

Reducing carbon emissions from vans

BT Fleet

2010 Tower Event

30th June 2010

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Deputy Director, Low Carbon Vehicle Partnership

Low Carbon Vehicle Partnership

Accelerating a sustainable shift to low carbon vehicles and fuels in the UK

Stimulating opportunities for UK businesses

Renewable Fuels Agency

Carbon and Sustainability Reporting Within the Renewable Transport Fuel Obligation

Technical Guidance Part One

Office of the Renewable Fuels Agency V1.2

August 2008

cenex

ACT ON CO₂

LowCVP 'Low Carbon Road Transport Challenge'

Proposals to reduce road transport CO₂ emissions in the UK to help mitigate climate change

June 2008

Fuel Economy	Low Carbon Car
115-130 mpg (litres/100 miles)	
107-115	
97-107	
87-97	
77-87	
67-77	
57-67	
47-57	
37-47	
27-37	
17-27	
1-16	
Fuel used (predicted) for 1000 miles	£662
VED for 12 months	£50

LowCVP
The carbon vehicle partnership

Accelerating the Shift to Low Carbon Vehicles and Fuels

Low Carbon Transport Innovation Strategy

ACT ON CO₂

Future events

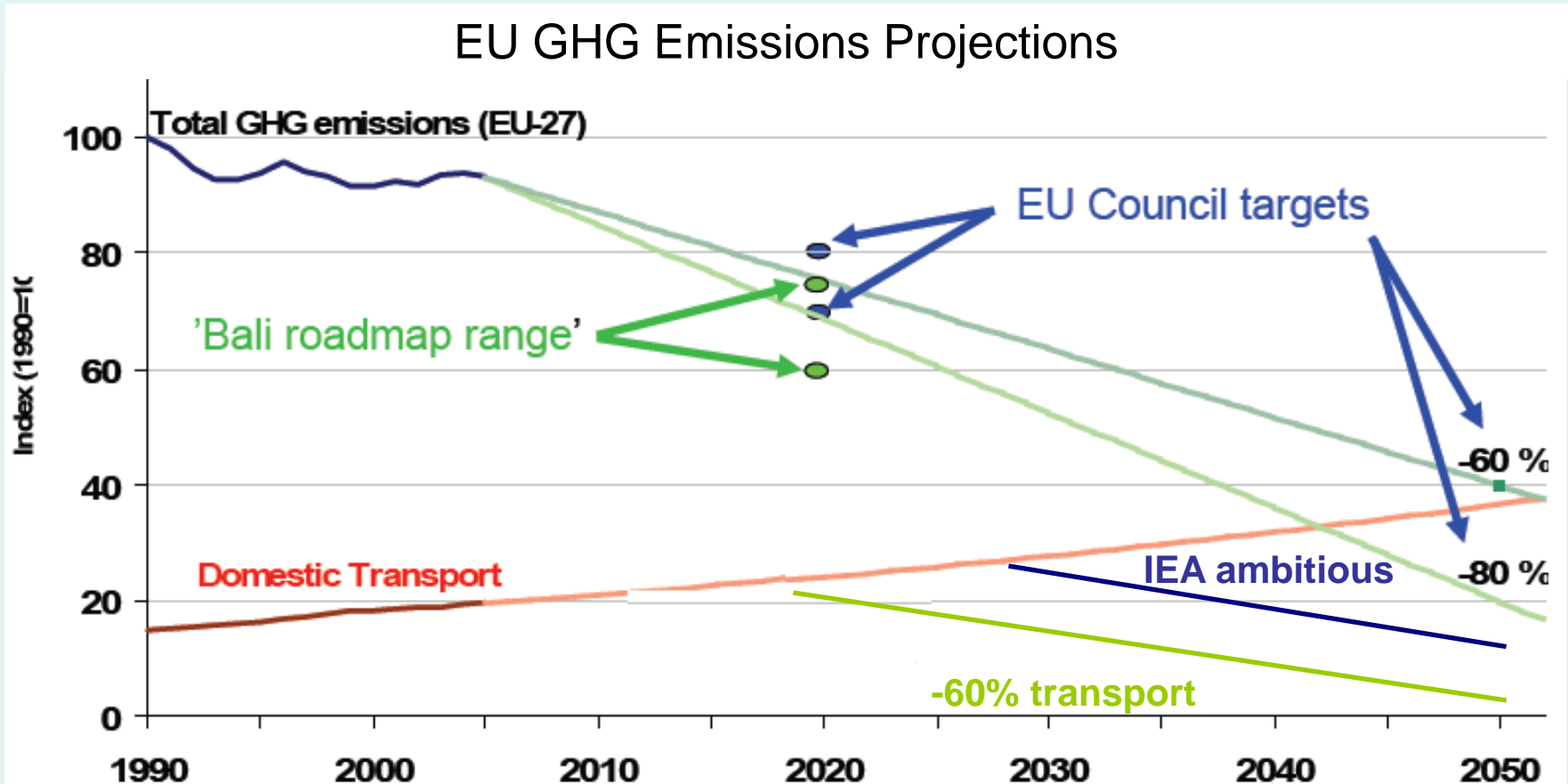
- LowCVP Annual Conference 2009: 'The Transport Challenge for Vehicles and Fuels'

Outline

- ❑ Drivers for change
 - Environmental and legislative
- ❑ The technology roadmap for low carbon light commercial vehicles
 - Cost effectiveness of technologies
- ❑ Challenges for sustainable fuels
 - Biofues / hydrogen / electricity
- ❑ Opportunities for reducing your carbon footprint today
 - Vehicle selection
 - Specification
 - Sources of information

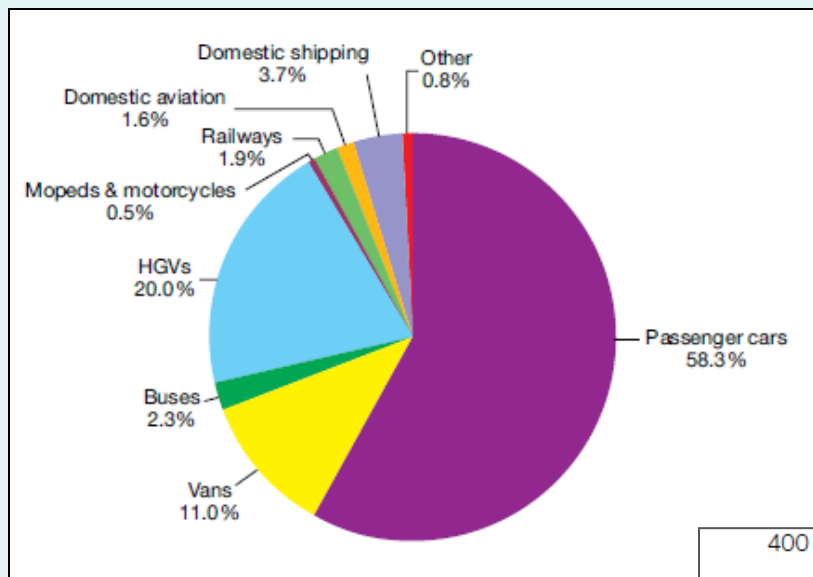


EU domestic transport emissions will consume the available CO2 budget on current trends. Even ambitious scenarios leave inadequate headroom for other sectors

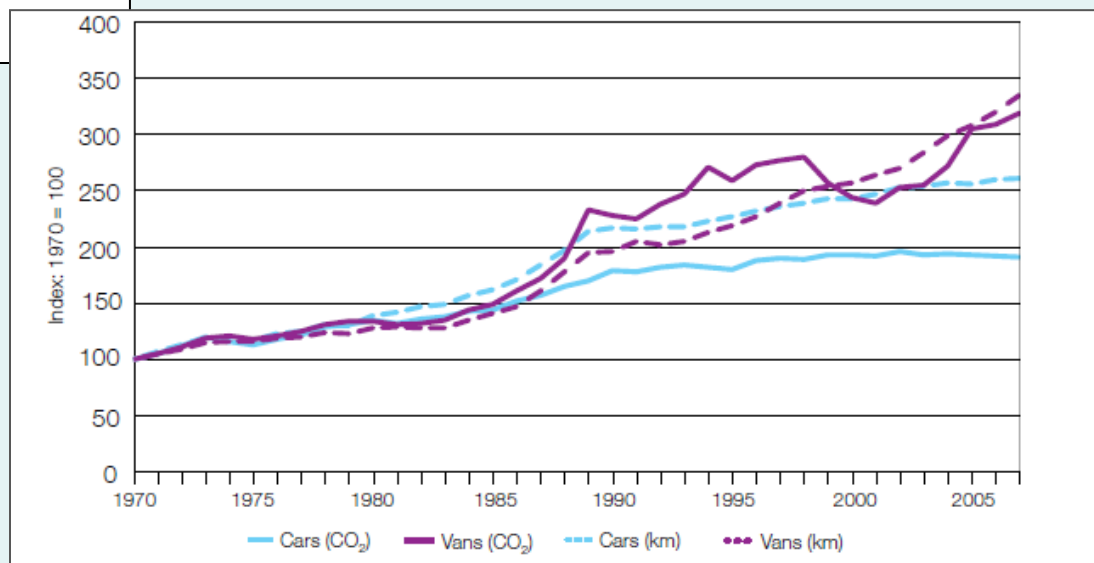


Adapted from EEA 2009 & TNO 2009

Climate Change Act 2008 requires UK to reduce emissions by 34% by 2020 and 80% by 2050 compared to 1990



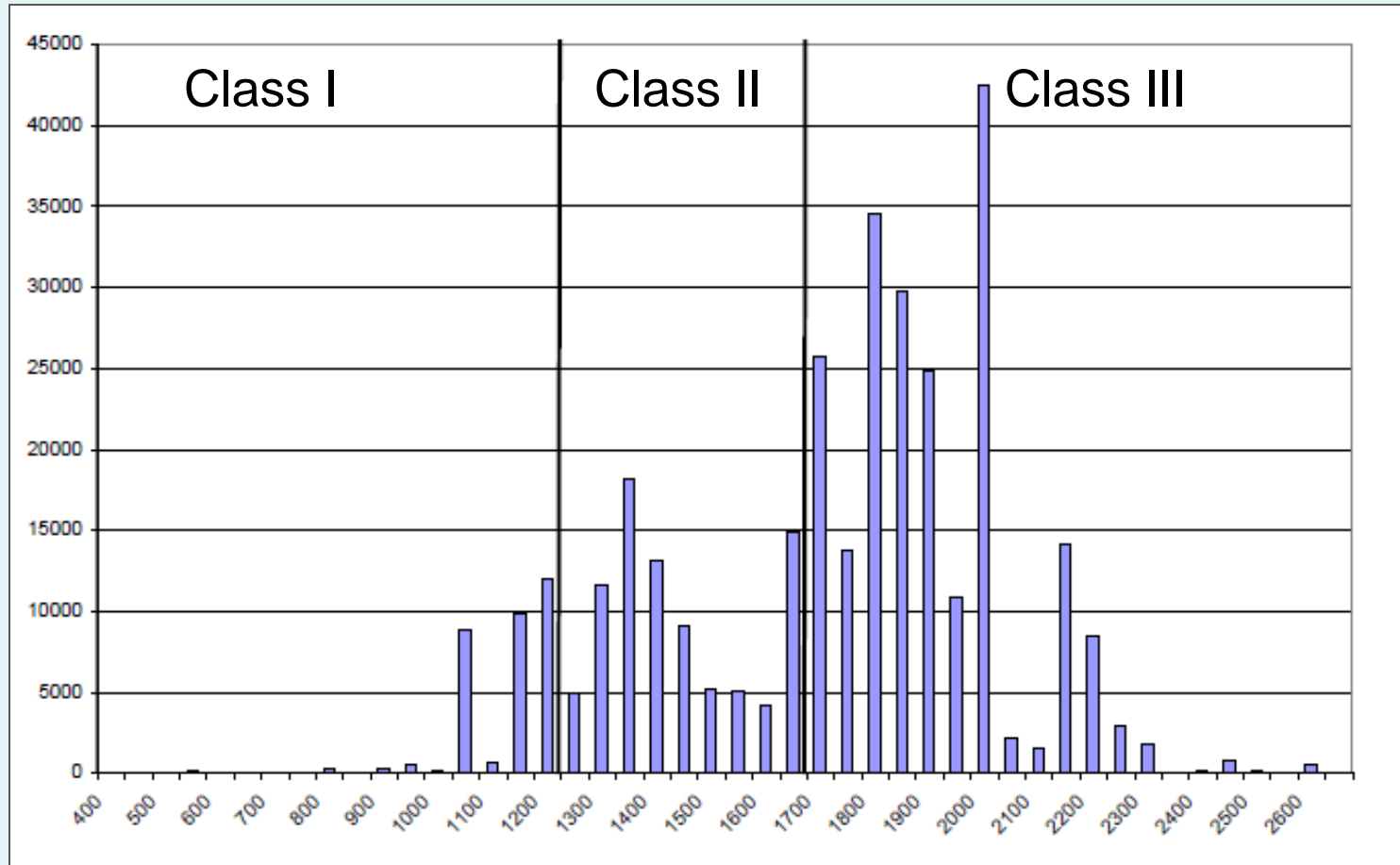
- ❑ Domestic transport accounts for 21% of UK emissions, up 12% since 1990
- ❑ Road transport accounts for 92% of UK transport emissions
- ❑ Since 1970 vehicle kilometres have trebled for both cars and vans, and van CO₂ is growing rapidly



European Commission regulating LCV CO2

- ❑ EC has published a proposal to regulate the emissions of new light commercial vehicles, in a similar manner to cars which places the obligation on the manufacturers.
- ❑ The regulation introduces mandatory targets for new LCV CO2;
 - 2016: 175 g/km
 - 2020: 135 g/km
- ❑ Penalty for non compliance 120 euros per gram per vehicle, modulated till 2018.
- ❑ Super credits for ultra low emission vehicles <50 g/km CO2
 - 2014: ultra low emission vehicle(ULEV) count as 2.5 vehicles
 - 2015: ULEVs count as 1.5 vehicles
- ❑ Eco-innovations – up to 7g/km per manufacturer from innovative technologies

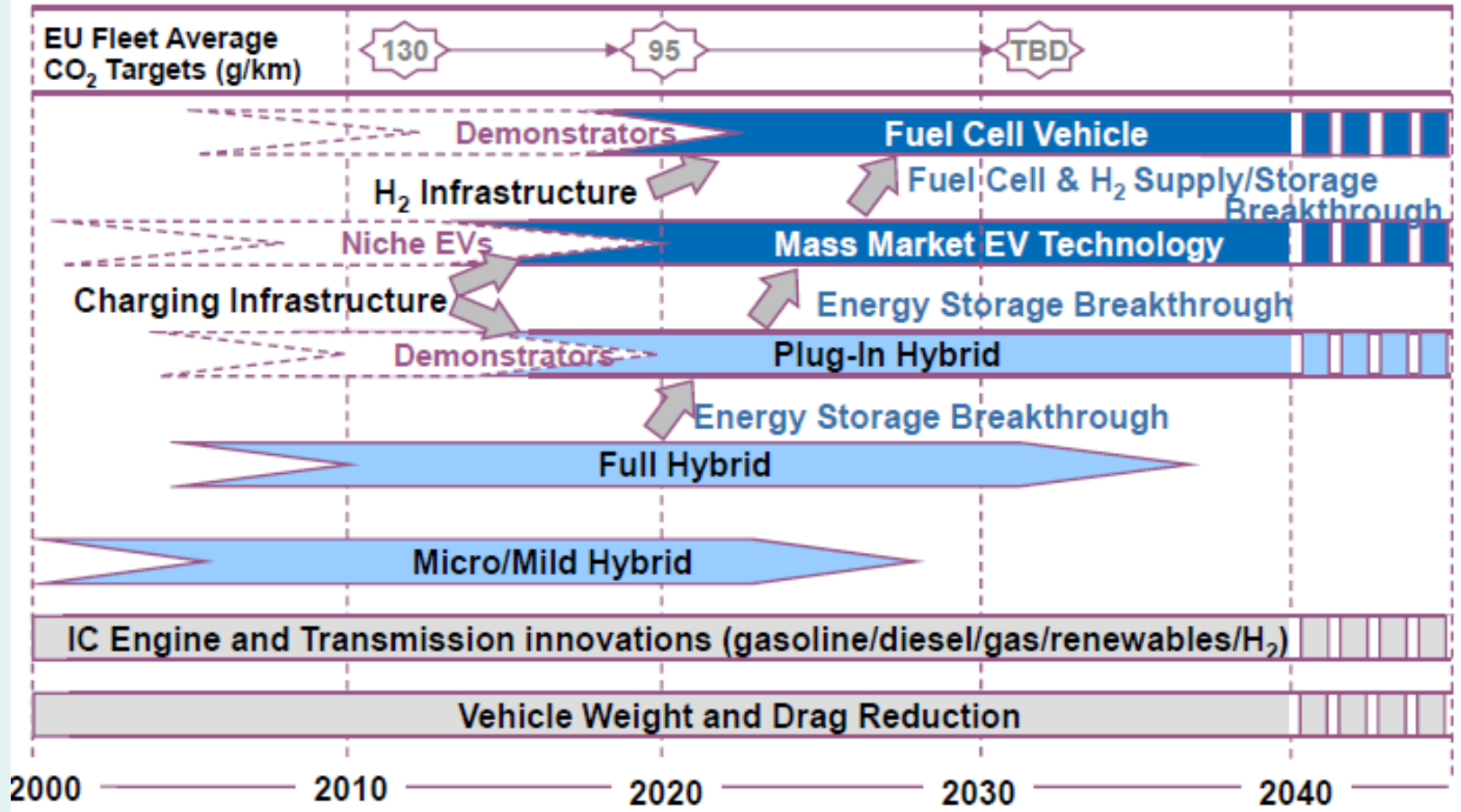
Average CO2 emissions for new LCVs is 207.6 g/km, which compares to the EU proposed target of 175 g/km by 2016 and 135 g/km by 2020



Source: AEA 2010

There is emerging consensus on the future evolution of low carbon car technologies many of which are applicable to vans

NAIGT low carbon car technology roadmap



There is global momentum towards electrification of transport

- ❑ EVs address key geopolitical concerns:
 - Climate
 - Energy security
 - Peak oil

- ❑ Early fleet interest, products viewed as sustainable, high technology and highly visible products

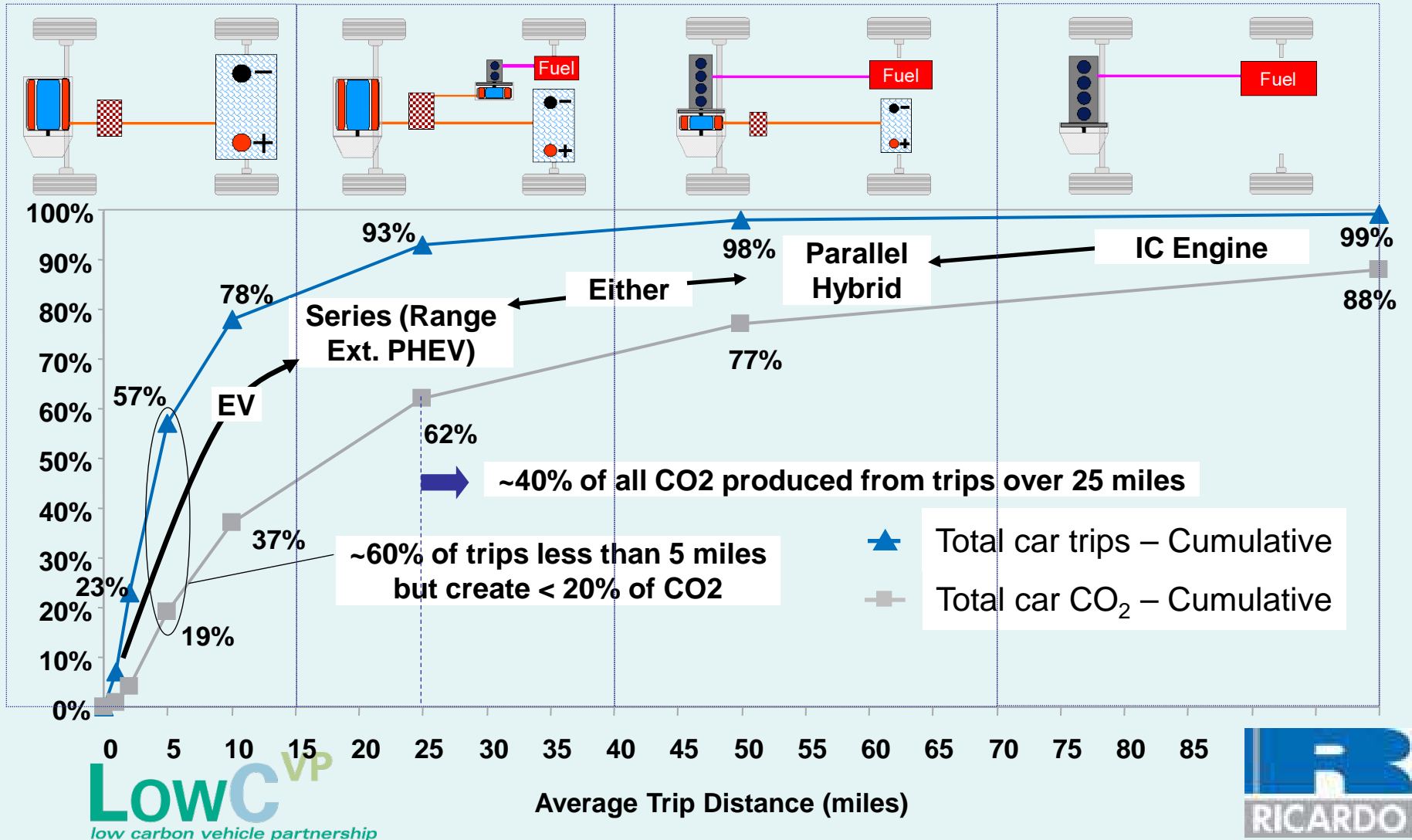
- ❑ Substantial public funding of RD&D

- ❑ Investment & commitment from global OEMs

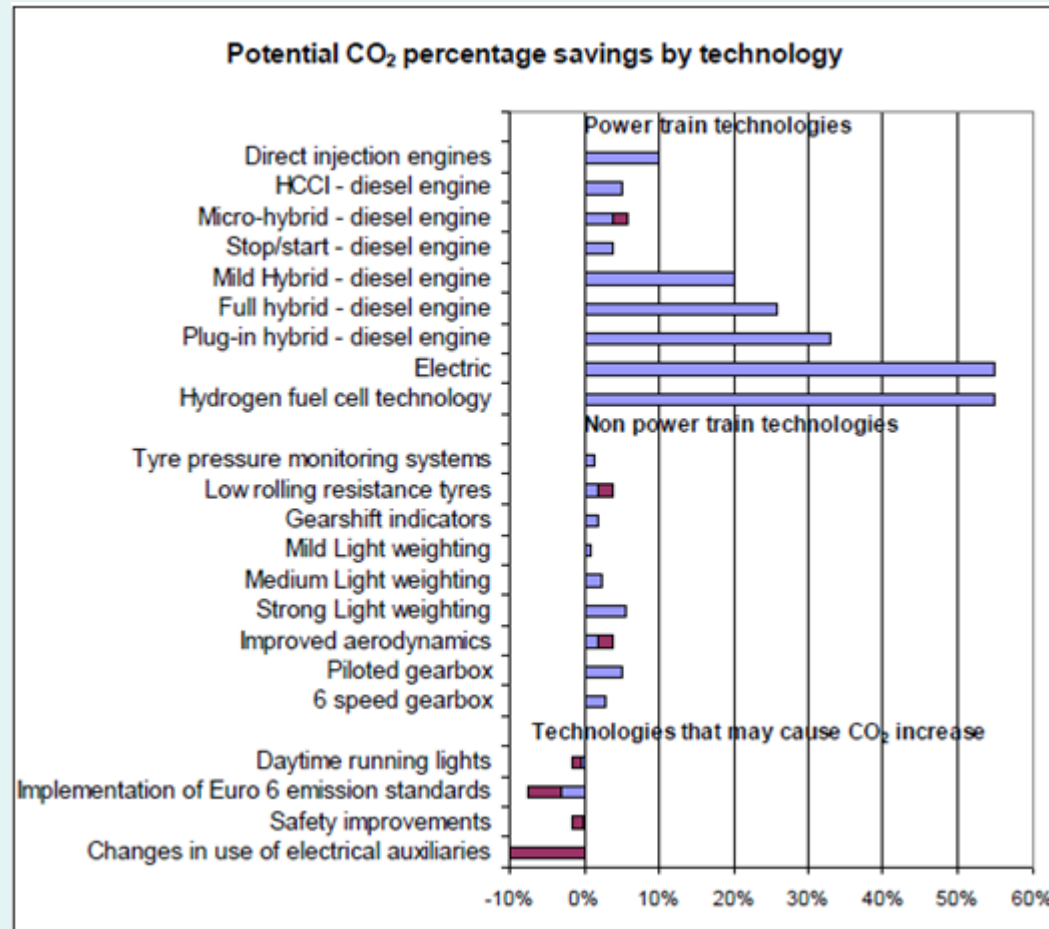
But ... electric vehicles will not be the silver bullet appropriate for all applications



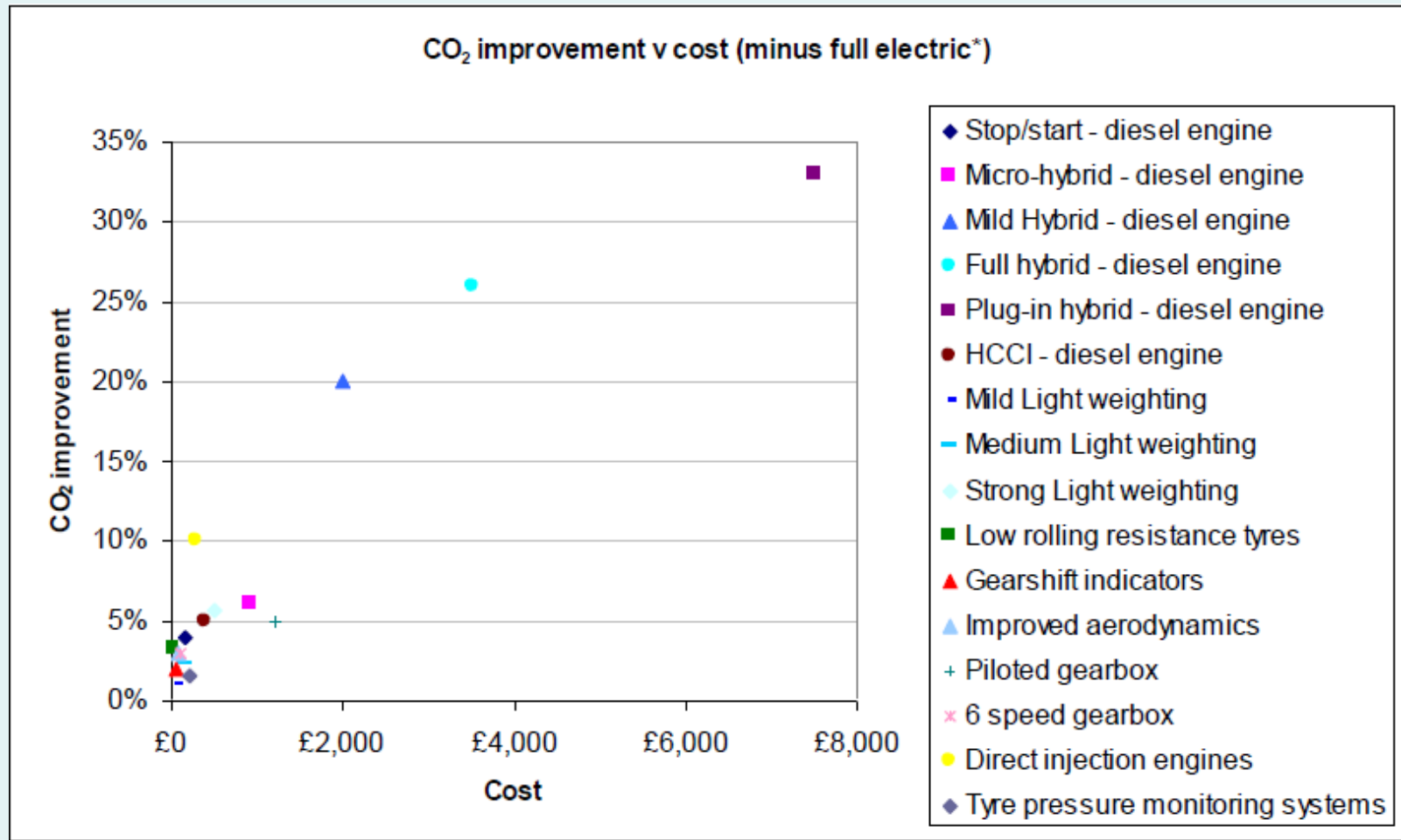
*Technology will be tailored to the application:
 EV for city use, PHEV or parallel hybrid for medium length
 journeys; IC for long journeys*



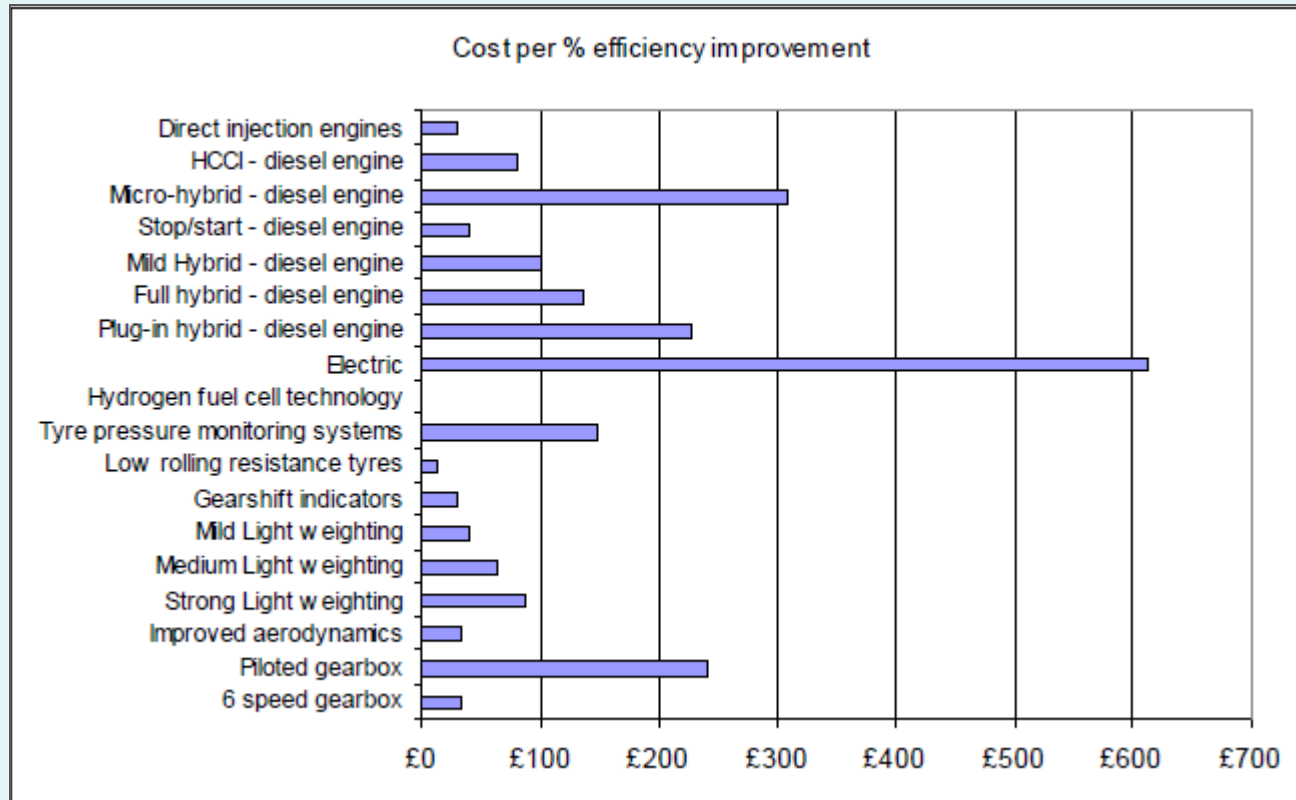
While electrification of powertrain offers the greatest potential for reductions in CO₂ in absolute terms there are a range of other technologies nearer to market.



The additional upfront cost of technologies varies considerably

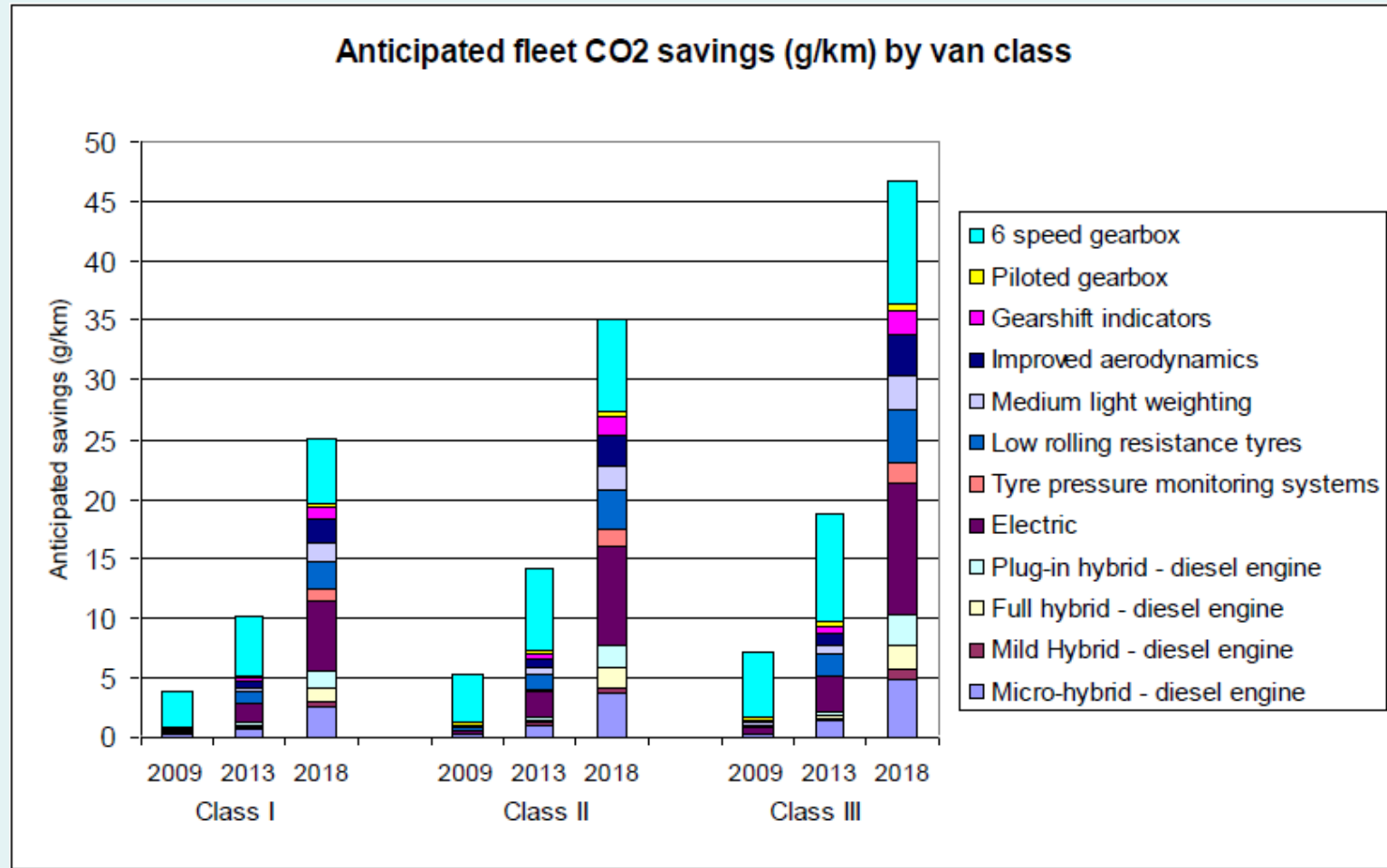


There are a range of closer to market technologies which deliver significant CO2 and fuel savings more cost effectively

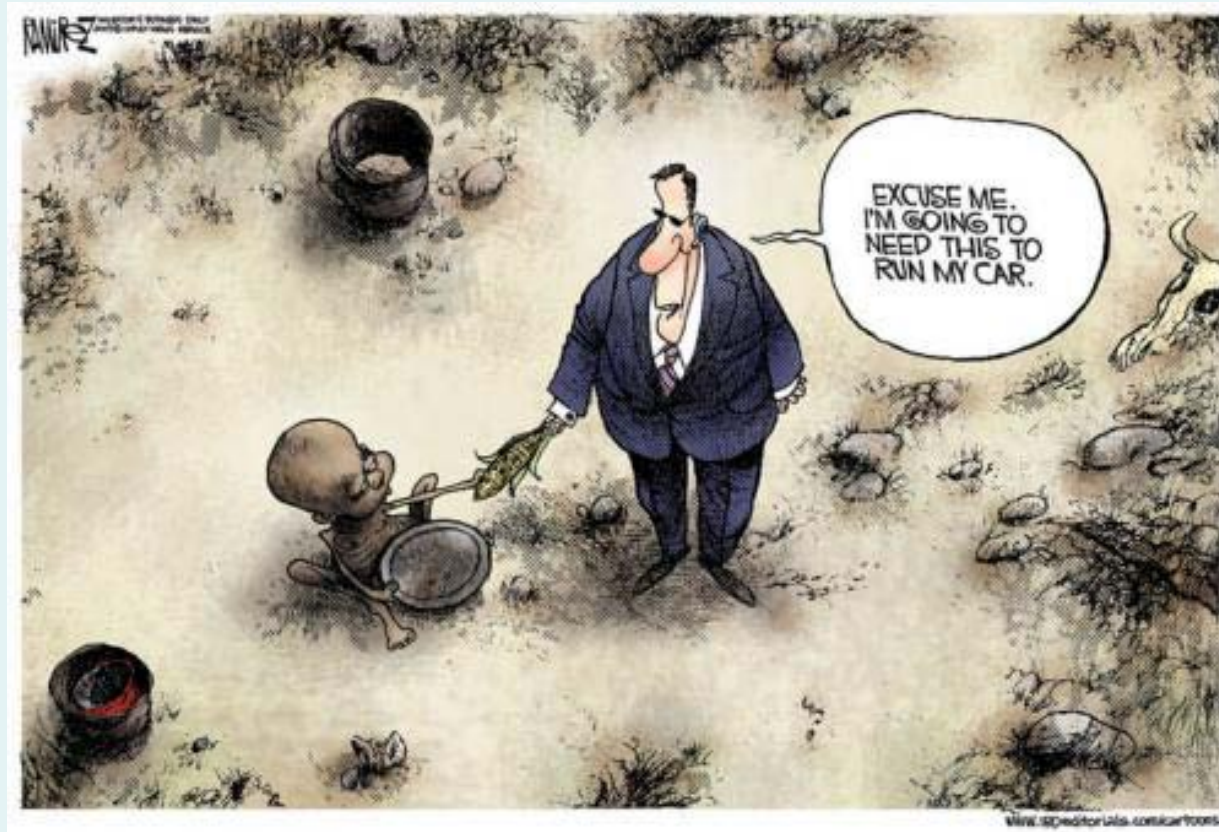


Source: AEA 2010


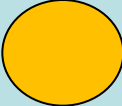
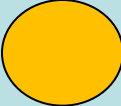
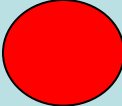





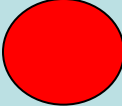




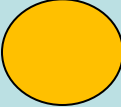
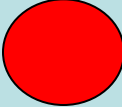




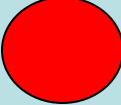
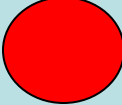







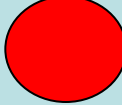
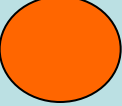





Over the next decade a range of technologies are expected to help deliver reductions in CO2 emissions



Reducing the carbon footprint of fuels is challenging



To 2020 the challenge is to ready the market for renewable fuels – but which option?

	1st G Bio	2nd G Bio	H2-IC	H2-FCV	Bio- CH4	EV
Technology readiness						
Cost competitiveness						
Vehicle availability						
Infrastructure deployment						
Driver acceptability						
Sustainability						

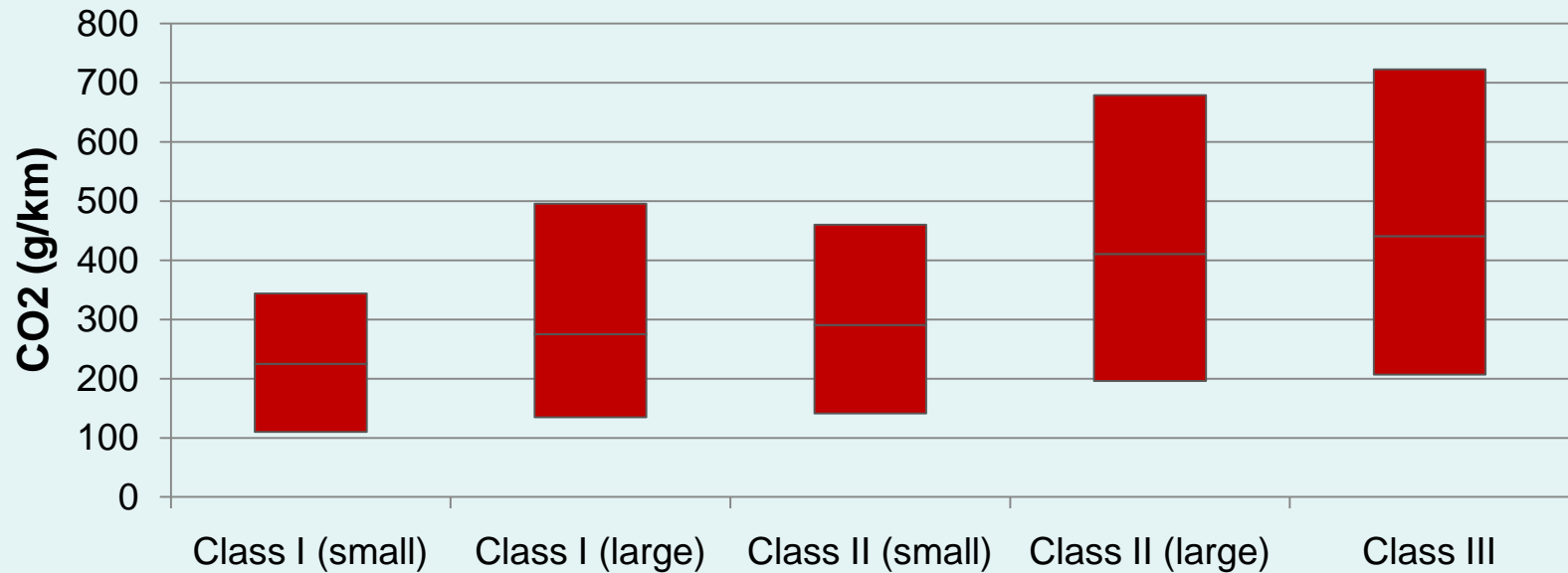
NB: The relative scores do not represent LowCVP policy

Five recognisable vehicle types sold in the UK light commercial vehicle market

Name	Reference mass	Class, as defined for EU emissions standards	Payload mass	Payload volume
Small car derived vans	≤1,305 kg	Class I	≤ 600 kg	≤ 1.5 m ³
Larger car derived vans	≤1,305 kg	Class I	> 600 kg	> 1.5 m ³
Smaller Class II vans	1,305 – 1,740 kg	Class II	≤ 1,000 kg	≤ 3 m ³
Larger Class II vans	1,305 – 1,740 kg	Class II	> 1,000 kg	> 3 m ³
Large vans	> 1,740 kg	Class III	Any	Any

- ❑ Class I vans divided into two groups;
 - Payload mass up to 600kg, payload volume 1m³
 - Payload mass 700kg, payload volume 2.5m³
- ❑ Class II vans divided into two groups;
 - Payload mass less than 800kg
 - Payload mass more than 1,100kg
- ❑ Class III no grouping in the vehicles sold

Choosing best in class offers significant opportunities to reduce carbon footprint now



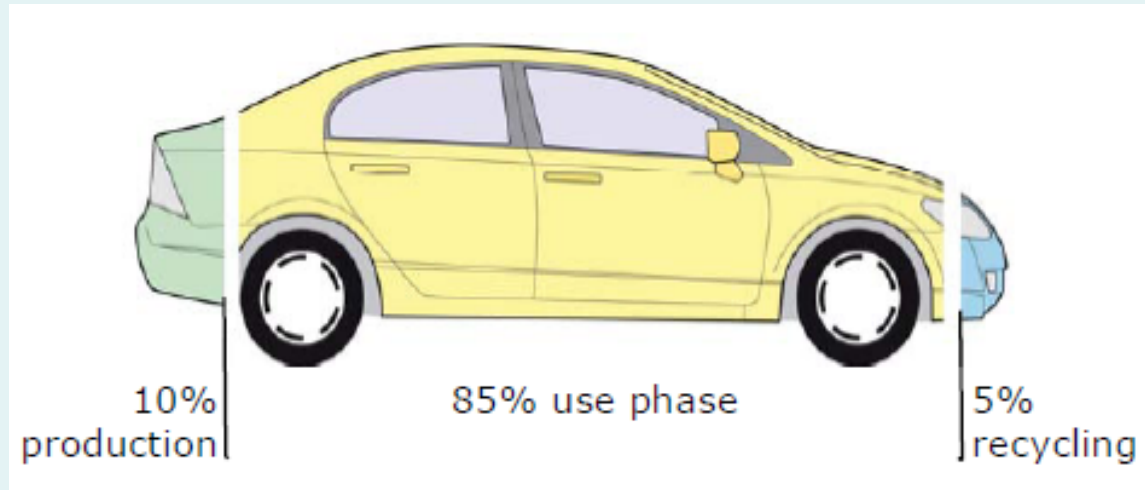
Vehicle type	Min CO2	Ave CO2	Min v Ave
Class I (small)	111	115	-3.5%
Class I (large)	135	139	-2.9%
Class II (small)	141	151	-6.6%
Class II (large)	196	216	-9.3%
Class III	207	234	-11.5%

What thresholds might you use to specify a low carbon van?

Van Group	CO2 for Best Decile (g/km)	Ave CO2 for whole group (g/km)	Potential threshold (g/km)
Class I (small)	111	115	110
Class I (large)	135	139	135
Class II (small)	142	151	142
Class II (large)	196	216	196
Class III	207	234	207

- ❑ Proposed European van CO2 regulation would imply an improvement in CO2 thresholds of x% per annum.
- ❑ The proposed thresholds for low carbon vans is based upon a tailpipe definition.
- ❑ The introduction of plug-in hybrids, electric, high blend biofuels and biogas could deliver significant reductions but on a WTW basis.

Increasingly whole life cycle emissions will need to be considered to assess your fleets carbon footprint



- ❑ Most CO2 emissions come from the use phase of the vehicles life cycle.
- ❑ While in use CO2 emissions have been reducing, the proportion has stayed stable due to improvements in energy management in the other phases.
- ❑ The introduction of technology advanced vehicles will increase CO2 emissions from production and end of life in future.

Most fuel efficient / low carbon light commercial vehicles available via Business Link and VCA websites



RIGHT VAN MAN

save fuel – save CO₂ – save money





www.vca.gov.uk

SMMT support

ACT ON CO₂

www.direct.gov.uk

www.smmt.co.uk

[Van Home](#) | [Download Data](#) | [Manufacturers](#) | [Exit to Business Link](#)

Vehicles

Filter Options

Use the drop-down options below to narrow down the list of available vehicles. **Changing any one of these options will automatically reset the table of results**

Manufacturer: All	Model: All	Fuel Type: All
Gearbox: All	Vehicle Load Length: All	Euro Standard: All
CO ₂ : All	Vehicle Type: Small Van	

Showing vehicles in Small Van group

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81 items in 9 pages

Make	Model	Vehicle Name	Fuel Type	Engine Size (cc)	Transmission	Load Length (Metres)	Gross Weight (kg)	Urban mpg	Extra Urban mpg	Combined mpg	CO ₂ g/km	
View	Ford	Fiesta	Panel Van - 1.6 Duratorq TDCi Diesel +DPF (ECONetic)	Diesel	1560	Manual	1.5	1530	61.4	88.3	76.3	98
View	Ford	Fiesta	Panel Van - 1.6 Duratorq TDCi Diesel +DPF (ECONetic)	Diesel	1560	Manual	1.5	1530	61.4	88.3	76.3	98
View	Ford	Fiesta	Panel Van - 1.6 Duratorq TDCi Diesel +DPF	Diesel	1560	Manual	1.5	1550	57.6	78.5	68.9	107
View	Ford	Fiesta	Panel Van - 1.4 Duratorq TDCi Diesel	Diesel	1399	Manual	1.5	1535	53.3	80.7	67.3	110

CO₂ figures for unladen LCVs

Vehicle and fuel technology

- ❑ CO2 emissions from vans needs to be tackled
- ❑ Electrification of transport will be developed
- ❑ Biofuels likely to play a role although sustainability issues to be addressed
- ❑ Different technologies better suited to different applications
- ❑ Potential to significantly reduce CO2 emissions and cut costs through better vehicle selection now



Thank you for your
attention

Any Questions?

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The Low Carbon Vehicle Partnership

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