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Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on certain fluorinated greenhouse gases

(presented by the Commission)

1. INTRODUCTION

This proposal for a new EC Regulation on fluorinated gases is a key element of the first phase of the European Climate Change Programme. It will put in place a legislative framework to reduce emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride, which are powerful greenhouse gases covered by the Kyoto Protocol. The proposal includes provisions on the containment, reporting and marketing and use of fluorinated gases.

2. THE PROBLEM TO BE ADDRESSED

2.1. International response to climate change

Action to reduce emissions of fluorinated gases needs to be considered in the context of wider efforts being taken to combat climate change. Climate change is recognised as one of the greatest environmental and economic challenges facing humanity. The international community initially responded to this threat by adopting in 1992 the United Nations Framework Convention on Climate Change, which has the ultimate objective to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system. This was followed by the adoption of the Kyoto Protocol in 1997, which requires industrialised countries to reduce their collective emissions of greenhouse gases by 5.2% below their 1990 levels for the period 2008 to 2012 (the first commitment period).

2.2. European Community's response to climate change

Tackling climate change is a key priority in the Sixth Environment Action Programme of the European Community (2001-2010)¹, which emphasises that this will be an outstanding challenge for the next 10 years and beyond. Under the Kyoto Protocol the European Community is committed to reduce its emissions by 8% within the first commitment period: an overall reduction of 336 million tonnes of carbon dioxide equivalent.

At the European Council in Gothenburg in June 2001, Heads of State and Government stressed that combating climate change is a major priority of the European Union's Sustainable Development Strategy, and reaffirmed their strong commitment to meet the target under the Kyoto Protocol. The European Community and the Member States have all ratified the Kyoto Protocol².

¹ Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme, OJ L 242 of 10/9/2002.

² The EU ratified the Kyoto Protocol pursuant to Council Decision of 25 April 2002 concerning the approval on behalf of the European Community of the Kyoto Protocol to the UNFCCC and the joint fulfilment thereunder, (OJ 15 May 2002, L130, page 1). The EC and its Member States ratified the Kyoto Protocol on 31 May 2002.

2.3. European Climate Change Programme

The European Climate Change Programme (ECCP) was established in June 2000 to identify additional cost-effective measures that could be taken to enable the European Community to meet its Kyoto Protocol target. The ECCP was a multi-stakeholder consultative process comprising sectoral working groups, including a working group on fluorinated gases.

The report on the first phase of the ECCP³ of June 2001 summarised the outcomes and conclusions of the working groups. In total, 42 cost-effective options were identified with a potential to reduce total greenhouse gas emissions by 664–765 million tonnes carbon dioxide equivalent.

Fluorinated Gases Working Group

The working group included representatives from all relevant industrial sectors, environmental non-governmental organisations and Member States. The notes of meetings and the reports of the working group were made available to a wider audience.

The report of the working group of June 2001⁴ stated that fluorinated gas emissions in 1995 were around 65 million tonnes of carbon dioxide equivalent or 2% of total greenhouse gas emissions in the European Community. The main uses of HFCs are as refrigerants, cleaning solvents and foam blowing agents. PFCs are used in semi-conductor manufacture and as cleaning solvents, and SF₆ is used in high-voltage switch gear and magnesium production. Assuming no additional measures were taken, emissions were forecast to increase to around 98 million tonnes of carbon dioxide equivalent by 2010, representing 2 to 4% of total projected greenhouse gas emissions.

The working group made a number of recommendations for action to reduce emissions of fluorinated gases, and there was a strong consensus amongst the stakeholders for a legislative framework at the Community level to improve the containment and monitoring of fluorinated gases, and to introduce marketing and use restrictions for certain applications.

The first phase of the European Climate Change Programme

The Commission's Communication "on the implementation of the first phase of the European Climate Change Programme" of October 2001⁵, proposed a package of 12 priority measures to be brought forward in 2002 and 2003, including a proposal for legislative action on fluorinated gases.

The Environment Council on 12 December 2001 welcomed the intention of the Commission, *to make a proposal for a framework directive on fluorinated gases, including containment of emissions from stationary and mobile sources, monitoring of quantities of fluorinated gases being placed on the market as well as marketing and use restrictions, where appropriate, for relevant applications where viable alternatives are available and if improvement of containment if not feasible, taking into account existing voluntary initiatives by some fluorinated gases industry sectors, where the development of alternatives is still ongoing.*

³ European Climate Change Programme Report, June 2001
http://europa.eu.int/comm/environment/climat/eccp_longreport_0106.pdf

⁴ Fluorinated Gases Working Group Report
<http://europa.eu.int/comm/enterprise/chemicals/sustdev/fluorgases/gas1.pdf>

⁵ COM(2001) 580 final.

The European Parliament on 25 September 2002 also welcomed the Commission's intention to make a proposal for a framework directive on fluorinated gases. It considered the expected reductions in emissions of fluorinated gases and improved monitoring were measures that were cost-effective and that would deliver environmental benefits. Furthermore it considered it important that all areas of application are covered by the proposal and that work on the ozone layer target and the climate target should be co-ordinated in the European Community's work on the environment in regard to the refrigeration and air-conditioning sectors and as an aid to new technology.

Concurrently with the ECCP process, the Environment Council of 10 October 2000 asked the Commission to "*study and prepare measures in reduction of all greenhouse gas emissions from air conditioning in vehicles*". Studies were undertaken to establish refrigerant leakage rates from car air-conditioning systems and to assess the impact on fuel consumption up until 2010 and beyond. The Commission also launched a stakeholder consultation process, which culminated on 10 and 11 February, 2003 in a "Conference on Options to Reduce Greenhouse Gas Emissions from Mobile Air Conditioners", where 150 participants from industry, public sector, non-governmental organisations, Member States, most accession countries, as well as the US, Japan and Australia discussed the options for mitigating greenhouse gas emissions from mobile air-conditioning. The stakeholder consultation ended on 11 March 2003. As a result of the studies and stakeholder consultation it became evident that the leakage of HFC-134a is about 40% higher than estimated by the ECCP working group. Also this process provided ample evidence about the cost-effectiveness of phasing out the HFC-134a in vehicle air-conditioning systems. Thus, the Commission has concluded that – given that technical progress is likely to further reduce the costs of air conditioning based on alternative refrigerants – a gradual flexible system to phase-out the refrigerant is the most desirable policy response. This conclusion is further emphasised in the agreement between the Council and the Parliament as part of the directive on EU-wide trading on greenhouse gases, which calls for the Commission to particularly consider measures at Community level in order that the transport sector makes a substantial contribution to meeting the Kyoto target.

3. THE OBJECTIVES AND APPROACH OF THE PROPOSAL

3.1. Overall policy objective

The overall objectives of the proposal are to make a significant contribution towards the European Community's Kyoto Protocol target by introducing cost-effective mitigation measures, and to prevent distortion of the internal market that could result from differing national measures in place or being planned. The focus is on the protection of the internal market through the harmonisation and improvement of requirements on the containment and reporting of fluorinated gases. This implies harmonised restrictions on the marketing and the use of fluorinated gases in applications where the containment of fluorinated gases is either difficult to achieve or the use of the fluorinated gases is considered inappropriate and suitable alternatives exist. The proposal is expected to reduce projected emissions of fluorinated gases by around 23 million tonnes of carbon dioxide equivalent by 2010, and even greater reductions in the period after as some provisions will not have a significant impact until then.

3.2. The approach to reach the objectives

The Commission has given careful consideration to the most appropriate policy instrument for the proposed measures on fluorinated gases, and in doing so took into account the views expressed by the working group and other stakeholders.

The Commission considers that the legislative framework needs to be:

- comprehensive - to ensure that consistent provisions apply across the Community for the relevant fluorinated gases in key sectors, taking into account the voluntary actions taken for example by the semiconductor, switchgear and foam industry, and the impact of existing legislation such as Council Directive 96/61/EC on sectors such as aluminium production. This is important as some Member States have introduced national legislation on fluorinated gases which, based on preliminary analysis, may be disproportionate in nature and have a negative impact on the internal market.
- flexible - to reflect the different national circumstances of Member States; the differences between sectors and applications and the links with other policy areas
- adaptable - to allow areas where knowledge is currently not strong to be addressed at a later stage as appropriate

The Commission believes that these requirements are best met through a new EC Regulation. This approach is in line with the general aims of the White Paper on European Governance⁶ by proposing a legislative instrument that provides the balance between the need for a uniform approach and the need for flexibility in how certain provisions are implemented on the ground. For example, the requirement to recover fluorinated gases from equipment at the end of life for recycling or destruction should apply to all such applications across the Community. On the other hand, designing the training and certification programmes for the persons involved in such activities is for the Member States to determine in the light of their own national circumstances.

A new EC Regulation will ensure that a consistent set of containment provisions is applied to the key sectors where both fluorinated gases and ozone depleting substances are used. Many of the industrial sectors and enterprises affected by the proposal are also subject to Regulation (EC) 2037/2000, which introduced similar containment provisions for ozone depleting substances. It would be appropriate to ensure that the approach enables Member States to build on the existing frameworks and minimise impacts on the internal market.

The link with Regulation (EC) 2037/2000 is very important. At the international level there are growing links between the Montreal and Kyoto Protocols at both the scientific and the policy level. For example, the 1999 report of the HFC and PFC Task force of the UNEP Technology and Economic Assessment Panel⁷ noted that HFCs, and to a lesser extent PFCs, are needed to replace ozone depleting substances in some applications. This is particularly important in the European Community, where the phase-out of the use of CFCs, HCFCs and other ozone depleting substances foresees a transition to fluorinated gases in some applications. The proposal, therefore, is designed to ensure that the phase-out of ozone depleting substances is not undermined.

⁶ COM(2001) 428 of 25.07.2001

⁷ The implications to the Montreal Protocol of the inclusion of HFCs and PFCs in the Kyoto Protocol, UNEP, October 1999.

The evolution of the EC Regulation is another important factor. It was evident from the working group discussions that it would not be possible to put in place a fully comprehensive framework for the containment of fluorinated gases since a number of issues required further research. The Commission's approach, therefore, is to move forward in two stages. First this proposal will establish the framework. Second there will be a period of monitoring and evaluation after which the Commission will consider the need for strengthening the existing controls and the need for introducing additional measures to ensure that the objective is achieved. Among these additional measures, the Commission will be exploring whether environmental agreements are a suitable policy instrument for reducing emissions and improving monitoring of fluorinated gases for some sectors. The ECCP working group identified semi-conductor manufacture, the operation of high voltage switch gear and the foam production as sectors that should be examined further.

3.3. Legal basis of the proposal

This proposal puts in place measures to reduce emissions of fluorinated gases that will help the European Community and Member States meet their Kyoto Protocol targets, and which also affect the use and placing on the market of products. This proposal is designed to ensure that the internal market is protected through the harmonisation of requirements on monitoring, containment and marketing and use of fluorinated gases. This is important because Member States are taking or planning measures at national level that could affect the internal market. In terms of choosing the appropriate legal basis for this proposal, it is necessary to assess where its centre of gravity lies. Taking into account the centrality of the provisions about the use and placing on the market of products, and the likelihood of increasing distortions to the internal market if the proposal were not made, it is appropriate for the proposal to be based on Article 95 of the EC Treaty.

3.4. Subsidiarity and proportionality

The proposal takes account of the principles of subsidiarity and proportionality. It takes account of the need to minimise distortions to the internal market by introducing a level playing field for all enterprises affected. The containment and recovery provisions can in principle achieve the internal market objective while ensuring a high degree of environmental protection, but uniform marketing and use restrictions are needed where containment does not work or the use of fluorinated gases is considered inappropriate. Moreover, Member States need flexibility to implement other provisions, such as the training and certification programmes, in the light of their own national circumstances. The need to take legislative action to reduce fluorinated gases has been established and is strongly supported by all stakeholders. The economic costs of the proposal have been assessed and the measures are shown to be cost-effective and proportionate.

4. MAIN ELEMENTS OF THE PROPOSAL

4.1. Article 3: containment

This Article contains provisions designed to improve the containment of fluorinated gases. The provisions cover the following aspects:

- duty to prevent and minimise leakage
- mandatory inspections for leakage

- leakage detection systems
- maintenance of records

Further background information on containment measures is available in the report of the working group and in a technical study undertaken for the Commission⁸

Duty to prevent and minimise leakage

The requirement to take all measures that are technically and economically feasible to prevent and minimise leakages imposes a duty on all persons responsible for emissions of fluorinated gases.

Leakage inspections

The implementation of the emission control provisions of Regulation (EC) 2037/2000 has shown that carrying out regular checks for leakage is one of the most effective ways to reduce emissions from equipment. The requirement for stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems is for at least one leakage inspection a year to be carried out by competent personnel, but the frequency of inspections varies depending on the quantity of fluorinated gas contained in the equipment.

Quantity of fluorinated gas in equipment	Frequency of inspection per annum
3 kilograms or more	Once
30 kilograms or more	Four
300 kilograms or more	Monthly

Leakage detection systems

All owners of stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems containing 300 kilograms or more of fluorinated gas are required to install leak detection systems. The competent authority has the power to vary the frequency of leakage inspections where leak detection systems are installed.

Maintenance of records

There is a requirement for all owners of stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems containing 3 kilograms or more of fluorinated gas to maintain records. These should include information on the quantity and type of fluorinated gas installed and on amounts added and recovered during servicing. This information must be kept available and can be requested by either the relevant competent authority or the Commission. These data can be used by the Member States and the Commission to improve information on leakage rates from various types of equipment to improve their monitoring and forecasting of emissions.

⁸ Assessment of the costs and implication on emissions of potential regulatory frameworks for reducing emissions of HFCs, PFCs and SF₆, Enviro 1 March 2003
<http://europa.eu.int/comm/environment/climat/eccp.htm>

4.2. Article 4: recovery

Fluorinated gases must be recovered for recycling, reclamation or destruction from the cooling circuits of all refrigeration, air-conditioning and heat pump equipment, from equipment containing solvents, from fire protection systems and fire extinguishers and from high voltage switch gear. Unused fluorinated gas contained in refillable containers must also be recovered. The recovery of fluorinated gases from all other products and equipment shall be done if it is technically feasible and cost-effective to do so.

4.3. Article 5: training and certification programmes

Member States will be required to establish programmes to provide for the training and certification of personnel involved in making inspections for leakage, and for those involved in the recovery, recycling, reclamation and destruction of fluorinated gases. Member States must notify the Commission about these programmes in a format to be agreed by the Management Committee. Member States shall give recognition to certificates issued in other Member States.

4.4. Article 6: reporting

The reporting requirements for fluorinated gases relate to producers, importers and exporters of quantities above one tonne per year. Data on the production, importation, export, recycling and destruction of fluorinated gases must be submitted to the Commission annually. These data will also identify the applications where these fluorinated gases are used. For producers and importers, the reports will include an estimate of the expected emissions over the life-cycle of the substance. This information will be used by the Commission to check the accuracy of the level of emissions reported to UNFCCC. The Commission will protect the confidentiality of data.

4.5. Control of use and placing on the market

There are a number of controls on the use of fluorinated gases and the placing on the market of products and equipment containing fluorinated gases. These restrictions are necessary either because it is difficult to reduce fluorinated gas emissions from these applications or because the use of fluorinated gases is considered inappropriate. In such circumstances, the use and placing-on-the-market controls are proposed because technically-feasible and cost-effective alternatives are available. Further background information on these applications and the alternatives is in the report of the working group and in a technical study undertaken for the Commission⁹. This study provides detailed in-depth analysis of the potential impacts of introducing these controls and was fully considered by the working group.

4.6. Article 7: control of use

Magnesium die-casting

The use of sulphur hexafluoride will be prohibited from 1 January 2007 except for magnesium die-casting where the annual consumption of sulphur hexafluoride is below 500 kilograms. For this size of operation the alternatives are not yet a cost-effective option.

⁹ Costs and impacts on emissions of potential regulatory framework for reducing emissions of HFCs, PFCs and SF₆, Ecofys 18 February 2003.

Vehicle tyres

The use of sulphur hexafluoride for filling car tyres will be prohibited from the entry into force of the proposed EC Regulation.

Air-conditioning in passenger cars and light commercial vehicles

This provision requires that the initial charging of the air-conditioning system of any passenger vehicle and light commercial vehicle placed on the market after 1 January 2009 should use a refrigerant with a global warming potential of 150 or less. This is to prevent such vehicles being placed on the market during the phase-out period with an empty air-conditioning system which could then be charged with HFC-134a or any other fluorinated refrigerant gas with a global warming potential above 150.

4.7. Article 8 and Annex II: placing on the market

Air-conditioning in passenger cars and light commercial vehicles

See explanation below for Articles 9 and 10.

Non-refillable containers

Placing on the market non-refillable containers containing fluorinated gases is prohibited one year from the date of entry into force of the proposed EC Regulation. Non-refillable containers are designed to be disposable, which means that any fluorinated gas left in such containers will eventually be emitted to atmosphere. This prohibition does not apply to metered dose inhalers or to non-refillable containers used in laboratories for analytical purposes.

Non-confined direct-evaporation systems

Placing on the market of non-confined direct-evaporation systems which use fluorinated gases as the refrigerant is prohibited after the date of entry into force of the proposed EC Regulation. This includes self-chilling drink cans and any other system where the act of cooling results in the refrigerant being released to atmosphere.

Fire protection systems and fire extinguishers

Placing on the market fire protection systems and fire extinguishers containing perfluorocarbons is prohibited from the date of entry into force of the proposed EC Regulation. The use of perfluorocarbons to service existing fire protection systems and fire extinguishers is permitted.

Windows

Placing on the market of windows containing fluorinated gases is prohibited two years after the date of entry into force of the proposed EC Regulation.

Footwear

Placing on the market footwear containing sulphur hexafluoride is prohibited from the date of entry into force of the proposed EC Regulation. Placing on the market footwear containing all other fluorinated gases is prohibited from 1 July 2006. This later prohibition will allow the switch to alternatives to be made in a cost-effective manner.

One-component foams

Placing on the market of one component foams containing fluorinated gases is prohibited one year after the date of entry into force of the proposed EC Regulation, except when the use of hydrofluorocarbons is required to meet national safety standards.

Novelty Aerosols

Placing on the market of novelty aerosols containing fluorinated gases is prohibited three years after the date of entry into force of the proposed EC Regulation.

4.8. Articles 9 and 10: air-conditioning systems in new vehicles

Performance standards for leakage from mobile air-conditioning systems

Any new passenger vehicles and light commercial vehicles placed on the market with air conditioning systems containing fluorinated gases with a global warming potential higher than 150 (currently being HFC-134a) are subject to a maximum leakage rate. The leakage rate shall not exceed 40 grams of fluorinated gases per year for a single evaporator system and 50 grams of fluorinated gases per year for a dual evaporator system. Those placing such vehicles on the market must provide independent verification of the leakage rates. According to a study prepared for the Commission, the actual leakage rates in the EU are currently about 53 grams of HFC-134a per annum with a range from about 30 grams to 80 grams. According to the information received during the stakeholder consultation many manufacturers specify that the air conditioning systems should not leak by more than 40 grams per annum. Thus, this performance standard is ensuring that all manufacturers follow good business practice and use high quality parts. In a dual evaporator system – used mainly in minivans and Sport-Utility-Vehicles, 50 grams leakage rate is justified because of the leaks caused by the additional evaporator and lines. The cost increase of the requirement to use quality parts is negligible.

Placing on the market of new vehicles with HFC-134a air-conditioning systems

This provides for the phase out of air-conditioning systems in new passenger cars (M1) and class I of light commercial vehicles (N1) using HFC-134a beginning 1 January 2009 and ending 31 December 2013. This covers also those second hand vehicles that have been imported to the EU for the first time. However, cars imported for personal use are exempt.

Between 1 January and 31 December 2009 only 80% of a predetermined quota of passenger cars and light commercial vehicles can be placed on the market with air-conditioning systems containing HFC-134a. This level is reduced over the following years to 60%, 40%, 20% and 10% and in 2014 no air-conditioning systems in new passenger cars and light commercial trucks will contain HFC-134a. This phased approach is designed to allow car manufacturers and importers enough time to introduce the changes to the platforms of cars in a cost-effective manner. The quota for a particular year is based on the actual cars placed on the market two years earlier. For example, the quota for 2009 will be 80% of the cars placed on the market in the EU in 2007 and the quota for 2010 will be 60% of the cars placed on the market in the EU in 2008. Thus, the reference year for allocation would be updated annually. As the basis for allocating the quota is the total cars placed on the market (not cars having a mobile air conditioner), the method of updating is neither unfair nor inefficient. Furthermore, as the arrangement is transitional it is acceptable to use the most recent data for allocating transferable quotas.

In order to allow additional flexibility and thus to reduce the compliance costs, a system of transferable quotas for air conditioners operating with HFC-134a is established. The quota holders can transfer quotas without any restriction to other quota holders. Transfers will take effect through notification to the Commission, which will register changes in holdings through an electronic registry.

To encourage an early entry of air conditioners operating with alternative refrigerants, car manufacturers and importers would be allocated additional quota for HFC-134a based air conditioners on a “one-to-one” basis. For instance, if a car manufacturer placed in 2007 on the market 10000 cars which have an air conditioner operating with alternative refrigerant, they will be allocated an additional 10000 quota of HFC-134a based air conditioners for 2009 or any other year up to 2018. If a car manufacturer places on the market an enhanced HFC-134a air conditioner which has verified design specifications of half of the emissions, car manufacturers would be allocated additional quota for HFC-134a based air conditioners on a “two-to-one” basis. For instance, if a car manufacturer placed in 2007 on the market 10000 cars which have an “enhanced HFC-134a” air conditioner, they will be allocated an additional 5000 quota of HFC-134a based air conditioners (or a 10000 quota of “enhanced HFC-134a” air conditioners) on 1 January 2009 or any other year up to 2018.

Special provisions have been made for possible *new entrants* i.e. for those car manufacturers and importers that have not placed any vehicles on the market in 2007 and the subsequent years. Such new entrants will be allocated non-transferable quotas corresponding to the relevant percentage of the current year. For example, if a new entrant wished to place vehicles with HFC-134a on the market in 2010 and had not sold any cars in the EU before, he would be allocated non-transferable quotas ex-post in 2011 based on 2010 sales numbers. The new entrant could thus purchase quotas (e.g. if the penetration rate of HFC-134a based mobile air-conditioning systems in his fleet were higher than 60% as stipulated in paragraph 1 of Article 10). However, while he could save the quotas for the following year, he could not transfer quotas to other manufacturers or importers, The certification procedures and penalties would be the same as for other companies.

Special provisions have also been made for small producers with a *de minimis* clause, which uses the same definitions as in the type approval system, i.e. that the small series and end of series limits defined in Annex XII to type approval directive (70/156/EEC) are exempt. For verification, the number of vehicles placed on the market needs to be reported. The verification requirements of the quota scheme are given. Car manufacturers and importers have three months to provide the verified information to the Commission. During the next three months quota holders may continue to transfer quotas so as to ensure that they hold sufficient quota to cover the vehicles placed on the market. At the end of this three-month period a corresponding amount of quotas will be written off (i.e. cancelled), while unused quotas be valid for the following year.

The penalty for non-complying air conditioners is set so that in the following year, two units will be deducted from the quota for each unit that did not fulfil the requirements of this regulation. However, as car manufacturers and importers can transfer quotas among one another, it is unlikely that this penalty will be used in practice. A financial penalty of €200 per unit is set for non-compliance in a transparent manner by making public those who did not comply with the Article 6 of the regulation. A high penalty is required in order to ensure all car manufacturers (both those that comply early and those that comply late) are treated equally. A low penalty would encourage non-compliance and would therefore be unfair to other manufacturers. The basis for setting the penalty is the same as in the directive on EU-wide trading on greenhouse gases¹⁰. In that directive the financial penalty is set at €100 per tonne of CO₂ and a deduction of 1 tonne from the following year's allowance. As the lifetime emissions of an HFC-134a based mobile air conditioner are about 2 tonnes of CO₂ equivalent, the penalty of €200 per non-complying mobile air conditioner is consistent with the directive of EU-wide trading on greenhouse gases. Finally, unused quotas can be transferred to the following year to allow maximum flexibility for car manufacturers and importers to plan the introduction of air conditioning systems using alternative refrigerants in a smooth and cost-effective manner.

In order to allow some HFC-134a based air conditioners to be placed on “niche” markets, it is possible to carry over the quotas from 2014 till 2018. However, new quotas can no longer be earned during this period.

It is important that consumers are informed about the impact of mobile air-conditioning system on fuel consumption and subsequent carbon dioxide emissions as well as the emissions of HFCs. The Commission therefore intends, when reviewing directive 1999/94/EC¹¹ to consider how this can be best achieved and to make any appropriate proposals in this respect.

There is a special provision to allow car manufacturers or importers to fulfil the provisions relating to air conditioning systems in vehicles jointly. Subject to European Community rules on competition, this would allow the car manufacturers and importers to act at the European level, thus minimising bureaucracy and simplifying the application of this regulation.

¹⁰ Proposal for the directive COM(2001) 581 23.10.2001.

¹¹ Directive 1999/94/EC of the European parliament and of the Council of 13 December 1999 relating to the availability of consumer information on fuel economy and carbon dioxide emissions in respect of the marketing of new passenger cars.

In order to facilitate the monitoring this regulation, the Commission intends to propose an amendment of the type approval directive (70/156/EEC), which will include information about air conditioning systems in the type approval of vehicles and to specify the role of type approval authorities in the verification of the leakage rates of mobile air conditioners.

4.9. Article 11: review

Monitoring

It is important and necessary to monitor the effectiveness of the measures in the proposed EC Regulation to ensure that the policy objective is being met. This will be done by analysing the inventories on greenhouse gas emissions, which are submitted annually by Member States to the Commission under the greenhouse gas monitoring mechanism. In addition, the data reported by producers, importers and exporters on the quantities of fluorinated gases placed on the market can be used to validate the data reported by Member States. The Commission will also consider whether further studies are needed to strengthen the monitoring and forecasting of emissions.

Evaluation

This proposal covers the air conditioning equipment of passenger cars and light commercial vehicles. The Commission will also study the leakage of fluorinated gases from air conditioning and refrigeration systems in other modes of transport. Depending on the findings of this work the Commission may make a proposal for further regulation by 31 December 2005.

Within five years after the entry into force of the proposed EC Regulation the Commission must carry out a wide-ranging evaluation of the provisions and make a report to the European Parliament and the Council. This includes ensuring that all of the recommendations of the working group are considered and followed-up as necessary.

The report shall:

- assess the impact of relevant provisions on emissions and projected emissions of fluorinated gases;
- evaluate the training and certification programmes established by Member States under Article 5;
- assess the need for European Community standards relating to the control of emissions of fluorinated gases from equipment, including technical requirements with respect to the design of products and equipment
- assess the need for the development and dissemination of notes describing best available techniques and best environmental practices concerning the prevention and minimisation of emissions of fluorinated gases
- include an overall summary of the development of the state of technology, experience gained, environmental requirements and any impacts on the functioning of the internal market.

At the end of this evaluation the Commission will send a report to the European Parliament and the Council and, if appropriate, include proposals for amendments to the proposed EC Regulation.

4.10. Article 12: management committee

This makes provision for the Commission to be assisted by the Management Committee established under Regulation (EC) No 2037/2000 on matters relating to fluorinated gases. Using this Management Committee builds on the strong links that exist between the Montreal and Kyoto Protocols and will ensure that decisions taken on fluorinated gases take account of policies affecting ozone depleting substances.

5. CONSULTATIONS

All key stakeholders have been involved by virtue of the ECCP process. The working group comprised about 10 permanent and 110 "revolving" participants from industry, environmental non-governmental organisations, academia, consultants, Member States and the Commission. The majority of the 110 revolving participants represented the various sectors of industry. The large make up of the group reflects the variety and complexity of the different sectors relevant for fluorinated gas emissions. Due to the high number of specialists from industry, the focus of the discussions was to seek consensus on the various technical options for emission reduction.

Under the work programme of the group, all major sectors accountable for emissions of fluorinated gases have been covered in 9 full-day meetings between June 2000 and April 2001. The mandate of the working group was extended to allow it to consider technical aspects of the proposed legislative framework. There were three meetings: 6 May 2002; 27 June 2002 and 25 September 2002. In addition, the Commission services have held bilateral meetings with stakeholders, especially when considering technical and commercially sensitive aspects of the proposal.

6. BUSINESS IMPACT ASSESSMENT¹²

6.1. Overall analysis of economic costs and potential for emissions reductions

Emissions: baseline and projections

The working group examined the sources of fluorinated gas emissions and established a baseline in 1995 and projected emissions through to 2010. The overall picture shows emissions increasing by around 50% from 65 to 98 million tonnes of carbon dioxide equivalent between 1995 to 2010 (table 1). Within this increase there is a significant change in HFC emissions between sectors which needs to be understood. Emissions of HFCs from industrial processes are expected to fall from 31.6 million tonnes of carbon dioxide equivalent to 7.7 million tonnes of carbon dioxide equivalent. However, from other sectors there is a strong upward trend in emissions as HFCs are used to phase-out ozone depleting substances. This is most marked in the refrigeration and air-conditioning sector where emissions increase

¹² For this proposal there was no requirement to carry out an extended impact assessment. The business impact assessment provides an assessment of the economic impact of the proposal on business and the environmental benefits in terms of expected reductions in emissions.

from 3.7 million tonnes of carbon dioxide equivalent in 1995 to around 40.5 million tonnes of carbon dioxide equivalent in 2010.

Table 1: Baseline and projected emissions (MT carbon dioxide equivalent)

Sector	1995	2010
Refrigeration and air-conditioning	2.3	20.5
Mobile air-conditioning	1.4	20.0*
Foam production	0.1	9.6*
One Component Foams	3.3	3.5
Aerosols	1.3	5.8*
High voltage switch gear	5.0	4.7
Cleaning solvents	0.0	0.3*
Fire fighting agents	0.0	0.5
Semi conductor manufacture	1.9	6.3
Tyres and windows	7.9	6.0
Metered dose inhalers	0.0	4.3
HCFC-22 production	31.6	7.7
Aluminium production	7.8	4.0
Magnesium production and casting	1.5	2.7
Others	1.1	2.1
TOTAL	65.2	98.0

Figures marked * have been revised as a result of further study following the working group report

Overall economic costs and expected reduction in emissions

In overall terms, the measures included in this proposal are expected to reduce emissions in 2010 by around 23 million tonnes of carbon dioxide equivalent. The containment measures have an average cost of around €18 per tonne of carbon dioxide equivalent reduced. The marketing and use restrictions have an average cost less than €1 per tonne of carbon dioxide equivalent, although this varies according to application. These figures are based on the working group report and four technical studies (see footnotes 8 and 9) carried out on behalf of the Commission. Stakeholders were extensively consulted during these studies and had the opportunity to comment on the final reports.

Containment study

This study considered the expected costs of introducing measures to contain emissions across all Member States. As an advanced containment system has been in place in the Netherlands for a number of years this system was used as a benchmark. The results of the study confirm that containment can be regarded as a cost-effective approach, particularly in the refrigeration and air-conditioning sectors (this analysis excluded the mobile air-conditioning sector which was the subject of separate studies). Costs in the Member States vary according to the structure of the refrigeration and air-conditioning sectors and the extent to which measures have already been taken. In those cases where control systems are already in place the incremental costs will be low while they are considerably above average where there are delays in the implementation of earlier legislation. The emission reduction achievable by 2010 due to additional containment efforts are around 15 million tonnes carbon dioxide equivalent.

Marketing and use and data reporting study

This study examined the cost and impact on businesses of potential marketing and use restrictions of certain applications of fluorinated gases. In total nine sectors were investigated, and stakeholders were consulted throughout on the technical feasibility of alternative technologies and the associated costs. The marketing and use restrictions proposed could contribute to an emission reduction equivalent of around 6 million tons of carbon dioxide equivalent in 2010 for an average cost of less than €1 per tonne carbon dioxide equivalent reduced (but excluding the mobile air-conditioning sector which was the subject of separate studies).

The overall annual costs of the data reporting requirements are estimated to be around €400,000 shared between 91 enterprises.

Mobile air-conditioning studies

Based on two studies on the leakage of hydrofluorocarbons from mobile air conditioners, the Commission Services (DG Environment) issued a consultation paper, in which it re-estimated the emissions of hydrofluorocarbons at 18-38 million tonnes of carbon dioxide equivalent in 2010 and 28-58 million tonnes of carbon dioxide equivalent in 2020. The uncertainties in the emissions depend upon the real life leakage rates, which are inherently difficult to measure. In the consultation paper the costs of use restrictions were estimated to range between €5 per tonne of carbon dioxide equivalent and €33 if the flammability issue of a low global warming potential hydrofluorocarbon or hydrocarbons was solved, or between €21 and €40 per tonne of carbon dioxide equivalent if the alternative refrigerant was carbon dioxide. The high cost of the latter alternative was assuming that industry would not find a low cost solution to manufacture hoses for air conditioners. Once this is solved the costs will drop towards €20-€40 per tonne of carbon dioxide equivalent.

Based on the responses to the consultation paper, the Commission estimates that the leakage of hydrofluorocarbons is likely to be 20 to 25 million tonnes of carbon dioxide equivalent in 2010 and the average cost of use restrictions is between €8 and €18 if the flammability issue is solved and between €21 and €46 if the cost of hoses in the case for carbon dioxide as the refrigerant is solved.

For the placing on the market restrictions relating to mobile air-conditioning, the environmental impact of the proposal is that the lifetime emissions of HFC-134a from air conditioning systems would be either eliminated (if non-HFC solutions are chosen by industry) or reduced by 90% (if HFC-152a is chosen as the refrigerant). Table 2 gives the best estimates of lifetime emissions after consulting with the industry. While the emissions during use of air conditioners (which is the largest source of emissions) have been established by the Commission, the largest uncertainty in the emissions relates to those during servicing of the equipment.

Overall, the lifetime emissions of HFC-134a are estimated to range from 1.70 and 2.24 tonnes of carbon dioxide equivalent per vehicle. The lower leakage of 1.70 tonnes of carbon dioxide equivalent is likely to be more representative for smaller or single evaporator systems while the higher leakage of 2.24 tonnes of carbon dioxide equivalent is likely to be more representative for larger or dual evaporator systems.

Table 2: Leakage of HFC-134a during the lifetime (14 years) of a vehicle based on two assumptions, tonnes of carbon dioxide equivalent.

	Low	High Assumptions
Regular HFC-134a emissions occurring during normal operation of a vehicle	0.96	0.96 53 g of HFC-134a / year
Irregular HFC-134a emissions resulting from accidents, stone hits, defects etc.	0.29	0.36 16 g of HFC-134a per year in “low” case and 20 g in “high” case
HFC-134a emissions during servicing	0.26	0.52 100 g of HFC-134a per service in “low” case 200 g per service in “high” case
HFC-134a emissions at end-of-life	0.14	0.35 20% of refrigerant lost of the charge at the end of life in the “low” case, 50% in the “high” case
Other HFC-134a emissions	0.04	0.04 Loss of refrigerant at manufacturing and distribution stages.
Total	1.70	2.24

6.2. Who will be affected by the proposal?

The proposal will affect the producers, importers and exporters of fluorinated gases as sales of fluorinated gases for servicing should fall. The manufacturers of equipment and products containing fluorinated gases will also be affected as they need to take steps to minimise emissions during manufacture and also design equipment to be more leaktight. The owners of equipment containing fluorinated gases will have to ensure their equipment is checked for leakage on a regular basis. The servicing sector will be affected because such persons handling equipment containing fluorinated gases must be trained and certified.

Concerning air conditioning in passenger cars and light commercial vehicles, the proposal will affect the chemical companies that supply HFC-134a, suppliers of air conditioning equipment as well as vehicle manufacturers. Due to reduced leakage of HFC-134a chemical companies will sell less refrigerant and thus lose revenue, but it needs to be emphasised, that it is the chemical itself that causes global warming when emitted to the atmosphere. Once the market and sales restrictions have taken place, chemical companies will carry on supplying HFC-134a to those vehicles, stationary air conditioners as well as refrigerators that continue to be operated with that refrigerant.

The current HFC-134a production capacity in the EU is estimated at 43 kilotonnes and not likely to increase. Without this regulation the total sales of HFC-134a to mobile air conditioners are estimated to be about 25 kilotonnes with a production value of about €75 million in 2010. With the proposed regulation, the sales of HFC-134a would reduce by less than 10% in 2010. This share would increase in the following years and by the time all vehicles have converted to use alternative refrigerants (in about 2025), the sales of HFC-134a to mobile air conditioning would no longer take place. If car manufacturers choose to install air conditioning equipment running with HFC-152a, the chemicals industry would substitute one chemical by another.

Among component and systems suppliers, some of which are also SMEs, the effect of the proposal would be both a business opportunity and a threat. Many of the EU companies are global leaders in alternative refrigerant technologies. For these companies the proposal will have a positive effect as they can concentrate their research and development effort on new technologies. For less innovative companies, the proposal is likely to imply additional cost as they need to step up their research and development activities.

Among car manufacturers, the situation is similar to the system and component suppliers. Some European car manufacturers have carried out research into and development of alternative refrigerants for the past decade. For such companies the proposal will offer a business opportunity to commercialise the fruits of their work while less innovative companies in air conditioning will have to incur additional costs.

It needs to be borne in mind that if car manufacturers decide to choose solutions that do not use hydrofluorocarbons, they will no longer be required to recover such gases at the end of life of vehicles, and thus save the costs. -Garages that maintain air conditioners – many of which are SMEs – will enjoy a similar benefit: the requirement to recover and recycle hydrofluorocarbons would no longer need to take place for cars that have air conditioning systems using alternative refrigerants.

6.3. What will business have to do to comply with the proposal?

To comply with the provisions users of fluorinated gases will have to ensure that their equipment is regularly checked and well-maintained by competent persons. For those sectors who have to move to alternatives they will need to obtain information about the alternatives and plan their transition. For others, like those using sulphur hexafluoride in tyres, the switch to air or nitrogen is easy and cost-free.

The chemicals industry needs to supply alternative refrigerants for mobile air conditioning systems depending on the decisions made by the car manufacturers on the refrigerant. Component and systems suppliers need to adapt their products to the new design requirements, too. For this sector, the production costs of more environmentally friendly air conditioning systems will be higher, but they will be offset by the increased revenues that they will receive from their clients. Clearly those suppliers that have already carried out research and development of alternative refrigerants will be in a better market position to reap the benefits when the proposal takes effect.

Car manufacturers have several alternative strategies to comply with the proposal, some of which are not mutually exclusive. First, they can decide not to supply any air conditioning systems in the vehicles. This is a possible response in the small, inexpensive passenger car segment as well as in some light commercial vehicles. Second, the manufacturer can decide to switch to alternative refrigerants, which are likely to be either carbon dioxide, hydrocarbons or HFC-152a. It is of course possible, although unlikely in the near future, that the industry will develop other refrigerants, or that other techniques to cool down vehicles emerge. Third, given the flexibility mechanism introduced in the proposal, the manufacturer can decide to introduce air conditioning systems operating with alternative refrigerants earlier than what is required in the proposal. Car manufacturers may wish to convert completely some production lines to new systems and, if as a consequence their whole fleet will over-comply on a particular year, they use the credits that are gained to convert the air conditioning systems in some other market later. This would be meaningful in cases where manufacturers choose to delay the investment in new systems to as late a date as possible. Fourth, some manufacturers may wish to take advantage of the flexibility system to such an extent that they will be able to transfer credits to other manufacturers and thus recuperate some of their research and investment costs. It is unlikely, however, that this fourth strategy will be used much.

6.4. What economic effect is the proposal likely to have?

For the containment provisions and the marketing and use provisions the economic costs are not high. In many cases the studies have shown that there are clear economic benefits from moving to alternative technologies. Refrigeration and air-conditioning equipment that functions well uses less energy and causes less disruption in the workplace, for example, a production line where refrigeration is essential runs more efficiently if the refrigeration equipment is functioning well. Similarly, air-conditioning is essential in some buildings to ensure the comfort of the occupants and so an efficient and functioning air-conditioning system can contribute towards the productivity of a workplace.

The service and maintenance sector can expect more work from the requirement to make regular inspections, and suppliers of high quality components can expect to do more business than those supplying inferior products. Part of the cost of regular inspections will be borne by the owners of the equipment, but there are also benefits as less leaky equipment is generally much more energy efficient and they will not have to buy new fluorinated gases to replace the amounts lost.

The production cost of air conditioning equipment in passenger cars and light commercial trucks will increase. Depending on the technical solution chosen by the car manufacturer the increase in production costs is estimated to range between €15 and €40 if HFC-152a were used as the refrigerant, between €30 and €50 per vehicle if hydrocarbons were used as the refrigerant, and €40 and €150 if carbon dioxide were used as the alternative refrigerant. It should be noted that the high cost of carbon dioxide assumes that the industry will not be able to solve during this decade a technical problem, which relates to using high pressure in flexible hoses. Current commercial hose technologies are relatively expensive. The current production cost of an air conditioning system ranges from €250 to €400.

While the production cost of air conditioning equipment will rise, there will be changes in the tools that will be used for servicing air conditioning equipment, too. During the change from one system to another there will be some increase in costs in garages as tools specific to refrigerants need to be purchased. However, after the change over to new systems, the garages will no longer face higher costs, and if carbon dioxide is chosen as the refrigerant, there will no longer be a need to recycle the refrigerant and thus, the costs of recycling equipment (costing about €2000 per unit) no longer need to be incurred by garages.

For end-of-life vehicle depots, if carbon dioxide is chosen as the refrigerant, there will no longer be a need to recycle the refrigerant as required by the end of life vehicle directive, thus, the costs of recovery equipment no longer need to be incurred by garages. It is estimated that the recovery of HFC-134a costs between €20 and €30 per end-of-life vehicle. This cost would be saved if carbon dioxide were chosen as the refrigerant.

HFC-134a is a relatively expensive refrigerant compared to its alternatives. Thus, the proposal would lower the costs of the refrigerant charge.

The economic effect of the proposal will be an increase in the investment cost of air conditioning equipment, which is likely to be offset by lower operational costs for air-conditioning systems due to lower maintenance and lower disposal costs. Given the range of €15-€40 and €40-€150 of additional costs depending on the technical solution (HFC-152a in the first case and carbon dioxide in the second case), it is likely that the cost of the alternative systems over the lifetime of the air conditioner will be between €15 and €150 higher than the cost of current systems.

This reflects the view that industry will be able to solve the technical problem concerning the cost of high pressure hoses, if carbon dioxide is chosen as the refrigerant. Further, the possibility of using carbon dioxide based air conditioner as a heat pump is not included in the calculation. In an increasing number of direct injection diesel as well as hybrid cars there is no longer enough excess heat and thus, cars need to have auxiliary heaters. In a carbon dioxide based system such auxiliary systems would no longer be required as the air conditioner can be reversed and used as a heater. However, due to lack of information of the cost implications, the Commission has not made an estimate of the (beneficial) impact of the heat pump in this calculation.

In sum, production costs of air conditioning systems are estimated to increase between €15 and €50. The Commission has estimated that due to this proposal hydrofluorocarbon emissions from each vehicle will reduce between 1.70 and 2.24 tonnes of carbon dioxide equivalent. This would imply that the cost per tonne of carbon dioxide equivalent of the sales restriction would range from €7 (in the case the cost increase per air conditioner is small and the current leakage of hydrofluorocarbons is high) and €88 (in the case the cost increase per air conditioner is high and the current leakage of hydrofluorocarbons is low) (table 3). Given the long transition period and the likelihood that one or several of the technologies will develop, the costs of compliance are likely to correspond to the lower values of table 3.

Table 3: Estimated cost of compliance cost per tonne of carbon dioxide equivalent of the proposal

Incremental cost of air conditioner operating with alternative refrigerant assuming either low or high cost increase per air conditioner*)	Cost in euros per tonne of CO ₂ equivalent	
	If current leakage of hydrofluorocarbons is high	If current leakage of hydrofluorocarbons is low
HFC-152a (low cost increase: €15)	€7	€10
Hydrocarbons (low cost increase: €30)	€13	€18
CO ₂ (low cost increase: €40)	€18	€24
HFC-152a (high cost increase: €40)	€20	€26
Hydrocarbons (high cost increase €50)	€22	€29
CO ₂ (high cost increase: €50)	€67	€88

*) The calculations take into account the fact that HFC-152a has 90% lower global warming potential than HFC-134a.

6.5. Does the proposal contain measures to take account of the specific situation of SMEs?

The situation of SMEs was taken into account during the working group discussions and specifically addressed in the studies undertaken. The measures in the proposal do not have a disproportionate affect on SMEs, but in the case of the use prohibition for sulphur hexafluoride in magnesium die-casting a derogation was made for SME operations because the switch to alternatives was not cost-effective.

For the provisions relating to mobile air-conditioning, the suppliers of HFC-134a and car manufacturers do not belong to the SME category. SMEs among the component suppliers will be treated similarly to other suppliers.

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on certain fluorinated greenhouse gases

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission¹³,

Having regard to the opinion of the European Economic and Social Committee¹⁴,

Acting in accordance with the procedure laid down in Article 251 of the Treaty¹⁵,

Whereas:

- (1) The sixth Environmental Action Programme: Environment 2010: Our Future, Our Choice¹⁶ identifies climate change as a priority for action. That Programme recognises that the Community is committed to achieving an 8% reduction in emissions of greenhouse gases within 2008 to 2012 compared to 1990 levels, and that in the longer-term global emissions of greenhouse gases will need to be reduced by approximately 70% compared to 1990 levels.
- (2) The ultimate objective of the United Nations Framework Convention on Climate Change, which was approved by Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change¹⁷, is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system.

¹³ OJ C [...], [...], p. [...].

¹⁴ OJ C [...], [...], p. [...].

¹⁵ OJ C [...], [...], p. [...].

¹⁶ Decision 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme, OJ L 242, 10.9.2002, p. 1.

¹⁷ OJ L 33, 7.2.1994, p. 11.

- (3) Council Decision 2002/358/EC of 25 April 2002, concerning the conclusion of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfillment of commitments thereunder¹⁸ commits the Community and its Member States to reduce their aggregate anthropogenic emissions of greenhouse gases listed in Annex A to the Kyoto Protocol by 8% compared to 1990 levels in the period 2008 to 2012.
- (4) Provision should be made for the prevention and minimisation of emissions of fluorinated gases, without prejudice to Council Directive 75/442/EEC of 15 July 1975 on waste¹⁹, Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control²⁰, to Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles²¹ and to Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment²².
- (5) Member States are taking or planning differing measures to reduce emissions of fluorinated gases. Such differing measures by Member States could create obstacles or distort competition within the internal market. It is therefore appropriate to take measures at Community level to ensure that the internal market is protected through the harmonisation of requirements on monitoring, containment and marketing and use of fluorinated gases.
- (6) Marketing and use restrictions for certain applications of fluorinated gases are considered appropriate to prevent distortions in the internal market that could result from differing measures taken by Member States, where viable alternatives are available and improvement of containment and recovery is not feasible, voluntary initiatives by some industry sectors needs to be taken into account as well as the fact that the development of alternatives is still ongoing.
- (7) The Kyoto Protocol requires reporting on emissions of fluorinated gases and data on the production, imports and export of fluorinated gases can help to validate the accuracy of these reports. Annual reporting should therefore be required from producers, importers and exporters of fluorinated gases.
- (8) Emissions of hydrofluorocarbon-134a (HFC-134a) from air conditioners in motor vehicles are of growing concern because of their impact on climate change. Cost-effective and safe alternatives are expected to be available imminently. These alternatives are not damaging or are considerably less damaging to the climate and do not adversely affect vehicles' energy consumption and related carbon dioxide emissions. The use of alternative refrigerants should be facilitated by using market mechanisms in the form of transferable quotas.
- (9) In order to facilitate the monitoring and verification of the leakage rates of air conditioning systems in new vehicles, the Commission will promote the preparation of European standards and will take other necessary measures in order to amend the pertinent European vehicle type approval legislation.

¹⁸ OJ L 130, 15.5.2002, p. 1.

¹⁹ OJ L 194, 25.7.1975, p. 39.

²⁰ OJ L 257, 10.10.1996, p. 26.

²¹ OJ L 269, 21.10.2000, p. 34.

²² OJ L 37, 13.2.2003, p. 24.

- (10) Provision should be made for the monitoring, evaluation and review of the provisions contained in this Regulation.
- (11) Member States should lay down rules on sanctions applicable to infringements of this Regulation and ensure that those rules are implemented. Those sanctions must be effective, proportionate and dissuasive.
- (12) This Regulation respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union.
- (13) Since, in order to preserve the internal market, the objective of the proposed action, the containment, reporting, control of use and placing on the market of certain fluorinated gases, cannot be sufficiently achieved by the Member States acting individually, and can therefore by reason of the scale and effects of the proposed action be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve that objective.
- (14) The measures necessary for the implementation of this Regulation should be adopted in accordance with Article 4 of Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission²³ through the committee established by Regulation (EC) No 2037/2000²⁴.

HAVE ADOPTED THIS REGULATION:

Article 1

Scope

This Regulation shall apply to the containment, the use, placing on the market of the fluorinated greenhouse gases hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride, and to the reporting of information on those gases. These substances are listed in Annex A to the Kyoto Protocol. An indicative list is given in Annex I.

This Regulation shall apply without prejudice to Council Directive 75/442/EEC, Council Directive 96/61/EC, to Directive 2000/53/EC of the European Parliament and of the Council and to Directive 2002/96/EC of the European Parliament and of the Council.

Article 2

Definitions

For the purposes of this Regulation the following definitions shall apply:

- (a) “placing on the market” means the supplying of unused products and equipment containing fluorinated gases by a manufacturer or an importer for the first time in the European Union;

²³ OJ L 184, 17.7.1999, p. 23.

²⁴ OJ L 244, 29.9.2000, p. 1.

- (b) “container” means a product designed for the purpose of transporting or storing fluorinated gases;
- (c) “recovery” means the collection and storage of fluorinated gases from, for example, machinery, equipment and containment vessels during servicing or for disposal;
- (d) “recycling” means the reuse of a recovered fluorinated gas following a basic cleaning process such as filtering and drying. For refrigerants, recycling normally involves recharge back into equipment as is often carried out on site;
- (e) “reclamation” means the reprocessing and upgrading of a recovered fluorinated gas through such processes as filtering, drying, distillation and chemical treatment in order to restore the substance to a specified standard of performance, which often involves processing off site at a central facility;
- (f) “vehicles” means any motor vehicle of categories M1 and class I of N1, as defined in Annex II to Directive 70/156/EEC;
- (g) “air conditioning systems containing fluorinated gases with a global warming potential higher than 150” means air conditioning systems that use hydrofluorocarbons the global warming potential of which exceeds 150 as specified in Annex I;
- (h) “enhanced HFC-134a air conditioner” means an air conditioner containing fluorinated gases with a global warming potential higher than 150 where the rate of leakage is verified as being less than 20 grams of fluorinated gases with a global warming potential higher than 150 per year for a single evaporator system, or less than 25 grams of fluorinated gases with a global warming potential higher than 150 per year for a dual evaporator system, and where the system will not require refilling for at least 12 years; and
- (i) “novelty aerosols” means those aerosol generators listed in the Annex to Directive 94/48/EC.

Article 3

Containment

1. All measures that are technically and economically feasible shall be taken to prevent and minimise emissions of fluorinated gases.
2. Subject to paragraph 3, stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems containing fluorinated gases shall be inspected for leakage according to the following schedule:
 - a) equipment containing 3kg or more of fluorinated gases shall be inspected at least once every year;
 - b) equipment containing 30kg or more of fluorinated gases shall be inspected four times per year;

- c) equipment containing 300kg or more of fluorinated gases shall be inspected monthly.
3. Where a leakage detection system is in place, the competent authority may adjust the frequency of inspections under paragraph 2(b) and (c) as appropriate.
4. Owners of stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems containing 300kg or more of fluorinated gases shall install leakage detection systems.
5. Owners of stationary refrigeration, air-conditioning and heat-pump equipment and fire protection systems containing 3kg or more of fluorinated gases shall maintain records on the quantity and type of fluorinated gases installed, any quantities added and the quantity recovered during maintenance and servicing. The records shall be made available on request to the competent authority and to the Commission.

Article 4

Recovery

1. Fluorinated gases contained in the following types of equipment shall be recovered for recycling, reclamation or destruction:
 - a) the cooling circuits of refrigeration, air-conditioning and heat pump equipment;
 - b) equipment containing solvents;
 - c) fire protection systems and fire extinguishers ; and
 - d) high voltage switch gear,

Recovery shall take place during the servicing and maintenance of that equipment or during the final disposal thereof.

2. Unused fluorinated gases contained in refillable containers shall be recovered for recycling, reclamation or destruction.
3. Fluorinated gases contained in other products and equipment shall be recovered, to the extent that it is technically feasible and cost-effective for recycling, reclamation or destruction.

Article 5

Training and certification programmes

1. Member States shall establish training and certification programmes for the personnel involved in carrying out the activities provided for in Articles 3 and 4.

2. Within two years of the entry into force of this Regulation, Member States shall notify the Commission of information on the training and certification programmes referred to in paragraph 1. Member States shall give recognition to the certificates issued in another Member State and shall not restrict the freedom to provide services or the freedom of establishment for reasons relating to the certification issued in another Member State.
3. Within one year of the entry into force of this Regulation, the Commission, in accordance with the procedure referred to in Article 12(2), shall determine the format of such notifications.

Article 6

Reporting

1. By 31 March each year from the second calendar year following entry into force of this regulation, the following data in respect of the preceding year shall be communicated to the Commission:
 - (a) Each producer who produces more than one tonne per annum shall communicate:
 - its total production of each fluorinated gas, identifying the applications in which the substance is expected to be used and providing an estimate of the expected emissions over the life-cycle of the substance;
 - any quantities recycled, reclaimed or destroyed.
 - (b) Each importer who imports more than one tonne per annum, including any producers who also import, shall communicate:
 - any quantities of fluorinated gases marketed in the Community, separately identifying the applications in which the substance is expected to be used and providing an estimate of the expected emissions over the life-cycle of the substance;
 - any quantities of used fluorinated gases imported for recycling, for reclamation or for destruction.
 - (c) Each exporter who exports more than one tonne per annum, including any producers who also export, shall communicate:
 - any quantities of fluorinated gases exported from the Community;
 - any quantities of used fluorinated gases exported for recycling, for reclamation or for destruction.
2. The format of the report referred to in paragraph 1 shall be established in accordance with the procedure referred to in Article 12(2) within one year of the entry into force of this Regulation.

3. The Commission shall take appropriate steps to protect the confidentiality of the information submitted to it.
4. The Commission may modify the reporting requirements in paragraph 1 in accordance with the procedure referred to in Article 12(2), to improve the practical application of those reporting requirements.

Article 7

Control of use

1. The use of sulphur hexafluoride in magnesium die-casting, except where the quantity of sulphur hexafluoride used is below 500 kilograms per year, shall be prohibited from 1 January 2007.
2. The use of sulphur hexafluoride for the filling of vehicle tyres shall be prohibited from the date of entry into force of this Regulation.
3. The use of fluorinated gases with a global warming potential higher than 150 to fill air conditioning systems for the first time in new vehicles placed on the market as from 1 January 2009 shall be prohibited, except as provided for in article 10.

Article 8

Placing on the market

The placing on the market of fluorinated gases in applications listed in Annex II shall be prohibited as specified in that Annex.

Article 9

Air conditioning systems in new vehicles

1. From 1 January 2005, any person placing new vehicles on the market with air conditioning systems containing fluorinated gases with a global warming potential higher than 150 shall ensure that the rate of leakage has been verified as not exceeding 40 grams of fluorinated gases per year for a single evaporator system or 50 grams of fluorinated gases per year for a dual evaporator system.
2. From 1 January 2009, the placing on the market of new vehicles with air conditioning systems containing fluorinated gases with a global warming potential higher than 150 shall be prohibited, except as provided for in Article 10.

Article 10

Quotas

1. Any person that intends to place new vehicles with air conditioning systems containing fluorinated gases with a global warming potential higher than 150, on the market from 1 January 2009 shall be allocated quotas representing a percentage of the vehicles placed on the market by that person in accordance with the following:
 - (a) between 1 January and 31 December 2009, 80% of vehicles placed on the market in 2007;
 - (b) in 2010, 60% of vehicles placed on the market in 2008;
 - (c) in 2011, 40%; of vehicles placed on the market in 2009;
 - (d) in 2012, 20%; of vehicles placed on the market in 2010;
 - (e) in 2013, 10%. of vehicles placed on the market in 2011.
2. Applications for first quota shall be submitted to the Commission by 30 June 2008, including information on the number of new vehicles referred to in paragraph 1 that were placed on the market by the applicant. The applications for the subsequent quotas shall be submitted to the Commission by 30 June of each year.

The annual quota for each quota-holder shall be published by 30 September of each year in the Official Journal of the European Union.

3. Allocation of a quota shall entitle the quota-holder to place a corresponding number of new vehicles referred to in paragraph 1 on the market, one quota unit corresponding to one vehicle. The quotas shall be transferable between quota-holders without restrictions. Transfers shall take effect through notification to the Commission of transfers in quota-holdings.
4. Any quota-holder that places new vehicles on the market with air conditioning systems containing no fluorinated gases or fluorinated gases with a global warming potential equal to or lower than 150 between the date of entry into force of this Regulation and 31 December 2008 shall be entitled, on substantiated application, to a corresponding increase in his quota for 2009.

Any quota-holder that places new vehicles on the market with enhanced HFC-134a air conditioning systems between the date of entry into force of this Regulation and 31 December 2008 shall be entitled, on substantiated application, to an addition to his quotas for 2009 corresponding to the 50% of the number of these vehicles placed on the market.

5. Each quota-holder shall by 31 March every year report the numbers of vehicles referred to in paragraph 1 that were placed on the market during the preceding year, together with supporting evidence. The first report shall be submitted to the Commission by 31 March 2010. Any such vehicle containing an enhanced HFC-134a air conditioning system shall be considered to be half such a vehicle.

6. On 30 June every year, quotas held by each quota-holder corresponding to the number of such vehicles placed by him on the market during the preceding year shall be cancelled.
7. Quota-holders who exceed their quotas shall have their quotas for the following year reduced by two units for each vehicle exceeding the quota.
8. Unused quotas shall be added to the quotas of the quota-holder for the following year.
9. On 30 July 2014, the name of any quota holder that has exceeded his total quota holdings for the period 2009 to 2013 shall be published. Any such quota-holder shall be subject to a financial penalty of 200 EUR in respect of each vehicle exceeding the quota.
10. Quota-holders with quotas remaining after 2013 may continue to place vehicles referred to in paragraph 1 on the market until 31 December 2018 in accordance with paragraphs 5 to 9.
11. By way of derogation from paragraphs 2 to 10, any person who places vehicles on the market below the small series and end of series limits defined in Annex XII to Council Directive 70/156/EEC shall be exempt from the requirements of this Article, provided that the number of vehicles placed on the market is below these limits. Any person that places a vehicle on the market that has been used for personal use shall also be exempt from the requirements of this Article.
12. In order to accommodate new entrants, any person who did not place any vehicles on the market during the period referred to in paragraph 1 (year X-2) shall be allocated non-transferable quotas corresponding to the relevant percentage listed in subparagraphs (a) to (e) of vehicles placed on the market by him in the year X, rather than year X-2.
13. Without prejudice to the Treaty, a group of persons may apply to fulfil the provisions of this Article as if they were a single person, specifying the period for which they want to so act. In the event of non-compliance with the provisions of this Article they shall be jointly and severally responsible.

Article 11

Review

1. On the basis of progress in potential containment or replacement of fluorinated gases in air conditioning and refrigeration systems contained in other modes of transport, the Commission shall review the present legislation and report thereon to the European Parliament and the Council by 31 December 2005 at the latest. The report shall be accompanied where necessary by legislative proposals.
2. Within five years after the entry into force of this Regulation, the Commission shall submit a report to the European Parliament and the Council based on the experience of the application of this Regulation. In particular, the report shall:

- assess the impact of relevant provisions on emissions and projected emissions of fluorinated gases and examine the cost-effectiveness of these provisions;
 - evaluate the training and certification programmes established by Member States under Article 5(1);
 - assess the need for European Community standards relating to the control of emissions of fluorinated gases from equipment, including technical requirements with respect to the design of products and equipment;
 - assess the need for the development and dissemination of notes describing best available techniques and best environmental practices concerning the prevention and minimisation of emissions of fluorinated gases;
 - include an overall summary of the development of the state of technology, experience gained, environmental requirements and any impacts on the functioning of the internal market.
3. The report shall, where necessary, be accompanied by proposals for revision of the relevant provisions of this Regulation.

Article 12

Committee

1. The Commission shall be assisted by the committee instituted by Article 18 of Regulation (EC) No 2037/2000.
2. Where reference is made to this paragraph, the procedure laid down in Article 4 of Decision 1999/468/EC shall apply, in compliance with Article 7 and Article 8 thereof.
3. The period provided for in Article 4(3) of Decision 1999/468/EC shall be set at one month.

Article 13

Sanctions

1. Without prejudice to Article 10, Member States shall lay down rules on sanctions applicable to infringements of the provisions of this Regulation and shall take all measures necessary to ensure that such rules are implemented. The sanctions provided for shall be effective, proportionate and dissuasive.
2. Member States shall notify the rules on sanctions to the Commission by one year after the entry into force of this Regulation and shall also notify it without delay of any subsequent amendment affecting those rules.

Article 14

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [...]

For the European Parliament
The President

For the Council
The President

ANNEX I

Fluorinated gases

<u>Fluorinated gas</u>	<u>Chemical Formula</u>	<u>Global Warming Potential</u>
Sulphur hexafluoride	SF ₆	23900
<u>Hydrofluorocarbons (HFCs):</u>		
HFC-23	CHF ₃	11700
HFC-32	CH ₂ F ₂	650
HFC-41	CH ₃ F	150
HFC-43-10mee	C ₅ H ₂ F ₁₀	1300
HFC-125	C ₂ HF ₅	2800
HFC-134	C ₂ H ₂ F ₄	1000
HFC-134a	CH ₂ FCF ₃	1300
HFC-152a	C ₂ H ₄ F ₂	140
HFC-143	C ₂ H ₃ F ₃	300
HFC-143a	C ₂ H ₃ F ₃	3800
HFC-227ea	C ₃ HF ₇	2900
HFC-236fa	C ₃ H ₂ F ₆	6300
HFC-245ca	C ₃ H ₃ F ₅	560
HFC-365mfc	CF ₃ CH ₂ CF ₂ CH ₃	890
<u>Perfluorocarbons (PFCs)</u>		
Perfluoromethane	CF ₄	6500
Perfluoroethane	C ₂ F ₆	9200
Perfluoropropane	C ₃ F ₈	7000
Perfluorobutane	C ₄ F ₁₀	7000
Perfluoropentane	C ₅ F ₁₂	7500
Perfluorohexane	C ₆ F ₁₄	7400
Perfluorocyclobutane	c-C ₄ F ₈	8700

ANNEX II

<u>Fluorinated gas</u>	<u>Application</u>	<u>Date of prohibition</u>
Fluorinated gases with a global warming potential higher than 150	Air conditioning in passenger cars and light commercial vehicles	1 January 2009 – 31 December 2013*
Sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons	Non-refillable containers, except for laboratory and analytical use and metered dose inhalers	One year after the date of entry into force
Hydrofluorocarbons and perfluorocarbons	Refrigerants in non-confined direct-evaporation systems	Date of entry into force
Perfluorocarbons	Fire protection systems and fire extinguishers	Date of entry into force
Sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons	Windows	Two years after the date of entry into force
Sulphur hexafluoride	Footwear	Date of entry into force
Hydrofluorocarbons	One component foams, except when required to meet national safety standards	One year after the entry into force
Hydrofluorocarbons	Novelty aerosols	Three years after the entry into force
Hydrofluorocarbons and perfluorocarbons	Footwear	1 July 2006

* *Progressive controls on placing on the market applicable in accordance with Article 10.*

LEGISLATIVE FINANCIAL STATEMENT

Policy area(s): Environment
Activit(y/ies): Policy Development

TITLE OF ACTION: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON CERTAIN FLUORINATED GREENHOUSE GASES

1. BUDGET LINE(S) + HEADING(S)

07-01-04-01

2. OVERALL FIGURES

2.1. Total allocation for action (Part B): EUR 2.736 million for commitment

2.2. Period of application:

Starts progressively from 2004 and continues indefinitely.

2.3. Overall multi-annual estimate of expenditure:

(a) Schedule of commitment appropriations/payment appropriations (financial intervention) (see point 6.1.1)

EUR million (*to three decimal places*)

	Year 2004	2005	2006	2007	2008	2009 and subsequent Years	Total
Commitments	0.100	0.170	0.170	0.170	0.170	0.170	0.950
Payments	0.100	0.170	0.170	0.170	0.170	0.170	0.950

(b) Technical and administrative assistance and support expenditure (*see point 6.1.2*)

Commitments	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Payments	0.250	0.000	0.000	0.000	0.000	0.000	0.250

Subtotal a+b							
Commitments	0.350	0.170	0.170	0.170	0.170	0.170	1.200
Payments	0.350	0.170	0.170	0.170	0.170	0.170	1.200

(c) Overall financial impact of human resources and other administrative expenditure (see points 7.2 and 7.3)

Commitments/ payments	0.256	0.256	0.256	0.256	0.256	0.256	1.536
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TOTAL a+b+c							
Commitments	0.606	0.426	0.426	0.426	0.426	0.426	2.736
Payments	0.606	0.426	0.426	0.426	0.426	0.426	2.736

2.4. Compatibility with financial programming and financial perspective

Proposal is compatible with existing financial programming and financial perspective.

2.5. Financial impact on revenue:

No financial implications.

3. BUDGET CHARACTERISTICS

Type of expenditure		New	EFTA contribution	Contributions from applicant countries	Heading in financial perspective
Non-compulsory	Differentiated	NO	NO	NO	No 3

4. LEGAL BASIS

Article 95

5. DESCRIPTION AND GROUNDS

5.1. Need for Community intervention

5.1.1. Objectives pursued

The legislative proposal would establish a framework to regulate fluorinated gases across the whole Community. The regulation includes provisions to improve the containment of fluorinated gases and to report data on these gases. In addition, the regulation would place marketing and use restrictions on fluorinated gases in certain applications. This regulation will contribute towards the cost-effective fulfilment of the international commitments of the European Community and its Member States under the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

The reporting provisions will require the Commission to take steps to protect the confidentiality of data and this can be achieved by building on the existing independent audit system already established under Regulation (EC) 2037/2000 on substances that deplete the ozone layer. As audit work for ozone depleting substances reduces in line with the phase-out, resources can be allocated to the proposed audit work for fluorinated gases meaning no additional costs fall on the Community budget.

For air-conditioners used in passenger and light commercial vehicles, the proposal provides for a flexible system phasing out the use of high global warming fluorinated gases through the use of transferable quotas. The detailed functioning of the system is left to the companies placing mobile air conditioners to the market. Thus, if the companies wish to transfer quotas, the costs of establishing the quota system would be largely borne by themselves. However, the proposal foresees that the Commission shall have a role to issue quotas for mobile air conditioners which use refrigerants with a high global warming potential during 2009-2013. It will also receive the verified reports of operators and cancel quotas. The major element of the cost to the Community budget is expected to be incurred in respect of establishing the technical specifications of the transferable quota system and to verify compliance.

5.1.2. Measures taken in connection with ex ante evaluation

None.

5.2. Action envisaged and budget intervention arrangements

For data reporting the proposed action is to ensure that the commercial sensitivity of data on fluorinated gases is protected, and that the data are presented to the commission in a clear and transparent manner.

The proposed action is to ensure that there no irregularities occur in the application and reporting of transferable quotas in the case of air conditioning equipment for passenger cars and light commercial vehicles. The reason for this is not financial, but primarily environmental. The records of quotas, which represent the entitlement to place on the market air conditioners containing fluorinated gases with high global warming potential form the basis of compliance and thus need to be verified.

5.3. Methods of implementation

For data reporting, it is envisaged that this will be made direct to the auditors, but the precise method and format for reporting will be determined in agreement with the Management Committee.

For vehicle air-conditioners, the Commission would receive the application for transferable quotas and – based on reports from the companies placing air conditioning systems on the market –verify the compliance.

6. FINANCIAL IMPACT

6.1. Total financial impact on Part B - (over the entire programming period)

6.1.1. Financial intervention

Commitments (in EUR million to three decimal places)

Breakdown	2004	2005	2006	2007	2008	2009 and subsequent Years	Total
Action 1: Appointing independent auditor to oversee annual data reporting		0.020	0.020	0.020	0.020	0.020	0.100
Action 2: Development of the quota management system for mobile air conditioners	0.050						0.050
Action 3: Running the quota management system		0.050	0.050	0.050	0.050	0.050	0.250

Action 4: Development of the format of reporting	0.050						0.050
Action 5: Monitoring compliance based on reports		0.100	0.100	0.100	0.100	0.100	0.500
TOTAL	0.100	0.170	0.170	0.170	0.170	0.170	0.950

6.1.2. *Technical and administrative assistance, support expenditure and IT expenditure (commitment appropriations)*

	2004	2005	2006	2007	2008	2009	Total
(1) Technical and administrative assistance							
(a) Technical assistance offices							
(b) Other technical and administrative assistance: <ul style="list-style-type: none"> – intra muros: – extra muros: <i>of which for construction and maintenance of computerised management systems</i> 							
Subtotal 1							

(2) Support expenditure							
(a) Studies	0.250						0.250
(b) Meetings of experts							
(c) Information and publications							
Subtotal 2	0.250						0.250
TOTAL	0.250						0.250

7. IMPACT ON STAFF AND ADMINISTRATIVE EXPENDITURE

7.1. Impact on human resources

Types of post		Staff to be assigned to management of the action using existing and/or additional resources		Total	Description of tasks deriving from the action
		Number of permanent posts	Number of temporary posts		
Officials or temporary staff	A	1		1	
	B	1		1	
	C				
Other human resources					
Total		2		2	

7.2. Overall financial impact of human resources

Type of human resources	Amount (EUR)	Method of calculation *
Officials	216 000	EUR 108 000 per official
Temporary staff		
Other human resources (specify budget line)		
Total	216 000	

The amounts are total expenditure for twelve months.

7.3. Other administrative expenditure deriving from the action

Budget line (number and heading)	Amount (EUR)	Method of calculation
Overall allocation (Title A7)		
A0701 – Missions	10 000	Estimate.
A07030 – Meetings	-	-
A07031 – Compulsory committees ¹	30 000	Management Committee under Regulation 2037/2000 meeting 2 times a year (reimbursement of travel of one delegate per Member State): estimated expense.
A07032 – Non-compulsory committees		
A07040 – Conferences		
A0705 – Studies and consultations		
Other expenditure (specify)		
Information systems (A-5001/A-4300)		
Other expenditure - Part A (specify)		
Total	40 000	

¹ The Management Committee for this regulation is the same as for Regulation 2037/2000. Thus, issues under both regulation will be discussed in the same meeting and reimbursement of travel costs is made only once. For clarity these expenses have been shown as memo item.

The amounts are total expenditure for twelve months.

I.	Annual total (7.2 + 7.3)	EUR 256 000
II.	Duration of action	
III.	Total cost of action (I x II)	

No other particular staff resources are envisaged for the Commission. Staff resources should be available from within existing resources.

8. FOLLOW-UP AND EVALUATION

8.1. Follow-up arrangements

By the end of 2005, the coverage of the regulation in other modes of transport will be reviewed.

8.2. Arrangements and schedule for the planned evaluation

Within five years after the entry into force of this Regulation, the Commission will report about the progress. This report may be accompanied by proposals for revision of the relevant provisions of this Regulation.

9. ANTI-FRAUD MEASURES

Usual Commission rules applicable.