

SMMT annual CO₂ report 2006 market



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Overview

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Climate change is a reality

Overwhelmingly, scientists agree that man-made CO₂ is one of the most important contributors to global warming.

Road transport is a major source of CO₂ emissions. In the UK it accounts for around 20 per cent of all man-made CO₂. Globally the figure is just under 11 per cent. That means the motor industry – as well as users of its products – must be prepared to play its part in reducing climate change impact. In other words, we have to be part of the solution, not just seen as a problem.

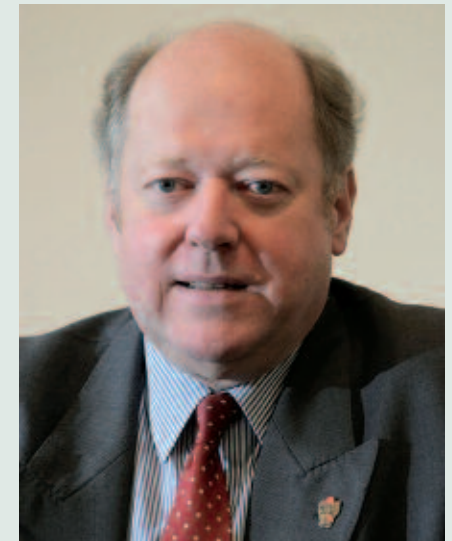
The truth is the motor industry has a good news story to tell, a story that will probably surprise many people. Significant improvements have been made in our products and across production sites and reports like this chart that progress.

This is the sixth report looking at the CO₂ performance of the new car market and, for the first time, we have supported the detail with an overview. This points to some of the headline facts and figures for those who need to know about present and future developments.

Three things have become clear to me as I have overseen this report over the last six years. Firstly, sustainable motoring is not a choice; it is an imperative. Secondly, investment in technologies like hybrids, biofuels and cleaner diesels has delivered real improvements in cutting tailpipe CO₂ from new cars. Finally, and perhaps controversially, the role of the consumer has been underplayed for too long.

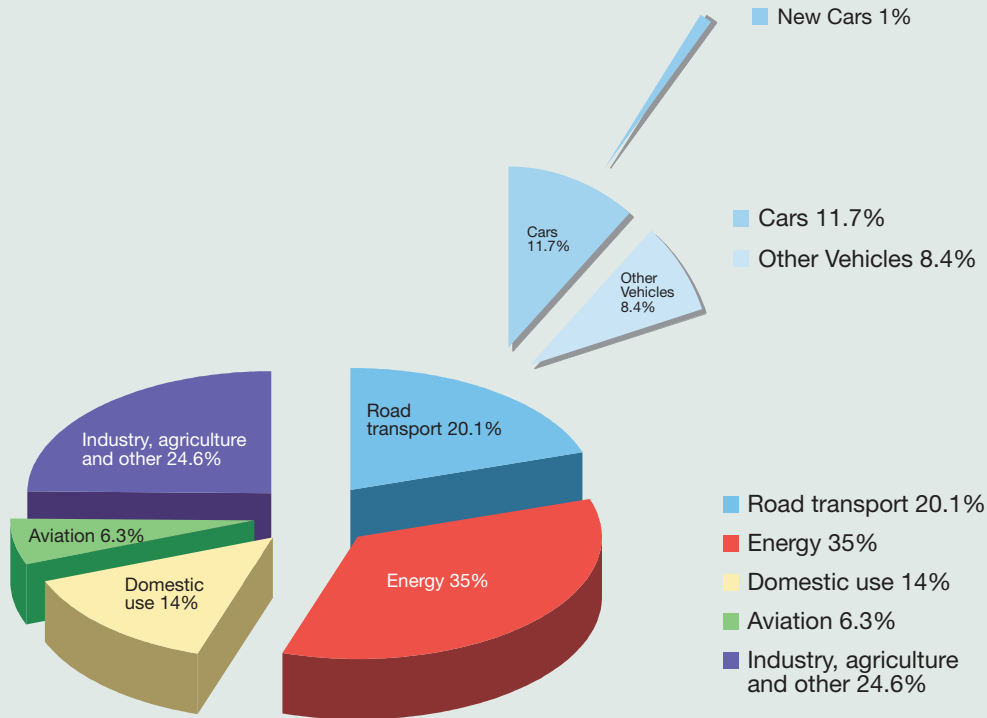
It is not an industry fudge to say that drivers have a responsibility to consider the impact of their motoring. Nor is it wrong to suggest that governments must tackle congestion and fuel companies must supply more sustainable fuels if we are serious about massive cuts in CO₂ from road transport.

Sometimes we in the industry call this our integrated approach. In reality it simply means working together to achieve our goal. It's common sense.



Christopher Macgowan, SMMT chief executive

CO₂ and road transport in context



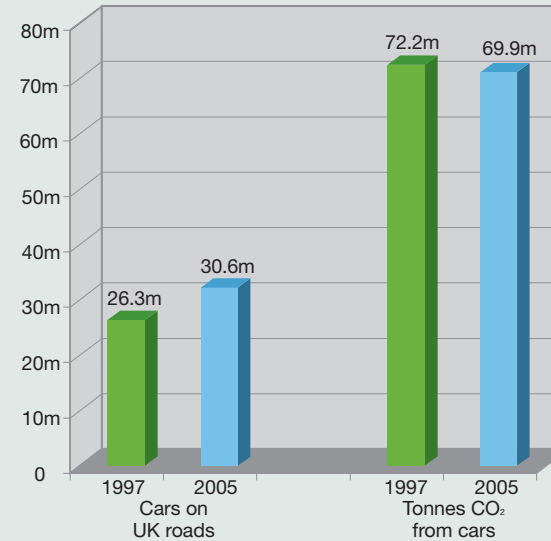
Source: Defra and SMMT

Road transport accounts for around a fifth of Britain's man-made CO₂ emissions. Cars are responsible for just under 12 per cent and trucks, vans, coaches, buses and motorcycles the other 8.4 per cent. Clearly the motor industry has a responsibility, but not exclusively. The good news is that we've already made significant progress.



CO₂ and road transport in context

Car parc and total CO₂ from cars 1997 v 2005*



* Source: SMMT and Defra: note 2005 latest available Defra figures

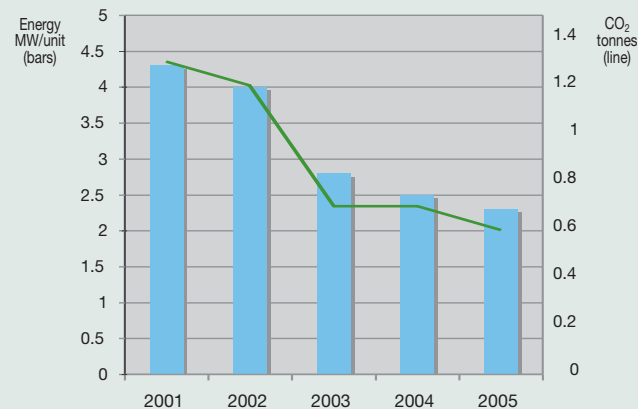
From 1997 to 2005, the number of cars on UK roads rose by 16 per cent from 26.3 to 30.6 million vehicles. During the same period total CO₂ output from cars fell as newer cars with lower CO₂ have joined the *parc*.

Figures reveal a drop from 72.2 million to 69.9 million tonnes CO₂ in 2005. That's a 3.2 per cent improvement and a saving of 2.3 million tonnes.

It's not just the industry's products that are helping drive down CO₂. Massive investment in cleaner, leaner manufacturing has also helped lower CO₂ across car and commercial vehicle sites.

In the last five years, energy needed to produce each vehicle has been halved saving around 700,000 tonnes of CO₂ a year, while water use has been cut by a factor of four.

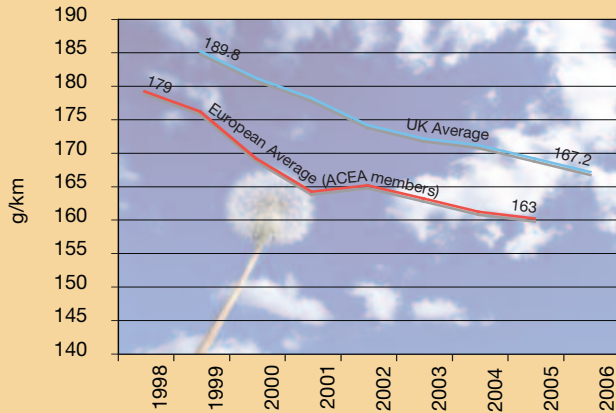
Energy and CO₂ to produce each vehicle in the UK



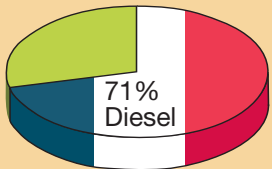
Source: SMMT seventh annual sustainability report

2006 highlights

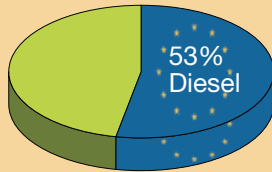
Average new car CO₂, UK and Europe



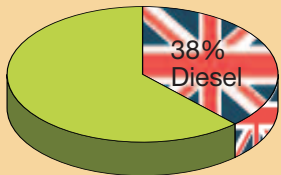
Diesel penetration and average CO₂ emissions



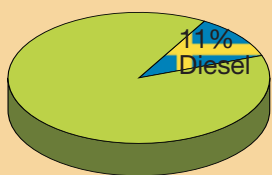
Average CO₂ - 149g/km



Average CO₂ - 160g/km



Average CO₂ - 167g/km



Average CO₂ - 195g/km

Source: UK figures, SMMT; European figures, ACEA

Investment in new technology has driven down new car CO₂, both here and in Europe. Mainstream biofuel, hybrid and ultra-clean diesel cars are now a reality and this year's report points to a 12 per cent drop in new car CO₂ from 1997, down from 189.8 to 167.2g/km

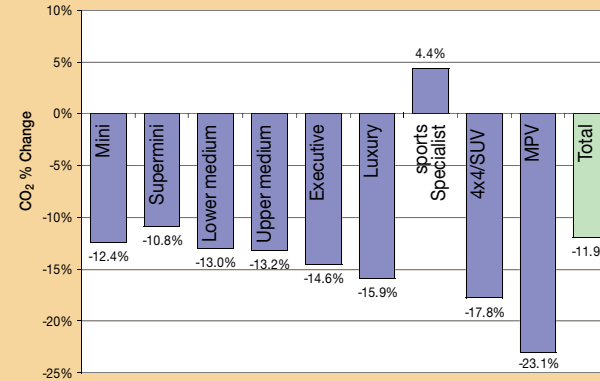
In 1997 less than four per cent of the new car market boasted sub-140g/km CO₂ emissions. By 2006, this figure had risen fivefold to 21.5 per cent, more than one in five cars.

However, the UK market still has higher average new car CO₂ than countries like France. One of the reasons is that diesel penetration in the UK is still significantly lower at just 38 per cent.

Diesel cars are around 20 per cent more fuel-efficient than equivalent petrol models which means a similar saving on CO₂ emissions. So more diesel cars mean lower average CO₂.

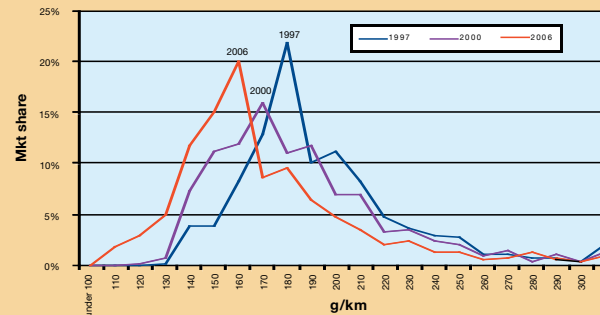
2006 highlights

Change in average new car CO₂ emissions by segment, 2006 vs 1997



Source: SMMT

Share of new car marked by CO₂ emissions



Source: SMMT

Other than in the specialist sports car segment, which accounts for less than three per cent of new car sales, average CO₂ has fallen across every market segment. The most significant improvements have come in new 4x4/SUV and MPV models, down 17.8 and 23 per cent respectively since 1997.

As well as improvements in fuel efficiency and diesel sales, two other factors have helped shift the market towards lower emitting cars. CO₂-based taxes and growing concern about running costs have certainly played their part in shifting the 'spike' downwards.

And while the market for sub-120 g/km cars is still relatively small at 4.7 per cent in 2006, that figure contrasts with 1997 when no new cars fell below this threshold.

In total 110,224 new cars under 120g/km left showrooms last year. Increasing this is a real challenge for industry and consumers, but is imperative for a lower-carbon car fleet.

2006 highlights

Top 10 lowest CO₂ emissions models registered in 2006 (lowest emitter in range)

	Model	CO ₂ g/km
1	Toyota Prius (H)	104
2	Citroën C2 (D)	107
3 =	Citroën C1 (P & D)	109
3 =	Citroën C3 (D)	109
3 =	Honda Civic (H)	109
3 =	Peugeot 107 (P)	109
3 =	Toyota Aygo (P & D)	109
8	Renault Clio (D)	110
9 =	Peugeot 206 (D)	113
9 =	Smart Fortwo/City (P)	113

Note: Axiom, Ligier, Microcar and Reva not included as only type B1 approval
Fuel type: H = hybrid, D = diesel, P = petrol

Source: SMMT

Lowest emitters by model segment

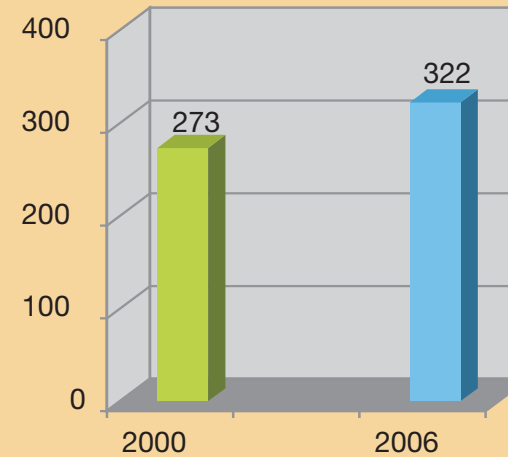
Segment	Model	CO ₂
Mini	Smart City Cabrio (P)	113 g / km
Supermini	Citroën C2 (D)	107 g / km
Lower medium	Honda Civic (H)	109 g / km
Upper medium	Toyota Prius (H)	104 g / km
Executive	Saab 9-5 (D)	147 g / km
Luxury	Mercedes S-Class (D)	209 g / km
Sports	Vauxhall Tigra (D)	124 g / km
4x4	Honda CR-V (D) Toyota RAV4 (D)	173 g / km
MPV	Skoda Roomster (D)	135 g / km

Note: Axiom, Ligier, Microcar and Reva not included as only type B1 approval

Source: SMMT

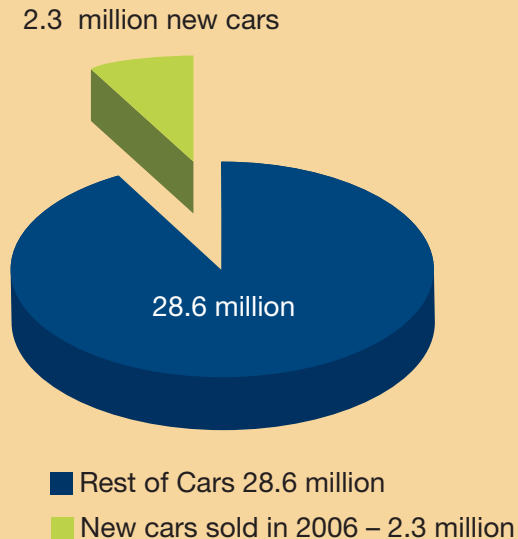
2006 highlights

18 per cent more model variants



Source: SMMT MVRIS

The car parc – all the cars on UK roads



Source: SMMT motorparc

The top 10 list of lowest emitting cars includes hybrids, fuel efficient petrol and diesel variants.

It is interesting to note the absence of some mainstream high-blend biofuel cars – for example the Ford Focus FFV and the Saab 9-3 Biopower. Some studies suggest that total CO₂ footprint for these models might be up to 70 per cent lower than the official tailpipe figures suggest, as much CO₂ from the exhaust is recaptured through crop growth.

Nevertheless, even using absolute tailpipe CO₂ as the benchmark, there are still 'low carbon choices' in every market segment.

SMMT economists have calculated that average CO₂ could be as low as 116.2 g/km (30 per cent lower than today's figure) if all buyers had chosen these variants last year.

However, we should remember that these tables relate to the 2006 market. New models are being launched constantly and latest info can be found at www.vcanewcarfueldata.org.uk

Choice is important to new car buyers. In 2006 there were 322 different model ranges on the market. That means 18 per cent more choice than the 273 model ranges available to customers in 2000.

However while the focus tends to be on new car CO₂, we should not forget the emissions of all the older cars on the road, nor the role of drivers in considering carefully the impact of their motoring.

The 2006 report suggests that the average new car sold last year, emits around seven per cent less CO₂ than the average for 'all the cars on UK roads'.

Moving forward

Fuel Economy		Supermini Special
CO ₂ emission figure (g/km)		
<100	A	B 113g/km
101-120	B	
121-150	C	
151-165	D	
166-185	E	
186-225	F	
226+	G	
Fuel cost (estimated) for 12,000 miles <small>A fuel cost figure indicates to the consumer a guide fuel price for comparison purposes. This figure is calculated by using the combined drive cycle (down centre and motorway) and average fuel price. Re-calculated annually, the current cost per litre is as follows – petrol 90p, diesel 94p and LPG 45p (VCA May 2006).</small>		£697
VED for 12 months <small>Vehicle excise duty (VED) or road tax varies according to the CO₂ emissions and fuel type of the vehicle.</small>		£50
Environmental Information		
<small>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.</small>		
Make/Model: Supermini Special	Engine Capacity (cc): 1398	
Fuel Type: Diesel	Transmission: 5 speed manual	
Fuel Consumption:		
Drive cycle	Litres/100km	Mpg
Urban	5.3	53.3
Extra-urban	3.7	76.3
Combined	4.3	65.7
Carbon dioxide emissions (g/km): 113g/km Important note: Some specifications of this make/model may have lower CO ₂ emissions than this. Check with your dealer.		

The integrated approach - working together to cut CO₂

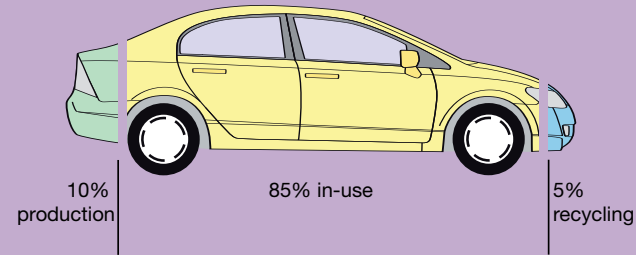
The motor industry's responsibility is to bring new technologies to market. But technology alone is not the answer. The approach to sustainable motoring must be joined-up and include better consumer information and action, plus support from government and fuel companies.

Consumer advice

As part of an integrated approach, the industry is giving consumers more information to help them choose lower-carbon new cars. One step it has taken is the introduction of a colour-coded label in showrooms. This allows simple car-by-car comparisons on CO₂. It also includes average annual running costs, tying the message that cheaper motoring and lower CO₂ new cars go hand-in-hand.

Moving forward

New car CO₂ output through the life cycle



Source: SMMT Sustainability Report

The life cycle

The vast majority of CO₂ emissions from a car come when it is being driven. Around 85 per cent of total CO₂ output comes from the tailpipe when the engine is running compared to 10 per cent during vehicle production and five per cent when it is scrapped. So we must encourage all drivers – not just new car buyers - to think about how and when to use their vehicles. Studies on eco-driving measures suggest efficiency savings of up to 25 per cent, massively cutting CO₂ and saving drivers money.

Congestion

Suppose a new car emits 20 per cent less CO₂ than its predecessor. What benefit would there be to the environment, if its driver spends 20 per cent longer sitting in traffic as congestion worsens? These are very real questions for government to address. Some studies have suggested that well designed roads, for example, can reduce real world CO₂ by up to 38 per cent.



Moving Forward

Taxation

Company car distribution by tax bands (15 = lowest CO₂ emitting petrol car
18 = lowest CO₂ emitting diesel car)



Tax systems play a role in driving market demand. Based on CO₂ emissions, company car tax is an example of how a long-term and stable system can work, encouraging drivers to switch to lower carbon cars.

The vast majority of new company cars now fall within the lowest bands although drivers are still faced with a moribund three per cent penalty for choosing diesel – totally at odds with moves to bring down CO₂ – and the reason for a spike at 18 per cent as well as 15 per cent rates.



Biofuels

An integrated approach means ensuring cleaner fuels are available en masse. Consider E85 bio-ethanol. Car makers now have mainstream models on the market capable of running on this high blend biofuel. But there are still far too few pumps selling it in the UK; just 14 sites at last count.

Moving Forward



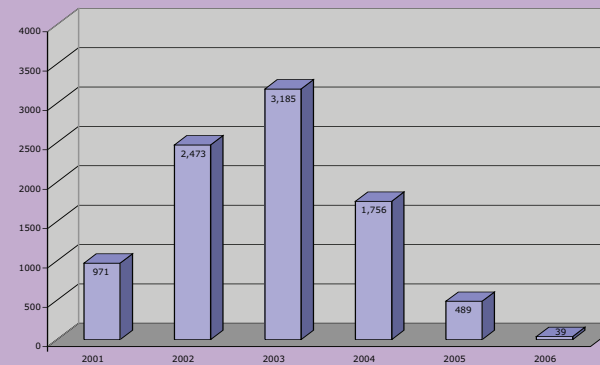
Act On CO₂

The industry supports DfT's campaign to encourage drivers to think carefully about choosing and using cars. Simple steps like keeping tyres correctly pressured, removing unnecessary weight from the car (eg a roof rack) and lightening up on the gas pedal can bring real benefits, for the environment and for motorists' pockets!

Joined-up thinking?

Sometimes when the industry talks about an integrated approach to new car CO₂ critics suggest it is trying to dilute its responsibility to develop cleaner cars. But consider what happens when an approach to fledgling technology goes wrong, when the thinking is not joined-up. The market for new gas cars, including LPG models, presents just such an example. The collapse of Powershift grants, and consumer uncertainty over long-term fuel incentives effectively ended sales of new LPG and other gas models.

New gas cars sold 2000 – 2006



More information

All industries must be open and honest about progress towards sustainability. That's why SMMT publishes annual new car CO₂ reports, one of a series of publications tracking industry progress in lowering CO₂ from its products and production sites. The SMMT has also produced consumer guides and advice on the role we can all play to reduce carbon footprint. Download free from www.smmt.co.uk

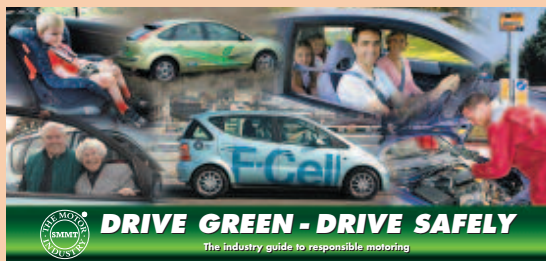


Sustainability Report

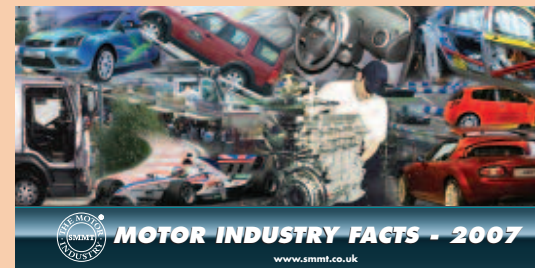
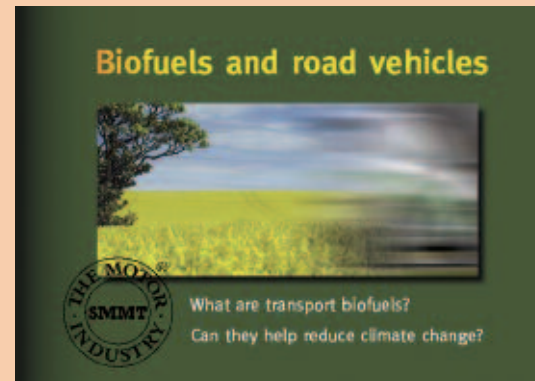
The motor industry was the first to publish a sector-wide Sustainability Report in 1999. Now in its eighth year, the report tracks progress towards economic growth, environmental performance and social responsibility across products and production sites in the UK.

Drive Green Drive Safely

SMMT's free guide to safer and more environmentally friendly motoring. It's full of simple tips and advice for drivers to cut their carbon footprint – and better protect their families.



More information



Biofuels

What are transport biofuels? Can they help reduce climate change? This straightforward guide presents answers to these questions in a handy, pocket sized pamphlet.

Motor Industry Facts 2007

Facts and figures at your fingertips. New car and commercial vehicle sales, production, and vehicle in use figures as well as safety, security and information about environmental impact of motoring.

SMMT web site –

www.smmt.co.uk. Head straight for the home page to take you to links to these key reports and more information.