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## Vans and CO<sub>2</sub> Analysis of automotive industry arguments

European vanmakers have attacked the European Commission's proposal to cut CO<sub>2</sub> emissions and improve the fuel efficiency of light commercial vehicles (LCVs). This paper examines five of their key arguments and attempts to present a more balanced view of the issue.

T&E believes that the Commission proposal is too weak and should be strengthened in the following respects:

- The 2007 proposals of 175 g/km by 2012 and 160 g/km by 2015 should be kept;
- The 2020 target should be tightened to 125 g/km
- The maximum speed of vans should be limited to 100 km/h

A full explanation of our position can be found in a briefing paper available from our website ([www.transportenvironment.org/Publications/prep\\_hand\\_out/lid/554](http://www.transportenvironment.org/Publications/prep_hand_out/lid/554))

**Industry: ‘Redesigned vans cannot be brought to market in time to reach the targets’**

**Reality: The targets can be met using existing technologies and downsized engines**

Any given van model is offered with a range of engines e.g. for 3.5 tonne vans it usually consists of three to five engines ranging from around 100 to 180 horsepower (hp). To meet the targets, manufactures could simply downsize the performance range of a model by replacing its most powerful engine with an engine of around 80 hp and introducing that engine as the standard.

In many cases manufacturers already offer such an engine in the segment below. This is a relatively modern, conventional, durable and torque-optimised drivetrain which is available in house and ready for use. Only minor adjustments needs to be carried out to fit these small engines in the upper segment(s). This can be carried out and introduced to the market very quickly.

In addition, many of the fuel-saving measures can be introduced in existing models (see under statement 4). Fuel-optimised gearshifting, start-stop systems, better tyres, and some aerodynamic improvements are examples of measures that have been introduced to existing models.

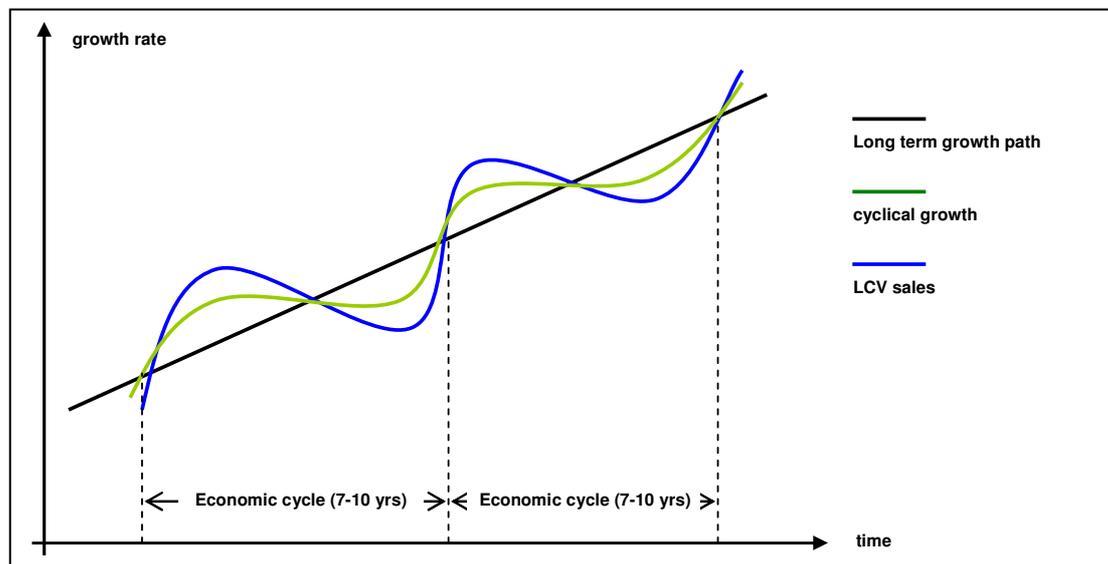
## Industry: 'Now is not the time for action due to weak sales in 2009'

### Reality: Sales of light vehicles were only 8% lower than normal last year, and the regulation will only apply in two years' time

All major manufacturers of light commercial vehicles (Ford, Renault, PSA, Fiat, Daimler, VW) also produce cars. They actually produce on average eight times as many cars as vans. Sales of light vehicles (cars plus vans) did not collapse in 2009; they were only 8% lower than the average since 1997<sup>1</sup>. It is not a secret that this was due to generous government subsidies for the purchase of new cars. Only the banking industry has seen more taxpayer-funded protection against the impacts of the recession; many other industries have been much less lucky.

Given the amount of public support the automotive industry has received, it would be quite appropriate for the industry to offer society something in return, namely a measure that will reduce oil imports, reduce fuel costs to small and medium sized enterprises, and last but not least, new, high-tech, secure, 21<sup>st</sup> century jobs with carmakers and their suppliers. On top of that, the proposed regulation will only kick in a couple of years from now, when undoubtedly more normal circumstances will have returned.

LCV sales are highly cyclical, their sales fall more in times of economic downturns as compared to passenger cars. On the other hand, they profit more in times of economic recovery. Referring to sales figures from economic downturns without any further comment on profits in previous years is not appropriate.



Finally, the need to reduce CO<sub>2</sub> emissions from all sources including road transport is undisputed and has not changed as a result of the economic crisis. If reductions are not made in the transport sector then other sectors like housing and agriculture will need to reduce more. But these sectors are probably just as affected by the current economic climate.

<sup>1</sup> ACEA figures, EU15, January to November for each year

**Industry: ‘The environmental impact of vans is limited because they represent only 10% of the vehicle fleet’**

**Reality: Vans emit 1/3 more CO<sub>2</sub> per vehicle per year than cars, so the environmental impact of targets is significant**

Currently, 12% of Europe’s road vehicle stock consists of vans<sup>2</sup>, but their number is rising fast. Between 1997 and 2007, the total fleet of vans increased by about 50%.<sup>3</sup> This fast increase is not surprising: vans are exempt from all sorts of legislation (social, driving licence, road tolls, speed limiter, specific pieces of safety legislation). All will continue to displace some of the commercial freight transport from trucks into vans. Hence there will be more vans on the roads.

As van sales are typically about an eighth of car sales, the number of vehicles the legislation will apply to is indeed far lower than in case of the cars legislation.

But fuel savings and CO<sub>2</sub> impacts are still significant. On average a van emits about a third more CO<sub>2</sub> per year than a car<sup>4</sup>, so a 14% reduction in CO<sub>2</sub>/km (from 203 to 175 g/km) yields a third more fuel and CO<sub>2</sub> savings per year than a similar reduction for cars.

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<sup>2</sup> COM impact assessment, p. 9 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2009:1454:FIN:EN:PDF>

<sup>3</sup> [www.acea.be/images/uploads/files/20090218\\_EU\\_Motor\\_Vehicles\\_in\\_Use\\_2007.pdf](http://www.acea.be/images/uploads/files/20090218_EU_Motor_Vehicles_in_Use_2007.pdf)

<sup>4</sup> Emissions per km are about 28% higher (203 instead of 158 g/km in 2007), and annual mileage is 5% higher, all according to the impact assessment.

**Industry: ‘Vans are mostly diesels, there is less reduction potential’**

**Reality: The best diesel cars have improved by 19-27% in just two years. The same technology can be applied to vans.**

According to the impact assessment, 97% of new vans are diesels. But this does not mean that the CO<sub>2</sub> reduction potential is small. Between 2007 and 2009, CO<sub>2</sub> emissions of the best diesel cars were reduced by 19-27%. This was reached without hybridisation but with a range of less expensive measures (see Table 1).

Table 1: Examples of improvement of ‘best practice’ diesel cars 2007 and 2009<sup>5</sup>

Brand and model	CO <sub>2</sub> of best available diesel variant (g/km)		Decrease (%)	Fuel-saving programme	Power
	2007	2009			
VW Golf	136	99	-27%	BlueMotion	Remains 77kW
Volvo S40	129	104	-19%	DrivE	Remains 80kW
Ford Focus	127	99	-22%	Econetic	Remains 80kW
Mercedes C220	169	127	-25%	BlueEfficiency	Increase 105→125kW
BMW 118	150	119	-21%	Efficient Dynamics	Increase 90→105kW

As fuel saving technologies deployed are largely transferable to diesel vans, similar reductions can be achieved. A 160 g/km target by 2015 (21% reduction compared with 2007 levels) is therefore feasible and does not require excessive technological investment.

<sup>5</sup> The year 2007 is chosen because it is the baseline for van emission data, which has been used in the supporting study.

## **Industry: ‘The vans market is rational and already takes fuel efficiency into account’**

### **Reality: The vans market does not take full advantage of fuel efficiency**

The car industry itself admits that there are large discrepancies between models with similar functionality. According to the UK car industry association, *“If everybody buying a new van bought the most fuel efficient model in its class the average buyer could save up to 17% on both CO<sub>2</sub> emissions and fuel costs”*<sup>6</sup>.

These findings reflect that LCV purchase decisions are either not exclusively based on rationality or that customers do not assess ownership costs correctly. Van makers do not have to communicate CO<sub>2</sub> performance to customers. Until recently they were not even obliged to measure the fuel efficiency of their product range. Therefore it is in fact plausible, that relatively inefficient vans still remain on the market.<sup>7</sup> More transparency for the end customer is therefore necessary - not only for the environment but also to lower fuel costs for small and medium-sized companies; businesses which depend on vans.

Another important aspect of this issue, however, is the rationality of *supply*. Today, for instance, the engine range for 3.5t-class vans typically starts at around 100 horse power (hp). This means there simply are no smaller engines available in that segment. Looking only 2 model generations back, 100 hp was the very top of the engine range - in some cases the top of the engine range was even lower than 100 hp - the start of the engine range now. Surely quite a few owners of small medium enterprises with duty cycles only around town would buy vans with smaller engines and lower fuel consumption if only they were available as fuel consumption and total cost of ownership are surely lower.

In conclusion: SMEs would clearly benefit from a wider choice of fuel-efficient vehicles and as such the current supply is largely ‘overpowered’ with regard to their requirements.

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<sup>6</sup> See: [www.smm.co.uk/articles/article.cfm?articleid=19726](http://www.smm.co.uk/articles/article.cfm?articleid=19726)

<sup>7</sup> Reporting CO<sub>2</sub> emissions for N1 vehicles has only become mandatory since the adoption of directive 2004/3/EC in 2004, see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0003:EN:NOT> This Directive requires that the CO<sub>2</sub> information is put into the official certificate of conformity, this does not mean that it also needs to be communicated to the consumer.