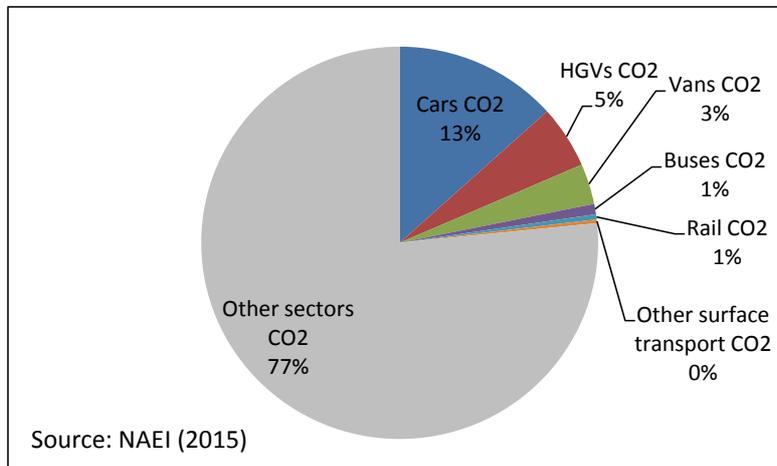


Emissions within this sector

Surface transport covers vehicles on the roads and rail. Direct emissions¹ from surface transport were 109 MtCO₂ in 2013, accounting for 95% of all domestic transport CO₂ emissions² and 23% of total UK CO₂ emissions (19% of GHG emissions) (Figure 1). CO₂ emissions are dominated by cars (57% of emissions), followed by HGVs (22%), vans (14%) and buses (4%); rail emissions account for 2%.

Emissions fell by 1.1% in 2013 due to falling carbon intensity of cars and vans. However, fuel sales imply that emissions are likely to have increased by around 1% in 2014, as rising demand outweighed carbon intensity improvements.

Figure 1. CO₂ emissions from surface transport vs other sectors (2013)



What can be done to reduce emissions in this sector?

- **Vehicle efficiency** via lightweighting, aerodynamic improvements and low rolling resistance tyres.
- **Biofuel use** in conventional vehicles (to 8% of total liquid fuel energy consumption) in the medium term.
- **Ultra-low emissions vehicles**, including plug-in hybrid, battery electric and hydrogen fuel cell vehicles.
- **Driving economically, efficiently and within speed limits** to reduce fuel consumption.
- Use of **low or no fuel options** such as car clubs, teleworking, walking and cycling, and more efficient freight logistics.

What is Government doing?

- The **EU New Car CO₂ regulation** and **New Van CO₂ regulation** set mandatory targets for the fleet average gCO₂/km of new cars and vans sold by manufacturers. These are supported by fiscal policies in the UK (e.g. **Vehicle Excise Duty** and **Company Car Tax**, differentiated by CO₂ emissions).

¹ i.e. from combustion of fossil fuels. They exclude indirect emissions from generation of electricity used by vehicles and trains.

² which also include emissions from domestic aviation and shipping

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- The **Plug-In Car Grant** came into effect in January 2011 and provides up to £5,000 towards the purchase of an electric car. In January 2012 this support was extended to vans (grant up to £8,000).
 - Funding is available for installation of electric vehicle **charge points**, including home and on-street rapid chargers and for charge points at railway stations.
 - In total, **£500m of funding** has been allocated for investment in ultra-low emission vehicles in 2015-2020.
 - The **Road Transport Fuel Obligation** means fossil fuel suppliers must deliver 4.75% of road transport fuels from sustainable renewable sources by 2015/16. The RTFO helps the UK fulfil its obligation under the EU Renewable Energy Directive.
 - The **Local Sustainable Travel Fund** is supporting schemes in 77 English Local Authorities to promote more sustainable travel choices and reduce car trips.

What is the CCC's position?

Our analysis shows that a 40% reduction in surface transport emissions from 2007 levels by 2025 could be an appropriate contribution to meeting carbon budgets.

- **New car and van emissions.** There has been good progress in reducing new car and van CO₂, despite evidence of a growing gap between real world and test cycle emissions. Reductions have mainly been a result of technology improvements rather than consumer purchase decisions.
 - **EU targets.** New car and van emissions are broadly consistent with our indicator trajectories, as manufacturers strive to meet EU legislation. To maintain momentum, the Government should push for strong EU targets to be set for 2030, and for a more representative test procedure to be introduced without delay.
 - **Vehicle taxation** provides an important tool to encourage the shift away from high emission vehicles. This should be aligned to new EU targets over time, and should encourage uptake of ultra-low emission vehicles.
- **Electric vehicles.** The market for electric vehicles has grown significantly in the last year.
 - **Sales.** Sales of electric vehicles quadrupled in 2014 and growth remains strong in 2015, with EVs making up 1.2% of car sales in the first quarter. The number and variety of EV models available also increased, which will help more drivers find an EV to suit their needs.
 - **Incentives.** The £500m funding package allocated for 2015-2020 is a positive step and combines, amongst other things, continued price support with softer measures shown to be effective in promoting uptake (e.g. access to bus lanes and preferential parking). Nevertheless, new financing and marketing approaches are required to address financial and attitudinal barriers.
 - **Charging.** Progress has been made in rolling out a national rapid charging network on the road network. Installation of rapid chargers is around half way to achieving national coverage requirements. However solutions are required to provide access to charging for people without off-street parking.
- **Behaviour change.** There has been some progress in changing travel behaviour, and in developing schemes to help freight operators become more efficient. Further interventions may be required to increase the reach and sustain the effectiveness of current action.

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- **Smarter Choices.** Support from the Local Sustainable Transport Fund is due to an end in 2015/16. Evidence suggests measures need to be sustained in order to lock-in sustainable travel behaviours.
 - **Freight logistics.** Industry-led action, such as the voluntary Logistics Carbon Reduction Scheme, has helped reduce the emissions intensity of freight activity (e.g. through measures to improve routing and vehicle fill), but does not cover all operators. New schemes should be developed to cover more of the sector.

Links to recent work by the CCC

- 2015 Annual Progress Report, Chapter 4: Progress reducing transport emissions.
<http://www.theccc.org.uk/publication/reducing-emissions-and-preparing-for-climate-change-2015-progress-report-to-parliament/>
- Fourth Carbon Budget Review – Technical Report, Chapter 5: Reducing emissions from transport.
<http://www.theccc.org.uk/publication/fourth-carbon-budget-review/>