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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE
EUROPEAN PARLIAMENT**

**Implementing the Community Strategy to Reduce CO₂ Emissions from Cars
First annual report on the effectiveness of the strategy**

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I. Introduction

The Community's strategy to reduce CO₂ emissions from passenger cars and improve fuel economy¹ was endorsed by the Council in 1996². It aims at achieving an average CO₂ emission figure for new passenger cars of 120 g CO₂/km by 2005, and 2010 at the latest.

It is based on three main pillars:

1. Commitments of the automobile industry on fuel economy improvements, aiming at achieving an average CO₂ emission figure for new passenger cars of 140 g CO₂/km by 2008/2009.
2. Fuel-economy labelling of cars³ which aims at ensuring that information relating to the fuel economy and CO₂ emissions of new passenger cars offered for sale or lease in the Community is made available to consumers in order to enable consumers to make an informed choice⁴.
3. The promotion of car fuel efficiency by fiscal measures. In this respect the Environment Council in October 1999⁵ reiterated the need to study the possibility of establishing a reference framework for fiscal incentives⁶.

These pillars are supplemented by research activities.

The Council invited the Commission to report about the effectiveness of the strategy regularly⁷. In order to establish a detailed and fully transparent monitoring the Commission

¹ COM (1995) 689 final

² Council conclusions of 25.6.1996

³ Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO₂ emissions in respect of the marketing of new passenger cars

⁴ The "Labelling" Directive has been adopted on 13 December 1999; the implementation by Member States is required by 18 January 2001. In June 2000 the Committee foreseen under Article 10 has been established with the objective to formally start work on the reporting format mentioned in Article 9. In addition the Commission services started work on the establishment of an Internet site on fuel consumption and CO₂ emissions from passenger cars marketed within the EU. It is planned to establish this site in close co-operation with the manufacturers concerned.

⁵ Council conclusions of 06.10.1999

⁶ The Commission has started work on fiscal framework measures. For this purpose it established an "Expert Group on Fiscal Framework Measures". The Expert Group's overall objective is to assist the Commission in its work on fiscal framework measures to reduce CO₂ emissions from passenger cars within a co-operative effort of all relevant stakeholders such as representatives of the Commission, the Member States, industry and the NGO community. In addition the Commission started technical discussions on the incorporation of the "Enhanced Environmentally Friendly Vehicle" concept into the passenger cars legislation, including fuel-consumption values.

⁷ Council conclusion of 25.06.1996

intends to submit reports on an annual basis, meeting at the same time related reporting requests expressed by Council⁸. The European Parliament should be informed as well.

This first report covers the progress made with regard to the commitments made by the automobile industry. Future reports will address as well the other parts of the strategy in more detail, including the requirements laid down in Decision 1753/2000/EC⁹ as soon as these parts of the strategy are implemented, or significant progress is made. The Commission believes that such a consolidated reporting will allow all interested parties to follow the implementation of the Community strategy in the most efficient way¹⁰.

II. Progress made with regard to the commitments made by the automobile industry

The commitments made by the automotive industries provide the major contribution to the Community's strategy to reduce CO₂ emissions from passenger cars and improve fuel economy.

After submission of the commitment of the European automobile industry (*European Automobile Manufacturers Association – ACEA*¹¹) in 1998¹², equivalent commitments were made in 1999 by the Japanese (*Japan Automobile Manufacturers Association - JAMA*¹³) and Korean (*Korea Automobile Manufacturers Association - KAMA*¹⁴) automobile industries¹⁵.

All three commitments constitute equivalent efforts having the following main features:

1. The CO₂ emission objective: All commitments contain the same quantified CO₂ emission objective for the average of new passenger cars sold in the European Union, i.e. 140 g CO₂/km (to be achieved by 2009 by JAMA and KAMA and by 2008 by ACEA).
2. Means of achievement: ACEA, JAMA and KAMA commit themselves to achieving the CO₂ target mainly by technological developments and related market changes.

In addition “estimated target ranges” for the average new car CO₂ emissions are provided for 2003/2004¹⁶. These target ranges, however, are indicative and do not represent an additional commitment by the associations. Nevertheless the Commission attaches special importance to these intermediate targets as a basis for verifying whether the commitments are effective.

The commitments of ACEA, JAMA and KAMA must be subject to a thorough, transparent and fair monitoring scheme. For this purpose they are complemented by the joint monitoring

⁸ Council conclusions of 06.10.1998 and 06.10.1999

⁹ Decision 1753/2000/EC of the European Parliament and of the Council establishing a scheme to monitor the average specific emissions of CO₂ from new passenger cars

¹⁰ Information concerning the Community strategy can also be found on the web site: http://www.cc.cec:8082/comm/environment/co2/co2_home.htm

¹¹ European car manufacturers in ACEA: BMW AG, DaimlerChrysler AG, Fiat S.p.A., Ford of Europe Inc., General Motors Europe AG, Dr. Ing. H.c.F. Porsche AG, PSA Peugeot Citroën, Renault SA, Volkswagen AG, AB Volvo

¹² COM (1998) 495 final

¹³ Japanese car manufacturers in JAMA: Daihatsu, Fuji Heavy Industries (Subaru), Honda, Isuzu, Mazda, Nissan, Mitsubishi, Suzuki, Toyota

¹⁴ Korean car manufacturers in KAMA: Daewoo Motor Co. Ltd., Hyundai Motor Company, Kia Motors Corporation

¹⁵ COM (1999) 446 final

¹⁶ For ACEA 165 – 170 g CO₂/km in 2003; for JAMA 165 – 175 g CO₂ /km in 2003; for KAMA 165 – 170 g CO₂/km in 2004.

mechanism with the associations and the future Community monitoring system¹⁷. Every year “Joint Reports”, one with each of the associations, are drafted and agreed between the parties, and attached to the Commission’s Communication to Council and European Parliament (see Annexes).

In order to guarantee transparency the Commission services and the three associations agreed on the format of the “Joint Report”. The layout of these reports is therefore quite similar and so is the detail of the underlying data that has been provided by the respective association. The associations’ data sources are considered as very reliable, and have been used because the official EU CO₂ monitoring system will not become operational until 2001/2. Once available this system will allow official emissions data to be used¹⁸.

The main findings for the reporting period 1995 to 1999 are:

All associations reduced the average specific CO₂ emissions of their cars sold on the EU market. ACEA and JAMA show good progress, KAMA is lagging behind (see Table 1).

ACEA	1995	1996	1997	1998	1999	Change 95-99 (%)*
	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)
gasoline	188	186	183	182	180	-4.3%
diesel	176	174	172	167	161	-8.5%
all fuels (1)	185	183	180	178	174	-6.0%

JAMA	1995	1996	1997	1998	1999	Change 95-99 (%)*
	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)
gasoline	191	187	184	184	181	-5.2%
diesel	239	238	222	221	221	-7.5%
all fuels (1)	196	193	188	189	187	-4.6%

KAMA	1995	1996	1997	1998	1999	Change 95-99 (%)*
	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)
gasoline	195	197	201	198	189	-3.0%
diesel	309	274	246	248	253	-18.1%
all fuels (1)	197	199	203	202	194	-1.5%

EU-15 (2)	1995	1996	1997	1998	1999	Change 95-99 (%)*
	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)	CO ₂ (g/km)
gasoline	188.6	186.4	183.8	182.5	180.3	-4.4%
diesel	178.8	177.5	175.0	171.5	165.3	-7.5%
all fuels (1)	186.4	184.4	181.8	179.6	175.9	-5.6%

(1) gasoline and diesel only, other fuels are negligible.

(2) New passenger cars put on the EU market by manufacturers not covered by the Commitment account for about 100 000 vehicles annually with an average specific CO₂ emission of about 220 to 240 g/km. Hence, they would not influence the EU average significantly.

(*) Percentages are rounded figures.

Table 1: Average specific CO₂ emissions of new passenger cars per fuel type, for each association and the European Union

Under the assumption that the associations continue with the average annual reduction rate in the same range as in the reporting period ACEA would meet the intermediate target rate, JAMA would be slightly above and KAMA would be significantly above. However, it can be expected that JAMA and KAMA will catch up in the coming years.

The average CO₂ emissions of new passenger cars decreased as well in all Member States (see Figure 1)

¹⁷ Decision 1753/2000/EC of the European Parliament and of the Council establishing a scheme to monitor the average specific emissions of CO₂ from new passenger cars.

¹⁸ Article 8 of Decision 1753/2000/EC requires that the monitoring system from the year 2003 onward shall serve as the basis for the voluntary obligations agreed between the Commission and the automobile industry.

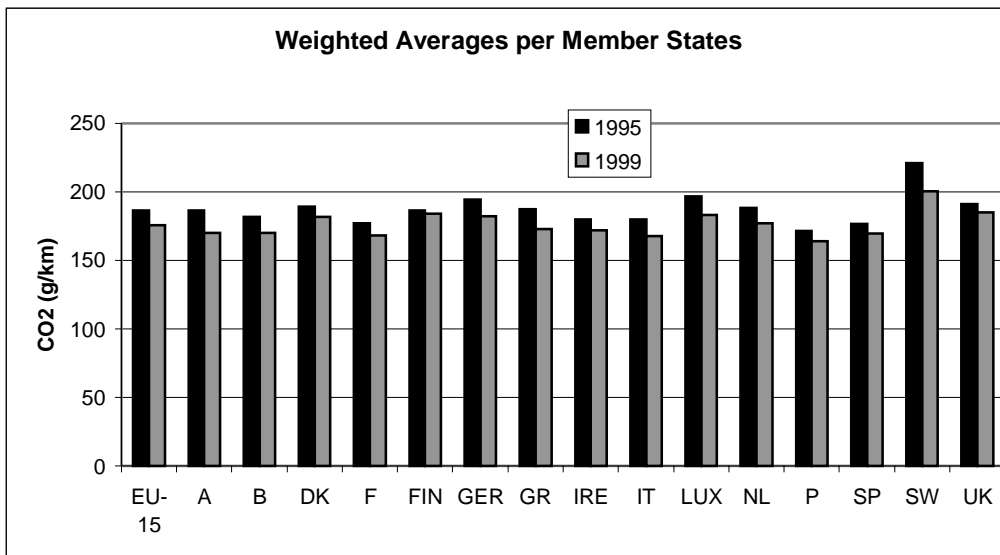


Figure 1: Average Specific CO₂ emissions of new passenger cars in the EU and in Member States in 1995 and 1999 (weighted averages based on the data for diesel and gasoline vehicles forwarded by the three associations)

In order to meet the final target of 140 g CO₂/km additional efforts are necessary and the annual reduction rate needs to be increased (on average the reduction rate must be 2 % per year throughout the entire monitoring period; currently ACEA achieves on average about 1,5 % per year, JAMA 1.15 % per year, and KAMA 0.4 % per year). However, it is predicted in the commitments that the associations would increase their reductions CO₂ rates with time. Furthermore ACEA points out in its report that the biggest advances on CO₂ emission will occur at the time of major product renewal, not at mid-cycle.

The reductions achieved so far are based on technological developments (mainly the introduction of High Speed Direct Injection Diesel (HDI) Engines, to less extent by the introduction of Gasoline Direct Injection (GDI) Engines, Continuously Variable Transmission, “Mini Cars” and Dual Fuelled Vehicles) as well as on other measures. Moreover, ACEA and JAMA introduced passenger cars emitting less than 120 g CO₂/km.

All associations increased the diesel share of their fleets within the reporting period (see Table 2).

ACEA	1995	1996	1997	1998	1999	Change 1995-1999 (%)
gasoline share	73,4%	72,9%	73,1%	70,3%	65,8%	-7,6%
diesel share	24,0%	24,3%	24,3%	27,0%	31,0%	7,0%
total number of PC	10.241.651	10.811.011	11.226.009	11.935.533	12.518.260	22,2%

JAMA	1995	1996	1997	1998	1999	Change 1995-1999 (%)
gasoline share	82,1%	82,1%	83,2%	81,6%	80,4%	-1,7%
diesel share	9,5%	10,4%	11,2%	13,1%	14,9%	5,3%
total number of PC	1.233.975	1.342.144	1.510.818	1.666.816	1.716.048	39,1%

KAMA	1995	1996	1997	1998	1999	Change 1995-1999 (%)
gasoline share	87,9%	87,6%	89,2%	85,9%	81,9%	-6,0%
diesel share	1,6%	1,8%	2,3%	6,1%	7,4%	5,8%
total number of PC	169.060	236.454	275.453	373.230	463.724	174,3%

EU-15 (1)	1995	1996	1997	1998	1999	Change 1995-1999 (%)
gasoline share	74,5%	74,2%	74,6%	72,1%	68,0%	-6,5%
diesel share	22,2%	22,4%	22,3%	24,7%	28,4%	6,2%
total number of PC	11.644.686	12.389.609	13.012.280	13.975.579	14.698.032	26,2%

Note: Totals include statistically unidentified vehicles and vehicles using 'other fuel' types; percentages do not include these vehicles.

(1) New passenger cars put on the EU market by manufacturers that are not covered by the Commitment account for about 100 000 vehicles annually, with an average specific CO₂ emission of about 220 to 240 g/km.

As these would not influence the EU average, they are not included in the EU averages and totals.

Table 2: Trends in Fleet composition for each association and the EU

The diesel share increase was predicted for the short-term, however it is expected that this will be reversed in the longer term with the introduction of Gasoline Direct Injection technology. All associations declared in their respective commitment that they will meet the final target by mainly technological developments and market changes linked to these developments¹⁹.

With regard to the assumptions underlying the commitments the associations drew attention to matters as fuel quality and other regulatory measures.

The car industry attributes great importance to the availability of low sulphur fuel to meet dual targets of reduced CO₂ and NO_x emissions. The associations made their commitments on the basis of the fuel quality requirements laid down in Directive 98/70/EEC, although they expect that better fuel qualities might be available in the market in the future²⁰. The Commission notes the importance that some parties attribute to lowering the current legislative maxima for the sulphur content of petrol and diesel in Community legislation. In order to consider the issue further the Commission has launched a consultative exercise to seek views from stakeholders. It is expected that this will be completed by the end of this year and before the pending amendment to Directive 98/70.

The car industry ACEA anticipates that the End-of-Life Vehicle (ELV) Directive will have adverse implications for the fuel efficiency of cars, as it may limit in its opinion the use of certain light materials and technologies, while burdening significantly the companies. The Commission does neither expect repercussions of the ELV Directive on the CO₂ commitment nor significant adverse repercussions on the industry's economic situation.

¹⁹ The three "Joint Reports" do not address the question of measures taken in all details since this issue will be studied in greater detail within the implementation of Decision 1753/2000/EC. This Decision requires the Commission to report to Council and European Parliament by 2003/2004 and 2008/2009 about the reductions achieved by technical and by other measures.

²⁰ The associations expected that some gasoline (e.g. Super-Plus 98 octane) and some diesel plus with a maximum sulphur content of 30 ppm are provided in 2000 on the whole EU market in a sufficient volume and geographical cover; in 2005 full availability of fuels on the whole EU market which satisfy the following: gasoline with a maximum sulphur content of 30 ppm and of a maximum aromatic content of 30% and diesel with a maximum sulphur content of 30 ppm and a cetane number of minimum 58.

KAMA drew special attention to the ongoing restructuring process, associated budget cuts and the reduction of technical and scientific staff that has negative repercussions on KAMA's capabilities to develop the necessary new CO₂ efficient technologies and to introduce new models on the EU market.

III. Other related measures

The Commission services are assessing some additional measures related to the measurement of CO₂ and fuel consumption, as defined in Directive 80/1268/EEC:

- (a) With regard to the extension of the scope to light commercial vehicles (category N1)
- (b) In the field of CO₂ emission values for alternatives fuels (other than LPG and NG, which are already included in the type approval system) and alternative propulsion systems
- (c) With regards the definition of mass in Directive 70/156/EEC.

IV. Conclusions

The implementation of the Community's strategy to reduce CO₂ emissions from passenger cars and improve fuel economy shows significant progress. Two of the three main pillars (commitments of the car industry and fuel-economy labelling of cars) are in place, intensive work on the third (fiscal measures) is underway. The first set of "Joint Reports" shows that the ACEA and JAMA are on the way to match the interim targets. KAMA has to increase its efforts significantly. In order to meet the final target of 140g CO₂/km all three associations have to increase their efforts, which is also foreseen in the Commitments. Based on the attached reports the Commission has no particular reason to believe that any of the associations would not live up to its commitment. To achieve the Community strategy target of 120g CO₂/km, it is important that the Community continues its work in developing and implementing the two pillars for consumer information and fiscal policy.

ANNEX

- 1) Monitoring of ACEA's Commitment on CO₂ Emission Reduction from Passenger Cars (1995-1999), Joint Report of the European Automobile Manufacturers Association and the Commission Services, Final version of 10. 07. 2000
- 2) Monitoring of JAMA's Commitment on CO₂ Emission Reduction from Passenger Cars (1995-1999), Joint Report of the Japan Automobile Manufacturers Association and the Commission Services, Final version of 11. 07. 2000
- 3) Monitoring of KAMA's Commitment on CO₂ Emission Reduction from Passenger Cars (1995-1999), Joint Report of the Korea Automobile Manufacturers Association and the Commission Services, Final version of 11. 07. 2000

The annexes are available only in English.