thousand		%	No.	%			Tonnes			%
1968	13.48	0.29	349.8	75,109	88.9	4.13	4.7	13.4	18.1	2.12	6.57	454	
1969	12.69	2.96	311.1	66,183	87.9	4.09	4.7	13.5	18.2	2.21	6.96	468	
1970	11.88	3.15	290.3	60,711	86.6	4.02	4.5	15.3	19.8	2.24	7.20	468	
1971	11.22	4.81	283.7	60,799	88.6	4.12	4.4	13.7	18.1	2.23	7.27	478	
1972	10.41	21.74	271.0	48,925	87.4	3.47	3.9	12.7	16.6	2.22	7.30	402	
1973	10.48	5.66	257.3	52,218	84.6	3.90	4.1	13.9	18.0	2.29	7.62	464	
1974	10.52	16.25	245.2	45,709	85.2	3.59	4.1	12.2	16.3	2.18	7.56	405	
1975	12.30	0.35	247.9	51,431	87.6	3.99	4.0	12.2	16.2	2.28	7.92	471	
1976	12.35	1.16	242.8	49,570	86.4	3.93	3.7	13.7	17.4	2.23	7.75	452	
1977	12.46	0.81	241.1	49,253	86.8	3.93	3.9	13.7	17.6	2.18	7.77	442	
1978	12.61	1.50	236.7	48,020	86.3	3.90	4.3	13.0	17.3	2.25	8.53	452	
1968/69	13.45	0.33	336.3	72,138	88.9	4.13	4.7	13.4	18.1	2.16	6.73	463	91.8
1969/70	12.85	2.94	305.1	64,639	87.8	4.07	4.7	13.6	18.3	2.20	6.99	466	92.3
1970/71	11.87	3.13	287.2	60,383	87.2	4.04	4.4	14.8	19.2	2.24	7.29	472	92.2
1971/72	11.69	26.78	281.5	52,115	90.1	3.56	4.3	13.4	17.7	2.13	7.05	394	92.2
1972/73	11.04	0.66	268.1	55,597	86.2	3.99	4.1	13.5	17.6	2.33	7.55	480	93.0
1973/74	10.73	21.39	252.0	45,828	83.4	3.50	4.1	13.8	17.9	2.15	7.30	392	93.5
1974/75	10.86	0.43	246.0	51,299	87.2	4.01	4.2	11.8	16.0	2.29	7.89	475	93.5
1975/76	13.17	0.51	247.1	50,570	86.9	3.93	3.9	12.8	16.7	2.28	7.89	463	93.6
1976/77	12.79	1.11	242.0	49,362	86.7	3.92	3.7	13.6	17.3	2.21	7.75	448	93.8
1977/78	12.57	0.84	240.5	49,011	86.8	3.92	4.0	13.6	17.6	2.19	7.91	442	93.6
1978/79	12.64	1.49	234.9	47,732	86.3	3.91	4.5	12.6	17.1	2.24	8.53	449	93.5

(1) See notes, page 32.

(2) The figures exclude training and other non-operational manshifts.

(3) The definition was changed from 1973. For current definition see notes, page 32. For definition up to 1972 see "Digest of United Kingdom Energy Statistics, 1974".

# Number of collieries, output, and breakdown of productivity

## Great Britain: NCB collieries

	1967/8	1968/9	1969/70	1970/1	1971/2	1972/3	1973/4	1974/5	1975/6	1976/7	1977/8
Number of collieries at end of year	376	317	299	292	289	281	259	246	241	238	231
Revenue output (Million tonnes)(1)	164.8	155.0	141.6	135.1	110.7	128.7	98.3	116.5	114.3	108.2	106.0
Number of workers (Thousands) whose average output per manshift is:-											
Under 1.00 tonne	3.3	2.3	4.9	6.3	6.2	2.9	7.9	11.2	10.5	6.3	14.1
1.00 tonne and under 1.50 tonnes	76.3	46.1	39.8	43.4	48.8	34.1	32.8	29.1	29.4	41.9	31.2
1.50 tonnes and under 2.00 tonnes	109.3	87.7	63.5	62.7	70.4	54.9	56.8	46.8	48.3	53.2	50.9
2.00 tonnes and under 2.50 tonnes	88.4	80.0	77.8	66.9	63.3	62.0	63.9	64.7	62.5	52.8	61.7
2.50 tonnes and under 3.00 tonnes	49.1	47.1	55.7	52.0	38.0	41.1	41.2	40.5	42.2	47.5	44.5
3.00 tonnes and under 3.50 tonnes	15.7	27.5	26.2	23.6	24.1	39.7	21.1	32.1	25.0	19.7	10.8
3.50 tonnes and over	10.9	18.2	18.3	23.9	17.0	23.1	13.3	18.4	20.3	14.8	19.8
Total (2)	353.0	308.9	286.2	278.8	267.8	257.8	237.0	242.8	238.2	236.2	233.0

(1) Includes slurry and production from collieries closed during the year.

(2) Excluding wage-earners still employed at collieries that had ceased production and those normally included in the figures of total wage-earners on colliery books but who are not allocated to individual collieries.



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## Sources of recruitment and wastage of wage-earners

### Great Britain: NCB collieries

	Number										
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Recruitment</b>											
Juveniles (under 18) newly employed	4,227	5,714	6,656	7,693	3,945	2,382	5,494	5,402	5,122	6,521	5,550
Adult new entrants	1,917	3,936	5,036	6,200	2,272	4,763	6,647	5,329	4,884	12,992	8,388
Re-entrants	9,118	13,696	13,417	14,117	7,038	10,257	14,295	10,616	7,055	9,848	6,657
<b>Total recruitment</b>	<b>15,262</b>	<b>23,346</b>	<b>25,109</b>	<b>28,010</b>	<b>13,255</b>	<b>17,402</b>	<b>26,436</b>	<b>21,347</b>	<b>17,061</b>	<b>29,361</b>	<b>20,595</b>
<b>Wastage</b>											
Deaths	1,866	1,602	1,602	1,414	1,427	..	1,337	1,336	1,336	1,150	1,023
Retirements by reason of age	6,186	4,153	3,692	3,513	3,322	..	2,959	3,031	2,673	10,044(1)	7,026(2)
Compensation and long term sickness cases removed from colliery books	6,208	4,997	4,245	3,707	2,841	..	2,596	2,080	2,971	2,868	2,734
Redundancy	24,418	9,582	6,148	4,182	6,819	7,264	4,617	5,403	4,349	4,923	2,942
Dismissals	4,666	3,288	3,496	4,253	2,033	..	2,300	2,902	2,063	2,215	2,947
Other wastage	29,175	24,673	22,398	15,240	9,672	9,337	11,324	7,699	7,847	10,447	10,981
<b>Total wastage</b>	<b>72,519</b>	<b>48,295</b>	<b>41,581</b>	<b>32,309</b>	<b>26,114</b>	<b>37,961</b>	<b>25,133</b>	<b>22,451</b>	<b>21,239</b>	<b>31,647</b>	<b>27,653</b>
Net intake (+) into, or outflow (—) from the industry	–57,257	–24,949	–16,472	–4,299	–12,859	–20,559	+1,303	–1,104	–4,178	–2,286	–7,058
Transfers from other collieries	31,542	20,189	15,623	12,476	9,598	..	9,907	9,084	8,157	11,138	9,821

(1) Including 8,376 under the Early Retirement Scheme.

(2) Including 6,644 under the Early Retirement Scheme.

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## Sources of recruitment and wastage of wage-earners

### Great Britain: NCB collieries

	Number										
	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79(1)
<b>Recruitment</b>											
Juveniles (under 18) newly employed	4,656	5,845	7,153	6,348	4,553	1,889	5,996	5,268	5,219	6,425	5,505
Adult new entrants	2,693	4,151	6,489	3,421	3,592	4,046	8,428	3,842	7,231	12,811	8,282
Re-entrants	11,531	13,056	16,073	8,014	9,484	9,744	16,429	7,874	7,709	9,428	6,733
<b>Total recruitment</b>	<b>18,880</b>	<b>23,052</b>	<b>29,715</b>	<b>17,783</b>	<b>17,629</b>	<b>15,679</b>	<b>30,853</b>	<b>16,984</b>	<b>20,159</b>	<b>28,664</b>	<b>20,520</b>
<b>Wastage</b>											
Deaths	1,796	1,624	1,535	1,363	1,444	1,375	1,371	1,322	1,291	1,064	1,064
Retirements by reason of age	5,569	3,997	3,591	3,457	3,320	2,939	3,056	2,877	2,607	10,330(2)	6,905(3)
Compensation and long term sickness cases removed from colliery books	5,915	4,601	4,078	3,456	2,961	2,407	2,604	2,031	3,196	2,761	2,740
Redundancy	20,367	8,711	4,750	4,658	6,771	9,489	4,347	5,848	4,499	4,059	2,913
Dismissals	3,576	3,238	3,709	3,490	2,413	..	2,681	2,741	1,980	2,403	2,935
Other wastage	27,803	23,926	21,306	13,722	10,909	20,558	10,481	7,297	8,166	10,828	10,860
<b>Total wastage</b>	<b>65,026</b>	<b>46,097</b>	<b>38,969</b>	<b>30,146</b>	<b>27,818</b>	<b>36,768</b>	<b>24,540</b>	<b>22,116</b>	<b>21,739</b>	<b>31,445</b>	<b>27,417</b>
Net intake (+) into, or outflow (—) from the industry	–46,146	–23,045	–9,254	–12,363	–10,189	–21,089	+6,313	–5,132	–1,580	–2,781	–6,897
Transfers from other collieries	29,163	18,545	14,385	10,321	10,944	..	11,457	8,586	8,081	11,176	9,247

(1) 53 weeks ending 31st March, 1979.

(2) Including 9,235 under the Early Retirement Scheme.

(3) Including 6,518 under the Early Retirement Scheme.



# Output, manpower, productivity and number of collieries, by Area<sup>(1)</sup>

Great Britain: NCB collieries

Unit	Scottish	North East	North Yorkshire	Doncaster	Barnsley	South Yorkshire
<b>Output of saleable coal<sup>(2)</sup></b>						
1968/69	Thousand tonnes	12,785	23,594	9,806	9,721	11,833
1969/70	"	11,326	20,830	9,366	8,662	10,261
1970/71	"	11,425	19,237	9,633	8,136	9,624
1971/72	"	10,526	15,760	8,574	6,918	7,746
1972/73	"	11,291	17,932	10,080	8,814	9,567
1973/74	"	8,957	13,756	7,345	6,646	7,687
1974/75	"	10,125	14,788	8,408	8,438	8,273
1975/76	"	9,822	14,583	8,447	8,013	7,954
1976/77	"	9,147	13,123	8,198	7,870	7,788
1977/78	"	8,407	12,763	8,164	7,487	7,648
1978/79	"	8,090	12,928	8,200	6,961	7,586
<b>Average number of wage-earners on colliery books</b>						
1968/69	Thousand	33.0	58.4	19.0	19.0	23.9
1969/70	"	30.6	50.6	18.0	17.9	21.8
1970/71	"	29.7	47.8	17.0	17.4	20.6
1971/72	"	29.4	47.6	16.9	17.1	20.0
1972/73	"	27.5	44.2	16.2	16.8	18.9
1973/74	"	25.2	40.6	15.1	16.5	18.2
1974/75	"	24.4	37.7	14.9	16.8	17.9
1975/76	"	24.2	36.6	15.4	17.2	18.0
1976/77	"	23.1	35.4	15.3	17.1	17.8
1977/78	"	22.1	34.9	15.5	17.2	17.8
1978/79	"	21.1	34.4	15.6	16.6	17.3
<b>Output per manshift overall</b>						
1968/69	Tonnes	1.89	1.86	2.41	2.49	2.37
1969/70	"	1.87	1.89	2.51	2.43	2.35
1970/71	"	1.93	1.86	2.70	2.43	2.29
1971/72	"	1.94	1.77	2.79	2.31	2.17
1972/73	"	2.01	1.95	3.04	2.72	2.49
1973/74	"	1.97	1.83	2.69	2.41	2.40
1974/75	"	2.01	1.90	2.64	2.58	2.27
1975/76	"	2.00	1.96	2.63	2.46	2.21
1976/77	"	1.96	1.85	2.57	2.45	2.19
1977/78	"	1.91	1.83	2.56	2.30	2.17
1978/79	"	1.96	1.86	2.57	2.27	2.25
<b>Number of collieries</b>						
<b>In production at end of year</b>						
1968/69		37	56	23	11	19
1969/70		32	50	22	11	19
1970/71		32	50	21	10	19
1971/72		32	48	21	10	19
1972/73		29	45	20	10	19
1973/74		24	38	18	10	19
1974/75		22	34	18	10	19
1975/76		21	32	18	10	19
1976/77		20	31	18	10	19
1977/78		19	30	18	10	19
1978/79		16	28	18	10	18

(1) Area boundaries are shown on the maps on page 35. For administrative, including statistical, purposes, N.C.B. operations in the Kent coalfield are included in the figures for the South Midlands area.

(2) Excludes coal extracted in work on capital account.



29 (continued)

North Derbyshire	North Nottingham	South Nottingham	South Midlands	Western	South Wales	Total	Unit	
								Output of saleable coal (2)
11,752	11,928	11,309	11,421	17,174	14,739	155,462	Thousand tonnes	1968/69
10,760	11,973	11,332	10,519	15,824	12,994	142,020	"	1969/70
9,934	12,292	10,725	10,025	14,664	11,873	135,483	"	1970/71
7,686	9,723	8,552	7,890	10,909	9,858	110,977	"	1971/72
8,386	11,985	10,105	8,803	12,924	10,962	129,062	"	1972/73
6,410	9,180	7,954	6,878	10,196	7,485	98,681	"	1973/74
7,856	11,008	9,856	8,760	12,778	8,798	116,836	"	1974/75
7,901	10,759	9,801	9,085	12,120	8,457	114,451	"	1975/76
7,345	10,651	9,057	8,824	11,344	7,780	108,428	"	1976/77
7,418	11,077	8,947	8,545	10,773	7,455	106,235	"	1977/78
7,383	11,009	8,596	8,545	10,941	7,752	105,377	"	1978/79
								Average number of wage-earners on colliery books
19.7	19.1	17.9	18.8	38.9	47.6	336.3	Thousands	1968/69
17.5	18.8	16.9	17.4	33.5	42.6	305.1	"	1969/70
14.7	18.6	16.6	16.6	31.4	38.6	287.2	"	1970/71
14.1	18.8	16.4	16.4	29.9	37.2	281.5	"	1971/72
13.6	18.5	15.9	15.5	28.8	35.0	268.1	"	1972/73
13.2	17.6	15.4	14.7	26.8	32.3	252.0	"	1973/74
12.6	17.4	15.4	15.1	25.8	31.4	246.0	"	1974/75
12.6	17.7	15.8	16.1	25.7	31.1	247.1	"	1975/76
12.4	17.6	15.7	16.0	25.0	30.1	242.0	"	1976/77
12.5	17.8	16.1	16.3	24.3	29.5	240.5	"	1977/78
12.3	18.0	15.9	16.2	23.6	28.0	234.9	"	1978/79
								Output per manshift overall
2.76	2.84	2.81	2.67	2.05	1.46	2.16	Tonnes	1968/69
2.84	2.98	2.98	2.68	2.17	1.45	2.20	"	1969/70
3.09	3.09	2.91	2.67	2.13	1.51	2.24	"	1970/71
2.91	2.75	2.76	2.45	1.91	1.44	2.13	"	1971/72
2.98	3.06	2.96	2.63	2.10	1.50	2.33	"	1972/73
2.67	2.79	2.72	2.45	2.03	1.28	2.15	"	1973/74
2.95	2.98	2.93	2.65	2.35	1.35	2.29	"	1974/75
3.01	2.91	2.94	2.62	2.27	1.37	2.28	"	1975/76
2.82	2.89	2.75	2.60	2.18	1.32	2.21	"	1976/77
2.84	2.96	2.67	2.47	2.14	1.29	2.19	"	1977/78
2.90	2.92	2.60	2.50	2.24	1.41	2.24	"	1978/79
								Number of collieries In production at end of year
16	15	12	19	31	55	317		1968/69
15	15	12	18	30	52	299		1969/70
14	15	12	18	28	51	292		1970/71
14	15	12	18	27	51	289		1971/72
14	15	12	18	27	51	281		1972/73
14	15	12	18	24	48	259		1973/74
12	15	12	18	24	44	246		1974/75
12	15	12	18	24	42	241		1975/76
12	15	12	18	23	41	238		1976/77
12	15	12	18	22	37	231		1977/78
11	15	12	18	22	37	223		1978/79



# Coke and other manufactured fuel

All the fuels covered in this section are smokeless, except for the small quantity of non-smokeless fuels included in Table 31. Table 32 gives information on disposals of all solid smokeless fuels mainly to the domestic market, and therefore also includes disposals of the natural smokeless fuels anthracite and dry steam coal. Table 34 gives statistics of coke ovens as operated by the different groups of undertakings.

All consumption figures include any use for own generation of electricity.

## Periods covered

Except where otherwise stated, all the figures in this section relate to periods of 52 weeks (see page 32 for the precise periods covered by the 52 week cumulations in the latest years shown).

## Coke oven coke (Table 30)

**Production**—The statistics cover coke produced at coke ovens in Great Britain (there are no coke ovens in Northern Ireland) owned by the British Steel Corporation, the private sector of the iron and steel industry, the National Coal Board and independent producers. Low temperature carbonization plants are not included. Breeze is excluded from the figures.

**Losses in screening etc.**—This is the balance between total production adjusted for stock changes at the ovens and actual disposals together with losses arising from re-screening coke at blast furnaces. (See Table 33 for information on coke breeze arising from re-screening).

## Inland consumption

**Blast furnaces**—Coke is normally re-screened on receipt at these plants and consumption is lower than receipts adjusted for stock changes. The balance is included under "losses in screening etc."

**Iron foundries, etc.**—Consumption by iron foundries with an annual output of 1,000 tonnes or more of iron castings and consumption by the iron and steel industry other than at blast furnaces.

**Other industries**—Industrial establishments (other than blast furnaces and iron foundries etc. as defined above).

**Domestic**—Prior to 1973 the figures relate to merchants' sales to consumers of less than 10 tonnes a year. From April 1973 the figures are of coke oven disposals to merchants, and, from January, 1975, include issues to personnel at coke ovens.

**Other consumption**—This is the balance between total supply and inland consumption by railways and the sectors defined previously, changes in known distributed stocks and shipments.

**Shipments**—Disposals for export as recorded by producers.

## Gas coke

Production of gas coke virtually ceased in 1974 and information on this fuel is not available since June, 1975. Certain details for previous periods are shown in Tables 32. Data for 1950, 1955, 1960, and 1970 to 1972, and 1968/69 to 1972/73 relating to production, stocks, inland consumption and shipments of gas coke, was given in Table 91 of the 1973 edition.

## Other manufactured fuels (Table 31)

The figures include non-smokeless as well as smokeless fuels. The most important of the latter are Phurnacite and Homefire produced by the National Coal Board and Coalite and Rexco produced by the low temperature carbonization industry.

## Solid smokeless fuels mainly for the domestic market (Table 32)

These include cokes, semi-cokes and smokeless briquetted fuels, as well as anthracite and dry steam coal, which are naturally smokeless. Premium smokeless fuels are those whose characteristics, including size, make them generally suitable for use in open fires whether of improved types or not. Prior to April 1973, figures for coke were calculated receipts by merchants for disposal to consumers taking less than 10 tonnes a year, plus, in the case of gas coke, direct sales to domestic premises by gas works. From April 1973, the figures relate to all disposals to merchants by producers, and from January 1975, include issues to personnel at coke ovens. For gas coke, figures for disposals since June 1975 have assumed negligible proportions, and details since then are not available. The figures shown for 1975 include gas coke up to end June, 1975.

## Coke breeze (Table 33)

Breeze can generally be described as coke screened below 19mm. ( $\frac{3}{4}$  inch) with no fines removed, but the screen size may vary in different areas and to meet the requirements of particular markets. The figures in Table 33 include coke oven and gas works breeze as well as other types, e.g. breeze produced at low temperature carbonization plants.

## Imports (Tables 30–32)

The figures are derived from returns made to HM Customs and Excise.

## Coke ovens (Table 34)

The statistics cover the same field as defined above under "Coke oven coke—Production".

Information on coal consumed for purposes other than for carbonization is given in Table 17.



# Supply and consumption of coke oven coke <sup>(1)</sup> United Kingdom

Million tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Quantity of coal used <sup>(2)</sup>	25.33	25.78	25.34	23.55	20.47	21.90	18.46	19.08	19.40	17.41	14.95
Production:											
N.C.B. ovens	3.95	4.08	4.02	4.03	3.45	4.06	3.56	4.12	4.10	3.49	2.77
Iron and steel industry ovens	11.47	11.66	11.42	10.28	9.15	10.04	8.14	7.68	8.44	7.62	6.70
Independent ovens	1.09	1.11	1.15	1.06	0.81	0.78	0.83	0.77	0.41	0.41	0.41
Total	16.51	16.85	16.59	15.37	13.41	14.88	12.53	12.57	12.95	11.52	9.88
Use at ovens	0.07	0.05	0.04	0.11	0.08	—	—	—	—	—	—
Changes in producers' stocks <sup>(3)</sup>	-0.33	-0.61	-0.26	+0.69	+0.60	+0.45	-1.32	+0.95	+0.64	+0.65	-0.16
Losses in screening etc. <sup>(4)</sup>	0.79	0.80	0.82	0.72	0.69	0.71	0.93	0.80	0.77	0.69	0.65
Imports	—	—	—	0.02	0.09	0.05	—	—	—	0.01	0.01
Total supply	15.98	16.61	15.99	13.87	12.13	13.77	12.92	10.82	11.54	10.19	9.40
Inland consumption:											
Blast furnaces	10.95	10.82	10.79	9.42	8.98	9.96	8.36	7.25	8.38	7.36	6.71
Iron foundries etc.	1.03	1.14	1.01	0.89	0.86	0.83	0.92	0.79	0.70	0.63	0.60
Other industries <sup>(5)</sup>	0.92	0.90	1.07	0.81	0.68	0.56	0.56	0.44	0.37	0.46	0.40
Railways <sup>(5)</sup>	0.02	0.02	0.02	0.01	0.01	—	—	—	—	—	—
Domestic <sup>(6)</sup>	1.52	1.55	1.50	1.19	1.07	1.57	1.65	1.43	1.31	1.28	1.13
Other consumption	1.34	1.57	1.45	0.86	0.66	0.36	0.25	0.14	0.12	0.09	0.08
Total	15.78	16.00	15.84	13.18	12.26	13.28	11.74	10.05	10.88	9.82	8.92
Shipments	0.17	0.37	0.37	0.26	0.24	0.41	1.20	0.83	0.59	0.48	0.49
Total consumption and shipments	15.95	16.37	16.21	13.44	12.50	13.69	12.94	10.88	11.47	10.30	9.41
Change in distributed stocks <sup>(3)</sup>	+0.03	+0.24	-0.22	+0.43	-0.37	+0.08	-0.02	-0.06	+0.07	-0.11	-0.01
Stocks at end of year:											
N.C.B. ovens	0.93	0.29	0.04	0.59	1.09	1.60	0.40	1.31	1.96	2.50	2.50
Iron and steel industry ovens	0.05	0.05	0.06	..	0.16	0.22	0.12	0.18	0.21	0.30	0.16
Independent ovens	0.02	0.04	0.02	0.22	0.16	0.04	0.02	0.05	0.01	0.03	0.01
Total producers' stocks	1.00	0.38	0.12	0.81	1.41	1.86	0.54	1.54 <sup>(7)</sup>	2.18	2.83	2.67
Blast furnaces	0.21	0.41	0.21	0.47 <sup>(8)</sup>	0.21	0.26	0.26	0.21	0.28	0.18	0.18
Iron foundries etc.	0.04	0.04	0.06	0.07	0.06	0.08	0.06	0.05	0.05	0.04	0.03
Other industry	0.03	0.02	0.04	0.07	0.05	..	..	..	..	..	..
Merchants	0.15	0.20	0.14	0.28	0.20	..	..	..	..	..	..
Other recorded stocks	0.01	0.01	0.01	—	—	—	—	—	—	—	—
Total distributed stocks	0.44	0.68	0.46	0.89 <sup>(8)</sup>	0.52	0.34 <sup>(9)</sup>	0.32 <sup>(9)</sup>	0.26 <sup>(9)</sup>	0.33 <sup>(9)</sup>	0.22 <sup>(9)</sup>	0.21 <sup>(9)</sup>

(1) For coke oven breeze, see Table 33 on page 52.

(2) See also Table 17 in the Coal section.

(3) Stock fall (—), stock rise (+).

(4) Including losses from rescreening coke at blast furnaces.

(5) From October 1973, the figures relate to coke oven disposals to these markets.

(6) Prior to April 1973, the figures relate to merchants' sales to consumers of less than 10 tonnes a year. From April 1973, the figures are all coke oven disposals to merchants, and, from January 1975, include issues to personnel at coke ovens.

(7) Includes stock adjustment of +0.05 million tonnes.

(8) Includes stock held at iron and steel industry ovens.

(9) Excludes stock at merchants, and other industry stock, which is no longer available.



# COKE AND OTHER MANUFACTURED FUEL

# 31

## Other manufactured fuels, supply and disposals United Kingdom

Thousand tonnes											
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Smokeless fuels produced by the National Coal Board:</b>											
Quantity of coal used	1,222	1,342	1,471	1,670	1,473	1,335	1,126	1,489	1,409	1,208	1,179
Production:											
Phurnacite	854	857	775	862	775	852	762	892	878	827	813
Multiheat	89	184	225	190	168	61	—	—	—	—	—
Homefire	38	66	98	53	168	180	196	264	282	230	225
Roomheat	—	2	29	57	100	54	—	—	—	—	—
Total	981	1,109	1,127	1,162	1,211	1,147	958	1,156	1,160	1,057	1,038
Change in stocks at plant (1)	-2	-12	+5	+6	+135	+5	-120	+16	+25	+5	+24
Supply	983	1,121	1,122	1,156	1,076	1,142	1,078	1,140	1,135	1,052	1,014
Inland disposals:											
Domestic	893	1,038	1,037	1,079	1,011	1,078	965	1,053	1,057	964	907
Industry	70	66	69	61	56	60	108	82	72	81	100
Total	963	1,104	1,106	1,140	1,067	1,138	1,073	1,135	1,129	1,045	1,007
Shipments (Phurnacite)	20	17	16	16	9	4	5	5	6	7	7
Total demand	983	1,121	1,122	1,156	1,076	1,142	1,078	1,140	1,135	1,052	1,014
<b>Other manufactured smokeless fuels:</b>											
Quantity of coal used for home production	2,252	2,512	2,613	2,761	3,033	2,218	2,633	2,545	1,975	1,944	1,871
Home production	1,864	2,090	2,144	2,277	2,478	1,858	2,195	2,103	1,646	1,606	1,543
Imports	—	—	53	307	313	195	165	120	82	86	77
Total supply	1,864	2,090	2,197	2,584	2,791	2,053	2,360	2,223	1,728	1,692	1,620
Inland disposals:											
Domestic	1,662	1,894	1,887	2,137	2,142	1,966	1,918	1,571	1,392	1,411	1,280
Other	189	207	210	179	305	271	193	213	126	153	166
Total	1,851	2,101	2,097	2,316	2,447	2,237	2,111	1,784	1,518	1,564	1,446
Shipments	49	83	122	120	121	157	298	266	267	160	172
Total demand	1,900	2,184	2,219	2,436	2,568	2,394	2,409	2,050	1,785	1,724	1,618
<b>Other manufactured fuels (not smokeless) (2):</b>											
Quantity of coal used	60	54	65	45	36	33	29	29	21	14	14
Production	59	59	74	53	42	39	33	34	24	16	16
Inland disposals	61	59	73	54	43	36	36	33	23	17	16

(1) Including stock adjustments. Prior to 1972 the figures relate to Phurnacite only. Stock fall (—), stock rise (+).

(2) There were no shipments during the years shown.



32

# Disposals of solid smokeless fuels mainly to the domestic market United Kingdom

Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Producers' disposals to merchants (1)											
Premium smokeless fuels:											
Produced by the Gas Industry:											
Cleanglow	375	402	261	132	13	—	—	—	—	—	—
Phimax	185	97	28	—	—	—	—	—	—	—	—
Multiheat	89	184	225	190	105	94	31	—	—	—	—
Other types (2)	1,441	1,627	1,636	1,612	1,709	1,760	1,692	1,493	1,410	1,375	1,243
Total	2,090	2,310	2,150	1,934	1,827	1,854	1,723	1,493	1,410	1,375	1,243
Other smokeless fuels (3)											
Anthracite	1,390	1,411	1,461	1,256	1,120	1,117	1,295	1,237	959	993	1,050
Dry steam coal	513	493	492	454	379	336	312	329	271	240	250
Phurnacite	766	785	685	780	682	731	706	798	784	737	696
Gas coke (4)	1,771	1,340	834	327	148	110	170	2(5)	—	—	—
Hard coke (4)(6)	1,546	1,567	1,454	1,332	996	1,497	1,642	1,425	1,314	1,278	1,161
Other	259	335	325	326	343	264	289	214	172	177	171
Total	6,245	5,931	5,251	4,475	3,668	4,055	4,414	4,005	3,500	3,425	3,328
Imports:											
Anthracite	—	—	3	165	291	143	79	137	143	270	218
Other smokeless fuels (3)	—	—	53	307	313	195	165	120	82	86	77
Grand total	8,335	8,241	7,457	6,881	6,099	6,247	6,381	5,755	5,135	5,156	4,866

(1) Including direct sales by gasworks to domestic premises.

(2) These include Homefire, Roomheat and the larger sizes of Coalite and Rexco.

(3) These are mainly boiler fuels.

(4) Prior to April, 1973, figures for coke were calculated receipts by merchants for disposal to consumers taking less than 10 tonnes per annum, plus, in the case of gas coke only, direct sales to domestic premises by gas works. From April, 1973, the figures relate to all disposals to merchants by producers.

(5) For coverage, see notes on page 48.

(6) From January, 1975, includes issues to personnel at coke ovens.



# COKE AND OTHER MANUFACTURED FUEL

# 33

## Supply and consumption of coke breeze United Kingdom

	Million tonnes										
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Supply</b>											
Hard coke breeze:											
Production at iron and steel coke ovens	0.83	0.86	0.89	0.86	0.72	0.58	0.51	0.58	0.66	0.60	0.60
Production at other coke ovens	0.61	0.63	0.66	0.60	0.49	0.56	0.54	0.60	0.50	0.47	0.37
Arising from re-screening coke stocks at coke ovens	0.13	0.13	0.09	0.74	0.72	0.75	0.87	0.64	0.69	0.70	0.70
Arising from re-screening coke stocks at blast furnaces and sinter plants	0.66	0.72	0.74								
Change in undistributed stocks <sup>(1)</sup>	-0.24	-0.18	-0.13	+0.14	—	+0.03	+0.08	+0.14	—	+0.04	-0.26
<b>Total supply</b>	<b>2.47</b>	<b>2.52</b>	<b>2.51</b>	<b>2.06</b>	<b>1.93</b>	<b>1.86</b>	<b>1.84</b>	<b>1.68</b>	<b>1.85</b>	<b>1.73</b>	<b>1.93</b>
Gas coke breeze:											
Production	1.21	0.79	0.46	0.19	0.03	0.02	—	—	—	—	—
Change in undistributed stocks <sup>(1)</sup>	-0.05	—	-0.11	-0.05	-0.02	—	—	—	—	—	—
<b>Total supply</b>	<b>1.26</b>	<b>0.79</b>	<b>0.57</b>	<b>0.24</b>	<b>0.05</b>	<b>0.02</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Other breeze supply</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>	<b>0.06</b>	<b>0.07</b>	<b>0.14</b>	<b>0.05</b>	<b>0.08</b>	<b>0.13</b>
<b>Total supply of coke breeze</b>	<b>3.78</b>	<b>3.36</b>	<b>3.13</b>	<b>2.34</b>	<b>2.01</b>	<b>1.94</b>	<b>1.91</b>	<b>1.82</b>	<b>1.90</b>	<b>1.81</b>	<b>2.06</b>
<b>Inland consumption</b>											
Hard coke breeze:											
Iron and steel:											
Sinter plants	1.87	1.76	1.85	1.76	1.54	1.41	1.15	1.22	1.35	1.21	1.30
Other	0.11	0.15	0.13	0.03	0.03	0.01	0.05	0.03	0.03	0.02	0.05
Coke ovens	0.11	0.10	0.11	0.08	0.13	0.21	0.21	0.23	0.22	0.19	0.16
National Coal Board works	0.14	0.13	0.12	0.08	0.06	0.03	0.03	0.02	0.03	0.06	0.04
Other	0.02	0.17	0.16	0.05	0.13	0.09	0.07	0.11	0.06	0.07	0.06
<b>Total</b>	<b>2.25</b>	<b>2.31</b>	<b>2.37</b>	<b>2.00</b>	<b>1.89</b>	<b>1.75</b>	<b>1.51</b>	<b>1.61</b>	<b>1.69</b>	<b>1.55</b>	<b>1.61</b>
Gas coke breeze:											
Iron and steel:											
Sinter plants	0.14	0.14	0.13	0.03	—	—	—	—	—	—	—
Power stations	0.39	0.12	0.07	0.03	0.01	0.01	—	—	—	—	—
Gas works	0.38	0.22	0.11	0.04	0.01	—	—	—	—	—	—
Other	0.18	0.19	0.10	0.07	0.03	0.01	—	—	—	—	—
<b>Total</b>	<b>1.09</b>	<b>0.67</b>	<b>0.41</b>	<b>0.17</b>	<b>0.05</b>	<b>0.02</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Other breeze</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.04</b>	<b>0.03</b>	<b>0.06</b>	<b>0.07</b>	<b>0.14</b>	<b>0.05</b>	<b>0.08</b>	<b>0.13</b>
<b>Total inland consumption</b>	<b>3.39</b>	<b>3.03</b>	<b>2.83</b>	<b>2.21</b>	<b>1.97</b>	<b>1.83</b>	<b>1.58</b>	<b>1.75</b>	<b>1.74</b>	<b>1.63</b>	<b>1.74</b>
<b>Shipments:</b>											
Hard coke breeze	0.17	0.17	0.17	0.08	0.10	0.10	0.27	0.18	0.19	0.18	0.38
Gas coke breeze	0.18	0.12	0.16	0.07	—	—	—	—	—	—	—
<b>Total</b>	<b>0.35</b>	<b>0.29</b>	<b>0.33</b>	<b>0.15</b>	<b>0.10</b>	<b>0.10</b>	<b>0.27</b>	<b>0.18</b>	<b>0.19</b>	<b>0.18</b>	<b>0.38</b>
<b>Total consumption and exports</b>	<b>3.74</b>	<b>3.32</b>	<b>3.16</b>	<b>2.36</b>	<b>2.07</b>	<b>1.93</b>	<b>1.85</b>	<b>1.93</b>	<b>1.93</b>	<b>1.81</b>	<b>2.12</b>
<b>Change in stocks at blast furnaces and sinter plants <sup>(1)</sup></b>	<b>+0.04</b>	<b>+0.04</b>	<b>-0.03</b>	<b>-0.02</b>	<b>-0.06</b>	<b>+0.01</b>	<b>+0.06</b>	<b>-0.11</b>	<b>-0.03</b>	<b>—</b>	<b>-0.06</b>
<b>Stocks at end of year:</b>											
At coke ovens	0.46	0.28	0.15	0.29	0.29	0.32	0.42 <sup>(2)</sup>	0.65 <sup>(3)</sup>	0.65	0.69	0.43
At gas works	0.18	0.18	0.07	0.02	—	—	—	—	—	—	—
At blast furnaces and sinter plants	0.31	0.35	0.32	0.30	0.24	0.25	0.31	0.20	0.18	0.18	0.12
<b>Total stocks</b>	<b>0.95</b>	<b>0.81</b>	<b>0.54</b>	<b>0.61</b>	<b>0.53</b>	<b>0.57</b>	<b>0.73<sup>(2)</sup></b>	<b>0.85<sup>(3)</sup></b>	<b>0.83</b>	<b>0.87</b>	<b>0.55</b>

<sup>(1)</sup> Stock fall (—), stock rise (+).

<sup>(2)</sup> Includes stock adjustment of +0.02 million tonnes.

<sup>(3)</sup> Includes stock adjustments of +0.09 million tonnes.



# Coke ovens: Summary of operations Great Britain

Thousand tonnes

	1977				1978			
	National Coal Board	Iron and Steel	Independents	Total	National Coal Board	Iron and Steel	Independents	Total
Coal carbonized	5,276	11,380	588	17,244	4,212	10,135	564	14,911
Coke								
Production	3,483	7,623	413	11,519	2,767	6,706	401	9,874
Used at coke ovens	—	—	—	—	—	—	—	—
Disposals (excluding breeze):								
Blast furnaces	365	7,415	47	7,827	376	6,928	86	7,390
Foundries	641	—	100	741	585	—	87	672
Other industry	172	26	142	340	156	23	148	327
Other inland	1,276	28	70	1,374	1,120	21	63	1,204
Shipments	435	—	37	472	464	—	28	492
Total	2,889	7,469	396	10,754	2,701	6,972	412	10,085
Production								
Crude tar	201	373	22	596	162	328	20	510
Crude benzole	49	80	2	131	37	98	3	138



# North Sea oil and gas

## On land

Exploration for oil and natural gas has been carried out on land in the United Kingdom for many years, initially under the terms of the Petroleum (Production) Act, 1918, and subsequently on the authority of licences issued under Regulations made under the Petroleum (Production) Act, 1934.

## Offshore

Approximately 240,000 square miles have been designated under the Continental Shelf Act 1964 as areas in which the rights of the United Kingdom with respect to the sea bed and subsoil and their natural resources may be exercised. In 1964 about 83,000 square miles in the North Sea were designated. In 1965—following the conclusion of Boundary Agreements with Norway, Denmark and the Netherlands—additional areas in the North Sea were designated, together with part of the Irish Sea and part of the English Channel comprising in all 39,000 square miles. In 1968 an additional 17,000 square miles were designated in the Irish Sea, St. George's Channel and the Bristol Channel. In 1971 32,000 square miles were designated, comprising a small area in the North Sea, an area west of the Orkneys and west of the Western Isles and an area covering parts of the Western Approaches and the English Channel. In 1974 52,000 square miles were designated in the Atlantic west of the Western Isles extending beyond Rockall. In 1976 about 7,000 square miles were designated in the English Channel and Western Approaches and in 1977 an additional 8,200 square miles were designated in this area. In 1978 a further 1,000 square miles were designated in the area north west of Shetland and an additional 1,300 square miles were designated in the English Channel and Western Approaches following the settlement of the boundary with France.

For licensing purposes the designated area is divided into blocks bounded by lines of latitude and longitude (except near the coast and on the boundary line), the rectangular blocks each having an area of about 250 square kilometres (roughly 100 square miles).

The Petroleum (Production) Regulations 1976, made under the Petroleum (Production) Act, 1934 and the Continental Shelf Act, 1964, lay down the conditions under which licences can be granted to search for and to get oil and natural gas. These Regulations superseded the Petroleum (Production) Regulations 1966, as amended by the Petroleum and Submarine Pipe-lines Act 1975.

The licences are of two types:—

- (i) Exploration licences, which are non-exclusive, cover preliminary work only and have an initial term of three years after which at the discretion of the Secretary of State they may be continued for a further period of three years. These may be applied for at any time.
- (ii) Production licences, which are exclusive and permit the getting of oil or natural gas. They have an initial four year term after which, subject to the licensees performing a specified work programme and observing

all the terms and conditions of the licences, they may be continued for a further period of three years and, thereafter, for an additional period of 30 years in respect of not more than one third of the area originally licensed. These may be applied for at any time by the British National Oil Corporation and the British Gas Corporation. All other applications may be made only following an invitation from the Secretary of State for Energy.

At 31 December 1978 a total of 218 companies were named in 188 production licences covering 59,195 square kilometres (approximately 22,800 square miles).

Drilling for petroleum in the United Kingdom sector of the North Sea began in December 1964. Gas was first found by BP Petroleum Development Limited, 45 miles east of the Humber (West Sole Gas Field) in the autumn of 1965 and supplies from this find began to flow into the natural gas pipeline system in mid-1967. Five other subsequent discoveries, Leman Bank, Indefatigable, Hewett, Viking and Rough are also now in production. One other field, Frigg (the large field which straddles the boundary between the British and Norwegian sectors) came into production in 1977.

Several other discoveries have been made, some of which may be developed in due course.

Twenty one oil fields are either in production or under development.

Further information about these fields and the other significant oil discoveries can be obtained from "The Development of the Oil and Gas Resources of the United Kingdom" 1979 (available from HMSO).

## Production and reserves

### Oil

The first production of oil from the UK sector of the Continental Shelf, in 1975, came from the Argyll and Forties fields. Production in 1975 totalled 1.1 million tonnes. In 1976 a further five fields — Auk, Montrose, Beryl, Brent, and Piper — came onstream and production totalled 12 million tonnes (including NGL's and landward production). In 1977 Claymore came onstream, and production (including NGL's and landward production) reached almost 38 million tonnes. In 1978 Thistle, Dunlin, Heather and Ninian came onstream; production was nearly 54 million tonnes (including NGL's and landward production). In 1979 it is expected to be 70–80 million tonnes, and the forecast for 1980 is 85–105 million tonnes. Table 36 shows estimates of the reserves of oil in the commercial and other significant discoveries. It also gives a forecast of reserves in future discoveries which might be made under existing licences (and 6th round). Taking into account estimates of reserves for all areas expected to be in the UK Continental Shelf, total recoverable reserves originally in place could lie in the range 2,400–4,400 million tonnes.

### Gas

During the year, 38 billion cubic metres of natural gas from the UK Continental Shelf were sold to British Gas.



This represents about 88 per cent of total UK gas supplies. The proportion of UKCS gas in the total is falling as deliveries from the Frigg field (60.9% imports) rise to full contract quantity. Estimates of the reserves of natural gas remaining in known discoveries at 31 December 1978 are given in Table 35.

## Note

The reserves figures given in Tables 35 and 36 are broken down into three categories as follows:—

- (i) *Proven reserves*—those which on the available evidence are virtually certain to be technically and economically producible.
- (ii) *Probable reserves*—those which are estimated to have better than a 50% chance of being technically and economically producible.
- (iii) *Possible reserves*—those which at present are estimated to have a significant but less than 50% chance of being technically and economically possible.

## Production (Table 38)

Offshore production of crude oil and associated gases from oil fields are measured after the initial separation of the gas from the oil on the fields. The associated gas is then further processed at on-shore gas separation plants to yield methane (C<sub>1</sub>), ethane (C<sub>2</sub>), propane (C<sub>3</sub>), butane (C<sub>4</sub>) and condensates (C<sub>5</sub>).

Production of methane (C<sub>1</sub>) and condensates (C<sub>5</sub>) from gas fields are measured at the land terminal separation plant after the non-associated gas has been processed and the figures for field production of methane and condensates are derived from these figures.

## Gaseous and liquid products (Table 40)

Supply and disposals refer to the onshore processing of associated gas, at Kinneil (Forties field) and Flotta (Piper field) and for non-associated gas at Easington (Rough and W. Sole fields); Theddlethorpe (Viking field), Bacton (Hewett, Leman Bank and Indefatigable fields) and St. Fergus (Frigg field).

## Supply and disposal of natural gas (Methane)

Details of receipts (indigenous production and arrivals) and disposals (direct supplies to petro-chemical industry and availability for the B.G.C.) are shown in Tables 41 and 42 Arrivals of liquefied natural gas commenced in the autumn of 1964, following a trial shipment in 1960. The first gas deliveries from the North Sea began in March 1967. The first gas from the Frigg field was brought ashore in August 1977 (the unitisation of this field gives approximately 60.9% ownership to Norway and 39.1% to the United Kingdom).

## Period covered

All the annual statistics in this section relate to calendar years.



## 35

# Estimated gas reserves on United Kingdom Continental Shelf (as at 31 December 1978)

Thousand million cubic metres(1)  
(million million cubic feet shown in brackets)

**(a) Remaining Recoverable Reserves in Present discoveries**

	Proven	Probable	Possible	Possible Total
<b>Southern Basin</b>				
Fields under contract to British Gas	387 (13.7)	14 (0.5)	25 (0.9)	426 (15.1)
Other discoveries believed to be commercial but not yet under contract	51 (1.8)	65 (2.3)	—	116 (4.1)
Other discoveries	—	31 (1.1)	40 (1.4)	71 (2.5)
<b>Total Southern Basin</b>	<b>438 (15.5)</b>	<b>110 (3.9)</b>	<b>65 (2.3)</b>	<b>613 (21.7)</b>
<b>Other areas (including Northern Basin)</b>				
Fields under contract to British Gas (Brent and Frigg(2))	173 (6.1)	—	—	173 (6.1)
Morecambe				
Other significant gas and condensate fields	40 (1.4)	166 (5.9)	314 (11.1)	520 (18.4)
Other gas associated with oil:				
Fields in production or under development (including Piper)	55 (1.9)	50 (1.8)	10 (0.3)	115 (4.0)
Other possible developments	—	—	59 (2.0)	59 (2.0)
<b>Total Other areas</b>	<b>268 (9.4)</b>	<b>216 (7.7)</b>	<b>383 (13.4)</b>	<b>867 (30.5)</b>
<b>Total for present discoveries</b>	<b>706 (24.9)</b>	<b>326 (11.6)</b>	<b>448 (15.7)</b>	<b>1,480 (52.2)</b>

**(b) Ultimately Recoverable Reserves**

Cumulative production to end 1978	280 (10)
Reserves remaining in present discoveries	706 (25) — 1,480 (52)
Total of ultimately recoverable reserves in present discoveries	986 (35) — 1,760 (62)
Reserves in future discoveries	0 — 550 (20)
Ultimately recoverable reserves on the UK Continental Shelf (rounded)	1,000 (35) — 2,300 (80)

(1) Conversion factor: 1 thousand million cubic metres ( $10^9$  cu. metres)  
= 0.03531 million million cubic feet  
( $10^{12}$  cu. feet)

(2) UK share of Frigg field.

## 36

# Estimated oil reserves on United Kingdom Continental Shelf (as at 31 December 1978)

Million tonnes

**(a) Remaining Recoverable Reserves in Present discoveries**

	Proven	Probable	Possible	Possible Total
Fields in production or under-development	1,121	124	173	1,418
Other significant discoveries not yet fully appraised	276	385	432	1,093
<b>Total Present discoveries</b>	<b>1,397</b>	<b>509</b>	<b>605</b>	<b>2,511</b>

**(b) Recoverable Reserves in Future discoveries**

Reserves in future discoveries under present licences including the Sixth Round	350–800
Reserves on the remainder of the UK Continental Shelf	550–1,000
<b>Total for future discoveries</b>	<b>900–1,800</b>

**(c) Total of Recoverable Reserves originally in place on the UK Continental Shelf**

Cumulative production to end of 1978	106
Remaining reserves in present discoveries	1,397–2,511
Total of recoverable reserves originally in place in present discoveries	1,503–2,617
Reserves in future discoveries	900–1,800
<b>Total of recoverable reserves originally in place on the UK Continental Shelf (rounded)</b>	<b>2,400–4,400</b>



# Licences issued and drilling activity United Kingdom

	Number of Exclusive Licences(1)	Total Area Licensed (Square Kilometre)(1)	Wells Drilled and Completed		Wells Drilling(1)		Total Depth Drilled (Metres)	
			Production	Exploration and Appraisal	Production	Exploration and Appraisal	Production	Exploration and Appraisal
<b>Land (2)</b>								
1969	163	60,438	—	8	—	—	—	6,967
1970	163	59,785	—	7	—	2	—	11,038
1971	181	68,959	—	12	—	—	—	15,509
1972	154	59,067	—	8	—	2	—	16,977
1973	127	44,650	4	14	—	3	3,909	26,319
1974	90	28,254	3	9	1	—	3,378	14,173
1975	120	39,277	12	6	3	4	16,672	10,002
1976	136	45,058	—	6	—	—	—	7,793
1977	147	45,289	2	3	—	1	2,187	4,692
1978	135	42,102	9	—	—	—	9,811	—
<b>Offshore</b>								
1969	89	106,894	28	49	4	6	66,337	129,879
1970	104	64,363	29	27	3	3	76,228	72,063
1971	110	56,365	37	26	—	3	90,987	79,743
1972	213	112,474	32	36	4	10	86,438	112,021
1973	209	109,648	22	58	3	14	68,472	179,322
1974	208	107,889	23	96	—	17	81,120	292,562
1975	194	102,613	16	115	5	17	57,941	379,415
1976	181	88,377	46	90	14	14	169,540	280,010
1977	189	81,181	92	102	23	17	283,999	338,868
1978	188	59,195	93	67	20	11	299,887	203,969

(1) At end of year.

(2) Includes a few coastal areas and estuaries.



		LAND'			OFFSHORE			
		Crude Oil	(1)(2) Methane [C <sub>1</sub> ]	Condensates [C <sub>5</sub> +]	(3) Crude Oil	(1)(4) Associated Gas	(1)(5)(6) Methane(7) [C <sub>1</sub> ] (8)	(5)(7) Condensates [C <sub>5</sub> +]
		Thousand tonnes	Million metres <sup>3</sup>	Thousand tonnes	Thousand tonnes	Million metres <sup>3</sup>	Million metres <sup>3</sup>	Thousand tonnes
1970		83	—	—	—	—	11,101	73
1971		83	177	2	—	—	18,285	127
1972		83	108	2	—	—	26,457	248
1973		88	52	—	—	—	28,851	284
1974		88	20	—	—	—	34,805	322
1975		107	1	—	1,116	10	36,256	341
1976		99	4	—	11,533	94	38,415	376
1977		99	3	—	37,321	258	40,304	381
1978		88	4	—	52,844	609	38,496	321
1977	January	23	1	—	2,182	15	4,871	49
	February			—	2,354	15	4,124	44
	March			—	2,960	20	4,194	45
	April	25	1	—	2,867	19	3,754	37
	May			—	3,450	26	3,074	31
	June			—	3,303	25	2,447	18
	July	26	1	—	3,174	19	2,038	18
	August			—	3,395	20	2,166	16
	September			—	3,402	23	2,486	20
	October	25	0	—	3,478	24	2,932	28
	November			—	3,224	25	4,034	37
	December			—	3,532	27	4,184	38
1978	January	23	1	—	3,709	46	4,815	39
	February			—	3,553	45	4,407	39
	March			—	3,627	36	4,193	40
	April	22	1	—	3,934	34	3,838	33
	May			—	4,584	54	2,789	25
	June			—	4,458	54	2,130	17
	July	21	1	—	4,518	57	2,127	14
	August			—	4,568	51	2,021	17
	September			—	4,358	51	2,011	13
	October	22	1	—	4,810	47	2,617	22
	November			—	5,138	73	3,307	27
	December			—	5,587	61	4,241	35

(1) Excludes gas flared or re-injected.

(2) Excludes colliery methane.

(3) Liquid hydrocarbons which may contain gases and condensates separated at subsequent processing stages.

(4) Gaseous hydrocarbons associated with crude oil production and yielding methane, ethane, propane, butane and condensates (including pentane) when separated at subsequent processing stages.

(5) Gaseous hydrocarbons occurring in a reservoir not producing crude oil.

(6) May include small quantities of other gases.

(7) Includes UK shares of Frigg.

(8) Includes associated gas (notionally methane) produced and used on Northern Basin oil production platforms.

	Thousand tonnes				
	1975	1976	1977	1978	Total to date
Argyll	487	1,094	808	694	3,083
Auk	—	1,213	2,329	1,303	4,845
Beryl	—	355	3,044	2,594	5,993
Brent	—	119	1,251	3,842	5,212
Claymore	—	—	336	3,033	3,369
Dunlin	—	—	—	675	675
Forties	629	8,554	20,139	24,466	53,788
Heather	—	—	—	142	142
Montrose	—	114	814	1,178	2,106
Ninian	—	—	—	42	42
Piper	—	84	8,600	12,229	20,913
Thistle	—	—	—	2,646	2,646
	1,116	11,533	37,321	52,844	102,814



Supply and Disposal  
United Kingdom

Thousand Tonnes

	Production	Own(1) Use	Avail- ability	Disposals							Stat- istical(4) Difference	
				Refineries			Petro- chemical	British Gas Corp	Exports	Other		Total
				Pro- cessing(2)	Blending(3)							
Ethane (5)												
1975	3	3	—	—	—	—	—	—	—	—	—	
1976	59	29	30	30	—	—	—	—	—	30	—	
1977	177	62	115	84	—	—	31	—	—	115	—	
1978	225	71	154	28	—	—	126	—	—	154	—	
Propane (5)												
1975	—	—	—	—	—	—	—	—	—	—	—	
1976	37	4	32	—	11	—	—	17	4	32	—	
1977	96	—	96	—	48	—	—	48	—	96	—	
1978	236	1	235	—	51	—	—	182	2	235	—	
Butane (5)												
1975	—	—	—	—	—	—	—	—	—	—	—	
1976	38	3	35	—	3	—	—	32	—	35	—	
1977	112	—	112	—	26	—	—	86	—	112	—	
1978	164	1	163	—	3	—	—	160	—	163	—	
Condensate												
— Total												
1975	341	—	341	114	149	67	—	—	12	342	—1	
1976	405	—	405	127	262	—	—	—	14	403	2	
1977	460	—	460	125	318	6	—	—	14	463	—3	
1978	449	—	449	436		—	—	—	11	447	2	
— Northern Basin (5)												
1975	—	—	—	—	—	—	—	—	—	—	—	
1976	29	—	29	—	29	—	—	—	—	29	—	
1977	79	—	79	—	72	6	—	—	—	78	1	
1978	128	—	128	—	128	—	—	—	—	128	—	
— Southern Basin (6)												
1975	341	—	341	114	149	67	—	—	12	342	—1	
1976	376	—	376	127	233	—	—	—	14	374	2	
1977	381	—	381	125	246	—	—	—	14	385	—4	
1978	321	—	321	308		—	—	—	11	319	2	

(1) Own use of methane includes consumption for drilling and pumping purposes.

(2) Condensate supplied to refineries for input (with crude oil) into distillation and downstream processing.

(3) Condensate supplied to refineries for direct sale or for blending with finished products.

(4) Includes stock change line losses and waste.

(5) Products separated from associated gas (609 million metres<sup>3</sup> 1978 — see table 38).

(6) Includes UK share of Frigg field.



## GAS (METHANE)

41

Supply and disposals of Methane  
United Kingdom

Million cubic metres												
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Production</b>												
Land	—	—	—	—	177	108	52	20	1	4	3	4
Offshore	472	2,020	5,060	11,101	18,285	26,457	28,851	34,805	36,256	38,415	40,304	38,496
Total	472	2,020	5,060	11,101	18,462	26,565	28,903	34,825	36,257	38,419	40,307	38,500
<b>Own Use</b>												
Land	—	—	—	—	11	2	2	—	—	—	—	—
Offshore	1	4	16	14	42	66	83	96	176	177	344	548
Total	1	4	16	14	53	68	85	96	176	177	344	548
<b>Net Production</b>												
Land	—	—	—	—	166	106	50	20	1	4	3	4
Offshore	471	2,016	5,044	11,087	18,243	26,391	28,768	34,709	36,080	38,238	39,960	37,948
Total	471	2,016	5,044	11,087	18,409	26,497	28,818	34,729	36,081	38,242	39,963	37,952
<b>Arrivals</b>												
Liquefied	839	1,089	1,141	916	913	842	806	668	921	1,056	877	729
Gases	—	—	—	—	—	—	—	—	—	—	952	4,332
Total	839	1,089	1,141	916	913	842	806	668	921	1,056	1,829	5,061
<b>Availability</b>	1,310	3,105	6,185	12,003	19,322	27,339	29,624	35,397	37,002	39,298	41,792	43,013
<b>Disposals</b>												
Petrochemical	—	—	—	—	35	98	138	154	152	160	163	137
BGC	1,310	3,105	6,185	12,003	19,287	27,241	29,486	35,243	36,850	39,138	41,629	42,876
Total	1,310	3,105	6,185	12,003	19,322	27,339	29,624	35,397	37,002	39,298	41,792	43,013

Million therms												
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Production</b>												
Land	—	—	—	—	64	38	19	7	—	1	1	1
Offshore	166	747	1,870	4,095	6,790	9,884	10,757	12,996	13,538	14,336	14,973	14,338
Total	166	747	1,870	4,095	6,854	9,922	10,776	13,003	13,538	14,337	14,974	14,339
<b>Own Use</b>												
Land	—	—	—	—	4	1	1	—	—	—	—	—
Offshore	—	1	6	13	15	25	31	36	65	68	126	203
Total	—	1	6	13	19	26	32	36	65	68	126	203
<b>Net Production</b>												
Land	—	—	—	—	60	37	18	7	—	1	1	1
Offshore	166	746	1,864	4,082	6,775	9,859	10,726	12,960	13,473	14,268	14,847	14,135
Total	166	746	1,864	4,082	6,835	9,896	10,744	12,967	13,473	14,269	14,848	14,136
<b>Arrivals</b>												
Liquefied	305	396	415	333	332	306	293	243	335	384	319	272
Gases	—	—	—	—	—	—	—	—	—	—	348	1,617
Total	305	396	415	333	332	306	293	243	335	384	667	1,889
<b>Availability</b>	471	1,142	2,279	4,415	7,167	10,202	11,037	13,210	13,808	14,653	15,515	16,025
<b>Disposals</b>												
Petrochemical	—	—	—	—	13	36	51	57	56	59	60	51
BGC	471	1,142	2,279	4,415	7,154	10,166	10,986	13,153	13,752	14,594	15,455	15,974
Total	471	1,142	2,279	4,415	7,167	10,202	11,037	13,210	13,808	14,653	15,515	16,025



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# Supply and disposals of Methane by Field

## United Kingdom

	Million Cubic Metres					Million Therms				
	Production			Direct (3) Supply to Petro- chemical Industry	Available for the Public Supply Gas Industry	Production			Direct (3) Supply to Petro- chemical Industry	Available for the Public Supply Gas Industry
	Total (1)	Own Use (2)	Net			Total (1)	Own Use (2)	Net		
<b>Land (4)</b>										
Total:—										
1971–1975	358	15	343	—	343	128	6	122	—	122
1976	4	—	4	—	4	1	—	1	—	1
1977	3	—	3	—	3	1	—	1	—	1
1978	4	—	4	—	4	1	—	1	—	1
Cumulative totals to end 1978	369	15	354	—	354	131	6	125	—	125
<b>Offshore</b>										
Total:—										
1967–1975	163,307	498	162,809	577	162,232	60,843	192	60,651	213	60,438
1976	38,415	177	38,238	160	38,078	14,336	68	14,268	59	14,209
1977	40,304	344	39,960	163	39,797	14,973	126	14,847	60	14,787
1978	38,496	548	37,948	137	37,811	14,338	203	14,135	51	14,084
Cumulative totals to end 1978	280,522	1,567	278,955	1,037	277,918	104,490	589	103,901	383	103,518
<b>Fields:—</b>										
<b>Frigg Field(5)</b>										
1977	614	1	613	—	613	225	1	224	—	224
1978	2,907	18	2,889	—	2,889	1,063	7	1,056	—	1,056
	3,521	19	3,502	—	3,502	1,288	8	1,280	—	1,280
<b>Hewett Field</b>										
1969–1975	31,452	153	31,299	—	31,299	11,607	58	11,549	—	11,549
1976	8,113	68	8,045	—	8,045	2,976	25	2,951	—	2,951
1977	7,852	76	7,776	—	7,776	2,879	27	2,852	—	2,852
1978	6,392	70	6,322	—	6,322	2,348	26	2,322	—	2,322
	53,809	367	53,442	—	53,442	19,810	136	19,674	—	19,674
<b>Indefatigable Field</b>										
1971–1975	21,022	59	20,963	—	20,963	7,836	22	7,814	—	7,814
1976	6,355	19	6,336	—	6,336	2,386	7	2,379	—	2,379
1977	6,779	19	6,760	—	6,760	2,516	7	2,509	—	2,509
1978	6,450	19	6,431	—	6,431	2,405	7	2,398	—	2,398
	40,606	116	40,490	—	40,490	15,143	43	15,100	—	15,100
<b>Leman Bank Field</b>										
1968–1975	81,363	173	81,190	—	81,190	30,560	71	30,489	—	30,489
1976	15,367	42	15,325	—	15,325	5,789	16	5,773	—	5,773
1977	15,581	56	15,525	—	15,525	5,843	22	5,821	—	5,821
1978	14,719	77	14,642	—	14,642	5,547	28	5,519	—	5,519
	127,030	348	126,682	—	126,682	47,739	137	47,602	—	47,602
<b>Rough Field</b>										
1975	10	—	10	—	10	4	—	4	—	—
1976	512	3	509	—	509	189	1	188	—	188
1977	1,063	6	1,057	—	1,057	392	2	390	—	390
1978	931	6	925	—	925	343	2	341	—	341
	2,516	15	2,501	—	2,501	928	5	923	—	923
<b>Viking Field</b>										
1972–1975	15,265	74	15,191	—	15,191	5,612	27	5,585	—	5,585
1976	6,046	30	6,016	—	6,016	2,248	11	2,237	—	2,237
1977	6,330	45	6,285	—	6,285	2,350	16	2,334	—	2,334
1978	5,238	32	5,206	—	5,206	1,945	12	1,933	—	1,933
	32,879	181	32,698	—	32,698	12,155	66	12,089	—	12,089
<b>West Sole Field</b>										
1967–1975	14,195	39	14,156	577	13,579	5,224	14	5,210	213	4,997
1976	2,012	5	2,007	160	1,847	742	2	740	59	681
1977	1,947	3	1,944	163	1,781	718	1	717	60	657
1978	1,533	3	1,530	137	1,393	566	1	565	51	514
	19,687	50	19,637	1,037	18,600	7,250	18	7,232	383	6,849
<b>Other(6)</b>										
1976	10	10	—	—	—	6	6	—	—	—
1977	138	138	—	—	—	50	50	—	—	—
1978	326	323	3	—	3	121	120	1	—	1
	474	471	3	—	3	177	176	1	—	1

(1) Total Production equals gas sold by production industry plus production industries own use.

(2) Used for drilling, production and pumping operations.

(3) Excluding sales by British Gas Corporation to the industry.

(4) Excluding colliery methane.

(5) UK share of Frigg.

(6) Associated Gas (notionally methane) produced and used on Northern Basin Oil Production Platforms.



# Petroleum

## Sources of Statistics

Statistics of arrivals and shipments of crude and process oils and petroleum products, refinery receipts, refinery throughput and output and deliveries of petroleum products are provided by the United Kingdom Petroleum Industry Advisory Committee.

Figures of refinery capacity (Table 43), are collected annually by the Department of Energy from individual oil companies.

Figures of inland deliveries by end use (Table 54) are provided by the Institute of Petroleum and are partly estimated.

## Period covered

All annual figures in this section relate to periods of calendar years.

## Arrivals and Shipments (Tables 44 and 47)

The terms "arrivals" and "shipments" are used to distinguish figures recorded by importers and exporters of oil from the import and export figures provided by HM Customs and Excise given in the Foreign Trade Section (page 125 et seq.).

## Marine bunkers (Tables 44, 45 and 47)

Deliveries to ocean going and coastal vessels under international bunker contracts. Other deliveries to coastal vessels are excluded.

## Crude and process oils (Tables 44 and 46)

All feedstocks, other than distillation benzene, for refining at refinery plants.

## Refineries (Tables 43 and 46)

Refineries distilling crude and process oils to obtain petroleum products. This excludes petrochemical plants, plants only engaged in redistilling products to obtain better grades, crude oil stabilisation plants and gas separation plants.

## Stocks (Table 48)

Closing stocks embrace Petroleum stocks in the UK at the end of the year held by the reporting companies or their associates together with stocks in transit (within the wholesale distribution system) in the UK.

## Products used as fuel (Table 46–54)

Refinery fuel—petroleum products used as fuel at refineries (see Tables 45, 46 and 52).

Ethane—a gas consisting essentially of (C<sub>2</sub>H<sub>6</sub>) occurring in natural gas and refinery gas streams. Primarily used, or intended to be used, as a chemical feedstock.

Propane—hydrocarbon containing three carbon atoms, gaseous at normal temperature but generally stored and transported under pressure as a liquid. Used mainly for industrial purposes and some domestic heating and cooking.

Butane—hydrocarbon containing four carbon atoms, otherwise as for propane. Additional uses—as a constituent of motor spirit to improve volatility and as a chemical feedstock.

Other gases for gasworks—ethane and refinery gases resulting from the processing of crude petroleum.

Naphtha (Light distillate feedstock)—petroleum distillate boiling predominantly below 200°C.

Aviation spirit—all light hydrocarbon oils intended for use in aviation piston-engine power units, whether in the air, on land, or on water, including bench testing of aircraft engines.

Wide-cut gasoline—all light hydrocarbon oils intended for use in aviation gas-turbine power units, whether in the air, on land or on water, including bench testing of aircraft engines.

Motor-spirit—blended light petroleum distillates used as fuel for spark-ignition internal-combustion engines other than aircraft engines.

5 star grade—all finished motor spirit with an octane number (research method) not less than 100.

4 star grade—all finished motor spirit with an octane number (research method) not less than 97.

3 star grade—all finished motor spirit with an octane number (research method) not less than 94.

2 star grade—all finished motor spirit not intended for marketing as 5, 4 or 3 star grades.

Aviation turbine fuel—all other Turbine Fuel intended for use in aviation gas-turbine power units, whether in the air, on land or on water, including bench testing of aircraft engines.

Burning oil (kerosene)—refined petroleum distillate, intermediate in volatility between motor spirit and gas oil, used for lighting and heating. White spirit and kerosene used for lubricant blends are excluded.

Vaporizing oil—blended kerosene-type petroleum distillate used in certain types of spark-ignition engines such as agricultural tractors, stationary engines and boats.

Gas/diesel oil:—petroleum distillate having a distillation range immediately between kerosene and light-lubricating oil.

(a) Derv (Diesel Engine Road Vehicle) fuel—gas/diesel oil for use in high speed, compression ignition engines in vehicles subject to Road Fund Tax.

(b) Gas oil—used as a burner fuel in heating installations, for industrial gas turbines and as for derv (but in vehicles not subject to Road Fund Tax e.g. Agricultural vehicles).

(c) Marine diesel oil—heavier type of gas oil suitable for heavy industrial and marine compression-ignition engines.

Fuel oil—heavy petroleum distillates or petroleum residues or blends of these used in furnaces for the production of heat or power. Excluding fuel oil for grease making or lubricating oil and fuel oil sold as such for road making.



### **Products not used as fuel (Tables 45–47, 50, 51 and 54)**

Feedstock for petroleum chemical plants—all petroleum products intended for use in the manufacture of petroleum chemicals. (A deduction has been made from these figures equal to the quantity of feedstock used in making the conventional petroleum products which are produced during the processing of the feedstock. The output and deliveries of these conventional petroleum products are included elsewhere as appropriate).

White spirit—a highly refined distillate with a boiling range of about 150°C to 200°C used as a paint solvent and for dry cleaning purposes etc.

Industrial spirits—refined petroleum fractions with boiling ranges up to 200°C dependent on the use to which they are put—e.g. seed extraction, rubber solvents, perfume etc.

Lubricating oils (and greases)—refined heavy distillates obtained from the distillation of petroleum residues. Includes liquid and solid hydrocarbons sold by the lubricating oil trade, either alone or blended with fixed oils, metallic soaps and other organic and/or inorganic bodies.

Bitumen—the residue left after the production of lubricating oil distillates. Used mainly for road making and building construction purposes. Includes other petroleum products, creosote and tar mixed with bitumen for these purposes and fuel oil sold as such for road making.

Paraffin wax—includes paraffin wax, which is a white crystalline hydrocarbon material of low oil content normally obtained during the refining of lubricating oil distillate, paraffin scale, slack wax, microcrystalline wax and wax emulsions. Used for candle manufacture, polishes, food containers, wrappings etc.

Petroleum cokes—carbonaceous material derived from hydrocarbon oils, uses for which include electrode manufacture. An unknown quantity of this product may be used as a fuel.

Miscellaneous products—includes petroleum cokes (prior to 1978), aromatic extracts, defoamant solvents and other minor miscellaneous products.

### **Inland deliveries into consumption (Tables 44, 45 and 50–54)**

Deliveries of all petroleum products marketed or used by the petroleum industry including benzole and other petroleum substitutes. Refinery fuel is shown separately.

Gas/diesel and fuel oils used in coastal and fishing craft are included in the figures of inland deliveries but petroleum coke and coal tar fuels are excluded.

Deliveries of motor spirit:—

- (a) Dealers—deliveries to garages, etc., mainly for resale.
- (b) Commercial consumers—direct deliveries for use in consumers' businesses.

Explanatory notes about the figures for the main classes of consumer shown in Table 52 are given below:—

Gas works:—Consumption of petroleum products (including purchases of petroleum gases) at public supply gas works (see Table 57).

Power stations:—Petroleum products consumed at public supply and transport generating stations (see Table 65).

Agriculture:—Deliveries of fuel oil and gas/diesel oil for use in agricultural power units, driers and heaters (see Table 53). Vaporizing oil for use in tractors and stationary vehicles and burning oil for farm use (see Table 54).

Iron and steel:—Deliveries of petroleum products to steel works and iron foundries.

Other industries:—The figures for "other deliveries" under this heading are the differences between total deliveries for gas making and electricity generation as recorded by the petroleum industry and consumption of petroleum products (including gases) by the public supply gas and electricity industries and transport power stations.

Road transport:—Deliveries of motor spirit and derv fuel for use in road vehicles of all kinds (see Table 54). Coal derived-benzole is excluded.

Water transport:—Fuel oil and gas/diesel oil delivered other than under international bunker contracts for coastal and inland vessels and fishing vessels and for use in ports and harbours (see Table 53).

Railways:—Deliveries of fuel oil, gas/diesel oil and burning oil to railways, excluding deliveries to railway power stations (see Table 52).

Air transport:—Total inland deliveries of aviation turbine fuel, aviation spirit and wide cut gasoline (see Table 52). The figures cover deliveries of aviation fuels in the United Kingdom to international and other airlines, British and foreign governments (including armed services) and for private flying.

Domestic:—Fuel oil and gas/diesel oil delivered for central heating of private houses and other dwellings (see Table 53) and deliveries of kerosene and liquefied petroleum gases for domestic purposes (see Table 54).

Public Services:—Deliveries to national and local government premises (including educational, medical and welfare establishments and British and foreign armed forces) of fuel oil and gas/diesel oil for central heating (see Table 53) and of kerosene (see Table 54).

Miscellaneous:—Deliveries of fuel oil and gas/diesel oil for central heating in premises other than those classified as domestic or public services and fuel oil and gas/diesel oil used by the petroleum industry other than as refinery fuel (see Table 53).



Refineries: Crude oil distillation capacity <sup>(1)</sup>  
United Kingdom

Million tonnes per annum at end of year

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
British Petroleum Co. Ltd.											
Kent	10.2	10.2	10.2	11.5	10.9	10.9	10.9	10.5	10.5	10.5	10.6
Grangemouth	4.6	4.6	9.1	9.0	8.8	8.8	8.8	8.6	8.6	8.6	8.6
Llandarcy	8.1	8.1	8.1	8.3	8.3	8.3	8.3	8.1	5.4	4.8	4.8
Belfast	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Total	24.4	24.4	28.9	30.4	29.5	29.5	29.5	28.7	26.0	25.4	25.5
Shell UK Ltd.											
Stanlow	10.7	10.7	10.7	10.7	10.7	10.7	18.3	18.3	18.3	17.6	17.6
Shellhaven	10.1	10.2	10.2 <sup>(2)</sup>	10.2 <sup>(3)</sup>	10.2	10.2	10.2	10.2	10.2	9.2	9.2
Teesport	5.4	5.4	5.4	5.4	6.1	6.4	6.4	5.8	5.3	5.3	5.3
Heysham	2.0	2.0	2.0	2.0	2.0	2.0	1.3	0.7	0.7	—	—
Ardrossan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	28.4	28.5	28.5	28.5	29.2	29.5	36.4	35.2	34.7	32.3	32.3
Esso Petroleum Co. Ltd.											
Fawley	17.0	16.2	16.4	19.4	19.8	19.4	18.9	18.2	18.2	17.3	17.3
Milford Haven	6.2	6.3	6.1	6.1	6.3	15.4	15.4	15.4	15.4	14.6	8.5
Total	23.2	22.5	22.5	25.5	26.1	34.8	34.3	33.6	33.6	31.9	25.8
Lindsey Oil Refinery Ltd.											
South Killingholme	3.0	7.1	7.0	7.2	8.4	9.6	9.8	8.8	8.8	9.2	8.8
Mobil Oil Co. Ltd.											
Coryton	3.3	6.4	6.8	6.8	6.8	8.6	8.6	8.6	8.6	8.4	8.4
Texaco Refining Co. Ltd.											
Pembroke	5.9	5.9	5.9	6.9	7.2	8.9	8.9	9.4	9.4	9.3	9.3
Philips-Imperial Petroleum Ltd.											
North Tees	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	4.5	4.5
Gulf Oil Refining Ltd.											
Milford Haven	3.0	4.1	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Continental Oil Co. Ltd.											
Killingholme	—	3.9	4.1	4.1	3.9	4.3	4.4	4.4	6.5	6.0	6.0
Burmah Oil Trading Ltd.											
Ellesmere Port	0.3	0.3	0.3	1.6	1.6	1.4	1.4	1.4	1.4	1.4	1.4
Barton	0.2	0.2	0.2	0.2	0.2	—	—	—	—	—	—
Total	0.5	0.5	0.5	1.8	1.8	1.4	1.4	1.4	1.4	1.4	1.4
Berry Wiggins & Co. Ltd.											
Kingsnorth	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	—	—
Weaste	0.2	0.2	0.2	0.2	—	—	—	—	—	—	—
Total	0.5	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.2	—	—
Philmac Oil Ltd.											
Eastham	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.5	0.5
Wm. Briggs and Sons Ltd.											
Dundee (Camperdown)	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.4
Amoco (UK) Ltd.											
Milford Haven	—	—	—	—	—	4.0	4.0	5.0	5.0	5.0	5.0
Total all refineries	97.7	109.3	114.8	122.0	124.2	142.0	148.6	146.4	145.6	139.5	133.1

(1) Figures for years prior to 1977 purport to show the theoretical maximum sustained throughput with units in a clean condition; For 1977 and 1978 a standardised definition has been adopted for all companies based on the rated design capacity per stream day, multiplied by the average number of days in operation per year.

(2) Temporarily reduced by a fire in November 1970 to 5,100 thousand tonnes per year.

(3) Temporarily reduced by fire in July 1971 to 5,100 thousand tonnes per annum.



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Supply and disposals  
United Kingdom

Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Crude oils:</b>											
Refinery receipts from (1) indigenous production											
Crude petroleum — Land	84	77	84	83	83	88	88	101	96	99	87
Offshore								895	11,280	37,319	52,059
Condensates(2)		8	34	55	144	147	162	160	135	122	411
Arrivals	83,195	93,153	102,155	107,736	107,706	115,472	112,822	91,366	90,466	70,697	68,144
Shipments	59	334	1,182	1,569	3,558	3,235	1,404	1,524	4,285	16,659	24,859
Net arrivals	83,136	92,819	100,973	106,167	104,148	112,237	111,418	89,842	86,181	54,038	43,285
Stock change(3)	+601	+1,514	-357	+1,654	-1,332	-437	+2,238	-1,305	+600	-1,354	+367
Backflows to refineries	490	268	464	726	1,267	1,560	1,810	1,275	692	682	916
Total refinery supply	83,109	91,658	101,912	105,377	106,974	114,469	111,240	93,578	97,784	93,614	96,391
Refinery throughput	83,100	91,699	101,911	105,342	106,980	114,338	111,217	93,579	97,784	93,615	96,390
Statistical difference(4)	+9	-41	+1	+35	-6	+131	+23	-1		-1	+1
<b>Petroleum products:</b>											
Refinery use:											
Fuel	5,155	5,636	6,028	6,184	6,420	7,053	6,946	6,031 <sup>(5)</sup>	6,342 <sup>(5)</sup>	6,238 <sup>(5)</sup>	6,423 <sup>(5)</sup>
Losses	896	976	1,187	913	1,192	1,331	1,211	901	1,158	1,039	811
Refinery output	77,049	85,087	94,696	98,245	99,368	105,954	103,060	86,647	90,284	86,338	89,156
Arrivals	22,816	20,758	20,428	19,369	20,827	18,300	14,537	12,786	10,709	13,050	11,511
Indigenous primary products(6)	1	4	9	12	105	143	151	185	372	647	627
Other receipts(7)	300	221	180	154	131	104	66	48	37	57	63
Stock change(3)	+364	+387	+1,055	+1,632	-1,380	-73	+2,589	-2,298	-598	-991	-396
Total supply	99,802	105,683	114,258	116,148	121,811	124,574	115,225	101,964	102,000	101,083	101,753
Inland deliveries of products											
For energy use	70,134	75,489	81,018	81,863	87,788	88,195	81,547	73,386	71,471	73,044	74,702
For non-energy use(8)	9,102	9,936	10,133	10,128	10,681	11,591	11,862	9,438	10,108	9,715	9,439
Shipments	14,453	14,344	17,424	17,166	15,979	17,404	14,631	13,924	15,988	14,294	13,536
Bunkers	5,344	5,585	5,515	5,655	5,225	5,499	4,759	3,444	3,569	2,829	2,872
Backflows to refineries	490	268	464	726	1,267	1,560	1,810	1,275	692	682	916
Total disposals	99,523	105,622	114,554	115,538	120,940	124,249	114,609	101,467	101,828	100,564	101,465
Statistical difference(4)	+279	+61	-296	+610	+871	+325	+616	+497	+172	+519	+288

(1) Includes quantities for export (and exports direct) from N. Sea oil fields.

(2) Only that condensate supplied to refineries for input (with crude oil) into distillation.

(3) Actual change. Rise (+), Fall (-).

(4) Supply greater than (+) or less than (-) recorded disposals (or refinery throughput).

(5) Includes some gas separation plants own use.

(6) Ethane, propane, butane and condensates (excluding that for distillation units which is included in refinery receipts from indigenous products) extracted at gas separation plants.

(7) Petroleum products derived from other sources, mainly bitumen and lubricating oils. For 1973 and earlier benzole produced from coal is included.

(8) Includes miscellaneous products (prior to 1978 these were estimated).



Petroleum products: Supply and disposals  
United Kingdom

	Ethane(1)	Propane	Butane	Other petrol- eum gases	Naphtha (LDF)	Aviation spirit	Wide-cut gasoline	Motor spirit	Industrial spirit	White spirit	Aviation turbine fuel
<b>1977</b>	2,521 (5)										
Refinery use	—	585	954	142	4,488	41	92	14,805	—	96	4,004
Losses	—	31	75		1,961	53	—	2,377	43	38	840
Refinery output	—	96	112	177	262						
Arrivals	—	—4	—3		—62	+6	—11	—181	—2	+11	—116
Indigenous primary product receipts	—										
Other receipts(2)	—										
Stock change(3)	—										
<b>Total supply</b>	—	716	1,144	319	6,773	88	103	17,363	45	123	4,960
Inland deliveries:											
For energy use	—	504	797	57	108	47	6	17,336	—	—	4,165
For non-energy use	—	2	17	169	5,071	—	—	—	62	115	—
Shipments	—	181	284	—	626	33	109	926	2	11	411
Bunkers											
Backflows to refineries											
<b>Total disposals</b>	—	687	1,098	226	5,805	80	115	18,262	64	126	4,576
Statistical differences(4)	—	+29	+46	+93	+968	+8	—12	—899	—19	—3	+384
<b>1978</b>											
Refinery use	99(5)	13	24	2,301	183			1			
Losses											
Refinery output	—	588	1,025	147	4,626	37	76	15,958	—	81	4,783
Arrivals	—	29	52	—	2,204	37	17	2,404	44	53	415
Indigenous primary product receipts	125	245	163	—	94						
Other receipts(2)	—	+11	—7	+1	—24	—13	—1	—80	+2	—	—86
Stock change(3)	—										
<b>Total supply</b>	125	851	1,247	146	6,948	87	94	18,442	42	134	5,284
Inland deliveries:											
For energy use	126	482	769	28	66	46	5	18,348	—	—	4,506
For non-energy use	—	39	28	117	4,850	—	—	—	68	127	—
Shipments	—	334	424	—	924	35	94	1,049	3	8	518
Bunkers											
Backflows to refineries											
<b>Total disposals</b>	126	855	1,221	145	5,840	81	99	19,397	71	135	5,024
Statistical differences(4)	—1	—4	+26	+1	+1,108	+6	—5	—955	—29	—1	+260

(1) Included in 'Other petroleum gases' for 1977.

(2) Petroleum products derived from other sources, mainly bitumen and lubricating oils.

(3) Actual change, Rise (+), Fall (—).

(4) Supply greater than (+) or less than (—) recorded disposals. The sum of the individual statistical differences do not add to the Total statistical difference owing to an inability to disaggregate the 'Backflows to refineries' to individual products. Individual product statistical differences can also compensate each other in that they reflect inter-product transfers after production and before disposal.

(5) Includes some gas separation plant own use.



45 (continued)

Thousand tonnes

Burning oil	Vaporising oil	Gas oil	Marine diesel oil	Fuel oil	Lubricating oils	Bitumen	Paraffin wax	Petroleum coke	Miscellaneous products	Total	
				2,973				744		6,238	<b>1977</b>
										1,039	Refinery use
2,452	10	22,753	723	30,481	1,380	1,882	86			86,338	Losses
290	5	1,669	162	4,769	381	20	2	1,364		13,050	Refinery output
								334			Arrivals
										647	Indigenous primary
					39	18				57	product receipts
+69	-3	-345	-53	-292	-1	-8	+2		+2	-991	Other receipts(2)
											Stock changes(3)
2,673	18	24,767	938	35,542	1,801	1,928	86		1,696	101,083	Total supply
											Inland deliveries:
2,615	12	19,085	540	27,772	-	-	-			73,044	For energy use
					1,029	1,847	74			9,715	For non-energy use
164	5	4,652	184	5,467	761	105	7	1,329		14,294	Shipments
		364	429	2,036				366		2,829	Bunkers
										682	Backflows to refineries
2,779	17	24,101	1,153	35,275	1,790	1,952	81		1,695	100,564	Total disposals
-106	+1	+666	-215	+267	+11	-24	+5		+1	+519	Statistical differences(4)
		9	31	3,274	3			450	35	6,423	<b>1978</b>
										811	Refinery use
2,602	12	23,621	403	30,518	1,203	1,886	91	413	1,086	89,156	Losses
161	-	1,514	130	3,847	395	68	12				Refinery output
									129	11,511	Arrivals
										627	Indigenous primary
						15			48	63	product receipts
-75	-3	+142	-4	-257	-4	-	+11		-9	-396	Other receipts(2)
											Stock change(3)
2,838	15	24,993	537	34,622	1,602	1,969	92		1,685	101,753	Total supply
											Inland deliveries:
2,652	8	19,055	420	28,191						74,702	For energy use
				42	1,021	1,887	84	115	1,061	9,439	For non-energy use
											Shipments
113	4	5,049	12	3,707	634	103	11		514	13,536	Bunkers
		345	621	1,906						2,872	Backflows to refineries
										916	
2,765	12	24,449	1,053	33,846	1,655	1,990	95		1,690	101,465	Total disposals
+73	+3	+544	-516	+776	-53	-21	-3		-5	+288	Statistical differences(4)



Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Throughput of crude and process oils</b>	83,100	91,699	101,911	105,342	106,980	114,338	111,217	93,579	97,784	93,615	96,390
Refinery fuel:											
Gases	1,584	1,871	2,042	2,423	2,374	2,572	2,491	2,168	2,508	2,521	2,437
Fuel Oil	2,998	3,232	3,533	3,337	3,536	3,946	3,895	3,342	3,066	2,973	3,274
Other products	573	533	453	424	510	535	560	521	768	744	712
Total	5,155	5,636	6,028	6,184	6,420	7,053	6,946	6,031	6,342	6,238	6,423
Losses	896	976	1,187	913	1,192	1,331	1,211	901	1,158	1,039	811
<b>Output of refined products</b>											
Gases:											
Propane	283	350	439	450	508	582	572	554	584	585	588
Butane	756	796	742	786	955	1,073	1,030	893	991	954	1,025
Other petroleum	595	515	370	284	369	394	272	151	158	142	147
Naphtha (L.D.F.)	5,918	6,094	6,442	5,728	5,728	6,607	6,448	3,968	4,583	4,488	4,626
Gasolines:											
Aviation spirit	60	37	49	60	31	63	14	16	26	41	37
Wide-cut gasoline	377	279	243	124	392	314	254	234	213	92	76
Motor spirit	9,530	10,227	11,347	12,522	13,632	14,842	14,520	13,940	15,232	14,805	15,958
Total	9,967	10,543	11,639	12,706	14,055	15,219	14,788	14,190	15,471	14,938	16,071
Industrial spirit	114	83	65	9	4	20	9	3	—	—	—
White spirit	137	115	124	122	121	130	141	91	109	96	81
Middle distillates											
Kerosene:											
Aviation turbine fuel	2,306	2,897	3,171	3,707	4,180	4,550	4,475	3,959	4,163	4,004	4,783
Burning oil	2,350	2,499	2,645	2,499	2,618	2,682	2,544	2,281	2,440	2,452	2,602
Vaporizing oil	70	57	37	41	31	35	20	18	18	10	12
Gas/diesel oil:											
Gas oil (2)	15,924	18,138	21,217	23,376	24,077	26,173	26,281	21,893	23,248	22,753	23,621
Marine diesel oil	1,221	1,340	1,297	1,079	1,459	1,680	1,360	1,430	950	723	403
Total	21,871	24,931	28,367	30,702	32,365	35,120	34,680	29,581	30,819	29,942	31,421
Fuel oil	34,260	38,266	42,858	43,173	41,002	42,026	40,022	32,711	32,695	30,481	30,518
Lubricating oils	1,035	1,202	1,323	1,429	1,333	1,477	1,455	1,141	1,310	1,380	1,203
Bitumen	1,753	1,723	1,917	2,094	2,004	2,225	2,129	2,099	1,897	1,882	1,886
Paraffin wax	57	59	66	65	68	86	99	67	81	86	91
Petroleum coke	303	410	344	697	856	995	1,415	1,198	1,586	1,364	413
Other products <sup>(3)</sup>											1,086
Total all products	77,049	85,087	94,696	98,245	99,368	105,954	103,060	86,647	90,284	86,338	89,156

(1) Crude and process oils comprise all feedstocks, other than distillation benzinies, for treatment at refinery plants. Refinery production does not cover further treatment of finished products for special grades such as in distillation plant for the preparation of industrial spirits.

(2) Including gas/diesel oil for supply as derv fuel.

(3) Other products comprise miscellaneous, mainly non-energy products e.g. sulphur, aromatics and defoamant solvents, and undefined feedstocks for petrochemical plants.



# Petroleum products: Arrivals, shipments and bunkers United Kingdom

Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Arrivals:</b>											
Gases	224	237	175	117	148	161	48	54	77	106	81
Naphtha (L.D.F.)	4,721	5,465	3,465	2,695	2,742	3,219	2,581	2,178	2,024	1,961	2,204
Aviation spirit	160	134	86	63	80	59	95	62	78	53	37
Wide-cut gasoline	158	50	33	29	58	31	28	25	—	—	17
Motor spirit	} 4,417	} 3,957	3,919	3,718	3,284	3,377	3,193	2,660	2,857	2,377	2,404
Industrial spirit			96	113	130	162	135	58	44	43	44
White spirit			56	41	49	47	48	41	41	22	31
Kerosene:											
Aviation turbine fuel	575	519	595	879	895	802	539	925	775	840	415
Burning oil	571	546	482	637	565	594	338	265	306	290	161
Vaporising oil	40	35	33	20	22	10	11	2	—	5	—
Gas/diesel oil	3,466	2,777	1,888	1,955	1,907	1,572	902	1,600	1,369	1,831	1,644
Fuel oil	7,441	6,154	8,710	8,205	9,855	7,054	5,641	4,163	2,371	4,769	3,847
Lubricating oils	616	522	480	467	484	475	528	364	430	381	395
Bitumen	63	133	119	120	221	250	172	82	59	20	68
Paraffin wax	1	1	2	6	1	1	4	1	1	2	12
Miscellaneous products(2)	189	187	296	298	387	492	281	325	287	334	129
Total	22,816 <sup>(1)</sup>	20,758	20,428	19,369	20,827	18,300	14,537	12,786	10,709	13,050	11,511
<b>Shipments:</b>											
Gases	46	75	105	131	136	168	167	176	316	465	758
Naphtha (L.D.F.)	133	178	371	623	591	488	822	523	614	626	924
Aviation spirit	83	66	37	52	32	41	26	31	48	33	35
Wide-cut gasoline	185	69	132	90	340	302	235	242	211	109	94
Motor spirit	} 875	} 822	} 988	1,117	1,243	1,257	899	1,155	1,276	926	1,049
Industrial spirit				2	2	2	2	1	1	2	3
White spirit				28	18	20	23	23	27	28	13
Kerosene:											
Aviation turbine fuel	535	637	527	641	652	586	792	563	599	411	518
Burning oil	399	417	431	562	498	506	316	299	235	164	113
Vaporising oil	30	27	19	14	13	15	11	8	6	5	4
Gas/diesel oil	5,137	5,462	6,210	6,477	6,098	6,832	6,739	5,751	6,080	4,836	5,061
Fuel oil	6,347	5,860	7,815	6,438	5,335	5,575	3,407	4,171	5,467	5,467	3,707
Lubricating oils	624	676	708	741	741	848	864	626	765	761	634
Bitumen	29	35	25	34	69	31	85	102	82	105	103
Paraffin wax	2	2	6	3	2	3	3	3	7	7	11
Miscellaneous products(2)	—	—	30	218	204	723	235	260	262	366	514
Total	14,453	14,344	17,424	17,166	15,979	17,404	14,631	13,924	15,988	14,294	13,536
<b>Bunkers:</b>											
Gas oil	}	731	780	798	726	770	997	811	749	756	793
Marine diesel oil											
Fuel oil		4,613	4,805	4,717	4,929	4,455	4,502	3,948	2,695	2,813	2,036
Total		5,344	5,585	5,515	5,655	5,225	5,499	4,759	3,444	3,569	2,829
											2,872

(1) Includes undefined petrochemical feedstocks which were 118 thousand tonnes in 1968.

(2) From Department of Trade, "Overseas Trade Statistics of the United Kingdom". Includes Petroleum Coke.



Stocks of petroleum products at end year  
United Kingdom

	Thousand tonnes										
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Propane	22	23	39	46	27	22	34	32	27	23	34
Butane	30	30	34	26	17	42	44	37	48	45	38
Other petroleum gases	—	—	—	—	1	—	—	—	—	—	1
Naphtha	763	971	832	622	493	820	752	633	692	630	606
Aviation spirit	65	53	56	45	36	33	49	42	36	42	29
Wide-cut gasoline	63	69	43	32	47	30	38	17	19	8	7
Motor spirit	1,699	1,599	1,611	1,667	1,685	2,017	2,316	1,979	2,099	1,918	1,838
Industrial spirit	27	18	13	15	17	12	15	14	18	16	18
White spirit	48	38	50	51	45	30	33	29	23	34	34
Aviation turbine fuel	336	395	455	542	560	608	638	700	729	613	527
Burning oil	607	635	672	713	606	555	666	488	522	591	516
Vaporising oil	49	46	43	38	36	30	22	14	11	8	5
Gas oil	2,547	2,554	2,518	3,317	2,893	3,347	4,025	3,149	2,906	2,561	2,703
Marine diesel oil	208	193	173	195	246	190	185	174	134	81	77
Fuel oil	4,441	4,697	5,778	6,520	5,771	4,735	6,056	5,409	4,783	4,491	4,234
Lubricating oils	485	429	458	518	504	444	580	511	504	503	499
Bitumen	88	109	114	122	118	131	150	128	150	142	142
Paraffin wax	4	2	3	9	6	7	10	8	6	8	19
Petroleum coke	43	51	75	121	111	93	122	73	132	134	20
Miscellaneous products											105
Total all products	11,525	11,912	12,967	14,599	13,219	13,146	15,735	13,437	12,839	11,848	11,452

Stock changes of petroleum products during year  
United Kingdom

	Thousand tonnes										
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Propane	+2	+1	+16	+7	-19	-5	+12	-2	-5	-4	+11
Butane	+1	—	+4	-8	-9	+25	+2	-7	+11	-3	-7
Other petroleum gases	—	—	—	—	+1	-1	—	—	—	—	+1
Naphtha	-48	+208	-139	-210	-129	+327	-68	-119	+59	-62	-24
Aviation spirit	+3	-12	+3	-11	-9	-3	+16	-7	-6	+6	-13
Wide-cut gasoline	-4	+6	-26	-11	+15	-17	+8	-21	+2	-11	-1
Motor spirit	—	-100	+12	+56	+18	+332	+299	-337	+120	-181	-80
Industrial spirit	+27	-9	-5	+2	+2	-5	+3	-1	+4	-2	+2
White spirit	+9	-10	+12	+1	-6	-15	+3	-4	-6	+11	—
Aviation turbine fuel	+336	+59	+60	+87	+18	+48	+30	+62	+29	-116	-86
Burning oil	-320	+28	+37	+41	-107	-51	+111	-178	+34	+69	-75
Vaporising oil	+3	-3	-3	-5	-2	-6	-8	-8	-3	-3	-3
Gas oil	+446	+7	-36	+799	-424	+454	+678	-876	-243	-345	+142
Marine diesel oil	+15	-15	-20	+22	+51	-56	-5	-11	-40	-53	-4
Fuel oil	-99	+256	+1,081	+742	-749	-1,036	+1,321	-647	-626	-292	-257
Lubricating oils	-27	-56	+29	+60	-14	-60	+136	-69	-7	-1	-4
Bitumen	+17	+21	+5	+8	-4	+13	+19	-22	+22	-8	—
Paraffin wax	-2	-2	+1	+6	-3	+1	+3	-2	-2	+2	+11
Petroleum coke	+5	+8	+24	+46	-10	-18	+29	-49	+59	+2	-9
Miscellaneous products											
Total all products	+364	+387	+1,055	+1,632	-1,380	-73	+2,589	-2,298	-598	-991	-396



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Inland deliveries  
United Kingdom

Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Energy use</b>											
Gases											
Propane and butane:											
For gasworks—Propane	136	131	106	70	52	28	13	14	17	16	18
Butane	657	592	500	358	304	233	59	39	29	10	10
Other uses—Propane	236	291	326	348	408	482	456	448	477	488	464
Butane	156	194	241	406	683	846	860	757	785	787	759
Propane and butane total	1,185	1,208	1,173	1,182	1,447	1,589	1,388	1,258	1,308	1,301	1,251
Other gases for gasworks	546	465	323	242	259	268	155	52	35	57	154
Naphtha (L.D.F.) for gasworks (1)	5,176	5,400	3,542	1,898	1,469	1,650	996	456	176	108	66
Aviation spirit	105	101	74	63	65	63	53	50	46	47	46
Wide-cut gasoline	347	282	153	83	77	72	63	32	2	6	5
Motor spirit											
Dealers											
5 star	1,387	1,112	1,225	1,683	2,339	2,669	1,998	1,572	1,338	694	161
4 star	6,343	6,664	6,947	7,043	7,567	8,249	9,162	9,522	10,620	12,117	14,101
3 star	1,057	1,562	2,257	2,334	2,126	2,033	1,846	1,717	1,621	1,388	1,112
2 star	3,093	2,969	2,688	2,838	2,880	2,996	2,579	2,384	2,400	2,220	2,052
Total	11,880	12,307	13,117	13,898	14,912	15,947	15,585	15,195	15,979	16,419	17,426
Commercial consumers											
5 star	163	153	153	154	152	148	113	93	67	50	37
4 star	450	465	478	464	450	471	448	503	525	555	601
3 star	56	70	93	91	85	94	87	93	93	99	103
2 star	464	449	394	357	300	267	251	241	215	213	181
Total	1,133	1,137	1,118	1,066	987	980	899	930	900	917	922
Total motor spirit	13,013	13,444	14,235	14,964	15,899	16,927	16,484	16,125	16,879	17,336	18,348
Kerosine:											
Aviation turbine fuel	2,764	2,968	3,254	3,667	3,929	4,202	3,690	3,834	3,989	4,165	4,506
Burning oil:											
Premier	830	853	836	713	778	788	603	538	576	559	536
Standard—Domestic	833	988	1,184	1,369	1,663	1,931	1,770	1,707	1,686	1,677	1,696
Other	336	403	461	484	487	465	409	383	358	379	420
Total	1,999	2,244	2,481	2,566	2,928	3,184	2,782	2,628	2,620	2,615	2,652
Vaporizing oil	75	65	54	48	41	35	27	17	13	12	8
Gas/diesel oil:											
Derv fuel:											
Dealers	698	721	797	854	931	1,061	966	947	963	959	984
Commercial consumers	3,953	4,147	4,238	4,332	4,323	4,597	4,552	4,467	4,631	4,752	4,891
Total	4,651	4,868	5,035	5,186	5,254	5,658	5,518	5,414	5,594	5,711	5,875
Other:											
Gas oil	8,781	10,059	11,554	12,124	14,553	14,594	13,111	12,599	12,522	13,374	13,180
Marine diesel oil	389	456	555	445	560	506	470	451	462	540	420
Total	9,170	10,515	12,109	12,569	15,113	15,100	13,581	13,050	12,984	13,914	13,600
Fuel oil:											
Light	3,430	3,451	3,163	2,588	2,203	1,895	1,579	1,340	1,138	1,123	982
Medium	5,202	5,521	6,856	6,155	5,812	5,410	4,709	4,210	4,275	4,167	3,919
Heavy	22,471	24,957	28,566	30,652	33,292	32,142	30,522	24,920	22,412	22,482	23,290
Total	31,103	33,929	38,585	39,395	41,307	39,447	36,810	30,470	27,825	27,772	28,191
<b>Total products used for energy</b>	<b>70,134</b>	<b>75,489</b>	<b>81,018</b>	<b>81,863</b>	<b>87,788</b>	<b>88,195</b>	<b>81,547</b>	<b>73,386</b>	<b>71,471</b>	<b>73,044</b>	<b>74,702</b>
<b>Non Energy use</b>											
Feedstock for petroleum-chemical plants											
Propane						0	2	1	2	2	39
Butane	113	123	113	69	113	11	24	17	19	17	28
Other gases						122	117	101	163	169	117
Total gases	113	123	113	69	113	133	143	119	184	188	184
Naphtha (L.D.F.)	5,070	5,851	5,948	5,725	5,922	6,723	6,704	4,660	5,228	5,071	4,850
Other products	244	288	275	260	280	340	365	155	264	488	855(2)
Total	5,427	6,262	6,336	6,054	6,315	7,196	7,212	4,934	5,676	5,747	5,889
Industrial spirit	220	101	48	48	68	79	71	68	66	62	68
White spirit	147	144	137	137	147	155	136	134	122	115	127
Lubricating oils	1,152	1,228	1,175	1,148	1,113	1,185	1,045	992	1,010	1,029	1,021
Bitumen	1,858	1,841	2,069	2,208	2,203	2,458	2,241	2,089	1,867	1,847	1,887
Paraffin wax	55	59	57	62	66	76	90	64	79	74	84
Petroleum Coke											
Miscellaneous Products	243(3)	301(3)	311(3)	471(3)	769(3)	442(3)	1,067(3)	1,157(3)	1,288(3)	841(3)	115
Total non energy	9,102	9,936	10,133	10,128	10,681	11,591	11,862	9,438	10,108	9,715	9,439
<b>Total all products</b>	<b>79,236</b>	<b>85,425</b>	<b>91,151</b>	<b>91,991</b>	<b>98,469</b>	<b>99,786</b>	<b>93,409</b>	<b>82,824</b>	<b>81,579</b>	<b>82,759</b>	<b>84,141</b>

(1) Including a quantity supplied for use as fuel by other consumers. This amounted to 4 thousand tonnes in 1978.

(2) Includes 42 thousand tonnes of fuel oil.

(3) Estimated.



# Inland deliveries by countries

## United Kingdom <sup>(1)</sup>

	Gases		Feed stock Naphtha (L.D.F.) for gas works and other uses(2) (3)	Avia- tion spirit (4) (4)	Wide cut gasoline (5) (5)	Motor Spirit			Kerosene		
	Butane and pro- pane for gas works and other uses (1) (1)	Other gases for gas works and other uses (2) (2)				Dealers (6) (6)	Commer- cial con- sumers (7) (7)	Total (8) (8)	Avia- tion turbine fuel (9) (9)	Burning oil (10) (10)	Vapori- zing oil (11) (11)
England & Wales											
1968	962	473	4,747	81	344	10,706	1,003	11,709	2,471	1,837	62
1969	968	394	4,924	78	277	11,078	1,008	12,086	2,665	2,049	54
1970	920	260	3,045	62	147	11,822	991	12,813	2,929	2,268	45
1971	958	184	1,717	57	72	12,506	934	13,440	3,312	2,348	39
1972	1,234	198	1,254	57	73	13,429	865	14,294	3,592	2,654	33
1973	1,352	219	1,424	52	70	14,342	847	15,189	3,818	2,870	27
1974	1,174	107	792	44	62	14,030	779	14,809	3,348	2,496	22
1975	1,034	32	291	41	31	13,648	807	14,455	3,453	2,340	14
1976	1,099	15	64	37	1	14,366	773	15,139	3,587	2,310	12
1977	1,098	7	43	36	5	14,766	789	15,555	3,753	2,293	11
1978	1,079	8	4	36	4	15,668	792	16,460	4,081	2,323	7
Scotland											
1968	203	55	386	14	3	863	102	965	275	122	6
1969	218	50	423	14	5	912	100	1,012	282	145	5
1970	227	43	430	9	6	951	94	1,045	302	155	4
1971	186	39	119	5	11	1,032	98	1,130	334	155	4
1972	175	41	143	7	4	1,109	90	1,199	314	194	4
1973	202	31	149	9	2	1,212	98	1,310	355	222	4
1974	178	29	121	8	1	1,179	83	1,262	319	200	2
1975	188	1	97	8	1	1,161	85	1,246	358	203	1
1976	190	—	48	8	1	1,196	88	1,284	381	218	—
1977	171	33	—	10	1	1,222	89	1,311	387	222	—
1978	144	126	—	9	1	1,292	93	1,385	398	215	—
Northern Ireland											
1968	20	18	43	10	—	311	28	339	18	40	7
1969	22	21	53	9	—	317	29	346	21	50	6
1970	26	20	67	3	—	344	33	377	23	58	5
1971	38	19	62	1	—	360	34	394	21	63	5
1972	38	20	72	1	—	374	32	406	23	80	4
1973	35	18	77	2	—	393	35	428	29	92	4
1974	36	19	83	1	—	376	37	413	23	86	3
1975	36	19	68	1	—	386	38	424	23	85	2
1976	19	20	64	1	—	417	39	456	21	92	1
1977	32	17	65	1	—	431	39	470	25	100	1
1978	28	20	62	1	—	466	37	503	27	114	1



51 (continued)

Thousand tonnes

Gas/diesel oil		Fuel oils (14)	Total products used as energy (15)	Feed stock for petroleum chemical plants (16)	Industrial spirit (17)	White spirit (18)	Lubricating oils (19)	Bitumen (20)	Paraffin wax (21)	Total (3) products used as non energy (22)	Total (3) all products (23)	
Derv fuel (12)	Other (13)											
4,100	8,037	26,980	61,803	4,699	201	140	1,052	1,465	53	7,853	69,656	England & Wales
4,285	9,263	29,231	66,274	5,460	94	137	1,125	1,476	57	8,650	74,924	1968
4,453	10,709	33,054	70,705	5,413	43	130	1,072	1,712	56	8,737	79,442	1969
4,592	11,087	33,372	71,178	5,073	42	130	1,047	1,830	61	8,654	79,832	1970
4,633	13,459	34,884	76,365	5,183	62	141	1,003	1,816	65	9,039	85,404	1971
												1972
4,992	13,255	32,977	76,245	5,890	72	148	1,061	2,024	74	9,711	85,956	1973
4,891	11,720	30,470	69,935	5,978	65	129	923	1,840	89	10,091	80,026	1974
4,756	11,008	25,530	62,985	4,156	62	127	883	1,689	62	8,136	71,121	1975
4,911	10,813	22,897	60,885	4,795	58	112	915	1,510	76	8,754	69,639	1976
5,026	11,685	23,004	62,516	4,863	55	109	921	1,494	72	8,355	70,871	1977
5,174	11,471	23,347	63,994	4,882	64	123	918	1,526	82	7,958	71,952	1978
460	940	2,965	6,394	714	19	6	83	309	2	1,133	7,527	Scotland
488	1,028	3,320	6,990	769	7	6	85	284	2	1,153	8,143	1968
485	1,140	3,963	7,809	885	5	6	85	268	1	1,250	9,059	1969
493	1,186	4,431	8,093	951	5	6	83	291	1	1,337	9,430	1970
516	1,301	4,662	8,560	1,115	5	5	90	288	1	1,504	10,064	1971
												1972
553	1,433	4,490	8,760	1,291	6	6	103	336	2	1,744	10,504	1973
522	1,473	4,419	8,534	1,234	5	6	102	302	1	1,650	10,184	1974
541	1,673	3,119	7,436	778	5	6	91	303	2	1,185	8,621	1975
559	1,756	2,949	7,394	881	7	10	79	256	3	1,236	8,630	1976
558	1,806	2,888	7,387	884	6	6	92	246	2	1,236	8,623	1977
564	1,695	3,059	7,596	955	3	4	86	249	2	1,299	8,895	1978
91	193	1,158	1,937	14	—	1	17	84	—	116	2,053	Northern Ireland
95	224	1,378	2,225	33	—	1	18	81	—	133	2,358	1968
97	260	1,568	2,504	38	—	1	18	89	—	146	2,650	1969
101	296	1,592	2,592	30	1	1	18	87	—	137	2,729	1970
105	353	1,761	2,863	17	1	1	20	99	—	138	3,001	1971
												1972
113	412	1,980	3,190	15	1	1	21	98	—	136	3,326	1973
105	388	1,921	3,078	—	1	1	20	99	—	121	3,199	1974
117	369	1,821	2,965	—	1	1	18	97	—	117	3,082	1975
124	415	1,979	3,192	—	1	—	16	101	—	118	3,310	1976
127	423	1,880	3,141	—	1	—	16	107	—	124	3,265	1977
137	434	1,785	3,112	52	1	—	17	112	—	182	3,294	1978

(1) Includes Channel Islands and Isle of Man.

(2) See footnote (1) Table 50.

(3) Includes deliveries of miscellaneous products and petroleum coke, which are estimated for years prior to 1978 and wholly allocated to England and Wales for these years.



Million tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Consumption by fuel producers</b>											
Power Stations	6.52	8.41	12.60	14.68	18.87	16.95	17.21	12.82	10.18	10.60	11.49
Refineries	5.16	5.64	6.03	6.18	6.42	7.05	6.95	6.03	6.34	6.24	6.42
Gas works	6.90	6.85	4.56	2.59	2.21	2.32	1.28	0.59	0.25	0.16	0.28
<b>Total</b>	<b>18.58</b>	<b>20.90</b>	<b>23.19</b>	<b>23.45</b>	<b>27.50</b>	<b>26.32</b>	<b>25.44</b>	<b>19.44</b>	<b>16.77</b>	<b>17.00</b>	<b>18.19</b>
<b>Deliveries to final user</b>											
<b>Industry</b>											
Iron and steel											
Butane and propane	0.02	0.03	0.03	0.13	0.06	0.06	0.04	0.04	0.05	0.05	0.06
Gas/diesel oil	0.31	0.39	0.41	0.44	0.48	0.51	0.43	0.32	0.25	0.28	0.30
Fuel oil	4.65	5.01	5.23	4.72	4.50	4.42	3.55	2.95	2.83	2.61	2.47
<b>Total</b>	<b>4.98</b>	<b>5.43</b>	<b>5.67</b>	<b>5.29</b>	<b>5.04</b>	<b>4.99</b>	<b>4.02</b>	<b>3.31</b>	<b>3.13</b>	<b>2.94</b>	<b>2.83</b>
Other industries											
Butane and propane	0.30	0.39	0.47	0.55	0.96	1.19	1.18	1.07	1.12	1.09	1.03
Burning oil	0.28	0.35	0.40	0.43	0.43	0.40	0.35	0.32	0.30	0.32	0.38
Vaporizing oil	0.01	—	—	—	—	—	—	—	—	—	—
Gas/diesel oil	3.49	4.06	4.58	4.77	5.61	5.67	4.88	4.50	4.48	4.63	4.68
Fuel oil	14.50	15.01	15.65	15.30	14.90	14.80	13.28	11.36	11.59	11.61	11.44
<b>Total</b>	<b>18.58</b>	<b>19.81</b>	<b>21.10</b>	<b>21.05</b>	<b>21.90</b>	<b>22.06</b>	<b>19.69</b>	<b>17.25</b>	<b>17.49</b>	<b>17.65</b>	<b>17.53</b>
Other deliveries (2)	0.42	0.41	0.45	0.50	0.24	0.12	0.13	0.64	0.39	0.41	0.22
<b>Total</b>	<b>19.00</b>	<b>20.22</b>	<b>21.55</b>	<b>21.55</b>	<b>22.14</b>	<b>22.18</b>	<b>19.82</b>	<b>17.89</b>	<b>17.88</b>	<b>18.06</b>	<b>17.75</b>
<b>Total industry</b>	<b>23.98</b>	<b>25.65</b>	<b>27.22</b>	<b>26.84</b>	<b>27.18</b>	<b>27.17</b>	<b>23.84</b>	<b>21.20</b>	<b>21.01</b>	<b>21.00</b>	<b>20.58</b>
<b>Transport</b>											
Railways											
Burning oil	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Gas/diesel oil	0.94	0.97	1.00	0.99	0.94	0.97	0.91	0.86	0.81	0.81	0.82
Fuel oil	0.10	0.12	0.14	0.10	0.08	0.05	0.05	0.05	0.05	0.06	0.06
<b>Total</b>	<b>1.06</b>	<b>1.10</b>	<b>1.15</b>	<b>1.10</b>	<b>1.03</b>	<b>1.03</b>	<b>0.97</b>	<b>0.92</b>	<b>0.87</b>	<b>0.88</b>	<b>0.89</b>
Road transport											
Motor spirit	12.94	13.42	14.24	14.96	15.90	16.93	16.48	16.12	16.88	17.34	18.35
Derv fuel	4.65	4.87	5.03	5.19	5.25	5.66	5.52	5.41	5.59	5.71	5.87
<b>Total</b>	<b>17.59</b>	<b>18.29</b>	<b>19.27</b>	<b>20.15</b>	<b>21.15</b>	<b>22.59</b>	<b>22.00</b>	<b>21.53</b>	<b>22.47</b>	<b>23.05</b>	<b>24.22</b>
Water transport											
Gas/diesel oil	0.66	0.69	0.73	0.71	0.67	0.77	0.92	1.07	1.13	1.13	1.11
Fuel oil	0.36	0.37	0.38	0.30	0.22	0.24	0.23	0.14	0.09	0.09	0.09
<b>Total</b>	<b>1.02</b>	<b>1.06</b>	<b>1.11</b>	<b>1.01</b>	<b>0.89</b>	<b>1.01</b>	<b>1.15</b>	<b>1.21</b>	<b>1.22</b>	<b>1.22</b>	<b>1.20</b>
Air transport											
Aviation spirit	0.10	0.10	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
Wide-cut gasoline	0.35	0.28	0.15	0.08	0.08	0.07	0.06	0.03	—	—	—
Aviation turbine fuel	2.76	2.97	3.25	3.67	3.93	4.20	3.69	3.83	3.99	4.17	4.51
<b>Total</b>	<b>3.21</b>	<b>3.35</b>	<b>3.47</b>	<b>3.81</b>	<b>4.07</b>	<b>4.33</b>	<b>3.80</b>	<b>3.91</b>	<b>4.04</b>	<b>4.22</b>	<b>4.56</b>
<b>Total transport</b>	<b>22.88</b>	<b>23.80</b>	<b>25.00</b>	<b>26.07</b>	<b>27.14</b>	<b>28.96</b>	<b>27.92</b>	<b>27.57</b>	<b>28.60</b>	<b>29.37</b>	<b>30.87</b>

(1) Coal derived benzole is excluded.

(2) The figures are the difference between total deliveries for gas making and electricity generation as recorded by the petroleum industry and actual consumption of petroleum products (including gases) by the public supply gas and electricity industries and transport power stations. They are included as fuel oil in the total for all classes of final consumers.



52 (continued)

Million tonnes											
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Domestic</b>											
Butane and propane	0.07	0.07	0.07	0.07	0.07	0.08	0.09	0.09	0.09	0.13	0.13
Burning oil:											
Premier	0.83	0.85	0.84	0.71	0.78	0.79	0.60	0.54	0.58	0.56	0.54
Standard	0.85	1.01	1.21	1.40	1.69	1.96	1.80	1.74	1.71	1.71	1.70
Gas/diesel oil	0.59	0.64	0.75	0.72	0.86	0.90	0.82	0.84	0.83	0.85	0.81
Fuel oil	0.21	0.22	0.18	0.11	0.08	0.07	0.07	0.06	0.06	0.06	0.06
<b>Total domestic</b>	<b>2.55</b>	<b>2.79</b>	<b>3.05</b>	<b>3.01</b>	<b>3.48</b>	<b>3.80</b>	<b>3.38</b>	<b>3.27</b>	<b>3.27</b>	<b>3.31</b>	<b>3.24</b>
<b>Other final consumers</b>											
Public administration											
Burning oil	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Gas/diesel oil	0.87	1.05	1.38	1.80	2.16	2.35	2.21	2.31	2.44	2.69	2.65
Fuel oil	2.56	2.62	2.80	2.74	2.46	2.11	1.79	1.63	1.71	1.83	1.65
<b>Total</b>	<b>3.44</b>	<b>3.68</b>	<b>4.19</b>	<b>4.55</b>	<b>4.63</b>	<b>4.47</b>	<b>4.01</b>	<b>3.95</b>	<b>4.16</b>	<b>4.53</b>	<b>4.31</b>
Agriculture											
Burning oil	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vaporizing oil	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.01
Gas/diesel oil	0.76	0.79	0.86	1.02	1.18	1.25	1.03	1.06	0.98	1.03	1.04
Fuel oil	0.41	0.44	0.41	0.36	0.35	0.37	0.30	0.30	0.30	0.33	0.32
<b>Total</b>	<b>1.24</b>	<b>1.30</b>	<b>1.33</b>	<b>1.44</b>	<b>1.58</b>	<b>1.66</b>	<b>1.37</b>	<b>1.39</b>	<b>1.30</b>	<b>1.38</b>	<b>1.38</b>
Miscellaneous											
Gas/diesel oil	1.01	1.23	1.36	1.34	1.52	1.79	1.62	1.65	1.69	1.77	1.68
Fuel oil	1.54	1.76	1.71	1.34	1.18	1.07	0.91	0.94	1.01	0.92	0.88
<b>Total</b>	<b>2.55</b>	<b>2.99</b>	<b>3.07</b>	<b>2.68</b>	<b>2.70</b>	<b>2.86</b>	<b>2.53</b>	<b>2.59</b>	<b>2.70</b>	<b>2.69</b>	<b>2.56</b>
<b>Total other final consumers</b>	<b>7.23</b>	<b>7.97</b>	<b>8.59</b>	<b>8.67</b>	<b>8.91</b>	<b>8.99</b>	<b>7.91</b>	<b>7.93</b>	<b>8.16</b>	<b>8.60</b>	<b>8.25</b>
<b>All classes of final consumer</b>											
Butane and propane	0.39	0.49	0.57	0.75	1.09	1.33	1.31	1.20	1.26	1.27	1.22
Aviation spirit	0.10	0.10	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
Wide-cut gasoline	0.35	0.28	0.15	0.08	0.08	0.07	0.06	0.03	—	—	—
Motor spirit	12.94	13.42	14.24	14.96	15.90	16.93	16.48	16.12	16.88	17.34	18.35
Aviation turbine fuel	2.76	2.97	3.25	3.67	3.93	4.20	3.69	3.83	3.99	4.17	4.51
Burning oil	2.00	2.24	2.48	2.57	2.93	3.18	2.78	2.63	2.62	2.62	2.65
Vaporizing oil	0.07	0.06	0.05	0.05	0.04	0.03	0.03	0.02	0.01	0.01	0.01
Derv fuel	4.65	4.87	5.03	5.19	5.25	5.66	5.52	5.41	5.59	5.71	5.87
Gas/diesel oil	8.63	9.82	11.07	11.79	13.42	14.21	12.82	12.61	12.61	13.19	13.09
Fuel oil	24.75	25.96	26.95	25.47	24.01	23.25	20.31	18.07	18.03	17.92	17.19
<b>Total</b>	<b>56.64</b>	<b>60.21</b>	<b>63.86</b>	<b>64.59</b>	<b>66.71</b>	<b>68.92</b>	<b>63.05</b>	<b>59.97</b>	<b>61.04</b>	<b>62.28</b>	<b>62.94</b>
<b>Grand total</b>	<b>75.22</b>	<b>81.11</b>	<b>87.05</b>	<b>88.04</b>	<b>94.21</b>	<b>95.24</b>	<b>88.49</b>	<b>79.41</b>	<b>77.81</b>	<b>79.28</b>	<b>81.13</b>



Inland deliveries of gas/diesel and fuel oils<sup>(1)</sup>

United Kingdom

Thousand tonnes

	Gas/diesel oil(2)			Fuel oil			Total		
	1976	1977	1978	1976	1977	1978	1976	1977	1978
Manufacturing industries:-									
Metals:									
Steel	205	225	251	2,787	2,573	2,435	2,992	2,798	2,686
Iron castings	45	51	54	39	38	33	84	89	87
Non-ferrous metals	108	109	115	235	217	208	343	326	323
Total	358	385	420	3,061	2,828	2,676	3,419	3,213	3,096
Engineering:									
General non-electrical	469	488	479	640	666	651	1,109	1,154	1,130
Electrical	160	151	143	399	383	385	559	534	528
Shipbuilding and marine engineering	65	66	66	60	57	54	125	123	120
Motor and cycle manufacture	126	121	102	313	332	304	439	453	406
Aircraft manufacture	29	36	35	139	133	120	168	169	155
Other vehicle manufacture	43	47	43	38	41	41	81	88	84
Other metal manufacture	116	106	99	219	221	190	335	327	289
Total	1,008	1,015	967	1,808	1,833	1,745	2,816	2,848	2,712
Food									
Grain milling	25	26	27	76	73	62	101	99	89
Baking	114	108	95	81	78	58	195	186	153
Milk products	26	25	26	219	252	272	245	277	298
Sugar and sugar confectionery	14	22	20	239	251	258	253	273	278
Drink	86	76	78	622	633	668	708	709	746
Tobacco	7	8	9	41	42	36	48	50	45
Other	143	131	134	533	505	498	676	636	632
Total	415	396	389	1,811	1,834	1,852	2,226	2,230	2,241
Chemicals:									
Soaps and detergents	2	3	4	182	180	135	184	183	139
Plastics and synthetic rubber	40	67	58	298	275	254	338	342	312
Other (including petroleum chemicals)	184	214	201	2,355	2,559	2,547	2,539	2,773	2,748
Total	226	284	263	2,835	3,014	2,936	3,061	3,298	3,199
Textiles and leather:									
Man made fibres	33	44	40	577	576	572	610	620	612
Cotton	7	7	7	91	92	86	98	99	93
Wool	18	14	14	125	112	120	143	126	134
Other textiles	42	39	38	319	319	302	361	358	340
Leather	9	9	9	62	63	61	71	72	70
Clothing	51	49	49	92	102	102	143	151	151
Total	160	162	157	1,266	1,264	1,243	1,426	1,426	1,400
Timber, rubber and paper:									
Timber	59	62	62	59	66	64	118	128	126
Paper making	40	51	50	1,075	1,036	1,111	1,115	1,087	1,161
Printing	65	69	58	100	99	96	165	168	154
Rubber goods	13	14	15	149	156	130	162	170	145
Total	177	196	185	1,383	1,357	1,401	1,560	1,553	1,586
Bricks and ceramics:									
Bricks and other building materials	216	202	218	333	289	288	549	491	506
Pottery	6	7	8	11	11	13	17	18	21
Glass	21	21	21	594	552	545	615	573	566
Cement	25	24	23	152	159	119	177	183	142
Total	268	254	270	1,090	1,011	965	1,358	1,265	1,235
Other manufacturing industries	387	411	428	647	531	549	1,034	942	977
<b>Total manufacturing industries</b>	<b>2,999</b>	<b>3,103</b>	<b>3,079</b>	<b>13,901</b>	<b>13,672</b>	<b>13,367</b>	<b>16,900</b>	<b>16,775</b>	<b>16,446</b>



53 (continued)

Thousand tonnes

	Gas/diesel oil(2)			Fuel oil			Total		
	1976	1977	1978	1976	1977	1978	1976	1977	1978
Petroleum industry(3)	163	160	152	511	441	409	674	601	561
Public utilities:									
Gas making	15	9	7	109	102	95	124	111	102
Electricity generation(4)	360	715	493	10,081	10,161	11,145	10,441	10,876	11,638
Water supply	33	45	44	2	2	1	35	47	45
Railways	813	808	824	47	60	57	860	868	881
<b>Total public utilities</b>	<b>1,221</b>	<b>1,577</b>	<b>1,368</b>	<b>10,239</b>	<b>10,325</b>	<b>11,298</b>	<b>11,460</b>	<b>11,902</b>	<b>12,666</b>
Non-manufacturing industries:—									
Agriculture and forestry:									
Power units	758	798	776	34	38	42	792	836	818
Driers and heaters	226	233	265	266	292	274	492	525	539
<b>Total</b>	<b>984</b>	<b>1,031</b>	<b>1,041</b>	<b>300</b>	<b>330</b>	<b>316</b>	<b>1,284</b>	<b>1,361</b>	<b>1,357</b>
Mines and quarries	319	310	323	42	57	62	361	367	385
Building and contracting (incl. open-cast mining)	886	875	888	46	49	77	932	924	965
Laundries	53	52	55	148	147	137	201	199	192
Miscellaneous non-manufacturing	438	524	595	277	296	298	715	820	893
Marine:									
Fishing	346	309	295	12	4	5	358	313	300
Other coastal and inland shipping	781	819	819	79	83	84	860	902	903
<b>Total</b>	<b>1,127</b>	<b>1,128</b>	<b>1,114</b>	<b>91</b>	<b>87</b>	<b>89</b>	<b>1,218</b>	<b>1,215</b>	<b>1,203</b>
<b>Total non-manufacturing industries</b>	<b>3,807</b>	<b>3,920</b>	<b>4,016</b>	<b>904</b>	<b>966</b>	<b>979</b>	<b>4,711</b>	<b>4,886</b>	<b>4,995</b>
Central heating—non-industrial:									
Private houses	612	611	590	23	27	28	635	638	618
Other dwellings	218	234	222	39	37	36	257	271	258
Offices	379	413	395	128	111	111	507	524	506
Distributive trades	449	471	434	242	236	232	691	707	666
Educational establishments	885	948	958	186	175	144	1,071	1,123	1,102
Medical and welfare establishments	433	499	474	821	936	880	1,254	1,435	1,354
Religious premises	171	172	163	4	3	1	175	175	164
Places of entertainment	149	147	132	37	36	33	186	183	165
Catering establishments	196	199	188	40	35	30	236	234	218
National Government buildings	408	424	411	334	313	306	742	737	717
Local Government buildings	493	535	544	123	100	71	616	635	615
British Armed Forces	189	230	205	237	298	240	426	528	445
Foreign Armed Forces	31	57	54	6	6	5	37	63	59
Other premises	181	214	215	50	55	63	231	269	278
<b>Total central heating</b>	<b>4,794</b>	<b>5,154</b>	<b>4,985</b>	<b>2,270</b>	<b>2,368</b>	<b>2,180</b>	<b>7,064</b>	<b>7,522</b>	<b>7,165</b>
<b>Total deliveries into consumption</b>	<b>12,984</b>	<b>13,914</b>	<b>13,600</b>	<b>27,825</b>	<b>27,772</b>	<b>28,233</b>	<b>40,809</b>	<b>41,686</b>	<b>41,833</b>

(1) The analysis is based on the *Standard Industrial Classification, 1968*, but the assignment to classes of the SIC has been made on the basis of such information about customers as was available to the oil company supplying them with fuel.

(2) Excluding derv fuel.

(3) Excluding refinery fuel

(4) Including establishments producing electricity for transport operation and for groups of factories.



# Inland deliveries by end use (1) United Kingdom

Thousand tonnes

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Butane and propane:</b>											
Domestic	67	68	73	78	83	91	91	91	90	130	154
Gas making	793	723	606	428	356	261	72	53	46	26	28
Other (2)	325	417	494	676	1,008	1,237	1,224	1,112	1,173	1,145	1,069
<b>Total</b>	<b>1,185</b>	<b>1,208</b>	<b>1,173</b>	<b>1,182</b>	<b>1,447</b>	<b>1,589</b>	<b>1,387</b>	<b>1,256</b>	<b>1,309</b>	<b>1,301</b>	<b>1,251</b>
<b>Motor spirit:</b>											
Cars and motor cycles	10,232	10,628	11,431	12,132	13,026	13,976	13,615	13,340	14,138	14,525	15,465
Public service vehicles and taxis	81	81	76	76	76	76	75	76	76	76	76
Goods vehicles	2,470	2,501	2,493	2,520	2,560	2,642	2,571	2,490	2,450	2,515	2,600
Services and other Government	172	173	176	178	181	178	171	168	165	170	157
Petroleum industry own use	2	—	—	—	—	—	—	—	—	—	—
Miscellaneous	56	61	59	58	56	55	52	51	50	50	50
<b>Total</b>	<b>13,013</b>	<b>13,444</b>	<b>14,235</b>	<b>14,964</b>	<b>15,899</b>	<b>16,927</b>	<b>16,484</b>	<b>16,125</b>	<b>16,879</b>	<b>17,336</b>	<b>18,348</b>
<b>Burning oil:</b>											
Farming	10	10	10	10	10	10	9	10	10	10	10
Industrial and railways	290	352	409	429	429	405	355	329	306	324	397
Services and other Government	10	15	17	19	21	20	17	16	15	15	13
<b>Domestic Heating:</b>											
Boilers	833	988	1,184	1,369	1,663	1,931	1,770	1,708	1,686	1,677	1,696
Other	830	853	836	713	778	788	603	537	576	559	536
Lighting and cooking	26	26	25	26	27	30	28	28	27	30	30
<b>Total</b>	<b>1,999</b>	<b>2,244</b>	<b>2,481</b>	<b>2,566</b>	<b>2,928</b>	<b>3,184</b>	<b>2,782</b>	<b>2,628</b>	<b>2,620</b>	<b>2,615</b>	<b>2,652</b>
<b>Derv fuel:</b>											
Public service vehicles and taxis	981	991	989	955	955	935	914	874	870	870	870
Goods vehicles	3,560	3,754	3,927	4,090	4,163	4,577	4,470	4,410	4,590	4,709	4,876
Petroleum industry own use	79	91	82	103	95	103	91	88	90	88	85
Miscellaneous	31	32	37	38	41	43	43	42	44	44	44
<b>Total</b>	<b>4,651</b>	<b>4,868</b>	<b>5,035</b>	<b>5,186</b>	<b>5,254</b>	<b>5,658</b>	<b>5,518</b>	<b>5,414</b>	<b>5,594</b>	<b>5,711</b>	<b>5,875</b>
<b>Lubricating oils and grease:</b>											
Aviation	5	5	4	4	4	4	3	3	3	4	4
Industrial	647	727	651	622	622	646	570	531	539	552	546
Marine	80	86	89	97	78	77	73	73	70	74	62
Motors	393	379	398	392	378	411	361	346	354	356	362
Agricultural	27	31	33	33	31	34	28	29	33	33	37
Fuel oil sold as lubricant	—	—	—	—	—	13	10	10	12	10	10
<b>Total</b>	<b>1,152</b>	<b>1,228</b>	<b>1,175</b>	<b>1,148</b>	<b>1,113</b>	<b>1,185</b>	<b>1,045</b>	<b>992</b>	<b>1,011</b>	<b>1,029</b>	<b>1,021</b>

(1) Source: 'Institute of Petroleum'. The figures are partly estimated.

(2) Excludes butane and propane used for 'Feedstock to petrochemical plants'.



# Gas

The first two Tables in this section summarize the production, distribution and consumption of gas from all sources in the United Kingdom. The public supply of gas in Great Britain is the responsibility of the British Gas Corporation (the Gas Council prior to 1973) and the remaining Tables relate to their operations, excepting that Tables 57 and 63 also include information relating to the operations of the public supply gas undertakings in Northern Ireland. All consumption figures include any use for own generation of electricity. The following notes, other than for production, refer to the public supply gas industry.

## Production (Table 55)

Town gas and Substitute Natural Gas (SNG) production are gases made by the public supply gas industry from coal, coke, coke breeze or oil. SNG is manufactured gas that has the properties of natural gas and is distributed as such.

North Sea natural gas production relates to the output of indigenous methane at land terminals and gas separation plants and includes output for their own use. Output of the Norwegian share of the Frigg gas field from these installations is included under imports. A very small quantity of inshore produced methane (other than colliery methane) is also included.

Colliery methane production is colliery methane piped to the surface and consumed at collieries or disposed of to consumers.

Coke oven and blast furnace gas production includes gas burnt to waste.

Liquefied petroleum gas production is petroleum refinery output of propane and butane plus that used in refineries as fuel, plus propanes and butanes yielded from North Sea associated hydrocarbon gases at gas separation plants.

Other petroleum gas production is petroleum refinery output of gases other than propane and butane, plus that used in refineries as a fuel, plus ethane yielded from North Sea associated hydrocarbon gases at gas separation plants.

## Period covered

Figures for financial years relate to years ended 31st March. All other annual figures cover periods of 52 weeks, except sales of gas which are for calendar years.

## Gas made (Tables 58 and 59)

All types of gas made from solid and liquid fuels except for producer gas made for firing retorts. Gas used in benzole extraction is excluded.

## Gas available (Tables 58 and 59)

Gas made together with reformed purchased gas and gas purchased and resold as such.

## System load factor (Table 59)

The average weekly gas available during the financial year expressed as a percentage of the availability in the peak week during the same period.

## Coal used (Tables 57–59)

Coal used for gas making, including that consumed in gas making processes other than carbonization and small quantities of coal used for other purposes.

## Oil used (Tables 57–59)

Light oils (including light distillates, gasoline and kerosine), gas oils (including heavy kerosine, light and heavy gas oils) and heavy oils (including residual oils). Petroleum gases are not included.

## Gas sales (Tables 57–63)

Gas supplied to consumers including natural gas supplied direct but excluding any bulk sales to gas undertakings. It differs from the total availability of gas, because of losses in transmission, differences in temperature and pressure between the points at which the gas is measured at the gas works and at consumers' premises, delays in reading meters, and consumption in the works, offices, showrooms, etc., of the undertakings. The figures include an adjustment to the quantities billed to consumers to allow for the estimated consumption remaining unread at the end of each year.

The classes of consumers are defined as follows:—

Domestic includes premises used wholly or mainly for domestic purposes.

Industrial includes factories, workshops and other industrial premises where goods, commodities or articles are produced, manufactured or processed.

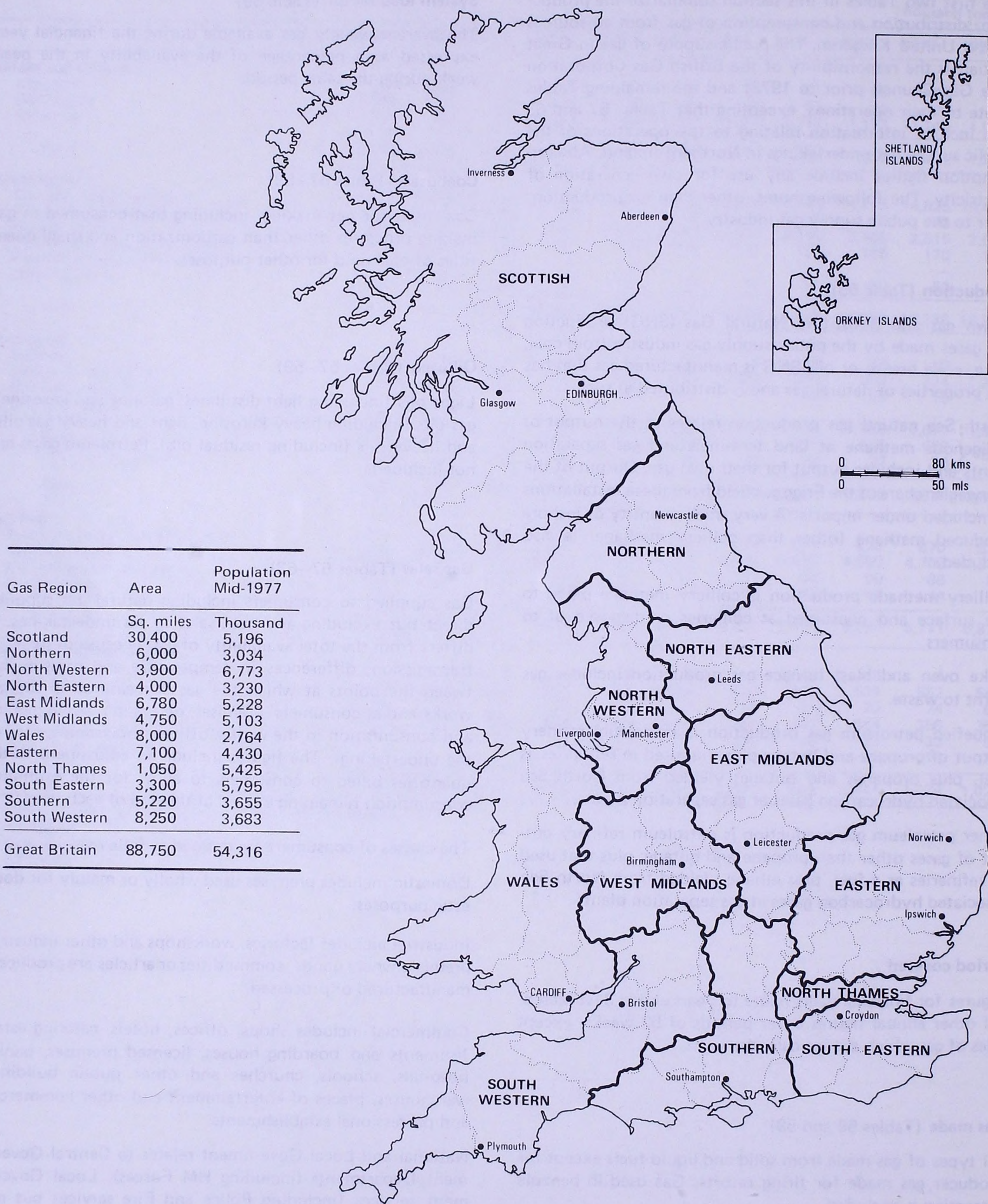
Commercial includes shops, offices, hotels, catering establishments and boarding houses, licensed premises, banks, hospitals, schools, churches and other public buildings, warehouses, places of entertainment and other commercial and professional establishments.

National and Local Government relates to Central Government Departments (including HM Forces), Local Government services (including Police and Fire services but not trading services).

In Table 57 hospitals and educational establishments are included with national and local government services under Public Administration; other commercial consumers are included in the Miscellaneous sector.



# BOUNDARIES OF GAS REGIONS





# Production and availability <sup>(1)</sup> United Kingdom

Million therms

		Public supply manufactured gas		Natural gas						Total (9)
		Town (1)	SNG(2) (2)	North Sea(3) and imported (3)	Colliery methane (4)	Coke oven gas (5)	Blast furnace gas (6)	Liquefied petroleum gas(4) (7)	Other petroleum gas(5) (8)	
Production(6)	1972	609	—	9,896	36	1,118	1,099	759	1,291	14,808
	1973	728	—	10,744	45	1,273	1,138	858	1,376	16,162
	1974	417	—	12,967	40	1,024	1,034	831	1,298	17,611
	1975	183	1(7)	13,473	40	1,072	881	752	1,081	17,483
	1976	58	9(7)	14,269	43	1,075	1,014	850	1,269	18,587
	1977	26	7(7)	14,848	51	958	868	899	1,295	18,952
	1978	21	21(7)	14,136	48	814	781	963	1,340	18,124
Arrivals	1972	—	—	306	—	—	—	70	—	376
	1973	—	—	293	—	—	—	76	—	369
	1974	—	—	243	—	—	—	23	—	266
	1975	—	—	335	—	—	—	26	—	361
	1976	—	—	384	—	—	—	36	—	420
	1977	—	—	667	—	—	—	50	—	717
	1978	—	—	1,889	—	—	—	38	—	1,927
Shipments	1972	—	—	—	—	—	—	64	—	64
	1973	—	—	—	—	—	—	79	—	79
	1974	—	—	—	—	—	—	79	—	79
	1975	—	—	—	—	—	—	83	—	83
	1976	—	—	—	—	—	—	148	—	148
	1977	—	—	—	—	—	—	218	—	218
	1978	—	—	—	—	—	—	356	—	356
Transfers	1972	+3,098	—	-2,700	-11	-83	—	-159	-145	—
	1973	+1,983	—	-1,648	-14	-54	—	-121	-146	—
	1974	+1,365	—	-1,208	-11	-30	—	-39	-77	—
	1975	+769	—	-700	-8	-10	—	-27	-24	—
	1976	+221	—	-171	-10	-9	—	-17	-14	—
	1977	+75	+15(8)	-42	-11	—	—	-10	-27	—
	1978	+34	+60(8)	+2	-10	—	—	-11	-75	—
Gross total available for inland consumption	1972	3,707	—	7,502	25	1,035	1,099	606	1,146	15,120
	1973	2,711	—	9,389	31	1,219	1,138	734	1,230	16,452
	1974	1,782	—	12,002	29	994	1,034	736	1,221	17,798
	1975	952	1	13,108	32	1,062	881	668	1,057	17,761
	1976	279	9	14,482	33	1,066	1,014	721	1,255	18,859
	1977	101	22	15,473	40	958	868	721	1,268	19,451
	1978	55	81	16,027	38	814	781	634	1,265	19,695
Losses, stock increases and statistical differences	1972	-437	—	-892	—	-59	-134	-22	+12	-1,532
	1973	-381	—	-866	—	-77	-147	-18	+10	-1,479
	1974	-252	—	-720	—	-67	-128	-33	—	-1,200
	1975	-236	—	-572	—	-75	-109	-22	-1	-1,015
	1976	-65	—	-555	—	-70	-139	-39	+1	-867
	1977	-31	—	-827	—	-55	-98	-34	-16	-1,061
	1978	-23	-2	-673	—	-34	-95	-9	-17	-853
Net total available for inland consumption(9)	1972	3,270	—	6,610	25	976	965	584	1,158	13,588
	1973	2,330	—	8,523	31	1,142	991	716	1,240	14,973
	1974	1,530	—	11,282	29	927	906	703	1,221	16,598
	1975	716	1	12,536	32	987	772	646	1,056	16,746
	1976	214	9	13,927	33	996	875	682	1,256	17,992
	1977	70	22	14,646	40	903	770	687	1,252	18,390
	1978	32	79	15,354	38	780	686	625	1,248	18,842

(1) Producer gas is excluded throughout except for very small quantities made by the gas supply industry and sold. Most of the producer gas made is used for heating retorts and is excluded from the gross make.

(2) Substitute Natural Gas.

(3) Including on-shore production (see Table 42).

(4) Propane and butane.

(5) Ethane and refinery tail gases.

(6) For definitions, see notes on page 79.

(7) Based on coal and oil.

(8) Based on petroleum gases.

(9) For an analysis of consumption, see Table 56.



# Analysis of consumption

## United Kingdom

Million therms

	1972	1973	1974	1975	1976	1977	1978
<b>Town gas:</b>							
Gas industry	57	7	7	3	2	1	—
Iron and steel industry	76	13	7	4	2	1	—
Other industries	382	300	189	84	25	11	6
Domestic	2,217	1,590	1,039	495	145	44	19
Public administration	181	175	100	47	15	6	3
Miscellaneous	357	245	188	83	25	7	4
Total	3,270	2,330	1,530	716	214	70	32
<b>Natural gas (North Sea and imported) and Substitute Natural Gas:</b>							
Gas industry	—	66	80	82	92	98	106
Power stations	630	285	985	858	662	519	338
Iron and steel industry	361	383	388	367	436	484	446
Petro-chemical plants (1)	36	51	57	56	59	60	51
Other industries (2)	2,833	3,850	4,446	4,561	5,157	5,387	5,513
Domestic	2,292	3,225	4,345	5,396	6,049	6,546	7,242
Public administration	181	337	440	550	672	740	811
Miscellaneous	277	326	541	667	809	834	926
Total	6,610	8,523	11,282	12,537	13,936	14,668	15,433
<b>Colliery methane:</b>							
Collieries	23	29	27	29	30	35	30
Coke ovens	2	2	2	3	3	5	4
Other industries	—	—	—	—	—	—	4
Total	25	31	29	32	33	40	38
<b>Coke oven gas:</b>							
Collieries	6	11	10	12	12	7	2
Coke ovens: for heating ovens	473	551	445	491	481	416	371
for other purposes	56	68	85	72	70	79	50
Iron and steel industry	405	466	337	346	371	337	296
Other industries	36	46	50	66	62	64	61
Total	976	1,142	927	987	996	903	780
<b>Blast furnace gas:</b>							
Coke ovens	57	43	45	35	49	52	51
Iron and steel industry:							
Blast furnaces (3)	485	402	355	737	826	718	635
Other	423	546	506				
Total	965	991	906	772	875	770	686
<b>Liquefied petroleum gas: (4)</b>							
Petroleum industry (5)	66	79	77	71	79	78	18
Iron and steel industry	29	30	19	20	25	26	25
Petro-chemical plants	5	5	12	8	10	9	31
Other industries	445	559	552	504	526	512	489
Domestic	39	43	43	43	42	62 (6)	62 (6)
Total	584	716	703	646	682	687	625
<b>Other petroleum gas: (7)</b>							
Petroleum industry (5)	1,108	1,180	1,163	1,006	1,175	1,168	1,190
Petro-chemical plants	50	60	58	50	81	84	58
Total	1,158	1,240	1,221	1,056	1,256	1,252	1,248
<b>All gases:</b>							
Collieries	29	40	37	41	42	42	32
Fuel conversion industries:							
Petroleum industry (5)	1,174	1,259	1,240	1,077	1,254	1,246	1,208
Power stations	630	285	985	858	662	519	338
Gas industry	57	73	87	85	94	99	106
Coke ovens	588	664	577	601	603	552	476
Total	2,449	2,281	2,889	2,621	2,613	2,416	2,128
<b>Other consumption:</b>							
Iron and steel industry (8)	1,779	1,840	1,612	1,474	1,660	1,566	1,402
Petro-chemical plants (9)	91	116	127	114	150	153	140
Other industries (2)	3,696	4,755	5,237	5,215	5,770	5,974	6,073
Domestic	4,548	4,858	5,427	5,934	6,236	6,652	7,323
Public administration	362	512	540	597	687	746	814
Miscellaneous	634	571	729	750	834	841	930
Total	11,110	12,652	13,672	14,084	15,337	15,932	16,682
<b>Total consumption</b>	<b>13,588</b>	<b>14,973</b>	<b>16,598</b>	<b>16,746</b>	<b>17,992</b>	<b>18,390</b>	<b>18,842</b>

(1) Direct sales by producers.

(2) Includes sales by public gas supply industry to petro-chemical plants.

(3) Blast furnace gas used in hot blast stoves.

(4) Propane and butane.

(5) Own use by petroleum refineries and gas separation plants.

(6) Includes sales from public gas supply industry.

(7) Ethane and refinery tail gases.

(8) Includes blast furnace gas used in hot blast stoves.

(9) Excludes sales by public gas supply industry to petro-chemical plants.



# Fuel input and gas output; gas sales

## United Kingdom: Public supply

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Fuel input to gas industry:</b>											
Coal (million tonnes)	10.9	7.0	4.3	1.8	0.6	0.5	0.1	—	—	—	—
Petroleum (million tonnes)	5.5	5.6	3.6	1.9	1.6	1.8	1.0	0.5	0.2	0.1	0.1
Petroleum gases (million therms)(1)	657	595	433	326	304	267	116	51	31	37	86
Natural gas (million therms)	1,019	1,686	2,089	3,041	2,711	1,662	1,219	708	181	53	8
Coke oven gas (million therms)	368	340	296	222	83	54	30	10	9	—	—
Total to gas works (million therms)	7,728	7,207	5,724	5,003	3,981	2,934	1,866	991	307	137	145
Natural gas for direct supply (million therms)	91	464	1,514	3,994	7,211	9,197	11,863	13,080	14,264	15,287	15,777
Total fuel input (million therms)	7,819	7,671	7,238	8,997	11,192	12,131	13,729	14,071	14,571	15,424	15,922

<b>Fuel input to gas industry (million tonnes of coal or coal equivalent):</b>											
Coal	10.9	7.0	4.3	1.8	0.6	0.5	0.1	—	—	—	—
Petroleum	9.4	9.5	6.2	3.3	2.7	3.0	1.8	0.8	0.3	0.2	0.2
Petroleum gases(1)	2.3	2.2	1.6	1.2	1.1	1.0	0.4	0.2	0.1	0.1	0.3
Natural gas	4.1	6.7	8.3	12.1	10.8	6.6	4.8	2.8	0.8	0.2	—
Coke oven gas	1.8	1.7	1.5	1.1	0.4	0.3	0.2	0.1	—	—	—
Total to gas works	28.5	27.1	21.9	19.5	15.6	11.4	7.3	3.9	1.2	0.5	0.5
Natural gas for direct supply	0.4	1.9	6.0	15.9	28.7	36.6	47.3	52.1	56.8	61.1	63.1
Total fuel input	28.9	29.0	27.9	35.4	44.3	48.0	54.6	56.0	58.0	61.6	63.6

<b>Gas output and sales (million therms):</b>											
Gas output:											
Town gas	4,859	5,230	4,511	4,438	3,707	2,711	1,782	952	279	101	55
Natural gas supplied direct(2)	91	464	1,514	3,994	7,211	9,197	11,863	13,081	14,273	15,309	15,858
Gross total available	4,950	5,694	6,025	8,432	10,918	11,908	13,645	14,033	14,552	15,410	15,913
Own use(3)	27	30	31	31	57	73	87	85	94	99	106
Losses in distribution, reforming, etc.	480	664	214	881	1,074	1,106	890	836	461	732	499
Total sales	4,443	5,000	5,780	7,520	9,787	10,729	12,668	13,112	13,997	14,579	15,308

<b>Analysis of gas sales (million therms)</b>											
Power stations	9	38	60	263	630	285	985	858	662	519	338
Final users:											
Iron and steel industry	140	174	244	343	437	396	395	371	438	485	446
Other industries	811	862	1,172	2,118	3,215	4,150	4,635	4,645	5,182	5,398	5,519
Domestic	2,829	3,212	3,542	3,930	4,509	4,815	5,384	5,891	6,194	6,590	7,261
Public Administration	175	190	201	234	362	512	540	597	687	746	814
Miscellaneous	479	524	561	632	634	571	729	750	834	841	930
Total final users	4,434	4,962	5,720	7,257	9,157	10,444	11,683	12,254	13,335	14,060	14,970
Total sales	4,443	5,000	5,780	7,520	9,787	10,729	12,668	13,112	13,997	14,579	15,308

(1) Butane, propane, ethane and refinery tail gases.

(2) Including substitute natural gas.

(3) Used in works, offices, showrooms, etc.



# Fuel input to gas works, production, availability and sales

## Great Britain: Public supply

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Fuel input for gas making(1)</b> (thousand tonnes)											
Coal	10,744	6,951	4,256	1,798	568	512	106	10	8	7	6
Coke	330	138	40	9	7	1	1	—	—	—	—
Coke breeze	382	237	111	33	13	4	—	—	—	—	—
<b>Oil (2)</b>											
Light oil	5,053	5,207	3,367	1,846	1,506	1,692	966	415	126	37	49
Gas oil	75	71	50								
Heavy oil	378	284	166								
<b>Total oil used</b>	<b>5,506</b>	<b>5,562</b>	<b>3,583</b>	<b>1,846</b>	<b>1,506</b>	<b>1,692</b>	<b>966</b>	<b>415</b>	<b>126</b>	<b>37</b>	<b>49</b>
(million therms)											
Liquefied petroleum gas (3)	—	—	—	—	—	—	—	—	—	1	3
Other petroleum gases (4)	—	—	—	—	—	—	—	—	—	14	57
<b>Gas production and sales</b> (million therms)											
Gas made											
Town gas	2,794	2,589	1,672	828	587	708	392	161	38	4	—
Substitute natural gas	—	—	—	—	—	—	—	1	9	22	79
<b>Total made</b>	<b>2,794</b>	<b>2,589</b>	<b>1,672</b>	<b>828</b>	<b>587</b>	<b>708</b>	<b>392</b>	<b>162</b>	<b>47</b>	<b>26</b>	<b>79</b>
<b>Gas purchased and reformed</b>											
Coke oven gas	368	340	296	222	83	54	30	10	9	—	—
Liquefied petroleum gas (3)	364	360	264	180	159	119	37	25	14	3	6
Other petroleum gases (4)	283	224	158	135	134	137	67	14	3	4	7
Natural gas (5)											
North sea	683	1,601	3,586	6,682	9,629	10,596	12,904	13,588	14,394	15,317	15,761
Other indigenous	19	17	14								
Imported	360	355	328								
<b>Total purchased</b>	<b>2,077</b>	<b>2,897</b>	<b>4,646</b>	<b>7,219</b>	<b>10,005</b>	<b>10,906</b>	<b>13,038</b>	<b>13,637</b>	<b>14,420</b>	<b>15,324</b>	<b>15,774</b>
<b>Total available</b>	<b>4,871</b>	<b>5,486</b>	<b>6,318</b>	<b>8,047</b>	<b>10,592</b>	<b>11,614</b>	<b>13,430</b>	<b>13,799</b>	<b>14,467</b>	<b>15,350</b>	<b>15,853</b>
<b>Own use (6)</b>	<b>24</b>	<b>27</b>	<b>29</b>	<b>31</b>	<b>57</b>	<b>73</b>	<b>87</b>	<b>85</b>	<b>94</b>	<b>99</b>	<b>106</b>
<b>Gas sold</b>											
Domestic	2,812	3,194	3,522	3,910	4,489	4,796	5,360	5,869	6,174	6,569	7,243
Industrial	956	1,081	1,472	2,720	4,278	4,827	6,011	5,870	6,258	6,399	6,300
Commercial	582	627	685	774	878	938	1,106	1,171	1,343	1,371	1,506
National and Local Government	66	71	71	86	112	139	157	171	194	210	232
<b>Total sold</b>	<b>4,416</b>	<b>4,973</b>	<b>5,750</b>	<b>7,490</b>	<b>9,757</b>	<b>10,700</b>	<b>12,634</b>	<b>13,081</b>	<b>13,969</b>	<b>14,549</b>	<b>15,281</b>

(1) Includes small quantities used for other purposes.

(2) See notes on page 79.

(3) Butane and Propane.

(4) Ethane and refinery tail gases.

(5) Including natural gas for direct supply.

(6) Used in works, offices, showrooms, etc.



# Fuel input to gas works, production, availability and sales

## Great Britain: Public supply

	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
<b>Fuel input for gas making (1)</b> (thousand tonnes)											
Coal	13,824	9,410	6,043	3,466	1,081	588	406	28	8	8	7
Coke	559	257	72	24	10	2	1	1	—	—	—
Coke breeze	455	360	192	86	17	10	2	—	—	—	—
<b>Oil (2)</b>											
Light oil	4,410	5,642	4,398	2,771	1,563	1,455	1,420	771	204	94	52
Gas oil	131	78	51								
Heavy oil	456	309	235								
<b>Total oil used</b>	<b>4,997</b>	<b>6,029</b>	<b>4,684</b>	<b>2,771</b>	<b>1,563</b>	<b>1,455</b>	<b>1,420</b>	<b>771</b>	<b>204</b>	<b>94</b>	<b>52</b>
(million therms)											
Liquefied petroleum gas(3)	—	—	—	—	—	—	—	—	—	—	3
Other petroleum gases (4)	—	—	—	—	—	—	—	—	—	—	25
<b>Gas production and sales</b> (million therms)											
<b>Gas made</b>											
Town gas	2,865	2,942	2,220	1,477	680	595	607	324	75	20	1
Substitute natural gas	—	—	—	—	—	—	—	—	5	12	47
<b>Total made</b>	<b>2,865</b>	<b>2,942</b>	<b>2,220</b>	<b>1,477</b>	<b>680</b>	<b>595</b>	<b>607</b>	<b>324</b>	<b>80</b>	<b>32</b>	<b>48</b>
<b>Gas purchased and reformed</b>											
Coke oven gas	394	358	330	279	153	73	31	25	8	4	—
Liquefied petroleum gas (3)	410	346	272	205	165	140	98	23	22	9	9
Other petroleum gases (4)	352	285	227	134	119	132	122	44	6	3	31
<b>Natural gas (5):</b>											
North Sea	290	858	2,323	4,640	7,632	10,231	11,548	13,277	14,230	14,693	15,748
Other indigenous	21	20	18								
Imported	299	354	352								
<b>Total purchased</b>	<b>1,766</b>	<b>2,221</b>	<b>3,522</b>	<b>5,258</b>	<b>8,069</b>	<b>10,576</b>	<b>11,799</b>	<b>13,369</b>	<b>14,266</b>	<b>14,709</b>	<b>15,788</b>
<b>Total available</b>	<b>4,631</b>	<b>5,163</b>	<b>5,742</b>	<b>6,735</b>	<b>8,749</b>	<b>11,171</b>	<b>12,406</b>	<b>13,693</b>	<b>14,346</b>	<b>14,741</b>	<b>15,836</b>
<b>Own use (6)</b>	<b>23</b>	<b>26</b>	<b>32</b>	<b>34</b>	<b>49</b>	<b>58</b>	<b>84</b>	<b>87</b>	<b>92</b>	<b>95</b>	<b>98</b>
<b>Gas sold</b>											
Domestic	2,652	3,011	3,362	3,653	4,045	4,603	5,035	5,710	5,941	6,183	6,964
Industrial	914	976	1,159	1,704	3,070	4,530	5,299	5,921	6,072	6,107	6,460
Commercial	570	608	643	702	784	913	982	1,131	1,259	1,353	1,527
National and Local Government	63	69	71	74	93	133	171	170	182	194	221
<b>Total sold</b>	<b>4,199</b>	<b>4,664</b>	<b>5,235</b>	<b>6,133</b>	<b>7,992</b>	<b>10,179</b>	<b>11,487</b>	<b>12,932</b>	<b>13,454</b>	<b>13,837</b>	<b>15,172</b>
<b>Gas available in peak week</b> (million therms)	<b>147</b>	<b>169</b>	<b>186</b>	<b>212</b>	<b>274</b>	<b>303</b>	<b>349</b>	<b>355</b>	<b>424</b>	<b>426</b>	<b>468</b>
<b>System load factor</b> (per cent)	<b>60.3</b>	<b>58.7</b>	<b>59.3</b>	<b>61.0</b>	<b>61.0</b>	<b>70.6</b>	<b>68.2</b>	<b>74.2</b>	<b>64.7</b>	<b>66.3</b>	<b>64.9</b>
<b>Number of consumers converted to natural gas</b> (thousands)											
Numbers converted in year	43	418	1,100	2,024	2,403	2,102	2,108	1,674	1,131	329	98
<b>Numbers converted by end of year:</b>											
Domestic	50	450	1,509	3,473	5,798	7,837	9,882	11,493	12,580	12,899	12,995
Industrial	—	3	8	16	26	34	41	49	56	57	57
Commercial	1	16	52	104	172	227	283	338	375	384	386
<b>Total</b>	<b>51</b>	<b>469</b>	<b>1,569</b>	<b>3,593</b>	<b>5,996</b>	<b>8,098</b>	<b>10,206</b>	<b>11,880</b>	<b>13,011</b>	<b>13,340</b>	<b>13,438</b>

(1) Includes small quantities used for other purposes.

(2) See notes on page 79.

(3) Butane and Propane.

(4) Ethane and refinery tail gases.

(5) Including natural gas for direct supply.

(6) Used in works, offices, showrooms, etc.



## Sales

Great Britain: Public supply

	Domestic					National and Local Government	
	Prepayment (1)	Credit (2)	Total (3)	Industrial (4)	Commercial (5)	(6)	Total (7)
<b>Sales</b> (million therms)							
1967/68	771	1,881	2,652	914	570	63	4,199
1968/69	760	2,251	3,011	976	608	69	4,664
1969/70	746	2,616	3,362	1,159	643	71	5,235
1970/71	733	2,920	3,653	1,704	702	74	6,133
1971/72	711	3,334	4,045	3,070	784	93	7,992
1972/73	736	3,867	4,603	4,530	913	133	10,179
1973/74	718	4,317	5,035	5,299	982	171	11,487
1974/75	726	4,984	5,710	5,921	1,131	170	12,932
1975/76	556	5,385	5,941	6,072	1,259	182	13,454
1976/77	451	5,732	6,183	6,107	1,353	194	13,837
1977/78	438	6,526	6,964	6,460	1,527	221	15,172
<b>Total net selling value</b> (£ million)							
1967/68	95	178	273	61	52	5	391
1968/69	102	227	329	65	58	6	458
1969/70	99	260	359	68	61	6	494
1970/71	98	288	386	77	64	6	533
1971/72	106	343	449	100	70	7	626
1972/73	108	405	513	134	79	9	735
1973/74	106	446	552	163	84	9	808
1974/75	116	549	665	230	109	13	1,017
1975/76	113	740	853	313	144	18	1,328
1976/77	104	926	1,030	442	191	25	1,688
1977/78	109	1,178	1,287	625	253	34	2,199
<b>Average net selling value</b> (Pence per therm) <sup>(1)</sup>							
1967/68	12.3	9.5	10.3	6.6	9.1	8.5	9.4
1968/69	13.4	10.1	10.9	6.7	9.5	8.7	9.9
1969/70	13.4	9.9	10.7	5.8	9.4	8.7	9.5
1970/71	13.3	9.9	10.6	4.5	9.1	8.3	8.7
1971/72	14.9	10.3	11.1	3.3	8.9	7.8	7.9
1972/73	14.8	10.5	11.2	3.0	8.5	7.2	7.2
1973/74	14.7	10.3	11.0	3.1	8.3	6.4	7.0
1974/75	16.0	11.0	11.6	3.9	9.7	7.6	7.9
1975/76	20.3	13.7	14.4	5.2	11.4	9.8	9.9
1976/77	23.0	16.2	16.6	7.2	14.2	12.9	12.2
1977/78	24.8	18.1	18.5	9.7	16.6	15.4	14.5
<b>Number of consumers</b> (Thousands)							
1967/68	6,110	6,450	12,560	78	539	33	13,210
1968/69	5,810	6,829	12,639	72	522	32	13,265
1969/70	5,501	7,233	12,734	71	510	32	13,347
1970/71	5,194	7,568	12,762	70	508	32	13,372
1971/72	4,887	7,913	12,800	68	491	31	13,390
1972/73	4,585	8,339	12,924	69	483	30	13,506
1973/74	4,223	8,767	12,990	70	465	34	13,559
1974/75	3,784	9,335	13,119	69	464	30	13,682
1975/76	3,163	10,202	13,365	69	463	28	13,925
1976/77	2,787	10,855	13,642	69	461	28	14,200
1977/78	2,536	11,427	13,963	70	453	30	14,516
<b>Average sales per consumer</b> (Therms)							
1967/68	126	292	211	11,734	1,058	1,760	318
1968/69	131	330	238	13,538	1,165	2,034	352
1969/70	136	362	264	16,294	1,261	2,160	392
1970/71	141	386	286	24,386	1,381	2,341	459
1971/72	146	421	316	45,096	1,596	3,005	597
1972/73	161	464	356	65,371	1,890	4,433	754
1973/74	170	492	388	75,700	2,112	5,029	847
1974/75	192	534	435	85,812	2,438	5,667	945
1975/76	176	528	445	88,003	2,719	6,500	966
1976/77	162	528	453	88,501	2,938	6,807	974
1977/78	173	571	499	92,286	3,371	7,465	1,045

<sup>(1)</sup> Excluding prepayment supplements and meter rents where charged separately from gas supplied.



## 61

# Industrial gas sales

## Great Britain: Public supply

Million Therms

Industry	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Ferrous metals	167	208	297	363	480	533	485	469	553	572
Non-ferrous metals	69	73	84	101	138	162	174	169	183	185
Engineering and shipbuilding	167	170	188	215	237	270	278	272	276	320
Electrical goods	57	58	61	80	126	139	163	172	180	207
Vehicles	86	90	96	141	187	202	278	317	321	360
Metal goods not elsewhere specified	99	110	120	137	171	213	242	240	252	266
Food, drink and tobacco	72	71	83	115	205	313	356	388	415	452
Chemical and allied trades (1)	38	83	372	982	1,431	1,742	1,906	1,903	2,090	2,207
Textiles, leather and clothing	28	31	34	61	143	159	181	180	187	193
Paper and printing	17	18	28	134	207	279	276	367	305	330
Bricks, cement, glass, etc.	54	59	72	195	395	410	447	457	452	493
China and earthenware	40	40	45	59	75	82	87	89	90	96
Miscellaneous and unspecified	47	110	195	487	735	795	1,048	1,049	803	779
Unallocated (mainly small consumers)	35	38	29							
<b>Total</b>	<b>976</b>	<b>1,159</b>	<b>1,704</b>	<b>3,070</b>	<b>4,530</b>	<b>5,299</b>	<b>5,921</b>	<b>6,072</b>	<b>6,107</b>	<b>6,460</b>

(1) Includes natural gas for petro-chemical feedstock.

## 62

# Commercial gas sales

## Great Britain: Public supply

Million Therms

	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Educational premises	77	84	92	131	206	218	249	277	307	325
Hospitals, medical services	43	45	53	64	109	127	168	185	201	231
Hotels, residential premises	176	187	204	224	217	110	117	125	127	148
Restaurants, public houses, clubs						123	136	142	145	159
Wholesale and retail distribution	86	88	98	103	101	114	115	125	133	147
Insurance, banks, offices, etc.	50	56	64	63	65	81	86	104	113	135
Transport and Communications	29	28	38	42	40	52	55	60	71	80
Other premises	147	155	153	157	175	157	205	241	256	302
<b>Total</b>	<b>608</b>	<b>643</b>	<b>702</b>	<b>784</b>	<b>913</b>	<b>982</b>	<b>1,131</b>	<b>1,259</b>	<b>1,353</b>	<b>1,527</b>



# Sales by Gas Regions

## United Kingdom: Public supply

		Sales				Number of consumers	
		Domestic (1)	Industrial (2)	Commercial and Public administration (3)	Total (4)	Domestic (5)	Industrial (6)
Gas Region		Million therms				Thousands	
Scottish	1976/77	313	236	90	639	831	3
	1977/78	354	270	104	728	847	4
Northern	1976/77	361	409	118	888	765	2
	1977/78	411	373	127	911	787	2
North Western	1976/77	945	632	177	1,754	1,879	9
	1977/78	1,037	677	202	1,916	1,917	9
North Eastern	1976/77	431	266	111	808	911	4
	1977/78	472	278	120	870	928	5
East Midlands	1976/77	712	638	152	1,502	1,432	8
	1977/78	809	675	163	1,647	1,470	7
West Midlands	1976/77	667	583	127	1,377	1,349	9
	1977/78	744	614	146	1,504	1,383	9
Wales	1976/77	195	338	71	604	531	1
	1977/78	234	363	79	676	550	1
Eastern	1976/77	475	186	98	759	997	6
	1977/78	533	204	108	845	1,030	6
North Thames	1976/77	747	366	263	1,376	1,766	14
	1977/78	801	426	321	1,548	1,773	14
South Eastern	1976/77	720	186	178	1,084	1,705	7
	1977/78	853	192	195	1,240	1,735	7
Southern	1976/77	381	177	95	653	850	4
	1977/78	437	185	107	729	884	4
South Western	1976/77	236	186	67	489	626	2
	1977/78	279	196	76	551	659	2
Total Great Britain	1976/77	6,183	6,107(2)	1,547	13,837(2)	13,642	69
	1977/78	6,964	6,460(2)	1,748	15,172(2)	13,963	70
Northern Ireland(3)	1976/77	21	3	6	30	165	—
	1977/78	19	3	6	28	159	—
Total United Kingdom	1976/77	6,204	6,110(2)	1,553	13,867(2)	13,807	69
	1977/78	6,983	6,463(2)	1,754	15,200(2)	14,122	70



		Average net selling value per therm <sup>(1)</sup>					
Commercial and Public administration (7)	Total (8)	Domestic (9)	Industrial (10)	Commercial and Public administration (11)	Total (12)	Gas Region	
		Pence					
36	870	18.7	8.9	14.6	14.5	1976/77	Scottish
35	886	20.0	12.0	17.0	16.6	1977/78	
30	797	15.9	8.1	14.1	12.0	1976/77	Northern
30	819	17.8	12.0	17.0	15.3	1977/78	
57	1,945	15.9	9.7	13.7	13.4	1976/77	North Western
57	1,983	17.9	12.2	16.1	15.7	1977/78	
30	945	15.7	8.7	13.0	13.0	1976/77	North Eastern
31	964	18.0	11.5	15.5	15.6	1977/78	
40	1,480	15.1	9.8	13.1	12.6	1976/77	East Midlands
40	1,517	17.3	12.8	15.9	15.3	1977/78	
35	1,393	15.3	10.8	13.6	13.2	1976/77	West Midlands
35	1,427	17.5	14.1	16.3	16.0	1977/78	
24	556	18.1	8.3	14.2	12.2	1976/77	Wales
24	575	19.4	11.6	16.7	14.9	1977/78	
29	1,032	17.2	9.2	14.2	14.9	1976/77	Eastern
28	1,064	18.9	12.1	16.9	17.0	1977/78	
84	1,864	17.6	7.7	14.2	14.3	1976/77	North Thames
84	1,871	19.3	9.7	16.1	16.0	1977/78	
71	1,783	17.8	9.3	14.6	15.8	1976/77	South Eastern
66	1,808	19.2	12.5	16.9	17.8	1977/78	
32	886	17.6	9.4	14.4	14.9	1976/77	Southern
32	920	19.1	11.8	16.8	16.9	1977/78	
21	649	18.4	9.7	14.8	14.6	1976/77	South Western
21	682	19.6	12.7	16.8	16.8	1977/78	
489	14,200	16.6	7.2(2)	14.0	12.2(2)	1976/77	Total Great Britain
483	14,516	18.5	9.7(2)	16.4	14.5(2)	1977/78	
6	171	48.8	30.4	40.8	45.3	1976/77	Northern Ireland <sup>(3)</sup>
6	165	50.5	33.1	41.3	46.7	1977/78	
495	14,371	16.8	7.3(2)	14.1	12.3(2)	1976/77	Total United Kingdom
489	14,681	18.6	9.7(2)	16.5	14.6(2)	1977/78	

(1) Excluding prepayment supplements and meter rents where charged separately from gas supplied.

(2) Includes gas supplied direct to consumers by the British Gas Corporation Headquarters.

(3) Includes sales by all gas undertakings.



# Electricity

The first three tables in this section cover the availability and consumption of electricity in the United Kingdom. Table 64 gives figures of the total quantity of electricity available including conventional thermal electricity generated by industrial and transport establishments; Tables 65 and 66 from which the statistics for the Energy Section are derived, relate to the public supply electricity industry, transport power stations and industrial hydro-electric and nuclear power stations only. Conventional thermal electricity generated by industrial establishments is not included in these two tables as the fuel used for such generation is already counted as final consumption in the statistics for other fuels in the Energy section and in the sections dealing with individual fuels. Purchases of electricity from other classes of consumer and, in the case of collieries and the iron and steel industry, sales from own generation to other classes of consumer are, however, taken into account in arriving at the final sector consumption figures in Table 66 (see also explanatory note on page 3).

Most of the remaining tables in this section cover the public electricity supply industry in Great Britain only but information about the public electricity supply system in Northern Ireland is given in Tables 69 and 80.

Separate details of electricity generated by industrial establishments including the coal mining industry and railway and transport authorities are given in Table 82.

## Period covered

Figures for financial years relate to years ended 31st March and for industrial generation refer to periods of 52 weeks. Prior to 1976, all other annual figures relate to calendar years and since then to periods of 52 weeks, except for sales, which are for calendar years throughout. Figures for shorter periods are provisional estimates which may not add exactly to the final calendar or financial year totals.

## Fuel input (Table 65) and Fuel used for generation (Table 67)

The factors used for the conversion of primary fuels and oil to coal equivalent are given under "coal and oil equivalent" on page 3. For coke and breeze consumed at power stations the conversion factor used is 1 tonne = 0.9 tonnes of coal equivalent, and for net imports of electricity 1 GWh = 137 tonnes coal equivalent.

## Electricity generated, used on works, electricity supplied (gross) and (net), and availability. (Tables 69, 70 and 73)

Electricity generated, less electricity used on works (i.e. for lighting and auxiliary power), equals electricity supplied (gross). Electricity supplied (gross) less electricity used in pumping at pumped storage stations equals electricity supplied (net). Electricity supplied (net) plus purchases of

electricity from industrial producers plus net exchanges between Boards and net imports equals electricity available. The figures for electricity supplied in Tables 74–76 and 78 exclude electricity supplied from stations on pre-commissioning operation.

## Installed capacity (M.C.R.) (Tables 70 and 71)

The maximum continuous rating of the generating sets in the stations, including auxiliary and stand-by sets, which are connected to the prime movers and to the busbars and are capable of use. Scrapped plant and any other plant which has been disconnected and written off are excluded.

## Output capacity (Tables 70, 71, 73–76 and 78)

Capacity installed after allowing for station consumption and any limitations in the capacity of prime movers.

## Maximum load

Twice the largest number of units supplied in any consecutive thirty minutes commencing or terminating at the hour.

## Simultaneous maximum load (load met) (Table 72)

The maximum load on the grid at any one time together with the load on any stations not connected to the grid. From 1955 it has been measured by the sum of the maximum load met by the Central Electricity Generating Board and the loads met at the same time by the North of Scotland Hydro-Electric Board and the South of Scotland Electricity Board.

## Simultaneous maximum potential demand (Table 72)

The maximum load met plus an allowance for any load shed (by voltage reduction or disconnection) or any reduction in frequency. It is therefore the estimated demand as opposed to the demand actually met.

## Plant load factor (Tables 72, 74 and 78)

The average hourly quantity of electricity supplied during the year, expressed as a percentage of the average output capacity during the year.

## System load factor (Table 72)

The average hourly quantity of electricity supplied during the year (including purchases from other sources), expressed as a percentage of the maximum potential demand nearest the end of the year or early the following year.



### **Electricity sold (Tables 70, 79–81)**

Up to 1972 this excludes sales within the public supply industry. The difference between it and the total available for sale as a result of generation and purchase of electricity reflects mainly losses in transmission but also consumption in the electricity industry's offices and showrooms and delays in reading meters. From 1973 sales to showrooms are included with shops in total sales.

For England and Wales, for the South of Scotland, for Northern Ireland and for the North of Scotland, from 1967/68, 1973, 1975 and 1977 respectively, the figures include an adjustment to the billed sales to allow for the estimated usage remaining unread at the end of each period. Prior to these dates, the figures relate to sales actually recorded on meters read during the period concerned.

Definitions of the sectors used for the sales statistics are:—

Domestic includes premises used wholly or mainly for private residential purposes.

Farms includes farmhouses and farm buildings and horticultural premises.

Public lighting refers only to lighting controlled by a street lighting or highway authority.

Traction comprises railways (including light railways), trams and trolley buses.

Combined domestic and commercial premises are those used for the dual purpose except where they receive solely a commercial tariff.

Shops include garages and licensed premises other than hotels. From 1973 the showrooms of Electricity Boards are also included.

Offices include banks and wholesale warehouses.

Public buildings include schools, hospitals, places of entertainment, etc.

Hotels exclude licensed premises not classed as hotels.

HM Forces excludes RN dockyards and Royal Ordnance factories.

Waterworks, etc., include gasworks, drainage and sewage pumping stations.

Factories, etc., relate to factories, works, workshops and other industrial premises used for manufacturing and processing.

### **Number of consumers (Tables 79 and 80)**

One consumer is counted for each account on the books of the Electricity Boards, irrespective of the number of meters

involved in the supply. However, where one account is rendered in respect of more than one premise, each premise is counted as a consumer.

### **Thermal efficiency (Tables 72, 75 and 78)**

The total calorific value of the electricity supplied expressed as a percentage of the calorific value (gross as fired) of the total fuel consumed.

### **Works cost of generation (Tables 76–78)**

This is the cost, excluding capital charges and the cost of transmission and distribution, of electricity supplied (net) from power stations, and including for Table 77 only, supplies from pre-commissioning operations.

Fuel costs include transport costs, but fuel handling costs, including the cost of repair and maintenance of fuel handling plants, are shown separately.

Other operating costs comprise salaries and wages at power stations, excluding amounts charged to fuel handling and repair and maintenance, and oil (other than for generation), water and stores.

### **Seasonal adjustments (Table 73)**

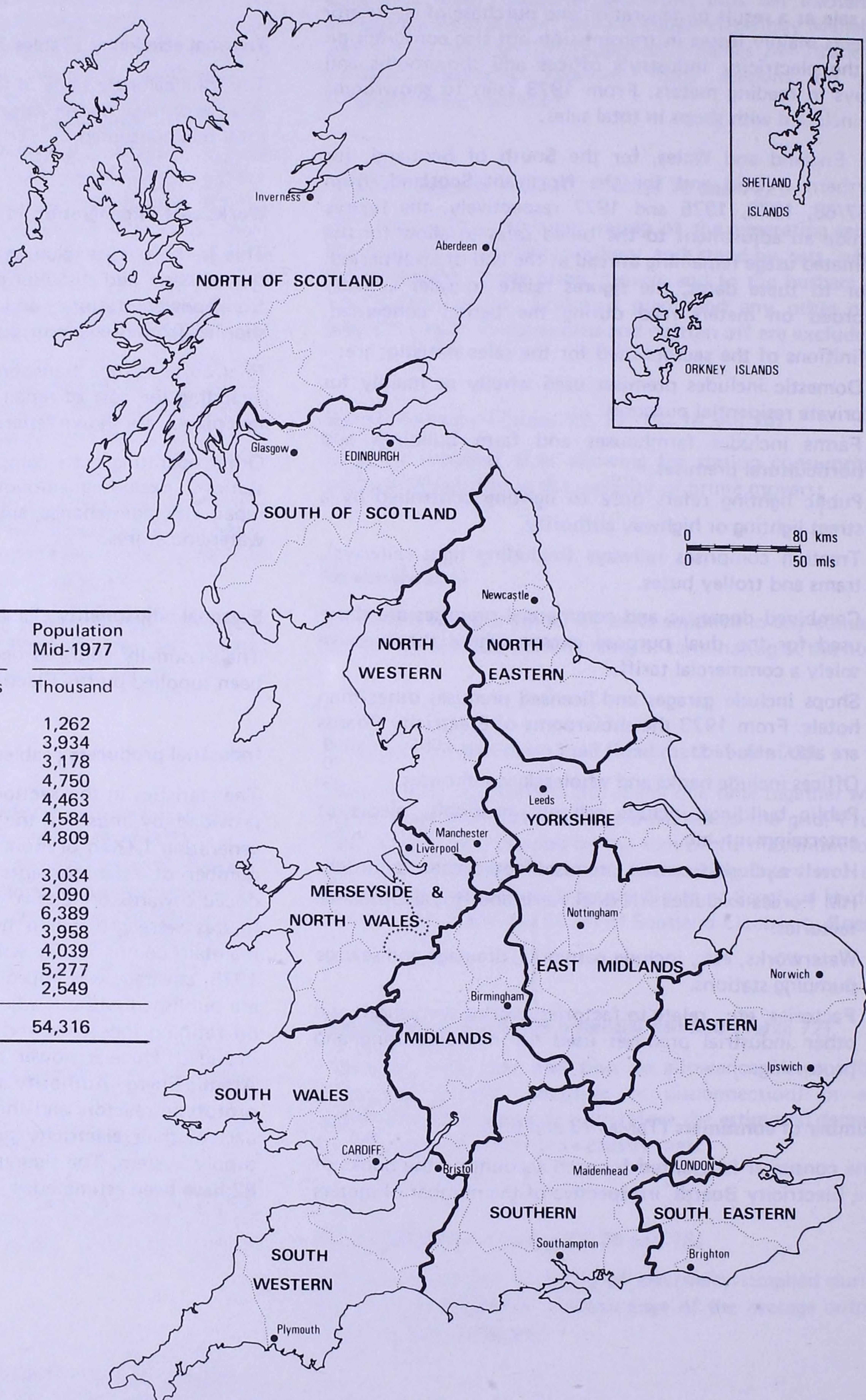
The seasonally adjusted figures of electricity available have been supplied by the Electricity Council.

### **Industrial producers (Tables 64, 66 and 82)**

The statistics in this section are compiled from information provided by most of the larger industrial establishments generating 1 GWh or more a year. Coverage, in terms of the number of establishments providing information, was reduced towards the end of 1973 and up to the end of 1975 figures were grossed-up by the small extent necessary to maintain comparability with earlier years. From the end of 1975, coverage was improved and the figures from then on are published without adjustment. The coal mining, gas and oil refining industries and transport undertakings are also included. Nuclear power stations are the United Kingdom Atomic Energy Authority and British Nuclear Fuels Limited prototype reactors and the figures in Table 64 relate to the part of their electricity production supplied to the public supply system. The figures for nuclear generation in Table 82 have been estimated.



# BOUNDARIES OF ELECTRICITY BOARDS



Electricity Board	Area	Population Mid-1977
	Sq. miles	Thousand
North of Scotland	22,250	1,262
Hydro-Electric	8,150	3,934
South of Scotland	5,700	3,178
North Eastern	4,750	4,750
North Western	4,100	4,463
Yorkshire	6,250	4,584
East Midlands	5,100	4,809
Midlands		
Merseyside and North		
Wales	4,750	3,034
South Wales	4,550	2,090
Eastern	7,750	6,389
London	250	3,958
South Eastern	3,100	4,039
Southern	6,500	5,277
South Western	5,550	2,549
Great Britain	88,750	54,316



# Electricity supply and availability<sup>(1)</sup> United Kingdom

GWh

	Year	Electricity supplied (gross)				Used in pumping at pumped storage stations (6)	Electricity supplied (net) (7)	Transfers between industrial producers and public supply (8)		Net imports (+) or exports (-) (2) (9)	Total available (10)
		Conventional thermal (1)	Hydro Natural flow (2)	Pumped storage (3)	Nuclear (4)	Total (5)					
Public supply	1968	165,222	2,957	849	21,337	190,365	1,124	189,241	+3,551	+734	193,526
	1969	177,109	2,794	1,120	22,460	203,483	1,513	201,970	+3,746	+579	206,295
	1970	188,175	3,846	1,123	19,247	212,391	1,487	210,904	+4,033	+551	215,488
	1971	195,181	2,835	908	20,285	219,209	1,209	218,000	+4,257	+117	222,374
	1972	200,048	2,847	870	22,119	225,884	1,184	224,700	+4,052	+480	229,232
	1973	216,796	3,214	663	20,582	241,255	882	240,373	+4,320	+63	244,756
	1974	203,478	3,520	695	25,605	233,298	896	232,402	+4,228	+50	236,680
	1975	207,159	3,186	1,140	23,181	234,666	1,430	233,236	+3,984	+75	237,295
	1976	205,048	3,128	1,365	27,944	237,485	1,729	235,756	+3,814	-99	239,471
	1977	207,904	3,320	1,297	31,564	244,085	1,608	242,477	+3,833	-	246,310
	1978	215,761	3,378	1,169	29,124	249,432	1,429	248,003	+3,995	-76	251,922
Industrial producers (3)	1968	13,945	595	-	3,140	17,680	-	17,680	-3,551	-	14,129
	1969	15,180	451	-	3,311	18,942	-	18,942	-3,746	-	15,196
	1970	14,996	678	-	3,558	19,232	-	19,232	-4,033	-	15,199
	1971	14,837	551	-	3,728	19,116	-	19,116	-4,257	-	14,859
	1972	15,175	571	-	3,520	19,266	-	19,266	-4,052	-	15,214
	1973	17,008	647	-	3,728	21,383	-	21,383	-4,320	-	17,063
	1974	16,660	562	-	3,627	20,849	-	20,849	-4,228	-	16,621
	1975	15,175	591	-	3,282	19,048	-	19,048	-3,984	-	15,064
	1976	16,414	599	-	3,209	20,222	-	20,222	-3,814	-	16,408
	1977	15,848	586	-	3,096	19,530	-	19,530	-3,833	-	15,697
	1978	15,387	647	-	3,338	19,372	-	19,372	-3,995	-	15,377
Total	1968	179,167	3,552	849	24,477	208,045	1,124	206,921	-	+734	207,655
	1969	192,289	3,245	1,120	25,771	222,425	1,513	220,912	-	+579	221,491
	1970	203,171	4,524	1,123	22,805	231,623	1,487	230,136	-	+551	230,687
	1971	210,018	3,386	908	24,013	238,325	1,209	237,116	-	+117	237,233
	1972	215,223	3,418	870	25,639	245,150	1,184	243,966	-	+480	244,446
	1973	233,804	3,861	663	24,310	262,638	882	261,756	-	+63	261,819
	1974	220,138	4,082	695	29,232	254,147	896	253,251	-	+50	253,301
	1975	222,334	3,777	1,140	26,463	253,714	1,430	252,284	-	+75	252,359
	1976	221,462	3,727	1,265	31,153	257,707	1,729	255,978	-	-99	255,879
	1977	223,752	3,906	1,297	34,660	263,615	1,608	262,007	-	-	262,007
	1978	231,148	4,025	1,169	32,462	268,804	1,429	267,375	-	-76	267,299

(1) See footnote (1) to Table 69.

(2) Transfers between the Republic of Ireland and Northern Ireland and between England and France.

(3) Including transport undertakings.



# Fuel input and electricity available<sup>(1)</sup> United Kingdom

							1978				
							Public Supply				
							CEGB and South Western EB	Scottish Elec- Tricity Boards	Northern Ireland	(2) Other	Total
	1972	1973	1974	1975	1976	1977					
<b>Fuel input (3)</b>											
Coal (million tonnes)	66.7	76.8	67.1	74.5	77.8	79.6	72.2	8.2	0.5	—	80.9
Oil (million tonnes)	18.8	16.9	17.2	12.8	10.2	10.6	9.4	0.9	1.2	—	11.5
Natural gas (million therms)	630	285	985	858	662	519	253	—	—	85	338
Electricity (TWh):											
Nuclear electricity generated	29.38	28.00	33.62	30.34	36.15	40.02	28.46	4.88	—	3.88	37.22
Hydro electricity generated	3.43	3.88	4.09	3.80	3.74	3.92	0.21	3.18	—	0.65	4.04
Coke and breeze (million tonnes)	—	0.1	0.1	0.1	0.1	0.1	0.1	—	—	—	0.1
Net imports (TWh)	0.48	0.06	0.05	0.08	-0.10	—	-0.08	—	—	—	-0.08
<b>Fuel input (3)</b>											
Coal	66.7	76.8	67.1	74.5	77.8	79.6	72.2	8.2	0.5	—	80.9
Oil	32.0	28.8	29.3	21.8	17.3	18.0	15.9	1.5	2.1	—	19.5
Natural gas	2.5	1.1	3.9	3.4	2.6	2.1	1.0	—	—	0.4	1.4
Electricity:											
Nuclear	10.6	10.1	12.1	11.0	12.9	14.3	10.2	1.7	—	1.5	13.4
Hydro	1.8	2.0	2.1	1.9	1.9	2.0	0.1	1.7	—	0.3	2.1
Coke and breeze	—	0.1	0.1	0.1	—	—	0.1	—	—	—	0.1
Net imports	0.1	—	—	—	—	—	—	—	—	—	—
<b>Total all fuels</b>	<b>113.7</b>	<b>118.9</b>	<b>114.6</b>	<b>112.7</b>	<b>112.5</b>	<b>116.0</b>	<b>99.5</b>	<b>13.1</b>	<b>2.6</b>	<b>2.2</b>	<b>117.4</b>
<b>Electricity supplied (gross)</b>											
Conventional thermal stations	200.71	217.47	204.10	207.81	205.71	208.57	190.72	19.76	5.28	0.66	216.42
Nuclear stations	25.64	24.31	29.23	26.46	31.15	34.66	24.85	4.27	—	3.34	32.46
Natural hydro-electric stations	3.42	3.86	4.08	3.78	3.73	3.90	0.21	3.17	—	0.65	4.03
Pumped storage stations	0.87	0.66	0.70	1.14	1.36	1.30	0.35	0.82	—	—	1.17
<b>Total electricity supplied (gross)</b>	<b>230.64</b>	<b>246.30</b>	<b>238.11</b>	<b>239.19</b>	<b>241.95</b>	<b>248.43</b>	<b>216.13</b>	<b>28.02</b>	<b>5.28</b>	<b>4.65</b>	<b>254.08</b>
Units used in pumping at pumped storage stations	1.19	0.88	0.90	1.43	1.73	1.61	0.53	0.90	—	—	1.43
<b>Electricity supplied (net)</b>	<b>229.45</b>	<b>245.42</b>	<b>237.21</b>	<b>237.76</b>	<b>240.22</b>	<b>246.82</b>	<b>215.60</b>	<b>27.12</b>	<b>5.28</b>	<b>4.65</b>	<b>252.65</b>
Net exchanges between Boards	—	—	—	—	—	—	+0.70	-0.70	—	—	—
Transferred to public supply Boards	—	—	—	—	—	—	+1.66	+1.68	—	-3.34	—
Purchased from collieries etc.	0.53	0.59	0.60	0.70	0.61	0.74	+0.63	+0.03	—	—	0.66
Net imports	0.48	0.06	0.05	0.08	-0.10	—	-0.08	—	—	—	-0.08
<b>Total electricity available</b>	<b>230.46</b>	<b>246.07</b>	<b>237.86</b>	<b>238.54</b>	<b>240.73</b>	<b>247.56</b>	<b>218.51</b>	<b>28.13</b>	<b>5.28</b>	<b>1.31</b>	<b>253.23</b>
<b>Total available by countries</b>											
England and Wales	219.18	226.48	219.64	219.07	222.00	226.80	200.40	26.16	4.86	21.81	231.42
Scotland	18.91	19.59	18.22	19.47	18.73	20.76	18.78	2.61	0.42	—	—
Northern Ireland	—	—	—	—	—	—	—	—	—	—	—
<b>Total consumption of electricity (5)</b>	<b>211.55</b>	<b>226.48</b>	<b>219.64</b>	<b>219.07</b>	<b>222.00</b>	<b>226.80</b>	<b>200.40</b>	<b>26.16</b>	<b>4.86</b>	<b>21.81</b>	<b>231.42</b>

(1) Public supply transport undertakings and industrial hydro and nuclear stations

(2) Transport undertakings and industrial hydro and nuclear stations.

(3) Includes small quantities of coal and oil used for steam made for sale.

(4) See notes on page 90.

(5) For an analysis of consumption see Table 66.



66

# Analysis of consumption<sup>(1)</sup> United Kingdom

TWh

	1972	1973	1974	1975	1976	1977	1978			Total
							England and Wales	Scotland	North-ern Ireland	
<b>Collieries:</b>										
Net purchases from public supply	4.38	4.74	4.38	4.84	4.96	5.09	4.74	0.45	—	5.19
<b>Fuel conversion industries:</b>										
Gas works	0.64	0.55	0.42	0.30	0.23	0.21	0.19	0.01	—	0.20
Coke ovens	0.24	0.26	0.23	0.23	0.24	0.21	0.17	0.01	—	0.18
Petroleum refineries	1.11	1.12	1.09	0.92	0.96	0.92	0.90	0.03	0.02	0.95
<b>Total fuel conversion industries</b>	<b>1.99</b>	<b>1.93</b>	<b>1.74</b>	<b>1.45</b>	<b>1.43</b>	<b>1.34</b>	<b>1.26</b>	<b>0.05</b>	<b>0.02</b>	<b>1.33</b>
<b>Final users:</b>										
Agriculture	3.84	3.98	3.94	3.65	3.62	3.96	3.27	0.52	0.23	4.02
<b>Industry:</b>										
Iron and steel industry:										
Purchased from public supply	10.77	11.64	11.29	11.16	12.61	12.31	12.04	1.02	—	13.06
Less sales to other industries	0.97	1.17	1.18	1.08	1.05	0.92	1.01	—	—	1.01
<b>Total</b>	<b>9.80</b>	<b>10.47</b>	<b>10.11</b>	<b>10.08</b>	<b>11.56</b>	<b>11.39</b>	<b>11.03</b>	<b>1.02</b>	<b>—</b>	<b>12.05</b>
<b>Other industries:</b>										
Purchase from public supply (2)	61.69	67.64	63.83	63.47	67.50	69.02	61.48	7.12	1.54	70.14
Purchased from Iron and steel industry	0.97	1.17	1.18	1.08	1.05	0.92	1.01	—	—	1.01
" " transport authorities	0.13	0.13	0.13	0.13	0.13	0.13	0.14	—	—	0.14
Industrial hydro generation	0.57	0.65	0.56	0.59	0.60	0.58	—	0.65	—	0.65
<b>Total</b>	<b>63.36</b>	<b>69.59</b>	<b>65.70</b>	<b>65.27</b>	<b>69.28</b>	<b>70.65</b>	<b>62.63</b>	<b>7.77</b>	<b>1.54</b>	<b>71.94</b>
<b>Railways:</b>										
Purchased from public supply	2.25	2.18	2.32	2.48	2.46	2.51	2.40	0.15	—	2.55
Self produced	0.42	0.43	0.39	0.42	0.41	0.42	0.42	—	—	0.42
<b>Total</b>	<b>2.67</b>	<b>2.61</b>	<b>2.71</b>	<b>2.90</b>	<b>2.87</b>	<b>2.93</b>	<b>2.82</b>	<b>0.15</b>	<b>—</b>	<b>2.97</b>
<b>Domestic</b>	<b>86.89</b>	<b>91.30</b>	<b>92.63</b>	<b>89.22</b>	<b>85.12</b>	<b>85.90</b>	<b>73.07</b>	<b>10.80</b>	<b>1.93</b>	<b>85.80</b>
<b>Public Administration</b>	<b>12.65</b>	<b>13.16</b>	<b>12.18</b>	<b>13.27</b>	<b>13.96</b>	<b>14.32</b>	<b>12.60</b>	<b>2.02</b>	<b>0.37</b>	<b>14.99</b>
<b>Miscellaneous:</b>										
Purchased from public supply	25.96	28.70	26.25	28.39	29.20	31.22	28.98	3.38	0.77	33.13
" " transport authorities	0.01	—	—	—	—	—	—	—	—	—
<b>Total</b>	<b>25.97</b>	<b>28.70</b>	<b>26.25</b>	<b>28.39</b>	<b>29.20</b>	<b>31.22</b>	<b>28.98</b>	<b>3.38</b>	<b>0.77</b>	<b>33.13</b>
<b>Total final users</b>	<b>205.18</b>	<b>219.81</b>	<b>213.52</b>	<b>212.78</b>	<b>215.61</b>	<b>220.37</b>	<b>194.40</b>	<b>25.66</b>	<b>4.84</b>	<b>224.90</b>
<b>Total all consumers</b>	<b>211.55</b>	<b>226.48</b>	<b>219.64</b>	<b>219.07</b>	<b>222.00</b>	<b>226.80</b>	<b>200.40</b>	<b>26.16</b>	<b>4.86</b>	<b>231.42</b>

(1) Analysis of total consumption shown in Table 65. Also see notes on page 90.

(2) Figures prior to 1974 may include small amounts of electricity purchased from collieries.



## 67

### Fuel used for generation

#### United Kingdom: Public Supply

Million tonnes of coal or coal equivalent (1)

Type of fuel	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Coal(2)	74.71	67.96	70.32	71.27	72.48	75.80	78.74	78.50
Oil for firing boilers(3)	18.80	22.12	25.73	24.68	23.99	16.70	13.45	14.72
Oil for lighting up boilers(4)	3.95	4.45	3.90	2.92	2.89	2.45	3.05	3.43
Natural gas(5)	0.43	1.35	2.21	2.32	3.34	3.56	1.98	1.94
Nuclear	7.72	8.83	8.95	8.68	10.27	9.42	12.26	13.02
Other(6)	2.70	2.02	2.29	2.71	2.29	1.92	1.75	2.19
<b>Total fuel used</b>	<b>108.31</b>	<b>106.73</b>	<b>113.40</b>	<b>112.58</b>	<b>115.26</b>	<b>109.85</b>	<b>111.23</b>	<b>113.80</b>

(1) See notes on page 90.

(2) Used in coal fired stations, and coal fired sections of mixed fired stations. Includes a small quantity of coke.

(3) Used in oil fired stations, and oil fired sections of mixed fired stations, plus all oil used in Northern Ireland.

(4) Used in coal fired stations, and pulverised coal fired sections of mixed fired stations. Also used for flame control and overburning. Oil used at coal fired power stations in Northern Ireland is included with oil for firing boilers.

(5) Used in mixed fired stations.

(6) Includes oil used in diesel engine and gas turbine stations, or sections (excluding Northern Ireland — see footnotes 3 and 4) and natural hydro-electricity.

## 68

### Electricity supplied (gross) (1) by type of station

#### United Kingdom: Public Supply

GWh

	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
Conventional steam stations(2)								
Coal fired	141,143	140,018	140,073	139,581	147,068	156,903	163,794	162,259
Oil fired	31,685	34,770	49,888	46,085	42,788	27,664	25,558	30,459
Mixed fired(3)	9,892	7,262	10,213	11,870	12,881	12,735	9,742	9,887
Dual fired	—	3,770	4,923	6,095	7,779	9,234	5,475	5,438
Unallocated(4)	+5,021	+4,768	+2,539	+2,295	+1,041	+1,004	+1,116	—
<b>Total</b>	<b>187,741</b>	<b>190,588</b>	<b>207,636</b>	<b>205,926</b>	<b>211,557</b>	<b>207,540</b>	<b>205,685</b>	<b>208,043</b>
Nuclear stations(2)	19,030	21,715	22,005	21,318	25,205	23,273	30,103	31,908
Gas turbine stations/sections	1,081	1,001	1,139	1,167	755	361	293	570
Diesel stations	196	192	190	198	214	219	244	275
Hydro-electric stations	3,921	2,699	3,010	3,691	3,398	3,112	2,806	3,430
Pumped storage stations	1,092	898	801	635	791	1,307	1,369	1,240
<b>Total electricity supplied (gross)</b>	<b>213,061</b>	<b>217,093</b>	<b>234,781</b>	<b>232,935</b>	<b>241,920</b>	<b>235,812</b>	<b>240,500</b>	<b>245,466</b>

(1) See footnote 1 to Table 69.

(2) Including associated diesel and gas turbine plant, excepting gas turbine plant which comprises a section of a station. Stations, or sections of stations, burning pulverised coal use oil for lighting up purposes (2.25 million tonnes were used for this purpose in Great Britain during 1977/78).

(3) Stations with a mixture of coal, oil or natural gas fired boilers.

(4) Net amount supplied from pre-commissioned or decommissioned stations.



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Electricity generated, supplied, and available <sup>(1)</sup>

United Kingdom: Public supply power stations

GWh

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
<b>Electricity generated by:</b>											
Steam plant (nuclear):											
England and Wales	21,549	22,582	19,230	20,679	23,011	21,416	26,928	23,940	28,298	30,703	28,459
Scotland	2,507	2,689	2,640	2,530	2,293	2,242	2,467	2,578	4,121	5,714	4,880
United Kingdom	24,056	25,271	21,870	23,209	25,304	23,658	29,395	26,518	32,419	36,417	33,339
Steam plant (other):											
England and Wales	159,611	169,470	179,184	186,144	187,951	202,177	190,428	194,333	193,111	195,094	202,079
Scotland	12,725	14,805	16,435	17,159	19,213	22,248	20,095	20,186	19,060	19,470	20,554
Northern Ireland	3,537	3,910	4,249	4,505	4,929	5,467	5,178	5,173	5,324	5,455	5,560
United Kingdom	175,873	188,185	199,868	207,808	212,093	229,892	215,701	219,692	217,495	220,019	228,193
Gas turbines and oil engines:											
England and Wales	475	771	1,306	806	1,391	1,089	899	460	210	629	312
Scotland	225	246	211	163	217	239	212	225	250	300	309
Northern Ireland	—	—	—	—	3	19	28	14	27	37	67
United Kingdom	700	1,017	1,517	969	1,611	1,347	1,139	699	487	966	688
Hydro-electric plant, other than pumped storage plant:											
England and Wales	188	183	259	161	189	188	245	172	153	223	210
Scotland	2,809	2,624	3,597	2,683	2,676	3,047	3,289	3,029	2,985	3,107	3,178
United Kingdom	2,997	2,807	3,856	2,844	2,865	3,235	3,534	3,201	3,138	3,330	3,388
Pumped storage plant:											
England and Wales	421	468	442	280	369	367	348	344	352	345	351
Scotland	430	654	683	630	503	301	349	809	1,029	968	832
United Kingdom	851	1,122	1,125	910	872	668	697	1,153	1,381	1,313	1,183
<b>Total electricity generated:</b>											
England and Wales	182,244	193,474	200,421	208,070	212,911	225,237	218,848	219,249	222,124	226,994	231,411
Scotland	18,696	21,018	23,566	23,165	24,902	28,077	26,412	26,827	27,445	29,559	29,753
Northern Ireland	3,537	3,910	4,249	4,505	4,932	5,486	5,206	5,187	5,351	5,492	5,627
United Kingdom	204,477	218,402	228,236	235,740	242,745	258,800	250,466	251,263	254,920	262,045	266,791
<b>Electricity used on works:</b>											
England and Wales	12,838	13,487	14,277	14,916	15,155	15,692	15,367	14,815	15,423	15,737	15,281
Scotland	1,096	1,225	1,345	1,378	1,421	1,518	1,537	1,459	1,674	1,867	1,731
Northern Ireland	178	207	223	237	285	335	264	323	338	356	347
United Kingdom	14,112	14,919	15,845	16,531	16,861	17,545	17,168	16,597	17,435	17,960	17,359
<b>Electricity supplied (gross)</b>											
England and Wales	169,406	179,987	186,144	193,154	197,756	209,545	203,481	204,434	206,701	211,257	216,130
Scotland	17,600	19,793	22,221	21,787	23,481	26,559	24,875	25,368	25,771	27,692	28,022
Northern Ireland	3,359	3,703	4,026	4,268	4,647	5,151	4,942	4,864	5,013	5,136	5,280
United Kingdom	190,365	203,483	212,391	219,209	225,884	241,255	233,298	234,666	237,485	244,085	249,432
<b>Electricity used in pumping at pumped storage stations:</b>											
England and Wales	589	680	639	416	556	546	526	503	522	516	528
Scotland	535	833	848	793	628	336	370	927	1,207	1,092	901
United Kingdom	1,124	1,513	1,487	1,209	1,184	882	896	1,430	1,729	1,608	1,429
<b>Electricity supplied (net):</b>											
England and Wales	168,817	179,307	185,505	192,738	197,200	208,999	202,955	203,931	206,179	210,741	215,602
Scotland	17,065	18,960	21,373	20,994	22,853	26,223	24,505	24,441	24,564	26,600	27,121
Northern Ireland	3,359	3,703	4,026	4,268	4,647	5,151	4,942	4,864	5,013	5,136	5,280
United Kingdom	189,241	201,970	210,904	218,000	224,700	240,373	232,402	233,236	235,756	242,477	248,003
<b>Purchases of electricity from industrial producers:</b>											
England and Wales	2,364	2,364	2,572	2,627	2,395	2,677	2,600	2,421	2,145	2,187	2,290
Scotland	1,187	1,382	1,461	1,630	1,657	1,643	1,628	1,563	1,669	1,646	1,705
United Kingdom	3,551	3,746	4,033	4,257	4,052	4,320	4,228	3,984	3,814	3,833	3,995
<b>Net exchanges between Boards and net imports:</b>											
England and Wales	-986	-726	+609	-238	+644	+1,041	-126	-909	-752	+405	+622
Scotland	+1,720	+1,305	-58	+355	-219	-932	+165	+984	+653	-405	-698
Northern Ireland	—	—	—	—	+55	-46	+11	—	—	—	—
United Kingdom	+734	+579	+551	+117	+480	+63	+50	+75	-99	—	-76
<b>Total electricity available:</b>											
England and Wales	170,195	180,945	188,686	195,127	200,239	212,717	205,429	205,443	207,572	213,333	218,514
Scotland	19,972	21,647	22,776	22,979	24,291	26,934	26,298	26,988	26,886	27,841	28,128
Northern Ireland	3,359	3,703	4,026	4,268	4,702	5,105	4,953	4,864	5,013	5,136	5,280
United Kingdom	193,526	206,295	215,488	222,374	229,232	244,756	236,680	237,295	239,471	246,310	251,922

(1) Total electricity generated less electricity used on works equals electricity supplied (gross). Electricity supplied (gross) less electricity used in pumping at pumped storage stations equals electricity supplied (net). Electricity supplied (net) plus

purchases of electricity from industrial producers plus net exchanges between Boards and net imports equals total electricity available. Electricity supplied (gross) is shown by type of plant for the United Kingdom as a whole, in table 64.



## ELECTRICITY

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# Generation and sales Great Britain: Public supply

	Total number of generating stations at end of period (1)	Plant capacity end of period		Plant commissioned during period (4)	Electricity generated (5)	Used <sup>(2)</sup> on works (6)	Supplied from stations (net) (7)	Purchased from outside sources <sup>(3)</sup> (8)	Total <sup>(4)</sup> electricity available (9)	Total sales to consumers (10)
		Installed (2)	Output <sup>(1)</sup> (3)							
		MW			GWh					
1968	314	53,559	50,084	4,058	200,940	15,059	185,881	4,285	190,166	173,925
1969	294	55,110	51,675	2,662	214,492	16,224	198,268	4,325	202,593	185,423
1970	289	60,538	56,057	5,541	223,987	17,110	206,877	4,584	211,461	193,907
1971	286	65,567	60,792	5,178	231,234	17,502	213,732	4,321	218,053	199,442
1972	273	68,794	63,812	2,951	237,813	17,760	220,053	4,478	224,531	206,370
1973	266	71,125	65,999	2,929	253,314	18,092	235,222	4,429	239,651	220,591
1974	259	72,136	67,238	1,898	245,260	17,801	227,459	4,267	231,726	213,902
1975	259	71,816	66,765	836	246,076	17,704	228,372	4,059	232,431	213,499
1976	230	69,852	65,581	2,552	249,569	18,826	230,743	3,715	234,458	216,282
1977	223	69,747	65,368	888	256,553	19,212	237,341	3,833	241,174	220,904
1978	216	69,911	65,449	1,212	261,164	18,441	242,723	3,919	246,642	225,346
1972/73										
England and Wales	175	61,111	56,451	2,798	220,609	16,106	204,503	2,513	207,841 <sup>(5)</sup>	191,276
Scotland	90	8,092	7,735	588	26,348	1,988	24,360	1,634	25,169 <sup>(5)</sup>	22,725
Total	265	69,203	64,186	3,386	246,957	18,094	228,863	4,147	233,010	214,001
1973/74										
England and Wales	170	62,588	58,050	2,052	217,548	15,779	201,769	2,919	205,111 <sup>(5)</sup>	189,555
Scotland	89	7,981	7,611	13	27,095	1,808	25,287	1,610	26,474 <sup>(5)</sup>	23,912
Total	259	70,569	65,661	2,065	244,643	17,587	227,056	4,529	231,585	213,467
1974/75										
England and Wales	169	63,160	58,547	1,735	227,232	16,278	210,954	2,495	212,818 <sup>(5)</sup>	195,944
Scotland	90	8,263	7,914	310	26,997	2,034	24,963	1,582	27,176 <sup>(5)</sup>	24,582
Total	259	71,423	66,461	2,045	254,229	18,312	235,917	4,077	239,994	220,526
1975/76										
England and Wales	162	62,546	58,701	1,165	220,022	15,393	204,629	2,298	206,171 <sup>(5)</sup>	189,438
Scotland	88	8,588	8,217	494	27,272	2,666	24,606	1,533	26,895 <sup>(5)</sup>	24,140
Total	250	71,134	66,918	1,659	247,294	18,059	229,235	3,831	233,066	213,578
1976/77										
England and Wales	138	60,042	56,390	1,118	224,789	16,217	208,572	1,894	209,911 <sup>(5)</sup>	191,960
Scotland	89	10,038	9,333	1,199	28,048	2,965	25,083	1,669	27,307 <sup>(5)</sup>	24,749
Total	227	70,080	65,723	2,317	252,837	19,182	233,655	3,563	237,218	216,709
1977/78										
England and Wales	138	60,095	56,351	57	228,146	16,226	211,920	2,370	214,956 <sup>(5)</sup>	196,495
Scotland	85	10,378	9,659	643	29,750	2,863	26,886	1,578	27,798 <sup>(5)</sup>	25,113
Total	223	70,473	66,010	700	257,896	19,089	238,806	3,948	242,754	221,608

<sup>(1)</sup> For the United Kingdom at the end of calendar years, the figures were as follows:

	MW
1968	51,053
1969	52,758
1970	57,206
1971	61,942
1972	65,034
1973	67,615
1974	69,035
1975	68,555
1976	67,431
1977	67,276
1978	67,357

<sup>(2)</sup> Includes units used in pumping at pumped storage stations.

<sup>(3)</sup> The figures include net imports from France.

<sup>(4)</sup> Relates to electricity available before distribution losses.

<sup>(5)</sup> Adjusted for exchanges between England and Scotland



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# Capacity of steam plant Great Britain: Public supply

	Number of generating stations or sections (1)	Installed capacity at end of period (2)	Output capacity		
			At end of period(1) (3)	New plant commissioned during period (4)	Electricity supplied from stations (5)
		MW	MW	MW	GWh
<b>Nuclear stations:</b>					
1967/68	8	3,674	3,116	190	19,781
1968/69	8	4,014	3,438	322	22,095
1969/70	8	4,014	3,438	—	21,259
1970/71	8	4,180	2,906	—	19,030
1971/72	9	4,981	3,551	645	21,715
1972/73	9	5,181	3,746	195	22,005
1973/74	9	5,181	3,746	—	21,318
1974/75	9	5,181	3,762	—	25,205
1975/76	10	4,851	4,221	459	23,273
1976/77					
C.E.G.B.	9	4,527	3,862	400	25,920
Scotland	2	1,704	1,300	541	4,183
Total	11	6,231	5,162	941	30,103
1977/78					
C.E.G.B.	9	4,527	3,832	—	27,096
Scotland	2	1,704	1,300	—	4,812
Total	11	6,231	5,132	—	31,908
<b>Oil-fired stations(2)</b>					
1967/68	32	4,623	4,300	—	16,690
1968/69	21	4,139	3,921	—	15,094
1969/70	19	4,393	4,155	350	21,763
1970/71	19	5,830	5,543	1,385	28,444
1971/72	21	7,569	7,523	1,500	31,417
1972/73	30	11,264	10,680	520	46,130
1973/74	30	11,236	10,664	—	41,723
1974/75	31	11,155	10,556	—	38,538
1975/76	28	10,855	10,345	—	23,206
1976/77					
C.E.G.B.	21	9,555	9,126	40	20,597
Scotland	5	1,447	1,372	642	358
Total	26	11,002	10,498	682	20,955
1977/78					
C.E.G.B.	21	9,605	9,166	40	24,993
Scotland	4	2,006	1,902	642	1,218
Total	25	11,611	11,068	682	26,211
<b>Other steam stations(2)(3)</b>					
1967/68	163	38,857	36,402	4,401	138,697
1968/69	159	41,979	39,231	3,336	150,559
1969/70	156	44,203	41,332	2,586	153,837
1970/71	151	46,295	43,479	2,821	155,204
1971/72	152	49,424	46,348	3,881	154,832
1972/73	135	48,500	45,523	2,598	156,665
1973/74	130	49,827	46,983	2,018	159,166
1974/75	129	50,448	47,540	1,701	168,026
1975/76	121	50,779	47,743	1,165	179,375
1976/77					
C.E.G.B.	89	43,326	40,798	525	161,769
Scotland	7	4,480	4,282	—	17,871
Total	96	47,806	45,080	525	179,640
1977/78					
C.E.G.B.	89	43,312	40,732	—	159,239
Scotland	5	4,480	4,282	—	17,439
Total	94	47,792	45,014	—	176,678

(1) Including plant up-rated and de-rated or converted (e.g. from coal to oil).

(2) The net amount of electricity supplied from pre-commissioned oil-fired stations is included under other steam stations.

(3) Includes stations fired by both coal and oil.



# Loads and efficiencies Great Britain: Public supply

		Simultaneous maximum load met during year <sup>(1)</sup> (1)	Simultaneous maximum potential demand during year <sup>(1)</sup> (2)	Plant load factor <sup>(2)</sup> (3)	System load factor <sup>(3)</sup> (4)	Average thermal efficiency of steam stations <sup>(4)</sup> (5)		
		MW	MW	Per cent	Per cent	Per cent		
1968		42,059	42,059	44.5	51.5	28.3		
1969		43,027	44,529	44.9	51.9	28.5		
1970		43,270	46,401	44.5	52.0	28.4		
1971		44,914	46,074	42.5	53.7	29.2		
1972		45,868	45,868	40.3	55.8	29.4		
1973		44,883	47,187	41.7	56.9	29.9		
1974		46,526	46,526	39.2	56.9	30.3		
1975		46,677	46,677	39.3	56.8	31.3		
1976		47,902	47,902	39.9	55.7	31.7		
1977		48,605	48,605	41.7	56.6	31.5		
1978		50,144	50,144	42.4	56.1	32.1		
1974/75	England and Wales	40,973	40,973	40.8	59.2	30.6		
	Scotland	5,553	5,553	37.2	55.9	31.6		
	Total	46,526	46,526	40.3	58.8	30.7		
1975/76	England and Wales	41,353	41,353	39.5	56.7	31.3		
	Scotland	5,324	5,324	37.6	57.5	32.5		
	Total	46,677	46,677	39.3	56.8	31.4		
1976/77	England and Wales	42,110	42,110	40.8	56.9	31.6		
	Scotland	5,792	5,792	35.8	53.8	32.5		
	Total	47,902	47,902	40.2	56.5	31.7		
1977/78	England and Wales	42,803	42,803	42.7	57.3	31.5		
	Scotland	5,802	5,802	34.9	54.7	32.3		
	Total	48,605	48,605	41.6	57.0	31.6		
		Plant load factor						
		Steam stations		Oil engines	Gas turbine	Hydro plant		Total
		Nuclear	Other			Natural flow	Pumped Storage	
		Per cent						
1974/75	England and Wales	76.6	40.0	18.3	4.3	22.8	11.2	40.8
	Scotland	78.7	40.9	25.7	0.6	30.9	8.4	37.2
	Total	76.8	40.1	24.9	4.0	30.2	9.4	40.3
1975/76	England and Wales	69.5	39.2	—	2.0	16.1	11.1	39.5
	Scotland	73.2	41.7	28.7	0.4	28.7	15.6	37.6
	Total	69.8	39.4	25.7	1.8	27.6	14.0	39.3
1976/77	England and Wales	77.0	40.0	10.3	1.4	16.7	11.0	40.8
	Scotland	62.8	38.0	27.7	0.6	25.7	16.7	35.8
	Total	74.6	39.8	26.0	1.3	24.9	14.7	40.2
1977/78	England and Wales	75.3	42.1	12.3	2.8	22.0	10.8	42.7
	Scotland	42.3	37.8	28.1	2.0	31.3	14.7	34.9
	Total	66.9	41.7	26.3	2.7	30.5	13.4	41.6

(1) Maximum occurring near the end of the year or early in the following year (see notes on page 90).  
 (2) Including pumped storage stations.

(3) Based on column 2.  
 (4) Excluding nuclear stations.



# Fuel use, generation, availability and output capacity

## Great Britain: Public supply

Period (1)	Fuel used (2)			Electricity generated by				Electricity supplied (net) (8)	Total (3) electricity available (9)	Adjusted electricity available (Annual rates) (4) (10)	Output capacity at end of period (11)
	Coal (1)	Coke and coke breeze (2)	Oil (3)	Steam plant (4)	Hydro plant (5)	Other methods (6)	Total (7)				
	Thousand tonnes			GWh					TWh		MW
1968	73,869	441	5,762	196,392	3,848	700	200,940	185,881	190.2	193.6	50,084
1969	76,329	171	7,510	209,546	3,929	1,017	214,492	198,268	202.6	200.5	51,675
1970	76,706	124	11,553	217,489	4,981	1,517	223,987	206,877	211.5	211.6	56,057
1971	72,130	68	13,692	226,511	3,754	969	231,234	213,732	218.1	215.9	60,792
1972	65,456	44	17,660	232,468	3,737	1,608	237,813	220,053	224.5	224.1	63,812
1973	76,028	65	15,579	248,083	3,903	1,328	253,314	235,222	239.7	241.0	65,999
1974	66,390	70	15,862	239,918	4,231	1,111	245,260	227,459	231.7	235.5	67,238
1975	74,038	136	11,373	241,037	4,354	685	246,076	228,372	232.4	234.2	66,765
1976	77,230	52	8,731	244,590	4,519	460	249,569	230,743	234.5	236.7	65,581
1977	78,854	80	9,344	250,981	4,643	929	256,553	237,341	241.2	240.8	65,368
1978	80,123	131	10,227	255,973	4,571	620	261,164	242,723	246.6	246.3	65,449
1976/77											
Summer	31,977	11	3,385	102,282	1,675	168	104,125	95,902	97.5	242.3	67,357
Winter	46,413	40	5,192	145,127	2,533	385	148,045	137,131	139.0	234.8	65,723
Year	78,390	51	8,577	247,409	4,208	553	252,170	233,033	236.5	238.6	65,723
1977/78											
Summer	34,359	28	3,504	108,839	1,685	242	110,766	102,193	103.9	245.3	65,464
Winter	43,567	63	6,222	142,771	2,979	620	146,370	135,910	138.0	235.8	66,010
Year	77,926	91	9,726	251,610	4,664	862	257,136	238,103	241.9	240.6	66,010
1978/79											
Summer	34,760	57	4,598	111,077	1,611	291	112,979	104,830	106.6	251.0	66,053
Winter	48,205	97	6,228	152,212	2,786	411	155,409	144,884	147.0	249.2	65,671
Year	82,965	154	10,826	263,289	4,397	702	268,388	249,714	253.6	250.1	65,671
1976/77 England and Wales	69,927	51	8,095	223,429	513	295	224,237	208,048	209.4	..	56,330
Scotland	8,463	—	482	23,980	3,695	258	27,933	24,985	27.1	..	9,333
1977/78 England and Wales	69,536	91	9,058	226,371	557	551	227,479	211,300	214.2	..	56,351
Scotland	8,390	—	668	25,239	4,107	311	29,657	26,803	27.7	..	9,659
1978/79 England and Wales	74,869	154	9,696	236,766	548	375	237,689	221,681	224.6	..	56,154
Scotland	8,096	—	1,130	26,523	3,849	327	30,699	28,033	29.0	..	9,517

(1) The summer period is from April to September inclusive and the winter period from October to March inclusive. The figures may not add exactly to the financial year totals given in Table 70 (see notes on page 90).

(2) Excluding coal and oil used in the production of steam for sale.

(3) Relates to electricity available before distribution losses.

(4) Adjusted for seasonal variations and weather effects. The figures have been provided by the Electricity Council.



Electricity supplied, output capacity and plant load factor <sup>(1)</sup> 1977/78

Great Britain: Public supply

Plant load factor	Number of stations or sections (1)	Output capacity at end of year (2)	Percentage of total capacity (3)	Electricity supplied (4)	Percentage of total electricity supplied (5)	Average plant load factor (6)
Per cent		MW	%	GWh	%	%
85 and over	3	1,226	1.9	9,494	4.0	88.4
80 and under 85	3	787	1.2	5,907	2.5	83.2
75 and under 80	6	5,036	7.7	34,389	14.5	78.0
70 and under 75	2	391	0.6	2,482	1.1	72.5
65 and under 70	1	840	1.3	4,905	2.1	66.7
60 and under 65	3	1,204	1.9	6,705	2.8	63.6
55 and under 60	8	4,140	6.4	21,370	9.0	58.9
50 and under 55	14	14,414	22.2	66,568	28.0	52.8
45 and under 50	11	4,361	6.7	17,628	7.4	46.1
40 and under 45	19	4,030	6.2	15,239	6.4	43.2
35 and under 40	19	5,227	8.0	16,887	7.1	36.9
30 and under 35	23	4,040	6.2	11,389	4.8	32.2
25 and under 30	19	3,088	4.8	7,756	3.3	28.7
20 and under 25	24	3,715	5.7	7,136	3.0	21.9
15 and under 20	10	2,396	3.7	3,769	1.6	18.0
10 and under 15	15	3,179	4.9	2,975	1.3	13.1
5 and under 10	16	2,416	3.7	1,769	0.7	8.3
Under 5	48	4,483	6.9	1,016	0.4	2.6
All stations	244	64,973	100.0	237,384	100.0	42.1
Cumulated distribution						
85 and over	3	1,226	1.9	9,494	4.0	88.4
80 and over	6	2,013	3.1	15,401	6.5	86.4
75 and over	12	7,049	10.8	49,790	21.0	80.4
70 and over	14	7,440	11.4	52,272	22.1	80.0
65 and over	15	8,280	12.7	57,177	24.2	78.6
60 and over	18	9,484	14.6	63,882	27.0	76.7
55 and over	26	13,624	21.0	85,252	36.0	71.3
50 and over	40	28,038	43.2	151,820	64.0	61.8
45 and over	51	32,399	49.9	169,448	71.4	59.7
40 and over	70	36,429	56.1	184,687	77.8	57.9
35 and over	89	41,656	64.1	201,574	84.9	55.2
30 and over	112	45,696	70.3	212,963	89.7	53.2
25 and over	131	48,784	75.1	220,719	93.0	51.6
20 and over	155	52,499	80.8	227,855	96.0	49.5
15 and over	165	54,895	84.5	231,624	97.6	48.2
10 and over	180	58,074	89.4	234,599	98.9	46.6
5 and over	196	60,490	93.1	236,368	99.6	45.0
All stations	244	64,973	100.0	237,384	100.0	42.1

(1) For stations in commission for the whole of the year excluding pumped storage stations. No new stations were brought into operation during the year, and 4 stations were closed down. No electricity was supplied by these stations.



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# Thermal efficiency of conventional steam stations <sup>(1)</sup> Great Britain: Public supply

Thermal efficiency	Number of stations or sections at end of year			Output capacity at end of year			Electricity supplied		
	1975/76	1976/77	1977/78	1975/76	1976/77	1977/78	1975/76	1976/77	1977/78
Per cent				MW			GWh		
34 and over	7	8	6	11,769	13,699	10,491	55,068	74,139	54,796
32 and under 34	15	13	15	17,575	15,136	18,677	80,348	61,092	84,473
30 and under 32	12	11	11	7,000	6,458	6,408	27,482	27,565	21,069
28 and under 30	11	10	11	3,760	5,060	4,722	11,673	14,235	12,502
26 and under 28	15	14	18	3,467	2,871	5,429	10,705	8,848	15,212
24 and under 26	16	17	15	3,516	3,962	3,168	7,135	7,054	7,007
22 and under 24	18	10	17	3,164	1,627	3,114	6,001	2,329	4,758
20 and under 22	7	13	12	799	2,040	1,907	1,510	3,203	2,182
18 and under 20	11	8	8	1,726	1,657	1,080	948	688	747
16 and under 18	16	4	2	2,185	583	177	553	140	45
14 and under 16	2	3	4	353	300	245	88	124	85
12 and under 14	7	5	1	655	979	154	46	97	13
10 and under 12	4	—	2	487	—	173	31	—	18
Under 10	27	16	5	1,632	1,493	385	—31	—29	—19
<b>Total</b>	<b>168</b>	<b>132</b>	<b>127</b>	<b>58,088</b>	<b>55,865</b>	<b>56,130</b>	<b>201,557</b>	<b>199,485</b>	<b>202,888</b>

(1) Excluding nuclear power stations and gas turbine sections. For average annual thermal efficiencies of all conventional steam stations, see Table 72.

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# Works cost of electricity supplied <sup>(1)</sup> 1977/78 Great Britain: Public supply

Fuel cost per kWh supplied	Number of stations or sections at end of year (1)	Average output capacity during the year		Electricity supplied		Electricity supplied per kW of average output capacity (6)	Average works costs per kWh supplied <sup>(2)</sup>			
		MW (2)	Percent- age of total (3)	GWh (4)	Percent- age of total (5)		Fuel (7)	Repairs & main-tenance (8)	Other operating costs (9)	Total (10)
Pence						kWh	Pence			
Conventional steam stations (3)										
Less than 0.8	1	57	0.1	416	0.2	7,305	0.316	0.075	0.068	0.459
0.8 and under 0.9	2	1,987	3.3	13,573	6.6	6,831	0.893	0.050	0.014	0.957
0.9 and under 1.0	9	13,903	23.4	70,401	34.0	5,064	0.950	0.083	0.022	1.055
1.0 and under 1.1	12	8,580	14.5	37,797	18.2	4,405	1.042	0.115	0.036	1.193
1.1 and under 1.2	15	10,455	17.6	36,548	17.6	3,496	1.166	0.105	0.042	1.313
1.2 and under 1.3	12	5,903	10.0	21,759	10.5	3,686	1.235	0.090	0.052	1.377
1.3 and over	76	14,682	24.8	22,394	10.8	1,525	1.514	0.214	0.198	1.926
All conventional steam stations	127	55,567	93.7	202,888	97.9	3,651	1.094	0.106	0.051	1.250
Other stations										
Gas turbine (4)	28	2,306	3.9	557	0.3	242	2.618	0.671	0.072	3.361
Oil engine	8	118	0.2	275	0.1	2,325	1.670	0.492	0.149	2.311
Hydro-electric (5)	70	1,284	2.2	3,430	1.7	2,672	0.000	0.047	0.043	0.091
<b>All stations</b>	<b>233</b>	<b>59,275</b>	<b>100.0</b>	<b>207,150</b>	<b>100.0</b>	<b>3,495</b>	<b>1.080</b>	<b>0.107</b>	<b>0.051</b>	<b>1.238</b>

(1) Excluding nuclear power stations.

(2) Due to rounding the sum of columns 7 to 9 may not exactly equal column 10.

(3) Excluding gas turbine sections.

(4) Including gas turbine sections at conventional steam stations.

(5) Excluding pumped storage stations.



## ELECTRICITY

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Works cost of generation <sup>(1)</sup>

Great Britain: Public supply

		1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
<b>Fuel:</b>												
Coal:												
Cost	£ m.	324.5	351.9	367.3	397.1	422.4	452.6	473.7	777.8	1,149.0	1,391.6	1,601.6
Average cost per tonne	£	4.612	4.652	4.806	5.365	6.208	6.495	6.673	10.793	15.125	17.660	20.447
Oil:												
Cost	£ m.	56.9	55.2	74.6	140.7	172.8	184.1	254.5	469.2	382.8	383.9	513.1
Average cost per tonne	£	9.098	9.570	8.938	11.222	11.675	11.148	16.762	31.906	37.698	45.426	53.685
Other fuel:												
Cost	£ m.	2.0	1.2	1.4	2.4	5.9	10.2	17.7	39.1	46.0	29.0	42.4
Total cost	£ m.	383.4	408.3	443.3	540.2	601.1	646.9	745.9	1,286.1	1,577.8	1,804.5	2,157.1
Average cost per kWh supplied (net)	pence	0.240	0.242	0.247	0.286	0.317	0.313	0.363	0.610	0.766	0.887	1.043
<b>Fuel handling: <sup>(2)</sup></b>												
Cost	£ m.	21.8	21.3	24.1	27.6	32.5	36.6	42.0	53.4	68.3	75.8	82.0
Average cost per kWh supplied (net)	pence	0.014	0.013	0.014	0.015	0.017	0.018	0.020	0.025	0.033	0.037	0.040
<b>Repair and maintenance: <sup>(3)</sup></b>												
Cost	£ m.	47.1	47.0	52.8	65.5	81.2	104.8	121.3	153.6	173.0	199.6	222.0
Average cost per kWh supplied (net)	pence	0.029	0.028	0.029	0.035	0.043	0.050	0.059	0.073	0.084	0.098	0.107
<b>Other operating costs:</b>												
Cost	£ m.	36.6	37.4	39.1	45.2	52.1	57.9	64.8	81.8	101.0	99.4	105.7
Average cost per kWh supplied (net)	pence	0.023	0.022	0.022	0.024	0.027	0.028	0.031	0.039	0.049	0.049	0.051
Total cost	£ m.	488.9	514.0	559.3	678.5	766.9	846.2	974.0	1,574.9	1,920.1	2,179.3	2,566.8
Average cost per kWh supplied (net)	pence	0.306	0.305	0.312	0.360	0.404	0.409	0.473	0.747	0.932	1.071	1.241

(1) All stations except nuclear power stations. Capital charges are excluded.

(2) Including repair and maintenance of fuel handling plant.

(3) Excluding fuel handling plant.



# Analysis of stations<sup>(1)</sup> Great Britain: Public supply

Output capacity at end of year	Number of stations or sections at end of year (1)		Aggregate output capacity at end of year (2)		Total electricity supplied (3)		Plant load factor (4)		Works cost of generation per KWh supplied (5)		Average thermal efficiency (6)	
	1976/77	1977/78	1976/77	1977/78	1976/77	1977/78	1976/77	1977/78	1976/77	1977/78	1976/77	1977/78
MW			MW		GWh		Per cent		Pence		Per cent	
<b>Steam stations (excluding nuclear power stations)</b>												
Under 25	2	—	0	—	4	—	0.03	—	74.304	—	2.4	—
25 and under 50	2	2	65	65	12	19	1.00	3.39	8.474	6.026	11.8	13.4
50 and under 75	12	13	704	755	1,242	1,197	17.07	17.06	1.331	1.431	22.5	22.0
75 and under 100	6	4	544	368	711	701	14.93	21.75	1.947	1.977	25.2	24.1
100 and under 150	22	21	2,481	2,367	2,820	3,135	12.38	15.12	1.899	2.079	22.8	21.8
150 and under 200	15	14	2,611	2,438	3,435	4,101	13.72	19.20	1.758	1.791	23.8	23.1
200 and under 250	23	23	5,257	5,257	10,277	11,867	21.80	25.77	1.450	1.632	26.6	25.4
250 and under 300	2	2	540	540	1,965	2,404	41.53	50.82	1.265	1.365	29.2	27.2
300 and under 400	15	15	5,026	5,026	12,374	13,400	28.11	30.44	1.286	1.490	27.4	26.3
400 and under 500	5	5	2,278	2,278	8,174	8,326	40.96	41.73	1.068	1.291	31.1	28.7
500 and under 600	3	3	1,640	1,640	6,285	5,944	43.75	41.37	1.183	1.362	29.3	28.0
600 and under 1,000	9	8	7,172	6,530	22,919	23,192	41.01	40.54	1.049	1.254	31.8	30.4
1,000 and over	16	17	27,547	28,866	129,267	128,602	53.77	51.95	0.978	1.136	33.7	32.1
Total	132	127	55,865	56,130	199,485	202,888	39.84	41.68	1.077	1.250	31.7	31.6
Gas turbine stations	28	28	2,292	2,309	252	557	1.33	2.76	3.587	3.361	23.4	22.9
Nuclear power stations	11	11	5,080	5,132	28,918	30,234	74.59	66.95	0.444	0.545	25.9	26.0
Oil engine stations	9	8	118	118	243	275	23.42	26.54	1.913	2.311	34.2	34.6
<b>Hydro electric stations</b>												
Under 10	31	31	85	85	224	269	30.13	36.17	0.202	0.172		
10 and under 25	24	24	454	454	1,104	1,395	27.78	35.07	0.100	0.091		
25 and under 50	10	10	357	357	901	1,066	28.84	34.13	0.071	0.072		
50 and over	5	5	388	388	576	700	16.93	20.57	0.075	0.086		
Total	70	70	1,284	1,284	2,805	3,430	24.95	30.50	0.094	0.091		
Pumped storage stations (2)	3	3	1,060	1,060	1,370	1,239	14.75	13.35				
All stations	253	247	65,699	66,033	233,073	238,623	40.19	41.59	0.984 (3)	1.149 (3)		

(1) Including stations closed down during the year, which supplied 5 GWh in 1976/77; the stations which closed in 1977/78 supplied no electricity.

(2) 1,759 GWh were consumed in pumping in 1976/77 and 1,510 GWh in 1977/78.

(3) Excluding pumped storage stations.



Shops, commercial premises, etc.(1)

Combined  
domestic  
and  
commercial  
premisesshops  
(6)offices  
(7)Public  
buildings  
(8)

	Domestic (1)	Farms (2)	Public lighting (3)	Traction(1) (4)	Combined domestic and commercial premises (5)	shops (6)	offices (7)	Public buildings (8)
<b>Sales (GWh)</b>								
1968	65,551	3,259	1,452	2,252	2,441	9,027	4,332	6,891
1969	70,896	3,360	1,573	2,288	2,686	9,573	4,734	7,446
1970	75,604	3,385	1,682	2,308	2,710	9,999	5,040	7,796
1971	79,200	3,492	1,764	2,331	2,766	10,293	5,245	8,072
1972	85,209	3,612	1,822	2,244	2,833	10,630	5,315	8,350
1973	89,569	3,710	1,946	2,181	2,879	11,808	6,082	8,876
1974	90,853	3,692	1,826	2,327	2,692	10,392	5,597	8,176
1975	87,359	3,458	2,073	2,482	2,612	11,285	6,303	8,942
1976	83,315	3,422	2,150	2,455	2,514	11,362	6,609	9,374
1977	83,970	3,750	2,163	2,512	2,447	11,874	7,326	9,607
1978	83,869	3,793	2,177	2,549	2,426	12,661	8,009	10,151
<b>Total selling value (£ thousand)</b>								
1968	581,573	29,111	11,827	13,139	23,501	93,335	44,591	67,455
1969	607,517	29,528	12,617	12,874	25,242	96,968	47,492	71,745
1970	633,874	29,684	13,366	13,109	25,042	99,494	50,158	74,929
1971	713,281	33,158	15,179	15,572	27,291	111,154	56,018	83,513
1972	814,583	36,703	16,801	15,081	29,989	122,093	60,226	91,469
1973	867,264	38,184	18,469	15,349	30,920	135,991	68,373	96,506
1974	1,049,994	46,037	20,243	22,503	34,555	146,923	77,345	109,325
1975	1,462,318	61,517	32,000	32,180	47,542	209,070	112,071	154,722
1976	1,789,669	75,298	39,477	39,183	56,491	253,336	139,712	191,807
1977	2,085,365	93,527	45,047	44,174	63,243	300,585	175,481	225,259
1978	2,313,893	104,022	50,029	50,304	69,215	350,283	209,899	262,031
<b>Average net selling value per kWh sold (Pence)</b>								
1968	0.887	0.893	0.815	0.583	0.963	1.034	1.029	0.979
1969	0.857	0.879	0.802	0.563	0.940	1.013	1.003	0.964
1970	0.838	0.877	0.795	0.568	0.924	0.995	0.995	0.961
1971	0.901	0.950	0.860	0.668	0.987	1.080	1.068	1.035
1972	0.956	1.016	0.922	0.672	1.059	1.149	1.133	1.095
1973	0.968	1.029	0.949	0.704	1.074	1.152	1.124	1.087
1974	1.156	1.247	1.109	0.967	1.284	1.414	1.382	1.337
1975	1.674	1.779	1.554	1.297	1.820	1.853	1.778	1.730
1976	2.148	2.200	1.836	1.596	2.247	2.230	2.114	2.046
1977	2.483	2.494	2.083	1.759	2.585	2.531	2.395	2.345
1978	2.759	2.742	2.298	1.973	2.853	2.767	2.621	2.581
<b>Number of consumers (Thousand)</b>								
1968	17,709	295	6	—	217	696	271	225
1969	17,961	281	6	—	223	680	272	225
1970	18,184	278	6	—	216	666	277	224
1971	18,394	278	6	—	200	667	278	221
1972	18,640	277	6	—	193	669	280	223
1973	18,842	275	6	—	188	664	289	230
1974	19,028	274	6	—	184	653	288	229
1975	19,276	271	6	—	179	642	283	237
1976	19,524	269	6	—	175	640	282	238
1977	19,790	264	6	—	162	647	287	238
1978	20,047	262	5	—	159	650	289	240
<b>Sales per consumer (kWh) (4)</b>								
1968	3,702	11,036	240,554	—	11,258	12,979	15,956	30,581
1969	3,947	11,936	261,818	—	12,020	14,074	17,391	33,172
1970	4,158	12,192	278,227	—	12,522	15,016	18,181	34,762
1971	4,306	12,551	303,854	—	13,865	15,431	18,844	36,483
1972	4,571	13,042	306,219	—	14,684	15,900	18,978	37,465
1973	4,754	13,473	326,784	—	15,281	17,783	21,064	38,563
1974	4,775	13,459	299,197	—	14,650	15,920	19,405	35,692
1975	4,532	12,733	368,337	—	14,574	17,578	22,251	37,682
1976	4,267	12,690	391,122	—	14,338	17,741	23,420	39,389
1977	4,243	14,233	392,844	—	15,061	18,350	25,551	40,357
1978	4,184	14,456	391,336	—	15,283	19,479	27,653	42,360



79 (continued)

Industrial (1)							
Hotels (9)	H.M. Forces (10)	Other (2) premises (11)	Total (2) (12)	Water works etc. (13)	Factories etc. (3) (14)	Total (3) (15)	Total all consumers (16)
Sales (GWh)							
1,394	1,192	3,410	28,687	3,183	69,541	72,724	173,925
1,537	1,224	3,802	31,002	3,365	72,939	76,304	185,423
1,634	1,254	4,195	32,628	3,334	74,966	78,300	193,907
1,685	1,250	4,504	33,815	3,288	75,552	78,840	199,442
1,792	1,263	4,814	34,997	3,318	75,168	78,486	206,370
1,924	958	5,246	37,773	3,594	81,818	85,412	220,591
1,875	795	4,943	34,470	3,480	77,254	80,734	213,902
1,978	834	5,517	37,471	3,585	77,071	80,656	213,499
2,000	975	5,974	38,808	3,528	82,604	86,132	216,282
2,065	1,062	6,273	40,654	3,579	84,276	87,855	220,904
2,180	1,104	6,425	42,956	3,745	86,257	90,002	225,346
1978							
Total selling value (£ thousand)							
12,455	8,608	31,524	281,469	20,656	447,828	468,484	1,385,603
13,479	8,780	34,419	298,125	21,873	469,679	491,552	1,452,213
14,303	8,912	37,759	310,597	22,118	490,269	512,387	1,513,017
16,016	9,877	44,029	347,898	23,668	544,589	568,257	1,693,345
17,922	10,575	49,579	381,853	26,121	554,229	580,350	1,845,371
19,565	8,116	54,775	414,246	27,966	605,598	633,564	1,987,076
23,446	8,886	64,656	465,136	37,047	786,182	823,229	2,427,142
33,268	13,155	94,588	664,416	50,867	1,033,079	1,083,946	3,336,377
40,834	16,654	122,300	821,134	59,574	1,283,571	1,343,145	4,107,906
48,426	20,758	147,325	981,077	69,629	1,503,373	1,573,002	4,822,192
56,170	23,916	165,732	1,137,246	79,650	1,705,042	1,784,692	5,440,186
1978							
Average net selling value per kWh sold (Pence)							
0.893	0.722	0.925	0.981	0.650	0.644	0.644	0.797
0.877	0.718	0.905	0.962	0.650	0.644	0.644	0.783
0.875	0.711	0.900	0.952	0.663	0.654	0.654	0.780
0.951	0.790	0.978	1.029	0.720	0.721	0.721	0.849
1.000	0.837	1.030	1.091	0.787	0.737	0.739	0.894
1.017	0.847	1.044	1.097	0.778	0.740	0.742	0.901
1.251	1.118	1.308	1.349	1.065	1.018	1.020	1.135
1.682	1.577	1.714	1.773	1.419	1.340	1.344	1.563
2.042	1.708	2.047	2.116	1.689	1.554	1.559	1.899
2.345	1.955	2.349	2.413	1.945	1.784	1.790	2.183
2.577	2.166	2.579	2.647	2.127	1.977	1.983	2.414
1978							
Number of consumers (Thousand)							
39	4	298	1,750	19	185	204	19,964
40	4	303	1,747	19	186	205	20,200
39	4	330	1,756	20	181	201	20,425
41	4	340	1,751	21	177	198	20,627
41	4	351	1,761	22	179	201	20,885
45	5	352	1,773	23	181	204	21,100
45	5	363	1,767	24	187	211	21,286
46	6	361	1,754	24	189	213	21,520
47	6	375	1,763	24	191	215	21,777
48	6	373	1,761	24	184	208	22,029
48	6	381	1,773	25	185	210	22,297
1978							
Sales per consumer (kWh) (4)							
35,964	269,412	11,439	16,389	170,676	375,765	357,014	8,599
38,594	290,514	12,567	17,747	175,746	392,460	372,218	9,066
41,974	331,373	12,727	18,580	169,467	412,744	388,969	9,381
41,221	337,134	13,232	19,311	155,785	428,169	399,067	9,556
43,397	344,611	13,701	19,877	150,538	420,318	390,717	9,881
42,530	218,971	14,899	21,304	154,401	453,202	419,077	10,454
41,739	168,826	13,615	19,511	144,717	413,918	383,192	10,049
42,893	148,004	12,276	21,355	152,787	407,102	379,058	9,921
42,963	170,903	15,927	22,009	148,460	432,190	400,813	9,932
43,213	179,453	16,822	23,086	147,345	457,967	421,747	10,028
45,379	183,541	16,879	24,232	150,619	465,708	428,416	10,106
1978							

(1) In addition, direct sales were made by railway and transport authorities from own generation. In 1978 these amounted to 143 GWh to commercial and industrial premises as well as 422 GWh used for traction.

(2) See Footnote (3)

(3) Includes, from April 1977, some slaughter houses previously classified to commercial premises. An analysis of industrial sales for 1977 onwards on the old basis is shown in Table 81.

(4) Excluding traction.



# Sales by Electricity Boards

## United Kingdom: Public supply

Electricity Board		Sales							Number of consumers	
		Domestic (1)	Farms (2)	Public lighting (3)	Traction (4)	Commer- cial(1) (5)	Industrial (6)	Total (7)	Domestic (8)	Farms (9)
		GWh							Thousand	
London	1977	5,858	1	161	1	5,851	2,297	14,169	1,590	—
	1978	5,767	1	151	1	6,261	2,293	14,474	1,599	—
South Eastern	1977	6,778	169	141	—	2,867	3,251	13,206	1,521	10
	1978	6,828	169	141	—	3,006	3,486	13,630	1,544	10
Southern	1977	8,905	368	181	—	3,890	5,445	18,789	1,854	22
	1978	8,843	363	191	—	4,051	5,738	19,186	1,886	22
South Western	1977	4,797	372	81	—	1,873	2,698	9,821	929	32
	1978	4,677	382	82	—	1,937	2,789	9,867	943	32
Eastern	1977	10,058	479	197	—	4,373	5,793	20,900	2,273	27
	1978	10,151	491	198	—	4,814	5,834	21,488	2,313	26
East Midlands	1977	5,871	372	187	—	2,700	8,118	17,248	1,666	22
	1978	6,045	373	178	—	2,857	8,354	17,807	1,693	22
Midlands (3)	1977	7,120	324	173	—	3,205	8,960	19,782	1,680	25
	1978	7,216	317	171	—	3,381	9,202	20,287	1,703	25
South Wales	1977	2,644	164	81	—	1,216	5,911	10,016	732	20
	1978	2,588	167	84	—	1,235	6,169	10,243	741	20
Merseyside and North Wales										
Merseyside	1977	3,124	113	99	—	1,404	6,499	11,239	828	10
	1978	3,122	118	95	—	1,501	6,528	11,364	839	10
North Wales	1977	1,066	108	18	—	443	1,269	2,904	251	9
	1978	1,096	107	19	—	476	1,288	2,986	255	8
Yorkshire (3)	1977	6,126	309	190	—	2,724	11,412	20,761	1,671	17
	1978	6,015	306	196	—	2,829	11,888	21,234	1,689	17
North Eastern	1977	4,038	193	166	1	1,918	6,241	12,557	1,167	16
	1978	3,990	196	168	1	2,000	6,616	12,971	1,178	16
North Western (3)	1977	6,756	277	189	3	3,466	7,541	18,232	1,741	21
	1978	6,733	281	194	3	3,606	7,727	18,544	1,758	21
Central Electricity Generating Board direct sales		1977	—	—	—	2,352	—	3,792	6,144	—
		1978	—	—	—	2,392	—	3,360	5,752	—
Total England and Wales (4)	1977	73,141	3,249	1,864	2,357	35,930	79,227	195,768	17,903	231
	1978	73,071	3,271	1,868	2,397	37,954	81,272	199,833	18,141	229
South of Scotland	1977	7,784	259	244	155	3,454	5,891	17,787	1,436	16
	1978	7,783	285	248	152	3,676	5,984	18,128	1,446	16
North of Scotland	1977	3,045	242	55	—	1,270	2,737	7,349	451	17
	1978	3,015	237	61	—	1,326	2,746	7,385	460	17
Total Great Britain (4)	1977	83,970	3,750	2,163	2,512	40,654	87,855	220,904	19,790	264
	1978	83,869	3,793	2,177	2,549	42,956	90,002	225,346	20,047	262
Northern Ireland	1977	1,932	211	55	—	2,553		4,751	432	33
	1978	1,933	231	63	—	2,637		4,864	..	..
Total United Kingdom	1977	85,902	3,961	2,218	2,512	131,062		225,655	20,222	297
	1978	85,802	4,024	2,240	2,549	135,595		230,210	..	..



80 (continued)

Average net selling value per kWh											
Commer- cial(1) (10)	Industrial (11)	Total(2) (12)	Domestic (13)	Farms (14)	Public lighting (15)	Traction (16)	Commer- cial(1) (17)	Industrial (18)	Total (19)		
Pence											
241	26	1,857	2.744	1.600	1.979	2.500	2.541	2.280	2.576	1977	London
245	26	1,870	3.061	2.200	2.191	3.100	2.785	2.545	2.851	1978	
133	9	1,673	2.538	2.369	1.991	—	2.328	1.878	2.322	1977	South Eastern
134	9	1,697	2.821	2.681	2.200	—	2.601	2.081	2.575	1978	
159	18	2,054	2.381	2.477	2.051	—	2.406	1.971	2.266	1977	Southern
161	18	2,088	2.643	2.756	2.276	—	2.657	2.180	2.506	1978	
96	9	1,066	2.476	2.616	2.272	—	2.517	1.846	2.314	1977	South Western
97	9	1,081	2.751	2.866	2.562	—	2.769	2.044	2.557	1978	
187	19	2,507	2.510	2.411	2.258	—	2.296	1.927	2.299	1977	Eastern
191	20	2,551	2.778	2.627	2.465	—	2.472	2.110	2.521	1978	
126	20	1,835	2.588	2.494	2.382	—	2.380	1.849	2.203	1977	East Midlands
126	20	1,862	2.820	2.778	2.615	—	2.598	2.061	2.425	1978	
138	20	1,864	2.481	2.583	2.160	—	2.469	1.946	2.235	1977	Midlands(3)
139	21	1,888	2.730	2.862	2.323	—	2.677	2.127	2.446	1978	
61	8	821	2.741	2.812	2.299	—	2.575	1.847	2.191	1977	South Wales
61	8	830	3.005	3.037	2.495	—	2.809	1.963	2.350	1978	
											Merseyside and North Wales
66	9	913	2.665	2.617	2.109	—	2.478	1.659	2.055	1977	Merseyside
66	9	924	3.007	2.935	2.402	—	2.705	1.850	2.297	1978	
26	2	288	2.581	2.700	2.361	—	2.465	1.753	2.205	1977	North Wales
27	2	292	2.892	3.038	2.700	—	2.725	1.944	2.460	1978	
120	19	1,827	2.535	2.501	2.177	—	2.425	1.812	2.119	1977	Yorkshire(3)
121	20	1,847	2.866	2.651	2.494	—	2.669	1.958	2.325	1978	
99	9	1,292	2.594	2.632	1.931	2.200	2.372	1.775	2.145	1977	North Eastern
99	10	1,304	2.903	2.901	2.145	3.900	2.580	1.906	2.335	1978	
159	18	1,939	2.472	2.526	1.861	1.667	2.424	1.862	2.205	1977	North Western(3)
160	17	1,956	2.789	2.831	2.028	1.933	2.690	2.039	2.450	1978	
—	—	—	—	—	—	1.755	—	0.642(5)	1.048	1977	Central Electricity Generating Board direct sales
—	—	—	—	—	—	1.970	—	0.786(6)	1.279	1978	
1,611	186	19,936	2.536	2.535	2.115	1.756	2.428	1.801	2.205	1977	Total England and Wales(4)
1,627	189	20,190	2.820	2.792	2.339	1.971	2.661	1.986	2.435	1978	
106	17	1,575	2.158	2.241	1.865	1.804	2.345	1.866	2.092	1977	South of Scotland
102	16	1,580	2.382	2.446	2.015	2.012	2.589	2.093	2.321	1978	
44	5	518	2.055	2.219	1.953	—	2.169	1.320	1.805	1977	North of Scotland
44	5	527	2.263	2.416	2.211	—	2.426	1.667	2.075	1978	
1,761	208	22,029	2.483	2.494	2.083	1.759	2.413	1.790	2.183	1977	Total Great Britain(4)
1,778	210	22,297	2.759	2.742	2.298	1.973	2.647	1.983	2.414	1978	
45	..	510	2.929	3.554	3.275	—	2.896	—	2.943	1977	Northern Ireland
..	..	..	3.286	2.728	3.176	—	2.498	—	2.878	1978	
2,014	..	22,539	2.493	2.551	2.112	1.759	2.005	—	2.199	1977	Total United Kingdom
..	..	..	2.771	2.799	2.323	1.973	2.203	—	2.424	1978	

(1) Including consumers on a combined domestic/commercial tariff.

(2) Including public lighting and traction.

(3) Industrial sales include, from April 1977, sales to slaughter houses; these sales were previously classified to the commercial sector.

(4) See footnote (3). An analysis of industrial sales in Great Britain for 1977 onwards on the old basis is shown in Table 81.

(5) 1976/77.

(6) 1977/78.



## 81

Sales to industrial and transport undertakings  
Great Britain: Public supply

	GWh										
	Iron and steel (1)	Engineering and other metal trades (2)	Food, drink and tobacco (3)	Coal mining (4)	Chemical and allied trades (5)	Textiles, leather and clothing (6)	Paper, printing and stationery (7)	Other industrial undertakings (1) (8)	Total industry (9)	Transport undertakings (10)	Total (11)
1973	11,646	21,429	5,761	4,879	14,299	5,203	3,157	19,038	85,412	2,181	87,593
1974	11,292	19,805	5,872	4,384	13,942	4,749	3,102	17,588	80,734	2,327	83,061
1975	11,164	20,101	6,044	4,838	12,835	4,691	3,218	17,765	80,656	2,482	83,138
1976	12,607	21,347	6,538	4,961	14,327	4,875	3,426	18,051	86,132	2,455	88,587
1977	12,310(2)	22,037	6,261	5,088	14,702	4,909	3,552	18,518	87,377	2,512	89,889
1978	13,063(2)	22,536	6,355	5,186	14,189	5,004	3,794	19,222	89,349	2,549	91,898

(1) Including gas, water and sewage works.

(2) Contains a small degree of estimation.

## 82

Production by industrial and transport undertakings  
Great Britain

	GWh (generated)											
	Iron and steel (1)	Engineering and other metal trades (2)	Food, drink and tobacco (3)	Coal mining (4)	Chemical and allied trades (5)	Other (2) (6)	Textiles, leather and clothing (7)	Paper, printing and stationery (8)	Other industries (including gas and water-works) (9)	Total industry (10)	Transport undertakings (11)	Total (12)
1973	2,707	2,716	458	309	4,339	7,859	498	2,763	643	22,292	703	22,995
1974(1)	2,179	3,139	521	251	4,222	7,942	450	2,569	502	21,775	649	22,424
1975(1)	1,660	3,319	435	297	3,820	7,343	406	2,107	394	19,781	689	20,470
1976	1,706	3,362	496	269	3,736	8,434	423	2,218	380	21,024	690	21,714
1977	1,555	3,463	516	278	3,604	7,969	355	2,136	392	20,268	701	20,969
1978	1,345	3,409	520	212	3,885	7,983	335	2,098	333	20,120	700	20,820

(1) See notes on page 90.

(2) Including production by the mineral oil refining industry; this amounted to 2,485 GWh, 2,475 GWh, 2,283 GWh, 2,570 GWh, 2,369 GWh and 2,450 GWh in 1973, 1974, 1975, 1976, 1977 and 1978 respectively.

## 83

Total electricity consumption by industrial and transport undertakings<sup>(1)</sup>  
Great Britain

	GWh										
	Iron and steel (1)	Engineering and other metal trades (2)	Food, drink and tobacco (3)	Coal mining (4)	Chemical and allied trades (5)	Textiles, leather and clothing (6)	Paper, printing and stationery (7)	Other industrial undertakings (1) (8)	Total industry (9)	Transport undertakings (10)	Total (11)
1973	13,010	24,540	6,191	4,834	22,575	5,671	5,754	19,290	101,865	2,613	104,478
1974	12,146	23,289	6,362	4,434	22,213	5,172	5,517	17,663	96,796	2,713	99,509
1975	11,637	23,679	6,453	4,904	20,484	5,073	5,198	17,693	95,121	2,897	98,018
1976	13,164	24,945	7,005	5,007	22,980	5,273	5,511	18,060	101,945	2,868	104,813
1977	12,854	25,510	6,730	5,137	22,717	5,243	5,554	18,726	102,471	2,932	105,403
1978	13,312	25,970	6,831	5,219	22,303	5,319	5,761	19,408	104,123	2,971	107,094

(1) Public supply sales to industrial and transport undertakings (see Table 81, plus the amount of electricity supplied (partly estimated) by industrial and transport undertaking power stations (see Table 82 for electricity generated) after adjustment for transfers, less the amount supplied by industrial and transport undertakings to the public supply system and to non-industrial consumers.



# Prices and values

## **Index of retail prices for fuel and light and petrol and oil (Table 84)**

**Coal and smokeless fuel**—Retail prices of the three standard grades of household coal and of the two most popular brands of smokeless fuels sold by the retailer, are obtained from local retailers by officers of the Department of Employment in more than 200 local office areas throughout the United Kingdom.

**Gas and electricity**—Information is obtained in respect of each of the British Gas Regions and Area Electricity Boards about the relative importance of the various tariffs for these fuels supplied for domestic purposes and the average household consumption at each of these tariffs. When prices are changed in an area, an index is calculated for each of the tariffs in use in that area at the average levels of consumption at each tariff. The indices for the various tariffs are combined by the use of aggregate expenditures at the tariffs. The area indices are combined using weights derived from the total receipts of each Gas Region and Electricity Board from their sales to domestic consumers.

**Other fuel and light**—This comprises paraffin and oil fuel used for domestic central heating. Paraffin prices are supplied to the Department of Employment by a large number of retailers throughout the United Kingdom and prices of oil fuel are provided by the main suppliers.

**Petrol and oil**—Retail prices of three grades of petrol and the most popular brands of engine oil are obtained from garages in more than 200 areas throughout the United Kingdom.

## **Typical retail prices of domestic fuels in certain large towns (Table 85).**

The 'certain large towns' were selected to include at least one town from each of the Electricity Boards in Great Britain and each Region of the British Gas Corporation.

Information on prices has been obtained from sources close to the market and from published tariffs for electricity and gas. Prices relating to consumptions of 10,000 and 30,000 kWh of electricity per annum are based on using storage heaters that require day time boost. The relevant off peak tariffs are not all available to new customers however alternate tariffs with lowered charges for off peak consumption are available e.g. 'White Meter' and 'Economy Seven'.

## **Consumers' expenditure on fuel and light (Table 86)**

This is expenditure on all forms of fuel for domestic heating, lighting and power but not the cost of hiring equipment.

**Coal and coke**—Consumers' expenditure on these fuels is based on estimates of coal merchants sales of solid fuels to domestic consumers. Expenditure in Northern Ireland is taken into account by adding estimated values based on colliery despatches of house coal to Northern Ireland. Coal supplied free or at reduced prices to miners is included, valued at pithead prices.

**Gas**—Personal consumption in the United Kingdom is taken as sales to domestic premises plus an allowance to represent the domestic element in sales to non-industrial premises (commercial and public administration). The average price used for valuation is the average revenue per therm for public supply sales of gas to domestic consumers.

**Electricity**—Sales by the public electricity supply to domestic consumers in the United Kingdom plus estimates of the domestic element included in sales to farms, combined domestic and commercial premises and non-industrial premises. Sales are valued at the average revenue per unit for electricity sold to domestic consumers.

**Petroleum and motor spirit and lubricating oil**—Estimates of the quantity and value of paraffin, fuel oil, liquid gases, motor spirit and lubricating oil purchased by domestic consumers are provided by the petroleum industry.

**Revaluation at constant prices**—For coal and coke and motor spirit and lubricating oil consumers' expenditure at 1975 average prices is calculated by applying average 1975 prices of these fuels to the quantities used for calculating expenditure at current prices. The estimates of expenditure on gas and electricity have been obtained by deflating the current price estimates by movements in the gas and electricity components of the index of retail prices.

## **Prices of fuels used by manufacturing industry (Table 87)**

Up to the end of 1973 information about prices of coal and oil for industrial use came from a wide variety of sources and whilst the series shown did not purport to be averages of actual prices paid the series were intended to be representative. The delivered prices quoted for coal were typical of those paid for average industrial grades by consumers but substantial variations from these prices arose because of the length of haul of coal from collieries, quantities contracted, delivery arrangements and differences in pithead prices, reflecting size, quality and coalfield. Fuel oil prices represented delivered prices to typical medium sized industrial consumers and were published scheduled prices for minimum bulk deliveries (inner zone), adjusted by estimates derived from information given in confidence, of rebates that might be negotiated by consumers. Rebates varied widely hence rebated prices may have differed substantially from the single figure shown. Hydrocarbon oil duties as shown in Table 89 are included. Prices for gas and electricity were based on the average net selling value for each fuel consumed by the industrial consumers (see Tables 60 and 79), changes in values per unit reflected both changes in tariffs and changes in patterns and scales of consumption.

From the beginning of 1974 unit values have been calculated from information provided quarterly by a panel of about eight hundred large fuel consumers within manufacturing industry in Great Britain.

Since the panel was selected so as to get a high proportion of consumption with a relatively small number of returns it is a sample which is more representative of large consumers



than of all consumers and the results may well exhibit a bias for some of the fuels. This, together with the fact that the figures are the average unit values of fuel invoiced to the consumers during the period and will often relate to contracts entered into during previous periods, probably accounts for the discontinuity in the series between 1973 and 1974.

Additional figures are shown for heavy fuel oil and gas oil from the first quarter of 1976. These are based on a report of the average prices realised by the main oil marketing companies in supply contracts that are either new or are renewed at a changed price during the quarter. The prices shown for heavy fuel oil are for contracts in the consumption range 1101 to 2500 thousand litres a quarter and for gas oil contracts in the consumption range 101 to 250 thousand litres a quarter. The coverage may extend beyond manufacturing industry and may include for example, large commercial users. Further figures are shown of British Gas Corporation estimates of average prices relating to new and renewed contracts (including commercial) for both firm and interruptible supplies of gas.

Conversion factors currently in use per tonne of coal, heavy fuel oil and gas oil are 261, 406 and 431 therms respectively. There are 29.3 kWh of electricity to the therm.

#### **Average prices of fuels used by the gas and electricity industries (Table 88)**

The prices shown are derived from information provided annually by those industries in Great Britain. The oil fuel prices shown in column 4 include gas oils used for lighting up furnaces by fired pulverised fuel.

#### **Effective rates of duty on principal hydrocarbon oils (Table 89)**

This table commences with the effective rates on 19th April 1950; there were, of course, duties applicable before this date.

#### **Index numbers of wholesale prices: Industrial fuels and crude oil (Table 90).**

These form part of the general series of wholesale price index numbers compiled in conjunction with the Department of Industry. The latest index numbers in these series are published monthly in 'Trade and Industry'. These index numbers are now published on a base of 1975=100; the index numbers formerly published on a base of 1970=100 have been converted to the new base.

It has not been found practicable to convert index numbers on the base 1963=100 to the new base due to the use of different weighting patterns.

**Coal (except for carbonizing) gas and electricity**—This index was formerly known as 'Fuel purchased by manufacturing industry'. Petroleum derived fuels are not included as these are themselves part of the output of manufacturing industry.

**Coal**—This series comprises pithead prices of coal supplied for general industrial use, for electricity generation and for carbonizing at coke ovens; the f.o.b. price of exported coal and the zone delivered price of house coal at merchants yards. The individual series are weighted to produce the combined index.

**Medium fuel oil (950 secs)**—The index is based on scheduled outer zone prices exclusive of rebates. Hydrocarbon oil duty is included.

**Motor spirit (two star)**—This index is based on scheduled outer zone prices exclusive of rebates for sales to the industrial/commercial consumer market i.e. to businesses for their own use and not for re-sale. Hydrocarbon oil duty is included. VAT is not included.

**Derv fuel**—This index is based on scheduled outer zone prices exclusive of rebates for sales to the industrial/commercial consumer market i.e. to businesses for their own use and not for re-sale. Hydrocarbon oil duty is included. VAT is not included.

**Crude oil**—The 1963=100 index is based on c.i.f. unit values of imported Petroleum Crude and Partly Refined for Further Refining (excluding natural gasolene). The 1975=100 index is based on the c.i.f. unit values of 'Petroleum Oils, Crude and Crude Oils obtained from Bituminous Minerals'.



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General index of retail prices: Indices for all items and the fuel and light group and main sub-groups and petrol and oil (1)  
United Kingdom

		All items	Fuel and light(2)	Coal and smokeless fuel	Gas	Electricity			
Weights	1962	1,000	62	28	12	18			
	1967	1,000	62	26	11	23			
	1968	1,000	62	24	11	25			
	1969	1,000	61	22	13	24			
	1970	1,000	61	23	13	23			
	1971	1,000	60	22	13	22			
	1972	1,000	60	20	13	24			
	1973	1,000	58	18	13	24			
15 January 1974 = 100									
Indices	1962	Monthly Averages	53.0	53.7	46	70	55		
	1967		62.3	65.9	58	77	70		
	1968		65.2	70.9	61	82	78		
	1969		68.7	73.1	64	86	78		
	1970		73.1	77.3	74	85	78		
	1971		80.0	85.3	83	93	87		
	1972		85.7	91.9	92	98	92		
	1973		93.5	94.5	95	99	94		
Fuel and light									
		Total	Coal and smokeless fuel	Coal	Smokeless fuels	Gas	Electricity	Petrol and oil	
Weights	1974	1,000	52	13	10	3	13	23	32
	1975	1,000	53	11	9	2	12	25	47
	1976	1,000	56	10	8	2	15	27	40
	1977	1,000	58	10	8	2	15	28	38
	1978	1,000	60	11	9	2	16	29	34
	1979	1,000	59	10	8	2	16	29	33
15 January 1974=100									
Indices	1974	108.5	110.7	105.8	105.7	105.9	103.7	114.5	126.9
	1975	134.8	147.4	141.5	142.4	138.5	119.9	166.4	172.6
	1976	157.1	182.4	175.0	176.2	171.1	146.5	207.2	183.6
	1977	182.0	211.3	203.7	205.2	199.3	170.9	236.2	196.8
	1978	197.1	227.5	226.3	228.6	217.8	176.1	260.1	187.2
1977	January 18	172.4	198.8	192.3	193.8	187.1	160.4	220.7	193.7
	February 15	174.1	198.0	192.3	193.8	187.1	160.3	219.0	193.9
	March 15	175.8	198.7	192.3	193.8	187.1	160.4	220.5	193.9
	April 19	180.3	202.9	201.2	201.6	200.2	163.9	224.0	206.1
	May 17	181.7	210.4	201.7	202.7	198.3	169.5	235.4	209.4
	June 14	183.6	214.5	201.7	202.7	198.3	174.8	241.3	209.4
	July 12	183.8	216.6	201.4	202.3	198.5	177.4	244.1	206.9
	August 16	184.7	217.3	201.4	202.3	198.5	177.4	245.5	191.4
	September 13	185.7	217.5	201.4	202.3	198.5	177.4	246.4	190.6
	October 18	186.5	220.8	218.4	220.5	210.5	177.4	246.8	189.6
	November 15	187.4	220.3	221.0	223.1	213.5	176.1	245.6	188.7
	December 13	188.4	220.0	221.0	223.1	213.5	176.1	244.8	188.3
1978	January 17	189.5	219.9	221.0	223.1	213.7	176.0	244.8	187.5
	February 14	190.6	221.1	221.0	223.1	213.7	176.0	247.5	188.1
	March 14	191.8	222.0	221.0	223.1	213.7	176.0	249.7	187.5
	April 18	194.6	223.6	221.0	223.1	213.7	176.0	253.3	186.1
	May 16	195.7	226.4	222.4	224.6	214.4	176.0	259.1	185.6
	June 13	197.2	228.9	222.4	224.6	214.4	176.1	264.9	185.8
	July 18	198.1	230.6	223.4	225.7	214.9	176.1	268.5	186.0
	August 15	199.4	230.6	223.4	225.7	214.9	176.1	268.5	186.0
	September 12	200.2	230.6	223.4	225.7	214.9	176.1	268.4	185.8
	October 17	201.1	230.3	223.4	225.7	214.9	176.1	267.6	185.9
	November 14	202.5	233.7	246.5	249.4	235.4	176.2	265.8	190.3
	December 12	204.2	232.8	246.5	249.4	235.4	176.2	263.6	191.3
1979	January 16	207.2	233.1	247.9	250.9	236.5	176.3	263.6	192.7
	February 13	208.9	234.4	248.4	250.9	238.6	176.4	265.3	195.3
	March 13	210.6	236.3	248.4	250.9	238.6	176.4	267.5	200.9
	April 10	214.2	237.2	249.6	252.2	239.8	176.4	268.6	210.6

(1) From 1974 indices are given to one decimal place to provide as much information as is available but precision is greater at higher levels of aggregation i.e. at sub-group and group levels.

(2) Including oil for domestic heating and light but excluding motor spirit and lubricating oil.

Source: Department of Employment



Typical retail prices of domestic fuels in certain large towns<sup>(1)</sup>

		Solid fuels <sup>(2)</sup>							Liquid fuels		
		House coal 'group 2) (1)	Anthra- cite nuts 1 (2)	Phurna- cite (3)	Sun- brite (4)	Anthra- cite grains 1A (5)	Coalite large (6)	Rexco large (7)	Gas oil (4) (8)	Standard grade burning oil (4) (9)	Premium kerosine (5) (10)
		Per 50 Kilogrammes							Per litre		Per gallon
Aberdeen	Dec 1976	208	300	297	255	256	297	268	7.94	8.28	43.5
	Dec 1977	242	343	336	291	290	333	301	8.74	8.70	47.0
	Dec 1978	271	380	374	328	327	369	337	8.74	8.70	47.0
Birmingham	Dec 1976	168	270	274	233	231	253	265	7.98	8.28	43.5
	Dec 1977	204	311	319	277	280	293	295	8.78	8.70	47.0
	Dec 1978	230	345	356	309	320	330	330	8.78	8.70	47.0
Brighton	Dec 1976	194	281	290	253	237	273	279	7.94	8.24	43.5
	Dec 1977	233	328	336	298	282	317	325	8.74	8.66	47.0
	Dec 1978	261	360	370	330	315	349	355	8.74	8.66	47.0
Cardiff	Dec 1976	177	254	253	—	215	—	—	7.90	8.20	43.0
	Dec 1977	220	297	297	—	258	—	—	8.70	8.62	46.5
	Dec 1978	252	333	333	—	295	—	—	8.70	8.62	46.5
Edinburgh	Dec 1976	183	282	288	245	247	275	255	7.90	8.20	43.0
	Dec 1977	219	323	328	287	291	315	299	8.70	8.62	46.5
	Dec 1978	248	358	362	318	326	349	327	8.70	8.62	46.5
Ipswich	Dec 1976	210	329	337	265	277	304	307	7.94	8.24	43.5
	Dec 1977	231	347	351	293	298	319	320	8.74	8.66	47.0
	Dec 1978	257	385	389	326	333	353	354	8.74	8.66	47.0
Liverpool	Dec 1976	173	275	277	235	237	254	—	7.90	8.20	43.0
	Dec 1977	205	316	318	272	280	290	299	8.70	8.62	46.5
	Dec 1978	235	355	355	307	325	325	337	8.70	8.62	46.5
Leeds	Dec 1976	155	258	262	211	222	229	236	7.94	8.24	43.5
	Dec 1977	186	299	304	249	263	264	283	8.74	8.66	47.0
	Dec 1978	215	334	337	283	300	298	—	8.74	8.66	47.0
London(8)	Dec 1976	203	289	300	258	247	278	288	7.90	8.20	43.0
	Dec 1977	242	332	337	295	286	314	328	8.70	8.62	46.5
	Dec 1978	264	365	371	327	320	346	362	8.70	8.62	46.5
Manchester	Dec 1976	174	275	278	227	233	244	250	7.90	8.20	43.0
	Dec 1977	200	320	317	263	288	278	282	8.70	8.62	46.5
	Dec 1978	229	360	358	298	333	314	321	8.70	8.62	46.5
Newcastle-upon-Tyne	Dec 1976	156	271	283	219	245	261	—	7.90	8.20	43.0
	Dec 1977	187	321	322	252	289	289	—	8.70	8.62	46.5
	Dec 1978	214	347	358	281	327	325	—	8.70	8.62	46.5
Nottingham	Dec 1976	156	256	259	212	214	234	239	7.94	8.24	43.5
	Dec 1977	183	297	298	246	259	266	274	8.74	8.66	47.0
	Dec 1978	209	331	333	278	297	299	309	8.74	8.66	47.0
Portsmouth	Dec 1976	198	280	286	256	234	280	286	7.90	8.20	43.0
	Dec 1977	239	310	328	301	280	322	321	8.70	8.62	46.5
	Dec 1978	268	361	361	336	316	359	361	8.70	8.62	46.5
Plymouth	Dec 1976	230	319	328	300	287	316	333	7.98	8.24	43.5
	Dec 1977	250	348	354	333	317	344	340	8.78	8.66	47.0
	Dec 1978	284	394	404	372	355	388	381	8.78	8.66	47.0

(1) These fuels are priced in units in which they are now usually sold.

(2) Typical prices quoted for usually deliveries of less than 1 tonne. Prices may vary from merchant to merchant and there may also be variations of a few pence per kg for larger or smaller deliveries.

(3) The prices are based on the most economical domestic tariffs for consumption levels quoted. Standing charges have been taken into account where applicable.



Electricity (3)					Gas (3)						
Annual level of consumption (kWh)					Annual level of consumption (therms)						
750 (11)	2,500 (12)	5,000 (13)	10,000 (6) (14)	30,000 (7) (15)	80 (16)	250 (17)	400 (18)	800 (19)	1,200 (20)		
Per kWh					Per therm						
3.463	2.418	2.194	1.699	1.605	28.10	22.90	19.60	16.85	15.93	Dec 1976	Aberdeen
4.022	2.684	2.397	1.882	1.764	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.447	2.965	2.648	2.054	1.948	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.581	2.677	2.484	1.679	1.601	22.10	18.40	16.60	15.10	14.60	Dec 1976	Birmingham
3.994	2.994	2.779	1.884	1.798	23.80	21.03	18.88	17.09	16.49	Dec 1977	
4.297	3.207	2.974	2.003	1.909	23.80	21.03	18.88	17.09	16.49	Dec 1978	
3.607	2.793	2.618	1.875	1.797	27.60	22.90	19.60	16.85	15.93	Dec 1976	Brighton
3.951	3.066	2.877	2.066	1.982	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.331	3.349	3.138	2.197	2.107	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.785	2.833	2.629	1.871	1.784	28.10	22.90	19.60	16.85	15.93	Dec 1976	Cardiff
4.168	3.123	2.899	2.082	1.979	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.506	3.359	3.109	2.205	2.092	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.152	2.381	2.216	1.448	1.356	27.22	24.03	20.73	17.98	17.06	Dec 1976	Edinburgh
3.418	2.582	2.403	1.720	1.629	29.30	24.74	21.20	18.25	17.27	Dec 1977	
3.758	2.840	2.643	1.892	1.792	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.509	2.635	2.448	1.819	1.736	27.60	22.90	19.60	16.85	15.93	Dec 1976	Ipswich
3.976	3.005	2.797	2.036	1.946	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.295	3.228	2.999	2.157	2.057	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.652	2.697	2.492	1.739	1.649	24.10	18.90	17.10	15.60	15.10	Dec 1976	Liverpool
4.139	3.086	2.861	1.955	1.858	25.80	21.86	19.40	17.35	16.67	Dec 1977	
4.561	3.404	3.156	2.097	1.993	25.80	21.86	19.40	17.35	16.67	Dec 1978	
3.588	2.672	2.475	1.700	1.621	24.10	18.90	17.10	15.60	15.10	Dec 1976	Leeds
4.012	2.994	2.775	1.906	1.820	25.80	21.86	19.40	17.35	16.67	Dec 1977	
4.385	3.253	3.011	2.032	1.938	25.80	21.86	19.40	17.35	16.67	Dec 1978	
3.728	2.808	2.606	1.924	1.847	27.60	22.90	19.60	16.85	15.93	Dec 1976	London(8)
4.228	3.181	2.951	2.141	2.049	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.768	3.516	3.242	2.286	2.179	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.346	2.599	2.439	1.705	1.634	24.10	18.90	17.10	15.60	15.10	Dec 1976	Manchester
3.737	2.897	2.717	1.907	1.827	25.80	21.86	19.40	17.35	16.67	Dec 1977	
4.248	3.240	3.024	2.060	1.964	25.80	21.86	19.40	17.35	16.67	Dec 1978	
3.600	2.693	2.498	1.830	1.752	24.10	18.90	17.10	15.60	15.10	Dec 1976	Newcastle-upon-Tyne
4.026	3.019	2.803	2.036	1.951	25.80	21.86	19.40	17.35	16.67	Dec 1977	
4.429	3.294	3.051	2.166	2.071	25.80	21.86	19.40	17.35	16.67	Dec 1978	
3.535	2.628	2.433	1.713	1.630	22.10	18.40	16.60	15.10	14.60	Dec 1976	Nottingham
3.920	2.915	2.700	1.910	1.819	23.80	21.03	18.88	17.09	16.49	Dec 1977	
4.347	3.212	2.969	2.045	1.945	23.80	21.03	18.88	17.09	16.49	Dec 1978	
3.424	2.581	2.400	1.730	1.650	27.60	22.90	19.60	16.85	15.93	Dec 1976	Portsmouth
3.882	2.933	2.730	1.943	1.855	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.261	3.200	2.973	2.071	1.975	29.30	24.74	21.20	18.25	17.27	Dec 1978	
3.934	2.844	2.611	1.796	1.685	28.10	22.90	19.60	16.85	15.93	Dec 1976	Plymouth
4.410	3.197	2.937	2.012	1.890	29.30	24.74	21.20	18.25	17.27	Dec 1977	
4.745	3.438	3.158	2.136	2.005	29.30	24.74	21.20	18.25	17.27	Dec 1978	

(4) Typical prices for deliveries of 2,275 litres of gas oil and 900 litres of standard grade burning oil. For smaller deliveries an addition of about 0.4p per litre is normally charged.

(5) Maximum retail prices when collected from retailers' premises.

(6) Includes 7,500 kWh at off-peak tariffs with provision for day-time boost.

(7) Includes 22,500 kWh at off-peak tariffs with provision for day-time boost.

(8) The prices quoted for gas relate to the North Thames Gas Region.



Consumers' expenditure on fuel and light <sup>(1)</sup>

United Kingdom

£ million

	Coal (2) (1)	Coke (2) (2)	Gas (3) (3)	Electricity (4) (4)	Petroleum (3) (5)	All fuel and light (4) (6)	Motor spirit and lubricating oil (7)	Total consumers' expenditure (5) (8)
<b>At current market prices</b>								
1968	297	58	301	607	70	1,341	714	27,412
1969	301	55	356	637	74	1,430	809	29,154
1970	311	53	381	663	81	1,495	859	31,660
1971	298	42	437	747	90	1,619	942	35,370
1972	284	37	512	851	108	1,797	1,093	39,889
1973	283	33	539	905	133	1,897	1,249	45,272
1974	317	49	617	1,096	185	2,268	1,717	51,997
1975	348	50	772	1,529	211	2,916	2,232	63,385
1976	389	48	1,003	1,879	274	3,600	2,541	73,464
1977	462	61	1,216	2,181	334	4,261	2,630	83,585
1978 <sup>(5)</sup>	471	55	1,373	2,420	327	4,654	2,597	95,738
<b>Revalued at 1975 prices<sup>(6)</sup></b>								
1968	631	145	447	1,274	166	2,664	1,728	55,716
1969	614	127	499	1,337	179	2,761	1,805	56,094
1970	557	104	534	1,387	195	2,782	1,886	57,516
1971	488	69	566	1,425	194	2,752	1,952	59,295
1972	421	56	628	1,517	225	2,854	2,176	62,772
1973	403	47	656	1,571	248	2,930	2,349	65,586
1974	408	63	714	1,575	217	2,983	2,277	64,212
1975	348	50	772	1,529	211	2,916	2,232	63,385
1976	314	39	818	1,497	221	2,894	2,409	63,540
1977	316	43	859	1,517	224	2,964	2,353	62,954
1978 <sup>(5)</sup>	293	35	935	1,533	218	3,019	2,455	66,397

(1) Expenditure out of personal income, that is the income of individuals and of charities and other non-profit making bodies.

(2) Including some manufactured fuel.

(3) Excluding motor spirit and lubricating oil.

(4) Including an estimate for wood.

(5) These figures are based on "National Income and Expenditure in the Fourth Quarter and Year 1978" an article in the April 1979 issue of "Economic Trends".

(6) For the years prior to 1973 totals may not equal the sum of their components due to the method used in rebasing to 1975 prices.



Prices of fuels used by manufacturing industry<sup>(1)</sup>

	Delivered to large industrial consumers <sup>(2)</sup>					Prices realised in new and renewed contracts		
	Coal (1)	Heavy fuel oil (2)	Gas oil (3)	Gas (2) (4)	Electricity (5)	Heavy fuel oil (6)	Gas oil (7)	Gas (8)
	£ per tonne			Pence per therm	Pence per kWh	£ per tonne		Pence per therm
<b>In Original Units</b>								
1968	5.4	9.3	..	6.67	0.644	..	..	..
1969	5.5	9.2	..	5.85	0.644	..	..	..
1970	6.6	9.2	..	4.52	0.654	..	..	..
1971	7.9	13.7	..	3.27	0.721	..	..	..
1972	8.5	13.1	..	2.96	0.737	..	..	..
1973	8.9	12.8	..	3.07	0.740	..	..	..
1974 <sup>(4)</sup>	9.6	30.3	48.5	2.97	0.932	..	..	..
1975	14.5	37.7	52.7	4.27	1.240	..	..	..
1976	17.9	43.2	63.4	6.48	1.489	..	..	..
1977	21.4	54.7	78.6	9.26	1.718	..	..	..
1978	23.2	51.3	78.9	11.71	1.900	..	..	..
1976 January—March	17.1	41.5	63.0	5.73	1.453	44.6	69.7	..
April—June	17.5	40.8	61.0	5.72	1.447	43.5	68.4	11.3
July—September	17.7	42.4	60.7	6.74	1.461	44.4	69.5	11.3
October—December	19.1	47.1	67.1	7.58	1.592	54.3	80.8	11.6
1977 January—March	20.0	53.3	76.1	8.58	1.714	55.2	81.9	12.7
April—June	21.2	56.1	79.8	9.12	1.656	59.1	87.2	13.0
July—September	22.1	54.8	79.6	9.30	1.676	57.0	84.8	14.4
October—December	22.3	54.7	80.1	10.13	1.826	55.6	84.2	15.0
1978 January—March	22.6	52.8	80.6	11.13	1.952	55.0	83.8	15.3
April—June	23.7	51.8	79.1	11.74	1.812	54.4	81.5	15.2
July—September	23.2	50.7	77.7	11.96	1.825	53.4	81.1	15.3
October—December	23.5	49.9	77.3	12.08	2.000	52.4	80.0	15.3
<b>In Pence per Therm</b>								
1968	2.08	2.25	..	6.67	18.87	..	..	..
1969	2.11	2.22	..	5.85	18.87	..	..	..
1970	2.53	2.22	..	4.52	19.16	..	..	..
1971	3.02	3.33	..	3.27	21.13	..	..	..
1972	3.25	3.18	..	2.96	21.59	..	..	..
1973	3.40	3.11	..	3.07	21.68	..	..	..
1974 <sup>(4)</sup>	3.70	7.37	11.23	2.97	27.31	..	..	..
1975	5.55	9.28	12.20	4.27	36.33	..	..	..
1976	6.87	10.63	14.71	6.48	43.63	..	..	..
1977	8.20	13.48	18.23	9.26	50.33	..	..	..
1978	8.90	12.64	18.30	11.71	55.67	..	..	..
1976 January—March	6.55	10.21	14.63	5.73	42.57	10.99	16.16	..
April—June	6.72	10.06	14.16	5.72	42.40	10.71	15.86	11.3
July—September	6.80	10.44	14.09	6.74	42.81	10.94	16.14	11.3
October—December	7.33	11.61	15.57	7.58	46.65	13.38	18.74	11.6
1977 January—March	7.67	13.14	17.66	8.58	50.21	13.61	19.00	12.7
April—June	8.12	13.81	18.51	9.12	48.51	14.55	20.22	13.0
July—September	8.49	13.51	18.47	9.30	49.11	14.04	19.67	14.4
October—December	8.55	13.48	18.59	10.13	53.50	13.67	19.53	15.0
1978 January—March	8.66	13.00	18.70	11.13	57.19	13.56	19.33	15.3
April—June	9.08	12.76	18.35	11.74	53.09	13.40	18.92	15.2
July—September	8.89	12.49	18.02	11.96	53.47	13.15	18.81	15.3
October—December	9.00	12.28	17.94	12.08	58.60	12.92	18.56	15.3

(1) See Explanatory Notes on page 111.

(2) Excluding the iron and steel industry.

(3) Up to 1973, years ended 31 March of following year.

(4) From the beginning of 1974 there has been a significant change in the method of compiling the information contained in this Table, see explanatory notes on page 111 for further details.



# PRICES AND VALUES

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## Average prices of fuels used by the public supply gas and electricity industries Great Britain

	Electricity industry					Gas industry (2)
	Coal	Oil for internal combustion engines (1)	Oil for gas turbines	Oil for burning	Gas purchased from public supply (5)	Natural gas
	(1)	(2)	(3)	(4)	(5)	(6)
	£ per tonne				Pence per therm	
1968/69	4.66	12.28	13.22	9.28	1.63	2.03
1969/70	4.81	11.81	12.37	8.45	1.63	1.46
1970/71	5.36	13.64	13.39	10.83	1.78	1.27
1971/72	6.21	16.11	17.35	11.28	1.67	1.25
1972/73	6.50	16.28	17.16	10.76	1.75	1.20
1973	6.66	17.16	19.25	11.69	1.98	1.33
1974	9.29	36.24	41.36	28.03	3.84	1.56
1975	14.16	45.91	52.25	36.27	4.87	1.79
1976	16.89	56.90	58.33	41.49	5.80	2.03
1977	19.66	68.95	73.85	51.50	7.65	2.83
1978	21.97	71.51	75.82	49.72	8.94	

(1) Other than for use in road vehicles.

(2) For the gas industry prices shown for the calendar years 1973 to 1977 relate to the financial years 1973/74 to 1977/78 respectively.

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## Effective rates of duty on principal hydrocarbon oils United Kingdom

Date from which duty effective	Gas for (1)				Gas for (1)					
	use as road fuel	Motor (1) spirit	Derv (1) fuel	Fuel oil and gas oil	use as road fuel	Motor (1) spirit	Derv (1) fuel	Fuel oil and gas oil	Kerosine	Kerosine
	Pence per gallon				Pence per litre					
19th April 1950		7.500	7.500			1.650	1.650			
11th April 1951		9.375	9.375			2.062	2.062			
11th March 1952		12.500	12.500			2.750	2.750			
4th December 1956		17.500	17.500			3.849	3.849			
9th April 1957		12.500	12.500			2.750	2.750			
17th April 1961				0.833	0.833			0.183	0.183	
26th July 1961		13.750	13.750	0.917	0.917	3.025	3.025	0.202	0.202	
9th April 1962				0.833	0.833			0.183	0.183	
11th November 1964		16.250	16.250			3.575	3.575			
21st July 1966		17.875	17.875	0.917	0.917	3.932	3.932	0.202	0.202	
11th April 1967		17.917	17.917			3.941	3.941			
19th March 1968		19.583	19.583			4.308	4.308			
22nd November 1968		21.542	21.542	1.008	1.008	4.739	4.739	0.222	0.220	
15th April 1969		22.500	22.500	1.000	1.000	4.949	4.949	0.220	0.220	
3rd July 1972	11.25					2.475				
10th April 1976	15.00	30.000	30.00			3.300	6.599	6.599		
30th March 1977	17.50	35.000	35.00	2.500		3.849	7.699	7.699	0.550	
8th August 1977	15.00	30.000				3.300	6.599			

(1) These fuels became liable to Value Added Tax as follows:—

- (i) 10% with effect from 1st April 1974.
- (ii) 8% with effect from 29th July 1974.
- (iii) For motor spirit 25% with effect from 18th November 1974.
- (iv) For motor spirit 12.5% with effect from 12th April 1976.



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# Index numbers of wholesale prices: Industrial fuels and crude oil

## United Kingdom

		Coal (except for carbonising), gas and electricity (1)	Commodities produced in the United Kingdom				
		Coal (2)	Medium fuel oil (950 secs) (3)	Motor spirit (two star) (4)	Derv fuel (5)	Crude oil (6)	
Annual averages		1963 = 100					
1968		119.7	112.9	114.0	131.6	130.0	108.5
1969		120.1	114.1	110.3	145.1	141.9	101.4
1970		125.7	130.1	112.4	147.2	142.8	97.8
		1975 = 100					
1970		53.3	33.7	33.5	57.7	66.6	17.5
1971		57.1	40.0	41.7	60.6	69.8	22.3
1972		59.2	43.4	42.9	61.5	70.8	22.5
1973		60.0	45.4	45.3	64.4	73.2	29.2
1974		75.4	64.2	81.6	84.6	93.7	85.6
1975		100.0	100.0	100.0	100.0	100.0	100.0
1976		117.5	117.9	124.2	117.7	126.6	131.5
1977		138.1	136.1	165.5	133.4	156.1	149.3
1978		151.1	150.3	169.5	130.9	160.3	138.3
Monthly averages							
1976	January	107.3	105.3	116.2	105.9	111.9	119.8
	February	107.6	105.2	116.2	105.9	111.9	119.7
	March	111.1	118.6	116.2	105.9	111.9	120.2
	April	118.8	120.0	116.2	115.9	123.5	122.8
	May	119.0	120.0	116.2	120.2	128.4	127.5
	June	119.2	120.1	116.2	120.2	128.4	132.6
	July	119.7	120.1	120.3	120.5	129.6	134.8
	August	119.7	120.2	125.7	121.0	131.2	136.7
	September	119.7	120.1	125.7	121.0	131.2	136.5
	October	120.6	121.6	126.8	121.5	131.7	138.0
	November	122.6	121.6	145.3	127.1	139.0	144.1
	December	124.2	121.6	148.8	127.3	140.8	144.8
1977	January	125.5	121.6	155.3	127.8	144.6	144.7
	February	126.3	121.6	155.3	127.8	144.6	147.8
	March	129.7	137.9	155.7	128.4	145.2	151.6
	April	137.2	138.4	164.2	137.8	156.2	151.0
	May	139.5	138.4	169.5	140.5	160.3	151.9
	June	141.6	138.4	169.5	140.5	160.3	150.9
	July	142.8	138.4	169.5	140.5	160.3	151.6
	August	142.8	138.3	169.5	133.4	160.3	150.4
	September	142.8	138.4	169.5	130.9	160.3	151.2
	October	142.9	140.6	169.5	130.9	160.3	148.9
	November	143.0	140.6	169.5	130.9	160.3	146.2
	December	143.1	140.7	169.5	130.9	160.3	145.2
1978	January	144.8	140.6	169.5	130.9	160.3	141.1
	February	144.8	140.6	169.5	130.9	160.3	138.0
	March	147.0	150.9	169.5	130.9	160.3	136.6
	April	152.9	150.9	169.5	130.9	160.3	140.6
	May	152.8	151.9	169.5	130.9	160.3	140.9
	June	152.9	151.9	169.5	130.9	160.3	144.9
	July	152.9	151.9	169.5	130.9	160.3	141.4
	August	152.8	151.9	169.5	130.9	160.3	139.4
	September	152.8	152.0	169.5	130.9	160.3	136.6
	October	153.0	152.0	169.5	130.9	160.3	134.4
	November	153.0	154.7	169.5	130.9	160.3	131.8
	December	153.1	154.7	169.5	130.9	160.3	134.4
1979	January	153.1	154.7	169.5	130.9	160.3	132.9
	February	153.0	154.7	174.1	133.8	163.9	136.5
	March	155.8	168.6	177.1	135.6	166.0	136.9
	April	159.9	168.6	179.1	139.7	169.4	137.5



# Financial

## Sources of statistics

Tables 91 to 94 present summary key financial statistics relating to the coal, gas and electricity industries and to the British National Oil Corporation within the responsibility of the Secretary of State for Energy. The statistics have been derived from information published in the annual Reports and Accounts of the statutory authorities. The accounts are all prepared under the historical cost convention; however those for the British Gas Corporation and the Electricity Council are modified to include certain additional provisions for depreciation.

Some estimates have been included to provide series that are as compatible as possible for the different industries covered. Complete compatibility is not possible due to differences in accounting procedures. In particular grants under the Coal Industry Acts are included in all relevant data for the National Coal Board, whereas Government compensation for price restraint is included only in the self financing ratios of the gas and electricity industries.

Self financing ratios have been quoted from those published by the gas and electricity industries while for the National Coal Board and the British National Oil Corporation self financing ratios have been derived using the guide line:—

allocations from profits + provisions to replace and sales of assets + deferred charges divided by the total of expenditure on fixed assets + investments + variations (compared with previous year) in working capital

Replacements of loans etc are not included.

The British Gas Corporation includes 'Deferred taxation' and 'Provisions' as a source of finance for 'Net assets'; otherwise the practice is to deduct such deferred liabilities and provisions from the assets.

## Periods covered

Except where otherwise stated the statistics for the National Coal Board relate to periods of 52 weeks approximately corresponding to the financial years. Figures for the

gas and electricity industries are for the financial years beginning on 1 April and ending on 31 March. Figures for the British National Oil Corporation relate to calendar years.

## National Coal Board

The figures cover all the activities of the Board including coal production, coke ovens, brickworks and other ancillary activities. For information relating to costs, proceeds and earnings at NCB coal mines see Table 23.

## Gas industry

The figures relate to the public supply industry in Great Britain. Except where otherwise stated they cover the activities of the British Gas Corporation or, prior to the formation of the Corporation on 1 January 1973, the Gas Council and the Area Gas Boards.

## Electricity industry

The statistics relate to the public supply industry in England and Wales and cover the activities of the Electricity Council, the Central Electricity Generating Board and Area Electricity Boards in England and Wales.

## British National Oil Corporation

The statistics relate to the Corporation whose major activity continued to be offshore exploration and development under the licence interests acquired in 1976. The Corporation, established on 1 January 1976 under the Petroleum and Submarine Pipe-lines Act 1975, has powers for action as an integrated oil company, the specific duty to advise the Secretary of State on oil matters and may be required to perform services on behalf of the Crown.



# Key financial statistics: National Coal Board <sup>(1)</sup> Great Britain

£ million

	1967/68	1968/69	1969/70	1970/71	(2) 1971/72	(2) 1972/73	(2) 1973/74	(2) 1974/75	(2) 1975/76	(2) 1976/77	(2) 1977/78
Net assets (3)	735	722	662	667	630	473	513	499	733	1,003	1,333
Average net assets employed	759	729	692	664	648	552	493	506	616	866	1,168
Capital requirements (4)	142	53	10	76	42	181	-25	187	405	417	400
Self financing ratio (per cent) (5)	42.3	94.4	100.0	90.4	100.0	2.3	—	34.9	43.5	41.5	40.5
Revenue: Coal	781	716	684	757	697	852	716	1,284	1,671	2,042	2,333
Other fuels	68	72	78	86	77	100	114	196	171	218	208
Other revenue(5)	51	62	57	56	86	142	189	181	346	268	348
Total (5)(6)	900	850	819	899	860	1,094	1,019	1,661	2,188	2,528	2,889
Expenditure:											
Materials, stores, power and repair	197	186	195	215	253	283	280	419	558	652	780
Wages and related expenditure	511	472	452	476	506	626	631	940	1,239	1,346	1,517
Depreciation	54	54	58	62	79	73	53	59	81	93	106
Other	103	109	105	112	141	151	167	209	264	334	392
Total	865	821	810	865	979	1,133	1,131	1,627	2,142	2,425	2,795
Operating profit (+) or loss (-) (5)	+34.6	+28.6	+8.8	+34.1	-119.3	-39.4	-112.3	+33.8	+46.2	+103.6	+94.3
Interest (Net)	34.2	37.5	34.9	33.6	37.6	43.9	32.2	36.2	51.8	78.0	87.0
Surplus (+) deficit (-) (5)	+0.4	-8.9	-26.1	+0.5	-156.9	-83.3	-144.5	-2.4	-5.6(7)	+25.6(7)	+7.3(7)
Return on average net assets employed (per cent) (5)	4.5	3.9	1.3	5.1	—	—	—	6.7	7.5	12.0	8.1

(1) The figures for 1967/68 and 1972/73 cover periods of 53 weeks.

(2) Figures do not necessarily correspond in all details with earlier years.

(3) Assets of £275 mn in 1972/73 were written off in accordance with the Coal Industry Act of 1973.

(4) Including changes in working capital.

(5) Includes grants under the Coal Industry Acts.

(6) Data up to 31 December 1975 includes revenue arising from assets in National Coal Board (Exploration) Ltd and its subsidiary L L Leasing Ltd.

(7) Allowing for Profit on realisation of assets, Taxation, Minority interests, Provisions for exchange profit or loss and Extraordinary items there were profits of £5.3mn, £27.2mn and £20.4mn in 1975/76, 1976/77 and 1977/78 respectively.



# Key financial statistics: Gas industry

## Great Britain: Public supply

	£ million										
	1967/ 68	1968/ 69	1969/ 70	1970/ 71	1971/ 72	1972/ 73(1)	1973/ 74	1974/ 75	1975/ 76	1976/ 77	1977/ 78
Net assets (2)	1,273	1,483	1,658	1,868	2,012	2,054	2,109	2,188	2,373	2,319	2,102
Average net assets employed	1,166	1,382	1,566	1,759	1,936	2,036	2,081	2,149	2,281	2,346	2,210
Capital requirements	298	282	278	299	254	197	256	339	472	357	228
Self financing ratio (per cent) (3)	17	27	30	28	47	85	92	76	66	100	100
Revenue:											
Sales of gas	273	329	360	386	448	513	552	664	853	1,030	1,287
Domestic	61	65	68	77	100	135	163	232	315	444	627
Industrial	61	67	70	74	82	92	98	128	172	229	304
Other	395	461	498	537	630	740	813	1,024	1,340	1,703	2,218
Total	96	96	62(4)	63	69	72	69	84	106	120	145
Appliances	..	..	..	..	..	73	75	85	99	102	126
Installation and contracting	77	60	41	30	10	5	3	1	1	10	43
Sales of oil, coke etc	22	23	59(4)	66	78	8	11	13	20	33	36
Other											
Total	590	640	660	696	787	898	971	1,207	1,566	1,968	2,568
Expenditure:											
On prime materials (5)	192	176	152	139	141	149	186	231	255	285	466
Wages and salaries	133	136	146	163	182	195	221	280	374	425	501
Depreciation and amounts written off	46	55	67	80	99	143	188	247	283	508(6)	580(6)
Other (including research and development)	175	183	193	205	225	260	270	343	467	538	707
Total	546	550	558	587	647	747	865	1,101	1,379	1,756	2,254
Operating profit (8)	44	90	102	109	140	151	106	106	187	212	314
Interest (Net)	57	73	88	107	125	145	156	163	177	181	133
Surplus (+) deficit (-)	-13	+17	+14	+2	+15	+6	-50(7)	-57(7)	+10(7)	+31(7)	+181(7)
Return on average net assets employed (per cent) (8)	3.7	6.3	6.3	6.0	7.2	7.2	5.4	6.0	8.6	9.0	14.2

(1) Because of the change in the form of accounts the 1972/73 figures are not strictly comparable with those for earlier years.

(2) Assets include costs relating to conversion operations and displaced plant which were written off by the end of 1977/78.

(3) Includes Government compensation for price restraint.

(4) In 1969/70 central heating installations are excluded from "Appliances" and included with "other".

(5) Includes coal, coke, oil and gas purchased.

(6) Depreciation includes historical and supplementary depreciation displaced plant and deferred charges.

(7) Excluding other income, share of profits of associated companies and taxation. Allowing for these there were profits of £25mn, £32mn and £104mn in 1975/76, 1976/77 and 1977/78 respectively.

(8) Excludes Government compensation for price restraint.



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# Key financial statistics: Electricity industry

## England and Wales: Public supply

£ million

	1967/ 68	1968/ 69	1969/ 70	1970/ 71	1971/ 72	1972/ 73	1973/ 74	1974/ 75	1975/ 76	1976/ 77	1977/ 78
Net assets	4,502	4,755	4,921	5,084	5,183	5,285	5,463	5,867	6,003	6,244	6,511
Average net assets employed	4,233	4,549	4,783	4,993	5,126	5,214	5,290	5,850	5,932	6,120	6,341
Capital requirements	631	524	448	461	416	449	566	789	564	693	780
Self financing ratio (per cent) (1)	46.8	70.9	77.4	52.6	70.0	77.5	62.4	47.5	87.4	94.2	103.7
Revenue:											
Sales of electricity											
Domestic premises	476	532	549	569	662	745	782	1,024	1,433	1,663	1,924
Industrial	406	438	457	486	522	557	581	845	1,050	1,291	1,484
Interchange of supplies	4	6	—	—	2	—	—	3	7	7	—
Other	273	302	322	333	379	417	421	566	772	919	1,086
All electricity	1,159	1,278	1,328	1,388	1,565	1,719	1,784	2,438	3,262	3,880	4,494
Other revenue	21	26	21	24	29	25	22	17	15	19	24
Total (2)	1,180	1,304	1,349	1,412	1,594	1,744	1,806	2,455	3,277	3,899	4,518
Expenditure:											
On fuel (at delivered cost)	368	385	414	514	562	595	699	1,191	1,490	1,744	2,074
Wages, salaries and related expenditure	197	201	210	231	262	283	313	403	520	567	614
Depreciation	220	248	258	272	288	307	324	340	372	379	554(3)
Other	137	147	161	190	225	261	317	404	462	572	705
Total	922	981	1,043	1,207	1,337	1,446	1,653	2,338	2,844	3,262	3,947
Operating profit (2)	258	323	306	205	257	298	153	117	433	637	571
Interests (Net)	203	222	241	261	282	297	339	385	424	430	438
Surplus (+) deficit (—)	+55	+101	+65	—56	—25	+1	—186	—268	+9	+207	+133
Return on average net assets employed (per cent) (2)	6.1	7.1	6.4	4.1	5.0	5.7	2.9	2.0	7.3	10.4	9.0

(1) Includes Government compensation for price restraint.

(2) Including profit or loss on contracting and sales of appliances.  
Excludes Government compensation for price restraint.

(3) Depreciation includes Supplementary Depreciation.



£ million

	1976	1977	1978
Net assets	359	557	751
Average net assets employed	..	458	654
Capital requirements(1)	387	221	245
Self financing ratio (per cent)(2)	2.5	5.1	6.8
Revenue(3)			
Equity petroleum	25.8(4)	27.8(4)	52.7
Purchased petroleum	—	—	379.1
Total	25.8	27.8	431.8
Expenditure			
Costs of sales (less depreciation)			
Equity petroleum	7.2	7.9	10.2
Purchased petroleum	—	—	378.5
Selling and administration expenses (less depreciation)	—	2.0	7.1
Depreciation	11.0	13.1	19.7
Provision for site restoration costs	—	—	5.4
Total	18.2	23.0	420.9
Operating profit	7.6	4.8	10.9
Interest (Net)(5)	8.7	6.7	8.6
Surplus (+) deficit (—)(6)	—1.1	—1.9	+2.3
Return on average net assets employed (per cent)	..	1.0	1.7

(1) "Payment in discharge of advance oil sale obligations" and "Repayment of loans from the National Loans Fund" are not included.

(2) "Funds originating from the National Loans Fund" and "Funds originating from royalty monies, net" are not included as funds obtained from within BNOC for the purpose of calculating this ratio.

(3) "Advance oil sale proceeds and obligations" and "Funds originating from royalty monies, net" are not included.

(4) Represents amounts received or estimated to be receivable for sales of gas and gas condensates.

(5) Includes financing costs but excludes amounts carried forward.

(6) Allowing for "Deferred taxation charge" there were net losses of £1.3mm and £1.9mm in 1976 and 1977, respectively. In 1978 "Deferred taxation charge" and "Write off of Interest and financing costs brought forward" reduced the surplus to a net loss of £3.0mm.







Value of fuel imports and exports<sup>(1)</sup>  
United Kingdom

£ million

£ million												
Imports (c.i.f.)							Exports (f.o.b.)					
	Coal (1)	Other solid fuel <sup>(2)</sup> (2)	Natural gas (3)	Petroleum		Electricity (6)	Total (7)	Coal (8)	Other solid fuel <sup>(2)</sup> (9)	Petroleum (3) (10)	Electricity (11)	Total (12)
				Crude (4)	Refined <sup>(3)</sup> (5)							
1968	—	0.9	12.9	593.1	292.9	1.7	901.5	12.1	8.1	147.6	—	167.8
1969	—	1.2	13.2	638.7(4)	252.0(4)	1.4	906.5	16.2	10.8	146.0	—	173.0
1970	0.9	2.7	10.6	686.9(4)	242.1(4)	1.6	944.8	17.5	13.3	175.9	—	206.7
1971	39.2	8.2	10.4	929.7(4)	258.7(4)	0.4	1,246.6	13.2	11.6	211.5	—	236.3
1972	48.9	11.3	9.4	914.0(4)	256.2(4)	1.7	1,241.5	9.7	9.2	219.7	—	238.6
1973	21.3	7.9	9.4	1,296.2(4)	388.4(4)	0.4	1,723.6	15.2	13.8	341.0	—	370.0
1974	62.1	7.2	8.1	3,725.6(4)	832.6(4)	0.4	4,636.0	20.8	46.9	701.0	—	768.7
1975	105.6	7.8	13.9	3,371.3(4)	801.9(4)	1.1	4,301.6	36.1	54.6	722.9	0.1	813.7
1976	82.7	9.0	20.3	4,444.7(4)	1,091.1(4)	—	5,647.8	30.6	47.7	1,175.4	1.1	1,254.8
1977	78.1	11.5	43.2	3,970.7(4)	1,126.7(4)	—	5,232.0	43.7	45.6	1,977.4	—	2,066.7
1978	77.0	6.5	187.7	3,527.7(4)	1015.9(4)	—	4,814.8	51.5	47.2	2276.0	—	2,374.7

Source: HM Customs and Excise

(<sup>1</sup>) The figures correspond to Section 3 of the Import and Export List. The figures exclude trade with the Channel Islands.

(<sup>2</sup>) Including coke, breeze, briquettes and pitch.

(<sup>3</sup>) Including liquefied gases other than natural gas and petroleum products not used as fuel, e.g., lubricants.

(<sup>4</sup>) The estimated f.o.b. values are:—

1969—crude £435.4 million, refined £213.4 million.

1970—crude £469.4 million, refined £193.5 million.

1971—crude £663.8 million, refined £200.9 million.

1972—crude £667.5 million, refined £216.2 million.

1973—crude £940.9 million, refined £339.5 million.

1974—crude £3,347.6 million, refined £787.0 million.

1975—crude £3,069.0 million, refined £779.2 million.

1976—crude £4,089.2 million, refined £1,060.8 million.

1977—crude £3,685.1 million, refined £1,090.5 million.

1978—crude £3,284.6 million, refined £979.2 million.



96

# Imports of solid fuels<sup>(1)</sup> United Kingdom

	1974		1975		1976		1977		1978	
	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel
European Economic Community:	Thousand tonnes									
Belgium	2	1	6	—	75	—	9	—	17	1
Federal Republic of Germany	70	52	41	16	168	18	204	31	260	35
France	2	88	—	96	2	61	10	61	1	55
Irish Republic	9	—	42	—	7	—	38	—	53	1
Netherlands	22	3	36	—	125	—	14	—	2	—
<b>Total</b>	<b>105</b>	<b>144</b>	<b>125</b>	<b>112</b>	<b>377</b>	<b>79</b>	<b>275</b>	<b>92</b>	<b>333</b>	<b>92</b>
Australia	1,003	—	2,629	—	1,471	—	1,344	—	1,025	—
Canada	47	—	365	—	—	—	—	—	—	—
German Democratic Republic	—	6	—	8	—	1	1	—	—	—
North Vietnam	—	—	34	—	30	—	—	—	—	—
Poland	686	—	96	—	129	—	179	—	416	—
Republic of South Africa	10	1	34	—	17	—	11	1	26	—
Soviet Union	—	—	2	—	40	—	165	—	106	—
United States of America	1,675	18	1,797	1	757	—	443	—	422	—
Other countries	15	3	1	1	16	2	21	1	24	—
<b>Total imports</b>	<b>3,541</b>	<b>172</b>	<b>5,083</b>	<b>122</b>	<b>2,837</b>	<b>82</b>	<b>2,439</b>	<b>94</b>	<b>2,352</b>	<b>92</b>
Value of imports	£ thousand									
	62,128	4,058	105,607	3,908	82,645	3,308	79,331	4,672	77,014	5,086
Average per tonne	£									
	17.55	23.59	20.78	32.03	29.14	40.34	32.53	49.70	32.74	55.23

(1) See footnote (1) to table 97.

Source: H.M. Customs and Excise

97

# Exports of solid fuels<sup>(1)</sup> United Kingdom

	1974		1975		1976		1977		1978	
	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel	Coal	Other solid fuel
European Economic Community:	Thousand tonnes									
Belgium and Luxembourg	363	140	420	74	263	32	134	22	135	53
Denmark	9	11	5	20	5	33	85	16	125	7
Federal Republic of Germany	365	198	392	151	253	64	426	26	495	77
France	580	38	735	30	460	20	813	6	950	—
Irish Republic	113	11	179	16	95	17	165	14	202	17
Italy	63	—	18	23	14	1	5	3	53	—
Netherlands	191	242	222	164	152	123	184	70	174	136
<b>Total</b>	<b>1,684</b>	<b>640</b>	<b>1,971</b>	<b>478</b>	<b>1,242</b>	<b>290</b>	<b>1,812</b>	<b>157</b>	<b>2,134</b>	<b>290</b>
Canada	2	40	—	17	—	—	—	1	—	7
Egypt	—	23	—	1	—	—	—	—	—	—
Finland	17	140	2	113	1	105	1	60	6	25
Norway	100	464	120	449	100	440	76	304	79	313
Poland	1	—	—	2	—	—	—	—	—	—
Portugal	13	18	8	30	5	23	12	59	3	42
Romania	—	14	—	38	—	—	—	—	—	—
Spain	—	56	—	38	2	25	—	5	13	1
Sweden	36	325	53	378	69	265	37	184	28	119
Tunisia	5	—	22	—	3	—	—	—	—	—
United States of America	—	195	—	29	—	—	—	10	—	152
Yugoslavia	—	—	—	17	—	13	—	18	—	9
Other countries	7	53	6	9	14	20	3	38	3	88
<b>Total exports</b>	<b>1,865</b>	<b>1,968</b>	<b>2,182</b>	<b>1,599</b>	<b>1,436</b>	<b>1,181</b>	<b>1,941</b>	<b>836</b>	<b>2,266</b>	<b>1,046</b>
Value of exports	£ thousand									
	20,785	42,651	36,072	47,607	30,646	41,038	43,727	36,028	51,522	38,569
Average per tonne	£									
	11.14	21.67	16.53	29.77	21.34	34.75	22.53	43.10	22.74	36.87

(1) In both Tables 96 and 97, the figures for coal correspond to item 321.4 (322.1 and 322.2 from 1978) of the Overseas Trade Statistics classification, and those for other solid fuel, to the sum of items 321.5, 321.6 and 321.8 (323.11 and 323.21 from 1978) of the Overseas Trade Statistics classification.

Source: H.M. Customs and Excise



# Imports and exports of crude oil and petroleum products

## United Kingdom

	Crude petroleum		Refined petroleum products (1)									
			Petroleum gases (2)		Motor spirit and Aviation spirit		Other spirit (3)		Aviation turbine fuel (kerosene)		Other kerosene	
	Quantity (1)	Value per tonne (2)	Quantity (3)	Value per tonne (4)	Quantity (5)	Value per tonne (6)	Quantity (7)	Value per tonne (8)	Quantity (9)	Value per tonne (10)	Quantity (11)	Value per tonne (12)
	Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	£
<b>Imports</b>												
1970	100,762	6·81	260	18·00	3,978	13·50	3,673	10·07	594	13·41	554	13·20
1971	107,328	8·66	217	19·08	4,203	15·30	2,749	10·36	877	13·92	650	14·74
1972	104,313	8·76	278	18·61	3,531	15·84	2,119	10·92	946	13·68	553	14·86
1973	113,261	11·44	326	19·90	3,564	25·63	4,057	19·82	955	20·19	666	20·21
1974	110,825	33·62	242	66·26	2,702	59·10	3,289	55·78	631	47·50	411	48·10
1975	87,180	38·67	176	75·71	2,284	62·83	3,205	55·89	932	55·00	306	53·98
1976	86,952	51·11	241	92·45	2,687	82·60	3,389	78·92	1,080	66·94	321	69·56
1977	68,562	57·91	343	97·39	2,388	85·35	2,510	83·95	833	76·30	404	75·71
1978	65,902	53·53	242	99·17	2,493	83·97	2,164	82·38	633	74·63	18	76·33
<b>Exports</b>												
1970	1,101	7·22	90	15·94	1,000	13·92	497	9·95	542	11·43	599	11·88
1971	1,447	6·82	124	12·24	1,193	15·55	666	9·92	628	13·64	579	14·90
1972	2,940	7·02	135	17·24	1,358	15·10	717	10·54	658	12·71	533	14·10
1973	2,797	8·32	186	15·13	1,279	23·85	1,043	19·02	388	17·88	557	18·60
1974	921	31·33	200	40·45	923	60·19	1,672	49·99	390	49·81	316	45·72
1975	772	38·29	185	48·19	1,115	61·05	1,354	50·81	446	50·07	341	55·47
1976	3,314	53·55	326	61·95	1,345	82·39	1,200	69·00	599	61·77	236	71·44
1977	15,253	59·98	499	67·23	955	86·81	1,129	72·14	429	74·65	207	80·72
1978	23,139	53·62	746	65·85	972	82·97	657	77·05	713	74·88	100	75·24
<b>Net Trade</b>												
1970	+99,661		+170		+2,978		+3,176		+52		-45	
1971	+105,881		+93		+3,010		+2,083		+249		+71	
1972	+101,373		+143		+2,173		+1,402		+288		+20	
1973	+110,464		+140		+2,285		+3,014		+567		+109	
1974	+109,904		+42		+1,779		+1,617		+241		+95	
1975	+86,408		-9		+1,169		+1,851		+486		-35	
1976	+83,638		-85		+1,342		+2,189		+481		+85	
1977	+53,309		-156		+1,433		+1,381		+404		+197	
1978	+42,763		-504		+1,521		+1,507		-80		-82	

(1) Excluding pitch.

(2) May include small quantities of unidentified non-petroleum gases.

(3) Including wide-cut gasoline, white spirit and petroleum naphthas.

(4) Includes refinery feedstock and process oils for the years 1970–1973. The quantities included in 'other' are as follows:—

Year	Imports	Exports	Net trade (thousand tonnes)
1970	2,214	254	+1,960
1971	2,039	326	+1,713
1972	2,725	383	+2,342
1973	2,039	80	+1,959

Refinery feedstock and process oils for the years 1974–1978 are included under the respective refined petroleum products heading.



							Total refined (1)(4) petroleum products		
Gas Oil/Diesel Oil		Fuel Oil		Lubricating Oils		Other (4)			
Quantity (13)	Value per tonne (14)	Quantity (15)	Value per tonne (16)	Quantity (17)	Value per tonne (18)	Quantity (19)	Quantity (20)	Value per tonne (21)	
Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	£	Thousand tonnes	Thousand tonnes	£	
1,906	10.16	8,993	7.03	529	28.97	2,606	23,093	10.39	1970
2,196	12.10	8,172	7.60	506	28.77	2,512	22,082	11.75	1971
2,032	11.94	9,642	6.88	538	30.80	3,348	22,987	11.27	1972
2,180	19.40	7,513	8.26	562	35.37	2,778	22,601	17.19	1973
1,356	37.10	6,054	27.81	569	73.46	3,085	18,339	45.39	1974
2,334	45.21	4,552	31.94	389	92.77	1,816	15,994	50.24	1975
3,017	54.15	2,750	37.58	429	118.22	2,128	16,042	68.02	1976
2,261	64.97	4,991	45.57	383	131.78	2,157	16,270	69.36	1977
1,708	67.68	4,068	42.54	1,701	71.86	4,536	17,563	66.83	1978
5,635	9.05	7,938	5.80	686	47.81	345	17,332	9.68	1970
6,140	11.24	6,195	6.50	726	50.75	693	16,944	11.91	1971
6,053	11.25	5,559	6.43	744	49.25	706	16,463	12.09	1972
6,348	21.91	5,597	8.35	808	53.61	879	17,085	18.59	1973
6,866	41.83	3,547	27.21	858	87.47	490	15,262	44.03	1974
5,669	44.77	3,798	30.73	684	132.06	715	14,307	48.46	1975
6,290	56.21	5,364	39.62	740	146.70	493	16,593	60.14	1976
4,849	69.48	5,694	48.86	733	174.02	735	15,230	70.51	1977
4,995	66.57	3,870	42.62	1,228	128.91	1,019	14,300	70.14	1978
-3,729		+1,055		-157		+2,261	+5,767		1970
-3,944		+1,977		-220		+1,819	+5,138		1971
-4,021		+4,083		-206		+2,642	+6,524		1972
-4,168		+1,916		-246		+1,899	+5,516		1973
-5,510		+2,507		-289		+2,595	+3,077		1974
-3,335		+754		-295		+1,101	+1,687		1975
-3,273		-2,614		-311		+1,635	-551		1976
-2,588		-703		-350		+1,422	+1,040		1977
-3,287		+198		+473		+3,517	+3,263		1978



Imports of crude oil  
United Kingdom

	Middle East								Western	
	Abu Dhabi (1)	Bahrain Qatar Muscat & Oman (2)	Dubai (3)	Kuwait (4)	Iran (5)	Iraq (6)	Saudi Arabia (7)	Other M.E. (8)	Total M.E. (9)	Netherland Antilles (10)
Thousand Tonnes										
1968	1,664	4,402	—	19,865	9,515	3,307	9,059	—	47,812	17
1969	2,001	4,698	—	24,068	8,011	3,878	12,773	73	55,502	146
1970	2,449	5,167	510	24,113	8,978	2,473	15,151	446	59,287	91
1971	2,859	5,125	1,082	21,735	10,788	3,939	21,356	809	67,693	—
1972	4,568	4,835	1,022	20,202	13,519	3,557	21,119	48	68,870	21
1973	2,702	5,540	1,464	20,852	20,899	2,382	27,234	243	81,316	—
1974	4,693	5,734	1,287	17,149	14,460	3,132	35,513	1,130	83,098	10
1975	2,336	6,683	1,481	10,907	17,505	2,610	22,139	122	63,783	—
1976	1,449	6,131	2,244	11,488	19,906	5,257	18,547	181	65,203	84
1977	2,166	1,759	2,056	9,183	12,848	5,486	18,438	161	52,097	—
1978	1,410	719	2,639	11,288	9,202	8,977	14,063	—	48,298	—
£ thousand										
1968	14,390	35,394	—	145,113	76,520	25,951	67,707	—	365,075	139
1969	16,376	34,933	—	165,828	59,867	27,948	84,569	524	390,045	860
1970	18,534	37,753	3,259	158,114	63,030	16,460	102,853	3,118	403,121	590
1971	25,966	44,289	9,244	183,805	94,132	34,004	172,004	7,055	570,499	—
1972	41,679	41,759	8,645	166,649	114,994	31,182	181,280	490	586,678	156
1973	31,926	63,440	14,632	221,671	215,350	27,537	308,115	2,759	885,430	—
1974	163,583	195,173	43,003	536,454	470,560	101,070	1,152,782	40,279	2,702,904	267
1975	96,341	268,464	57,515	409,977	670,112	99,442	842,168	4,210	2,448,229	—
1976	75,423	317,122	114,543	577,281	1,017,879	276,322	947,886	8,656	3,335,112	4,094
1977	132,413	106,574	115,647	526,304	748,358	323,048	1,041,313	9,278	3,002,935	—
1978	81,211	41,216	138,314	593,536	491,337	486,875	750,414	—	2,582,903	—
£ per tonne										
1968	8.64	8.04	—	7.31	8.04	7.85	7.47	—	7.63	8.19
1969	8.19	7.43	—	6.89	7.47	7.21	6.62	7.07	7.02	5.90
1970	7.56	7.30	6.38	6.55	7.02	6.65	6.78	6.99	6.79	6.49
1971	9.08	8.64	8.54	8.45	8.72	8.63	8.05	8.71	8.42	—
1972	9.12	8.63	8.45	8.24	8.50	8.76	8.58	10.05	8.51	7.46
1973	11.81	11.45	9.99	10.63	10.30	11.56	11.31	11.38	10.88	—
1974	34.86	34.03	33.42	31.28	32.54	32.26	32.46	35.64	32.52	26.54
1975	41.23	40.17	38.82	37.58	38.28	38.10	38.03	34.44	38.38	—
1976	52.05	51.72	51.04	50.25	51.13	52.56	51.10	47.82	51.14	48.73
1977	61.13	60.58	56.24	57.31	58.24	58.88	56.47	57.62	57.64	—
1978	57.57	57.29	52.40	52.58	53.39	54.23	53.35	—	53.47	—



99 (continued)

## Hemisphere

Venez- uela (11)	Other W.H. (12)	Total W.H. (13)	Algeria (14)	Libya (15)	Nether- lands (16)	Nigeria (17)	Norway (18)	U.S.S.R. (19)	Other countries (20)	Total Imports (21)	
Thousand tonnes											
6,923	399	7,339	699	21,673	133	1,599	—	—	552	79,807	1968
5,582	281	6,009	928	21,434	16	5,220	—	—	2,614	91,723	1969
4,711	233	5,035	1,352	24,104	30	7,715	—	—	3,239	100,762	1970
6,440	172	6,612	433	20,518	—	9,003	122	137	2,810	107,328	1971
5,095	158	5,274	1,056	14,935	—	10,787	627	225	2,539	104,313	1972
3,892	17	3,909	2,229	11,618	—	8,957	911	170	4,151	113,261	1973
3,294	93	3,397	492	8,651	1,201	7,909	461	101	5,515	110,825	1974
3,076	—	3,076	1,432	2,666	3,467	5,839	2,413	674	3,830	87,180	1975
1,447	136	1,667	903	2,241	4,257	3,834	4,185	2,762	1,900	86,952	1976
1,066	—	1,066	374	2,009	2,280	1,338	4,141	2,781	2,476	68,562	1977
1,145	—	1,145	225	1,295	2,527	1,932	3,469	2,670	4,341	65,902	1978
£ thousand											
46,697	3,735	50,571	5,003	155,644	820	11,969	—	—	4,024	593,106	1968
34,807	2,925	38,592	6,397	150,517	117	37,020	—	—	16,011	638,699	1969
30,809	2,520	33,919	9,120	166,475	214	53,474	—	—	20,588	686,911	1970
53,726	2,289	56,015	3,814	191,139	—	83,140	1,108	1,354	22,627	929,696	1971
40,751	2,130	43,037	10,326	142,064	—	102,416	5,760	2,288	21,436	914,005	1972
38,449	226	38,675	28,844	160,907	—	117,766	9,912	1,798	52,902	1,296,234	1973
92,596	816	93,679	23,720	370,510	42,487	281,178	18,543	3,817	188,773	3,725,611	1974
101,998	—	101,998	65,783	106,657	135,934	238,573	97,515	27,266	149,350	3,371,305	1975
58,024	6,281	68,399	51,481	123,215	210,503	203,998	220,700	132,872	98,421	4,444,701	1976
49,361	—	49,361	24,941	124,615	135,047	82,653	249,067	157,066	145,054	3,970,739	1977
49,799	—	49,799	13,559	73,427	138,043	108,425	190,678	136,905	233,975	3,527,714	1978
£ per tonne											
6.75	9.36	6.89	7.15	7.18	6.17	7.48	—	—	7.30	7.43	1968
6.24	10.39	6.42	6.89	7.02	7.53	7.09	—	—	6.13	6.96	1969
6.53	10.81	6.73	6.74	6.90	7.01	6.93	—	—	6.35	6.81	1970
8.34	13.40	8.47	8.81	9.31	—	9.23	9.07	9.87	8.01	8.66	1971
7.99	13.50	8.16	9.77	9.51	—	9.49	9.18	10.16	8.44	8.76	1972
9.87	13.44	9.89	12.93	13.84	—	13.14	10.88	10.55	12.74	11.44	1973
28.11	8.78	27.57	48.22	42.82	35.36	35.55	40.21	37.96	34.22	33.62	1974
33.16	—	33.15	45.92	40.00	39.20	40.84	40.41	40.43	39.00	38.67	1975
40.09	46.18	41.03	57.01	54.98	49.44	53.20	52.73	48.10	51.80	51.11	1976
46.30	—	46.30	66.68	62.02	59.23	61.77	60.14	56.47	58.58	57.91	1977
43.48	—	43.49	60.15	56.71	54.63	56.13	54.96	51.30	53.89	53.53	1978



## TEMPERATURES

100

Mean air temperatures <sup>(1)</sup>

## Great Britain

	Average 1941–70 °C	Deviations from normal (Average 1941–70) (Centigrade degrees)											
		1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Calendar year	9.6	–0.1	–0.2	+0.1	+0.3	–0.3	+0.1	–	+0.3	+0.4	–0.1	–0.2	
First half year	7.9	–0.1	–0.8	–0.1	–0.1	–0.2	+0.3	+0.5	+0.3	+0.8	–0.3	–0.6	
Second half year	11.3	–0.1	+0.2	+0.3	+0.7	–0.4	–0.1	–0.5	+0.5	+0.1	+0.1	+0.1	
First quarter	4.4	+0.2	–0.8	–0.7	+0.6	+0.7	+0.9	+1.5	+1.1	+0.8	+0.6	–0.1	–2.2
Second quarter	11.4	–0.4	–0.6	+0.5	–0.8	–1.0	–0.3	–0.5	–0.6	+0.8	–1.3	–1.0	
Third quarter	15.1	–0.3	+0.6	+0.2	+0.5	–0.9	+0.4	–1.0	+1.2	+1.2	–0.3	–0.6	
Fourth quarter	7.4	+0.2	–0.1	+0.4	+1.0	+0.2	–0.5	+0.1	–0.2	–1.0	+0.7	+0.8	
Summer (2)	13.3	–0.4	–	+0.3	–0.2	–1.0	–	–0.8	+0.3	+1.0	–0.9	–0.8	
Winter (2)	5.9	–0.4	–0.4	+0.5	+0.8	+0.6	+0.5	+0.6	+0.3	–0.2	+0.3	–0.7	
January	3.6	+1.0	+2.1	+0.4	+1.1	+0.6	+1.1	+2.5	+3.1	+2.3	–0.6	–0.2	–3.1
February	3.9	–1.6	–2.7	–0.7	+1.1	+0.7	+0.8	+1.9	+0.8	+0.9	+1.2	–1.3	–2.5
March	5.7	+0.9	–2.1	–1.7	–0.3	+0.8	+0.8	+0.1	–0.7	–0.7	+1.3	+1.1	–0.9
April	8.5	–0.3	–1.0	–1.7	–0.7	+0.1	–1.3	–0.5	–0.2	–0.5	–1.2	–2.1	–0.9
May	11.3	–1.5	–0.3	+1.4	+0.2	–0.7	–	–0.4	–1.6	+0.5	–0.9		
June	14.4	+0.5	–0.6	+1.7	–1.9	–2.5	+0.5	–0.7	+0.1	+2.3	–2.0	–0.8	
July	15.9	–1.0	+0.9	–0.5	+1.0	–0.4	–0.2	–0.8	+1.3	+2.4	–	–1.2	
August	15.7	–0.2	+0.6	+0.4	–0.1	–0.5	+0.8	–0.5	+2.5	+1.6	–0.4	–0.8	
September	13.7	+0.3	+0.4	+0.8	+0.6	–1.8	+0.6	–1.6	–0.3	–0.3	–0.6	+0.3	
October	10.8	+1.9	+2.1	+0.1	+0.8	–0.1	–1.4	–2.9	–0.7	–0.1	+0.9	+1.1	
November	6.8	–0.1	–1.3	+1.1	–0.4	–0.4	–0.6	–0.1	–0.5	–0.6	–0.4	+1.8	
December	4.7	–1.4	–1.3	–0.2	+2.4	+1.1	+0.4	+3.3	+0.6	–2.5	+1.5	–0.4	

Source: Meteorological Office publications.

(1) The figures are averages of the monthly mean temperatures as recorded at 15 meteorological stations selected as representative of fuel consumption in Great Britain—2 in Scotland, 1 in Wales and 12 in England, five of which are counted twice.

(2) The summer period is from April to September inclusive, and the winter period is the six months beginning in October and ending with March of the following year.



**Estimated average gross calorific values of fuels, 1978, used in the Energy Section**  
(for calorific values relating to previous years see previous issues of this Digest)

	Therms per tonne			Therms per tonne	
<b>COAL</b>			<b>COKE (inc. low temperature cokes)</b>	.. ..	266
All consumers (weighted average)	.. ..	243	COKE breeze	.. ..	231
Power stations	.. ..	224	OTHER SOLID FUEL	.. ..	262
Gas works	.. ..	295	CREOSOTE/PITCH MIXTURES	.. ..	370
Coke ovens	.. ..	285			
Low temperature carbonization plants	.. ..	276			
Manufactured fuel plants	.. ..	285			
Collieries	.. ..	256			
Agriculture	.. ..	285			
Iron and steel industry	.. ..	276			
Other industries (weighted average)	.. ..	261			
Engineering, etc.	.. ..	263			
Food, drink and tobacco	.. ..	271			
Chemicals and allied trades	.. ..	245			
Textiles, leather and clothing	.. ..	261			
Paper, printing etc.	.. ..	251			
Bricks, tiles, etc.	.. ..	265			
China, earthenware and glass	.. ..	278			
Cement	.. ..	246			
Other trades	.. ..	269			
Railways	.. ..	295			
Water transport	.. ..	276			
Domestic					
House coal	.. ..	285			
Anthracite and dry steam coal	.. ..	316			
Miner's coal	.. ..	290			
Other consumers	.. ..	261			
Imported coal (weighted average)	.. ..	279			
Shipments (weighted average)	.. ..	264			

**PETROLEUM**

	Therms per tonne	
Crude oil (weighted average)	.. ..	427
Liquefied petroleum gas	.. ..	470
Other gases	.. ..	496
Light distillate feedstock for gasworks	.. ..	453
Aviation spirit and wide-cut gasoline	.. ..	447
Aviation turbine fuel	.. ..	440
Motor spirit	.. ..	445
Burning oil	.. ..	441
Vaporizing oil	.. ..	435
Gas/diesel oil (inc. derv)	.. ..	431
Fuel oil	.. ..	406
Power stations	.. ..	408
Non-fuel products (notional value)	.. ..	400

**Average conversion factors for petroleum**

	Imperial gallons per tonne	Litres per tonne		Imperial gallons per tonne	Litres per tonne
<b>Crude oil</b>			<b>Kerosine:</b>		
Indigenous	262	1,190	Aviation turbine fuel	277	1,260
Imported	256	1,165	Burning oil	279	1,266
Average of refining throughput	258	1,173	Vaporizing oil	269	1,221
Propane	433	1,969	Derv fuel	262	1,190
Butane	381	1,732	Gas/diesel oil:		
Naphtha (Light distillate feedstock)	317	1,440	Gas oil	262	1,190
Aviation spirit	305	1,385	Marine diesel oil	259	1,177
Aviation turbine fuel—wide cut gasoline	287	1,305	Fuel oil: All grades	229	1,040
Motor spirit: All grades	295	1,342	Light fuel oil	236	1,075
5 Star	291	1,324	Medium fuel oil	232	1,055
4 Star	295	1,342	Heavy fuel oil	229	1,040
3 Star	297	1,351	Lubricating oils	246	1,120
2 Star	300	1,365	Bitumen	213	966
Industrial spirit	305	1,387	Petroleum coke	186	845
White spirit	282	1,284			

**Note:**—The above conversion factors, which for refined products have been compiled by the UK Petroleum Industry Advisory Committee, apply to the year 1978, and are only approximate for other years.



## CONVERSION FACTORS

WEIGHT .. ..	1 kilogramme (kg) = 2.2046 lb      1 pound (lb) = 0.4536 kg 1 tonne (t) = 1,000 kg = 0.9842 long ton = 1.102 short tons (sh tn) 1 Statute or long ton = 2,240 lb = 1.016 t = 1.120 sh tn
VOLUME (1) ..	1 m <sup>3</sup> = 35.31 ft <sup>3</sup> 1 ft <sup>3</sup> = 0.02832 m <sup>3</sup> 1 litre = 1.760 UK pint      1 pint (UK pt) = 0.5682 litre 1 Imperial gallon (UK gal) = 8 UK pt = 1.201 U.S. gallons (US gal) = 4.54609 litres 1 US gal = 0.8327 UK gal = 6.661 UK pt = 3.785 litres 1 barrel = 42 US gal = 34.97 UK gal = 159.0 litres 1 litre = 1,000 cu. centimetres = 0.22 UK gal.
HEAT .. ..	1 British thermal unit (Btu) = 0.252 kilocalorie (kcal) = 1.05506 kilojoule (kJ) 1 kcal = 4.1868 kJ = 3.9683 Btu 1 therm = 100,000 Btu = 25,200 kcal = 105,506 kJ 1 million therms = 25.2 Tcal = 105.506 terajoule (TJ) 1 megacalorie (Mcal) = 3,968.3 Btu = 4,186.8 kJ 1 teracalorie (Tcal) = 39,683 therms = 4.187 TJ 1 thermie (th) = 4,185.5 kJ 1 terajoule (TJ) = 9,478.1 therms
CALORIFIC VALUE	1 kcal/kg = 1.8 Btu/lb      1 Btu/lb = 0.5556 kcal/kg 1 kcal/m <sup>3</sup> = 0.1124 Btu/ft <sup>3</sup> 1 Btu/ft <sup>3</sup> = 8.898 kcal/m <sup>3</sup>
ENERGY .. ..	1 kilowatt hour (kWh) = 1,000 watt hours 1 hp h = 1,980,000 ft lb = 0.7457 kWh
HEAT/ENERGY ..	1 hp h = 2,545 Btu = 641.3 kcal = 2,685 kJ 1 kWh = 3,412 Btu = 859.845 kcal = 3,600 kJ 1 Btu = 778 ft lb 1 therm = 29.3 kWh 1 GWh = 34,121 therms
POWER .. ..	1 hp = 550 ft lb/sec = 0.7457 kW 1 kW = 1.34 hp 1 megawatt (MW) = 1,000 kW
METRIC MULTIPLIERS	kilo = 10 <sup>3</sup> mega = 10 <sup>6</sup> giga = 10 <sup>9</sup> tera = 10 <sup>12</sup> peta = 10 <sup>15</sup> exa = 10 <sup>18</sup>
TEMPERATURE	1 scale degree Centigrade (C) = 1.8 scale degrees Fahrenheit (F) For conversion of temperatures:— °C = $\frac{5}{9}$ (°F — 32): °F = $\frac{9}{5}$ °C + 32 (C = Centigrade F = Fahrenheit)

(1) In the UK the normal conditions of gas measurement are 60°F 30" wet. On the Continent they are 0°C 760 mm dry. The standard International conditions are 15°C 1013.25 mbars dry. The following are the conversion factors:

At 60° F 30" wet	At 0°C 760 mm dry	At 15°C 1013.25 mbars dry
1 ft <sup>3</sup>	= 0.0264 m <sup>3</sup>	= 0.02785 m <sup>3</sup> (st)
37.88 ft <sup>3</sup>	= 1 m <sup>3</sup>	
35.92 ft <sup>3</sup>	=	1 m <sup>3</sup> (st)
0.10474 Btu/ft <sup>3</sup>	= 1 kcal/m <sup>3</sup>	
0.1105 Btu/ft <sup>3</sup>	=	1 kcal/m <sup>3</sup> (st)
1 Btu/ft <sup>3</sup>	= 9.5475 kcal/m <sup>3</sup>	= 9.05 kcal/m <sup>3</sup> (st)



# Some approximate equivalents

The following equivalents are provided as an aid to quick "off the cuff" calculations in circumstances where an approximate answer or order of magnitude is adequate.

For convenience of use, the equivalents have been rounded in varying degrees and consequently calculations approached from different aspects will produce somewhat different results. Because of the large variation in thermal content, specific gravity etc, of fuels, particularly between grades of coal and types of crude oil and petroleum products, there is not in practice (except where shown in brackets) an overall precise or constant relationship between the volumes and the thermal contents of different combinations of fuels.

For more accurate calculations therefore, the thermal values and factors given on pages 133 and 134 should be used. The conventions employed for calculating coal and oil equivalent are given on page 3.

The approximations below reflect averages of all grades and uses of fuel (eg power station and other coal) and all types of product (eg petroleum products) except for electricity generated. For this, only power station grades of coal and oil have been used in arriving at the approximations. The equivalents for the different fuels relate to fuels as supplied to the user and do not take account of efficiency of utilisation, except that for electricity generation an average thermal efficiency of 30% at power stations has been assumed.

## Coal

1 million tonnes	250 million therms
	600 thousand tonnes petroleum
	7,500 GWh electrical energy <sup>(1)</sup>
	2,000 GWh electricity produced <sup>(2)</sup>
	24,500 million ft <sup>3</sup> natural gas
	700 million m <sup>3</sup> natural gas

## Natural gas

1 million therms	100 million ft <sup>3</sup>
	2.75 million m <sup>3</sup>
	4,000 tonnes coal
	2,400 tonnes petroleum
	30 GWh electrical energy <sup>(1)</sup> (29.3GWh)
	9 GWh electricity produced <sup>(2)</sup>
100 million ft <sup>3</sup> per day	375 million therms per year
	1,050 million m <sup>3</sup> per year
1 million m <sup>3</sup> per day	130 million therms per year
100 million therms per year	27 million ft <sup>3</sup> per day
	0.75 million m <sup>3</sup> per day

## Petroleum (Fuel products)

1 million tonnes	7.5 million barrels
	425 million therms
	1.7 million tonnes coal
	12,500 GWh electrical energy <sup>(1)</sup>
	3,600 GWh electricity produced <sup>(2)</sup>
	42,000 million ft <sup>3</sup> natural gas
	1,200 million m <sup>3</sup> natural gas
1 million barrels	140 thousand tonnes
	60 million therms
	230 thousand tonnes coal
	1,700 GWh electrical energy <sup>(1)</sup>
	500 GWh electricity produced <sup>(2)</sup>
	5,600 million ft <sup>3</sup> natural gas
	160 million m <sup>3</sup> natural gas

## Crude petroleum<sup>(3)</sup>

1 million tonnes	7.5 million barrels
1 million barrels per day	50 million tonnes a year

## Electrical energy

1 GWh	34,000 therms (34,121 therms)
	140 tonnes coal
	80 tonnes petroleum
	3.3 million ft <sup>3</sup> natural gas
	100 thousand m <sup>3</sup> natural gas

## Electricity generated

1 GWh	500 tonnes coal
	280 tonnes petroleum
	115 thousand therms natural gas
	11 million ft <sup>3</sup> natural gas
	300 thousand m <sup>3</sup> natural gas

(1) This represents the amount of electricity that has the same *energy content* as the amount of fuel in the left-hand column.

(2) This represents the approximate amount of electricity that could be *produced* using the amount of fuel in the left-hand column.

(3) The equivalents vary according to the type of crude. See conversion factors for petroleum on page



## FURTHER SOURCES OF U.K. ENERGY AND FUEL INDUSTRY STATISTICS

The publications listed below give shorter term statistics or more detail on a country or fuel industry basis, or compare the U.K. with other countries on a common unit or otherwise comparable basis. Some also give information on aspects not covered by this Digest. The list is not exhaustive and the titles of publications may alter.

### General statistics including energy information

Regional Statistics (annual). HMSO.

*Prepared by the Central Statistical Office.*

\*Basic Statistics of the Community (annual).

*Statistical Office of the European Communities.*

Digest of Statistics—Northern Ireland (twice yearly). HMSO.

*Prepared by the Statistics and Economics Unit, Department of Finance.*

Digest of Welsh Statistics (annual). HMSO.

*Prepared by the Welsh Office.*

Monthly Digest of Statistics. HMSO.

*Prepared by the Central Statistical Office.*

Scottish Abstract of Statistics (annual). HMSO.

*Prepared by the Scottish Office.*

### Energy

\*Annual Bulletin of General Energy Statistics for Europe.

*Prepared by the Economic Commission for Europe.*

\*Energy Statistics: yearbook.

*Statistical Office of the European Communities.*

\*Energy Statistics.

*Organisation for Economic Co-operation and Development.*

\*Energy Balances of OECD Countries.

*Organisation for Economic Co-operation and Development.*

Energy Trends (monthly).

*Prepared by the Department of Energy. (Available through Central Office of Information) (Free).*

\*World energy supplies (annual).

*Prepared by the United Nations Statistical Office.*

\*Overall energy balance sheets (annual).

*Statistical Office of the European Communities.*

### Coal

\*Annual bulletin of coal statistics for Europe.

*Prepared by the Economic Commission for Europe.*

National Coal Board. Annual Report and statistical tables.

\*Quarterly bulletin of coal statistics for Europe.

*Prepared by the Economic Commission for Europe.*

\*Coal Statistics (annual).

*Statistical Office of the European Communities.*

### Electricity

Annual bulletin of electric energy statistics for Europe.

*Prepared by the Economic Commission for Europe.*

Central Electricity Generating Board. Annual Report. Statistical Yearbook.

\*Electricity Council. Statement of accounts and statistics (annual).

\*Electricity supply industry: achievements, forecasts (annual).

*Organisation for Economic Co-operation and Development.*

\*Half-yearly bulletin of electric energy statistics for Europe.

*Prepared by the Economic Commission for Europe.*

North of Scotland Electricity Board. Report and accounts (annual).

South of Scotland Electricity Board. Report and accounts (annual).

\*Electrical Energy Statistics (annual).

*Statistical Office of the European Communities.*

### Oil and gas

\*Annual bulletin of gas statistics for Europe.

*Prepared by the Economic Commission for Europe.*

\*British Gas Corporation. Annual report.

\*Oil statistics (annual).

*Organisation for Economic Co-operation and Development.*

\*Development of the oil and gas resources of the United Kingdom: a report to Parliament by the Secretary of State for Energy.

\*Oil statistics (quarterly).

*Organisation for Economic Co-operation and Development.*

Consumption and Refinery Production (annual).

*The Institute of Petroleum.*

\*Available through HMSO







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