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Environmental Audit Committee
Committee Office
7 Millbank
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Dear Sirs,

**UKPIA'S SUBMISSION TO THE ENVIRONMENTAL AUDIT COMMITTEE'S INQUIRY INTO
REDUCING CARBON EMISSIONS FROM TRANSPORT**

The UK Petroleum Industry Association (UKPIA) represents nine companies engaged in oil refining and marketing in the UK. Our member companies supply most of the transport fuels and other oil related products used in the UK. As such, we have a major interest in the topic of reducing carbon from transport – particularly road transport - and welcome the opportunity to respond to the Committee's consultation on this important issue.

Our more detailed responses are confined to those questions where we have specific knowledge or expertise.

Summary

UKPIA's views can be summarised as follows:

- UKPIA believes that the UK's energy policy should continue to be based on maintaining a reliable UK energy system meeting all three pillars of sustainability-economic, environmental and social – with clear targets underpinned by a framework for their achievement. Policy objectives should not be dominated by any one of these pillars and should also avoid 'picking winners'. Sound science should be a cornerstone of this policy to ensure goals are met cost effectively.
- The oil industry believes that due to their low cost, on-going availability, and ease of use petrol and diesel will remain the dominant road transport fuels globally to 2030 and beyond, a view that is shared by the International Energy Agency in their forecasts of future energy use.
- The Government has set a challenging target for the UK to reduce its emissions of carbon dioxide in 2050 to 60% of the 1990 level, with reductions coming from across all sectors. For road transport, the contribution is expected to be 2-4 million tonnes

carbon/year by 2020, or about 5 to 10% of expected emissions, to be derived largely from a combination of improved vehicle efficiency, biofuels and a modest change in consumer behaviour.

- The oil industry believes that the Government's targets should be achieved by deploying the most cost-effective options first. This will ensure that the UK remains competitive by meeting its targets at the least cost and develops the technology that is most likely to be taken up by other countries, so creating opportunities for UK business.
- The industry takes seriously, and is closely involved in meeting, the challenge of reducing greenhouse gas emissions. For road transport, public, commercial and domestic sectors, savings are likely to come from a range of options, including new technology, bioenergy, renewables, increased energy efficiency and changes in consumer behaviour.
- The oil industry is currently working towards meeting the Government's target of replacing 5% of road fuels by biofuels by 2010 under the Renewable Transport Fuels Obligation (RTFO), which they estimate will save 1 million tonnes carbon/year. This will require time and significant investment by the industry at refineries and in the supply/distribution chain.
- The oil industry is actively developing and/or deploying new technology which will reduce emissions of greenhouse gases such as biofuels, wind, solar, carbon capture and storage, hydrogen and also fundamental research. Energy efficiency is also being improved in our operations for example by installing gas fired CHP in our refineries. This is backed by active participation in groups like the Low Carbon Vehicle Partnership and policy guidance from studies such as the Concawe/Eucar/JRC well-to-wheels study of different alternative fuels.
- The aviation sector presents different challenges by virtue of the international scope of the industry - requiring global co-operation to reduce emissions and change international treaties/agreements -, strongly growing consumer demand and no ready alternative to existing fuels utilised.

Responses to Questions posed by the Select Committee

Q1 *What progress has the Department for Transport (DfT) made against key carbon reduction targets?*

Public Service Agreements (PSAs) link the allocation of public expenditure to published targets with the aim of defining clear, long term goals to underpin the attainment of Government policy.

The DfT's current set of PSA targets for the period 2005-2008 was published in the Spending Review 2004 and took effect from 1 April 2005. DfT's responsibility (either solely or jointly with other departments) for road transport targets include:

- to reduce greenhouse gas emissions to 12.5% below 1990 levels in line with the UK's Kyoto agreement commitments
- move towards a 20% reduction in carbon dioxide emissions below 1990 levels by 2010, through a range of measures including energy efficiency and renewables.

(PSA 7 - both the above jointly with DEFRA & DTI)

These targets were also linked to sustainability indicators.

In addition, the Powering Future Vehicles Strategy launched in 2002 set some challenging targets for buses and passenger cars. For passenger cars the target was:

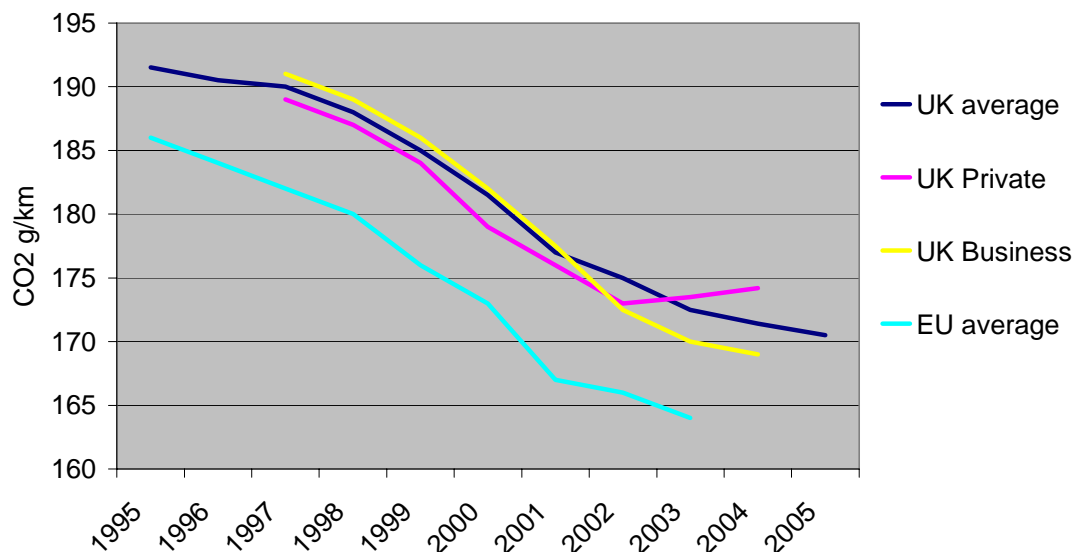
- that 10% of new passenger vehicles sold by 2010 emit CO₂ emissions of less than 100g CO₂/km (equiv to 75 mpg)

The PFV Strategy envisaged a combination of methods to achieve the target, including new vehicle technology and lower carbon fuels.

In terms of progress, CO₂ emissions from road transport have increased by less than 10% since 1990 despite an increase in the number of vehicles registered and an increase in kilometres driven of over 20% (Sources: DTI and DfT). This has largely been achieved as a result of increased vehicle efficiency reflecting a move to diesel powered vehicles within the car (PLG) fleet (37% of new car sales in 2005 -source: SMMT).

Overall average emissions of new passenger cars in the UK has improved from around 192g CO₂/km in 1995 to 171 in 2005 (11% improvement) but with a marked contrast between the business sector and the privately owned sector over the last few years.

UK new car fleet average tailpipe CO₂ emissions



A significant factor in the shift to more efficient vehicles in the business sector has been company car taxation linking tax liability to CO₂ output. Although the DfT is responsible in part for measures to help meet Government targets, past experience shows that fiscal measures – either including an element of incentive or a ‘stick’ – have a marked influence on consumer behaviour. A range of measures are available to back up policy targets and direction, including taxation and Vehicle Excise Duty.

A number of measures through different organisations has been initiated but delivery might be better served by a more cohesive approach and clearer responsibility for

meeting public and private sector targets, whilst at the same time giving consistent signals to consumers.

The powering Future Vehicles target that 10% of new passenger vehicles sold by 2010 emit CO₂ emissions of less than 100g/km is likely to be missed **unless new policies are introduced**. The target would require in the region of 240,000 cars to be sold meeting this standard by 2010. In 2004 less than 500 cars were sold meeting this target.

Although Transport Energy programmes (Powershift) have helped raise awareness of available options and given modest grant assistance, the impact has been slight. Influencing consumer attitudes is difficult and although the new car CO₂ labelling scheme in showrooms, promoted by car manufacturers and the LowCVP, should raise awareness, the evidence points to environmental considerations remaining a low priority for many car buyers. The increase in oil prices over the last two years may start to have an effect but it is clear that influence through duty measures to underpin policy objectives, remains unpopular with voters and thus a sensitive issue for Government.

Q2 *Are the DfT's carbon reduction targets underpinned by a coherent strategy across its full range of activities?*

Government/ DfT's policies cover:

- Improving vehicle efficiency – EU voluntary agreement and its future extension
- Renewable Transport Fuels Obligation – to add 5% biofuels to petrol and diesel, the current maximum limit in European fuels standards. DfT has also requested the European Commission to work with CEN to increase the level of biofuels that can be added to petrol and diesel without invalidating vehicle warranties.
- Supporting the development and introduction of cleaner vehicle technologies
- Encouraging the new LowCVP car efficiency label

Hence the policies cover all the major options- viz improving vehicle efficiency, reducing the carbon content of fuels and influencing consumer behaviour.

However in some cases, eg the targets in the Powering Future Vehicles Strategy, there are no specific policies in place that will deliver the target. DfT's expectation is that the average fuel consumption of the fleet will fall to the point that the target will be met but progress to date suggests that it is unlikely to happen.

Although there have been a number of initiatives designed to encourage the take up of lower carbon vehicles and fuels, this does not amount to a coherent strategy. This is exemplified by the reaction to the announcement of the DfT's road pricing study in 2005 which had a muted reception from those organisations expecting such a scheme to also be used to reduce carbon emissions.

Consistent, clear policy underpinned by a framework for delivery targeting the most cost-effective methods of reducing emissions of greenhouse gases rather than specific sector targets would undoubtedly assist in meeting the Government's overall target for CO₂ reduction in the most cost-effective way. Ideally, this should be backed by a lead department taking responsibility for delivery. For the transport sector, DfT is best placed to take a lead.

Such an approach would give clarity and consistency both to consumers but above all to the business sector which needs to make the investment and implement many of the changes required to deliver lower emissions.

Q3 Does the current balance of expenditure between DfT's objectives adequately reflect the environmental challenges it faces?

The environmental challenges should be met by greater emphasis on clearer policy signals from Government. These should be consistent across sectors and longer-term in nature, to avoid the risk of short-term measures and incentives that have no sustainable impact on behaviour or technology once removed.

The Transport Energy programmes (£29 million for 2005/6 financial year) should be used to underpin these policy objectives, by assisting with 'seed corn' funding for specific projects and activities.

The necessity to submit these programmes for EU Commission approval in line with the rules on state aid provision, and the subsequent delay in approval, has seriously affected the distribution of funding.

However the delay has highlighted the need for funding to be aimed at projects that, if successful, can continue without on-going DfT funding. This demonstrates the need to focus on cost-effective, sustainable measures that are most likely to succeed in the long term.

Q4 What, realistically, could the DfT achieve by 2010 and 2020 in terms of reducing transport-related carbon emission and the role that demand management should play in doing so?

The task of reducing carbon emissions from road transport is a major one and the timescale for doing so relatively tight given the time needed to develop and then introduce new technologies into the fleet, particularly for vehicles.

On fuels, the Government has announced the Renewable Transport Fuel Obligation (RTFO) requiring a road fuels biofuel content of 5% by 2010. DfT estimate this could reduce CO₂ emissions from road transport by up to 1 million tonnes of carbon per year (out of a total of 33 mtec/a). The actual wells to wheels reduction depends on the source of the biofuel (see chart below) and is much smaller than the potential reduction from improving vehicle fuel economy.

Table - Wells to Wheels Greenhouse Gas Emissions

Fuel	Wells to Wheels Greenhouse Gas Emissions g CO₂ equivalent/km
Petrol	196
Ethanol (95/5) from sugar beet	193
Ethanol (95/5) sugar cane(Brazil)	188
Diesel	164
Biodiesel (95/5)	160

Source: Concawe/JRC/Eucar 2005

Demand management can be implemented through a variety of direct methods including fiscal methods such as duty or VED, and road pricing or measures to

encourage car sharing schemes, travel planning, better information and making alternative means of travel more attractive. The development of the road pricing is at an early stage with pilot projects planned for 2008, so cannot be counted upon to make a contribution by 2010. Other measure could start to have an interim impact.

In the meantime, improvements in vehicle efficiency and influencing consumer purchase patterns will potentially have the largest effect. Under the voluntary agreement between the EU and car manufacturers, they are aiming to meet a target for the average new car sold in the EU of 140g CO₂/Km by 2008/9. The UK market, like Germany, Sweden, etc, prefers larger cars and so has lagged behind the EU average with UK emissions still at the 171g/Km level in 2005. If this rate of progress were maintained, this would indicate a level of close to 160g/km by 2010. In the longer term, there is greater scope for introduction of new vehicle and fuel technologies to achieve the EU aspiration 120g CO₂/Km target some time after 2012. The impact on overall emissions would be highly dependent on how quickly new technology enters the vehicle fleet.

Q5 *What specific steps should the DfT now take to reduce road transport carbon emissions and congestion over the next decade?*

Influencing consumer behaviour both in terms of the type of vehicle purchased, the amount it is used, passenger load factors and driving style, remain major challenges.

A range of measures should be employed, including education and fiscal, to bring about a move to more fuel efficient vehicles and more efficient driving styles and usage.

Encouraging a shift in transport mode will require public transport alternatives that are more attractive to consumers in terms of cost and convenience. In real terms motoring costs have reduced by 2.4% in the last five years whilst bus and rail charges have increased by 1.8% (source: CFIT). However, motorists value the convenience and security of car travel and will pay a premium for this.

Congestion is closely linked to demographics, GDP growth and planning considerations. The latter can be influenced in part by better integrated policies linking proximity to home, work and shops, although the problems in many towns are inherited over decades. Solutions thus tend to be long term in nature.

Although congestion charging is a possibility on the busiest of roads, this is likely only to redistribute demand during the day, or on to other routes, rather than reducing overall demand for travel, which is relatively inelastic.

In the longer term, alternative fuels could play a larger role and the oil industry is working to demonstrate the most promising technologies including hydrogen and more efficient biofuels.

Powering Future Vehicles

Q6 *whether the targets set out in the Powering Future Vehicles strategy were adequate and what progress has been made against them since 2002?*

The response under question 2 outlines the very limited progress made to date in meeting the targets. Although there is availability of vehicles meeting the criteria, it is a relatively niche market for essentially the smallest cars. New policies/initiative will be required if these targets are to be met.

There also appears to be limited consumer appetite for these vehicles since most consumers are seeking vehicles that meet the needs of their lifestyle rather than one with the lowest CO₂ emissions. Additionally, emphasis should be upon the CO₂ emissions rather than the technology of the vehicle so that consumers are able to make more informed choices.

Revised targets for lower CO₂ emissions in the most popular vehicle segments might be an alternative target in bringing down emissions as it would be addressing a larger pool of vehicles. However it would still not address the pool of cars consumers have to choose from which is set at a European level and not a UK level.

Ideally, such a move should be underpinned by measures encouraging consumers in the direction of the most efficient vehicles in the sector.

Q7 what organisations and funding sources are involved, whether there is adequate co-ordination between them, and whether the overall funding available and spent in support of the strategy is adequate in view of the environmental challenges the DfT is facing?

The DfT and DTI are the main departments with responsibility for the development of lower carbon vehicles and fuels, with input from DEFRA on some aspects of renewable fuels and HM Treasury on fiscal measures.

Action programmes, funding and research are carried out by a number of bodies including:

- Low Carbon Vehicle Partnership
- Energy Saving Trust (advice & funding to consumers)
- The Carbon Trust (advice & funding to industry on carbon saving)
- DTI funded research into low carbon and hydrogen fuel cell technology
- EU programmes eg CUTE which funded the three London hydrogen buses
- Academia and consultants reports on specific topics
- Industry's own research

The availability of Government funding is limited hence it seems unrealistic to expect the schemes to stimulate major change in the market for lower carbon vehicles/fuels.

Funding therefore should be focussed on the most cost effective return for reducing carbon, aimed at specific CO₂ emission reduction targets rather than a particular technology or fuel. Above all there must be confidence in the continuity of grant schemes for both companies and consumers alike.

Thank you for the opportunity to contribute to this important debate.

Yours sincerely

Chris Hunt