

Proposal for a Directive of the European Parliament and of the Council on the quality of petrol and diesel fuels and amending Directive 98/70/EC

(2001/C 213 E/13)

(Text with EEA relevance)

COM(2001) 241 final — 2001/0107(COD)

(Submitted by the Commission on 11 May 2001)

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 Commission,

Having regard to the opinion of the Economic and Social Committee,

Having regard to the opinion of the Committee of the Regions,

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

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/EC ⁽¹⁾, lays down the environmental specifications for market fuels;
- (2) Article 95 of the Treaty foresees that Commission proposals aimed at the establishment and functioning of the internal market and concerning, *inter alia*, health and environmental protection, shall take as a base a high level of environmental protection;
- (3) A revision of Directive 98/70/EC is foreseen in respect of the requirements of Community air quality standards and related objectives and in order to incorporate additional specifications to complement those mandatory specifications already laid down in Annex III and Annex IV of the Directive;
- (4) A reduction of the sulphur content of petrol and diesel has been identified as a means of contributing to the achievement of those objectives;
- (5) The adverse effect of sulphur in petrol and diesel on the effectiveness of catalytic exhaust gas after-treatment technologies is well established;
- (6) Road vehicles are increasingly reliant upon catalytic after-treatment devices to attain the emissions limits mandated in Council Directive 70/220/EEC ⁽²⁾ relating to measures to be taken against air pollution by gases from positive-ignition engines of motor vehicles and Council Directive 88/77/EEC ⁽³⁾ relating to the measures to be taken against the emission of gaseous pollutants from diesel engines for use in vehicles. Accordingly a reduction in the sulphur content of petrol and diesel is likely to have a larger impact on exhaust emissions than changes to the other fuel parameters;
- (7) The introduction of lower sulphur fuels will improve the fuel efficiency of new, emerging vehicle technologies and lead to significant reductions in emissions of conventional air pollutants when used in existing vehicles. These benefits must be balanced against the increased emissions of CO₂ associated with the production of zero sulphur petrol and diesel;
- (8) It is therefore appropriate to lay down measures ensuring the introduction and availability of zero sulphur fuels. In this regard fiscal incentives have been shown to be effective in promoting the introduction of higher quality fuels according to national needs and priorities;
- (9) The availability of zero sulphur fuels resulting from this Directive, will provide a basis for the automobile manufacturers to make significant additional commitments towards the attainment of the Community's target of 120 g/km for the average CO₂ emissions of the new car fleet when the current environmental commitments with the automobile manufacturers are reviewed in 2003;
- (10) It is necessary to ensure that sufficient quantities of zero sulphur petrol and diesel fuels are available from 1 January 2005 on a balanced geographic basis in order to permit the free circulation of new vehicles requiring these fuels whilst ensuring that CO₂ emissions reductions from new vehicles outweigh those additional emissions associated with the production of zero sulphur fuels;

⁽¹⁾ OJ L 350, 28.12.1998, p. 58, as last amended by Commission Directive 2000/71/EC, (OJ L 287, 14.11.2000, p. 46).

⁽²⁾ OJ L 76, 6.4.1970, p. 1. Directive as last amended by Directive 2001/1/EC of the European Parliament and of the Council (OJ L 35, 6.2.2001, p. 34).

⁽³⁾ OJ L 36, 9.2.1988, p. 33. Directive as last amended by Directive 1999/96/EC of the European Parliament and of the Council (OJ L 44, 16.2.2000, p. 1).

- (11) The complete penetration of zero sulphur fuels should be provided for from 1 January 2011 in order to allow the fuel manufacturing industry enough time to make the necessary investments to adapt its production plans. In addition, the full introduction of zero sulphur fuels from 2011 will reduce emissions of conventional pollutants from the existing fleet of vehicles leading to an improvement in air quality whilst ensuring that there is no overall increase in greenhouse gas emissions;
- (12) The emissions from engines installed in non-road mobile machinery and agricultural tractors must comply with the limits stipulated in Directive 97/68/EC of the European Parliament and of the Council ⁽¹⁾ relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery and of Council Directive 74/150/EEC ⁽²⁾ relating to the type-approval of wheeled agricultural or forestry tractors, respectively. Attainment of these emissions limits will become increasingly dependent upon the quality of the gas oils used by these engines and so it is important to include a definition for such fuels in Directive 98/70/EC;
- (13) It is appropriate to provide for a uniform system of fuel quality monitoring and reporting in order to assess compliance with the mandated environmental fuel quality specifications;
- (14) A procedure should be laid down for updating the measurement methods used to ensure compliance with the mandated fuel quality specifications;
- (15) The provisions of Directive 98/70/EC should be amended to take account of Council Decision 1999/468/EC of 28 June 1999 laying down procedures for the exercise of implementing powers conferred upon the Commission ⁽³⁾;
- (16) Provision should be made for a review of the provisions in Directive 98/70/EC in order to take account of new Community air quality legislation and related environmental objectives, the development of new pollution abatement technologies and to confirm, or otherwise, the date for full introduction of zero sulphur diesel in order to ensure that there is no overall increase in emissions of greenhouse gases;
- (17) The Member States should lay down rules on penalties applicable to infringements of the provisions of Directive 98/70/EC and ensure that they are implemented. Those penalties must be effective, proportionate and dissuasive;
- (18) Directive 98/70/EC should therefore be amended accordingly,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Directive 98/70/EC is amended as follows:

1. Article 2 is amended as follows:

(a) The second paragraph of point 2 is deleted.

(b) The following point 3 is added.

'3. "gas oils intended for use by non-road mobile machinery and agricultural tractors' means":

— any petroleum derived liquid, falling within CN codes 2710 00 66 to 2710 00 68, intended for use in engines referred to in Directives 97/68/EC and 74/150/EC as amended respectively, and where

— less than 65 % by volume (including losses) distils at 250 °C by the ASTM D 86 method (or where distillation percentage cannot be determined by the ASTM D 86 method), and where

— 85 % or more by volume (including losses) distils at 350 °C by the ASTM D 86 method.'

2. Article 3 is amended as follows:

(a) The following sub-paragraphs (d) and (e) are added to paragraph 2.

'(d) Without prejudice to the provisions of subparagraph (c), Member States shall take all necessary measures to ensure that, by no later than 1 January 2005, unleaded petrol with a maximum sulphur content of 10 mg/kg (ppm) is marketed in their territories. Member States shall ensure that such unleaded petrol is available on a balanced geographic basis and complies in all other respects with the specifications in Annex III.

(e) By no later than 1 January 2011, Member States shall ensure that unleaded petrol can be marketed in their territory only if it complies with the environmental specification set out in Annex III except for the sulphur content which shall be less than 10 mg/kg (ppm).'

⁽¹⁾ OJ L 59, 27.2.1998, p. 1.

⁽²⁾ OJ L 84, 28.3.1974, p. 10. Directive as last amended by Directive 2000/25/EC of the European Parliament and of the Council (OJ L 173, 12.7.2000, p. 1).

⁽³⁾ OJ L 184, 17.7.1999, p. 1.

3. Article 4 is amended as follows:

(a) The following sub-paragraphs (d) and (e) are added to paragraph 1.

'(d) Without prejudice to the provisions of subparagraph (c), Member States shall take all necessary measures to ensure that, by no later than 1 January 2005, diesel fuel with a maximum sulphur content of 10 mg/kg (ppm) is marketed in their territories. Member States shall ensure that such diesel fuel is available on a balanced geographic basis and complies in all other respects with the specifications in Annex IV.

(e) By no later than 1 January 2011, Member States shall ensure, subject to the provisions of Article 9.1(a), that diesel fuel can be marketed in their territory only if it complies with the environmental specification set out in Annex IV except for the sulphur content which shall be less than 10 mg/kg (ppm).'

(b) The following new paragraph 5 is added.

'5. Member States shall ensure that gas oils marketed in their territory and intended for use by non-road mobile machinery and agricultural tractors contain less than 2 000 mg/kg (ppm) of sulphur. By 1 January 2008 at the latest the maximum permissible sulphur content of gas oils intended for use by non-road mobile machinery and agricultural tractors shall be 1 000 mg/kg (ppm). However, Member States may require a lower limit of 500 mg/kg (ppm) or the same sulphur content as for diesel fuels as stipulated in this Directive.'

4. Article 8 is replaced by the following.

'Article 8

1. Member States shall monitor compliance with the requirements of Articles 3 and 4, in respect of petrol and diesel fuels, on the basis of the analytical methods referred to in European Norms EN 228 and EN 590 respectively.

2. The Member States shall establish a fuel quality monitoring system which must comply, as a minimum, with the requirements of EN ... (number of new standard to be inserted once published). The use of an alternative fuel quality monitoring system may be permitted so long as Member States are able to demonstrate that such a system provides results of comparable quality.

3. Each year by 30 June the Member States shall submit a summary of national fuel quality data for the preceding calendar year. The first summary shall be submitted by 30 June 2002. The format for this summary shall follow that described in EN ... (number of new standard to be inserted once published). In addition, Member States shall report the

total volumes of petrol and diesel fuel marketed in their territories and the volumes of unleaded petrol and diesel marketed which contain less than 10 mg/kg (ppm) of sulphur. Furthermore, the Member States shall report the extent geographically to which petrol and diesel fuels containing less than 10 mg/kg (ppm) of sulphur are marketed within their territory.'

5. Article 9 is amended as follows:

(a) Paragraph 1 is replaced by the following.

'1. By 31 December 2006 at the latest the Commission shall review the fuel specifications of Directive 98/70/EC and propose amendments, if appropriate, in keeping with current and future requirements of Community air quality legislation and related objectives. In particular, the Commission shall consider:

(a) The necessity of any change to the end date for the full introduction of diesel fuel, with a maximum sulphur content of 10 mg/kg (ppm), in order to ensure that there is no overall increase in greenhouse gas emissions. This analysis shall consider developments in refinery processing technologies, expected fuel economy improvements of vehicles and the rate that new fuel-efficient technologies are introduced into the vehicle fleet.

(b) The implications of new Community legislation setting air quality standards for substances such as Polycyclic Aromatic Hydrocarbons.

(c) The outcome of the review described in Article 10 of Directive 99/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide, oxides of nitrogen, particulate matter and lead in ambient air (*).

(d) The outcome of the review of the various commitments with the Japanese (**), Korean (***) and European (****) automobile manufacturers to reduce the fuel consumption and carbon dioxide emissions of new passenger cars.

(e) The outcome of the review required by Article 7 of Directive 99/96/EC and the confirmation of the mandatory NO_x emission standard for heavy duty engines.

(f) The effective functioning of new pollution abatement technologies and developments affecting international fuel markets.

(*) OJ L 163, 29.6.1999, p. 41.

(**) OJ L 100, 20.4.2000, p. 57.

(***) OJ L 100, 20.4.2000, p. 55.

(****) OJ L 40, 13.2.1999, p. 49.'

(b) Paragraph 2 is deleted.

6. The following Article 9a is inserted:

Article 9a

Member States shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties determined must be effective, proportionate and dissuasive.'

7. In Article 10 the first paragraph is replaced by the following:

'The measurement methods referred to in Annexes I, II, III and IV of this Directive shall be those analytical methods set out in European Norms EN 228 and EN 590. Any change to a test method in either EN 228 or EN 590 shall only be binding on the Member States if the new method gives at least the same accuracy and at least the same level of precision as the test method it replaces. In the event that additional adaptation of these methods to technical progress is necessary, amendments may be adopted by the Commission in accordance with the procedure mentioned in Article 11, paragraph 2.'

8. Article 11 is replaced by the following:

Article 11

1. The Commission shall be assisted by the Committee established in accordance with Article 12 of Directive 96/62/EC (*), composed of representatives of the Member States and chaired by a representative of the Commission.

2. Where reference is made to this paragraph, the regulatory procedure laid down in Article 5 of Decision

1999/468/EC shall apply in accordance with Articles 7 and 8 thereof.

3. The period provided for in Article 5 of Decision 1999/468/EC shall be three months.

_____ (*) OJ L 296, 21.11.1996, p. 55.'

9. The Annexes I to IV are replaced by the text in the Annex to this Directive.

Article 2

Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive by 30 June 2003 at the latest. They shall forthwith inform the Commission thereof.

Member States shall apply these measures from 1 January 2004.

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.

Article 3

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

Article 4

This Directive is addressed to the Member States.

ANNEX

‘ANNEX I

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

Type: **Petrol**

Parameter ⁽¹⁾	Unit	Limits ⁽²⁾	
		Minimum	Maximum
Research octane number		95 ⁽³⁾	—
Motor octane number		85	—
Vapour pressure, summer period ⁽⁴⁾	kPa	—	60,0 ⁽⁵⁾
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 ⁽⁶⁾
— aromatics	% v/v	—	42,0
— benzene	% v/v	—	1,0
Oxygen content	% m/m	—	2,7
Oxygenates			
— Methanol (stabilising agents must be added)	% v/v	—	3
— Ethanol (stabilising agents may be necessary)	% v/v	—	5
— Iso-propyl alcohol	% v/v	—	10
— Tert-butyl alcohol	% v/v	—	7
— Iso-butyl alcohol	% v/v	—	10
— Ethers containing 5 or more carbon atoms per molecule	% v/v	—	15
— Other oxygenates ⁽⁷⁾	% v/v	—	10
Sulphur content	mg/kg	—	150
Lead content	g/l	—	0,005

⁽¹⁾ Test methods shall be those specified in EN 228. Any change to a test method in EN 228 shall only be binding on the Member States if the new method gives at least the same accuracy and at least the same level of precision as the test 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 2 R 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⁾ Unleaded Regular grade petrol may be marketed with a minimum motor octane number (MON) of 81 and a minimum research octane number (RON) of 91.

⁽⁴⁾ The summer period shall begin no later than 1 May and shall not end before 30 September. For Member States with arctic conditions the summer period shall begin no later than 1 June and shall not end before 31 August.

⁽⁵⁾ For Member States with arctic conditions the vapour pressure shall not exceed 70 kPa during the summer period.

⁽⁶⁾ Unleaded Regular grade petrol may be marketed with a maximum olefin content of 21 % v/v.

⁽⁷⁾ Other mono-alcohols and ethers with a final boiling point no higher than that stated in EN 228.

ANNEX II

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR VEHICLES EQUIPPED WITH COMPRESSION IGNITION ENGINES

Type: **Diesel fuel**

Parameter ⁽¹⁾	Unit	Limits ⁽²⁾	
		Minimum	Maximum
Cetane number		51,0	—
Density at 15 °C	kg/m ³	—	845
Distillation:			
— 95 % (v/v) recovered at	°C	—	360
Polycyclic Aromatic Hydrocarbons	% m/m	—	11
Sulphur content	mg/kg	—	350

⁽¹⁾ Test methods shall be those specified in EN 590. Any change to a test method in EN 590 shall only be binding on the Member States if the new method gives at least the same accuracy and at least the same level of precision as the test 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 2 R 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).

ANNEX III

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

Type: **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	—	2,7
Oxygenates			
— Methanol (stabilising agents must be added)	% v/v	—	3
— Ethanol (stabilising agents may be necessary)	% v/v	—	5
— Iso-propyl alcohol	% v/v	—	10
— Tert-butyl alcohol	% v/v	—	7
— Iso-butyl alcohol	% v/v	—	10
— Ethers containing 5 or more carbon atoms per molecule	% v/v	—	15
— Other oxygenates ⁽⁵⁾	% v/v	—	10
Sulphur content	mg/kg	—	50
	mg/kg	—	10 ⁽⁶⁾
Lead content	g/l	—	0,005

⁽¹⁾ Test methods shall be those specified in EN 228. Any change to a test method in EN 228 shall only be binding on the Member States if the new method gives at least the same accuracy and at least the same level of precision as the test 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 2 R 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 conditions the summer period shall begin no later than 1 June and shall not end before 31 August.

⁽⁴⁾ For Member States with arctic conditions the vapour pressure shall not exceed 70 kPa during the summer period.

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

⁽⁶⁾ In accordance with Article 3.2, by no later than 1 January 2005 unleaded petrol with a maximum sulphur content of 10 mg/kg must be marketed and be available on a broad geographic basis within the territory of a Member State. By 1 January 2011 all unleaded petrol marketed in the territory of a Member State must have a sulphur content of less than 10 mg/kg.

ANNEX IV

ENVIRONMENTAL SPECIFICATIONS FOR MARKET FUELS TO BE USED FOR VEHICLES EQUIPPED WITH COMPRESSION IGNITION ENGINES

Type: Diesel fuel

Parameter ⁽¹⁾	Unit	Limits ⁽²⁾	
		Minimum	Maximum
Cetane number		51,0	—
Density at 15 °C	kg/m ³	—	845
Distillation:			
— 95 % (v/v) recovered at	°C	—	360
Polycyclic Aromatic Hydrocarbons	% m/m	—	11
Sulphur content	mg/kg	—	50
	mg/kg	—	10 ⁽³⁾

⁽¹⁾ Test methods shall be those specified in EN 590. Any change to a test method in EN 590 shall only be binding on the Member States if the new method gives at least the same accuracy and at least the same level of precision as the test 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 2 R 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⁾ In accordance with Article 4.1, by no later than 1 January 2005 diesel fuel with a maximum sulphur content of 10 mg/kg must be marketed and be available on a broad geographic basis within the territory of a Member State. In addition, and subject to the review in Article 9.1, by 1 January 2011 all diesel fuel marketed in the territory of a Member State must have a sulphur content of less than 10 mg/kg.'