



Andy Eastlake Comment

Road freight is vital to meeting carbon targets

- There is much work still to be done to improve the environmental impacts of heavy goods vehicles, but manufacturers and operators are now taking action.

The UK's legally binding commitment to an 80% cut in CO₂ emissions by 2050 requires transport, along with all other sectors, to make a major contribution to the target. Announcing the fifth carbon budget – the halfway point from the first carbon budget period (2008-12) – the Committee on Climate Change recently said the government should continue on the lowest cost path towards meeting the target and commit to CO₂ emissions reduction of 61% by 2028-32 (see p6).

While there has been sustained progress on road transport for the past ten years or more – the gap between 'real world' and test results aside – heavy goods vehicle (HGV) emissions have flat-lined since 1990 at around 24 million tonnes of CO₂ equivalent. Gains in vehicle efficiency and operational improvements have been offset by greater activity in the sector. This is even more pronounced for vans.

CO₂ from HGVs now represent nearly 5% of UK emissions, with vans contributing just under 3% (compared with 12% for cars).

The recent furore around emissions testing has also focused attention on air quality, where the UK is in breach of European regulations in more than 30 areas. While progress on technical efficiency has been steady in the HGV sector in recent years, there have been big leaps forward in terms of local pollution. New Euro VI truck engines are delivering 95%-plus savings in nitrogen oxides (NO_x) and particulates compared with only a few years ago.

It's important, of course, not to lose sight of the many opportunities available to reduce unnecessary freight (for example, by reducing food waste or packaging) and to shift freight to less carbon-intensive modes. But to meet our targets we also need a step-change in the scale of ambition and delivery of road freight improvements in three key areas: vehicles, fuels and operations.

In terms of vehicles, a combination of actions is needed by original equipment manufacturers (OEMs) and operators to improve HGV fuel efficiency. These include operators retrofitting fuel-saving technologies and training drivers in fuel-efficient methods to drive down costs and improve environmental performance.

Meanwhile, OEM innovations to improve new vehicle fuel efficiency will be largely driven by market and regulatory pressures, so we need to ensure the policy framework is pushing change in the right direction without significantly adding to transport costs or undermining local competitiveness.

On the fuels side, a range of options exist to reduce the carbon intensity of the energy HGVs consume. These include supporting

the use of electric and plug-in hybrid vehicles, expanding use of sustainable biodiesel and supporting the uptake of gas (particularly biomethane and biopropane) in specific vehicles.

While the Low Carbon Vehicle Partnership (LowCVP) is primarily focused on making sure operational vehicles are efficient and clean, clear gains can be made through operational efficiencies. Supply chain collaboration and optimising HGV weights and dimensions are key to raising average payloads, reducing empty running and increasing the overall efficiency of freight operations, in terms of tonnes or volume moved per unit of energy consumed.

LowCVP was set up by the government in 2003 to speed up the shift to low-carbon vehicles and fuels in road transport. Now part-funded by government and its members (of which there are around 200 representing a diverse range of stakeholders), it is sharpening its focus on the UK's freight sector.

In earlier work, LowCVP identified three main opportunities for HGV cutting emissions which pointed to the need for specific interventions: independent testing to validate (and market) the effectiveness of retrofit technology; conversion to natural gas and biomethane; and supporting the uptake of hybrid and pure electric vehicles, particularly in urban areas.

We have developed an accreditation scheme for retrofitting fuel-saving technologies. Independent verification of the technologies' performance and a credible assessment of the applicability of equipment to different operational environments were identified as key requirements.

A test process for this is ready for peer review and launch. The next phase will be to develop an umbrella accreditation process for approving and certifying low-carbon technologies for HGV applications. The scheme will also assess the technologies' operational characteristics, and their applicability, for operators.

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The scheme will provide test results and recommendations to the Department for Transport (DfT) and Office for Low Emission Vehicles for stimulating uptake. The test protocol has many potential applications in the evaluation of cleaner truck technologies.

With our low-carbon truck trial nearing its final phase, and the emergence of Euro VI gas vehicle technology for HGVs, we are also managing a new test programme for the DfT to benchmark the latest gas trucks for emissions including methane, CO₂ and NO_x, and fuel consumption.

In collaboration with Transport for London, LowCVP recently held a workshop to progress its commercial vehicle activity and ensure coordination with complementary programmes.

The workshop also marked the relaunch of the partnership's commercial vehicle working group which will drive forward these initiatives with all stakeholders in the freight decarbonisation area.

Options for decarbonising the freight sector have been identified and several related initiatives are under way. Improving the comparability of vehicle data, clearly needed as a basis for effective policy, is part of the solution and this is being addressed.

LowCVP is now aiming to make 2016 the year of low-carbon commercial vehicles. Interested manufacturers, operators and other stakeholders are encouraged to join us to help shape future policy and drive progress in this area. ■

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