



Energy and environment

Transport energy consumption

[Table ENV0102](#) (TSGB0302)

- In 2011 transport accounted for 41 per cent of all final energy consumption in the UK. Road transport accounted for 28 per cent of final energy consumption with aviation accounting for 9 per cent.
- The direct use of petroleum accounted for 98 per cent of transport energy consumption.
- Energy from renewable sources made up around 2.9 per cent of transport energy consumption in 2011 up from 0.1 per cent in 2005.
- Almost all transport renewable energy consumption is in the form of biofuels blended into petrol and road diesel. Biofuels made up 2.8 per cent of road transport energy consumption in 2011, up from 0.2 per cent in 2005.

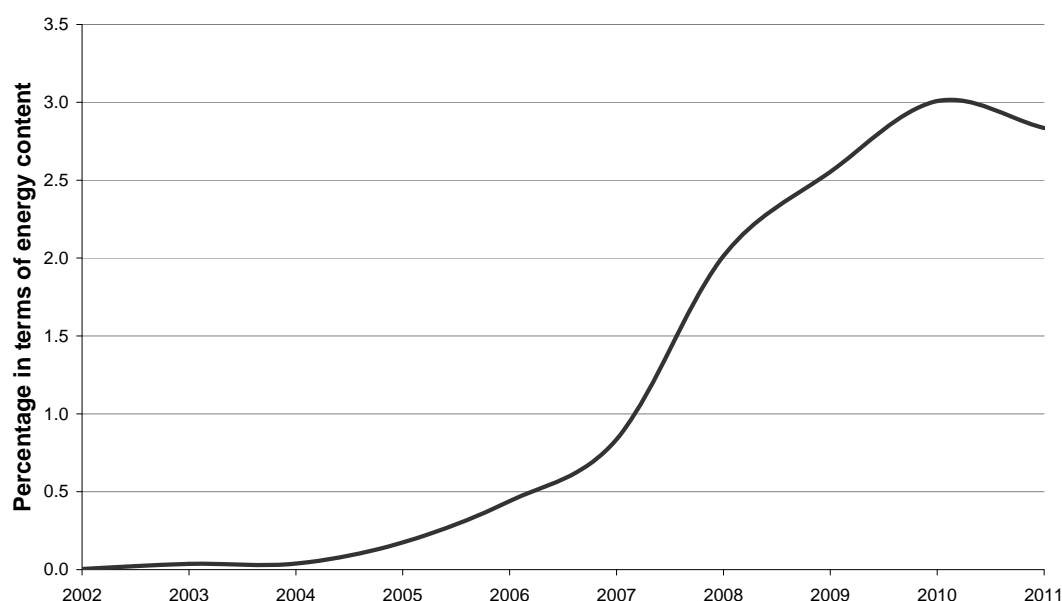
This summary contains information on:

- Transport energy consumption;
- Greenhouse gas emissions from transport;
- Air pollutant emissions from transport.

Associated tables and charts can be accessed through the [Energy and environment statistics webpage](#).

Background on the data sources for each table can be found in the Energy and environment notes and definitions.

Biofuels as a proportion of all road transport fuels 2002 – 2011



Background notes

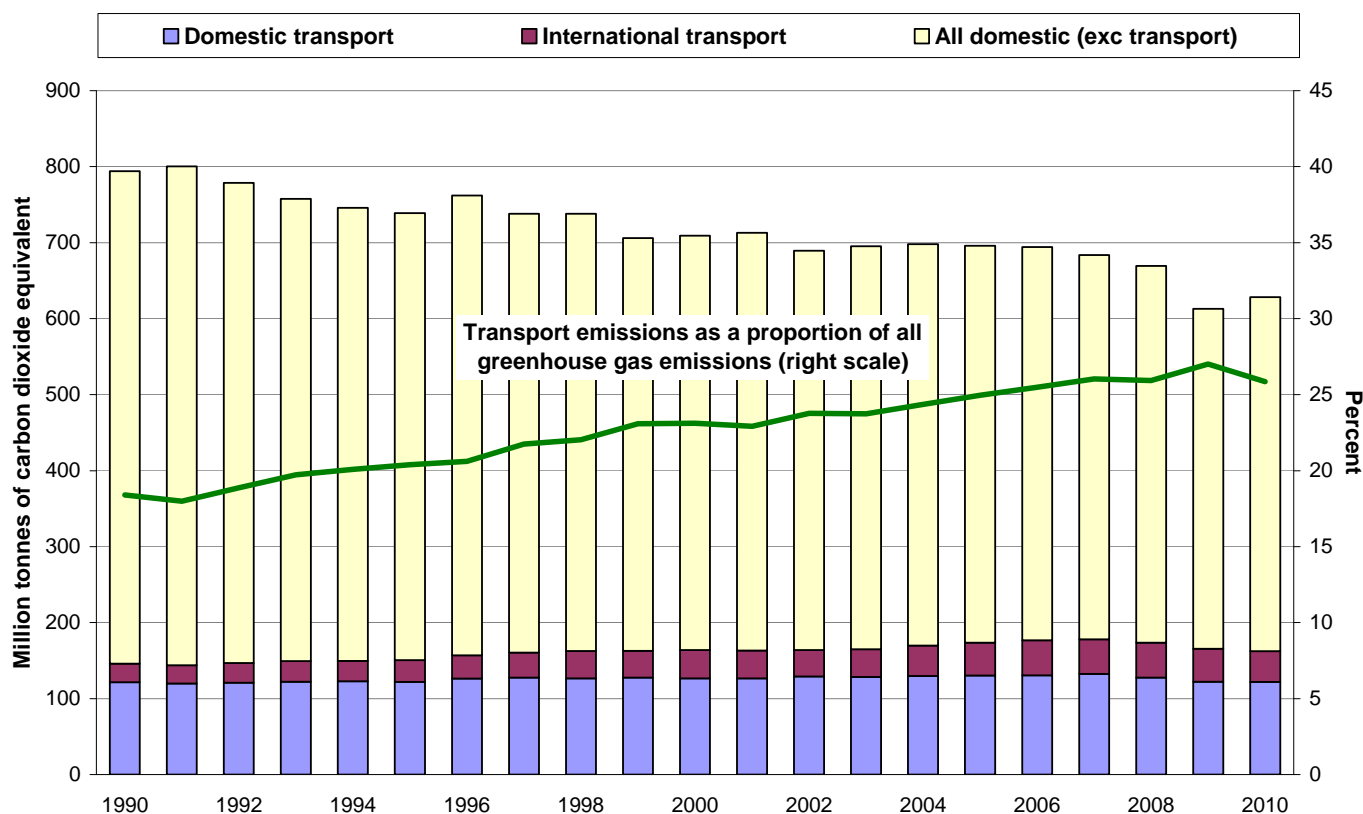
More information on energy consumption can be found in the [Digest of UK Energy Statistics](#) (DUKES)

Greenhouse gas emissions ([Table ENV0201\(a\)](#)) (TSGB0306)

There is no internationally agreed way of allocating emissions from international transport to individual nation states. However emissions from international shipping and international aviation based on estimated fuel consumption from UK fuel bunkers can be added to the domestic emissions to give a UK total.

- Between 1990 and 2010 greenhouse gas (GHG) emissions from transport have increased by 11 per cent whilst total GHG emissions have fallen by 21 per cent over the same period. As a result, as a proportion of total GHG emissions, transport emissions have risen from 18 per cent in 1990 to 26 per cent in 2010.

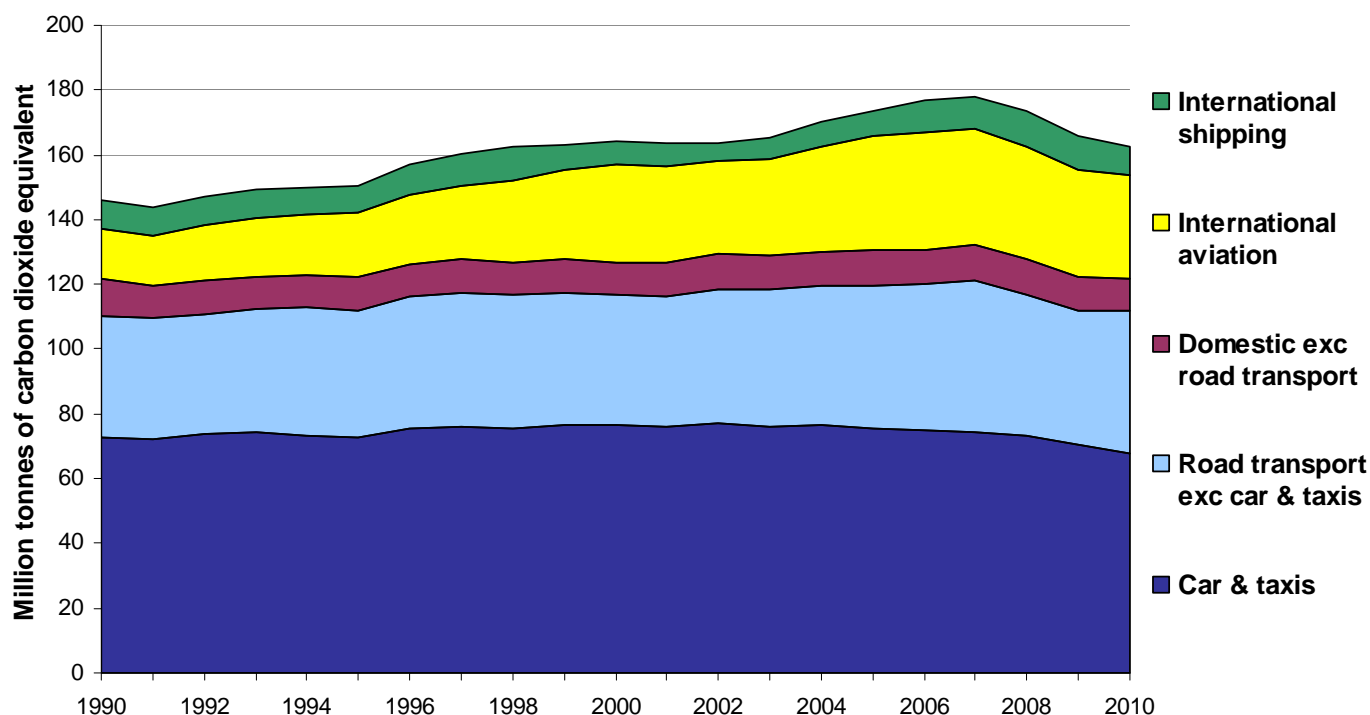
UK greenhouse gas emissions, 1990 – 2010



- Emissions from international transport have grown by 65 per cent between 1990 and 2010. As a proportion of total GHG emissions, international transport emissions have risen from 3 per cent in 1990 to 6 per cent in 2010.

- Road transport made up 69 per cent of total GHG emissions from transport in 2010. However most of the growth in total transport GHG emissions since 1990 is attributable to growth in international air travel. Emissions from international aviation in 2010 were more than double 1990 levels (a 102 per cent increase). Emissions from international aviation made up a fifth (20 per cent) of total transport GHG emissions in 2010.

UK transport greenhouse gas emissions by mode, 1990 – 2010

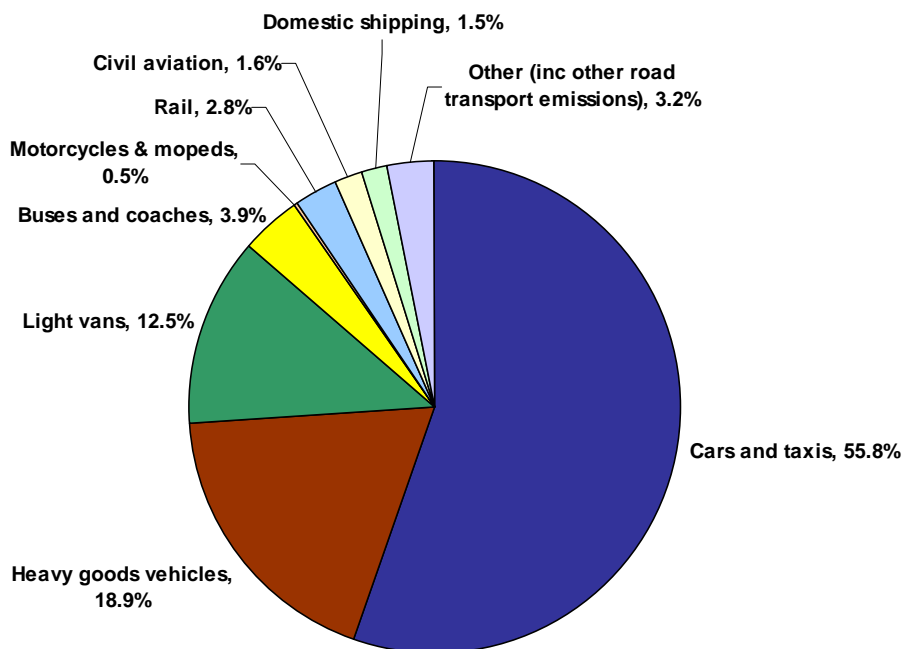


Domestic greenhouse gas emissions ([Table ENV0201\(a\)](#)) (TSGB0306)

- Domestic greenhouse gas (GHG) emissions from transport were around the same level in 2010 (121.9 MtCO₂e) as in 1990 (122.5 MtCO₂e). Domestic emissions from all other sources fell by 28 per cent over the same period. As a result emissions from domestic transport increased as a proportion of all domestic GHG emissions, from 16 per cent in 1990 to 21 per cent in 2010.
- Domestic road transport GHG emissions grew by 10 per cent between 1990 and 2007, with continual improvements in the fuel economy of new cars slightly offset by continuing growth in road traffic volumes. This was followed by a fall of 8 per cent between 2007 and 2009 and then no change between 2009 and 2010.

- Road transport made up 92 per cent of all domestic transport emissions in 2010, with car travel accounting for over a half (56 per cent) and heavy goods vehicle and light van traffic accounting for just under a third (31 per cent).

UK domestic transport greenhouse gas emissions, 2010



- The falls in road traffic volumes during the recession are likely to have been the main driver of the 8 per cent fall in domestic transport GHG emissions between 2007 and 2009. The other key factor was improvements in car fuel economy. Continual improvement in new car fuel economy over time has meant that older less efficient cars have been replaced by increasingly more efficient new cars. This is likely to be key reason for the decreases car traffic GHG emissions since 2002 despite growth in car traffic volumes.
- Increases in biofuels as a proportion of all transport fuels have also contributed to the fall in domestic transport GHG emissions between 2007 and 2010. CO₂ emissions from the combustion of biofuels are not included in the GHG emission figures, in line with international guidelines. These CO₂ emissions are offset by the CO₂ absorbed in the growth of the crops which the biofuels are produced from.

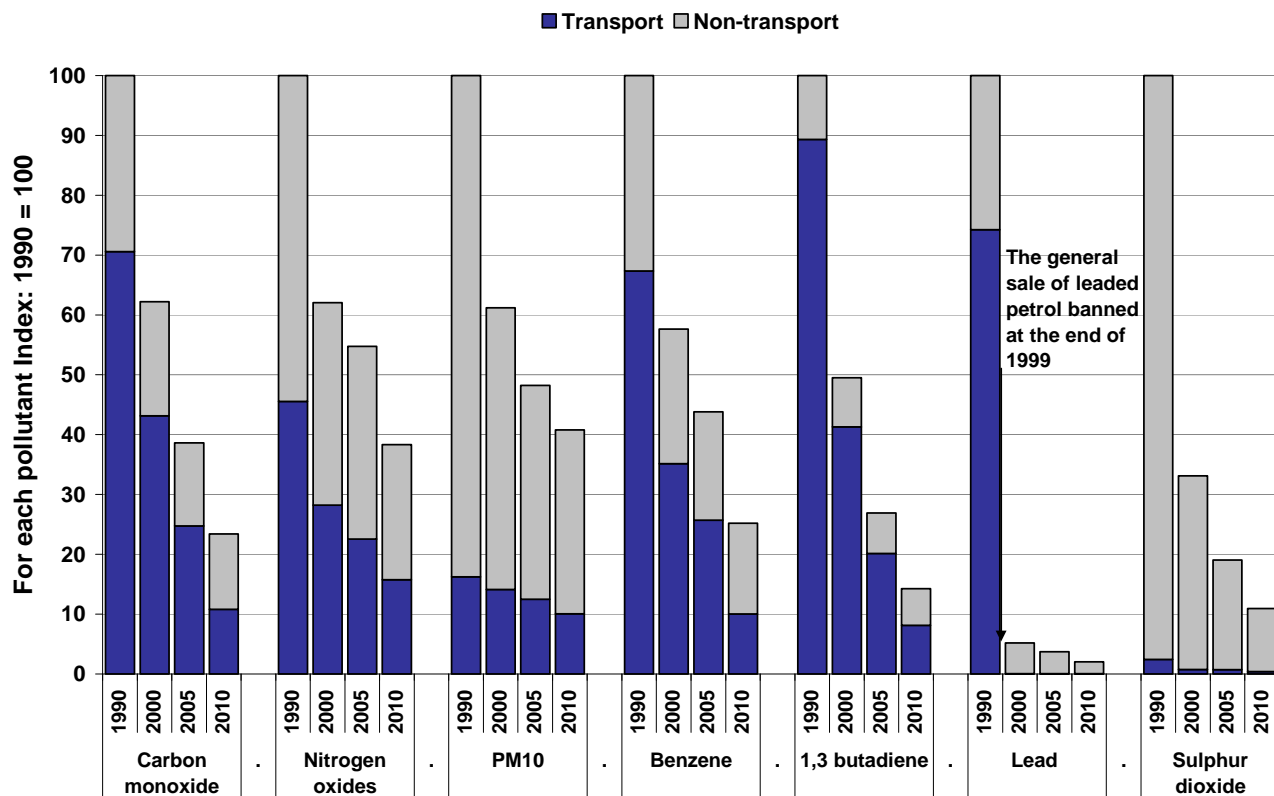
Background notes

1. More information on greenhouse gases emissions can be found on the DECC website at: www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/intro/intro.aspx
2. More data on UK greenhouse gas emissions can be found on the DECC website at: http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/uk_emissions/uk_emissions.aspx

Air pollutant emissions from transport ([Table ENV0301](#)) (TSGB0308)

Local air pollutants need to be controlled to reduce risks to health, the environment and quality of life. As is the case with greenhouse gas emissions, emissions from road transport accounts for the majority of air quality pollution from transport. Air pollutant emissions from transport have fallen considerably since 1990, mainly as a result of cleaner road vehicles and road fuels.

UK air pollutant emissions: 1990, 2000, 2005 and 2010



- Carbon monoxide reduces the oxygen carrying capacity of blood. Emissions from transport have fallen by 85 per cent since 1990.
- Nitrogen oxides are acid gases and can affect human health and vegetation. They also contribute to the formation of ground level ozone which can trigger a range of health problems and damage vegetation. Nitrogen oxide emissions from transport have fallen by 65 per cent since 1990.
- Benzene and 1,3 butadiene are also involved in the formation of ground level ozone and can cause a range of adverse health effects. They are also carcinogenic. Transport emissions of these pollutants have fallen by 85 per cent and 91 per cent respectively.

Background notes

More data and information about air pollutant emissions can be found on the [DEFRA Air Quality webpage](#).