

Alternative Fuels for Vans and Trucks

Waterfront – An Inconvenient Truck

25th February 2009

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Low Carbon Vehicle Partnership

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

Stimulating opportunities for UK businesses

LOWC^{VP}
low carbon vehicle partnership

LowCVP 'Low Carbon Road Transport Challenge'

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

June 2006



Fuel Economy	Low Carbon Car												
<p>CO₂ emissions figure (g/km)</p> <ul style="list-style-type: none"> <100 A 101-120 B 121-150 C 151-180 D 181-225 E 226-275 F 276+ G 	B 117 g/km												
<p>Fuel cost (estimated) for 12,000 miles</p> <p>VED for 12 months</p>	<p>£662</p> <p>£50</p>												
<p>Environmental Information</p> <p>A guide on fuel economy and CO₂ emissions which contains data for all new passenger car models is available at any point of sale free of charge. In addition to the fuel efficiency of a car, driving behaviour as well as other non-technical factors play a role in determining a car's fuel consumption and CO₂ emissions. CO₂ is the main greenhouse gas responsible for global warming.</p>													
<p>Make/Model: Low Carbon Car</p> <p>Fuel Type: Diesel</p> <p>Drive Cycle:</p> <table border="1"> <thead> <tr> <th>Drive cycle</th> <th>Litres/100km</th> <th>Mpg</th> </tr> </thead> <tbody> <tr> <td>Urban</td> <td>5.4</td> <td>53.3</td> </tr> <tr> <td>Extra-urban</td> <td>3.8</td> <td>74.2</td> </tr> <tr> <td>Combined</td> <td>4.4</td> <td>64.2</td> </tr> </tbody> </table>	Drive cycle	Litres/100km	Mpg	Urban	5.4	53.3	Extra-urban	3.8	74.2	Combined	4.4	64.2	<p>Engine Capacity (cc): 1996</p> <p>Transmission: 5 speed manual</p>
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Combined	4.4	64.2											
<p>Carbon dioxide emissions (g/km): 117 g/km</p> <p>Important note: Some specifications of this make/model may have lower CO₂ emissions than this. Check with your dealer.</p>													

LowC^{VP} marketing challenge

CARS NOT CARBON

A competition to promote a greener motoring marketing

Event outline

Winners to be announced at the LowCVP Annual Conference 28th June 2007 DTI Conference Centre, Westminster

Accelerating the shift to low carbon vehicles and fuels



LowC^{VP} Accelerating the Shift to Low Carbon Vehicles and Fuels

Welcome

LowC^{VP} is a partnership of nearly 200 organisations from the automotive and fuel industries, the environmental sector, government, academia, motor club groups and other organisations with a shared interest in low carbon vehicles and fuels.

Latest news

LowC^{VP} Annual Conference 2007 [agenda announced](#) 17/05/2007

The LowC^{VP} 5th annual conference on 28th June will feature a high profile line up of speakers including Transport Secretary Douglas Alexander and will set out some of the key challenges facing the UK in its drive to reduce CO₂ emissions and improve air quality.

Subjecting representatives of LowC^{VP} Conference 2007 17/05/2007

There was a limited number of places for the address at the LowC^{VP} annual conference which will be held on 28 June in central London. The event, which has been fully booked, will feature a number of speakers and a panel discussion on the challenges facing the UK in its drive to reduce CO₂ emissions and improve air quality.

Government and the Low Carbon Transport Revolution 08/05/2007

Transport Secretary Douglas Alexander has announced that the LowC^{VP} will be the focus of a new report in the Energy White Paper. The LowC^{VP} will also be featured prominently through which

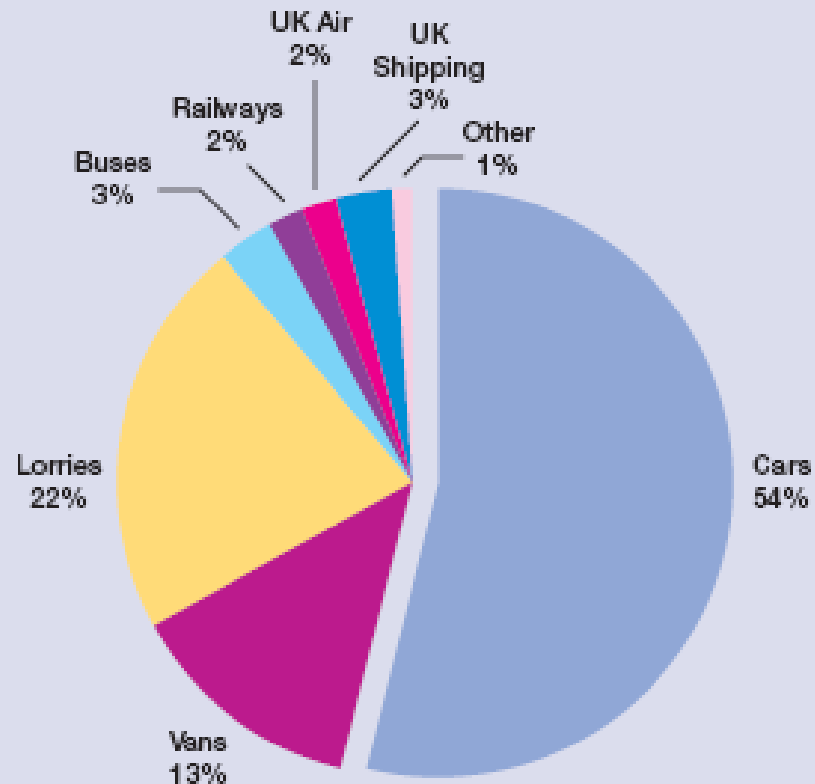
Scope

- ❑ CO2 regulation of vans and trucks
- ❑ Alternative fuel options
- ❑ Practical options for today
- ❑ Why act now?



Lorries and Vans represents 35% of UK transport sector emissions

UK transport sector carbon emissions by mode 2005 by source (excluding international aviation and shipping)



EU regulation of all transport emissions is inevitable – supported by tax differentials for low carbon vehicles

Cars

- 1997 Car Voluntary Agreement
- 2008 Car regulation



Fuels

- 2003 Biofuels Directive
- 2008 Renewable Energy Directive
- 2008 Fuel Quality Directive



Vans

- 2004 Measurement of carbon dioxide emissions and fuel consumption of N1 vehicle
- 2009 Van CO2 regulation proposals


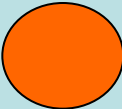
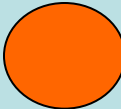
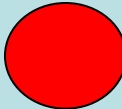

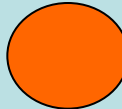

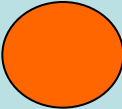
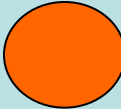
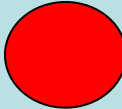
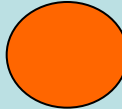
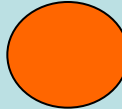


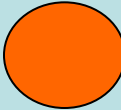
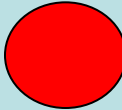
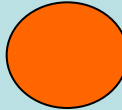
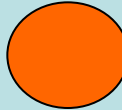


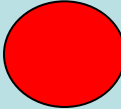
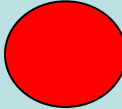
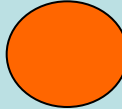
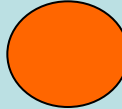


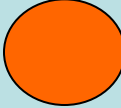
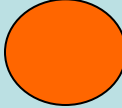

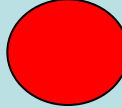
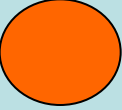
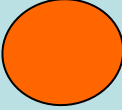
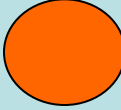





Trucks

- 2011? Truck CO2 emission regulations
- 2018? Transport within EU emissions Trading Scheme



*There are issues with all alternative fuels
but opportunities exist in specific niche sectors*

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

Principal alternative fuel options for trucks and vans

Trucks

Vans

Biodiesel



Biomethane

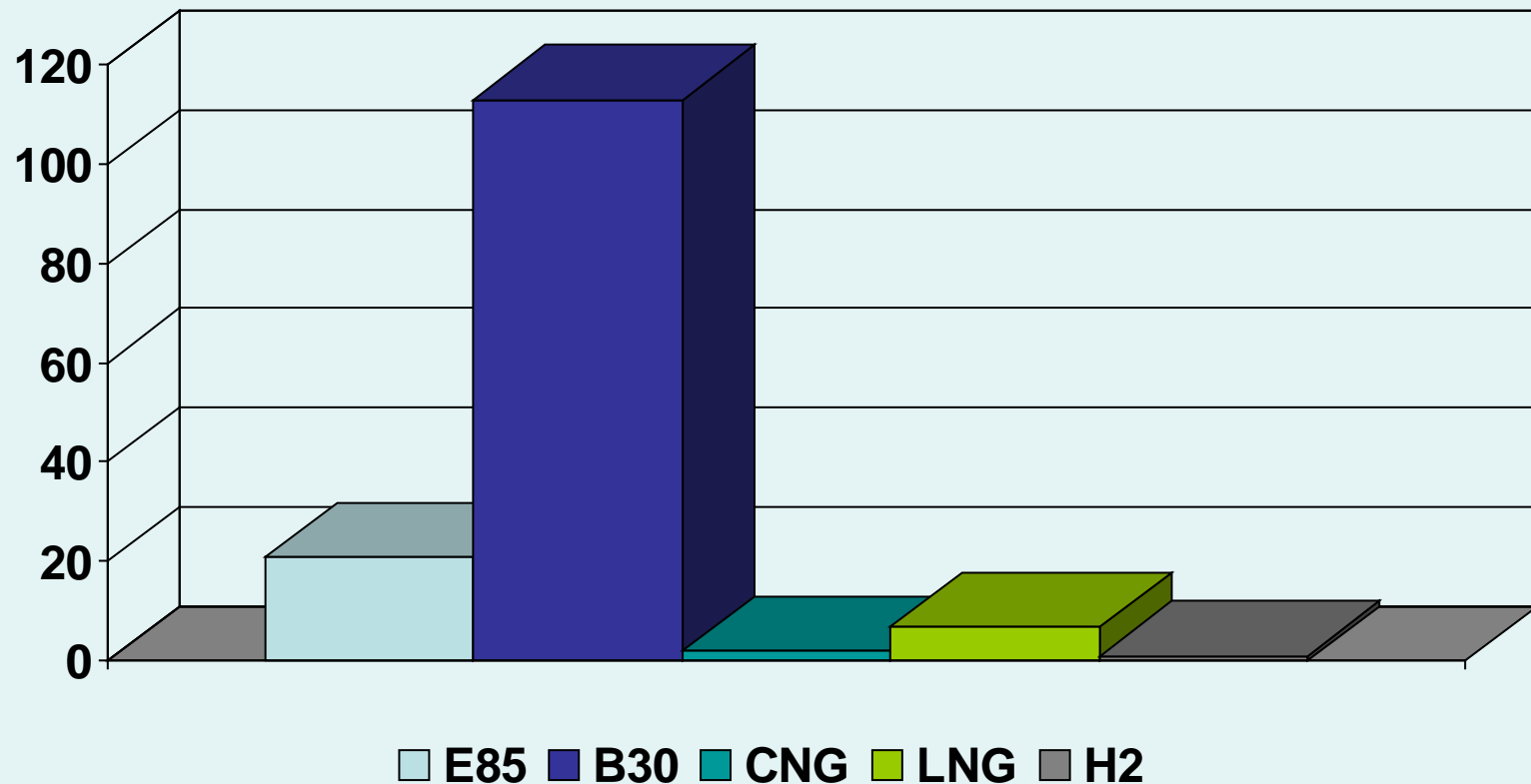


Electric



*Current UK infrastructure for alternative fuels is minimal
-limiting use to return to base operations for most fuels*

UK Refueling Stations



Electric vans & trucks

- ❑ Low carbon – even charged from grid
- ❑ Low running and maintenance costs
 - 4p/mile (diesel 12p/mile)
- ❑ Limited, but growing model choice
 - Modec, Smith, Mega + others
- ❑ Range
 - c100miles
- ❑ High purchase cost
 - X2.5 diesel equivalent
 - Options to lease battery
- ❑ Simple infrastructure
 - 8 hours recharging
- ❑ Quiet, zero emission in use, high profile
- ❑ Low charges



Biomethane

- ❑ Carbon-neutral
- ❑ Low running costs
- ❑ Limited but growing range of NG vans
 - Caddy (VW), Sprinter (Merc), Daily (Iveco)
- ❑ RH drive trucks now becoming available
 - Econic (Merc),
- ❑ Dual-fuel options
 - Hardstaff, Cleanair Power
- ❑ Limited infrastructure
 - Dual fuel options or depot refuelling
- ❑ High purchase cost
 - +c£20k truck



Biodiesel

- ❑ Lower carbon
- ❑ Limited but growing range of warranted vehicles
 - Trucks - Renault, DAF + others
 - Vans - Vauxhall, PSA + others
- ❑ Fuel quality is essential
 - EN41214
- ❑ Limited infrastructure (bunkered fuel desirable) simple refuelling
- ❑ Minimal purchase increment
- ❑ Potential issues in unsuitable vehicles
- ❑ Buy sustainable fuel – good GHG-savings, sourced responsibly



In conclusion

- ❑ Vans and trucks emit over a quarter of UK transport CO2 emissions
- ❑ Proposals for regulation of van CO2 expected this year – trucks will follow
- ❑ For commercial vehicles the best current options are: B30 biodiesel, biomethane or electric vehicles
- ❑ Fit the vehicle to the application
- ❑ Don't be discouraged by past-experience – new vehicles and fuels are fit-for-use
- ❑ Consider other ways to reduce CO2 emissions
 - Stop-start
 - Low rolling resistance tyres
 - Driver training
 - Route planning
 - Speed management

In Mahatma Gandhi's words:

*"Be the change you want to see
in the world"*

Any Questions?

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