CLEANER IS CHEAPER

Why European climate policy for cars is failing, and what can be done about it

T&E
European Federation for
TRANSPORT and ENVIRONMENT

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Why European climate policy for cars is failing, and what can be done about it, T&E 05/5

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Introduction

In 1996, the European Union made a commitment to its citizens – it would ensure that the average new car would emit no more than 120 grams of carbon dioxide per kilometre. And it set a deadline for achieving this of 2005, or 2010 at the absolute latest. This realistic commitment has been re-stated on several occasions by heads of government and other ministers.

It is now the end of 2005. With average new car CO_2 emissions at around 160 g/km, the EU's first deadline has been missed by a long way, and the rate of progress makes it clear that even the deadline of 2010 will not be met. Also the target of the voluntary commitment of the car industry, 140 g/km by 2008, will almost certainly be missed. The Commission has informally postponed its target date for 120 g/km to 2012, yet in recent months it has allowed a chorus to develop, according to which even that is not feasible.

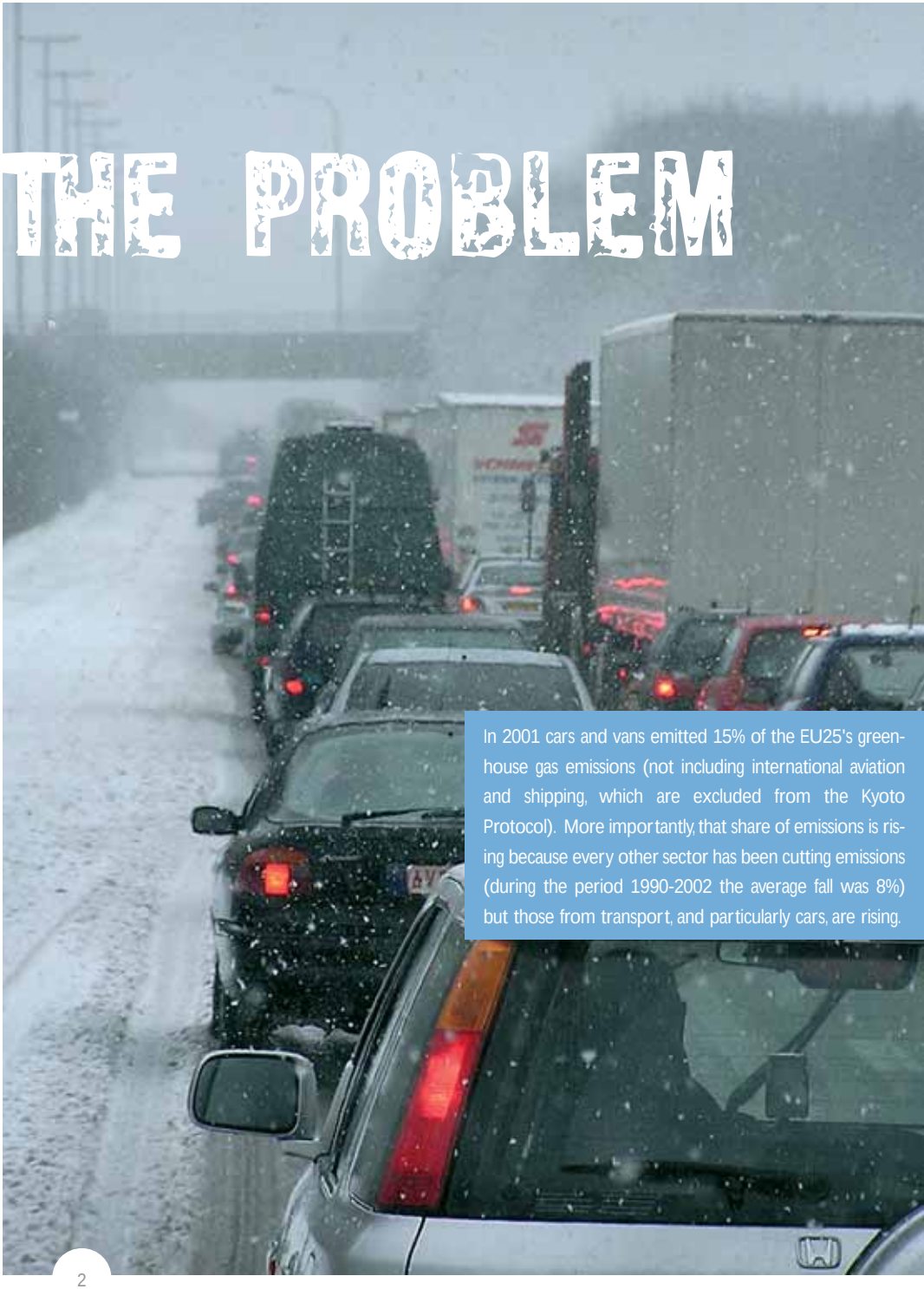
With the Commission due to publish early in 2006 how it sees the next stage of CO_2 emissions reduction, T&E is keen to stress three things:

- Why it is important that the 120 g/km target is reached by 2012 at the latest
- Why claims from the automotive industry that this target is not technically feasible are without any foundation
- What action is now needed to maximise technological developments to reduce CO_2 not just to 120 g/km but even lower

This publication explains these three central aspects of the debate.

Please note: This publication deals only with carbon dioxide (CO_2) emissions, irrespective of how relevant other issues such as air pollution and transport pricing might be – this is to link it with the specific area of European legislation that is designed to tackle this issue. As such, it is about EU policy regarding the responsibility of automotive manufacturers to reduce the CO_2 emissions of their vehicles.

THE PROBLEM

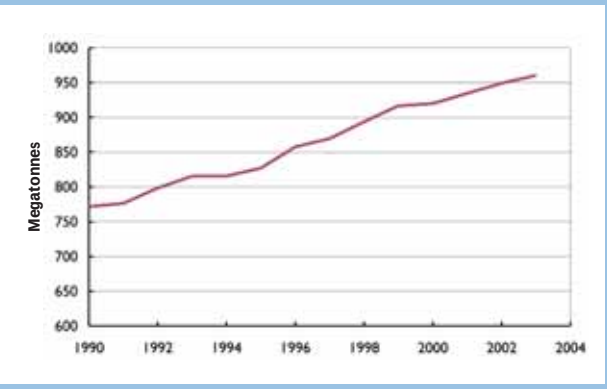


In 2001 cars and vans emitted 15% of the EU25's greenhouse gas emissions (not including international aviation and shipping, which are excluded from the Kyoto Protocol). More importantly, that share of emissions is rising because every other sector has been cutting emissions (during the period 1990-2002 the average fall was 8%) but those from transport, and particularly cars, are rising.

Greenhouse gas emissions from cars are growing

Today's cars are, on average, cleaner than they used to be. They are also a bit more fuel-efficient. That's the good news. But the car industry could have told you that – and they probably have.

The bad news is that overall emissions from cars in Europe are rising, and they're rising fast. Consider the following statistics:



CO2 EMISSIONS FROM ROAD TRANSPORT
EU25 + BULGARIA, ICELAND, NORWAY, ROMANIA, TURKEY

- CO_2 emissions from cars have risen by 1% per year since 1990 (vans by 1.5% per year)
- Passenger cars in the EU25 emitted approximately 580 megatonnes of CO_2 equivalents in 2001 (plus an extra 40 megatonnes used in the oil refining process)
- Vans were responsible for an estimated 98 megatonnes in 2002 (plus another 6 megatonnes for refining)
- Assuming 1% per year growth in emissions, we can say that in 2005, cars and vans will be responsible for some 750 megatonnes of CO_2 equivalents.

If Europe is serious about tackling climate change, this rise in overall emissions from cars must be reversed

There are a number of reasons for this growth. The number of cars on Europe's roads is increasing every year. And people are driving greater distances – car kilometres in the EU have been growing by around 2.5% per year since 1990. It also seems that people prefer to drive alone – occupancy rates have been falling for years.

At the same time, something else has been happening: cars of all types have been growing in size and weight. And car manufacturers have tended to market bigger and more powerful cars – while optional extras such as air conditioning (which can increase fuel consumption by as much as 15%) have increasingly become standard features.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ORDINAIRE

Europe is addicted to oil imports

At September 2005 prices (€55 a barrel), cars are costing Europe €78 billion per year in oil imports. If you include vans the total is €92 billion. This is four times as much as we spent ten years ago when the 120 g/km target was agreed – oil is now much more expensive and we use more of it.

The €92 billion is 0.9% of the Gross Domestic Product (GDP) of the 25-member EU.
To put that figure in perspective, it's twice the amount Europe spends in total on development aid, and more even than the United Nations objective that sets a target of 0.7% of GDP allocated to aid spending. It is almost as much as the total EU budget. Yes, we are spending that just on filling up our cars and vans!

This figure could come down considerably if cars were made more fuel-efficient, something that would automatically follow from stricter CO_2 reduction limits.

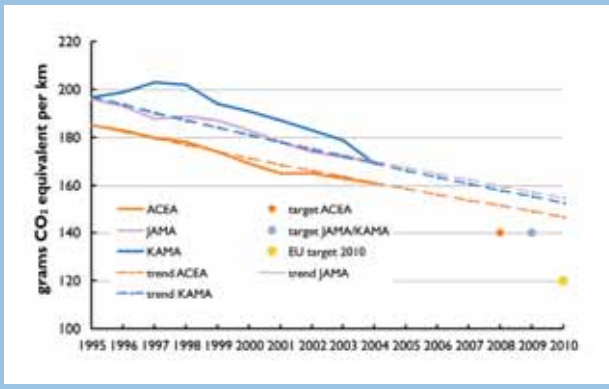
Europe's oil import bill for cars and vans = € 92 billion per year

The 'voluntary' approach has failed

Current EU policy for the reduction of CO_2 emissions from passenger cars is based on a decision taken by European Environment Ministers at a meeting on 25-26 June 1996. The medium-term objective is for the average new car sold in the EU to emit no more than 120g of CO_2 per kilometre. As CO_2 emissions are directly linked to fuel consumption, this is equivalent to an average of 5 litres per 100km for petrol cars and 4.5 litres/100km for diesels.

This objective was supposed to be reached in 2005 or by 2010 at the latest.

The car makers were asked to find ways of achieving it, but their first step was to reject it. The Commission threatened them with mandatory limits. For a while the makers did nothing in the hope that the threat was an empty one, but in 1998 they feared the Commission was on the point of insisting on legally binding limits. So the European car makers' business association Acea signed a 'voluntary agreement', under which the average CO_2 emissions from new cars sold in the EU should be reduced from 186g/km in 1998 to 140 g/km in 2008. Parallel voluntary agreements were signed with the Japanese (Jama) and Korean (Kama) makers' federations for similar reductions by 2009, but all three refused to agree to a date for the 120 g/km target.

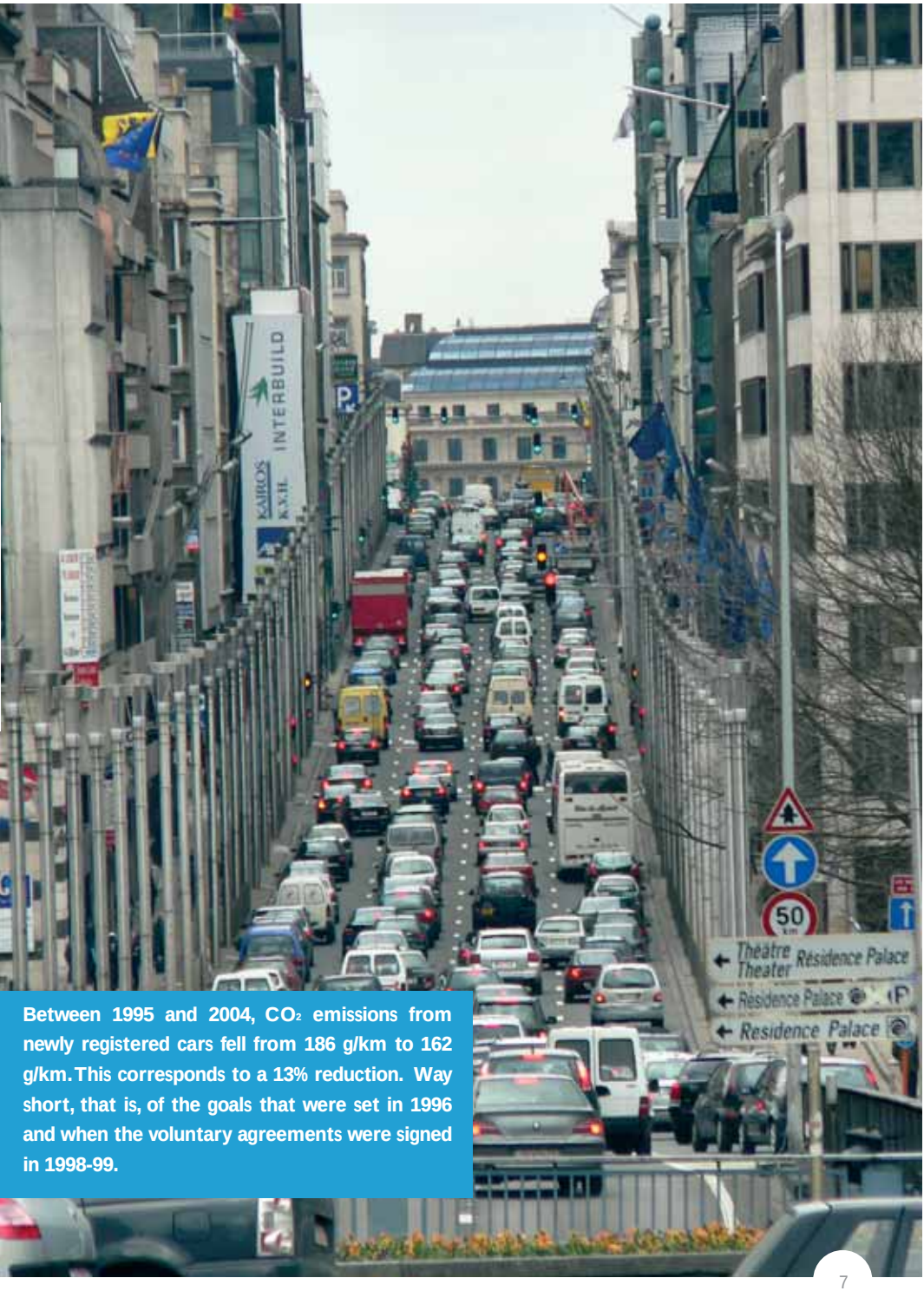


TARGET VS ACTUAL REDUCTIONS

The EU policy embraces three so-called 'pillars':

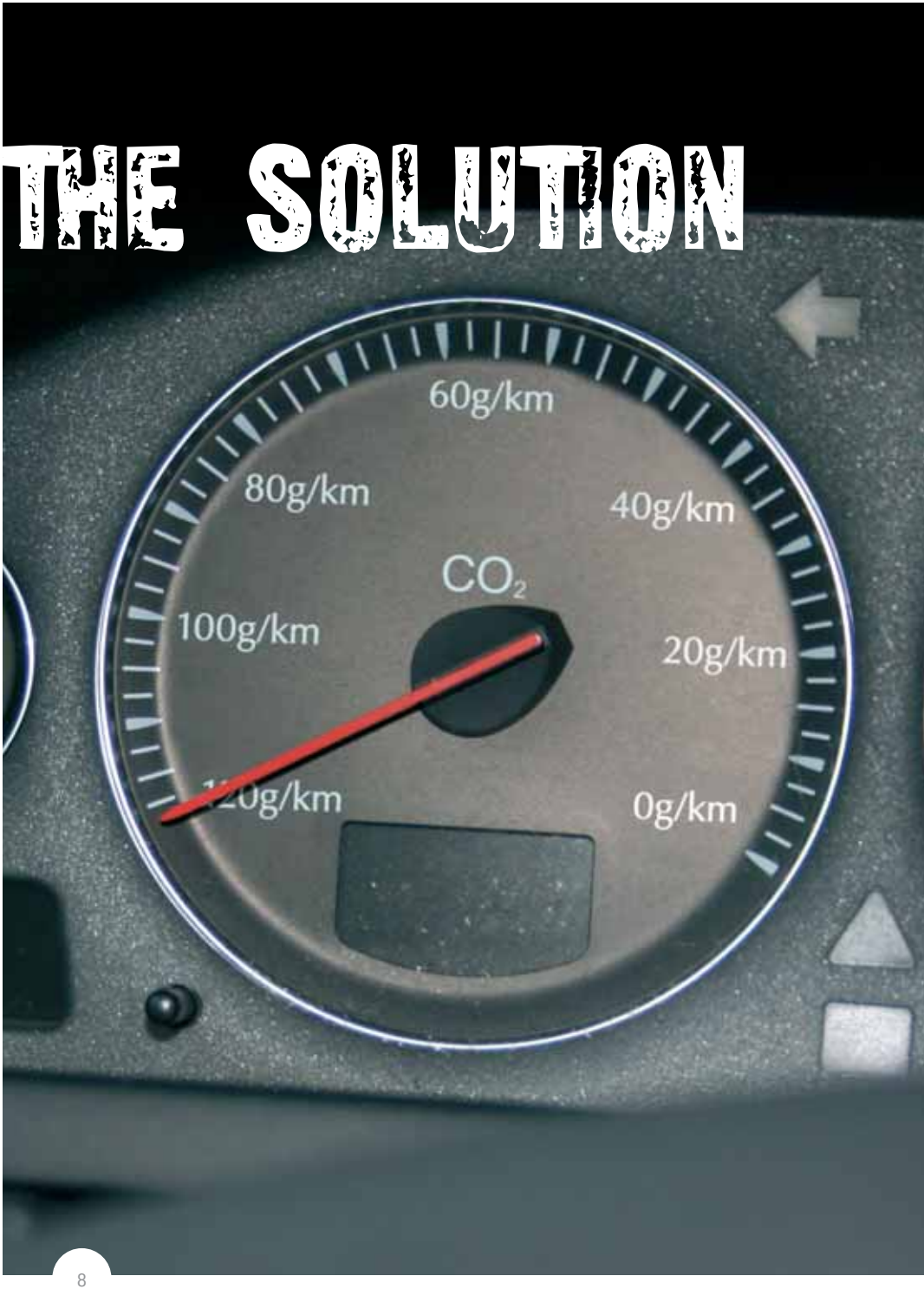
- Technological innovation to reduce the average per kilometre CO_2 emissions of new cars (currently regulated by the three 'voluntary agreements')
- Labelling of new cars to inform consumers about a car's CO_2 emissions
- Providing a framework for Member States to link car taxation to CO_2 emissions

The first of these pillars is by far the most important in terms of its ability to effect large-scale reductions in fuel consumption and CO_2 emissions, so we will focus on it.



Between 1995 and 2004, CO_2 emissions from newly registered cars fell from 186 g/km to 162 g/km. This corresponds to a 13% reduction. Way short, that is, of the goals that were set in 1996 and when the voluntary agreements were signed in 1998-99.

THE SOLUTION



120g/km and beyond

As a signatory to the Kyoto Protocol, and with inherent obligations beyond the current Kyoto commitments, it is of paramount importance that the EU does the maximum to reduce the harmful impact of road transport. In the short term, anything less than sticking to the original 120 g/km target would clearly be less than the maximum, indeed even stricter limits will be needed before long. And it is clear the voluntary approach has failed. Therefore, legally binding measures are now urgently needed.

The European Commission should propose legally binding targets that encompass the following three pillars:

- **Challenging:** an ambitious target of 120g/km by 2010 and goals for the longer term that may seem challenging by today's standards, ie. 100g/km, 80g/km, 60g/km and below
- **A carrot and stick approach:** Under the existing voluntary agreements, no individual brand has an incentive to cut emissions – because the targets are an average for all brands. Reductions in CO_2 should be rewarded every step of the way; and equally, companies that lag behind should be punished.
- **Transparency:** It is currently possible to find out the emissions of individual car models, but there is no publicly available information linking these figures to sales by company. In other words it is not possible to see how an individual manufacturer is doing at cutting overall emissions of its new car fleet. Consumers have the right to know how much every individual car brand is doing to cut emissions. This would also provide an incentive for manufacturers to cut emissions and capitalise on their environmental performance.

A 120g/km target for 2010 seemed necessary to European leaders a decade ago. With oil prices continuing to rise, this target matters now more than ever.

Any policy proposal that takes the emphasis away from the responsibility of the car industry to cut the emissions levels of their products would be unacceptable.

The European Parliament agrees and has called for legally binding CO_2 targets for passenger cars on several occasions.

What follows is a synopsis of why the solution we propose is feasible, affordable and necessary.

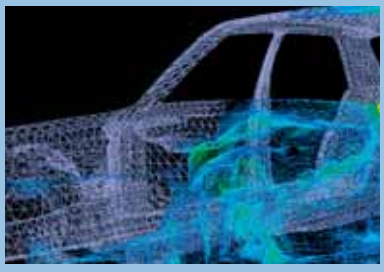
Climate change

If by 2012 the average new car were to meet a standard of 120 g/km, **it would result in an 11% reduction in car CO_2 emissions by 2020** (75MT CO_2) – an effective contribution to the fight against climate change.

Oil dependence

Cutting emissions by a quarter, from 162g/km (their 2004 level) to 120g/km by 2012 would **cut Europe's oil bill by €20 billion every year**.

120 g/km is technologically feasible



The automotive industry has for several years said 120 g/km is not feasible, and their words are proving uncannily similar to pronouncements by leading Commission officials.

A number of recent independent technological studies[1] all indicate that the 120g/km target can be met with widely available existing technology. A number of improvements offer the chance to reduce fuel consumption, including:

- Advanced lightweight materials
- Advanced drivetrains, stop/start engines, regenerative braking, etc.
- Hybrid drivetrains with smaller petrol and diesel engines

So technologically it is possible. But technological progress comes at a price, which someone has to pay.

[1] For example: IEEP/TNO/CAIR 2005, 'Service contract to carry out economic analysis and business impact assessment of CO_2 emissions reduction measures in the automotive sector', the Institute for European Environmental Policy (IEEP), TNO, and CAIR, the Centre for Automotive Industry Research (IEEP 2005).

It's cheap ... and consumers get their money back

Inevitably, a central argument repeatedly used to argue against the 120 g/km target is that the technology would be too expensive. But it isn't!

According to recent independent studies, reducing average CO_2 emissions to 120g/km can be done at a very reasonable cost (corresponding to as low as 1-2% of the price of a new car). For example, the 2005 IEEP report for the European Commission said the costs would be €577 per car, on average. The report also says that figure is likely to be an overestimation. This sounds familiar: catalytic converters were said to cost something like this in the late 1980s, and we know they now cost one tenth of this amount and work a lot better. That is innovation.

And even if car manufacturers simply added the cost of this technology onto the retail price of a new car, consumers would get the money back anyway in the form of fuel savings. At September 2005 oil prices (excluding charges and taxes), an average car doing 200,000km during its lifetime would give its owner more than €1000 back in fuel savings. The overall socio-economic costs are in reality negative.

Cost of reaching 120g/km = € 577 per car at the most

Lifetime fuel savings = € 1000 per car

For consumers, this means money saved. In other words...

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It's good for competitiveness

In 2000, EU heads of government met in Lisbon to map out a strategy to boost jobs and economic growth in Europe. So far, according to most observers, European policies have not delivered on these goals. A legally binding 120g/km CO_2 target for passenger cars is an example of a European policy that could deliver.

The costs of the technology – which we have seen are low – would provide a major boost to European technology companies, creating jobs in a dynamic sector of the economy. The 'costs' of reducing average CO_2 emissions to 120g/km would in fact translate into revenues for automotive technology companies (unlike the cost of fuel, which is burnt). This would be a boost to Europe's world-leading emissions-control technology industry.

The billions of euros of savings in fuel costs could be invested in socially beneficial projects, such as education, rather than burnt inside inefficient car engines.

But **only a legally binding set of challenging targets, a 'carrot and stick' approach that rewards innovative companies and punishes laggards, and transparent information about each company's performance will achieve this.**

A better bet than alternative fuels

A word on alternative fuels. It seems likely that a new generation of biofuels, hydrogen power and other energy sources will play some role in the vehicles of the future. However, there are big questions to be answered about each one.

The reason fuel efficiency (and the corresponding reduction in CO_2 emissions that comes with it) is so important is that the technology can be applied to any energy source. After all, it makes sense to use less, whether it's hydrogen, biofuel or even solar power. In short, fuel efficiency is a win-win policy, whatever the fuel.

Conclusion

Unlike at national level where extensive bureaucracies exist, officials of the EU's institutions work with very little specialist support. It is therefore crucial to the functioning of the EU that Commission officials and MEPs can rely on expert input from outside sources. Thus it is entirely natural that the Commission relies on input from the European automotive industry (among others) in drawing up its emissions parameters for new cars.

But the relationship between the car makers and the EU has become distorted and manipulative. The car industry has dragged its feet at every stage of the CO_2 emissions process, and on this and other issues has constantly exaggerated the difficulty and cost of making technologically feasible improvements. In the 1990s it 'cried wolf' over the introduction of catalytic converters, saying they would raise car prices to unacceptable levels, something that clearly hasn't happened. And it is doing so again over CO_2 emissions.

At every stage of the CO_2 emissions reduction process, the EU has made it clear that if the car industry cannot deliver the required reductions by itself, it will have to be forced to do so through mandatory limits. The voluntary approach has been tried, and is failing, even with weakened targets. If the EU does not now adopt legally binding limits, future threats to the car makers will be seen as empty, and it will be clear who is running the show in Brussels.

An average CO_2 emissions limit of 120 g/km by 2012 is technologically feasible, affordable, and consistent with the Lisbon strategy. There is now no reasonable argument against it. If the EU insists on it, the automotive industry's Research & Development departments will spring into action – to everyone's benefit.

It is time for the EU to decide whether its first loyalty is to Europe's citizens or Europe's car makers.

Find out more

Further information, as well as position papers, reports and factsheets can be downloaded free from the T&E website. **www.t-e.nu**

About T&E

T&E is Europe's principal environmental organisation campaigning specifically on transport. Members are drawn from NGOs in nearly every European country, all of whom promote a more environmentally sound approach to transport.

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