

## Energy consumption

The Energy Consumption dataset gives estimates of total energy used by each industry and the proportion of total energy used from renewable resources. Detailed estimates of consumption of different fuel types by each sub-sector are given in the Carbon Fuel Use by 93 industries dataset.

### Unit of measurement

The unit of measurement is tonne of oil equivalent (toe), which enables different fuels to be compared and aggregated. It should be regarded as a measure of energy content rather than a physical quantity. Standard conversion factors for each type of fuel are given in the “*Digest of UK Energy Statistics*” (DUKES).

### Consumption of carbon fuels, energy used in transformation processes and losses in distribution

The consumption of carbon fuels and the related consumption of energy can be analysed from a number of different perspectives. In terms of atmospheric emissions, it may be helpful to identify which industrial sectors are actually consuming the carbon fuels that give rise to emissions.

From this perspective, fuels used by the electricity generation sector are attributed entirely to that sector, even though some of the energy is transformed into electricity. This analysis is shown in Part 1 of the table showing Energy Consumption.

In terms of energy consumption, it is possible to attribute energy used during the process of transformation into electricity, and the energy lost in distributing electricity to end users, either directly to the electricity generation sector, or indirectly to the consumers of energy. Parts 2 and 3 of the table in Energy Consumption consider energy consumption from both points of view. Part 2 allocates the consumption of energy directly to the immediate consumer of the energy, while Part 3 allocates these “electricity overheads” to the end user of the electricity.

### Non-energy uses of fuels

Non-energy use of fuels includes, for example, chemical feedstocks, solvents, lubricants and road-making material. These uses have been excluded from the data.

### Renewable energy sources

Renewable energy is defined to include solar power, energy from wind, wave and tide, hydroelectricity, and energy from wood, straw and sewage gas. Landfill gas and municipal solid waste combustion have been included within renewable energy for the purposes of defining energy sources in the context of sustainable development policy.

1. Department of Trade and Industry. *Digest of United Kingdom Energy Statistics. Various issues.* HMSO/TSO

2. Department of Trade and Industry. *Energy Trends. Various issues.* HMSO/TSO

## Sources and methods for estimating consumption of energy by industrial sector

Data for estimating fuel consumption by industrial sectors are collected by the DTI and underlie the figures given in the “*Digest of UK Energy Statistics*”<sup>1</sup>. However, the figures shown in Energy Consumption differ from those given in the “*Digest of UK Energy Statistics*” (DUKES) in that:

Fuels used by the UK fishing fleet, UK international shipping and aircraft operators, and ships and aircraft used for UK military purposes, are included, whether or not they were purchased in the UK, whereas fuels purchased in the UK by non-resident operators are excluded;

Purchases of petrol and diesel abroad by UK motorists and road hauliers are included;

Non-energy uses of fuels for example, chemical feedstocks, solvents, lubricants and road-making material, are excluded. However, energy lost through gas leakage etc is included;

The classification of industrial sectors used in environmental accounts differ from that used in DUKES. In particular, the transport sector is defined to include only enterprises that provide transport services to other consumers (i.e. public transport operators, freight haulage companies, etc.). The energy consumed by households' use of private cars is allocated to the domestic sector;

The allocation of energy use to particular industries is primarily based on DUKES data. However, for certain industries' better estimates are used as published by the DTI in Energy Trends. Differences in publication times may result in minor reconciliation anomalies between ONS and DTI energy data.

## Reference

1. Department of Trade and Industry. *Digest of United Kingdom Energy Statistics*. Various issues. HMSO/TSO