

Annex A – Technical Notes

Tables 2.1.1 to 2.1.3

A1. The source of the prices in these tables is the Consumer Prices Index (CPI), published by the Office for National Statistics (ONS). The fuel components within the CPI are published, together with the all items CPI. Table A1 below gives the weights within the total index, in parts per 1,000, of the fuel components. The CPI is calculated using prices collected on the second or third Tuesday of each month.

A2. Quarterly data is published three months in arrears. Any revised data is marked with an “r”. Annual data is published in the March edition of QEP. Revisions to the real terms series in Table 2.1.2 occur when the GDP deflator is updated.

Table A1: Consumer price index, fuel component weights

| | All items | Domestic fuels | Solid fuels | Gas | Electricity | Liquid fuels | Motor fuels and oil |
|------|-----------|----------------|-------------|-----|-------------|--------------|---------------------|
| 1996 | 1,000 | 45 | 2 | 20 | 22 | 1 | 40 |
| 2000 | 1,000 | 33 | 1 | 13 | 17 | 2 | 38 |
| 2005 | 1,000 | 28 | 1 | 12 | 14 | 1 | 27 |
| 2006 | 1,000 | 32 | 1 | 14 | 15 | 2 | 35 |
| 2007 | 1,000 | 39 | 1 | 18 | 19 | 1 | 36 |
| 2008 | 1,000 | 35 | 1 | 15 | 17 | 2 | 38 |
| 2009 | 1,000 | 46 | 1 | 23 | 20 | 2 | 34 |
| 2010 | 1,000 | 47 | 1 | 25 | 19 | 2 | 41 |
| 2011 | 1,000 | 44 | 1 | 22 | 19 | 2 | 43 |
| 2012 | 1,000 | 56 | 1 | 32 | 20 | 3 | 46 |
| 2013 | 1,000 | 48 | 1 | 26 | 19 | 2 | 40 |
| 2014 | 1,000 | 45 | 1 | 21 | 21 | 2 | 35 |
| 2015 | 1,000 | 42 | 1 | 20 | 20 | 1 | 34 |

The following notes apply to Table 2.1.1:

A3. **Solid fuels** - Retail prices of one standard grade of household coal and of the boiler/room heater grade of smokeless fuel sold by the retailer, obtained from local retailers in up to 146 areas throughout the United Kingdom.

A4. **Gas** – average of the major gas companies’ tariffs, plus butane gas.

A5. **Electricity** – average of the major electricity companies’ tariffs.

A6. **Liquid fuels** – Retail prices of domestic kerosene heating oil are provided by retailers in up to 146 areas throughout the United Kingdom.

A7. **Motor fuel and oil** - Ultra-low sulphur petrol (ULSP), ultra-low sulphur diesel (ULSD) and motor oil. Retail prices of the different grades of motor spirit and engine oil are obtained weekly from oil companies and supermarkets throughout the United Kingdom, with the weekly data averaged to produce a monthly figure.

Tables 2.2.1 to 2.5.2

A8. Tables 2.2.3 and 2.3.3 show representative electricity and gas bills by payment type in each of the 15 Public Electricity Supply (PES) regions in the UK. The unit cost represents the total cost to the consumer per unit consumed and is calculated by dividing the bill by the number of units consumed (3,800 kWh for electricity, 15,000 kWh for gas). Data on regional electricity and

Technical notes

gas bills from 2013 onwards are shown based on PES regions as opposed to selected towns and cities within the PES regions and gas Local Distribution Zones (LDZ). This change has been made because most energy suppliers now charge for gas according to the PES area that a household is in. It is not possible to present historical data on gas bills in this way, as the data from previous years was not collected in this format. Table A2 maps the selected towns and cities to the PES region and LDZ that they are within.

Table A2: Towns and cities by LDZ and PES area

| | Gas LDZ | Electricity PES area |
|-------------|---------------|--------------------------|
| Aberdeen | Scotland | Northern Scotland |
| Belfast | n/a | Northern Ireland |
| Birmingham | West Midlands | West Midlands |
| Canterbury | South East | South East |
| Cardiff | Wales | South Wales |
| Edinburgh | Scotland | Southern Scotland |
| Ipswich | Eastern | Eastern |
| Leeds | North East | Yorkshire |
| Liverpool | North West | Merseyside & North Wales |
| London | London | London |
| Manchester | North West | North West |
| Newcastle | Northern | North East |
| Nottingham | East Midlands | East Midlands |
| Plymouth | South West | South West |
| Southampton | Southern | Southern |

A9. Provisional annual data is published in the December edition of QEP, with final data being published in March.

A10. Bills and unit costs are based on published prices and include standing charges where applicable. No allowances are made for introductory offers or non-cash benefits that may be available from new suppliers. Both electricity and gas bills and costs reflect the prices of all suppliers. This basis is used for all the domestic bills and cost data used in Tables 2.2.1 to 2.3.3. The bills shown relate to the total bill including VAT in cash terms received during the calendar year, for the tariff type shown, including all tariff changes and rebates. Averages are weighted by the number of domestic customers. For electricity, an annual consumption of 3,800 kWh is used, whilst the equivalent figure for gas is 15,000 kWh.

A11. The weighted average of all supplier gas bills are based on equivalent tariffs of British Gas and other gas supply companies. From 2007 onwards, due to a methodology change, the estimates are based on bills received during the calendar year. As part of the methodology change, it is now assumed that, of the 15,000 kWh of gas consumed per annum (see A8), 6,000 kWh are consumed in the first quarter, 3,000 kWh in Q2, 1,500 kWh in Q3 and 4,500 kWh in Q4.

A12. From June 2013, data on the number of gas customers are shown based on Public Electricity Supply (PES) regions. In previous quarters, this data has been presented by Local Distribution Zones (LDZs). This change has been made because most energy suppliers now charge for gas according to the PES area that a household is in, and so it is more appropriate to present data in this format. Gas bills are also published on a PES area basis from December 2013 onwards. It is not possible to present historical data on gas bills and customer numbers in this way, as the data from previous years was not collected in this format.

A13. Tables 2.4.2, 2.4.3 and 2.5.2 show data for 'Economy 7' tariffs, where a lower unit cost is applied to off-peak (night) consumption. For the total consumption of 6,000 kWh, off-peak consumption has been taken as 3,000 kWh.

Technical notes

A14. Tables 2.2.4 and 2.3.4 are experimental statistics, used together with modelled energy consumption in the calculation of household notional energy bills for use in the modelling of the level of fuel poverty in England. These data are not suitable for calculating the average bills of low use consumers. The data reported is an average of the fixed and variable costs across the four quarters in the year. In the calculation, more weight is given to costs in Q1 and Q4, when it is assumed that more electricity and gas is consumed (and hence the price at this time should contribute more to the average). Therefore, these values should not be used to determine current average bills. For more information see the Fuel Poverty Methodology Handbook on the DECC website: <https://www.gov.uk/government/publications/fuel-poverty-methodology-handbook>

Table 2.6.1

A15. Household final consumption expenditure comprises household expenditure in the United Kingdom on the fuels specified and fuel purchases by foreign tourists. It excludes expenditure on fuels by businesses. VAT was levied on domestic fuels at 8 per cent in April 1994, reduced to 5 per cent in September 1997, and is included in the table from 1994 onwards. For coal, coke and petroleum products it was assumed that all consumers paid VAT from the date of its introduction. For electricity and gas an estimate was made that 5 per cent of electricity sales and 4 per cent of gas sales were covered by customers pre-paying their bills to avoid VAT in 1994 and 1995. Figures for total consumers' expenditure are also shown for comparison.

Due to the reclassification of Household Expenditure to conform to the European Systems of Accounts 1995 (ESA 95), COICOP (Classification of Individual Consumption by Purpose) headings have been rearranged.

The following notes apply to Table 2.6.1:

A16. **Solid Fuels** – Household final consumption expenditure on these fuels is based on estimates of inland sales of solid fuels to domestic consumers. Expenditure in Northern Ireland is estimated based on values of colliery despatches of house coal to Northern Ireland.

A17. **Gas** - Personal consumption in the United Kingdom is taken as sales to domestic premises. Estimates of the quantity and value of liquid gases purchased by domestic consumers are provided by the petroleum industry. The average price used is the average revenue per kWh for public supply sales of gas to domestic consumers.

A18. **Electricity** - Sales from the public electricity supply system to domestic consumers in the United Kingdom plus estimates of the domestic element included in sales to dual use premises. Sales are valued at the average revenue per unit for electricity sold to domestic consumers, which takes into account discounts and lump sum rebates.

A19. **Liquid fuels** (domestic heating and lighting oil) - For fuel oils and heating oils, information is available from the petroleum industry on quantities delivered to domestic consumers. The figures for domestic consumption are then valued using monthly prices collected from oil companies by the department.

A20. **Vehicle fuels and lubricants** (petrol, diesel, LPG, oil and lubricants, brake and other fluids, coolants) – Estimates of the quantity and value of lubricating oil purchased by domestic customers are provided by the petroleum industry. For motor spirit and diesel, estimates of business purchases of the fuels are made and deducted from total deliveries to arrive at purchases by domestic consumers. The figures for domestic consumption are then valued using monthly prices collected by the department from oil companies.

Table 2.6.2

A21. Figures for Table 2.6.2 are taken from the Expenditure and Food Survey (EFS) conducted by the ONS. The figures are estimates based upon a representative sample of households. The averages in the table have been calculated on the basis of consuming households, i.e. only those households who consumed the particular fuel in question are included in the calculation of the average expenditure. These estimates therefore differ from those published by the ONS in the report, "Family Spending", where the total of all households is used to calculate average fuel expenditure. After the publication of data for 1993 the survey moved to a financial year basis until 2005/06, then returned to a calendar year basis from 2006. The data presented on expenditure on fuel as a proportion of total expenditure in Table 2.6.2 are based on all households, not just those consuming the fuel or other commodity, for ease of comparison.

Tables 3.1.1 to 3.1.4

A22. Prices are derived from information collected via the Quarterly Fuels Inquiry on fuel purchases from a panel of around 600 establishments within manufacturing industry (which excludes electricity generation). The panel consists of companies purchasing fuels in small and large quantities. To maximise the coverage of each fuel type and minimise the burden on business, larger users are surveyed proportionally more than smaller users.

A23. Provisional quarterly data is published three months in arrears, with final data being published six months in arrears. Any revised data is marked with an "r". Provisional annual data is published in the March edition of QEP, with final annual data published in June. The entire year's quarterly data is reviewed in June to ensure that each of the contributors who supply data have been placed in the correct size band based upon their actual annual consumption. This means that there can be revisions made to data from Q1 to Q4 at this time.

A24. For each size of consumer the average price for a fuel (exclusive of VAT) is calculated by dividing the total quantity of purchases into their total value. The "all consumers-average" price uses base weighting and weights the prices for each size band according to purchases by businesses in the size band recorded in the 1984 Purchases Inquiry (a large scale survey conducted every 5 years until 1989, and conducted annually for a rotating selection of industries from 1994 to 1999.) The weights will be reviewed when comprehensive up-to-date purchases data are available. The size bands are defined, for each fuel individually, according to the approximate range of annual purchases covered. (See Table A3).

A25. As described above the prices given are representative market prices. This means trades that, because of their size or dominance of total consumption would produce an unrepresentative price, are excluded. Coal purchased by the iron and steel sector is excluded, as is gas purchased for electricity generation.

A26. For some fuels, the relative size in volume terms of the largest users can have the effect of moving the weighted average more towards the large user price. This is true for gas where, because of the growth in consumption, the weights provided by the 1984 purchases survey may be out of date. Therefore, for some fuels (e.g. gas and gas oil), the median price (the price at which 50 per cent of the prices paid are higher and 50 per cent lower) may be another useful guide to average prices.

A27. From Q1 2010 published coal prices were restricted, with only average prices and prices for large consumers available due to the small number of companies reporting data. Data for medium fuel oil, liquefied petroleum gases and hard coke were discontinued from Q1 2005, and there was no sub-division into size bands due to the small number of sites purchasing each of these fuels. The small sample sizes reflect the small overall consumption, relative to the major fuels covered,

Technical notes

which meant that, although the prices were still representative, they could be subject to more sample effects than the other fuels (e.g. if a relatively large purchaser switches fuel).

A28. To enable coal prices to be calculated in common units, companies record the calorific value of the coal they purchase. Conversion factors for fuel oil (both heavy and medium), gas oil, liquefied petroleum gas and hard coke are given in Annex B.

A29. The 10 per cent and 90 per cent deciles and the median price are presented in addition to the prices for each size band. The 10 per cent decile is the point within the complete range of prices below which the lowest 10 per cent of those prices fall. Similarly, the 90 per cent decile is the point above which the highest 10 per cent of the prices occur. These values give some indication of the spread of prices paid by purchasers. The deciles and the median are calculated by giving equal "weight" to each purchaser, but are scaled to represent the mix of fuel users by size in the industrial population that the panel represents. From Q1 2007, decile information is only published for gas and electricity.

Table A3: Range of annual purchases for the Quarterly Fuels Inquiry

| Fuel | Large Greater than | Of which: | | Medium | Small Less than |
|-----------------------------------|-----------------------|-----------------------------|------------------|----------------|--------------------|
| | | Extra large Greater than | Moderately large | | |
| Coal (tonnes) | 7,600 | .. | .. | 760 to 7,600 | 760 |
| Heavy fuel oil (tonnes) | 4,900 | .. | .. | 490 to 4,900 | 490 |
| Gas oil (tonnes) | 175 | .. | .. | 35 to 175 | 35 |
| Electricity (thousand kWh) | 8,800 | 150,000 | 8,800 to 150,000 | 880 to 8,800 | 880 |
| Gas ⁽¹⁾ (thousand kWh) | 8,800 | .. | .. | 1,500 to 8,800 | 1,500 |

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

Table 3.2.1

A30. The prices for fuels used in electricity generation are collected via a quarterly inquiry of electricity generators in the United Kingdom. This covers companies that produce electricity from nuclear sources plus all companies whose prime purpose is the generation of electricity. The companies are: AES Electric Ltd., Centrica plc., Coryton Energy Company Ltd., Eggborough Power Ltd., E.On UK plc., Fellside Heat and Power Ltd., Fibrogen Ltd., Fibropower Ltd., Fibrothetford Ltd., International Power, Premier Power Ltd., Rocksavage Power Company Ltd., RWE Npower plc., Scottish Power plc., Scottish and Southern Energy plc., SELCHP Ltd., Spalding Energy Company Ltd.

A31. The data reported are the value and volume of fuel purchased during the quarter and may not always reflect the fuel actually used (i.e. there can be stocking and destocking, especially of coal). The prices reported are typically for long-term contracts, with price escalator factors, some of which may have been entered into some time ago. As such, the prices can be higher than those paid by large industrial users who typically negotiate contracts each year.

A32. Provisional quarterly data is published three months in arrears, with final data being published six months in arrears. Any revised data is marked with an "r". Provisional annual data is published in the March edition of QEP, with final data being published in June.

Tables 3.3.1 and 3.3.2

A33. Data for these indices is taken from a number of sources: electricity data are taken from a monthly electricity survey run by DECC; gas data are taken from the monthly Producer Price Index

Technical notes

(PPI) gas series created by DECC; coal and heavy fuel oil data are taken from the Quarterly Fuels Inquiry (QFI) used to create Table 3.1.1.

A34. Provisional quarterly data is published three months in arrears, with final data being published six months in arrears. Any revised data is marked with an “r”. Provisional annual data is published in March, with final data being published in June. The entire year’s quarterly data for coal and HFO is reviewed in June to ensure that each of the contributors who supply data to the Quarterly Fuels Inquiry have been placed in the correct size band based upon their actual annual consumption. This means that there can be revisions made to data from Q1 to Q4 at this time.

A35. The Climate Change Levy (CCL) came into effect in April 2001. The rates increased in April 2007, 2008, 2009, and then annually in April of each successive year since 2011. The rates are shown in Table A4 below:

Table A4: Climate Change Levy rates from April 2001

| | Coal | Electricity | Gas | LPG |
|----------|--------------|-------------|-------------|--------------|
| Apr-2001 | £11.70/tonne | 0.430p/kWh | 0.150p/kWh | £9.60/tonne |
| Apr-2007 | £12.01/tonne | 0.441p/kWh | 0.154p/kWh | £9.85/tonne |
| Apr-2008 | £12.42/tonne | 0.456 p/kWh | 0.159 p/kWh | £10.18/tonne |
| Apr-2009 | £12.81/tonne | 0.470 p/kWh | 0.164 p/kWh | £10.50/tonne |
| Apr-2011 | £13.21/tonne | 0.485 p/kWh | 0.169 p/kWh | £10.83/tonne |
| Apr-2012 | £13.87/tonne | 0.509 p/kWh | 0.177 p/kWh | £11.37/tonne |
| Apr-2013 | £14.29/tonne | 0.524 p/kWh | 0.182 p/kWh | £11.72/tonne |
| Apr-2014 | £14.76/tonne | 0.541 p/kWh | 0.188 p/kWh | £12.10/tonne |
| Apr-2015 | £15.12/tonne | 0.554 p/kWh | 0.193 p/kWh | £12.40/tonne |

Tables 3.4.1 and 3.4.2

A36. The prices for gas and electricity consumed by non-domestic users in the United Kingdom are collected via a quarterly inquiry of gas and electricity suppliers. The data reported are the value and volume of energy sold during the quarter in each of the sizebands. The average price (excluding VAT) for each size of consumer is obtained by dividing the total quantity of purchases for each fuel into their total value.

A37. The electricity and gas sizebands shown in tables 3.4.1 and 3.4.2 are defined in terms of the approximate annual purchases by the consumers purchasing them, as shown in Table A5 below. The sizebands from Q1 2006 onwards differ slightly from those published previously. The average electricity price from Q1 2007 includes the new Extra Large sizeband, introducing a discontinuity with the averages for previous quarters. Some electricity sizebands were renamed in Q1 2008; however, the consumptions were unchanged.

Table A5: Range of annual purchases for the Price Transparency survey

| | | Annual consumption | | | Annual consumption |
|--------------------|--------------|--------------------|------------|------------|---------------------|
| | | MWh | | | MWh |
| Electricity | Very Small | 0 - 20 | Gas | Very Small | <278 |
| | Small | 20 - 499 | | Small | 278 – 2,777 |
| | Small/Medium | 500 - 1,999 | | Medium | 2,778 – 27,777 |
| | Medium | 2,000 - 19,999 | | Large | 27,778 – 277,777 |
| | Large | 20,000 - 69,999 | | Very Large | 277,778 – 1,111,112 |
| | Very Large | 70,000 – 150,000 | | | |
| | Extra Large | >150,000 | | | |

A38. Quarterly data is combined to form annual average prices by sizeband which are also published within the table spreadsheet.

Technical notes

A39. The Climate Change Levy (CCL) came into effect in April 2001. For more details see paragraph A35 and Table A4.

Tables 4.1.1 to 4.1.3

A40. The data published are national average prices calculated from prices supplied by all major motor fuel marketing companies. Prior to 1977, price data were collated from a variety of sources, mainly the published wholesale prices of the oil companies to which retailers' margins were added. The results of various consumers' surveys were also taken into consideration in arriving at a typical price. From January 1995 sales by super/hyper markets are included in the price estimates.

A41. Crude oil prices are shown in Table 4.1.1 as an index based on a "basket" of both indigenous and imported crude oil prices that are used as an input, along with other fuel prices, for the Producer Prices Index (PPI) produced by ONS. The index represents the average price paid by refineries for the month and is calculated in sterling on a cif basis.

A42. Provisional monthly prices are usually revised in the month following their original publication, with revisions being marked with an "r". Provisional annual prices are published in December, with revisions being made during the following two months as data becomes available.

Tables 5.1.1 to 5.10.3

A43. International comparisons in Section 5 are based on data published by international organisations.

A44. Motor fuel prices in Tables 5.1.1 and 5.2.1 are taken from the European Commission's 'Oil Bulletin' and converted from Euros to sterling. Data in these tables shows prices of unleaded petrol and diesel in the EU, with and without tax, on or about the 15th of the month, with the UK ranked within the EU 15 and EU 28.

A45. Annual electricity and gas prices in Tables 5.3.1, 5.5.1, 5.7.1 and 5.9.1 are collated and published by the International Energy Agency (IEA) in 'Energy Prices and Taxes'. Prices are shown excluding and including taxes in sterling, with the UK price compared to the IEA median price and ranked within the IEA and G7. Methodology can vary between countries. From December 2013, prices for all IEA countries are shown, rather than EU and G7 countries as previously published.

A46. The data presented in Tables 5.4.1, 5.6.1, 5.8.1 and 5.10.1 are derived from Eurostat's Statistics in Focus series. Eurostat publishes data on gas and electricity prices around six months after the end of the reference period. Prices are shown excluding and including taxes in sterling, with the UK price compared to the EU 15 and EU 28 median price and ranked within the EU 15 and EU 28.

A47. From 1st January 2008, data shows average prices over 6-month periods (January - June and July - December). Prior to 2008, the Price Transparency data was for a single point in time (1st January and 1st July), and each size band was represented by a single consumption figure. Eurostat's change to the methodology in 2008 created a discontinuity within the price series. The new methodology prices are published within the original tables, with a clear distinction between old and new data. Whilst prices using the old and new methodologies will not be comparable, the UK ranking and UK price relative to the EU median should be broadly comparable across the old and new data. The sizebands for consumers from January 2008 onwards are shown in Table A6.

Table A6: Eurostat sizebands

| Industrial Electricity | Eurostat size band | Annual consumption (MWh) |
|-------------------------------|---------------------------|---------------------------------|
| Small | Band IB | 20 - 499 |
| Medium | Band ID | 2,000 - 19,999 |
| Large | Band IE | 20,000 - 69,999 |
| Very Large | Band IF | 70,000 – 150,000 |

| Industrial Gas | Eurostat size band | Annual consumption (MWh) |
|-----------------------|---------------------------|---------------------------------|
| Small | Band I2 | 278 – 2,777 |
| Medium | Band I3 | 2,778 – 27,777 |
| Large | Band I4 | 27,778 – 277,777 |

| Domestic Electricity | Eurostat size band | Annual consumption (kWh) |
|-----------------------------|---------------------------|---------------------------------|
| Small | Band DB | 1,000 – 2,499 |
| Medium | Band DC | 2,500 – 4,999 |
| Large | Band DD | 5,000 – 15,000 |

| Domestic Gas | Eurostat size band | Annual consumption (kWh) |
|---------------------|---------------------------|---------------------------------|
| Small | Band D1 | < 5,557 |
| Medium | Band D2 | 5,557 – 55,557 |
| Large | Band D3 | >55,557 |

A48. It is important when comparing international prices to keep in mind the impact of exchange rates (as the data are presented in a common pound sterling basis, the changing level of the pound will cause some changes in relative prices) and inflation rates in individual countries. The relative strength of the pound in 1997, 1998 and 1999 (e.g. sterling appreciated by 21 per cent against the German Mark between 1996 and 1999) to some extent will have had an adverse effect on comparisons of UK data.

A49. For tables 5.3.1 to 5.10.3, where data is not available, we have estimated the price in relation to the median for that table. A '+' indicates that the price is likely to exceed the median price, '+/-' indicates that the price is likely to be around the median, '-' indicates that the price is likely to be below the median price. This methodology is intended to give a better indication of the UK position when compared with those countries where up-to-date data is not available.

A50. When determining which tables to use to compare international gas and electricity prices, the 6-monthly Eurostat tables (5.4, 5.6, 5.8 and 5.10) provide prices for different sizes of consumer, and in general have more timely data reflecting changes on a shorter timescale, but comparisons with non-EU countries require the use of the annual IEA tables (5.3.1, 5.5.1, 5.7.1, and 5.9.1). Rankings may differ between the IEA and Eurostat tables.

Annex B – Calorific values and conversion factors

B1: Estimated average gross calorific values of fuels 2014

| | GJ per tonne | | GJ per tonne | Moisture content |
|---|--------------|--|-----------------------|------------------|
| Coal: | | Renewable sources: | | |
| All consumers (weighted average) ⁽¹⁾ | 27.0 | Domestic wood ⁽³⁾ | 14.9 | 20.0% |
| Power stations ⁽²⁾ | 25.1 | Industrial wood ⁽⁴⁾ | 18.6 | 0.0% |
| Coke ovens ⁽¹⁾ | 31.8 | Straw | 15.8 | 15.0% |
| Low temperature carbonisation plants and manufactured fuel plants | 28.5 | Poultry litter ⁽⁵⁾ | 9.1 | 16.0% |
| Collieries | 29.0 | Meat and bone | 20.0 | 16.0% |
| Agriculture | 29.5 | General industrial waste | 16.0 | 5.0% |
| Iron and steel | 30.4 | Hospital waste | 14.0 | 5.0% |
| Other industries (weighted average) | 26.7 | Municipal solid waste ⁽⁶⁾ | 9.2 | 30.0% |
| Non-ferrous metals | 25.1 | Refuse derived waste ⁽⁶⁾ | 18.5 | 30.0% |
| Food, beverages and tobacco | 29.4 | Short rotation coppice ⁽⁷⁾ | 13.0 | 30.0% |
| Chemicals | 26.5 | Tyres | 32.0 | 5.0% |
| Textiles, clothing, leather etc. | 29.5 | Wood pellets | 16.7 | 10.0% |
| Pulp, paper, printing etc. | 24.2 | Biodiesel | 38.7 | 4.0% |
| Mineral products | 27.9 | Bioethanol | 29.7 | 10.0% |
| Engineering (mechanical and electrical engineering and vehicles) | 29.5 | Petroleum: | | |
| Other industries | 32.7 | Crude oil (weighted average) | 45.7 | |
| Domestic | | Petroleum products (weighted average) | 46.4 | |
| House coal | 30.1 | Ethane | 50.7 | |
| Anthracite and dry steam coal | 34.3 | Butane and propane (LPG) | 49.4 | |
| Other consumers | 26.4 | Light distillate feedstock for gasworks | 47.7 | |
| Imported coal (weighted average) | 27.4 | Aviation spirit and wide cut gasoline | 47.4 | |
| Exports (weighted average) | 32.2 | Aviation turbine fuel | 46.3 | |
| Coke (including low temperature carbonisation cokes) | 29.8 | Motor spirit | 47.1 | |
| Coke breeze | 29.8 | Burning oil | 46.2 | |
| Other manufactured solid fuel | 29.8 | Gas/diesel oil | 45.3 | |
| | | DERV | 45.7 | |
| | | Fuel oil | 43.4 | |
| | | Power station oil | 43.4 | |
| | | Non-fuel products (notional value) | 43.2 | |
| | | | MJ per m ³ | |
| | | Natural gas produced ⁽⁸⁾ | 39.7 | |
| | | Natural gas consumed ⁽⁹⁾ | 39.3 | |
| | | Coke oven gas | 18.0 | |
| | | Blast furnace gas | 3.0 | |
| | | Landfill gas ⁽¹⁰⁾ | 21 – 25 | |
| | | Sewage gas ⁽¹⁰⁾ | 21 – 25 | |
| | | Anaerobic Digestion – farm/food ⁽⁷⁾ | 21 - 26 | |

(1) Applicable to UK consumption - based on calorific value for home produced coal plus imports and, for "All consumers" net of exports.

(2) Home produced coal only

(3) On an 'as received' basis; seasoned logs at 20% moisture content. On a 'dry' basis 18.6 GJ per tonne.

(4) Data reported on an oven-dry basis 18.6 GJ per tonne.

(5) The calorific value of poultry litter typically ranges on a net basis from 5 GJ/tonne to 10 GJ/tonne depending upon the moisture content of the fuel. For poultry manure, much lower calorific values should be used.

(6) Average figure based on survey returns.

(7) On an "as received" basis; at 30% moisture content. On a "dry" basis 18.6 GJ per tonne.

(8) The gross calorific value of natural gas can also be expressed as 11.031 kWh per cubic metre. This value represents the average calorific value seen for gas when extracted. At this point it contains not just methane, but also some other hydrocarbon gases (ethane, butane, propane). These gases are removed before the gas enters the National Transmission System for sale to final consumers.

(9) UK produced and imported gas. This weighted average of calorific values will approximate the average for the year of entering the National Transmission System and what readers will see quoted on their gas bills. It can also be expressed as 10.908 kWh per cubic metre.

(10) Calorific value varies depending on the methane content of the gas.

Note: The above estimated average gross calorific values apply only to the year 2014. For calorific values of fuels in earlier years see Table B2. The calorific values for coal other than imported coal are based on estimates provided by the main coal producers. The calorific values for petroleum products have been calculated using the method described in Chapter 1, paragraph 1.31 of the Digest of UK Energy Statistics (DUKES).

B2: Estimated average gross calorific values of fuels 1980, 1990, 2000, 2010 and 2012 - 2014

| | GJ per tonne (gross) | | | | | | |
|---|----------------------|------|------|------|------|------|------|
| | 1980 | 1990 | 2000 | 2010 | 2012 | 2013 | 2014 |
| Coal | | | | | | | |
| All consumers ⁽¹⁾⁽²⁾ | 25.6 | 25.5 | 26.2 | 25.8 | 26.0 | 26.0 | 26.0 |
| All consumers - home produced plus imports minus exports ⁽¹⁾ | .. | .. | 27.0 | 27.1 | 26.9 | 27.0 | 27.0 |
| Power stations ⁽²⁾ | 23.8 | 24.8 | 25.6 | 24.9 | 25.3 | 25.2 | 25.1 |
| Power stations - home produced plus imports ⁽¹⁾ | .. | .. | 26.0 | 25.8 | 26.2 | 26.3 | 26.2 |
| Coke ovens ⁽²⁾ | 30.5 | 30.2 | 31.2 | 30.5 | 31.8 | 31.8 | 31.8 |
| Coke ovens - home produced plus imports ⁽¹⁾ | .. | .. | 30.4 | 30.5 | 31.8 | 31.8 | 31.8 |
| Low temperature carbonisation plants and manufactured fuel plants | 19.1 | 29.2 | 30.3 | 30.2 | 28.4 | 28.5 | 28.5 |
| Collieries | 27.0 | 28.6 | 29.6 | 29.3 | 29.0 | 29.0 | 29.0 |
| Agriculture | 30.1 | 28.9 | 29.2 | 28.0 | 29.5 | 29.5 | 29.5 |
| Iron and steel industry ⁽³⁾ | 29.1 | 28.9 | 30.7 | 30.4 | 30.4 | 30.4 | 30.4 |
| Other industries ⁽¹⁾ | 27.1 | 27.8 | 26.7 | 27.7 | 26.8 | 26.8 | 26.7 |
| Non-ferrous metals | .. | 23.1 | 25.1 | 25.4 | 25.1 | 25.1 | 25.1 |
| Food, beverages and tobacco | 28.6 | 28.1 | 29.5 | 28.6 | 29.4 | 29.4 | 29.4 |
| Chemicals | 25.8 | 27.3 | 28.7 | 26.7 | 26.6 | 26.5 | 26.5 |
| Textiles, clothing, leather & footwear | 27.5 | 27.7 | 30.4 | 29.5 | 29.5 | 29.5 | 29.5 |
| Pulp, paper, printing, etc. | 26.5 | 27.9 | 28.7 | 24.1 | 24.2 | 24.2 | 24.2 |
| Mineral products ⁽⁴⁾ | .. | 28.2 | 27.0 | 27.6 | 27.7 | 27.8 | 27.9 |
| Engineering ⁽⁵⁾ | 27.7 | 28.3 | 29.3 | 29.5 | 29.5 | 29.5 | 29.5 |
| Other industry ⁽⁶⁾ | 28.4 | 28.5 | 30.2 | 32.6 | 32.5 | 32.6 | 32.7 |
| Domestic | | | | | | | |
| House coal | 30.1 | 30.2 | 30.9 | 29.8 | 30.2 | 30.2 | 30.1 |
| Anthracite and dry steam coal | 33.3 | 33.6 | 33.5 | 34.7 | 34.5 | 34.3 | 34.3 |
| Other consumers | 27.5 | 27.5 | 29.2 | 25.5 | 26.3 | 26.3 | 26.4 |
| Transport –Rail | .. | .. | .. | 30.3 | 30.2 | 30.2 | 30.2 |
| Imported coal ⁽¹⁾ | .. | 28.3 | 28.0 | 27.9 | 27.4 | 27.4 | 27.4 |
| of which | | | | | | | |
| Steam coal | .. | .. | 26.6 | 26.5 | 26.5 | 26.5 | 26.5 |
| Coking coal | .. | .. | 30.4 | 32.1 | 31.8 | 31.8 | 31.8 |
| Anthracite | .. | .. | 31.2 | 31.0 | 31.7 | 31.7 | 31.7 |
| Exports ⁽¹⁾ | .. | 29.0 | 32.0 | 32.3 | 32.4 | 32.3 | 32.2 |
| of which | | | | | | | |
| Steam coal | .. | .. | 31.0 | 31.2 | 31.2 | 31.2 | 31.2 |
| Anthracite | .. | .. | 32.6 | 33.2 | 32.7 | 32.6 | 32.5 |
| Coke ⁽⁷⁾ | 28.1 | 28.1 | 29.8 | 29.8 | 29.8 | 29.8 | 29.8 |
| Coke breeze | 24.4 | 24.8 | 24.8 | 29.8 | 29.8 | 29.8 | 29.8 |
| Other manufactured solid fuels ⁽¹⁾ | 27.6 | 27.6 | 30.8 | 29.8 | 29.8 | 29.8 | 29.8 |
| Petroleum | | | | | | | |
| Crude oil ⁽¹⁾ | 45.2 | 45.6 | 45.7 | 45.7 | 45.7 | 45.7 | 45.7 |
| Liquefied petroleum gas | 49.6 | 49.3 | 49.1 | 49.2 | 49.3 | 49.3 | 49.4 |
| Ethane | 52.3 | 50.6 | 50.7 | 50.7 | 50.7 | 50.7 | 50.7 |
| LDF for gasworks/Naphtha | 47.8 | 47.9 | 47.6 | 47.8 | 47.8 | 47.8 | 47.7 |
| Aviation spirit and wide-cut gasoline (AVGAS & AVTAG) | 47.2 | 47.3 | 47.3 | 47.4 | 47.4 | 47.4 | 47.4 |
| Aviation turbine fuel (AVTUR) | 46.4 | 46.2 | 46.2 | 46.2 | 46.2 | 46.2 | 46.3 |
| Motor spirit | 47.0 | 47.0 | 47.0 | 47.1 | 47.1 | 47.1 | 47.1 |
| Burning oil | 46.5 | 46.2 | 46.2 | 46.2 | 46.2 | 46.2 | 46.2 |
| Vaporising oil | 45.9 | 45.9 | .. | .. | .. | .. | .. |
| Gas/diesel oil ⁽⁸⁾ | 45.5 | 45.4 | 45.6 | 45.3 | 45.3 | 45.3 | 45.3 |
| Derv ⁽⁸⁾ | .. | .. | .. | 45.6 | 45.7 | 45.7 | 45.7 |
| Fuel oil | 42.8 | 43.2 | 43.1 | 43.3 | 43.3 | 43.3 | 43.4 |
| Power station oil | 42.8 | 43.2 | 43.1 | 43.3 | 43.3 | 43.3 | 43.4 |
| Non-fuel products (notional value) | 42.2 | 43.2 | 43.8 | 43.1 | 43.1 | 43.1 | 43.2 |
| Petroleum coke (Power stations) | .. | .. | .. | 30.9 | 31.1 | 30.1 | 30.1 |
| Petroleum coke (Other) | .. | 39.5 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 |
| Natural Gas ⁽⁹⁾ | .. | 38.4 | 39.4 | 40.1 | 39.6 | 39.7 | 39.7 |

(1) Weighted averages.

(2) Home produced coal only.

(3) From 2001 onwards almost entirely sourced from imports.

(4) Based on information provided by the British Cement Industry Association; almost all coal used by this sector in the latest 4 years was imported.

(5) Mechanical engineering and metal products, electrical and instrument engineering and vehicle manufacture.

(6) Includes construction.

(7) Since 1995 the source of these figures has been the ISSB.

(8) DERV included within gas/diesel oil until 2005

(9) Natural gas figures are shown in MJ per cubic metre.

B3: Standard conversion factors

1 tonne of oil equivalent (toe) = 10^7 kilocalories
= 396.83 therms
= 41.868 GJ
= 11,630 kWh

1 therm = 100,000 British thermal units (Btu)

The following prefixes are used for multiples of joules, watts and watt hours:

| | | |
|----------|-------------------------|--------------|
| kilo (k) | = 1,000 | or 10^3 |
| mega (M) | = 1,000,000 | or 10^6 |
| giga (G) | = 1,000,000,000 | or 10^9 |
| tera (T) | = 1,000,000,000,000 | or 10^{12} |
| peta (P) | = 1,000,000,000,000,000 | or 10^{15} |

WEIGHT

1 kilogramme (kg) = 2.2046 pounds (lb)

1 pound (lb) = 0.4536 kg

1 tonne (t) = 1,000 kg
= 0.9842 long ton
= 1.102 short ton

1 Statute or long ton = 2,240 lb
= 1.016 t
= 1.120 sh tn

1 barrel = 159.0 litres
= 34.97 UK gal
= 42 US gal

VOLUME

1 cubic metre (cu m) = 35.31 cu ft

1 cubic foot (cu ft) = 0.02832 cu m
1 litre = 0.22 Imperial gallons

1 UK gallon = 8 UK pints
= 1.201 U.S. gallons
= 4.54609 litres

LENGTH

1 mile = 1.6093 kilometres

1 kilometre (km) = 0.62137 miles

TEMPERATURE

1 scale degree Celsius (C) = 1.8 scale degrees Fahrenheit (F)

For conversion of temperatures: $^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$; $^{\circ}\text{F} = 9/5 ^{\circ}\text{C} + 32$

Calorific values and conversion factors

B4: Average conversion factors for petroleum

| | | Litres per tonne |
|--------------------------------|---------------------------------|---------------------|
| Crude oil: | Indigenous | 1,199 |
| | Imported | 1,181 |
| | Average of refining throughput | 1,192 |
| Ethane | | 2,730 |
| Propane | | 1,966 |
| Butane | | 1,739 |
| Naphtha (l.d.f.) | | 1,461 |
| Aviation gasoline | | 1,408 |
| Motor spirit: | All grades | 1,368 |
| | Super unleaded | 1,359 |
| | Ultra low sulphur petrol (ULSP) | 1,369 |
| Middle distillate feedstock | | .. |
| Kerosene: | Aviation turbine fuel | 1,256 |
| | Burning oil | 1,250 |
| DERV fuel: | 0.005% or less sulphur (ULSD) | 1,192 |
| Gas/marine diesel oil | | 1,172 |
| Fuel oil (1% or less sulphur): | All grades | 1,014 |
| | Light | .. |
| | Medium | .. |
| | Heavy | .. |
| Lubricating oils | White | 1,143 |
| | Greases* | .. |
| Bitumen | | 987 |
| Petroleum coke | | .. |
| Petroleum waxes | | 1,184 |
| Industrial spirit | | 1,247 |
| White spirit | | 1,282 |

Note: The above conversion factors, which for refined products have been compiled by DECC using data from UK Petroleum Industry Association companies, apply to the year 2014. The litres to tonnes conversions are made at a standard temperature of 15°C.

.. Denotes commercially sensitive data, as too few companies are producing the fuel to be able to report it.

Effective rates of duty

Annex C - Effective rates of duty on principal hydrocarbon oils, 1979 to 2015⁽¹⁾

Pence per litre

| Date from which duty effective | | Motor spirit ⁽²⁾⁽³⁾ | | | | | Diesel ⁽²⁾ | |
|--------------------------------|------|--------------------------------|------------------|----------|----------------|-------------------|-----------------------|-------------------|
| | | Leaded | Lead replacement | Unleaded | Super unleaded | Ultra low sulphur | Regular | Ultra low sulphur |
| 13 June | 1979 | 8.100 | .. | .. | .. | .. | 9.200 | .. |
| 26 March | 1980 | 10.000 | .. | .. | .. | .. | 10.000 | .. |
| 10 March | 1981 | 13.820 | .. | .. | .. | .. | 13.820 | .. |
| 2 July | 1981 | .. | .. | .. | .. | .. | 11.910 | .. |
| 9 March | 1982 | 15.540 | .. | .. | .. | .. | 13.250 | .. |
| 15 March | 1983 | 16.300 | .. | .. | .. | .. | 13.820 | .. |
| 13 March | 1984 | 17.160 | .. | .. | .. | .. | 14.480 | .. |
| 19 March | 1985 | 17.940 | .. | .. | .. | .. | 15.150 | .. |
| 19 March | 1986 | 19.380 | .. | .. | .. | .. | 16.390 | .. |
| 17 March | 1987 | .. | .. | 18.420 | .. | .. | .. | .. |
| 15 March | 1988 | 20.440 | .. | .. | .. | .. | 17.290 | .. |
| 14 March | 1989 | .. | .. | 17.720 | .. | .. | .. | .. |
| 20 March | 1990 | 22.480 | .. | 19.490 | .. | .. | 19.020 | .. |
| 19 March | 1991 | 25.850 | .. | 22.410 | .. | .. | 21.870 | .. |
| 10 March | 1992 | 27.790 | .. | 23.420 | .. | .. | 22.850 | .. |
| 16 March | 1993 | 30.580 | .. | 25.760 | .. | .. | 25.140 | .. |
| 30 November | 1993 | 33.140 | .. | 28.320 | .. | .. | 27.700 | .. |
| 29 November | 1994 | 35.260 | .. | 30.440 | .. | .. | 30.440 | .. |
| 1 January | 1995 | 36.140 | .. | 31.320 | .. | .. | 31.320 | .. |
| 28 November | 1995 | 39.120 | .. | 34.300 | .. | .. | 34.300 | .. |
| 15 May | 1996 | .. | .. | .. | 37.620 | .. | .. | .. |
| 26 November | 1996 | 41.680 | .. | 36.860 | 40.180 | .. | 36.860 | .. |
| 2 July | 1997 | 45.100 | .. | 40.280 | 43.600 | .. | 40.280 | .. |
| 17 March | 1998 | 49.260 | .. | 43.990 | 48.760 | .. | 44.990 | 42.990 |
| 9 March | 1999 | 52.880 | .. | 47.210 | 52.330 | .. | 50.210 | 47.210 |
| 1 October | 1999 | .. | 49.210 | .. | 49.210 | .. | .. | .. |
| 21 March | 2000 | 54.680 | 50.890 | 48.820 | 50.890 | .. | 51.820 | 48.820 |
| 1 October | 2000 | .. | .. | .. | .. | 47.820 | .. | .. |
| 7 March | 2001 | .. | (4) | 46.820 | (4) | 45.820 | .. | 45.820 |
| 15 June | 2001 | .. | .. | 48.820 | .. | .. | .. | .. |
| 1 October | 2003 | 56.200 | .. | 50.190 | .. | 47.100 | 53.270 | 47.100 |
| .. | 2004 | .. | (5) | .. | (5) | .. | .. | .. |
| 7 December | 2006 | 57.680 | .. | 51.520 | .. | 48.350 | 54.680 | 48.350 |
| 1 October | 2007 | 60.070 | .. | 53.650 | .. | 50.350 | 56.940 | 50.350 |
| 1 April | 2008 | .. | .. | (5) | .. | .. | (9) | .. |
| 1 December | 2008 | 62.070 | .. | .. | .. | 52.350 | .. | 52.350 |
| 1 April | 2009 | .. | .. | .. | .. | 54.190 | .. | 54.190 |
| 1 May | 2009 | 63.910 | .. | .. | .. | .. | .. | .. |
| 1 September | 2009 | 65.910 | .. | .. | .. | 56.190 | .. | 56.190 |
| 1 April | 2010 | 66.910 | .. | .. | .. | 57.190 | .. | 57.190 |
| 1 October | 2010 | 67.910 | .. | .. | .. | 58.190 | .. | 58.190 |
| 1 January | 2011 | 68.670 | .. | .. | .. | 58.950 | .. | 58.950 |
| 23 March | 2011 | 67.670 | .. | .. | .. | 57.950 | .. | 57.950 |

(1) Duty rates remain the same unless otherwise stated.

(2) These fuels became liable to Value Added Tax (VAT) as follows:-

- (i) 10% with effect from 1 April 1974
- (ii) 8% with effect from 29 July 1974
- (iii) For motor spirit 25% with effect from 18 November 1974
- (iv) For motor spirit 12.5% with effect from 12 April 1976
- (v) 15% with effect from 18 June 1979
- (vi) 17.5% with effect from 1 April 1991
- (vii) 15% with effect from 1 December 2008
- (viii) 17.5% with effect from 1 January 2010
- (viii) 20% with effect from 4 January 2011 (*Notes continued on following page*)

Effective rates of duty

Annex C - Effective rates of duty on principal hydrocarbon oils, 1979 to 2015⁽¹⁾ (continued)

| | | Pence per litre | | | | |
|--------------------------------|------|----------------------------------|--|-------------------------|---------------------------|-------------------------|
| Date from which duty effective | | Aviation gasoline ⁽²⁾ | LPG for use as road fuel ⁽²⁾⁽⁸⁾ | Fuel oil ⁽⁶⁾ | Gas oil ⁽⁶⁾⁽⁷⁾ | Kerosene ⁽⁶⁾ |
| 13 June | 1979 | 8.100 | 4.050 | 0.660 | 0.660 | |
| 26 March | 1980 | 10.000 | 5.000 | 0.770 | 0.770 | |
| 10 March | 1981 | 13.820 | 6.910 | | | |
| 2 July | 1981 | | | | | |
| 9 March | 1982 | 7.770 | 7.770 | | | |
| 15 March | 1983 | 8.150 | 8.150 | | | |
| 13 March | 1984 | 8.580 | 8.580 | | | zero |
| 19 March | 1985 | 8.970 | 8.970 | | | |
| 19 March | 1986 | 9.690 | 9.690 | | 1.100 | |
| 17 March | 1987 | | | | | |
| 15 March | 1988 | 10.220 | 10.220 | | | |
| 14 March | 1989 | | | | | |
| 20 March | 1990 | 11.240 | 11.240 | 0.830 | 1.180 | |
| 19 March | 1991 | 12.930 | 12.930 | 0.910 | 1.290 | |
| 10 March | 1992 | 13.900 | 13.900 | 0.950 | 1.350 | |
| 16 March | 1993 | 15.290 | 15.290 | 1.050 | 1.490 | |
| 30 November | 1993 | 16.570 | 16.570 | 1.160 | 1.640 | |
| 29 November | 1994 | 17.630 | 33.140 | 1.660 | 2.140 | |
| 1 January | 1995 | 18.070 | | | | |
| 28 November | 1995 | 19.560 | 28.170 | 1.810 | 2.330 | |
| 15 May | 1996 | | | | | |
| 26 November | 1996 | 20.840 | 21.130 | 1.940 | 2.500 | |
| 2 July | 1997 | 22.550 | | 2.000 | 2.580 | |
| 17 March | 1998 | 24.630 | | 2.180 | 2.820 | |
| 9 March | 1999 | 26.440 | 15.000 | 2.650 | 3.030 | |
| 1 October | 1999 | | | | | |
| 21 March | 2000 | 27.340 | | 2.740 | 3.130 | |
| 7 March | 2001 | | 9.000 | | | |
| 15 June | 2001 | | | | | |
| 9 April | 2003 | | | 3.820 | 4.220 | |
| 1 October | 2003 | 28.100 | | | | |
| 3 December | 2004 | | | 4.820 | 5.220 | |
| 6 December | 2005 | | | 6.040 | 6.440 | |
| 7 December | 2006 | 28.840 | 12.210 | 7.290 | 7.690 | |
| 1 October | 2007 | 30.030 | 16.490 | 9.290 | 9.690 | |
| 1 December | 2008 | 31.030 | 20.770 | 9.660 | 10.070 | |
| 1 April | 2009 | | 24.820 | 10.000 | 10.420 | |
| 1 May | 2009 | 33.340 | | | | |
| 1 September | 2009 | 34.570 | 27.670 | 10.370 | 10.800 | |
| 1 April | 2010 | 38.350 | 30.530 | 10.550 | 10.990 | |
| 1 October | 2010 | | 31.950 | 10.740 | 11.180 | |
| 1 January | 2011 | | 33.040 | 10.880 | 11.330 | |
| 23 March | 2011 | 37.700 | 31.610 | 10.700 | 11.140 | |

- (3) From 14 March 1989 until 20 March 1990, the rate of duty for 2-star and 3-star leaded motor spirit was 21.220 pence per litre.
- (4) With the separate duty rate abolished, duty on these fuels is now charged at the rate appropriate to unleaded petrol or ultra low sulphur petrol, dependent upon the sulphur and aromatic content of the fuel.
- (5) Duty now charged at the rate appropriate to ultra low sulphur petrol.
- (6) For industrial and commercial consumers these fuels became liable to the standard rate of VAT on 1 July 1990 (see note 2), recoverable by the majority of such consumers. These fuels attracted VAT for domestic consumers from 1 April 1994 at an initial rate of 8%. This was reduced to 5% from 1 September 1997.
- (7) AVTUR (aviation turbine fuel) attracted the gas oil rate until 18 March 1986 after which it was zero-rated.
- (8) From 29 November 1994 this duty is priced in pence per kilogram as the relative calorific values of the different types of road fuel gases are very similar when related to mass (kilogram). The conversion rate for LPG is approx. 1kg = 2 litres.
- (9) Duty now charged at the rate appropriate to ultra low sulphur diesel

Annex D – Further Sources of Information

D1 Energy prices

Energy Prices (annual); Statistical Office of the European Communities summarises price information published in the European Commissions Weekly Oil Bulletin, and half-yearly Statistics in Focus on Gas Prices and Electricity Prices

Energy Prices and Taxes (quarterly); OECD International Energy Agency

Electricity prices; Eurostat (annual)

Gas prices; Eurostat, (annual)

D2 Fuel poverty

The **2015 fuel poverty statistics report** was published in May 2015, and includes statistics for the number of fuel poor households in 2013. The web reference is:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/468011/Fuel_Poverty_Report_2015.pdf

D3 Department of Energy and Climate Change publications on energy

Unless otherwise stated, all titles are available from the DECC publication order line:

tel: 0845 504 9188

e-mail: deccteam@decc.ecgroup.net

and can also be found on the DECC website at:

<https://www.gov.uk/government/organisations/department-of-energy-climate-change>

Statistical publications

Energy Trends

<https://www.gov.uk/government/collections/energy-trends>

Energy Trends contains quarterly data on production and consumption of overall energy and of the individual fuels in the United Kingdom. Also includes data on foreign trade in fuels.

Digest of UK Energy Statistics (DUKES) 2015

<https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes>

Also available from The Stationery Office and can be ordered through Government Bookshops.

DUKES contains annual data on production and consumption of overall energy and of the individual fuels in the United Kingdom. Also includes a commentary covering all the major aspects of energy and gives a comprehensive picture of energy production and use over the last five years with key series taken back to 1970.

UK Energy Sector Indicators

<https://www.gov.uk/government/collections/uk-energy-sector-indicators>

The indicators cover a variety of energy topics; the role of the industry in the UK economy, conversion efficiency, energy use, fuel prices, fuel poverty, competition and energy in the environment.

Further sources of information

Energy Consumption in the UK

<https://www.gov.uk/government/collections/energy-consumption-in-the-uk>

This booklet brings together statistics from a variety of sources to produce a comprehensive review of energy consumption in the UK since the 1970s. It describes the key trends in energy consumption in the UK since 1970 with a particular focus on trends since 1990. It includes an analysis of the factors driving the changes in energy consumption, the impact of increasing activity, increased efficiency, and structural change in the economy, while detailed tables can be found on the internet. The information is presented in five sections covering firstly overall energy consumption, then energy consumption in the transport, domestic, industrial and service sectors.

Energy Flow Chart

<https://www.gov.uk/government/collections/energy-flow-charts>

An annual publication illustrating the flow of primary fuels from home production and imports to their eventual final uses. They are shown in their original state and after being converted into different kinds of energy by the secondary fuel producers.

UK Energy in Brief

<https://www.gov.uk/government/statistics/uk-energy-in-brief-2014>

An annual publication summarising the latest statistics on energy production, consumption and prices in the UK.

Sub-National Energy Consumption Statistics

<https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics#sub-national-energy-consumption-statistics>

Sub-National data are published by DECC to emphasise the importance of local and regional decision making for energy policy in delivering a number of national energy policy objectives.

National Energy Efficiency Data-framework (NEED)

<https://www.gov.uk/government/collections/national-energy-efficiency-data-need-framework>

DECC has constructed a National Energy Efficiency Data-framework (NEED) to enable detailed statistical analysis of energy efficiency. The data framework matches the gas and electricity consumption data collected for DECC sub-national energy consumption statistics and records of energy efficiency measures in the Home Energy Efficiency Database (HEED) run by the Energy Saving Trust (EST), as well as typographic data about dwellings and households.

Green Deal and Energy Company Obligation Statistics

<https://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics>

DECC publishes a range of information relating to the rollout of the Green Deal and ECO policy. This includes the number of GD Assessments, number of GD Plans, number of energy efficiency measures installed, data on the amount of GD cashback vouchers issued, data on ECO brokerage, and information on the supply chain. DECC also publishes quarterly statistics on the levels of wall and loft insulation in Great Britain, along with information on the remaining potential for insulation measures.

UK Greenhouse Gas Emissions Statistics

<https://www.gov.uk/government/collections/uk-greenhouse-gas-emissions-statistics>

Emissions data are produced by DECC to show progress against the UK's goals, both international and domestic, for reducing greenhouse gas emissions.

UK Energy and CO2 emissions projections

<https://www.gov.uk/government/collections/energy-and-emissions-projections>

The Updated Energy projections (UEP) are published annually by DECC. They provide updated projections and analysis of energy use and carbon dioxide emissions in the UK. The UEP exercise incorporates all firm environmental policy measures and is based on updated assumptions consistent with the most recent UK Budget announcements.

Further sources of information

Policy publications

Energy Act 2013

The Energy Act 2013 received Royal Assent on 18 December 2013. It established a legislative framework for delivering secure, affordable and low carbon energy, including Electricity Market Reform (EMR). More details on the DECC website:

<https://www.gov.uk/government/collections/energy-act>

Annual Energy Statement

In the Coalition Programme for Government, the Government committed to producing and Annual Energy Statement (AES) to provide market direction, set strategic energy policy and help guide investment. The first statement was delivered to parliament on 27 June 2010, with subsequent statements delivered on 23 November 2011, 29 November 2012, and 31 October 2013. The latest statement, delivered on 6 November 2014, is available on the internet:

<https://www.gov.uk/government/publications/annual-energy-statement-2014>

Energy Act 2011

The Energy Act 2011 was given Royal Assent on 18 October 2011. The Act is available at:

<https://www.gov.uk/government/publications/energy-act-2011>

Electricity Market Reform (EMR) White Paper

On 12 July 2011 the Government published 'Planning our electric future: a White Paper for secure, affordable and low-carbon electricity'. The White Paper sets out key measures to attract investment, reduce the impact on consumer bills, and create a secure mix of electricity sources including gas, new nuclear, renewables, and carbon capture and storage. The White Paper is available on the internet at: <https://www.gov.uk/government/publications/planning-our-electric-future-a-white-paper-for-secure-affordable-and-low-carbon-energy>

Energy Act 2010

The Energy Act 2010 was given Royal Assent on 8 April 2010. The Act is available at:

<http://services.parliament.uk/bills/2009-10/energy.html>

The UK Low Carbon Transition Plan

http://webarchive.nationalarchives.gov.uk/20100509134746/http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

This paper, published in July 2009, sets out how the UK will meet the cut in emissions set out in the budget of 34% on 1990 levels by 2020.

Energy Act 2008

The Energy Act 2008 was granted Royal Assent on 26 November 2008. The Act is available at:

<http://www.legislation.gov.uk/ukpga/2008/32/contents>

Climate Change Act 2008

The Climate Change Act became law on 26 November 2008. The Act is available at:

<http://www.legislation.gov.uk/ukpga/2008/27/contents>

D4 Energy related websites

The DECC website can be found at <https://www.gov.uk/government/organisations/department-of-energy-climate-change>;
the statistics website is at <https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics>

Other Government websites

HM Revenue and Customs

www.gov.uk/government/organisations/hm-revenue-customs

Department for Environment, Food and Rural Affairs

www.gov.uk/government/organisations/department-for-environment-food-rural-affairs

HM Government Online

www.direct.gov.uk

Department for Transport

www.gov.uk/government/organisations/department-for-transport

National Statistics (ONS)

www.statistics.gov.uk

Northern Ireland Executive

www.northernireland.gov.uk

Department for Communities and Local Government

www.gov.uk/government/organisations/department-for-communities-and-local-government

Ofgem (The Office of Gas and Electricity Markets)

www.ofgem.gov.uk

Scottish Executive

www.scotland.gov.uk

The Scottish Parliament

www.scottish.parliament.uk

National Assembly for Wales

www.wales.gov.uk

UK Parliament

www.parliament.uk

Other useful energy related websites

Air Quality Archive

www.airquality.co.uk

BP

www.bp.com

Building Research Establishment

www.bre.co.uk

Coal Authority

www.coal.decc.gov.uk/

Consumer Futures

www.consumerfutures.org.uk/

Advice Guide (Citizen's Advice Bureau)

www.adviceguide.org.uk/

Energy Institute

www.energyinst.org/home

Energy Networks Association

www.energynetworks.org

Energy UK

www.energy-uk.org.uk/home

Europa (European Union Online)

www.europa.eu

Eurostat

<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>

Interconnector (UK) Ltd

www.interconnector.com

International Energy Agency

www.iea.org

Iron and Steel Statistics Bureau

www.issb.co.uk

National Grid

www.nationalgrid.com

Organisation of the Petroleum Exporting Countries (OPEC)

www.opec.org

The Stationery Office

www.tso.co.uk

Oil & Gas UK

www.oilandgasuk.co.uk/

UK Petroleum Industry Association

www.ukpia.com

Ricardo AEA Energy and Environment

www.ricardo-aea.com/cms/

Renewable UK

www.renewableuk.com/

United Nations Statistics Division

unstats.un.org/unsd/default.htm

US Department of Energy

www.energy.gov

US Energy Information Administration

www.eia.doe.gov