# COMMISSION OF THE EUROPEAN COMMUNITIES



Brussels, 12.06.1998 COM(1998) 348 final

98/0202 (SYN)

# Proposal for a COUNCIL DECISION

establishing a scheme to monitor the average specific emissions of carbon dioxide from new passenger cars

(presented by the Commission)

### 1. BACKGROUND

#### 1.1. CO<sub>2</sub> emissions and road transport

In the context of world-wide efforts to combat global climate change and as a party to the United Nations Framework Convention on Climate Change the Community has committed itself to stabilizing carbon dioxide (CO<sub>2</sub>) emissions at 1990 levels by the year 2000. Moreover, it is recognized by the Community that in order to reduce the risk of a dangerous, anthropogenic interference with the climate system, reductions of greenhouse gas emissions will be required in industrialized countries in the medium term. Indeed, at the Conference of the Parties to the UNFCCC held in Kyoto in December 1997, the Community accepted a target contained in the Protocol to reduce its emissions of a basket of greenhouse gases, including  $CO_2$ , by 8% relative to the levels in 1990 by 2008-2012.

With regard to the above, the trends in  $CO_2$  emissions from transport are a special cause for concern. In particular,  $CO_2$  emissions from passenger cars account for about half of all  $CO_2$  emissions from the transport sector and approximately 12% of  $CO_2$  emissions from all sources in the EU. Passenger car  $CO_2$  emissions are expected to grow significantly in the future which may undermine the Community's commitments on climate change.

# 1.2. The Community's CO<sub>2</sub>/cars strategy

While there was a clear trend of fuel efficiency improvement for passenger cars until the mid 1980s, average fuel consumption per kilometre has remained roughly the same since then. The average specific emissions of  $CO_2$  from the current passenger car fleet is estimated at approximately 170g/km as measured by the "euromix" test cycle<sup>1</sup>.

The Community's strategy to reduce the  $CO_2$  emissions from passenger cars through improved fuel economy, as proposed by the Commission<sup>2</sup> and endorsed by the Council<sup>3</sup>, includes an objective for new passenger cars to attain an average specific emission of  $CO_2$  of 120 g/km by 2005 (2010 at the latest). The  $CO_2$ /cars strategy consists of three pillars, namely, an environmental agreement with the manufacturers, a framework for fiscal incentives and a fuel economy labelling scheme to influence consumer choice.

In its conclusions of 25 June 1996, the Council stated that the implementation of a  $CO_2$  monitoring scheme for new passenger cars was of "crucial" importance in order to assess the effectiveness of the  $CO_2$ /cars strategy. In

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Council Conclusions of 25 June 1996.

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Defined in Directive 80/1268/EEC (OJ L 375, 31.12.1980, p. 36) relating to the fuel consumption of motor vehicles.

Communication on a Community strategy to reduce  $CO_2$  emissions from passenger cars and improve fuel economy, COM(95) 689 final.

addition, the Council asked the Commission to report regularly on the impact of the CO<sub>2</sub>/cars strategy on the new car market. Furthermore, the Council considered that measures to reduce CO<sub>2</sub> emissions should be coherent with other environmental objectives, in particular air quality objectives including tropospheric ozone and acidification, and should not compromise traffic safety.

The motivation to establish a scheme to monitor the average CO<sub>2</sub> emissions of new passenger cars was an integral part in the development of the Community's CO<sub>2</sub>/cars strategy. As such, one of its functions will be to verify the correct functioning of any agreement that is reached with the automobile manufacturers to reduce the fuel consumption of their vehicles.

If agreement can not be reached and legislation is instead put into place, then a monitoring system will still be required. This arises from the fact that the attainment of the 120 g CO<sub>2</sub>/km target will depend not only on technological improvements in vehicles (achieved by limit values for example) but also on the future development of the new car market. Developments in the market, as brought about by fuel economy labels and fiscal measures, need to be monitored as do negative developments. For example, if there is a general shift by consumers to "upsize" their vehicles then the benefits arising from reduced emissions from individual cars may be negated by the overall shift to less fuel efficient models.

For these reasons, a monitoring system will be necessary whatever the precise mix of policies comprising the Community's CO<sub>2</sub>/cars strategy.

#### 1.3. **Current situation**

No Community-wide scheme to monitor the CO<sub>2</sub> emissions from new passenger cars currently exists nor has any Member State put into operation such a scheme at a national level. The difficulty in implementing such a monitoring scheme lies in linking sales and or registration information with official fuel consumption data in a transparent way.

Several private organizations have published sales-weighted estimates of the average fuel consumption of passenger cars, for example, the VDA (Verband Deutscher Automobilindustrie) has compiled figures for the domestic German car fleet since 1978.

The most comprehensive scheme to monitor the CO<sub>2</sub> emissions from new passenger cars has been developed by the European Conference of Ministers of Transport (ECMT)<sup>4</sup> using the BDSA (Base de Données Statistiques Automobiles) database covering 15 countries. The BDSA is compiled by the CCFA (Comité des Constructeurs Français d'Automobiles) from many different sources and inevitably contains some inaccuracies. Furthermore, it does not cover all newly registered passenger cars (approximately 87% of new cars in ECMT countries).

<sup>&</sup>quot;Report on the monitoring of fuel consumption and CO2 emissions of new cars", European Conference of Ministers of Transport, CEMT/CM(97) 17. 3

### 1.4. Consultation with interested parties

The process of developing the current proposal has involved three meetings with experts from the Member States, ECMT, industry and NGOs. There has been extensive bilateral discussion with several Member States and the European Automobile Manufacturers Association(ACEA) and there is general support from both for the proposed  $CO_2$ /cars monitoring scheme.

# 2. THE PROPOSED DECISION

### 2.1. Objectives

The Community has adopted an objective of 120 g/km for the average specific emissions of  $CO_2$  to be attained by 2005 by the fleet of new passenger cars in the EU. There is currently no mechanism to monitor accurately the average specific emissions of  $CO_2$  from new passenger cars at the EU level. The objectives of the proposed Council Decision are, therefore:

- to assess the effectiveness of the Community's CO<sub>2</sub>/cars strategy;
- to provide information on the changes in the passenger car fleet, due to the implementation of the strategy, which may affect other Community policy objectives such as air quality, ground level ozone, regional acidification and road safety;
- to assess the impact of the  $CO_2$ /cars strategy on the new car market.

### 2.2. Type of information collected

The proposed Decision provides for a monitoring scheme which will collect information relating to the specific emissions of  $CO_2$ , manufacturer, fuel type, mass, engine power and engine capacity of each newly registered passenger car. The Council, in its conclusions, expressed the wish that any monitoring scheme be based on official data from the competent authorities in the Member States. The range of the data to be collected and reported arises from the objectives that a monitoring scheme must address in addition to its ability to monitor progress towards the Community's specific  $CO_2$  emissions objective.

The first is to provide data to allow an assessment of the changes in the new car fleet which could impact on other Community environmental objectives such as air quality, acidification and ground level ozone. For example, the emissions from petrol and diesel vehicles contribute differently to these environmental effects and thus an increased market share of one or other fuel types may have implications for the attainment of these Community objectives in the future.

Secondly, the Council in its conclusions of 25 June 1996 specifically requested that the Commission take into account "the importance of contributions from each car manufacturer in reducing fuel consumption". It is, therefore, important from both the Community's and the manufacturers' point

of view that the monitoring scheme be able to demonstrate that each of the manufacturers is contributing to the success of any environmental agreement.

Thirdly, the collection of data regarding the distribution of  $CO_2$ , mass, power and engine capacity will allow the influence of the  $CO_2$ /cars strategy on the characteristics of the new car market to be assessed as requested by the Council (for example, to identify trends such as a downsizing of the car fleet). Such information might also be useful in assessing the potential impact on road safety, the future demand for motor fuels, competitiveness of the automobile industry, etc.

The proposed monitoring scheme will allow a more precise understanding of the emissions characteristics of the whole passenger car fleet. This will aid Member States in estimating such emissions within the framework of Council Decision 93/389/EC relating to a Community mechanism to monitor anthropogenic  $CO_2$  and other greenhouse gas emissions<sup>5</sup>

# 2.3. Description of the proposed monitoring scheme

The operation of the proposed scheme depends upon the collection of the appropriate data by the competent authorities in the Member States. Vehicle specific data, including the specific emissions of CO<sub>2</sub>, for cars registered in a given calendar year are to be collected and some simple manipulation performed (e.g. calculation of average specific emissions for different groups of vehicles). This aggregated data is then to be communicated to the Commission who will aggregate the data further on an EU scale before publishing an annual report. This monitoring information will, of course, be available to both consumers and organizations representing their interests.

All of the data to be included in the proposed monitoring scheme will be available by the proposed implementation date as a result of existing or planned Community legislation covering the type-approval of motor vehicles and their trailers<sup>6</sup>. This data should be consistent between Member States as all national type-approval authorities must satisfy the requirements of existing Community legislation in this area.

From the responses that the Commission has received from its requests for information it is apparent that most, if not all, Member States operate centralized and computerized vehicle registration databases containing much of the information required by the proposed monitoring scheme. The information in the registration files comes from either the Certificate of Conformity (CoC) or the type-approval documentation (see below).

The information required to underpin the proposed monitoring scheme is to be collected by the competent authorities in the Member States. In many instances this will be those official bodies responsible for the collection of vehicle-registration data. The various vehicle registration schemes in the

<sup>&</sup>lt;sup>5</sup> OJ L 167, 9.7.1993, p. 31.

Directive 70/156/EEC (OJ L 42, 23.2.1970, p. 1); last amended by Directive 96/27/EC, (OJ L 169, 8.7.1996, p. 1).

Member States exhibit some heterogeneity. However, it is not the intention of this proposed Decision to harmonize these systems, but simply to use the information that they currently store. In most cases, some minor upgrading of the registrations systems will be required in order that they are able to store and access those categories of information which are required but not currently collected and to assure the quality of this data.

It has been decided to adopt a flexible approach towards the collection of the relevant monitoring data. The preferred procedure will use the CoC as the source of data, but the Decision will permit alternative approaches if they can be demonstrated to yield equivalent results. Member States will be obliged to collect only those data which are essential to the objectives of a  $CO_2/cars$  monitoring scheme in order to minimize the extent to which national vehicle registration systems must be adapted. It is recognized that  $CO_2$  emissions data may not be available for a small proportion of vehicles registered each year. This is because they fall outside of the scope of the European type-approval process. For example if cars are produced in low volume, imported privately from outside of the EU or self built from kits. These vehicles are not expected to influence the European average specific  $CO_2$  emission figure significantly.

# 2.4. Financial implications

Member States have been asked to estimate the costs of implementation of the proposed monitoring scheme. However, the situation is complicated by the fact that some Member States have initiated steps to upgrade national registration systems for domestic policy reasons (e.g. purchase and circulation taxes linked to vehicle emissions). The recent Commission proposal to harmonize registration certificates within the Community<sup>7</sup> may also provide a stimulus for some Member States to modify their registration systems.

Those Member States that have responded have indicated that the costs associated with these modifications lie in the range ECU 17 000-125 000, though the majority cite costs at the lower end of this range. The same Member States have indicated that there are additional annual costs associated with operating the monitoring scheme and these lie in the range ECU 1 000-42 000. Overall, the costs associated with the initial implementation of a  $CO_2$ /cars monitoring scheme across the 15 Member States are estimated at somewhere between ECU 0.5-1.0 million. Annual running costs are expected to be somewhat less than this.

# 2.5. Vehicle type-approval

The information required for the operation of the proposed monitoring scheme is generated by the existing EC type-approval process for motor vehicles. The measurement of the specific emissions of  $CO_2$  is an integral part of the type-approval process<sup>8</sup>.

Communication on registration documents for motor vehicles and their trailers, COM(97) 248 final.

Directive 80/1268/EEC (OJ L 375, 31.12.1980, p. 36), as amended by Directive 93/116/EC (OJ L 329, 30.12.1993, p. 39).

As part of the application for vehicle type-approval, the manufacturer must provide an *information folder* which contains the technical details of the vehicle type. Once a type-approval has been granted, a *type-approval certificate* is issued by the type-approval authority to which the original application was made. In addition, an *information package* containing all relevant technical information relating to the type-approval is circulated to all other national type-approval authorities in the Community.

According to the provisions of Article 6 of Directive 70/156/EEC, as amended by Directive 92/53/EEC<sup>9</sup>, the manufacturer, in his capacity as the holder of a vehicle type-approval, shall issue a *Certificate of Conformity* (CoC) which shall accompany each new vehicle. Furthermore, Article 7 of the same Directive states that "each Member State shall register, permit the sale or entry into service of new vehicles on grounds relating to their construction and functioning if, and only if, they are accompanied by a valid Certificate of Conformity". The CoC is specific to a particular vehicle and contains all the relevant data required for the implementation of the current Decision. A Commission Directive<sup>10</sup>, amending Directive 70/156/EEC, has been adopted which will ensure that the value of the specific emissions of CO<sub>2</sub> will appear on the CoC before the commencement date of the proposed monitoring scheme.

The manufacturer may subdivide the vehicle *type* into *variants* and *versions* the relevant technical data for which should also appear in the information folder and the information package. The type, variant and version are identified by a unique numbering system. In addition, the manufacturer declares only one official  $CO_2$  emission figure per version. It is the intention of the proposed monitoring scheme to use only "version specific" data. The CoC contains only version specific data.

Manufacturers adopt different practices with respect to the degree of differentiation within a particular vehicle type (i.e. the number of different versions that they declare). Within a given version there may be differences between vehicles with respect to their  $CO_2$  emissions but the "worse case"  $CO_2$  emission is declared by the manufacturer for type-approval purposes. This figure is included in the CoC. It is apparent that the more versions that a manufacturer declares then the more accurate the average  $CO_2$  emission figure will be for a given vehicle type. Greater differentiation in the future may also lead to a greater apparent reduction in the average specific  $CO_2$  emissions of a manufacturer's new car fleet relative to the current situation. This reinforces the requirement that a monitoring scheme must utilize "version specific" data.

If manufacturers differentiate their vehicle types further in the future, then this may place an added technical burden on the national vehicle registration systems. This is pertinent to those Member States which plan to upgrade their particular systems in the near future.

10 Commission Directive ...... OJ L .....

<sup>&</sup>lt;sup>9</sup> OJ L 225, 10.8.1992, p. 1.

2.6. Test cycles and CO<sub>2</sub> measurements

Prior to 1997, fuel consumption and  $CO_2$  measurements of passenger cars were made using the "euromix" test cycle as defined in Directive 80/1268/EEC. This cycle has been replaced by the same test cycle as that used to measure the exhaust gas emissions of passenger cars, the so-called Combined Urban/Enhanced Urban Drive Cycle ("ECE + EUDC")<sup>11</sup> However, a proposed Directive(<sup>12</sup>) will, if adopted, modify the ECE test cycle used for the measurement of exhaust gas emissions and introduce new reference fuels as from 1 January 2000 for new vehicle types and from 1 January 2001 for all new cars. The test cycle specified for the measurement of CO<sub>2</sub> emissions will, however, remain unchanged. The Commission, therefore, intends to bring forward amending legislation to ensure that both exhaust gas emissions and CO<sub>2</sub> emissions are measured according to the same test procedures post 1 January 2000.

As a consequence of modifying the current ECE drive cycle, the average specific emissions of  $CO_2$  as measured for type-approval (and used within the  $CO_2$  monitoring scheme) will increase. This increase may be of the order of 3% though this estimate is provisional. Since the monitoring scheme covered by the proposed Decision will commence as of 1 January 2000, it is likely that this increase in specific  $CO_2$  emissions will be captured and it is, therefore, important to be aware of its origin.

# 2.7. Which fuels are included?

An important requirement for the correct functioning of the monitoring scheme is the accuracy and consistency of data collected by the Member States. This was recognized by the Council who asked that any scheme be based upon official data collected by the competent authorities in the Member States.

The above principle, therefore, excludes data which are not measured in a consistent way using standard fuels and common procedures across the Community. It is apparent, therefore, that the monitoring scheme is restricted to data which is collected under EC type-approval legislation. Currently, this only includes petrol and diesel vehicles though the intention is to include Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG) in the future. The Commission will come forward with amendments to this Decision as and when new fuels are included in the type-approval legislation. Initially, it is expected that few gas fuelled vehicles will be type-approved and the impact, therefore, on the average  $CO_2$  emissions value of the new car fleet will be small.

<sup>11</sup> Defined in Directive 91/441/EEC (OJ L 242, 30.8.1991, p. 1) amending Directive 70/220/EEC (OJ L 76, 6.4.1970, p. 1) relating to measures to be taken against air pollution from motor vehicles.
<sup>12</sup> Communication on a further strategy for the control of atmospheric emissions from road transport taking into account the results of the Auto Oil programme, COM(96) 248 final.

The inclusion of electric vehicles is problematic because of the difficulty in assessing the benefits of their use in terms of their overall  $CO_2$  emissions. Although tail-pipe emissions of  $CO_2$  are zero, the life-cycle emissions may be considerable. In addition, these life-cycle emissions may vary widely across the Community due to the very different structures of the power generation industries in the Member States.

# 2.8. Data quality assurance

The Member States shall be responsible for the validity and accuracy of the data that they collect. The proposed monitoring scheme will only use official data from the Member States taken either from the type-approval documentation or the Certificate of Conformity. In addition, certain criteria have been laid down as to how these data sources are to be used.

There are, nonetheless, several potential sources of error which have been outlined in the proposal. These include human error in the conversion of data contained in the (paper) type-approval documentation to a digital form, the selection of the correct "version specific" data from such electronic databases of type-approval information, human error during the transfer of data from the (paper) Certificate of Conformity to the electronic registration file during vehicle registration and the transfer of incorrect data from manufacturers and dealers during automated vehicle registration. The Member States will be asked to minimize these errors and to assess the quality of the data that they collect. The accuracy of this data is of prime importance as it will be used to measure both the effectiveness of the Community's  $CO_2$ /cars strategy and the performance of the automotive manufacturers in reducing the  $CO_2$  emissions of the new car fleet. In any event, the Commission will assess the functioning of the monitoring system and may propose appropriate measures to improve the operation of the scheme should they be necessary.

## 2.9. Car registration systems in the Member States

It is not the intention of this proposed Decision to harmonize the various national vehicle registration systems but simply to build upon them in order to extract data of a certain quality for monitoring purposes. As an indirect effect, implementation of the monitoring scheme may require some registration systems to be adapted. There exists a degree of heterogeneity in the various national vehicle registration systems which are described below. The data contained in the national registration databases is summarized in Table 1.

# 2.9.1. Austria

A customer must present a CoC to the appropriate regional body in order to register a new passenger car. The regional authorities then forward the data to the Ministry of the Interior (and the central statistical office) where a registration file is created in a centralized database. Austria has recently implemented a new car purchase tax based upon the fuel consumption and, at a later date, upon the specific emissions of  $CO_2$ . This should contribute to the accuracy and quality of the data collected for monitoring purposes.

# 2.9.2. Belgium

A centralized passenger car registration system exists where the data required for each registration file is taken from type-approval documentation except for privately imported vehicles where the CoC is used, if one is available.

# 2.9.3. Denmark

A computerized system for the registration of passenger cars is in operation. Administrative changes are envisaged which will allow the inclusion of fuel consumption in the electronic registration file which will be used as the basis to calculate a circulation tax. The registration data is taken from type-approval documentation otherwise the CoC is used in conjunction with a vehicle inspection.

# 2.9.4. Finland

Registration of new passenger cars is performed on-line at organizations such as official inspection sites and a database of version specific vehicle registration data currently exists. The information is extracted from a database of type-approval documentation or from a vehicle inspection but not from the CoC.

### 2.9.5. France

The registration file and certificate are created upon demand and presentation of the CoC by the vehicle owner at the appropriate authority in the Départements. All registration files are stored in a centralized vehicle registration database which contains version-specific information. This version-specific data is retrieved from a database of type-approval data using the type, variant and version numbers contained on the CoC presented by the vehicle owner.

### 2.9.6. Germany

A centralized national database of vehicle registration information exists. The information is taken from the type-approval documentation although the technical data for several similar versions, as defined by type-approval legislation, are aggregated in the database. Technical information for "each aggregated version" is sent to the regional registration authorities (responsible to the Länder) who issue a registration document ("Fahrzeugschein") to the applicant upon presentation of a "German CoC" ("Fahrzeugbrief") given by the manufacturer or importer if authorized by the KBA on the basis of an existing type-approval.

# 2.9.7. Greece

The Direction of Information at the Ministry of Transport maintains a national electronic database of vehicle registration data. The data contained in the registration files is extracted from a database of type-approval information when a vehicle is presented for registration by one of the responsible regional authorities. Before a vehicle can be registered, information in the type-approval file is cross checked against data contained in the CoC using type, variant and version numbers to access the type-approval database.

# 2.9.8. Ireland

The technical information required for the registration of new passenger cars is supplied by the franchized distributors in an electronic format and stored in a central database. This data is essentially that contained in the CoC. A request to register a new vehicle is made on-line at a local office. This triggers the extraction of the appropriate data from the central database which is incorporated into a registration file.

#### 2.9.9. Italy

No information has been received regarding the vehicle registration system in Italy.

### 2.9.10. Luxembourg

A central computerized database of passenger car registration data exists. This data is generally taken from type-approval documentation supplied by the manufacturers or else from the CoC accompanying each new car. Only those data required for the operation and calculation of the annual circulation tax are stored currently.

# 2.9.11. Netherlands

The present vehicle registration database will be replaced in the Netherlands in the next 1-2 years. Currently, version-specific information, obtained from type-approval documentation, is contained in a central database maintained by the central registration authorities. The importer (manufacturer/dealer) of a new vehicle requests the production of a registration card by the central registration authorities by transmission of certain data appearing on the CoC which is sent electronically to the central registration authority. The registration card is sent to the dealer and ultimately passed on to the purchaser of a new car.

# 2.9.12. Portugal

A central database of registration information exists. This information is taken from the CoC.

# 2.9.13. Spain

Information taken from a "technical inspection sheet" (based upon the CoC) is used by the provincial traffic authorities when creating an electronic registration file during the vehicle registration process. The Directorate-General for Traffic is responsible for a centralized containing the individual registration files.

# 2.9.14. Sweden

During the registration of a new passenger car, data from the CoC is extracted and used to create a registration file for the new vehicle. A central computerized database exists for the storage of each registration file.

## 2.9.15. United Kingdom

A central computerized vehicle registration database currently exists. Type-approval information is used though no "data extraction" from databases takes place. The CoC is used for non-mainstream vehicles. The registration system is currently being updated which will allow automatic data entry by the manufacturer/dealer (essentially an electronic version of the CoC) and the on-line production of a registration certificate at the showroom. It is foreseen that 90% of first time registrations will be performed in this manner by 1999.

#### 3. JUSTIFICATION WITH REGARD TO THE PRINCIPLE OF SUBSIDIARITY

# (a) What are the objectives of the planned action in the context of the obligations incumbent on the Community?

The Community's strategy to reduce the  $CO_2$  emissions from new passenger cars sets out an emissions objective of 120 g/km of  $CO_2$  expressed as an average over all new cars sold in the Community. This objective is to be attained by 2005 (2010 at the latest).

A scheme to monitor the average specific emissions of  $CO_2$  from new passenger cars is required in order to assess the effectiveness of the Community's strategy. This was recognized by the Council in its conclusions of 25 June 1996.

# (b) Is the planned action in an area where the Community has exclusive competence or shared competence with the Member States?

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Shared competence; Article 130s.

# (c) What is the Community dimension to the problem (for example, how many Member States are concerned and what solutions have been in force until now)?

The  $CO_2/cars$  strategy sets out a Community objective and, therefore, monitoring at a Community level is required to assess the effectiveness of the  $CO_2/cars$  strategy. No system currently exists at an EU level which would allow for monitoring of the specific emissions of  $CO_2$  from new cars. Only the Member States collect the necessary data for the operation of a monitoring system of sufficient accuracy and robustness. All Member States are concerned. Participation is, therefore, required by each of the Member States in order for a Community-wide monitoring scheme to be successful.

# (d) Does action at the Community level or at Member State level represent the most effective solution?

Coordination at a Community level is required because of the nature of the objective which has been set. The Member States remain responsible for the collection, storage and transmission of the appropriate data. The proposed Decision only provides for the aggregation of the data at the EU level.

# (e) What benefits would the proposed Community action bring and what would be the cost of inaction?

The principal benefit of the proposed action is the ability to assess the effectiveness of the Community's policies to reduce the specific emissions of  $CO_2$  from new passenger cars. The cost of inaction is difficult to express in monetary terms but if measures to reduce these emissions are not successful then there will be an additional risk of anthropogenic interference with the climate system. It is extremely difficult to estimate the benefits associated with the implementation of a  $CO_2$ /cars monitoring scheme. In practice, it is the only way to monitor progress towards the Community's  $CO_2$  emissions objective for passenger cars.

Member States have been asked to estimate the costs of implementation of the proposed monitoring scheme. Those Member States that have responded have indicated that the costs associated with these modifications lie in the range ECU 17 000-125 000, though the majority cite costs at the lower end of this range. The same Member States have indicated that there are additional annual costs associated with operating the monitoring scheme and these lie in the range ECU 1 000-42 000. Overall, the costs associated with the initial implementation of a  $CO_2$ /cars monitoring scheme across the 15 Member States are estimated at somewhere between ECU 0.5-1.0 million. Annual running costs are expected to be somewhat less than this.

# (f) What instruments are available to the Community (recommendation, financial support, regulation, mutual recognition, ...)

For the monitoring system to work all Member States must transmit a minimum set of data to the Commission each year. For this reason it is felt that a recommendation or financial support can not guarantee that this will be the case. The purpose of the proposed legislation is to ensure that the Member States transmit certain data to the Commission. A harmonization of national provisions is not intended. The choice, therefore, lies between a Decision and a Directive. Precedents<sup>13</sup> set by existing Community legislation in similar areas seems to indicate that a Decision would be most appropriate.

# (g) Is uniform regulation necessary or would a Directive which outlines the general objectives but which leaves the method of implementation to the Member States suffice?

As outlined in (f) above, the aim of the proposed Decision is to ensure the availability of certain data at a Community level. The monitoring scheme requires quite specific information which must be obtained from similar sources in order to guarantee that information from one Member State is consistent with that from another and of comparable accuracy. However, it is not the intention to harmonize the national vehicle registration systems. For the proper functioning of the monitoring scheme it is only necessary that these registration systems capture a *minimum* set of data with an appropriate level of accuracy. Member States will retain the flexibility with regard to the operation of their national vehicle registration systems.

#### 4. CONTENTS OF THE PROPOSAL

#### 4.1. Article 1

This requests that Member States implement a system to monitor the average specific emissions of  $CO_2$  of new passenger cars in their territory. It only applies to passenger cars registered for the first time in the EU.

#### 4.2. Article 2

This Article provides definitions for a number of terms appearing in the proposed Decision.

# 4.3. Article 3

This Article, in conjunction with Annex I, states which individual vehicle-specific data are to be collected by the Member States and used by the  $CO_2/cars$  monitoring scheme. In addition, the Article indicates the responsibilities of Member States with regard to the validity and quality of the data that they collect.

# 4.4. Article 4

This Article specifies which data are to be communicated to the Commission. The preparation of the data requires some simple manipulation of the individual vehicle specific data collected throughout the preceding calendar year. These manipulations are described in Annex III.

 <sup>(</sup>a) Council Decision 97/101/EC establishing a reciprocal exchange of information and data from networks and individual stations measuring ambient air pollution within the Member States (OJ L 35, 5.2.1997, p. 14); (b) Council Decision 93/389/EEC for a monitoring of Community CO<sub>2</sub> and other greenhouse gas emissions (OJ L 167, 9.7.1993, p. 31).

The data transmitted to the Commission should be in a certain format which is described in Annex IV. It is proposed that Member States will have a period of three months from the end of a given calendar year in which to transmit the specified data to the Commission, though in the first year of operation this has been extended to six months.

# 4.5. Article 5

This Article simply requires the Member States to designate an organization to be responsible for the collection and communication of the monitoring data and to inform the Commission of their nomination.

# 4.6. Article 6

This Article requests the Member States to inform the Commission on how they intend to implement the requirements of the Decision.

# 4.7. Article 7

This Article describes the obligation on the Commission to report on the functioning of the monitoring scheme by 31 December 2003.

#### 4.8. Article 8

This Article describes the Commission's intention to report to Council the monitoring data received from the Member States on an annual basis.

### 4.9. Article 9

This Article states that the Council Decision is addressed to the Member States.

### 4.10. Annex I

This Annex describes the information which must be collected by the Member States. It also indicates from where this data is to be taken.

# 4.11. Annex II

This Annex describes the conditions governing the use of certain data sources other than the Certificate of Conformity for use in the proposed monitoring scheme and outlines several potential sources of error.

# 4.12. Annex III

This Annex describes the mathematical treatments to be performed on the data collected by the Member States before it is transmitted to the Commission.

# 4.13. Annex IV

This Annex describes the format of the monitoring data which is to be communicated to the Commission.

	Source	e of registration data		Information co	ntained in electronic i	registration files	
	Type-approval	Certificate of Conformity	Fuel-type	Mass (of bodywork in running order)	Manufacturer	Power	Engine capacity
Austria		yes	yes	yes	yes	yes	yes
Belgium	Yes	(privately imported cars)	yes		yes	yes	yes
Denmark	Yes	(in some cases along with vehicle check)	yes	yes (without fuel, coolant and oil)	yes	no	no
Finland	cross checking	yes	yes	yes	possible via VIN	yes	yes
France	Yes		yes	yes (not based on CoC)	yes	yes	yes
Germany	Yes		yes	yes (not based on CoC)	yes	yes	yes
Greece	Yes	(cross checked with CoC)	yes	?	yes	yes	?
Ireland		yes (provided by distributor)	yes	no - but possible	yes	no - but possible	yes
Italy	Yes	yes					
Luxembourg	Yes	yes					
Netherlands	Yes	privately imported vehicles	yes	yes (mass in running order minus 100 kg)	yes	no - but possible	no - but possible
Portugal		yes	yes	yes	yes		
Spain	Yes		yes	/	yes	(fiscal horsepower)	yes
Sweden		yes	yes	yes	yes	yes	yes
UK	yes (not extracted)	yes ( non-mainstream cars)	yes	no	yes	no	yes

# Table 1. Summary of data contained in national vehicle registration databases

# Proposal for a COUNCIL DECISION establishing a scheme to monitor the average specific emissions of carbon dioxide from new passenger cars

### THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community and in particular Article 130s(1) thereof,

Having regard to the proposal from the Commission<sup>14</sup>

Having regard to the opinion of the Economic and Social Committee<sup>15</sup>,

Acting in accordance with the procedure laid down in Article 189c of the Treaty in cooperation with the European Parliament<sup>16</sup>,

- (1) Whereas the Community recognizes that greenhouse gas concentrations in the atmosphere should be stabilized at such a level that would prevent dangerous anthropogenic interference with the climate system;
- (2) Whereas the Community is committed, within the United Nations Framework Convention on Climate Change, to stabilizing emissions of carbon dioxide (CO<sub>2</sub>) at 1990 levels by 2000;
- (3) Whereas the Community has accepted a target to reduce its emissions of a basket of greenhouse gases by 8% relative to 1990 levels by 2008-2012 as part of the Protocol agreed at the December 1997 Kyoto Conference of the Parties to the United Nations Framework Convention on Climate Change;
- (4) Whereas Council Decision 93/389/EEC<sup>17</sup> established a mechanism to monitor Community emissions of CO<sub>2</sub> and other greenhouse gases;
- (5) Whereas in recognizing the importance of passenger cars as a source of CO<sub>2</sub>, the Community, in the Commission Communication of 20 December 1995<sup>18</sup>, has developed a strategy to reduce CO<sub>2</sub> emissions from passenger cars and improve fuel economy;

<sup>14</sup> OJ

<sup>15</sup> OJ

<sup>&</sup>lt;sup>16</sup> Opinion of the European Parliament of ....... (OJ ...); Council Common Position of ....... (OJ ...); Decision of the European Parliament of ....... (OJ ...).

<sup>&</sup>lt;sup>17</sup> OJ L 167, 9.7.1993, p. 31.

<sup>&</sup>lt;sup>18</sup> COM(95) 689 final.

- (6) Whereas the specific emissions of CO<sub>2</sub> from new passenger cars are measured on a harmonized basis in the Community according to the methodology laid down in Council Directive 80/1268/EEC<sup>19</sup> of 16 December 1980 relating to the carbon dioxide emissions and the fuel consumption of motor vehicles, as last amended by Commission Directive 93/116/EC<sup>20</sup>;
- (7) Whereas it is necessary to establish procedures to monitor the specific emissions of  $CO_2$  from new passenger cars sold throughout the Community in order to monitor the effectiveness of the Community strategy, as referred to in the Commission Communication of 20 December 1995;
- (8) Whereas only official data that is consistent with Council Directive 70/156/EEC<sup>21</sup>, as last amended by Commission Directive 98/14/EC<sup>22</sup> on the type-approval of motor vehicles and their trailers, should be collected by the Member States;
- (9) Whereas Directive 70/156/EEC provides that manufacturers are to issue a Certificate of Conformity which must accompany each new passenger car and that Member States are to permit the registration and entry into service of a new passenger car only if it is accompanied by a valid Certificate of Conformity;
- (10) Whereas it is not the intention of this Decision to harmonize national vehicle registration systems but to build upon them in order to ensure the compilation of a minimum data set required to allow the proper functioning of a Community scheme to monitor the average specific emissions of CO<sub>2</sub> from new passenger cars;
- (11) Whereas such a monitoring scheme should only apply to those passenger cars which are to be registered for the first time in the Community and have not been registered previously elsewhere,

HAS ADOPTED THIS DECISION:

## Article 1

This Decision establishes a scheme to monitor the average specific emissions of  $CO_2$  from new passenger cars registered in the Community. It only applies to those passenger cars which are being registered in the Community for the first time, have not been registered previously elsewhere and have been subject to EC type-approval under Directive 70/156/EEC.

<sup>19</sup> OJ L 375, 31.12.1980, p. 36.

- <sup>20</sup> OJ L 329, 30.12.1993, p. 39.
- <sup>21</sup> OJ L 42, 23.2.1970, p. 1.
- <sup>22</sup> OJ L 91, 25.3.1998, p. 1.

#### For the purposes of this Decision:

2.

- 1. Passenger car means a motor vehicle of category M1, as defined in Annex I to Directive 70/156/EEC, that is used for the carriage of passengers and that has no more than eight seats in addition to the driver's seat. It does not include two and three-wheeled motor vehicles and special purpose vehicles as defined in the second indent of Article 4(1)(a) of Directive 70/156/EEC.
  - Newly registered car means a passenger car registered for the first time in the Community. It specifically excludes those vehicles which are re-registered in a second Member State or have been registered previously outside the Community.
- 3. Certificate of Conformity means the certificate, referred to in Article 6 of Directive 70/156/EEC, which must accompany each new passenger car before it can be registered or allowed entry into service.
- 4. Specific emission of  $CO_2$  for a given passenger car means that measured in accordance with Directive 80/1268/EEC.
- 5. *Manufacturer* means the trade name of the person or body responsible to a type-approval authority for all aspects of the vehicle type and is that which appears on the Certificate of Conformity (referred to as *Make*).
- 6. Maximum net power of new passenger cars means the maximum engine power stated on the Certificate of Conformity and measured in accordance with Council Directive 80/1269/EEC<sup>23</sup>.
- 7. Mass means the mass of the car with bodywork in running order as stated in the Certificate of Conformity and defined in section 2.6 of Annex I to Directive 70/156/EEC.
- 8. *Engine Capacity* means the engine capacity as stated on the Certificate of Conformity and measured in accordance with Directive 80/1269/EEC.
- 9. *Fuel type* means the fuel for which the car was originally type-approved and is that which appears on the Certificate of Conformity.
- 10. *Registration file* means an electronic file containing information relating to the registration of an individual passenger car.
- 11. Variant and version mean the differentiated vehicles of a given type that are declared by the manufacturer, as described in Annex II to Directive 70/156/EEC, and uniquely identified by type, variant and version numbers.
- 12. *Type-approval documentation* means the information package containing the information folder, type-approval certificate and test results that are circulated between the national type-approval authorities in accordance with Article 4(5) and (6) of Directive 70/156/EEC.

<sup>23</sup> OJ L 375, 31.12.1980, p. 46.

- 1. For the purposes of establishing the scheme referred to in Article 1, Member States shall collect the information described in Annex I for each car referred to in that Article which is registered in their prritory.
- 2. Member States shall be permitted to take the information referred to in paragraph 1 from either Community type-approval documentation or the Certificate of Conformity.
- 3. Member States shall be responsible for the validation and quality of the data that they collect. Member States shall take into consideration the potential sources of error described in Annex II, take steps to minimize those errors and make an annual assessment, by statistical analysis or otherwise, of the proportion of incorrect data that they have collected and stored. Member States shall communicate that assessment to the Commission together with the monitoring data referred to in Article 4(1).
- 4. In the light of the assessment referred to in paragraph 3, the Commission may ask Member States to give details of the procedures which they have implemented in order to ensure data quality and, if it is not satisfied as to the effectiveness of such procedures, it may, in consultation with the Member States, ask for further measures to be implemented.

#### Article 4

- 1. In each calendar year Member States shall calculate the following according to the methods described in Annex III:
  - (a) For each separate fuel type,
    - (i) the total number of newly registered passenger cars,
    - (ii) the average specific emissions of CO<sub>2</sub> for newly registered passenger cars;
  - (b) For each separate manufacturer and fuel type, the number of newly registered passenger cars and average specific emissions of CO<sub>2</sub>;
  - (c) For each fuel type and distinct  $CO_2$  emission category specified in Annex III(4), the number of newly registered passenger cars;
  - (d) For each fuel type and distinct mass category specified in Annex III(5),
    - (i) the number of newly registered passenger cars,
    - (ii) the average specific emissions of  $CO_2$ ,
    - (iii) the average mass;
  - (e) For each fuel type and distinct engine net power category specified in Annex III(6),
    - (i) the number of newly registered passenger cars,

- (ii) the average specific emissions of CO<sub>2</sub>,
- (iii) the average net engine power;
- (f) For each fuel type and distinct engine capacity category specified in Annex III(7),
  - (i) the number of newly registered passenger cars,
  - (ii) the average specific emissions of  $CO_2$ ,
  - (iii) the average engine capacity.
- 2. The information referred to in paragraph 1 shall be transmitted annually to the Commission by the Member States. The first transmission shall take place no later than 1 July 2001. Subsequent transmissions shall be completed by 1 April for the monitoring data collected in the preceding calendar year. The data shall be transmitted in accordance with the format specified in Annex IV.
- 3. On request from the Commission, the Member States shall also transmit the full set of data collected pursuant to Article 3.

### Article 5

Member States shall designate a body responsible for the collection and communication of the monitoring information and shall inform the Commission thereof by 31 July 2000.

#### Article 6

Member States shall report to the Commission by 31 July 2000 at the latest on how they intend to implement the provisions of this Decision. On the basis of those reports the Commission may seek further information or request, in consultation with Member States, that changes be made in the proposed method of implementation.

#### Article 7

The Commission shall report to the Council by 31 December 2003 at the latest on the operation of the monitoring scheme established by this Decision.

### Article 8

For each calendar year, the Commission shall submit to the Council a report based upon the monitoring data it receives from the Member States.

#### Article 9

This Decision is addressed to the Member States.

Done at Brussels,

For the Council The President

# Data to be collected and transmitted by the Member States for the purposes of a CO<sub>2</sub> monitoring scheme for new passenger cars

With regard to the operation of a Community-wide scheme to monitor the specific emissions of  $CO_2$  from new passenger cars, Member States shall collect a minimum amount of information for each new passenger car that is registered in the Community for the first time. Only petrol and diesel are to be considered as these are the only fuels included in the European type-approval legislation.

1. The following data shall be collected and stored by the Member States when a new passenger car is registered for the first time in the Community.

- specific emissions of CO<sub>2</sub> (g/km)

- fuel type (e.g. petrol, diesel)

- manufacturer

mass (kg)

- maximum net power (kW)

engine capacity (cm<sup>3</sup>)

15

## **Data Quality and Accuracy**

# 1. Introduction

\* 2.

Manufacturers may differentiate their passenger car types into variants and further still into versions. For any given car the most accurate  $CO_2$  emissions data is that cited for the particular version to which the car belongs. For the purposes of the monitoring scheme Member States should collect, therefore, only "version specific" data.

Use of type-approval documentation as the source of monitoring data

- (a) Information that is to be used for CO<sub>2</sub>/cars monitoring purposes (or to be included in electronic databases for subsequent use in a CO<sub>2</sub>/cars monitoring scheme) must be extracted from the official "information package" accompanying the notification of the granting of type-approval as circulated by the national type-approval authorities in the Member States and as laid down in Directive 70/156/EEC.
- (b) The information package circulated by national type-approval authorities may contain data specific to several different versions. It is important, therefore, that the appropriate data for a new passenger car covered by the provisions of this Decision is correctly identified in the information package. The data for a specific version shall, therefore, be selected on the basis of the vehicle's "type", "variant" and "version" numbers as they appear on the Certificate of Conformity. The Certificate of Conformity necessarily contains data relating to a specific version of a given car type.

## 3. Potential sources of error

# (a) Extraction of version specific data from type-approval documentation

There are two important potential sources of error associated with the use of type-approval documentation as the source of monitoring data for the purposes of this Decision. The first may arise in the conversion of data contained in a paper format in the information folder into an electronic format for use in a database of type-approval data. This is most likely to arise from human error. The second concerns the correct extraction of data from electronic databases of type-approval data. Data for the correct version should be identified in such databases by the unique combination of *type*, *variant* and *version* numbers given on the Certificate of Conformity.

(b) Transfer of data from the CoC into an electronic registration file

When data is taken from the Certificate of Conformity (paper) and entered into an electronic registration file during the registration of a new passenger car there is a risk that incorrect data might be entered. The most likely source is human error.

# (c) Automated transfer of data by the manufacturers to registration authorities

In some Members States manufacturers are asked to transfer data contained in the Certificate of Conformity to the registration authorities (or directly into registration files) directly by electronic means. There is of course a possibility that incorrect data is transferred and the systems should, therefore, be validated.

#### Methodology to calculate the CO<sub>2</sub> monitoring information for new passenger cars

This Annex describes the monitoring information that is to be communicated to the European Commission. The monitoring information is to be generated from the raw data collected during the first registration of new passenger cars (described in Annex I) according to the methods described below. The precise format in which this information should be communicated to the Commission is described in Annex IV.

Only petrol and diesel are to be considered as these are the only fuels included in the European type-approval legislation at the current time. Only information regarding new passenger cars which have not been registered previously within the Community are to be included in this monitoring scheme. Passenger cars which have been registered previously within the Community or elsewhere are specifically excluded from the provisions of this Decision.

#### 1. Numbers of newly registered passenger cars differentiated by fuel type $(N_i)$ .

For each separate fuel type (e.g. petrol and diesel) Member States shall sum the number of new passenger cars which have been registered for the first time within their territory. For each fuel type, f, the number of new passenger cars registered for the first time is represented as  $N_f$ .

# 2. Average specific CO<sub>2</sub> emissions of newly registered cars of a given fuel type $(S_{f,ave})$

The specific CO<sub>2</sub> emission averaged over all newly registered cars of a given fuel type, (designated by  $S_{f,ave}$ ) is calculated from the sum of the specific CO<sub>2</sub> emissions of each individual newly registered car of a particular fuel type,  $S_{f}$ , divided by the number of newly registered cars of the same fuel type,  $N_{f}$ .

$$S_{f,ave} = (1/N_f) \cdot \Sigma S_f$$

# 3. The average specific CO<sub>2</sub> emissions for all newly registered cars of a given fuel type and manufacturer $(S_{f,ave,man})$

This is calculated from the sum of the specific CO<sub>2</sub> emissions from each newly registered car of a particular fuel type and manufacturer,  $S_{f,man}$ , divided by the total number of newly registered cars of the same fuel type and manufacturer,  $N_{f,man}$ .

$$S_{f,ave,man} = (1/N_{f,man}) \cdot \sum S_{f,man}$$

#### 4. The distribution of CO<sub>2</sub> emissions from new passenger cars

The number of newly registered passenger cars of each fuel type which fall into each of the following  $CO_2$  emission categories is to be recorded. The  $CO_2$  emission categories are <60, 60-80, 81-100, 101-120, 121-140, 141-160, 161-180, 181-200, 201-250, 251-300, >300 g/km.

# 5. The mass distribution of new passenger cars

6.

7.

For each of the following mass categories, <650, 650-750, 751-850, 851-950, 951-1050, 1051-1150, 1151-1250, 1251-1350, 1351-1550, 1551-1750, and >1750 kg the number of newly registered passenger cars of a given fuel type, the average mass of these vehicles and also their average specific emissions of CO<sub>2</sub> are to be recorded

If the number of new cars in a given mass category, m, and fuel type, f, is given by  $N_{f,m}$ , then the average mass of these vehicles  $M_{f,m,ave}$ , is calculated from the sum of the individual masses  $M_{f,m}$ , of each new car divided by  $N_{f,m}$ .

$$M_{f,m,ave} = (1/N_{f,m}) \cdot \Sigma M_{f,m}$$

If  $S_{f,m}$  is the specific emission of CO<sub>2</sub> of individual cars in a particular mass category and fuel type then, by analogy, the average specific emission of CO<sub>2</sub> of these vehicles is given by

$$S_{f,m,ave} = (1/N_{f,m}) \cdot \sum S_{f,m}$$

# The distribution of maximum net power of newly registered passenger cars

For each of the following maximum net power categories, <30, 30-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, 101-110, 111-120, 121-130, 131-140, 141-150, 151-160, 161-170, and >180 kW the number of newly registered passenger cars of a given fuel type, the average maximum net power of these vehicles and also their average specific emissions of CO<sub>2</sub> are to be recorded.

If the number of new cars in a given power range, p, and fuel type, f, is given by  $N_{f,p}$ , then the average net power of these vehicles  $P_{f,p,ave}$ , is calculated from the sum of the individual maximum net power values  $P_{f,p}$  of each new car divided by  $N_{f,p}$ .

$$P_{f,p,ave} = (1/N_{f,p}) \cdot \Sigma P_{f,p}$$

If  $S_{f,p}$  is the specific emission of CO<sub>2</sub> of individual cars in a particular engine power category and fuel type then, by analogy, the average specific emission of CO<sub>2</sub> for these vehicles is given by

$$S_{f,p,ave} = (1/N_{f,p}) \cdot \sum S_{f,p}$$

### The distribution of engine capacity of newly registered passenger cars

For each of the following engine capacity categories, <700, 700-800, 801-900, 901-1000, 1001-1100, 1101-1200, 1201-1300, 1301-1400, 1401-1500, 1501-1600, 1601-1700, 1701-1800, 1801-1900, 1901-2000, 2001-2100, 2101-2200, 2201-2400, 2401-2600, 2601-2800, 2801-3000,  $>3000 \text{ cm}^3$  the number of newly registered passenger cars of a given fuel type, the average engine capacity of these vehicles and also their average specific emissions of CO<sub>2</sub> are to be recorded.

If the number of new cars in a given engine capacity range, c, and fuel type, f, is given by  $N_{f,c}$ , then the average engine capacity of these vehicles  $C_{f,c,ave}$ , is calculated from the sum of the individual engine capacities,  $C_{f,c}$  of each new car divided by  $N_{f,c}$ .

$$C_{f,c,ave} = (1/N_{f,c}) \cdot \Sigma C_{f,c}$$

If  $S_{f,c}$  is the specific emission of CO<sub>2</sub> of individual cars in a particular engine capacity category and fuel type then, by analogy, the average specific emission of CO<sub>2</sub> for these vehicles is given by

$$S_{f,c,ave} = (1/N_{f,c}) \cdot \sum S_{f,c}$$

# Format of monitoring information to be transmitted to the Commission

The following outlines the format in which the monitoring information, calculated according to the methodology in Annex III, should be communicated by the Member States to the Commission.

1.

# Specific emissions of CO<sub>2</sub> averaged over all newly registered passenger cars of a given fuel-type

For each different fuel-type Member States shall provide the number of newly registered passenger cars and the average specific  $CO_2$  emission of those cars. The data shall be presented in tabulated form, as illustrated below, where the  $CO_2$  emissions values are to be given to the nearest whole number.

Fuel type	Number of newly registered cars	Average specific CO <sub>2</sub> emission g/km
Petrol		g/km
Diesel	•	g/km

# 2. Average specific emissions of CO<sub>2</sub> by manufacturer and fuel type

The data concerning all newly registered passenger cars are to be grouped by manufacturer and sub-divided further by fuel type (e.g. petrol and diesel). For each sub-group Member States shall present the average specific emissions of  $CO_2$  and the number of vehicles on which it is based. The required information is to be transmitted in a tabulated form as shown below. Again the  $CO_2$  emissions values are to be given to the nearest whole number.

Manufacturer	Fuel type	Number of newly registered cars	Average specific CO <sub>2</sub> emission g/km
••••	Petrol	•••••	g/km
	Diesel		g/km

# 3. The distribution of CO<sub>2</sub> emissions in the new passenger car fleet

For each different fuel type Member States shall provide the number of new passenger cars registered in each distinct  $CO_2$  emission category, by manufacturer and for the total of all manufacturers, according to the following format.

Manufacturer											
Fuel type	]	Numbers	of newly	v register	ed passe	nger cars	s per CO	2 Emissio	on Categ	ory (g/kr	n)
	<60	60-80	81- 100	101- 120	121- 140	141- 160	161- 180	181- 200	201- 250	251- 300	>300
Petrol											
Diesel											

				Tota	l of all m	anufactur	rers				
Fuel type		Numbe	rs of new	ly registe	ered passe	enger cars	s per CO <sub>2</sub>	Emissio	n Categoi	ry (g/km)	
	<60	60-80	81- 100	101- 120	121- 140	141- 160	161- 180	181- 200	201- 250	251- 300	>300
Petrol											
Diesel											

# 4. The distribution of mass, power and engine capacity of new passenger cars

The vehicle characteristics of mass, power and engine capacity have been divided into classes and aggregated data for each class interval is to be communicated. The data required, by manufacturer and for the total of all manufacturers, regards the average property (mass, power, engine capacity) and the average specific emission of  $CO_2$  for the vehicles in the class. The values of mass, power and engine capacity and specific emissions of  $CO_2$  are to reported to the nearest whole number.

Manul												
Fuel-typ	e/parameter				N	ew pass	enger ca	r mass in	kg			
		• 650	650-750	751-850	851- 950-	951- 1050	1051- 1150	1151- 1250	1251- 1350	1351- 1550	1551- 1750	>1750
Petrol	Number of cars											
	Average mass			4								
	Average CO <sub>2</sub> emission											
Diesel	Number of cars											
	Average mass											
	Average CO <sub>2</sub> emission											
						•						

				Τ	otal of a	Ill manuf	acturers					
Fuel-type	/parameter				N	ew passe	nger car	mass in	kg			
		<650	650-750	751-850	851- 950-	951- 1050	1051- 1150	1151- 1250	1251- 1350	1351- 1550	1551- 1750	>1750
Petrol	Number of cars			and the form								
	Average mass											
	Average CO <sub>2</sub> emission											
Diesel	Number of cars											
	Average mass											
	Average CO <sub>2</sub> emission											

Manut	facturer			ч ч ч	1 1 1											e men Xeleni		
Fuel-typ	e/parameter					N	ew pas	senger	car m	aximur	n engi	ne pov	ver in k	W				
		<30	30-40	41-50	51-60	61-70	71-80	81-90	91- 100	101- 110	111- 120	121- 130	131- 140	141- 150	151- 160	161- 170	171- 180	>180
Petrol	Number of cars																	
	average engine power																	
	average CO <sub>2</sub> emission																	
Diesel	number of cars																	
	average engine power																	
	average CO <sub>2</sub> emission																	

		<u>,</u>					Tota	l of al	manu	facture	ers					· · · ·		
Fuel-type	/parameter					N	ew pas	senger	car m	aximu	m engi	ne pov	ver in k	κW				
		<30	30-40	41-50	51-60	61-70	71-80	81-90	91- 100	101- 110	111- 120	121- 130	131- 140	141- 150	151- 160	161- 170	171- 180	>180
Petrol	number of cars																	
	Average engine power																	
	Average CO <sub>2</sub> emission																	
Diesel	Number of cars																	
	Average engine power																	
	Average CO <sub>2</sub> emission																	

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Manu	facturer							5. 5. 5. 5. 5. S. 5. 5.			ob <u>, i ob</u> le en side		<u></u>				n de la composition de la comp		· · · · ·			
Fuel-typ	e/parameter								Nev	v passe	enger c	ar engi	ine cap	acity i	n cm <sup>3</sup>							
		<700	700- 800	801- 900	901- 1000	1001- 1100	1101- 1200	1201- 1300	1301- 1400	1401- 1500	1501- 1600	1601- 1700	1701- 1800	1801- 1900	1901- 2000	2001- 2100	2101- 2200	2201- 2400	2401- 2600	2601- 2800	2801- 3000	>3000
Petrol	Number of cars																					1
	average engine capacity																					
	average CO <sub>2</sub> emission																					
Diesel	number of cars																					
	average engine capacity																					
	average CO <sub>2</sub> emission																					

	1.14			t		5. S. S.										. A. S.						
Fuel-typ	e/parameter								Nev	v passe	enger c	ar engi	ne cap	oacity i	n cm <sup>3</sup>							
		<700	700- 800	801- 900	901- 1000	1001- 1100	1101- 1200	1201- 1300	1301- 1400	1401- 1500	1501- 1600	1601- 1700	1701- 1800	1801- 1900	1901- 2000	2001- 2100	2101- 2200	2201- 2400	2401- 2600	2601- 2800	2801- 3000	>3000
Petrol	number of cars																					
	average engine capacity																					
	average CO <sub>2</sub> emission																					
Diesel	Number of cars																					
- /	Average engine capacity	•																				
	Average CO <sub>2</sub> emission																3					

# Total of all manufacturers

#### IMPACT ASSESSMENT FORM

# The Impact of the Proposal on Business with Special Reference to Small and Medium-Sized Enterprises (SMEs)

# TITLE OF THE PROPOSAL

Proposal for a Council Decision establishing a scheme to monitor the average specific emissions of carbon dioxide from new passenger cars

Reference Number (Repertoire)

# 1. TAKING INTO ACCOUNT THE PRINCIPLE OF SUBSIDIARITY, WHY IS COMMUNITY LEGISLATION NECESSARY IN THIS AREA AND WHAT ARE ITS MAIN AIMS?

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The Communication from the Commission, COM(95) 689 final, as endorsed by the Council in its conclusions of 25 June 1996, sets out a strategy to reduce the  $CO_2$  emissions of new passenger cars sold in the EU. The strategy consists of three main elements, namely, an agreement with the auto manufacturers to reduce the fuel consumption of their cars, fuel economy labelling and fiscal measures. In addition, the strategy contains an emissions objective of 120 g/km of  $CO_2$  expressed as an average for the Community's new car fleet. This objective is to be attained by 2005 (2010 at the latest).

The  $CO_2/cars$  strategy sets out a Community objective and, therefore, monitoring at a Community level is required to assess the effectiveness of the  $CO_2$  cars strategy. In its conclusions, the Council stressed the importance of establishing a transparent EU-wide monitoring system in order to be able to assess the progress made towards attainment of the desired  $CO_2$  emissions objective. Moreover, the Council invited the Commission to come forward with a proposal on this matter.

No system currently exists at an EU level which would allow for monitoring of the specific emissions of  $CO_2$  from new cars. Only the Member States collect the necessary data for the operation of a monitoring system of sufficient accuracy and robustness. All Member States are concerned, therefore, and participation of each Member State is required in order for a Community-wide monitoring scheme to be successful.

The principal aim of the proposed action is the ability to assess the effectiveness of the Community's policies to reduce the specific emissions of  $CO_2$  from new passenger cars. In addition, the proposed monitoring scheme will provide information on the changes in the passenger car fleet, resulting from the implementation of the strategy, which may affect other Community policy objectives such as air quality, ground level ozone, regional acidification and road safety.

# 2. THE IMPACT ON BUSINESS

#### Who will be affected by the proposal?

As the proposed monitoring scheme will use official data associated with the registration of new vehicles in the EU it is likely that the impacts resulting from the implementation of the proposed Decision will fall onto the national vehicle registration authorities in the Member States. However, in some instances where new car registration is performed with data transmitted automatically by the dealers to the national registration authority it is possible that new car dealers will also be affected.

#### What will business have to do to comply with the proposal?

In all the Member States the vehicle registration authorities collect certain items of vehicle specific data before registering a new passenger car and allowing it into service. The current proposal will mean that national vehicle registration authorities may have to modify their registration procedures and electronic data bases in order to capture additional data required by the proposed monitoring scheme. These changes will, in most cases, be modest. In addition, some processing of the accumulated passenger car registration data will have to be performed by these registration authorities in order that they can report the relevant aggregated data to the Commission each year. In those Member States where the new car dealers play a more active role in vehicle registration they may have to adapt computer systems in order to transmit extra data to the national vehicle registration authority. These changes are expected to be of a minor nature (e.g. one or two extra pieces of information per vehicle registered).

#### What economic effects is the proposal likely to have?

Implementation of the proposed Decision will have modest financial implications for the national vehicle registration authorities. Cost estimates obtained from the Member States range from ECU 17 000-125 000 for the upgrading of computers and software and annual costs for data processing of up to ECU 40 000. These cost estimates are based on a single Member State basis.

The proposed Decision is unlikely to have any effect on employment, investment, on creation of new businesses or on the competitive position of businesses. The proposal may have the effect of bringing forward Member State's plans to upgrade computer facilities, etc. associated with vehicle registration, as several have indicated that such changes are being considered for domestic policy reasons (e.g. differentiated circulation taxes according to the degree of vehicle exhaust pollution).

Does the proposal contain measures to take account of the specific situation of small and medium-sized firms?

No. The proposed Decision will have very minor effects on small businesses.

# 3. CONSULTATION

Representatives from the vehicle registration authorities in most Member States have been consulted as well as representatives from the European Automobile Manufacturers Association (ACEA), the European Conference of Ministers of Transport (ECMT) and NGOs. Those Member States that have participated in the development of the proposal have been favourably disposed to the establishment of a monitoring scheme. Some Member States would prefer, however, to have a scheme that is not overly complex and which increases markedly the quantity of data that they would be required to collect. The auto industry is also favourably disposed as it perceives such a scheme as providing a transparent and unambiguous measure of the progress that it is likely to make in reducing emissions of  $CO_2$  from new cars in the future.

ISSN 0254-1475

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COM(98) 348 final

# DOCUMENTS

14 07 15

Catalogue number : CB-CO-98-375-EN-C

ISBN 92-78-37061-4

Office for Official Publications of the European Communities

L-2985 Luxembourg

EN