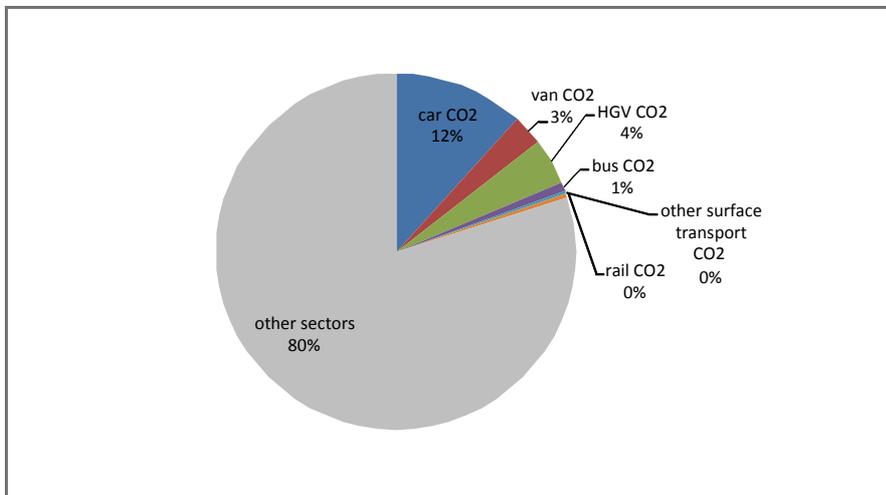


## Emissions within this sector

Surface transport emissions are from vehicles on the roads and rail. Direct emissions from surface transport were 111 MtCO<sub>2</sub> in 2011, accounting for 24% of total CO<sub>2</sub> emissions (20% of GHG emissions) produced in the UK (Figure 1). They accounted for 94% of all domestic transport CO<sub>2</sub> emissions, which also include emissions from domestic aviation and shipping. CO<sub>2</sub> emissions are dominated by cars (58% of emissions), followed by HGVs (21%), vans (14%) and buses (4%); rail emissions account for 2%.

Emissions fell by 7% between 2007 and 2011 due to falling carbon intensity of cars and vans, and falling mileage by HGVs. However, this has been in the context of the economic recession and increases in fossil fuel prices. The longer-term trend has been one of rising emissions.

**Figure 1. Emissions from surface transport vs other sectors (2011)**



## What can be done to reduce emissions in this sector?

- **Improving fuel efficiency** via lightweighting, aerodynamic improvements and low rolling resistance tyres.
- **Use of biofuels** in conventional vehicles (up to 8% of total liquid fuel consumption) only in the medium term.
- **Use of ultra-low emissions vehicles**, including plug-in hybrid, battery electric and hydrogen fuel cell vehicles.
- **Driving economically, efficiently and within motorway speed limits** to reduce fuel consumption.
- **Smarter choices**, a range of measures such as car clubs, teleworking, travel planning, to reduce car use.

## What is Government doing?

- **The EU New Car CO<sub>2</sub> regulation and New Van CO<sub>2</sub> regulation** set mandatory targets for the fleet average gCO<sub>2</sub>/km of new cars and vans sold by manufacturers. These are supported by fiscal policies in the UK (e.g. CO<sub>2</sub>-differentiated Vehicle Excise Duty).
- **The Plug-In Car Grant** came into effect in January 2011 and provides consumers and businesses with up to £5,000 towards the purchase of an eligible electric car. In January 2012 this support was extended to vans (grant up to £8,000).

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- **Following the Plugged-In Places programme** (which offered match-funding for installation of public electric vehicle charging points), funding is now available for home and on-street charging and for charge points at railway stations.
  - **The Plug-In Vehicle Infrastructure strategy** sets out other actions such as cutting red tape for installing charge points.
  - **The Road Transport Fuel Obligation** means fossil fuel suppliers must deliver 5% (in 2013) of road transport fuels from sustainable renewable sources. The RTFO helps the UK fulfil its obligation under the EU Renewable Energy Directive.
  - **Eco-driving** is covered by the National Driving Standards and is an informal part of the UK driving test.

## What is the CCC's position?

Our analysis shows that reducing surface transport emissions to 89 MtCO<sub>2</sub> by 2020 (67 MtCO<sub>2</sub> by 2030) could be an appropriate contribution to meeting carbon budgets and could be achieved at a low cost.

- **New car and van emissions.** There has been good progress on new car CO<sub>2</sub>; progress on new van CO<sub>2</sub> has been more limited.
  - **New car CO<sub>2</sub>** is currently outperforming our indicator trajectory. The EU regulations together with CO<sub>2</sub>-differentiated VED have been key drivers, but the recession and high fuel prices may also have had an impact in encouraging purchase of more fuel efficient cars. As the economy recovers, stronger incentives may be needed.
  - **New van CO<sub>2</sub>.** We expect this will improve as a result of the new EU regulations, but the Government should consider scope for use of complementary policy levers to strengthen incentives (e.g. fiscal levers).
- **Electric vehicles.** The Government has made progress developing policies to support electric vehicle market development.
  - **Sales.** Low sales of electric vehicles in 2011 are not a major cause of concern, given the limited availability of models on the market and that take-up of new technologies is naturally expected to be slow in early years. A number of new models are expected on the market in the near future.
  - **Incentives.** The decision in Budget 2012 to remove company car tax exemptions for zero and ultra low-emission vehicles should be reversed. It undermines incentives for purchase of electric vehicles as company cars, a market niche where there is a potentially high share of early adopters.
  - **Charging.** Development of electric vehicle charging infrastructure has begun, with around 6,000 charge points installed across the UK in the period to end-March 2012.
- **Behaviour change.** Progress towards roll-out of Smarter Choices has been good – although more is needed – with limited progress on eco-driving training, and the risk of a backward step on limiting speed.
  - **Smarter Choices.** Creation of the Local Sustainable Transport Fund is positive but still leaves much to do. Plans are needed for a full roll-out of Smarter Choices over the next decade.
  - **Eco-driving training.** Uptake of training remained very low in 2011. Government should consider options to increase levels of training and opportunities to provide information on fuel consumption and other benefits of eco-driving.
  - **Enforcing speed limits.** Rather than enforcing the current speed limit on motorways, the Government is considering increasing it to 80 mph. This would increase emissions, as well as increasing the number and severity of accidents. An option on enforcing the existing speed limit should be included in any Government appraisal and consultation.

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## Links to recent work by CCC

- **Fourth Carbon Budget**, Chapter 4: Decarbonising surface transport  
<http://www.theccc.org.uk/reports/fourth-carbon-budget>
- **2012 Annual Progress Report**, Chapter 5: Progress reducing transport emissions.  
<http://www.theccc.org.uk/reports/2012-progress-report>
- **International Aviation and Shipping Review**, Chapter 4 - Decarbonising Surface Transport.  
<http://www.theccc.org.uk/reports/international-aviation-a-shipping>