



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 31.1.2007  
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2007/0019 (COD)

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels and amending Council Directive 1999/32/EC, as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC**

(presented by the Commission)

{SEC(2007) 55}

{SEC(2007) 56}

## EXPLANATORY MEMORANDUM

### 1. CONTEXT OF THE PROPOSAL

#### • **Grounds for and objectives of the proposal**

Directive 98/70/EC<sup>1</sup> established minimum specifications for petrol and diesel fuels for use in road and non-road mobile applications. These specifications were established for health and environmental reasons. This proposal for revision of Directive 98/70/EC will contribute to reducing air pollutant and greenhouse gas emissions from road and non-road fuel use and help to implement the Community strategies on air quality and on climate change. It will lead to lower emissions of particulate matter. It will also enable the use of higher volumes of biofuels while taking into consideration environmental and health requirements. It will reduce greenhouse gas emissions from the fuels regulated.

The main reasons for reviewing the Directive stem from evolving fuel and engine technology and the growth in biofuel use. The Community air quality goals set in the Thematic Strategy on Air Pollution and the continuing need to address Greenhouse Gas emissions are the other main factors influencing the need for revision of the Directive.

#### • **General context**

Directive 98/70/EC was last modified by Directive 2003/17/EC<sup>2</sup>. This modification only affected the sulphur limits for petrol and diesel set in the Directive. The continuing evolution of Community pollutant emissions legislation and the links between vehicle technology and fuel quality, mean that fuel quality has to be reviewed in parallel.

The need for a review and possible revision of Directive 98/70/EC is foreseen in its Article 9. This states that in view of:

- further progress on vehicle pollutant emissions;
- the evolution of the CO<sub>2</sub> and cars strategy;
- and the development of alternative fuels,

it should be considered whether these factors have led to a need for a revision of the fuel specifications. In addition, other specific issues are identified for consideration. Wide ranging discussions with stakeholders identified a number of additional issues to be considered in the review.

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<sup>1</sup> Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EC.

<sup>2</sup> Directive 2003/17/EC of the European Parliament and of the Council of 3 March 2003 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels.

- **Existing provisions in the area of the proposal**

Directive 98/70/EC as amended by Directive 2003/17/EC establishes minimum specifications for petrol and diesel to be placed on the market in the EU. Included within its scope is the sulphur limit for gas oil used for Non-Road Mobile Machinery.

Directive 1999/32/EC<sup>3</sup> establishes sulphur limits for certain liquid fuels and inter alia specifically refers to the fuel used in inland waterway vessels.

Directive 93/12/EEC<sup>4</sup> had previously regulated the sulphur content of liquid fuels, however following its amendment by Directives 98/70/EC and 1999/32/EC only one Article of the Directive remains in force.

- **Consistency with the other policies and objectives of the Union**

The Thematic Strategy on Air Pollution sets out a number of goals for the reduction of air pollution in the EU. This proposal is consistent with those goals by aiming in its different aspects to reduce or at least avoid any increase in emissions of the most important pollutants

Moreover, this proposal forms part of the Kyoto strategy of the EU, which is based on convergent action involving industry, transport, energy, housing and agriculture.

The proposal is consistent with the Sustainable Development Strategy since its goal is, where possible, to reduce or avoid increases in, undesirable pollutant emissions that lead to environmental and health impacts and to reduce transport greenhouse gas emissions. This needs however to be done in a cost effective manner considering the societal benefit.

The proposed Directive also aims at facilitating the achievement of current and future Community biofuel targets. The Commission's Biofuel Strategy<sup>5</sup> states that it must "focus on .... ensuring that the use of biofuels does not give rise to environmental or technical problems". The review addresses constraints on biofuel use and feasible modifications without increasing in-use environmental pressures. It is also recognised that further review of the limits and of the instruments might be needed as fuel and biofuel technologies and volumes develop.

The proposal has implications for the Lisbon strategy and the internal market. Fuel specifications affect not only fuel suppliers but also manufacturers of vehicles, non-road mobile machinery and fuel and exhaust system components. Changes to the specification can increase or reduce costs for those sectors. The specification also has some impact on the cost of fuel supplied and the size of the fuel markets and implications for overall energy use, greenhouse gas emissions and the level of health impacts from air pollution. The implications of any cost changes have been assessed and taken into account, and the changes proposed are believed to not increase overall costs to society.

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<sup>3</sup> Directive 1999/32/EC of the Council of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Council Directive 93/12/EEC.

<sup>4</sup> Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels.

<sup>5</sup> An EU Strategy for Biofuels - COM(2006) 34, 8.2.2006.

The proposal is in conformity with better regulation principles as it involves the simplification of obligations imposed on industry, repeal of one directive, coherence with the climate change strategy, sustainable development strategy, biofuel strategy and the Thematic Strategy goal to improve air quality.

The proposed specifications have been defined on the basis of best available techniques with the objective of decreasing pollutant and greenhouse gas emissions as much as possible without creating other environmental damage. Potential trade-offs in some areas, for example reducing sulphur can increase greenhouse gas emissions, have been assessed.

## **2. CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT**

- **Consultation of interested parties**

### *Consultation methods, main sectors targeted and general profile of respondents*

In view of the highly technical nature of the Directive, a stakeholder process was organised with the relevant EU level stakeholders. During this process, the scope of the review was discussed and stakeholders were invited to put forward their views on all of the different aspects of the review. Two meetings were held and a further opportunity was provided for written comments. The majority of respondents agreed to their comments being made public and these are published at [http://forum.europa.eu.int/Public/irc/env/fuel\\_quality/library](http://forum.europa.eu.int/Public/irc/env/fuel_quality/library).

### *Summary of responses and how they have been taken into account*

Because of the wide range of issues covered by the review, it is not possible to provide an overall summary of stakeholder comments here. The Impact Assessment reports the main views of stakeholders for each aspect of the review in particular where stakeholders hold diverging views. Where views diverge, the Commission has attempted to establish the most credible approach while recognising the uncertainty and avoiding risk of undesirable environmental or health consequences.

- **Collection and use of expertise**

### *Scientific/expertise domains concerned*

The review covers issues mainly relating to air pollution, combustion and engine technology, oil refining, biofuel technology and greenhouse gas emissions.

### *Methodology used*

The review of the Fuel Quality Directive covers a wide range of areas and involves a significant number of industrial sectors. Many aspects and the issues underlying them are highly technical.

In view of these factors, the Commission has sought input from organisations with relevant expertise. This input has been provided by the Commission's Joint Research Centre (JRC), a structured stakeholder process and through dialogue and meetings with individual stakeholder or groups of stakeholders.

The JRC has undertaken scientific work in support of some of the technical areas in the review with the support of different stakeholders. The JRC reported on progress to the stakeholder meetings and responded to questions and comments. The JRC's final advice was received on 28 February 2006.

#### *Main organisations/experts consulted*

The experimental work carried out by the JRC also involved the research organisation of the European automotive industry (EUCAR) and the research organisation of the European oil industry (CONCAWE). A large range of stakeholders have provided input to the process and these are detailed in Annex 1 of the Impact Assessment.

#### *Summary of advice received and used*

For a large number of the areas assessed in the review, there is little or no disagreement about the findings. These areas are: Captive Fleets, End date for 10ppm sulphur in diesel, Review of Directive 1999/96/EC, Review of CO<sub>2</sub> and cars policy, Review of Directive 1999/30/EC.

In some areas there are single industry interests that favour a particular position. These include the limit on FAME content in diesel, non-road diesel specification, diesel density, petrol oxygenate content, petrol vapour pressure.

In a number of other areas there is a clear difference of opinion between different sectors, usually the vehicle manufacturing industry and the oil industry. These include World Wide Fuel Charter, Poly Aromatic Hydrocarbons, detergents and metallic additives. Disagreement exists on the impact of metallic additives on emission control systems and the ethanol and vapour pressure limits.

Metallic additives are claimed by some parts of industry to raise risks of damage to vehicle exhaust control systems while the manufacturers of additives dispute this claim. It has so far not proved possible to agree a test method for verifying whether or not metallic additives do cause damage.

The use of ethanol in blends with petrol can lead to increased pollutant emissions which are precursors of ground level ozone. Higher blends of ethanol have problems of compatibility with some vehicles. The use of ethanol, and other biofuels, offers the potential to reduce life cycle Greenhouse Gas emissions from road fuels. The assessment of these impacts is disputed, in particular by the ethanol supply industry.

The existence of potentially serious risks with irreversible consequences has been mentioned in some areas, for example by vehicle manufacturers and the oil industry. These risks include damage to vehicles and increases in pollutant and greenhouse emissions.

#### *Means used to make the expert advice publicly available*

The comments of stakeholders on all of the different aspects of the review have been made publicly available on the internet as noted above, except in cases where stakeholders requested their comments to be kept confidential.

- **Impact assessment**

The Commission carried out an Impact Assessment listed in the Work Programme. This report is accessible as document SEC(2007) 55. The Impact Assessment considers the following sixteen areas:

- a) Whether the fuel specifications contained in the Directive should be replaced with those from the World Wide Fuel Charter proposed by the automotive industry.
- b) Whether in the absence of a limit, a maximum limit on the FAME (biodiesel) content in diesel should be introduced in the Directive. Such a limit would constrain the amount of FAME that could be blended.
- c) Whether it would result in any environmental benefit to establish minimum specifications for LPG, Natural Gas and Biofuels in the Directive.
- d) Whether it would result in any environmental benefit to establish a specific fuel specification for use by captive fleets.
- e) What mandatory date should be established for maximum sulphur content of 10ppm in diesel. This level of sulphur is needed to improve operation of pollutant control technologies.
- f) Whether any parameters need to be changed following the review of Directive 1999/96/EC<sup>6</sup> to ensure the correct operation of vehicles meeting the tighter emission specifications.
- g) Whether any parameters need to be changed following the review of the CO<sub>2</sub> and cars voluntary agreements to enable car manufacturers to comply with their commitments.
- h) Whether any amendment of the fuel parameters is required following the review of Directive 1999/30/EC<sup>7</sup> to enable the air quality limit values to be attained.
- i) Whether the maximum content of Poly Aromatic Hydrocarbons (currently set at 11%) in diesel should be modified to lower vehicle pollutant emissions.
- j) Whether any amendment is required to the specification for gas oil to be used in non-road mobile machinery to enable the introduction of machinery meeting new emission limits.

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<sup>6</sup> Directive 1999/96/EC on the approximation of the laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression ignition engines for use in vehicles, and the emission of gaseous pollutants from positive ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles and amending Council Directive 88/77/EEC and the confirmation of the mandatory NO<sub>x</sub> emission standard for heavy duty engines.

<sup>7</sup> Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air.

- k) Whether any amendment is required to the Directive in view of the potential environmental benefit from a wider use of detergents in fuels.
- l) Whether any amendment is required to the Directive in relation to the potential use of metallic additives in fuels as their effect on vehicles and emissions is unclear.
- m) Whether the maximum density of diesel should be modified in view of the higher density of FAME (biodiesel) to facilitate its blending in diesel.
- n) Whether any amendment is required to the maximum oxygenate limits for petrol in view of the desirability of promoting the use of biofuels.
- o) Whether any amendment is required to the maximum vapour pressure limit for petrol in view of the desirability of promoting the use of biofuels given that a change in vapour pressure could lead to higher emissions of volatile organic compounds.
- p) Whether an amendment is desirable to the Directive to take into account the lifecycle greenhouse gas emissions from fuel and thereby provide a technology neutral incentive to de-carbonise transport fuels and develop new and better biofuels.

For each area the options considered differ. In (f) and (g) no action appears to be the only feasible option. For all the other areas, no action was considered, as were between 1 and 6 other options. These other options include voluntary action by one or more sections of industry, introduction or tightening of existing limits in the specification as well as introducing new elements into the Directive.

### **3. LEGAL ELEMENTS OF THE PROPOSAL**

- **Summary of the proposed action**

For the majority of the areas assessed it was concluded that no action was the preferred option. In a number of areas changes to the Directive will lead to a reduction in pollutant and greenhouse gas emissions and lower overall costs. The main changes proposed to Directive are:

- 1) The mandatory date for a maximum of 10ppm sulphur in diesel is confirmed as 2009. This will result in lower pollutant emissions, primarily particulate matter, as well as facilitating the introduction of other pollutant control equipment and provides certainty to industry.
- 2) The maximum poly aromatic hydrocarbon content in diesel will be reduced to 8% from 2009. This might result in a reduction in particulate matter and poly aromatic hydrocarbon emissions, however the level and date have been chosen to ensure that there will be no cost from the change proposed.
- 3) The maximum sulphur content in non-road gas-oil will be reduced from 1000ppm to 10ppm for land based uses and from 1000ppm to 300ppm for inland waterways. The change for the land based equipment will facilitate the

introduction of more advanced engines and emission control equipment as well as lowering particulate matter emissions from the existing equipment. The change for inland waterways will ensure that these engines operate at the type approved levels of pollutant emissions.

- 4) To enable a higher volume of biofuels to be used in petrol, a separate petrol blend is established with higher permitted oxygenate content (including up to 10% ethanol). For the same reason, the vapour pressure limit is increased for petrol blended with ethanol. All blends available on the market will be clearly labelled. These changes will facilitate development of the biofuel market while avoiding the possible risks of damage to existing vehicles. Higher emissions of volatile organic compounds will be controlled by collecting emissions in petrol stations for all fuels. The Commission will bring forward a proposal for mandatory introduction of filling station vapour recovery in 2007.
- 5) A mandatory monitoring of lifecycle greenhouse gases is introduced from 2009. From 2011 these emissions must be reduced by 1% per year. This will ensure that the fuel sector contributes to achieving the Community's longer term greenhouse gas reduction goals and parallels efforts on improving vehicle efficiency. It will also stimulate further development of low carbon fuels and other measures to reduce emissions from the production chain.
- 6) The permitted maximum vapour pressure for ethanol blends has been changed in order to allow the bio-fuels industry to develop in the early years. However, as base petrol could be manufactured to allow a higher content of bio-fuels and ethanol with a lower vapour pressure, oil companies have been invited to develop these blends also in Europe. When this lower vapour pressure base petrol is available in sufficient quantities, the vapour pressure limit might be reviewed.

In addition the proposed Directive clarifies the possible use of the exemption to the vapour pressure limit for arctic or severe weather to avoid misinterpretation and increase legal certainty and introduces a new review clause. The proposed Directive also brings Directive 98/70/EC up to date by amending it to eliminate redundant elements.

- **Legal basis**

This act has two legal bases (Article 95 and Article 175), since it amends one act and repeals another, both of which are based on Article 95 (ex Article 100a) and amends a third act which is based on Article 175 (ex Article 130s).

- **Subsidiarity principle**

The objectives of the proposal cannot be sufficiently achieved by the Member States because there is an EU wide market for road vehicles and an important aspect of their proper functioning is the quality of the fuel available. Action by Member States alone would mean that there would cease to be a single market in road transport fuels because of the different specifications that would be in use. This would be damaging from an economic perspective as well as reducing security of energy supply since it would make each Member State's market dependent only on supply produced to its

specification thus preventing interchange between Member States in the case of disruption to the market.

The benefits of limiting environmental and health damage from the use of road transport fuel will be greater at lower cost through a single EU fuel specification. Because air pollutants are carried across borders it is desirable to ensure that concerted action is taken to reduce emissions across the Community.

The proposal therefore complies with the subsidiarity principle.

- **Proportionality principle**

The proposal complies with the proportionality principle for the following reasons.

The proposal takes the form of a Directive which sets out the minimum fuel specification for reasons of environmental and health protection. Other technical aspects of fuel specifications are not addressed in the Directive but are left to be governed by European standards in line with better regulation principles.

The proposal does not increase the financial or administrative burden on the Community, national, regional or local governments. The requirements in relation to these bodies are not changed from that in the existing Directive.

In developing the proposals the costs and benefits have been analysed as detailed in the Impact Assessment. The actions proposed have been chosen to ensure that the benefits always outweigh the costs. In this way the overall costs to economic operators and citizens have been minimised.

- **Choice of instruments**

Proposed instrument: Directive.

Other means would not be adequate because to provide certainty fuel quality must be governed by binding legislation. This rules out all options other than a Directive or Regulation. Since it is only necessary to control the final specification of the fuel, but not how that specification is assured, a Regulation would be unnecessarily stringent.

#### **4. BUDGETARY IMPLICATION**

The proposal has no implication for the Community budget.

#### **5. ADDITIONAL INFORMATION**

- **Simplification**

The proposal provides for simplification of legislation by modifying two existing Directives (Directive 98/70/EC and Directive 1999/32/EC<sup>8</sup>). The resulting Directives

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<sup>8</sup> Note 1 and 3 above.

are shorter, clearer, avoid a current area of overlap and leave less ground for legal uncertainty.

- **Repeal of existing legislation**

The proposal will lead to the repeal of an existing redundant Directive (93/12/EEC<sup>9</sup>).

- **Review/revision/sunset clause**

The proposal includes a review clause.

- **Correlation table**

The Member States are required to communicate to the Commission the text of national provisions transposing the Directive as well as a correlation table between those provisions and this Directive.

- **European Economic Area**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

## 6. DESCRIPTION OF THE ELEMENTS

### Article 1

**Point 1.** This amends Article 2 by adding a new paragraph 5 more clearly defining the meaning of arctic or severe weather conditions.

**Point 2.** This amends Article 3. Paragraph 2, sub-paragraphs (a) and (b) are deleted since they are redundant. Sub-paragraph (c) is modified to authorise the marketing of petrol complying with Annex V.

Paragraph 3 is replaced to require all fuels meeting the specifications set out in Annex III and Annex V to be labelled.

Paragraphs 4, 5 and 6 are deleted because they are redundant as any derogations would have expired in 2003, 2005 or 2007.

Paragraph 7 is replaced to clarify the maximum content of lead for the small quantities of leaded petrol that Member States might continue to permit.

**Point 3.** This amends Article 4. In paragraph 1, sub-paragraphs (a) and (b) are deleted since they are redundant. Sub-paragraph (e) is replaced to confirm the date of 1 January 2009 as the date at which all diesel shall contain a maximum of 10mg/kg of sulphur.

Paragraph 2 and 3 are deleted because they are redundant as any derogations would have expired in 2003 and 2007. Paragraph 4 is deleted because the procedure for

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<sup>9</sup> Note 4 above.

dealing with derogations under paragraphs 2 and 3 is consequently no longer required.

Paragraph 5 is replaced to introduce tighter sulphur specifications for gas oil used in non-road mobile machinery.

Paragraph 6 is added to introduce tighter maximum permissible sulphur content in gas oils intended for use by inland waterway vessels by 31 December 2009. A further reduction is introduced by 31 December 2011 at the latest.

**Point 4.** This changes the heading and introduces a new paragraph in Article 6 requiring Member States wishing to use the derogation for summer vapour pressure in arctic or severe weather conditions subject to the approval of the Commission.

**Point 5.** This inserts two new Articles. The first Article requires Member States to oblige fuel suppliers to report on life cycle greenhouse gas emissions from the fuel they supply. The methodology of the reporting mechanism is to be established in coordination with the provisions of Directive 2003/30/EC. An additional requirement coming into force at a later date requires reported emissions to be reduced.

The second Article foresees that the Commission shall, in accordance with the procedure referred to in Article 11(2), adopt measures for the modifications of specifications concerning the blending of ethanol into petrol, and in particular, the vapour pressure.

**Point 6.** This inserts a new Article requiring the Commission to continue to develop suitable test methodology for the use of metallic additives into fuels.

**Point 7.** This replaces the original Article requiring the Commission to report on the Directive on a regular basis. The first report is foreseen by 31 December 2012 and further reports are foreseen every three years. The reports shall be accompanied by proposals where appropriate. Elements that shall inter alia be included in the report are specified in this Article.

**Point 8.** This replaces the original Article 11 (as listed in Annex III point 80 of Regulation (EC) No 1882/2003<sup>10</sup>) in order to make a reference to the regulatory procedure with scrutiny.

**Point 9.** This deletes Article 14 which is redundant.

**Point 10.** This deletes Annex I of Directive 98/70/EC which is redundant.

**Point 11.** This deletes Annex II of Directive 98/70/EC which is redundant.

**Point 12.** In Annex III the maximum vapour pressure limit for ethanol blends is increased.

**Point 13.** In Annex IV the maximum permitted Polycyclic Aromatic Hydrocarbon content in diesel is changed to 8% and footnote 3 is modified as a result of

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<sup>10</sup> OJ L 284, 31.10.2003, p. 1.

confirmation of 1 January 2009 as the date for all diesel to contain a maximum of 10mg/kg of sulphur.

**Point 14.** A new Annex V containing the specification for petrol containing up to 10% ethanol is added including an increase in maximum content of all oxygenates and an overall oxygenate content of 3.7%.

**Point 15.** A new Annex VI containing the level of permitted vapour pressure increase for different ethanol blends is added.

#### Article 2

Directive 1999/32/EC contains references to the fuel to be used by inland waterway vessels. The changes in this proposal to the fuel specification for these vessels requires a consequent change to that Directive.

#### Article 3

Earlier changes made to Directive 93/12/EEC by both Directive 1998/70/EC and Directive 1999/32/EC have left only one paragraph of Article 2 of that Directive in force. This is redundant and therefore the Directive is repealed.

#### Article 4

The date of transposition is set at 31 December 2008 at the latest.

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**amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels and amending Council Directive 1999/32/EC, as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC**

**(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 and 175(1) thereof,

Having regard to the proposal from the Commission<sup>11</sup>,

Having regard to the opinion of the European Economic and Social Committee<sup>12</sup>,

Having regard to the opinion of the Committee of the Regions<sup>13</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty<sup>14</sup>,

Whereas:

- (1) Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC<sup>15</sup> establishes minimum specifications for petrol and diesel fuels for use in road and non-road mobile applications for health and environmental reasons.
- (2) The Communication from the Commission to the Council and the European Parliament – Thematic Strategy on Air Pollution<sup>16</sup> established goals to reduce emissions of pollutant emissions until 2020. These goals flowed from an extensive analysis of costs and benefits. In particular goals are set to reduce SO<sub>2</sub> emissions by 82%, NO<sub>x</sub> emissions by 60%, volatile organic compounds (VOCs) by 51% and

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<sup>11</sup> OJ C , , p. .

<sup>12</sup> OJ C , , p. .

<sup>13</sup> OJ C , , p. .

<sup>14</sup> OJ C , , p. .

<sup>15</sup> Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels (OJ L 74, 27.3.1993, p. 81).

<sup>16</sup> Communication from the Commission to the Council and the European Parliament: Thematic strategy on air pollution - COM(2005) 446.

primary PM2.5 by 59% relative to emissions in 2000. The consequences of the amendments of Directive 98/70/EC on VOC emissions from petrol stations should be addressed in future legislation.

- (3) The Community has committed itself under the Kyoto protocol to Greenhouse Gas emission targets for the period 2008-12. Inland transport currently accounts for almost 20% of these emissions. The Community is considering what level of Greenhouse Gas savings should be sought beyond the Kyoto commitment. All sectors will need to contribute to the future goals.
- (4) One aspect of greenhouse gas emissions from transport has been tackled through the Community policy on CO<sub>2</sub> and cars. Road fuel use makes a significant contribution to overall Community greenhouse gas emissions. Monitoring and reducing fuel life cycle greenhouse gas emissions can contribute to helping the Community meet its greenhouse gas reduction goals through the decarbonisation of transport fuel.
- (5) The Community has adopted regulations limiting pollutant emissions from Light and Heavy duty Road Vehicles. The fuel specification is one of the factors that influences the ease with which such emission limits can be met.
- (6) Directive 2003/30/EC of 8 May 2003 of the European Parliament and of the Council on the promotion of the use of biofuels or other renewable fuels for transport<sup>17</sup> aims at promoting the use of biofuels within the Community. The Community Strategy on Biofuels has been further elaborated in the Communication from the Commission of 2006 - An EU Strategy for Biofuels<sup>18</sup>. While indicating the willingness to further develop biofuels and biofuel technology, the Communication makes clear that the growth of biofuels should not lead to an increase in environmental damage and emphasised the need for improving the greenhouse gas saving. The Communication also recognises the need to encourage further development of biofuel technology.
- (7) Directive 98/70/EC links a derogation for the maximum summer petrol vapour pressure to the existence of arctic or severe weather conditions. As the application of this has given rise to legal uncertainty, the conditions governing use of that derogation need to be clarified.
- (8) Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery<sup>19</sup>, sets emission limits for engines used in non-road mobile machinery. Fuel needs to be provided for the operation of this machinery that enables the proper functioning of these engines.
- (9) The combustion of road transport fuel is responsible for around 20% of Community Greenhouse Gas emissions. One approach to reducing these emissions is through

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<sup>17</sup> OJ L 123, 17.5.2003, p. 42.

<sup>18</sup> An EU Strategy for Biofuels - COM(2006) 34, 8.2.2006.

<sup>19</sup> Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery (OJ L 59, 27.2.1998, p. 1) as amended by Directive 2004/26/CE (OJ L 146, 30.4.2004, p. 1).

reducing the life-cycle greenhouse gas emissions of these fuels. This can be done in a number of ways. In view of the Community's ambition to further reduce greenhouse gas emissions and the important role that road transport emissions play, it is appropriate to work on a mechanism requiring fuel suppliers to report the life-cycle greenhouse gas emissions of the fuel that they supply and to reduce those emissions by a fixed amount per year from 2010 onwards. As one of the consequences of this directive will be an increased possibility to use biofuels the greenhouse gas reporting and reduction mechanism will be developed in co-ordination with the provisions of Directive 2003/30/EC.

- (10) As a wide range of business sectors are involved in the supply of the different fuels that will contribute to achieving the decarbonisation of transport fuel, a full stakeholder consultation will be developed in co-ordination with the provisions of Directive 2003/30/EC.
- (11) The Commission has set a goal of achieving a minimum 10% biofuel share in transport fuels by 2020. Continuing technical progress in the fields of automotive and fuel technology coupled with the continuing desire to ensure that the level of environmental and health protection is optimised necessitate periodic review of the fuel specifications based upon further studies and analyses of the impact of additives and biofuels component on pollutant emissions. Therefore, the possibility of facilitating the decarbonisation of transport fuels should be regularly reported upon.
- (12) Detergent use can contribute to keeping engines clean and thereby reducing pollutant emissions. At present no satisfactory way of testing fuel samples for their detergency properties has been established. Therefore the responsibility for informing their customers of the benefits of detergents and their use rests with suppliers of fuel and vehicles. Nevertheless, the Commission should review whether further developments enable a better approach to optimising the use and benefit from detergents.
- (13) The details concerning the blending of ethanol into petrol, in particular the limits on vapour pressure and possible alternatives for ensuring that ethanol blends do not exceed acceptable vapour pressure limits, should be reviewed on the basis of experience on the application of Directive 98/70/EC.
- (14) Blending ethanol into petrol increases the vapour pressure of the resulting fuel while the vapour pressure for petrol blends has to be controlled to limit air pollutant emissions.
- (15) Blending ethanol in petrol results in a non-linear change of the vapour pressure of the resulting fuel mixture. To ensure that the vapour pressure of the petrol resulting from blending any two legal petrol-ethanol blends remains within the legal vapour pressure limit, it is necessary to define the permitted vapour pressure waiver for such mixtures so that it corresponds to the actual increase in vapour pressure that results from adding a given percentage of ethanol to petrol.
- (16) In order to encourage the use of low-carbon fuels while respecting air pollution targets, petrol refiners should ideally make available low vapour pressure petrol in the volumes required. As this is not for the moment the case, the vapour pressure limit for ethanol blends is increased in order to allow the biofuels market to develop.

- (17) Directive 98/70/EC provides that certain measures are to be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission<sup>20</sup>.
- (18) Decision 1999/468/EC has been amended by Decision 2006/512/EC, which introduced a regulatory procedure with scrutiny for measures of general scope designed to amend non-essential elements of a basic instrument adopted in accordance with the procedure referred to in Article 251 of the Treaty, including by deleting some of those elements or by supplementing the instrument by the addition of new non-essential elements.
- (19) In the framework of setting a new mechanism for monitoring greenhouse gas emissions, power should be conferred on the Commission to establish the methodology to be used in reporting on the lifecycle greenhouse gas emissions from road transport fuel and fuel used for non-road mobile machinery. Since those measures as those for the adaptation of the permitted analytical methods provided for in Article 10 of Directive 98/70/EC, are of general scope and are designed to supplement this Directive by the addition of new non-essential elements, they should be adopted in accordance with the regulatory procedure with scrutiny provided for in Article 5a of Decision 1999/468/EC.
- (20) Directive 98/70/EC provides for a number of fuel specifications some of which are now redundant. In addition, it details a number of derogations that have expired. For reasons of clarity it is therefore appropriate to delete these elements.
- (21) Biofuel technologies are evolving. Further research is needed into all possible approaches to convert biomass into transport fuel. It is therefore appropriate that a balanced approach should be taken to the limits set in the Directive with a view to increase, if appropriate, the use of different biofuels. These include: methanol, ethanol, higher order alcohols, ethers and other oxygenates.
- (22) Directive 1999/32/EC of the Council of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Council Directive 93/12/EEC<sup>21</sup> lays down some aspects of fuel use in inland waterway transport. The delimitation between that Directive and Directive 98/70/EC requires clarification. Both Directives establish limits for the maximum sulphur content of gas-oil used in inland waterway vessels. In the interest of clarity and legal certainty, it is therefore, appropriate to adjust those Directives, so that only one act lays down this limit.
- (23) Directive 98/70/EC and Directive 99/32/EC should therefore be amended accordingly
- (24) Council Directive 93/12/EEC of 23 March 1993 relating to the sulphur content of certain liquid fuels<sup>22</sup> has been extensively amended over time and as a result no longer retains any elements of substance. It should therefore be repealed.

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<sup>19</sup> OJ L 184, 17.7.1999, p. 23. Decision as amended by Decision 2006/512/EC (OJ L200, 22.7.2006, p. 11).

<sup>21</sup> Directive 1999/32/EC of the Council of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Council Directive 93/12/EC (OJ L 121, 11.5.1999, p. 13).

<sup>22</sup> OJ L 74, 27.3.1993, p. 81, Directive as amended by Directive 1999/32/EC.

- (25) Since the objectives of ensuring a single market for fuel for road transport and non-road mobile machinery and ensuring respect of minimal levels of environmental protection from use of this fuel cannot be sufficiently achieved by the Member States and can therefore, by reason of ensuring a single market for these fuels and facilitating one for the vehicles and machinery using them, 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 Directive does not go beyond what is necessary in order to achieve those objectives.

HAVE ADOPTED THIS DIRECTIVE:

*Article 1*

Amendments to Directive 98/70/EC

Directive 98/70/EC is amended as follows:

1. In the first paragraph of Article 2, the following point 5 is added:

"5. Arctic or severe winter conditions means average winter temperatures during the period from October to April in the region or Member State concerned which are below the average for the Community."

2. Article 3 is amended as follows:

- (a) In paragraph 2, points (a) and (b) are deleted.
- (b) In paragraph 2(c) the words "or Annex V" are added at the end of the sentence.
- (c) Paragraph 3 is replaced by the following:

"3. Fuel meeting the specification set out in Annex III shall be marked in the national language or languages "Low biofuel petrol".

Fuel meeting the specification set out in Annex V shall be marked in the national language or languages "High biofuel petrol"."

- (c) Paragraphs 4, 5 and 6 are deleted.
- (d) Paragraph 7 is replaced by the following:

"7. Notwithstanding paragraph 1, Member States may continue to permit the marketing of small quantities of leaded petrol with a lead content not exceeding 0,15 g/l to a maximum of 0,5 % of total sales to be used by old vehicles of a characteristic nature and to be distributed through special interest groups."

3. Article 4 is amended as follows:

(a) Paragraph 1 is amended as follows:

- i. Points (a) and (b) are deleted.
- ii. In point (d), the words "without prejudice to the provisions of sub paragraph c)" are deleted.
- iii. Point (e) is replaced by the following:

"(e) By 31 December 2008 at the latest, Member States shall ensure that diesel fuel may be marketed on their territory only if it complies with the environmental specifications set out in Annex IV."

(b) Paragraph 2, 3 and 4 are deleted.

(c) Paragraph 5 is replaced by the following:

"5. Member States shall ensure, that gas oils intended for use by non-road mobile machinery and agricultural and forestry tractors marketed within their territory after 1 January 2008 contain less than 1000mg/kg of sulphur. By 31 December 2009 at the latest, the maximum permissible sulphur content of gas oils intended for use by non-road mobile machinery and agricultural and forestry tractors, excluding inland waterway vessels, shall be 10 mg/kg.

(d) The following paragraph 6 is added:

"6. Member States shall ensure that, by 31 December 2009 at the latest, the maximum permissible sulphur content of gas oils intended for use by inland waterway vessels is 300 mg/kg. Member States shall ensure that this is reduced to 10mg/kg by 31 December 2011 at the latest."

4. Article 6 is amended as follows:

(a) The heading is replaced by the following: "Marketing of fuels with more stringent environmental specifications and higher vapour pressure".

(b) The following paragraph 1a is inserted:

"1a. By way of derogation from Annex III, a Member State may take measures to ensure that in the whole of its territory or in specific areas, where these are subject to extremely cold average winter temperatures, a higher vapour pressure be permitted than that specified as the maximum for the summer period as set out in footnote 5 of Annex III and footnote 4 of Annex V."

(c) In paragraph 2, the term "paragraph 1" is replaced by the term "paragraph 1 or 1a."

5. The following Articles 7a and 7b are inserted :

*"Article 7a*

**Greenhouse Gas emission reductions**

1. From 1 January 2009, Member States shall require suppliers of fuels for road transport and non-road mobile machinery that are placed on the market, to monitor and report the life-cycle greenhouse gas emissions from those fuels.
2. From 1 January 2011, Member States shall require suppliers of fuels for road transport and non-road mobile machinery that are placed on the market, to reduce the emissions of greenhouse gas emissions from those fuels. The reduction shall equal an additional 1% of the emissions in 2010 per year for each calendar year up to and including 2020. The level of life-cycle greenhouse gas emissions per unit of energy reported in 2020 shall be no greater than 90% of the level reported in 2010.
3. The measures necessary for the implementation of the monitoring, reporting and verifying of the lifecycle greenhouse gas emissions based on a precise definition of the elements to take into account for the calculation of these emissions to meet the obligations in paragraphs 1 and 2 of this Article, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the procedure referred to in Article 11(2).

*Article 7b*

**Ethanol blended into petrol**

The measures relating to the details concerning the blending of ethanol into petrol and, in particular, the vapour pressure as set out in Annex VI and possible alternatives, and designed to amend non-essential elements of this Directive, inter alia by supplementing it, shall be adopted in accordance with the procedure referred to in Article 11(2)."

6. The following Article 8a is inserted:

*"Article 8a*

**Metallic additives**

The Commission shall continue to develop a suitable test methodology concerning the use of metallic additives in fuel."

7. Article 9 is replaced by the following:

*"Article 9*

**Report**

The Commission shall submit by 31 December 2012, and every three years thereafter, a report to the European Parliament and the Council accompanied, where appropriate, by a proposal.

That report shall in particular take account of the following :

- (a) the use of biofuels in the framework of this Directive and the use and evolution of automotive technology, having regard to the goal to achieve a minimum of 10% biofuel use in transport fuel by 2020, set out in the Commission's Strategic Energy Review\*, and the goal of decarbonising transport fuel;
- (b) the Community policy on CO<sub>2</sub> emissions from road transport vehicles;
- (c) limits of vapour pressure for ethanol blended into petrol;
- (d) pollutant emission limits for engines used in inland waterway applications on the basis of an examination of the pollutant and greenhouse gas impacts;
- (e) the increase of the use of detergents in fuels;
- (f) the use of metallic additives in fuels.

\* COM(2007)1, 10.1.2007."

8. Article 11 is replaced by the following:

*"Article 11*  
**Committee Procedure**

1. The Commission shall be assisted by a committee.

2. Where reference is made to this paragraph, Article 5a(1) to (4), and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof."

9. Article 14 is deleted.

10. Annex I is deleted.

11. Annex II is deleted.

12. Annex III is amended as follows:

Footnote 5 is modified by adding the following text: "Where fuel contains ethanol, the maximum summer vapour pressure may exceed 60kPa by the amount shown in the table in Annex VI."

13. Annex IV is amended as follows:

- (a) in the row for "Polycyclic Aromatic Hydrocarbons", the entry in the column "Maximum" is replaced by "8".

(b) Footnote 3 is replaced by the following:

"(3) Until 31 December 2008, diesel fuel with a maximum sulphur content of 10mg/kg shall be marketed and available on an appropriately balanced geographical basis within the territory of a Member State. From 1 January 2009, all diesel fuels marketed within the territory of a Member State shall have a maximum sulphur content of 10mg/kg."

14. Annex V as set out in the Annex to this Directive is added.
15. Annex VI as set out in the Annex to this Directive is added.

#### *Article 2*

#### **Amendments to Directive 1999/32/EC**

Article 4b of Directive 1999/32/EC is amended as follows:

- (a) In paragraph 1, point (a) is deleted.
- (b) In paragraph 2, point (b) is deleted.
- (c) The following paragraph 2a is inserted:

"2a. Where inland waterway vessels that carry a certificate proving conformity with the International Convention for the Safety of Life at Sea, 1974 as amended, are at sea, they may use fuel whose specification is laid down in this Directive.

Where those vessels are not at sea, they shall use fuel as specified in Directive 98/70/EC."

#### *Article 3*

#### **Repeal**

Directive 93/12/EEC is repealed.

#### *Article 4*

#### **Transposition**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [31 December 2008] at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 5*  
**Entry into force**

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

*Article 6*  
**Addressees**

This Directive is addressed to the Member States.

Done at Brussels, [...]

*For the European Parliament*  
*The President*

*For the Council*  
*The President*

**ANNEX**  
**ANNEX V**

**ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR  
VEHICLES EQUIPPED WITH POSITIVE-IGNITION ENGINES**

Type: **High biofuel Petrol**

Parameter (1)	Unit	Limits (2)	
		Minimum	Maximum
Research octane number		95	—
Motor octane number		85	—
Vapour pressure, summer period (3)	kPa	—	60,0 (4)
Distillation:			
— percentage evaporated at 100 °C	% v/v	46,0	—
— percentage evaporated at 150 °C	% v/v	75,0	—
Hydrocarbon analysis:			
— olefins	% v/v	—	18,0
— aromatics	% v/v	—	35,0
— benzene	% v/v	—	1,0
Oxygen content	% m/m	—	3,7
Oxygenates			
— Methanol			3
— Ethanol (stabilising agents may be necessary)	% v/v		10
— Iso-propyl alcohol	% v/v	—	12
— Tert-butyl alcohol	% v/v	—	15
— Iso-butyl alcohol	% v/v	—	15
— Ethers containing five or more carbon atoms per molecule	% v/v	—	22
— Other oxygenates(5)	% v/v	—	15
Sulphur content	mg/kg	—	10
Lead content	g/l	—	0,005

(1) Test methods shall be those specified in EN 228:1999. Member States may adopt the analytical method specified in replacement EN 228:1999 standard if it can be shown to give at least the same accuracy and at least the same level of precision as the analytical method it replaces.

(2) The values quoted in the specification are 'true values'. In the establishment of their limit values, the terms of ISO 4259 'Petroleum products - Determination and application of precision data in relation to methods of test' have been applied and in fixing a minimum value, a minimum difference of 2R above zero has been taken into account (R = reproducibility). The results of individual measurements shall be interpreted on the basis of the criteria described in ISO 4259 (published in 1995).

(3) The summer period shall begin no later than 1 May and shall not end before 30 September. For Member States with arctic or severe winter conditions, the summer period shall begin no later than 1 June and shall not end before 31 August.

(4) For Member States with arctic or severe winter conditions the maximum vapour pressure shall not exceed 70.0 kPa. Where fuel contains ethanol, the maximum permitted summer vapour pressure may exceed 60kPa by the amount shown in the table in annex VI

(5) Other mono-alcohols and ethers with a final boiling point no higher than that stated in EN 228:1999.

**ANNEX VI**

**VAPOUR PRESSURE WAIVER PERMITTED FOR PETROL CONTAINING  
ETHANOL**

Ethanol content (%v/v)	Vapour pressure waiver permitted (kPa)
0	0
1	3.65
2	5.95
3	7.20
4	7.80
5	8.0
6	8.0
7	7.94
8	7.88
9	7.82
10	7.76

The permitted vapour pressure waiver for intermediate ethanol content between the values listed, shall be determined by a straight line extrapolation between the ethanol content immediately above and that immediately below the intermediate value.