

Car CO2 taxation and it's impact on the British car fleet

**Ministry of Industry and Information Technology
International Council on Clean Transportation
Vehicle Fuel Consumption Regulation and Fiscal
Policy Workshop**

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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

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

Fuel Economy	Low Carbon Car
<100	B 107 g/km
101-120	
121-140	
141-160	
161-180	
181-220	
>220	

Fuel used (predicted) for 1000 miles

£662

VED for 12 months

£50

LowCVP

Accelerating the Shift to Low Carbon Vehicles and Fuels

Low Carbon Transport Innovation Strategy

LowCVP

Equipping with mercury microscope

ACT ON CO₂

Future events

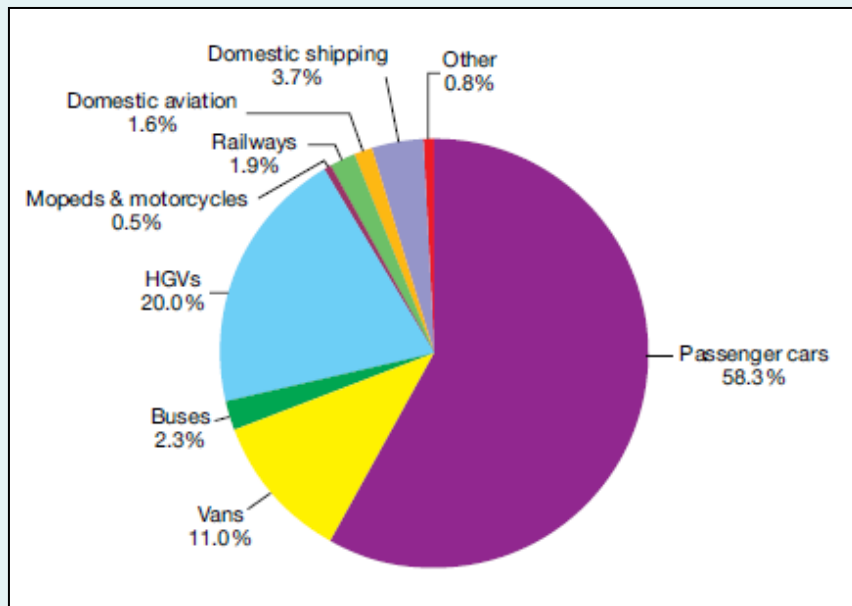
LowCVP Annual Conference 2009 'The Transport Challenge for Vehicles and Fuels'

EU new car CO2 regulation is supported by UK car tax policy but there is no direct link

- ❑ The European Union regulation of new car CO2 emissions sets targets for average new car CO2:
 - 2015 target of 130g/km
 - 2020 target of 95g/km (subject to impact assessment)
- ❑ The target is pan-European per manufacturer.
- ❑ EU has no tax raising powers so tax policy to support the target has to be implemented at Member State level.
- ❑ UK government does not have a specific target for new car CO2 or for CO2 from transport as a whole.
 - UK car tax has been designed to support EU target
 - Range of incentives intended to encourage introduction of new low carbon technology

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

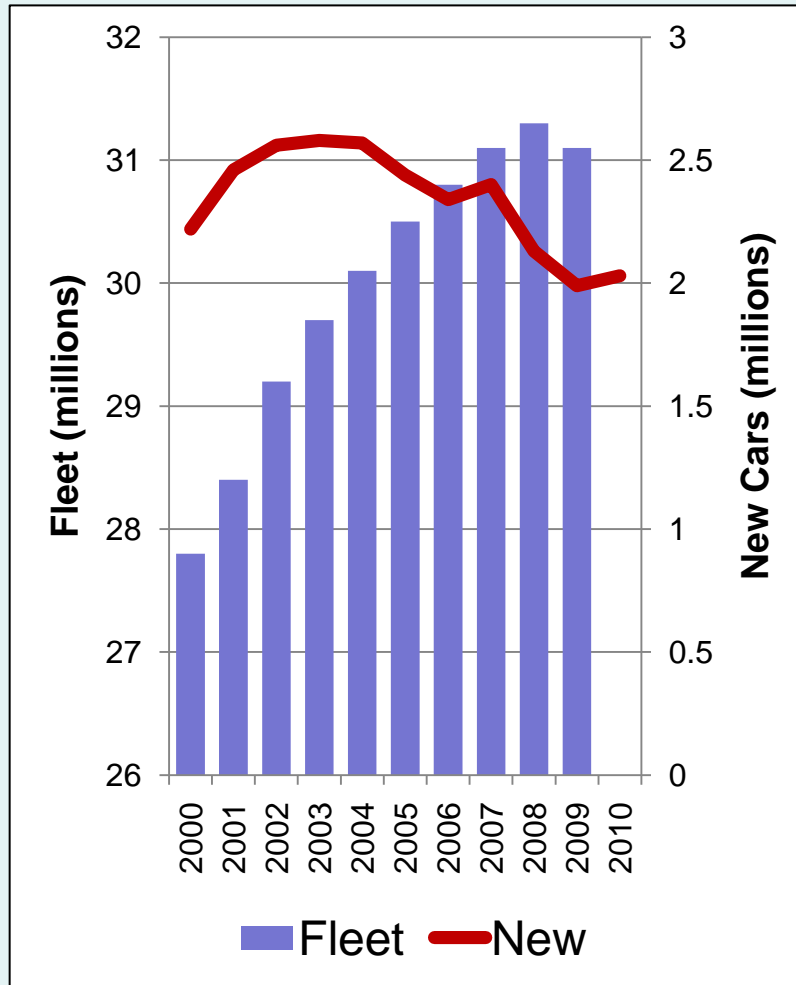
CO2 emissions from transport in UK



Source: DfT 2009

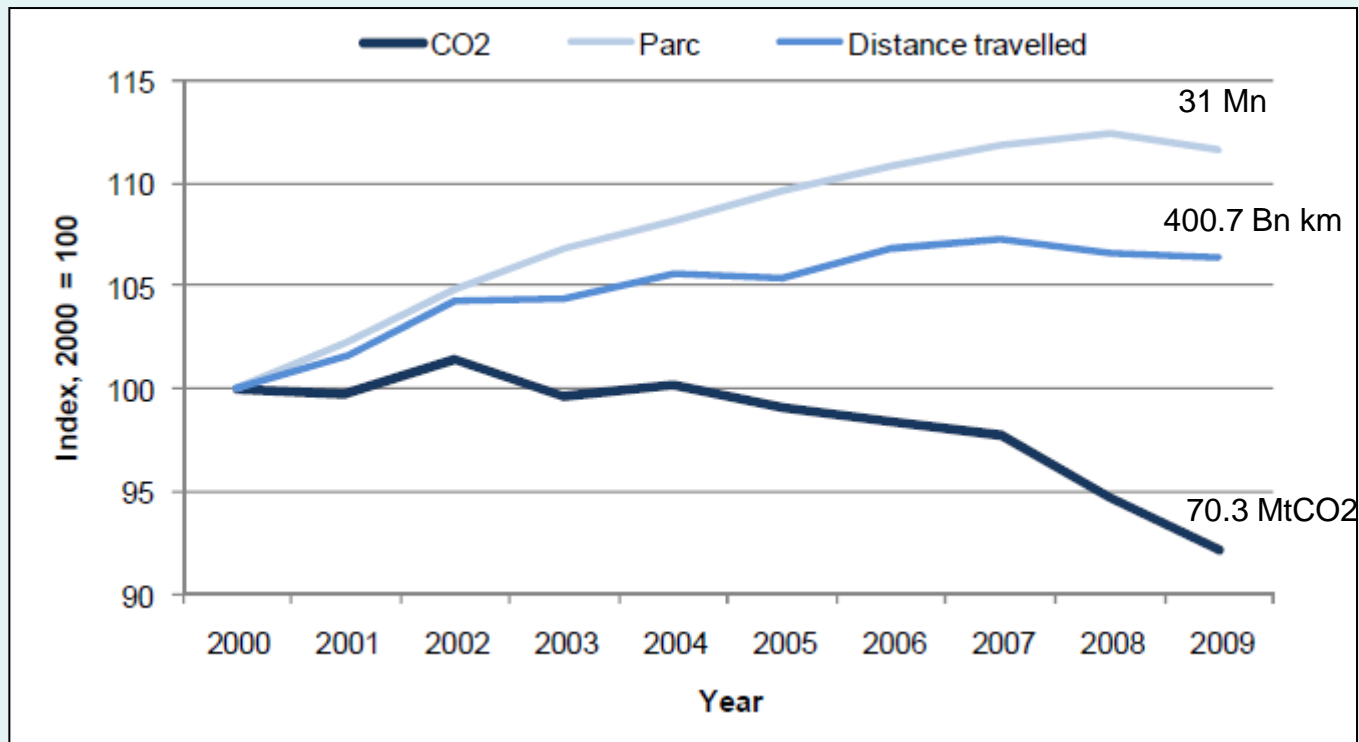
- ❑ Domestic transport accounts for 21% of UK emissions, which have risen 12% since 1990.
- ❑ Road transport accounts for 92% of UK transport emissions.
- ❑ Passenger cars account for more than half of all CO2 from road transport and 13% of total UK emissions.

UK car fleet and new car market are currently contracting due to recession



- ❑ UK fleet is 31m cars, with a new car market of around 2m cars per year.
- ❑ Average car life is 13.2 years.
- ❑ Majority of new car sales in 2010 were to businesses (60%) with private sales hit by recession.
- ❑ Petrol market share has reduced from 85.9% in 2000 to 52.8% by 2010.

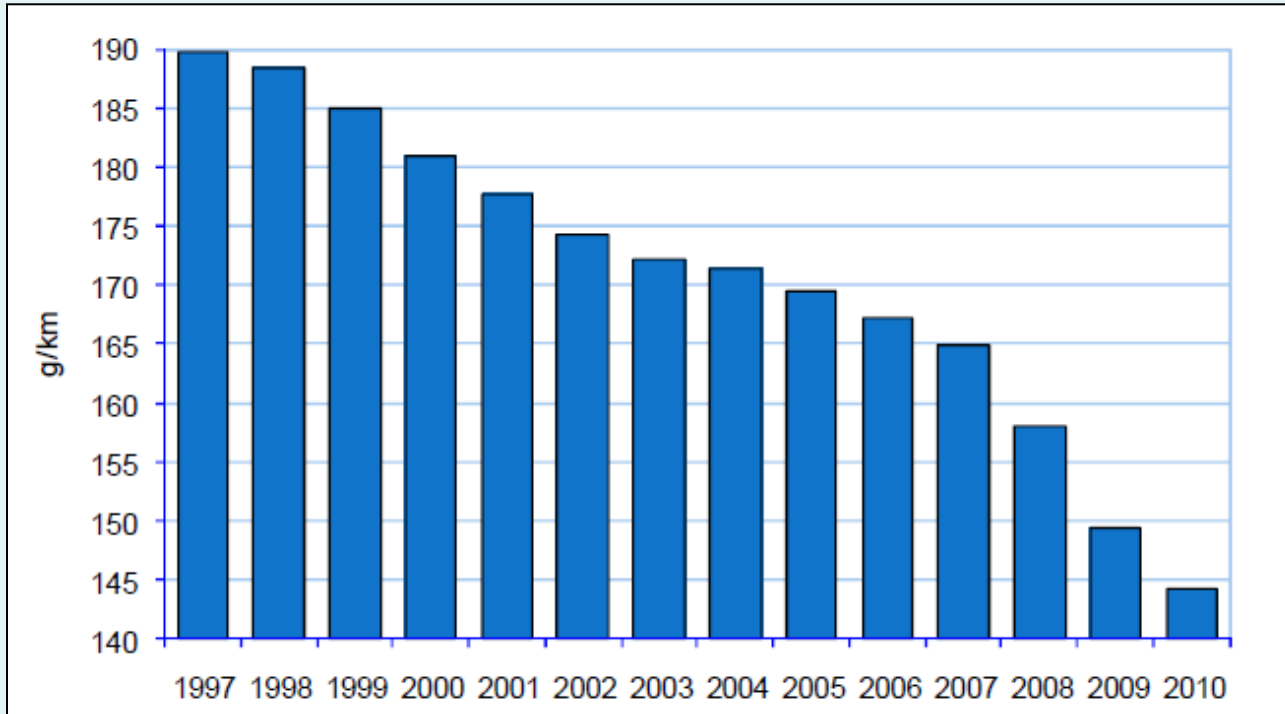
Total CO2 emissions from cars in the UK has been declining in recent years to 70.3 MtCO2.



The reduction in total CO2 emissions from cars has been due to:

- ❑ New more fuel efficient cars, and
- ❑ Plateau in the growth of the car fleet and distance travelled.

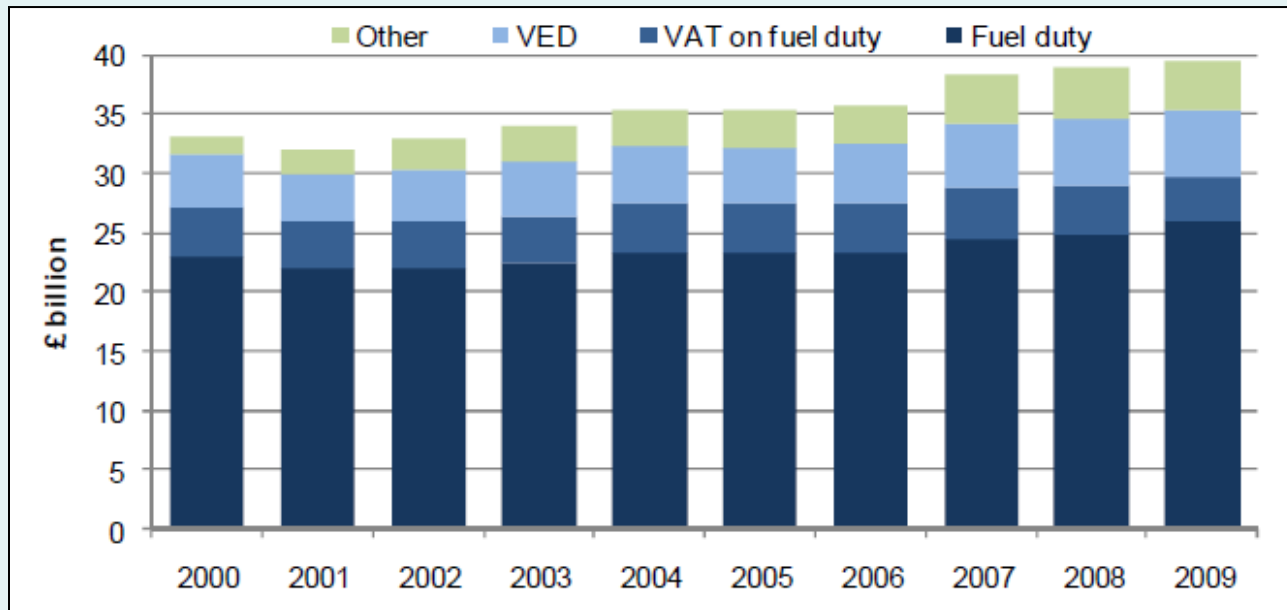
In 2010 new car CO2 emissions had reduced to 144.2 g/km, 20% reduction since 2000



Main influences on emission reduction:

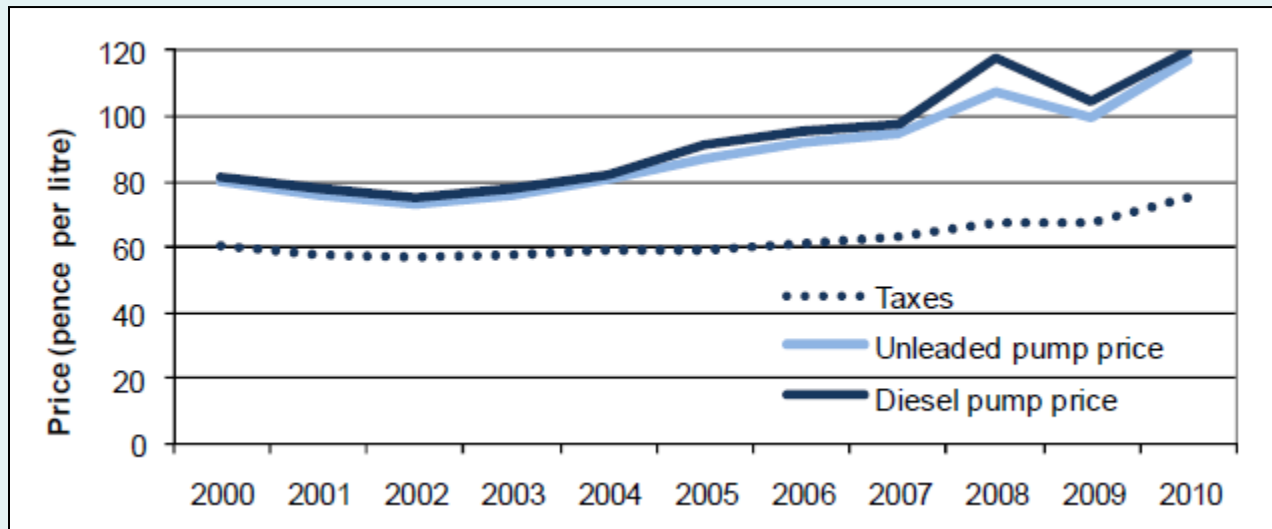
- Economic situation and recent recession.
- UK car tax policy.
- European Car CO2 regulation.
- Higher fuel prices

There are 3 primary taxes influencing car CO2. Revenue from these taxes on cars has risen significantly during last decade.



- ❑ The UK has the highest fuel duty in the EC, currently tax makes up 65% of petrol and diesel pump prices.
- ❑ Vehicle Excise Duty (VED) was moved to a CO2 basis in 2001 and has been revised and rationalised since then.
- ❑ Company Car Tax was moved to a CO2 basis in 2002.

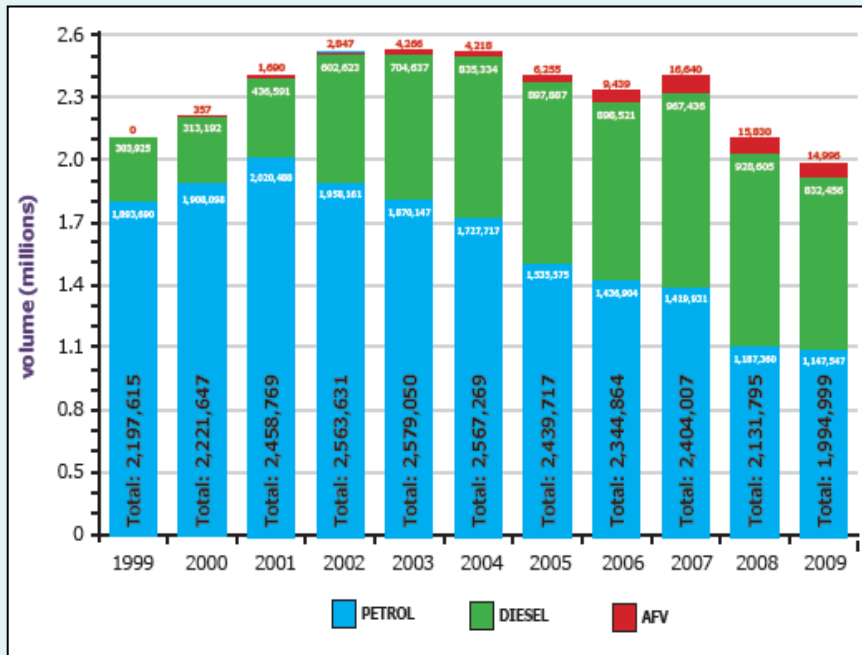
Fuel prices in UK are amongst highest in Europe due to fuel price escalator policy in 1990s



- ❑ Fuel prices, including tax, higher than £1.20 per litre, up 14% since 2000 in real terms.
- ❑ Fuel taxes in 2000 were at a high of 76% of pump price after increases in 1990s, before being reduced as a result of public protests.
- ❑ Petrol and diesel tax has been harmonised reducing diesel cars running cost.
- ❑ Further fuel duty increases are planned 2011-14 but are under pressure already.

The harmonisation of fuel duty for petrol and diesel has helped increased diesel market share

UK new car sales by fuel type



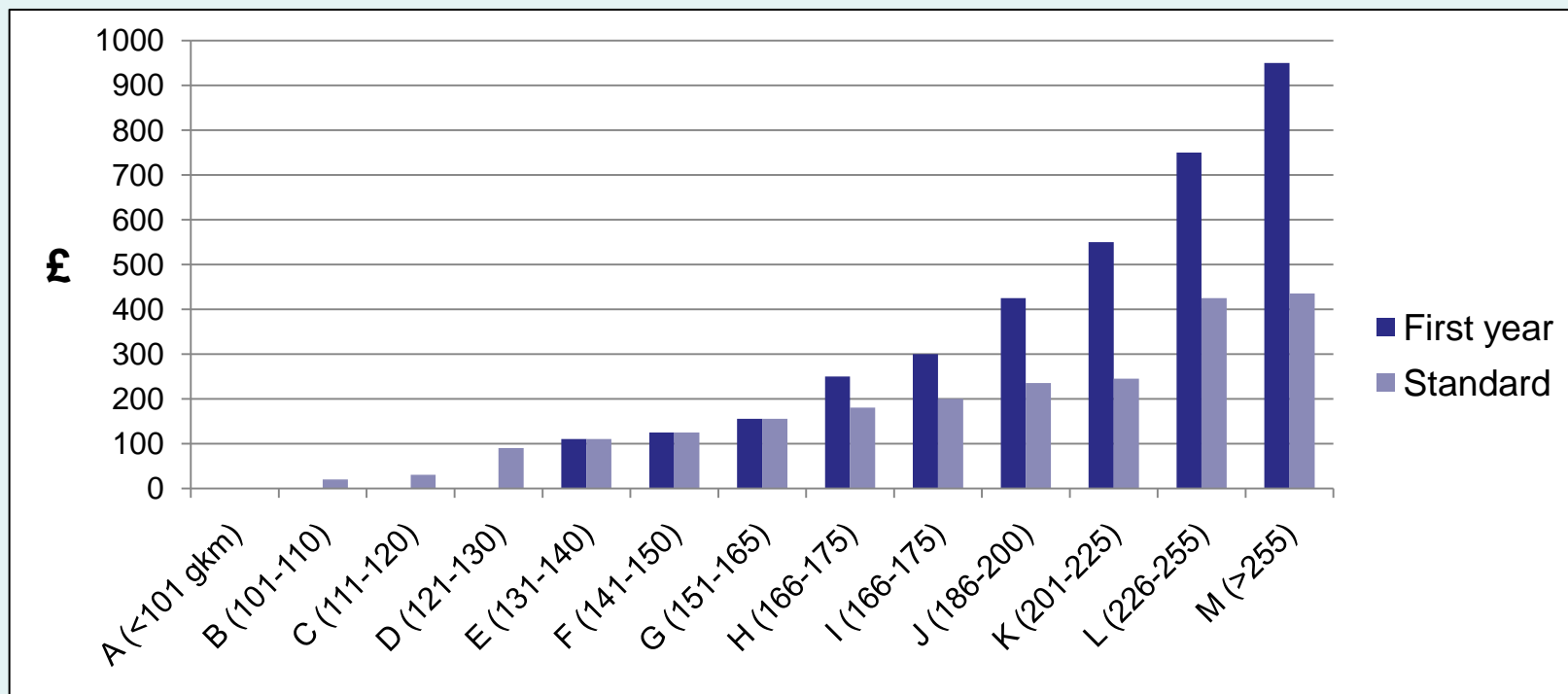
Source: SMMT

- ❑ Diesel engine market share has increased from a 14% to 46% of new car sales by 2010.
- ❑ Improvements in diesel engines' performance and refinement have made them an attractive alternative.
- ❑ Diesel penetration in larger cars segments exceeds 60%, but remains low in smaller cars.
- ❑ There is an emerging market for Alternative Fuelled Vehicles (AFV) which is developing (approx 1%).

VED was first based on CO2 in 2001 and has been enhanced since then in terms of number of bands and level of taxation

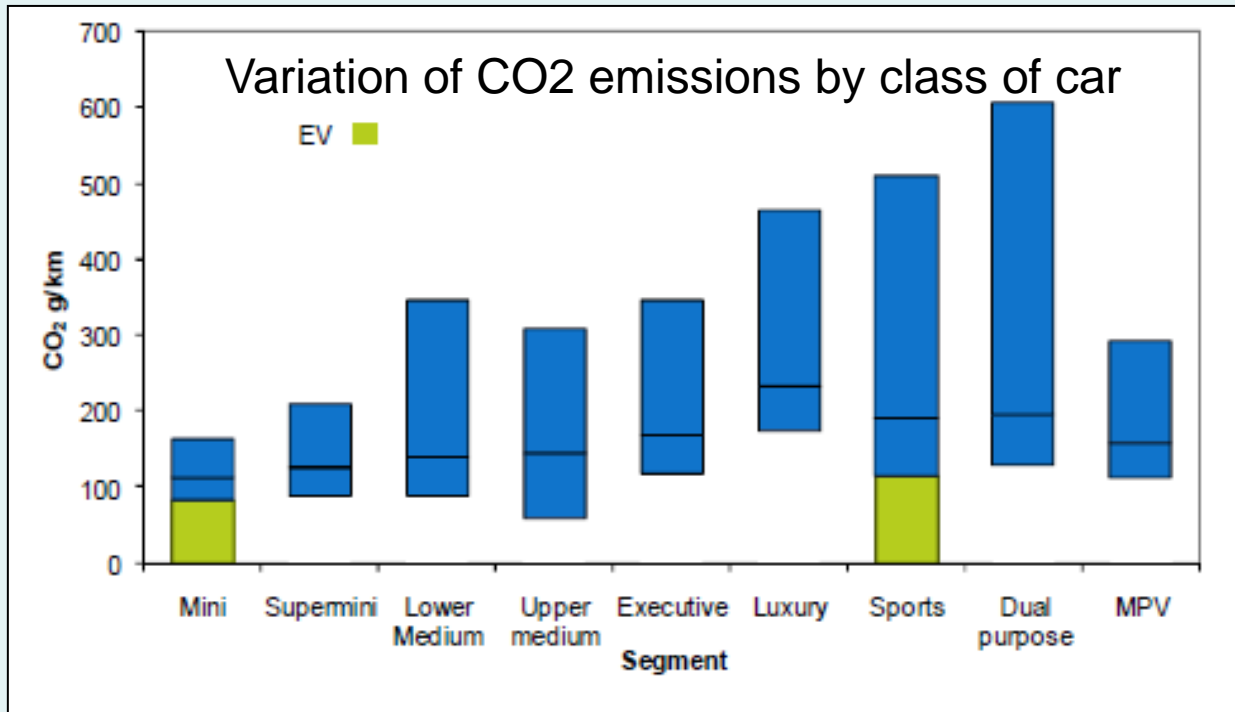
	2001		2005		2010		
CO2 g/km	VED Band	£	VED Band	£	VED Band	Std £	First Year £
<100	A	100	A	65	A	0	0
101-110			B	75	B	20	0
111-120					C	30	0
121-130			C	105	D	90	0
131-140					E	110	110
141-150					F	125	125
151-165	B	120	D	125	G	155	155
166-175	C	140			H	180	250
176-185			E	145	I	200	300
186-200	D	155	F	190	J	235	425
201-225					K	245	550
226-255			G	210	L	425	750
255+					M	435	950

In 2010 a higher rate of VED was introduced to specifically influence new car buyers choice on a CO2 basis



- ❑ The standard rate remains similar to previous years but the first year rate has been substantially modified.
- ❑ Cars over 166 g/km CO2 have pay an increased rate of VED.
- ❑ Cars below 121 g/km CO2 are exempt from VED.for the first year.

There is significant variation in CO2 between cars in the same class which is not understood by car buyers



- ❑ Public's perception is that cars of a similar size will be about the same CO2.
- ❑ To ensure the effectiveness of tax policy relating to fuels and car ownership tax requires education and provision of information.

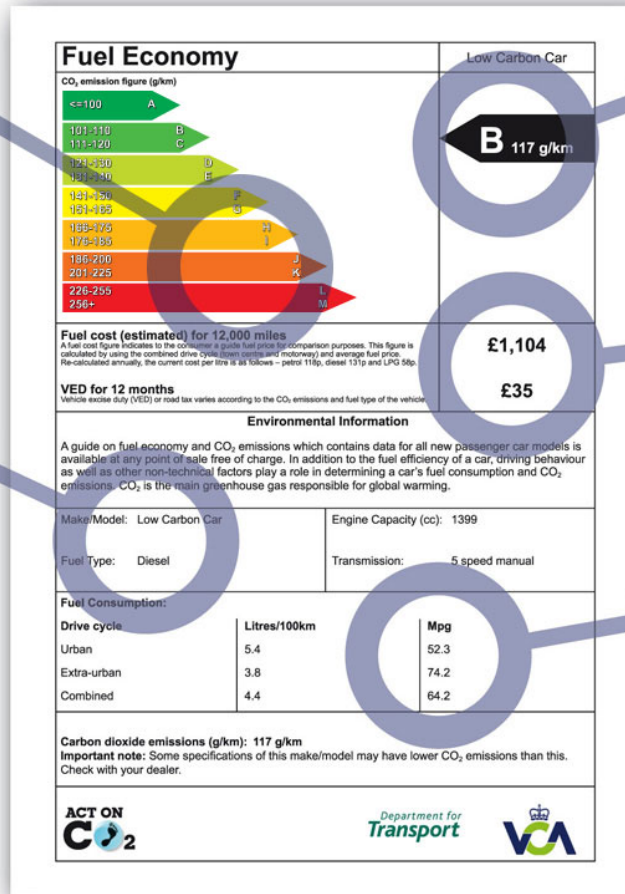
UK new car fuel economy label provides key information at point of sale and is integrated with VED

Thirteen VED bands

The figures on the coloured arrows (A-M) indicate the 13 ranges of emissions by g/km that correspond to levels of annual Vehicle Excise Duty (VED or Road Tax). Low carbon-emitting cars pay less tax. The lowest – Band A – pay no tax.

Make, model and engine details

The vehicle make, model, fuel type, engine capacity and transmission type are all listed. Together they determine the CO₂ emissions and running costs.



CO₂ emissions figure

The black arrow points to the vehicle's relevant band of CO₂ emissions on which Vehicle Excise Duty (VED or Road Tax) is based.

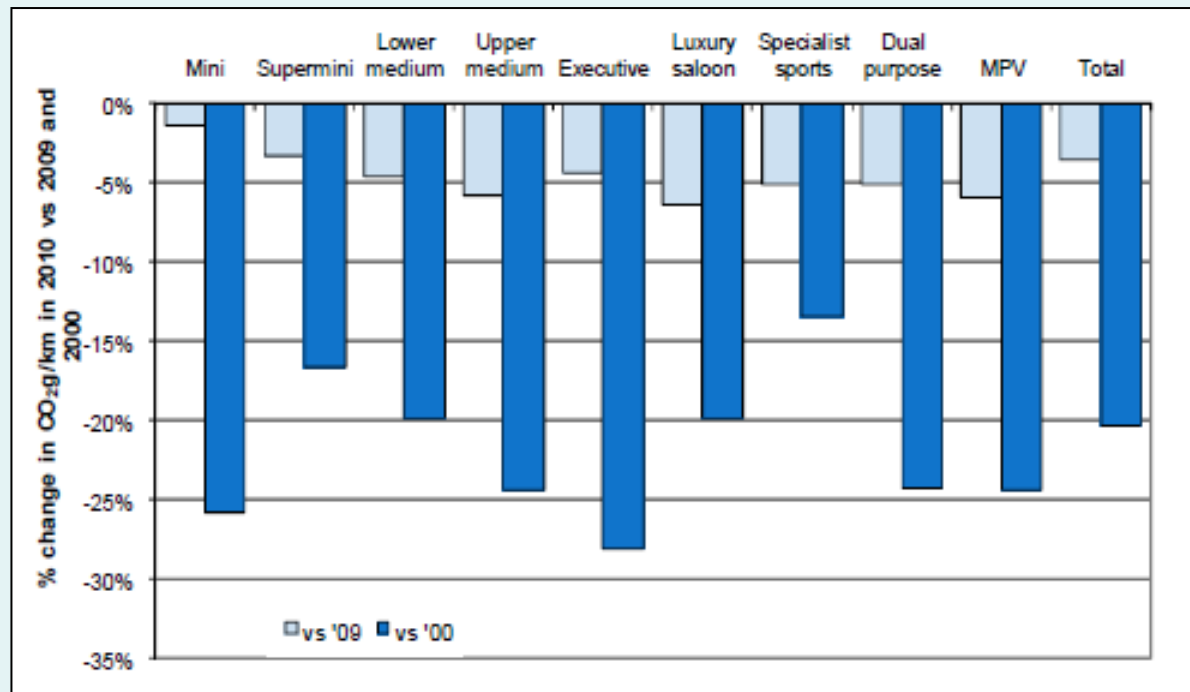
Running costs

Average yearly fuel costs are calculated and displayed together with the relevant level of Road Tax. Figures updated with recent prices.

Fuel consumption

Shows how efficient the car is in miles per gallon and litres per 100km in town, country and combined driving situations.

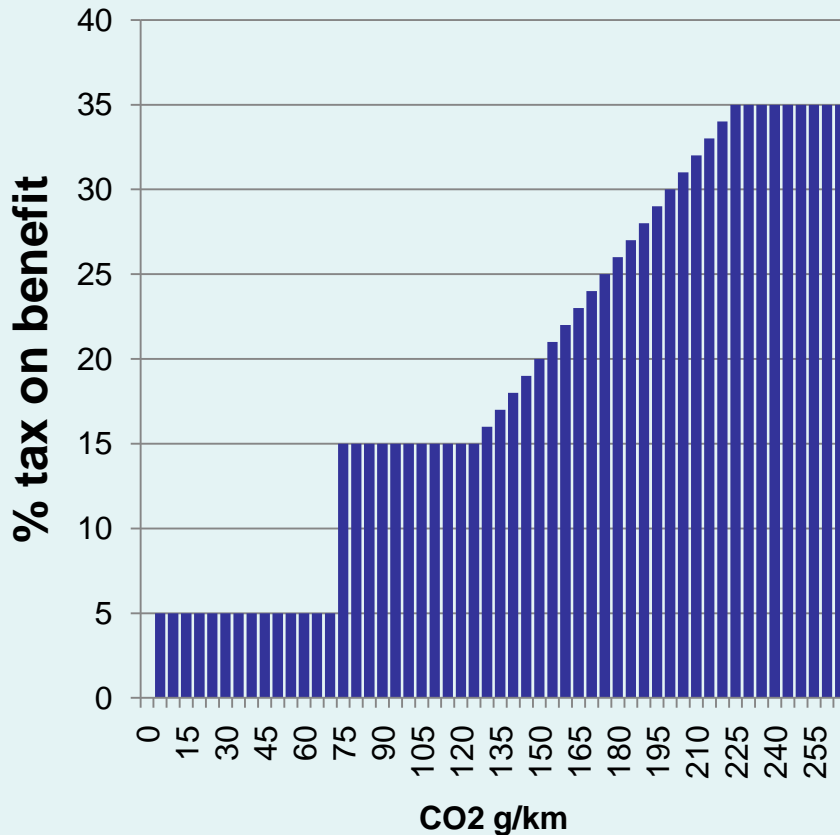
Average CO2 emissions has reduced in each car segment



- ❑ Choosing lower CO2 in class and technological improvements are driving down CO2 across all market segments.
- ❑ There is some evidence of downsizing but this is limited. Dual purpose and MPV segments have increased market share.

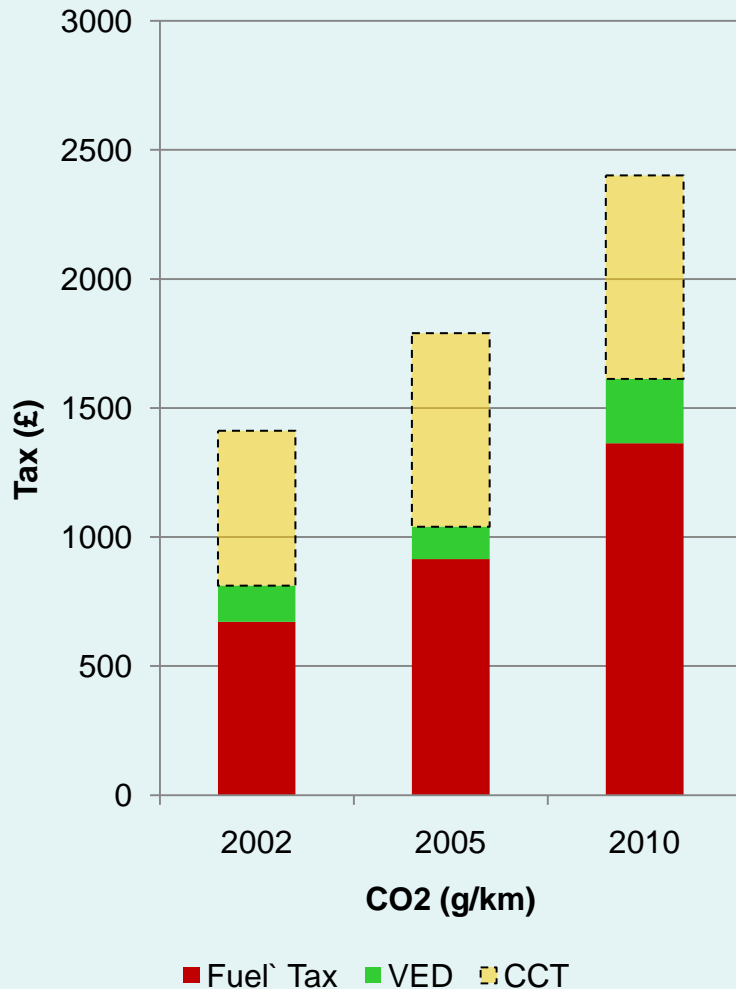
Company Car Tax (CCT) provides a strong incentive to employees through income tax

Company Car Taxation (CCT)



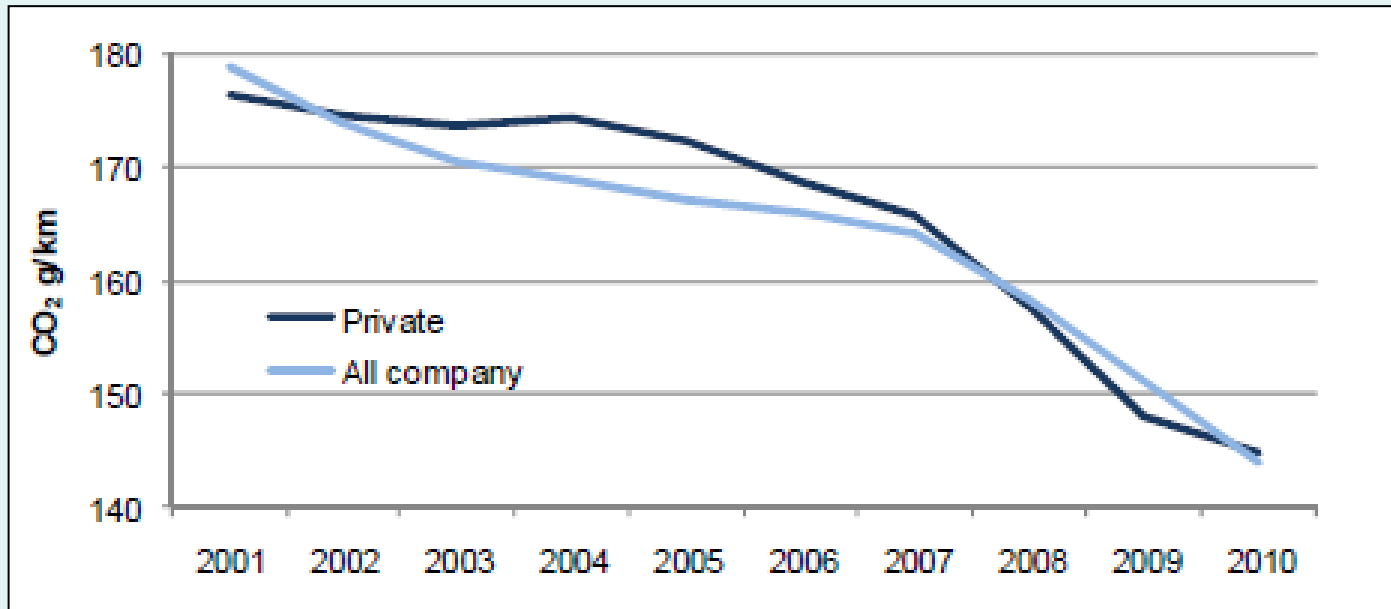
- ❑ CCT is a tax on employees who get benefit from use of a company car.
- ❑ CCT was introduced in 2002 and has steadily increased over time. Future increases have already been announced.
- ❑ Special low rates apply for cars emitting less than 75 g/km for a 5 year period.
- ❑ For a £15,000 car emitting more than 130g/km marginal tax rate is £20 per gram of CO₂.

Absolute cost of fuel, VED and CCT for a car of 170 CO₂ g/km since 2002



- The graph compares tax and fuel cost since 2002 for a medium/large size family car during the first year of ownership.
- Private motorists incur only fuel cost and VED while a company car user will also incur CCT.
- The change in fuel cost is dominated by the increase in oil prices over the period. Fuel tax has varied between 75%-60%.
- CCT imposed a strong incentive earlier than the other taxes.

Impact of Company Car Taxation was felt early in the decade



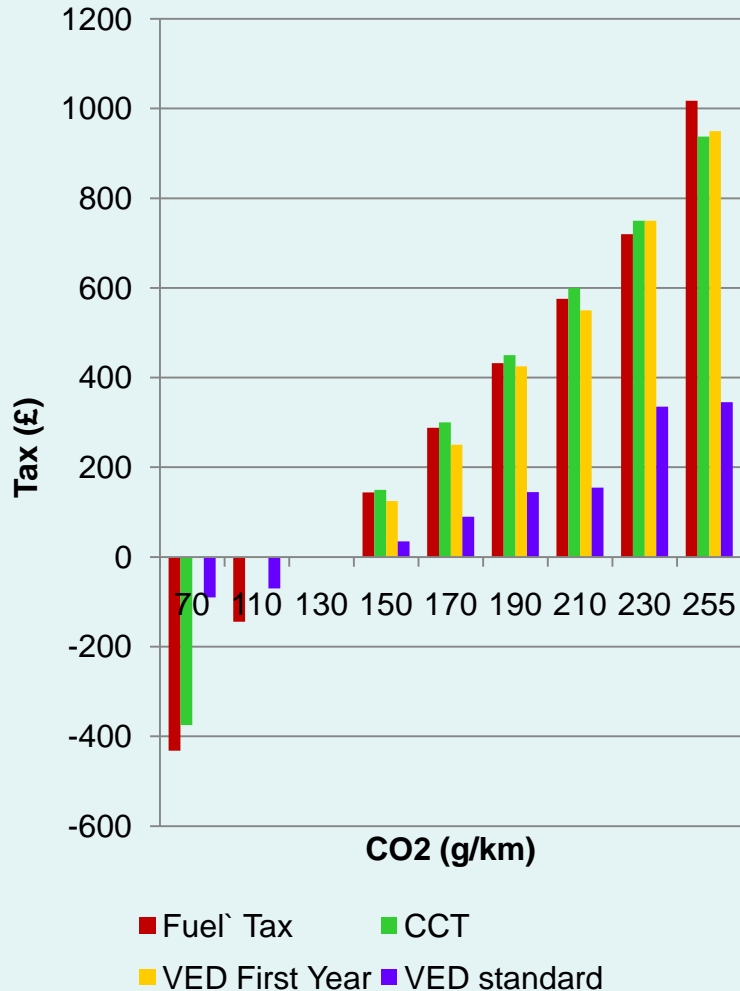
- ❑ CCT had a strong relationship between CO2 and tax from the start in 2002.
- ❑ The UK company car market responded with a rapid reduction of 6.5% in company car CO2 by 2005, compared to 2.5% for private cars.
- ❑ Private market has now caught up.

The importance people place on aspects of a vehicle when buying a car is an indication of how effective each tax will be



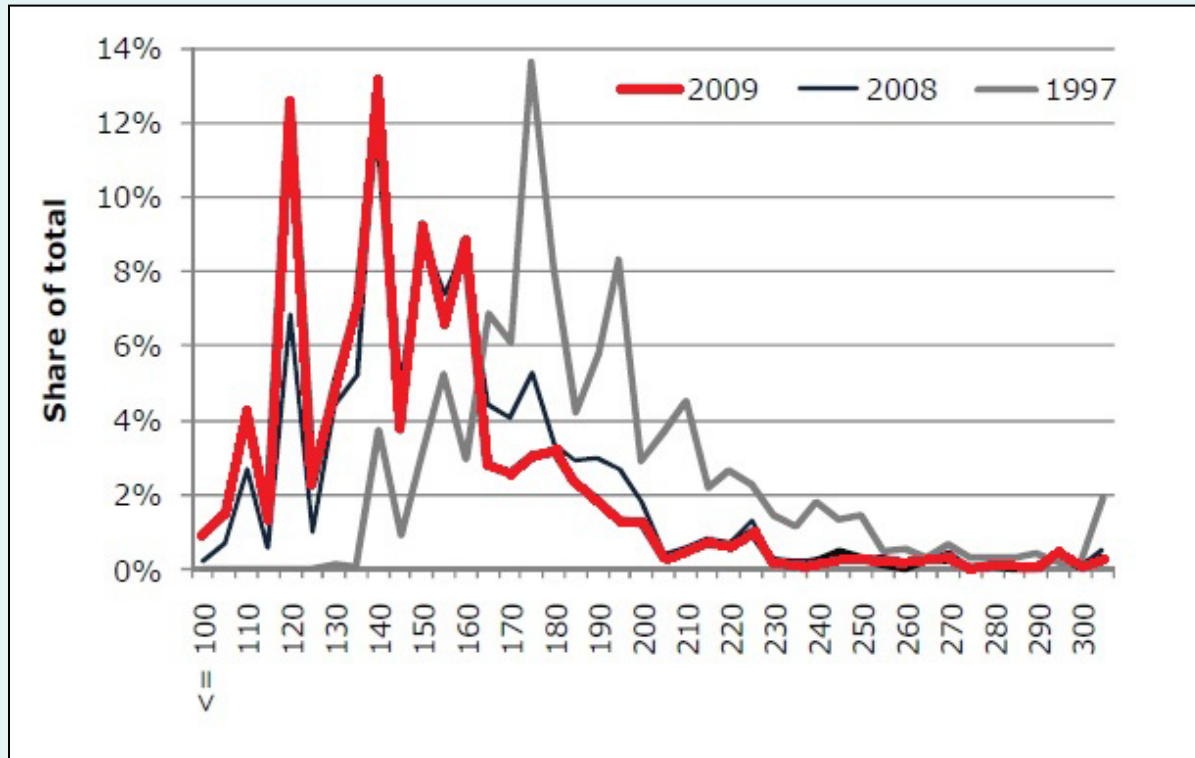
- Fuel consumption is an important influencing factor in the car purchase decision.
- Cost of road tax (VED) appears to have been less importance.
- CCT is only important to company car users.
- All three taxes are likely to be more effective in the future.
- Chinese text

Marginal cost of fuel, VED and CCT compared to a car of 130 CO2 g/km



- ❑ The graph compares the car taxes paid for a variety of cars to a car achieving 130 g/kmCO₂.
- ❑ Cost of fuel and CCT increase significantly with the CO₂ emissions of the car.
- ❑ Standard VED doesn't increase as strongly as fuel cost or CCT although the new First Year VED rate does.
- ❑ The marginal cost of choosing a higher CO₂ car is significant.

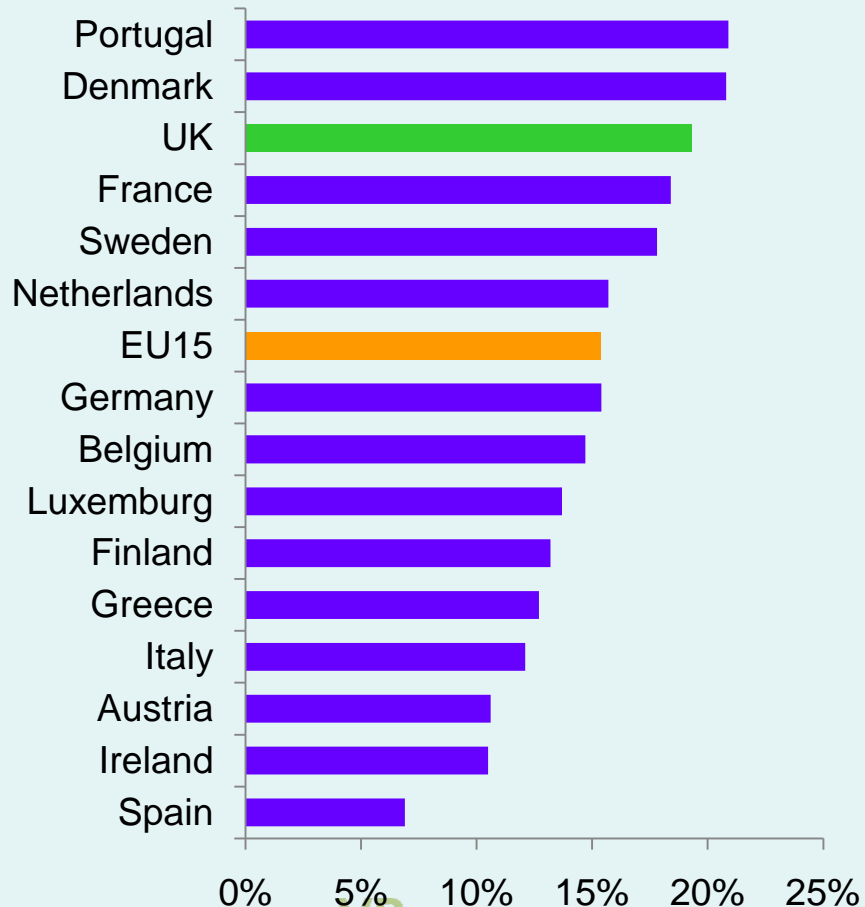
Combined impact of fuel taxation, VED and Company Car Tax has been to encourage demand for lower CO2 cars



- ❑ Sub 120 CO2 g/km cars account for 20% of new car registrations
- ❑ Technology gains as well as market shift key to improvements
- ❑ Host of new models and eco sub brands introduced

The result of car tax policy in reducing CO2 has been successful relative to other European countries

**Reduction in average new car CO2
(2009 v 2000)**



- By 2009 the UK had achieved a 19% reduction in new car average CO2, the third largest in Europe.
- However, UK had opportunities ready for exploitation to reduce CO2.
 - Low diesel market share
 - Relatively high CO2 car market
 - Environmentally aware population

Summary

- ❑ UK has three primary taxes used to encourage low CO2 cars
 - Fuel tax
 - Car ownership tax (VED)
 - Company car tax
- ❑ Together these taxes provide a strong incentive to:
 - Chose better in class and,
 - Encourage diesel cars.
- ❑ UK has reduced new car CO2 by 20% since 2000. This has been achieved through:
 - Growth of the diesel market particularly within the company car market and larger cars.
 - Selection of lower CO2 cars within the same class of cars.
 - Some downsizing.

Thank you for your
attention

Any Questions?

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