

## **EC Proposal for a Directive on the Promotion of Clean & Energy-Efficient Vehicles**

### **Department for Transport discussion paper**

*This paper is circulated to the Bus working Group on behalf of the DfT which is seeking views on how the proposed directive will affect procurement of vehicles by the public sector.*

### **Introduction**

The aims of this informal discussion paper are to explain the proposals that have put forward by the European Commission in its Revised Proposal for a Directive on the Promotion of Clean and Energy-Efficient Vehicles<sup>1</sup>, and to seek views on how they are likely to affect procurement of road transport vehicles by public sector authorities in the UK.

These views will help inform development of the UK government's position on this Directive, its negotiating position in Brussels and how, if adopted, it will be transposed into UK law. The paper includes a summary of the proposals (Section 1 below) and a series of questions designed to obtain stakeholder views (Section 2).

We are looking for comments from:

- UK public sector organisations, including local authorities, schools, hospitals, or their representative bodies;
- Private sector companies which provide services requiring the use or provision of road transport vehicles (including refuse collection);
- Bus service operators;
- Vehicle manufacturers (all types of road transport vehicles)
- Any other interested parties or members of the public

### **Where to find the text of the Proposal**

---

<sup>1</sup> Revised Proposal for a Directive of the European Parliament and of the Council on the promotion of clean and energy efficient road transport vehicles, 17 December 2007 COM (2007) 817

The text of the Commission's Proposal can be viewed at the following internet address:

[http://ec.europa.eu/transport/clean/promotion/index\\_en.htm](http://ec.europa.eu/transport/clean/promotion/index_en.htm)

The Department for Transport has also submitted Explanatory Memorandum 5113/08 to the UK Parliament on the Proposal, available here:

[www.publications.parliament.uk/pa/cm200708/cmselect/cmeuleg/16xi/1607.htm](http://www.publications.parliament.uk/pa/cm200708/cmselect/cmeuleg/16xi/1607.htm)

### **How to respond**

Section 2 below provides an optional questionnaire form which you can use to express views on the Commission's proposals. This asks a number of questions and provides room for comments. Alternatively, you can send written comments by email or by post in the form of your choosing.

Initial working group discussions on the Proposal are expected to take place from the end of March 2008. Therefore, responses by **Friday 21 March 2008** would be particularly helpful. However, if you are not able to meet this deadline your response will still be considered; later responses should be received by **20 April 2008**.

Completed questionnaire forms and other responses should be sent to Lucy Ahad at the Department for Transport, by email at: [lucy.ahad@dft.gsi.gov.uk](mailto:lucy.ahad@dft.gsi.gov.uk) or by post at 1/33 Great Minster House, 76 Marsham St, London SW1P 4DR. You can also contact Lucy with any queries or comments at the addresses provided above, or by phone on 020 7944 4493.

### **What happens next**

To become an EU Directive, the Proposal needs to be considered and agreed both by the EU Council of Ministers (governments of the individual member states) and by the European Parliament.

Discussion at the Council of Ministers is expected to take place at Transport Council in June 2008; the First Reading by the European Parliament is scheduled for 8 July 2008.

In advance of these discussions the UK government also expects to conduct an impact assessment to assess the costs and benefits of the proposals in greater detail. Together with the stakeholder responses this will inform development of its position.

If the Proposal is agreed by the Council and Parliament, the UK will need to transpose the Directive into UK law at the latest 18 months after its publication in the Official Journal of the European Union.

**Department for Transport  
February 2008**

## **Section 1: Summary of proposals**

1. This revised Proposal sets out a new requirement for public sector bodies in the EU as well as their contractors to include wholelife environmental costs into procurement award criteria for road transport vehicles from 1<sup>st</sup> January 2012 at the latest. The aim is to encourage EU public authorities to procure vehicles with an improved environmental performance, so as to stimulate the market for cleaner and more energy efficient vehicle models and promote their earlier introduction.
2. If adopted, the Directive will apply to procurement of all road transport vehicles (passenger cars, Light Commercial Vehicles (LCVs), buses, Heavy Goods Vehicles (HGVs), refuse trucks etc) by public sector bodies and their contractors. These are defined as “contracting authorities” and “contracting entities” as set out in Directives 2004/17/EC<sup>2</sup> and 2004/18/EC<sup>3</sup>; as well as “operators under contract, licence, permit or authorisation granted by public authorities”.
3. In practice, the organizations that will be covered by this definition include the UK government, the devolved administrations, local authorities, state-run schools, NHS Trusts and a number of organizations defined in the above Directives, as well as operators delivering services on their behalf. In particular, the Proposal will also apply to private sector companies delivering public passenger transport services on behalf of local authorities, including bus operators, as well as others such as refuse collection providers.
4. The Proposal specifies the methodology, which public sector organizations covered will be required to apply in order to assess and value vehicles’ wholelife environmental impacts. This is based on internalization of the expected wholelife external costs of vehicles into the cost assessment for the vehicle, according to values specified by the Commission in an Annex to the Proposal. Details of

---

<sup>2</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:134:0001:0113:EN:PDF>

<sup>3</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:134:0114:0240:EN:PDF>

these values are attached below at **Annex A**; a worked example of how the methodology will be applied is supplied at **Annex B**.

5. The external environmental impacts that will need to be considered and internalized include:
  - **energy efficiency** - based on average fuel consumption, the energy content of fuels used to power them, and expected lifetime mileage
  - **carbon dioxide (CO<sub>2</sub>) emissions**, based on average CO<sub>2</sub> emissions in kilograms per kilometres and expected lifetime mileage
  - **emissions of pollutants, specifically oxides of nitrogen (NO<sub>x</sub>), non-methane hydrocarbons (NMHC) and particulate matter (PM)**, calculated as for CO<sub>2</sub>
  
6. This Proposal aims to contribute to meeting EU objectives of increasing energy efficiency in the transport sector and to protecting the environment, by reducing total emissions of CO<sub>2</sub> and of air quality pollutants from vehicles. The Commission expects that implementation of the Proposal will result in a number of long-term benefits, including:
  - economies of scale in the production of cleaner and more energy efficient vehicle models
  - lower costs for these technologies, and thus,
  - improvements in the overall environmental performance of the EU vehicle fleet.
  
7. The UK government supports these policy objectives. It also supports the principle of an EU initiative to promote green public procurement of road transport vehicles - so long as there is clear evidence that the benefits of the measures proposed outweigh the costs and that there is added value to action at Community level. However, it has some concerns about:
  - the workability of the methodology for calculating the cost of emissions in practice (in particular linked to data availability for larger vehicles)
  - the effectiveness of the Commission's proposals, given that UK public authorities procure on the basis of best value, and that they do not specify the weighting that should be given to environmental impacts in procurement decisions

- the emissions values specified by the Commission - and the possible unintended consequences (linked to the higher values put forward for air quality pollutants compared to standard UK guidance, which could encourage take-up of vehicles with a higher performance on air quality, but a lower performance on carbon, in areas where they are not appropriate)

Stakeholder views on these issues to inform the UK position would be very welcome.



If you would like your response or personal details to be treated **confidentially** please explain why:

Part 2: Your comments

Rationale for proposals

Currently there is no mandatory requirement for EU or UK public authorities to take environmental impacts into account in procurement decisions for vehicles – although many do so, in a variety of different ways. The Commission argues that action at EU level is required to harmonise the way in which they do so, so as to stimulate the introduction of cleaner and more energy-efficient vehicles.

	Yes	No
Q1. Do you agree that there should be a legal requirement for UK public authorities to take environmental impacts into account in procuring road transport vehicles?	<input type="checkbox"/>	<input type="checkbox"/>

Please explain your reasons or add any additional comments you wish to make:

	Yes	No
Q2. Do you think this Proposal could be effective in creating a market for cleaner and more energy-efficient vehicles?	<input type="checkbox"/>	<input type="checkbox"/>

Please explain your reasons or add any additional comments you wish to make:



Impacts for UK affected bodies

*(Note: this section should only be completed by UK public sector bodies or other organisations covered by the Proposal)*

A study conducted for the Commission<sup>4</sup> finds that the overall benefits of this measure applied across the EU will outweigh the costs. The UK government is keen to obtain better information about how the requirement would be likely to affect UK organisations to ensure that the measure is effective and the impacts of compliance are not disproportionate.

Q3. Does your organisation take the likely environmental impacts of vehicles into account in making procurement decisions? Yes  No

If you answered yes, please explain how environmental impacts are taken into account, what is covered, or add any additional comments you wish to make:

Q4. If the requirements in this Proposal became UK law, would this change your purchasing decisions for vehicles? Yes  No

---

<sup>4</sup> Study on a new approach for the cleaner and more energy efficient vehicles directive proposal, [http://ec.europa.eu/transport/clean/promotion/index\\_en.htm](http://ec.europa.eu/transport/clean/promotion/index_en.htm)

If it would change your procurement decisions, please explain how it would do so, or add any additional comments you wish to make:

### Methodology

The Proposal specifies a standard methodology that public authorities and other organisations concerned would have to take into account in assessing the environmental costs of vehicles. This is based on internalization of the expected wholelife environmental impacts into the cost assessment made for different vehicle options, using values specified by the Commission. It is important that the methodology is clear, simple, and easy for relevant UK organisations to apply in practice.

Q5. Do you think the methodology suggested by the Commission will be straightforward to apply in practice? 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

Please explain your reasons or add any additional comments you wish to make:

Q6. Is the information about vehicles emissions and fuel consumption readily available to UK procurement and fleet managers? 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

Please explain your reasons or add any additional comments you wish to make:

Q7. Will complying with the Directive take up any extra time for public authorities? Yes  No

Please explain your reasons or add any additional comments you wish to make:

Q8. Do you think the values for energy, CO2 and air quality pollutants specified by the Commission are appropriate? Yes  No

Please explain your reasons or add any additional comments you wish to make:

#### Implications for private sector contractors

The requirements in the Proposal would apply to private sector contractors procuring vehicles used to deliver services to UK public sector authorities. In particular, it applies to procurement of buses used to provide commercial and subsidized services in the UK.

Q9. Do you think the Proposal should apply to Yes  No

private sector operators delivering services such as bus transport, refuse collection or others?

Please explain your reasons or add any additional comments you wish to make:

## **Annex A: Conversion figures supplied by the Commission for calculating vehicle emissions costs**

---

Table 1: Energy content of motor fuels

<b>Fuel</b>	<b>Energy content</b>
Diesel	36 MJ/litre
Petrol	32 MJ/litre
Natural Gas	38 MJ/Nm <sup>3</sup>
LPG (liquefied petroleum gas)	24 MJ/litre
Ethanol	21 MJ/litre
Biodiesel	33 MJ/litre
Emulsion fuel	32 MJ/litre
Hydrogen	11 MJ/Nm <sup>3</sup>

Table 2: Cost for emissions in road transport (in 2007 prices):

<b>CO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>NMHC</b>	<b>Particulate Matter</b>
2 €cents/kg	0.44 €cents/g	0.1 €cents/g	8.7 €cents/g

Table 3: Lifetime mileage of road transport vehicles

<b>Vehicle category</b> (M and N categories as defined in Directive 2007/46/EC)	<b>Lifetime mileage</b>
Passenger cars (M1)	200 000 km
Light commercial vehicles (N1)	250 000 km
Heavy goods vehicles (N2, N3)	1 000 000 km
Buses (M2, M3)	800 000 km

## **Annex B: Worked example for calculating vehicle emissions figures**

This Annex provides an illustrative worked example of how to apply the Commission's methodology to calculate the expected wholelife costs of two different vehicle models (including environmental impacts) as part of a hypothetical procurement scenario. It is based on a cost calculation and comparison for two fictional passenger car models with a different performance on fuel consumption, and emissions of carbon and air quality pollutants.

### **Assumptions**

The tables below provide details of the assumptions used for the calculation.

**Table 1: Sample calculations of external lifetime costs**

	Energy content of fuels (MJ/litre)	Unit cost of energy (pence/MJ)	Pre-tax cost per litre (pence)
Diesel	36	0.97	34.77
Petrol	32	1.01	32.37

*Source:* Commission, UK government

**Table 2 : Emissions values (2007 prices)\***

CO <sub>2</sub> (pence/kg)	No <sub>x</sub> (p/g)	NMHC (p/g)	PM (p/g)
1.48	0.33	0.07	6.44

*Source :* European Commission

\* Based on an exchange rate of 0.74 Euros to 1 Pound Sterling, UK Cabinet Office guidance, January 2007

**Table 3: Assumed lifetime mileage for passenger cars**

#### **Lifetime mileage (km)**

Cars                    200,000

*Source:* European Commission

## Calculation

This example compares the costs of two fictional vehicle models (Passenger car A and Passenger car B), based on the methodology provided by the Commission. Both vehicles are assumed to be fuelled by petrol. A number of assumptions have been made about their list price, average fuel consumption and emissions of carbon dioxide and air quality pollutants.

In each case, the expected cost of each vehicle over its lifetime for a procuring organisation is calculated by considering:

- Vehicle list price (it is assumed that the vehicle is directly purchased rather than leased)
- The cost of fuel to operate it over its lifetime
- The cost of the carbon and air quality pollutant emissions it is expected to produce over its lifetime, using the values supplied by the Commission

Table 4: Summary of vehicle wholelife cost assessment

<u>Passenger car A</u>		<u>Passenger car B</u>	
<b>List Price</b>	£14,500	<b>List Price</b>	£12,000
Fuel consumption (combined l/100km)	4.5	Fuel consumption (combined l/100km)	8.5
Energy use (MJ/km)	1.44	Energy use (MJ/km)	2.72
<b>Total fuel cost</b>	£2,913.30	<b>Total fuel cost</b>	£5,502.90
<b>Total lifetime costs without env. Impacts</b>	£17,413.30	<b>Total lifetime costs without env. Impacts</b>	£17,502.90
CO2 (g/km)	110	CO2 (g/km)	200
<b>Total cost of CO2</b>	£325.6	<b>Total cost of CO2</b>	£592.00
Nox (g/km)	0.01	Nox (g/km)	0.023
<b>Total cost of Nox emissions</b>	£6.51	<b>Total cost of Nox emissions</b>	£14.98
NMHC (g/km)	0.02	NMHC (g/km)	0.048

<b>Total cost of NMHC emissions</b>	£2.96	<b>Total cost of NMHC emissions</b>	£7.10
PM (g/km)	0	PM (g/km)	0
<b>Total cost of PM emissions</b>	£0.00	<b>Total cost of PM emissions</b>	£0.00
<b>Total lifetime costs</b>	£17,748.37	<b>Total lifetime costs</b>	£18,116.98

## Discussion

The above calculation shows how fleet managers in the organisations covered by the Proposal would be expected to compare the costs of two different passenger car options in an imagined procurement scenario. They would need to follow the same approach for other vehicle types (including vans, buses or Heavy Goods Vehicles).

In this illustrative example, the Commission's methodology shows the first vehicle model to be more economic over its lifetime than the second - taking into account expected fuel savings and the cost of environmental impacts, as well as the Commission's assumptions around fuel energy content, average lifetime mileage for passenger cars, and values for different emissions. This is despite the higher list price of the first vehicle model.

Fleet managers seeking to procure a vehicle on the basis of best value would have to assess this calculation in light of their own specific fleet requirements, local environmental priorities, and other user needs.