



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 01.02.2000

COM(2000) 44 final

1998/0202 (COD)

**COMMISSION OPINION**

**pursuant to Article 251(2) (c) of the EC Treaty,  
on the European Parliament's amendments  
to the Council's common position regarding the  
proposal for a**

**DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**establishing a scheme to monitor the average specific emissions of CO<sub>2</sub> from new  
passenger cars**

**AMENDING THE PROPOSAL OF THE COMMISSION**

**pursuant to Article 250(2) of the EC Treaty**

## **EXPLANATORY MEMORANDUM**

On 2 December 1999 the European Parliament adopted in total 10 amendments. Two amendments have been accepted by the Commission in full (7 and 10), one in part (3, first part), and three in principle (2, 4 and 9). The remaining amendments could not be accepted.

The Commission's position with regard to the EP's amendments is as follows:

### **Amendment 1 concerning Recital 1**

The amendment aims at clarifying the text by stressing that the Community's obligation to stabilise CO<sub>2</sub> emissions might necessitate a reduction in the concentration of greenhouse gases. However, the original wording already implied this and the clarification is not necessary. Moreover, the wording of the Common Position corresponds to Article 2 of the UN Framework Convention on Climate Change. The Commission cannot accept this amendment.

### **Amendment 2 concerning a new Recital 6a**

The Commission agrees that N1 vehicles are a potential priority target group for further voluntary commitments. Therefore it is currently taking first steps to include fuel-consumption and CO<sub>2</sub> measurements of light commercial vehicles (N1 vehicles) in the type approval legislation. There is currently no plan to study the inclusion of other types of vehicles than N1, mainly because they are assumed to be fuel-efficient anyway (trucks), or because their contribution to total CO<sub>2</sub> emissions is too small (two-wheelers). The Interinstitutional Agreement of 22 December 1998, guideline 10\*, stipulates that recitals should not be used to foresee future policy action. Therefore, this amendment, as worded, cannot be accepted. In summary, the Commission can agree in principle to the proposed amendment as far as N1 vehicles are concerned; however, it needs to be re-worded in order to be in line with the Interinstitutional Agreement and to take into account the current state of play with regard to ongoing work on the different vehicle categories.

### **Amendment 3, first part, concerning Recital 8**

The amendment to recital 8 qualifies the monitoring process. It can be accepted.

### **Amendment 3, second part, concerning Recital 8**

This amendment seeks to oblige the Commission to put forward a legal framework for the Environmental Agreements entered into with the car manufacturer's associations. It should be mentioned that the Commission services are working on a general legal framework for environmental agreements. However, with regard to the agreements in question, the Commission has said on several occasions that, if it was clear that the car industry did not comply with its commitments, then legislation on CO<sub>2</sub> emission limit values would be considered. Moreover, it would be inappropriate to start work on such kind of legislation at this time in order to prepare for the event of the failure of the agreements. This would send the wrong message to the industry. Finally, to accept the recital would impinge on the Commission's right of initiative and would run counter to the Interinstitutional Agreement of 22 December 1998, guideline 10. Therefore the Commission cannot accept the amendment.

#### **Amendment 4 concerning a new Recital 8a**

The proposed recital emphasises the second and the third pillars of the Community's CO<sub>2</sub> and cars strategy, which are respectively consumer information, and the use of fiscal incentives. The Commission accepts it in principle. In any case, the Common Position on the consumer information Directive (fuel economy labelling) was endorsed by the EP at second reading. Therefore there is no need to mention it again. As fiscal incentives are an important element in the strategy, including such a reference could offer an added value. However, the proposal needs to be re-worded in order to meet the requirements of the Interinstitutional Agreement of 22 December 1998, guideline 10.

#### **Amendments 5 and 6 concerning the quality of data**

The amendments aim at strengthening the Commission's hand against member States. However, the Commission cannot accept these amendments. The Common Position contains a satisfactory solution in its view.

#### **Amendment 7 concerning the reporting date**

The amendment seeks to bring forward from 31 December 2003 to 31 December 2002 the report by the Commission on the operation of the scheme. The Commission can accept the proposed amendment. However, it should be mentioned that all dates of the Decision might have to be reviewed, depending on the date of adoption.

#### **Amendment 8 concerning the content of the reference year for monitoring the voluntary commitment**

This amendment refers to the intermediate target in the agreements. The target year is wrongly specified (2002 instead of 2003; in addition, the agreement with KAMA contains another intermediate target year (2004)). Moreover, while the substance of the amendment is in line with the agreement, it is not considered necessary to specify this in the Decision. The Commission cannot accept this amendment.

#### **Amendment 9 concerning the content of the annual reports**

The proposal aims at adding a new article, which would clarify the nature of the report so that it would also have to include an analysis of whether any changes in CO<sub>2</sub> emissions are from manufacturer's efforts or from other elements of the CO<sub>2</sub>/cars strategy. This analysis will be critical in assessing whether the manufacturers are meeting their commitments under the environmental agreement in particular in light of the interim targets for 2003/2004 and of course in terms of the overall 2008/2009 objective. However, such an analysis will require significant work to develop a methodology, technical studies as well as intensive discussions with the manufacturers. Furthermore, relevant developments will only become apparent after a few years. Therefore, the Commission intends to undertake such assessments for the intermediate target years and the final target years only. Therefore Commission rejects the amendment as worded, but accepts it in principle.

### **Amendment 10 concerning the data to be collected**

This amendment would add to the list of technical characteristics to be monitored the length and width of vehicles. Although the significance of the body size is currently not clear there might be a need for such data in future, e.g. when assessing technical and non-technical measures. The Commission accepts this proposal.

Based on this assessment the Commission forwards the following amended proposal:

Proposal for a

**DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of establishing a scheme to monitor the average specific emissions of CO<sub>2</sub> from new passenger cars**

AMENDING THE PROPOSAL OF THE COMMISSION  
pursuant to Article 250(2) of the EC Treaty

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION ,

Having regard to the Treaty establishing the European Community, and in particular Article 175 thereof,

Having regard to the proposal from the Commission<sup>1</sup>,

Having regard to the opinion of the Economic and Social Committee<sup>2</sup>,

Having regard to the Council's Common Position<sup>3</sup>

Having regard to the legislative Resolution of the European Parliament<sup>4</sup>

Acting in accordance with the procedure laid down in Article 251 of the Treaty,

- (1) Whereas the ultimate objective of the UN Framework Convention on Climate Change is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system;
- (2) Whereas, under the Kyoto Protocol to the United Nations Framework Convention on Climate Change agreed at the December 1997 Kyoto Conference, the Community has accepted the target of reducing its emissions during the period 2008 to 2012 in respect of a basket of greenhouse gases by 8% relative to 1990 levels;
- (3) Whereas the Kyoto Protocol requires the Parties referred to in Annex I to the Protocol to have made demonstrable progress in achieving their commitments by 2005;

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<sup>1</sup> OJ C 231, 23.7.1998, p. 6

<sup>2</sup> OJ C 40, 15.2.1999, p. 8

<sup>3</sup> OJ C 123, 4.5.1999, p. 13

<sup>4</sup> Resolution of the European Parliament of ... (not yet published in the Official Journal).

- (4) Whereas Decision 93/389/EEC<sup>5</sup> established a mechanism to monitor Community emissions of CO<sub>2</sub> and other greenhouse gases;
- (5) Whereas, in recognition of the importance of passenger cars as a source of CO<sub>2</sub> emissions, the Commission has proposed a Community strategy to reduce CO<sub>2</sub> emissions from passenger cars and to improve fuel economy; whereas in its Conclusions of 25 June 1996 the Council welcomed the Commission's approach;
- (6) Whereas the European Parliament and the Council have formulated an objective of 120 g/km (5 litres/100 km for petrol engines and 4,5 litres/100 km for diesel engines) as a mean value for CO<sub>2</sub> emissions in 2005 (2010 at the latest);
- (7) **Whereas there is a Community basis for the measurement of the specific emissions of CO<sub>2</sub> from vehicles only for vehicles of category M1 pursuant to Annex II of Directive 70/156/EEC; whereas the Commission is studying the possibility for appropriate proposals on harmonised procedures for measuring the specific CO<sub>2</sub> emission from vehicles of category N1 pursuant to Annex II of the Directive 70/156/EEC**
- (7 ~~8~~) Whereas the specific emissions of CO<sub>2</sub> from new passenger cars are measured on a harmonised basis in the Community according to the methodology laid down in Council Directive 80/1268/EEC of 16 December 1980 relating to the carbon dioxide emissions and the fuel consumption of motor vehicles<sup>6</sup>;
- (8 ~~9~~) Whereas it is necessary to establish procedures to monitor **on an objective basis** the specific emissions of CO<sub>2</sub> from new passenger cars sold throughout the Community in order to verify the effectiveness of the Community strategy, as referred to in the Commission communication of 20 December 1995, as well as the implementation of commitments formally undertaken by car manufacturers' organisations; **whereas this Decision will provide such a scheme;**
- (10) Whereas the Commission is studying the possibilities for a reference framework on fiscal incentives in order to encourage the use of fuel-efficient passenger cars;**
- (9 ~~11~~) Whereas, for the purpose of this Decision, only official data that is consistent with Council Directive 70/156/EEC<sup>7</sup>, of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers, should be collected by the Member States;
- (10 ~~12~~) 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;
- (11 ~~13~~) Whereas it is not the intention of this Decision to harmonise national vehicle registration systems but to build upon them in order to ensure the compilation of a

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<sup>5</sup> Council Decision 93/389/EEC of 24 June 1993 for a monitoring mechanism of Community CO<sub>2</sub> and other greenhouse gas emissions, OJ L 167, 9.7.1993, p. 31.

<sup>6</sup> OJ L 375, 31.12.1980, p. 36. Directive as last amended by Commission Directive 93/116/EC (OJ L 329, 30.12.1993, p. 39).

<sup>7</sup> OJ L 42, 23.2.1970, p. 1. Directive as last amended by European Parliament and Council Directive 98/91/EC (OJ L 11, 16.1.1999, p. 25).

minimum set of data 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;

~~(12~~ **14**) Whereas it is desirable to include all new alternatively powered passenger cars which fall under the scope of Directive 70/156/EEC;

~~(13~~ **15**) Whereas such a monitoring scheme should only apply to those new passenger cars which are to be registered for the first time in the Community and have not been registered previously elsewhere;

~~(14~~ **16**) Whereas it is necessary to maintain contacts between the Commission and Member States as regards the control of quality of data in order to assure an adequate implementation of this Decision,

HAVE ADOPTED THIS DECISION:

#### *Article 1*

This Decision establishes a scheme to monitor the average specific emissions of CO<sub>2</sub> from new passenger cars registered in the Community. It applies only to those passenger cars which are being registered in the Community for the first time and have not been registered previously elsewhere.

#### *Article 2*

For the purposes of this Decision:

1. "passenger car" means any motor vehicle of category M1, as defined in Annex II to Directive 70/156/EEC and which falls under the scope of Directive 80/1268/EEC. It does not include vehicles falling under the scope of Directive 92/61/EEC<sup>8</sup> and special purpose vehicles as defined in the second indent of Article 4(1)(a) of Directive 70/156/EEC;
2. "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;
4. "specific emission of CO<sub>2</sub> for a given passenger car" means that measured in accordance with Directive 80/1268/EEC and set out in Annex VIII to Directive 70/156/EEC and attached to type-approval documentation;
5. "manufacturer" means the person or body responsible to the approval authority for all aspects of the type-approval process and for ensuring conformity of production. It is not essential that the person or body is directly involved in all stages of the

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<sup>8</sup> Council Directive 92/61/EEC of 30 June 1992 relating to the type-approval of two or three-wheel motor vehicles (OJ L 225, 10.8.1992, p. 72). Directive as amended by the 1994 Act of Accession.

construction of the vehicle, system, component or separate technical unit which is the subject of the approval process;

6. "make" means the trade name of the manufacturer and is that which appears on the certificate of conformity and the type-approval documentation;
7. "maximum net power of new passenger cars" means the maximum engine power stated on the certificate of conformity and the type-approval documentation and measured in accordance with Council Directive 80/1269/EEC<sup>9</sup>;
8. "mass" means the mass of the car with bodywork in running order as stated in the certificate of conformity and the type-approval documentation, and defined in section 2.6 of Annex I to Directive 70/156/EEC;
9. "engine capacity" means the engine capacity as stated on the certificate of conformity and the type-approval documentation;
10. "fuel type" means the fuel for which the car was originally type-approved and is that which appears on the certificate of conformity and the type-approval documentation;
11. "registration file" means an electronic file containing information relating to the registration of an individual passenger car;
12. "type", "variant" and "version" mean the differentiated vehicles of a given make that are declared by the manufacturer, as described in Annex II.B to Directive 70/156/EEC, and uniquely identified by type, variant and version alphanumeric characters;
13. "alternatively powered vehicle" means any motor vehicle of category M1 as defined in Annex II to Directive 70/156/EEC and which does not fall under the scope of Directive 80/1268/EEC;
14. "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.

### *Article 3*

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 territory.
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.

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<sup>9</sup> Council Directive 80/1269/EEC of 16 December 1980 on the approximation of the laws of the Member States relating to the engine power of motor vehicles (OJ L 375, 31.12.1980, p. 46). Directive as last amended by Directive 97/21/EC (OJ L 125, 16.5.1997, p. 31).

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 minimise those errors and communicate to the Commission an assessment, by statistical analysis or otherwise, of the proportion of incorrect data together with the report referred to in Article 4(4).
4. Member States shall take steps to improve the quality of the data that they collect and upon request by the Commission shall inform it thereof. On the basis of this information the Commission may, in consultation with the Member State concerned, propose to that Member State measures to further improve the quality of data which the Member State shall consider. On this basis, the Member State shall inform the Commission of the further steps which, if appropriate, it will take to improve the quality of data.

#### *Article 4*

1. In each calendar year Member States shall determine the following according to the methods described in Annex III, both by manufacturer and for the total of all manufacturers:
  - (a) for each separate fuel type:
    - (i) the total number of newly registered passenger cars, as specified in Annex III(1);
    - (ii) the average specific emissions of CO<sub>2</sub> for newly registered passenger cars, as specified in Annex III(2);
  - (b) for each fuel type and for each distinct CO<sub>2</sub> emission category specified in Annex III(3):
    - (i) the number of newly registered passenger cars;
    - (ii) the average specific emissions of CO<sub>2</sub>, as specified in Annex III(3), second subparagraph;
  - (c) for each fuel type and for each distinct mass category specified in Annex III(4):
    - (i) the number of newly registered passenger cars;
    - (ii) the average specific emissions of CO<sub>2</sub>, as specified in Annex III(4), third subparagraph;
    - (iii) the average mass, as specified in Annex III(4), second subparagraph<sup>10</sup>;
  - (d) for each fuel type, and for each distinct maximum net power category specified in Annex III(5):

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<sup>10</sup> If the mass of a passenger car, which appears on the type-approved documentation or the certificate of conformity, is given by both a minimum and a maximum figure, Member States shall transmit only the figure which represents the maximum mass for that passenger car.

- (i) the number of newly registered passenger cars;
  - (ii) the average specific emissions of CO<sub>2</sub>, as specified in Annex III(5), third subparagraph;
  - (iii) the average maximum net power, as specified in Annex III(5), second subparagraph;
- (e) for each fuel type and for each distinct engine capacity category specified in Annex III(6):
- (i) the number of newly registered passenger cars;
  - (ii) the average specific emissions of CO<sub>2</sub>, as specified in Annex III(6), third subparagraph;
  - (iii) the average engine capacity, as specified in Annex III(6), second subparagraph.
2. In addition, as regards alternatively powered vehicles, Member States shall determine the number of such vehicles which are registered in their territory.
3. If the way in which the mass of vehicles registered in their territory is measured varies, Member States shall inform the Commission thereof.
4. The information referred to in paragraphs 1 and 2 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.
5. 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 competent authority for the collection and communication of the monitoring information and shall inform the Commission thereof no later than six months after the entry into force of this Decision.

#### *Article 6*

Member States shall report to the Commission no later than six months after the entry into force of this Decision on how they intend to implement its provisions.

#### *Article 7*

The Commission shall report to the Council by 31 December ~~2003~~ **2002** at the latest on the operation of the monitoring scheme established by this Decision.

*Article 8*

1. For each calendar year, the Commission shall submit to the European Parliament and to the Council a report based upon the monitoring data it receives from the Member States.
2. **For the intermediate target years and the final target years the commitments referred to in the Commission Recommendations 1999/125/EC of 5 February 1999 and (.....), the reports will indicate whether the reductions are due to technical measures taken by the manufacturers or other reasons, such as changes in the consumer behaviour.**

*Article 9*

This Decision is addressed to the Member States.

Done at Brussels, [...]

*For the Council*  
*The*  
*[...]*

*President*

## ANNEX I

### **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<sub>2</sub> from new passenger cars, Member States will collect a minimum amount of information for each new passenger car that is registered in the Community for the first time. Only fuels and propulsion systems included in Community type approval legislation are to be considered.

The following data will 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>)
- **length times breadth (i.e. body size of vehicle).**

## ANNEX II

### **Data quality and accuracy**

#### 1. Introduction

Manufacturers may differentiate their passenger car types into variants and further still into versions. For any given car the most accurate CO<sub>2</sub> 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.

#### 2. 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 will, 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 certificate of conformity 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 Member States manufacturers are asked to transfer data contained in the certificate of conformity to the registration authorities (or directly into registration files) by electronic means. There is of course a possibility that incorrect data is transferred and the systems should, therefore, be validated.

## ANNEX III

### **Methodology for determining the CO<sub>2</sub> monitoring information for new passenger cars**

This Annex describes the monitoring information that is to be communicated to the 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 fuels and propulsion systems included in Community type approval legislation are to be considered 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 ( $N_f$ ).

For each separate fuel type (e.g. petrol and diesel) Member States will determine 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,  $N_f$ .

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

3. 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<sub>2</sub> emission categories is to be recorded. The CO<sub>2</sub> emission categories are <60, 60-80, 81-100, 101-120, 121-140, 141-160, 161-180, 181-200, 201-250, 251-300, 301-350, 351-450, > 450 g/km.

If the number of new cars in a given CO<sub>2</sub> emissions category,  $c$ , and fuel type,  $f$ , is given by  $N_{f,c}$ , then the average CO<sub>2</sub> emissions of these vehicles  $C_{f,c,ave}$ , is calculated from the sum of the individual CO<sub>2</sub> emissions  $C_{f,c}$ , of each new car divided by  $N_{f,c}$ .

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

4. The mass distribution of new passenger cars

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, 1751-2000, 2001-2250, 2251-2500, 2501-2800 and >2800 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  $N_{f,m}$ .

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

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

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

5. 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, 171-180, 181-200, 201-250, 251-300, >300 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 maximum 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  $N_{f,p}$ .

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

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

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

6. 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, 3001-3500, 3501-4500, >4500 cm<sup>3</sup>, 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  $N_{f,c}$ .

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

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

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

## ANNEX IV

### COUNCIL REGULATION

#### Format of monitoring information

### COUNCIL REGULATION

#### 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 will provide the number of newly registered passenger cars and the average specific CO<sub>2</sub> emission of those cars. The data will be presented in tabulated form, as illustrated below, where the CO<sub>2</sub> emissions values are to be given to the nearest whole number.

Fuel type	Number of newly registered passenger cars	Average specific CO <sub>2</sub> emissions g/km
Petrol	.....	.....
Diesel	.....	.....
...	.....	

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 will present all average specific emissions of CO<sub>2</sub> and the number of passenger cars on which it is based. The required information is to be transmitted in a tabulated form as shown below. Again the CO<sub>2</sub> emissions values are to be given to the nearest whole number.

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

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

For each different fuel type Member States will provide the number of new passenger cars registered in each distinct CO<sub>2</sub> emission category, by manufacturer and for the total of all manufacturers, according to the following format.

Manufacturer	Numbers of newly registered passenger cars per CO <sub>2</sub> Emission Category (g/km)												
Fuel type	<60	60-80	81-100	101-120	121-140	141-160	161-180	181-200	201-250	251-300	301-350	351-450	>450
Petrol													
Average CO <sub>2</sub> emission													
Diesel													
Average CO <sub>2</sub> emission													

Total of all manufacturers													
Fuel type	<60	60-80	81-100	101-120	121-140	141-160	161-180	181-200	201-250	251-300	301-350	351-450	>450
Petrol													
Average CO <sub>2</sub> emission													
Diesel													
Average CO <sub>2</sub> emission													

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, concerns the average property (mass, power, engine capacity) and the average specific emission of CO<sub>2</sub> for the

passenger cars in the class. The values of mass, power and engine capacity and specific emissions of CO<sub>2</sub> are to be reported to the nearest whole number.

Manufacturer																
Fuel-type/parameter		New passenger car mass in kg														
		<650	650-750	751-850	851-950	951-1050	1051-1150	1151-1250	1251-1350	1351-1550	1551-1750	1751-2000	2001-2250	2251-2500	2501-2800	>2800
Petrol	Number of cars															
	Average mass															
	Average CO <sub>2</sub> emission															
Diesel	Number of cars															
	Average mass															
	Average CO <sub>2</sub> emission															

		Total of all manufacturers														
Fuel-type/parameter		New passenger car mass in kg														
		<650	650-750	751-850	851-950	951-1050	1051-1150	1151-1250	1251-1350	1351-1550	1551-1750	1751-2000	2001-2250	2251-2500	2501-2800	>2800
Petrol	Number of cars															
	Average mass															
	Average CO <sub>2</sub> emission															
Diesel	Number of cars															
	Average mass															
	Average CO <sub>2</sub> emission															

Manufacturer																					
Fuel-type/parameter		New passenger car maximum engine power in kW																			
		< 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	181-200	201-250	251-300	>300
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																				

		Total of all manufacturers																			
Fuel-type/parameter		New passenger car maximum engine power in kW																			
		< 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	181-200	201- 250	251-300	>300
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																				

Manufacturer																								
Fuel/type parameter		New passenger car engine capacity in 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	3001-3500	3501-4500	>4500
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																							

		Total of all manufacturers																						
Fuel/type parameter		New passenger car engine capacity in 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	3001-3500	3501-4500	>4500
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																							