



Manual of European Environmental Policy

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Sulphur content of certain liquid fuels

Formal reference	
93/12/EEC (OJ L74 27.3.93)	Directive relating to the sulphur content of certain liquid fuels
Proposed 10.6.91 – COM(91)154	
Legal base	Article 115 TFEU (originally Article 100 EEC Treaty)
1999/32/EC (OJ L121 11.5.99)	Amendment
Proposed 21.6.97 – COM(97)88	
2005/33/EC (OJ L 191 22.7.2005)	Amendment
Legal base	Article 192 TFEU (originally Article 130s EEC Treaty)
Binding dates (1999/32)	
Formal compliance	1 July 2000
Limits to be met (heavy fuel oil)	1 January 2003
Limits to be met (gas oil)	1 July 2000, 1 January 2008
Commission to review and report to Parliament and Council	31 December 2006
Binding dates (2005/33)	
Entry into force	11 August 2005
Formal compliance	11 August 2006
Limits to be met (marine fuels)	
- Baltic Sea area	11 August 2006
- North Sea	12 months after entry into force of the IMO designations, according to established procedures, or 11 August 2007.
- Any other sea, including ports that the IMO designates as SO _x Emission Control Area	12 months after the date of entry into force of the designation. Note: Directives 75/716/EEC and 87/219/EEC were repealed by Directive 93/12/EEC on 1.10.94. Directive 93/12/EEC was repealed by Directive 98/70/EC (see section on the quality of petrol and diesel). The amending Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels was amended by Directive 2005/33/EC, Regulation (EC) No 219/2009 and Directive 2009/30/EC (see section on the quality of petrol and diesel).

Purpose of the Directives

The original Directive 75/716/EEC set limits on the sulphur content of diesel fuel and other gas oils, both to eliminate barriers to trade resulting from different limits in different countries, and also to reduce air pollution by sulphur dioxide.

‘Gas oil’ is a term used to describe certain medium distillates intended for use as fuel, and includes ‘diesel fuel’ which is used in certain motor vehicles. Gas oil differs from ‘fuel oil’ which is a term for heavier oil used for industrial heating and in power stations. Gas oil is also sometimes referred to as ‘light fuel oil’. Directive 1999/32/EC set tighter limits on the sulphur content of gas oil and introduced a limit on the sulphur content of heavy fuel oil, which was not covered by the original Directive. In August 2005, an amending Directive (2005/33/EC) to Directive 1999/32/EC was published. The so-called ‘Marine Fuel Sulphur Directive’ extends the coverage of the Directive 1999/32/EC to marine fuels other than marine gas oils by setting maximum sulphur content for those fuels.

Summary of the Directives

Directive 93/12/EEC repealed and replaced Directive 75/716/EEC, including its amending Directive 87/219/EEC. A limit of 0.2 per cent sulphur by weight for gas oils came into effect from 1 October 1994. This is applicable to all gas oils apart from those which are contained in the fuel tanks of vessels, aircraft or motor vehicles which cross a frontier into the Community, or are intended for processing prior to final combustion. A more stringent limit of 0.05 per cent sulphur by weight is applied solely to diesel fuels from 1 October 1996. Member States are obliged to take ‘all necessary measures to check by sampling’ the sulphur content of gas oils. The Directive also imposes a requirement on the Commission, with a due date of 1 January 1994, to submit proposals to the Council for a lower limit for the sulphur content of gas oil to come into effect by 1 October 1999, and new limit values for aviation kerosene. Directive 93/12/EEC was repealed by Directive [2009/30/EC](#) on the quality of petrol and diesel.

Directive 1999/32/EC maintained the 0.2 per cent limit for gas oil until 1 January 2008 when it is to be reduced to 0.1 per cent by mass. The Directive sets the limit on the sulphur content of heavy fuel oil to 1 per cent by mass from 1 January 2003. In both cases derogations are allowed if a higher sulphur content (up to 0.2 and 3 per cent, respectively) does not result in critical loads being exceeded in any Member State. There are also derogations for some marine uses of gas oil and for the use of heavy fuel oil in combustion plants, where the emissions of sulphur dioxide do not exceed certain levels. In this Directive, the definition of gas oils excludes all motor diesels which are covered by Directive 98/70/EC (see section on the [quality of petrol and diesel](#)).

Directive 2005/33/EC amends Directive 1999/32/EC. It includes a requirement for the maximum sulphur content for marine fuels equal to 1.5 per cent by mass. This limit concerns marine fuels used in SO_x Emission Control Areas (in accordance with the IMO MARPOL agreement) and by passenger ships. Member States are responsible for the enforcement of these rules on all ships flying their flag and all ships harboured in their ports. With effect from 1 January 2010, Member States are required to ban the use of marine fuels, including marine gas oils, which exceed 0.1 per cent sulphur emission by mass in ships at berth¹ in Community ports. These limits are not mandatory for vessels

that trial ship emission abatement technologies approved by Member States and following criteria developed by the European Commission.

Member States are responsible for sampling and inspecting log books and bunker delivery notes to check compliance with the requirements of the Directive. Member States are required to submit a short report on the sulphur content of the liquid fuels falling within the scope of this Directive and used within their territory during the preceding calendar year to the European Commission every year by 30 June.

Development of the Directives

The roots of Community control over the sulphur content of gas oil can be traced back to 1969, when the Commission instituted a general programme of measures to eliminate technical or non-tariff barriers to trade. As a result of a study of the difficulties encountered by the oil industry in adjusting to the different requirements of different Member States, the Commission incorporated 'petroleum oils used for heating or for the propulsion of motor vehicles' into the general programme in May 1973. This step preceded the first action programme on the environment of November 1973 which, however, mentioned the general programme as a possible instrument of environmental policy and, by way of example, referred to a limit on the sulphur content of gas oil. By the time such a measure was first formally proposed, it was therefore seen both as an environmental protection tool and as a move to facilitate trade. This approach was realized in Directive 75/716/EEC and remains in place in Directive 93/12/EEC. From a trade point of view, what matters is that controls are the same in the different Member States, while the contribution of the Community's environmental policy has been to ensure that the limits imposed are as strict as reasonably possible.

A spur to action on the sulphur content of gas oil was provided by information supplied in 1973 by the Dutch, French, Italian and German governments of proposals for further legislation concerned with fuels. This led to the adoption in 1975 of Directive 75/716/EEC. The Directive allowed only two grades of gas oil to be used in the Community: Type A, having the lower sulphur content, which could be used without restriction; and Type B, which could only be used in certain zones designated by Member States. Sulphur content limits (by weight) were set at 0.5 per cent for Type A and 0.8 per cent for Type B from October 1976, reducing to 0.3 per cent and 0.5 per cent respectively in October 1980.

In proposing an amending Directive in 1985 the main points made by the Commission were: that gas oil amounted to only 6 per cent of total sulphur emissions in the Community; that the average sulphur content was already 0.34 per cent, so that the lower limit would cause few problems to industry and the consumer; and that as costs at the refinery increased steeply only when the sulphur content was reduced below 0.2 per cent, there was no justification for going below that figure. The resulting amendments, in Directive 87/219/EEC, dropped the distinction between Type A and Type B gas oil and set a maximum sulphur content of 0.3 per cent. Member States were permitted to set more stringent limits, but not less than 0.2 per cent, in order to meet air quality standards in accordance with Directive 80/779/EEC (see section on [historical legislation - smoke and sulphur dioxide](#)), or to prevent damage to the environment or natural heritage.

Directive 87/219/EEC foreshadowed the eventual establishment of a single limit value for the sulphur content of gas oil. In presenting a proposal to this effect in (COM(91)154), the Commission drew attention to the fact that the lower 0.2 per cent sulphur limit already applied throughout Belgium, Denmark, Germany, Luxembourg and the Netherlands. The Commission saw the fact that different standards were applied elsewhere as a barrier to trade – a barrier that was removed by Directive 93/12/EEC in applying the 0.2 per cent sulphur limit across the Community. Since 1980 there had also been a significant increase in the use of gas oil for diesel fuel, and this trend was expected to continue. The Commission pointed out that reductions in emissions from diesel-engined cars required by Directive 91/441/EEC (see section on [emissions from vehicles](#)) would require a lower sulphur content in diesel fuel, to enable the use of catalytic converters in diesel cars. This was reflected in Directive 93/12/EEC through a more stringent sulphur limit applicable to diesel fuels from 1 October 1996. Further measures on the quality of diesel fuel were introduced by Directive 98/70/EC which amends Directive 93/12/EC.

In March 1997 the Commission adopted a proposal (COM(97)88) for a Directive relating to the sulphur content of certain liquid fuels, which included proposed amendments to Directive 93/12/EEC. This became part of the Commission's strategy to combat acidification and aimed to reduce emissions of sulphur dioxide which result from the combustion of these fuels. The proposal strengthened the requirement of Directive 93/12/EEC that Member States prohibit the marketing of gas oil the sulphur content of which exceeds 0.2 per cent by weight, by requiring that from 1999 Member States take all necessary steps to ensure that this is the case. In addition, for heavy fuel oil the proposal imposed a maximum sulphur content of 1 per cent by weight from 2000. Exemptions were proposed for combustion plants where emissions were not problematic and for gas oil used for marine purposes in Greece and the Canary Islands. After the European Parliament's first reading an amended proposal was published in July 1998. A Common Position ([OJ C364 25.11.98](#)) was provisionally reached by the Council in June 1998 which agreed with the maximum levels of sulphur content given in the original proposal, but increased the time period for compliance to 2000 and 2003, respectively. The Common Position also added a second stage for gas oil as it proposed that the maximum limit should be halved to 0.1 per cent by weight by 2008. Directive 1999/32/EC was adopted in April 1999.

In November 2002, the European Commission published a strategy to 'reduce atmospheric emissions from seagoing ships' ([COM\(2002\)595](#) Volume I), which was accompanied by a proposal to expand the scope of Directive 1999/32/EC ([COM\(2002\)595](#) Volume II). This was in response to growing awareness that ships were fast becoming the biggest source of air pollution in the EU. With respect to marine fuel, Directive 1999/32/EC covered marine gas oils, but not heavy fuel oil (HFO). The strategy suggested that this approach had resulted in an increase in the use of HFO, which had in turn led to an increase in emissions of sulphur oxides. The proposed amendment would have, therefore, expanded the scope of Directive 1999/32/EC by setting upper limits on the levels of sulphur allowable in all marine fuels used in EU waters. The first reading in the European Parliament resulted in a large number of proposed amendments to the proposed Directive. Thus the Commission considered it appropriate to reissue an amended proposal in 2003 which included some of the proposed amendments ([COM\(2003\)476](#)). Some amendments which sought to strengthen the proposal considerably (principally through tighter fuel sulphur limits in a second phase) were, however, excluded from the amended proposal. The Commission believed it to be

premature to define tighter limits. In its second reading the Parliament negotiated a stronger review in 2008, requiring the Commission to consider a second-phase limit of 0.5 per cent, depending on progress at IMO negotiations (see ‘further developments’ below). It also tightened requirements on the availability of low-sulphur fuel and the use of abatement technology, and introduced an incentive for ships in port to plug in to clean shore-side electricity. Finally, in July 2005, Directive 2005/33/EC on marine sulphur emissions was adopted². In May 2006, the Commission adopted a Recommendation ([2006/339/EC](#)) on the promotion of shore-side electricity for use by ships at berth in Community ports.

Implementation of the Directives

Directive 1999/32/EC was transposed in all Member States. See national [execution measures](#).

The amending Directive 2005/33/EC was transposed in all Member States. See national [execution measures](#).

The Commission has published frequently answered questions in relation to the implementation of these Directives³.

In December 2009, the Commission published a recommendation ([2009/1020/EU](#)) on the enforcement of Directive 2005/30/EC. The document came out of the concern that a very low number of ships were certified as complying with a new EU limit on the sulphur content of fuels used while at berth in European ports. This limit was supposed to enter into force in January 2010. The Commission found in its report that some ships had not yet had completed the modifications and the vast majority were not certified.

In July 2011 the Commission reported on the implementation of the Directive ([COM\(2011\)441](#)). The deadline for transposition was 11 August 2006. Only three Member States had then reported national transposition measures. Seven Member States notified transposition a year and a half later. Finally the latest transposition notification was received in April 2010. Following the delays in transposition, the Commission initiated 16 infringement procedures which have now all been closed. Directive 1999/32/EC contains a requirement for Member States to report annually to the Commission. 26 reports were received for the first reporting year (2007), then 25 reports in 2008 and 26 reports in 2009. The European Maritime Safety Agency assisted the Commission in analysing the reports. It found that there was a lot of variation in the structure and content with significant information gaps in some reports. Sampling was also not consistent between Member States - the frequency and the techniques cannot give a reliable picture of implementation. In addition the report looked at progress made by the International Maritime Organisation since the 2008 revision of the MARPOL Agreement and its benefits. It found that the benefits have been estimated to reach between €15 to €34 billion per annum in 2020. The costs of implementation have been estimated to range from €2.6 to €11 billion. It recommended remedying to the discrepancies between the MARPOL Agreement and existing EU legislation by reviewing the Directive.

Enforcement and court cases

The following cases have been concluded in the European Court of Justice concerning Directive 1999/32/EC:

Case [C-394/09](#) 23.09.2003, was brought against the United Kingdom by the European Commission supported by Spain for failure to transpose the Directive in Gibraltar. The Court dismissed the application.

Case [C-90/04](#) 23.2.2004, was a judgement against Austria for failure to meet its reporting obligations under Directive 1999/32/EC.

Case [C-86/03](#) 15.12.2005, was brought by Greece which sought the annulment of Commission Decision 2003/3/EC on a request from Greece for authorization to use heavy fuel oils with a maximum sulphur content of 3 per cent by mass in part of its territory ([OJ 2003 L 4, p. 16](#)) ('the contested decision'). As an alternative it sought a declaration, on the basis of Article 241 EC (Article 277 TFEU), that Council Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels was inapplicable. The European Court however dismissed the action.

Related legislation

The following measures are related to this Directive:

- The measures in Directives 1999/32/EC and 2005/33/EC complement Member States' national measures to comply with National Emission Ceilings Directive [2001/81/EC](#).
- Directive [2009/30/EC](#) amending Directive 1998/70/EC on fuel quality of petrol and diesel sets sulphur content limits for petrol and diesel fuels not covered by Directives 1999/32/EC and 2005/33/EC, but it includes some aspects of fuel use in inland waterway transport which overlap with Directive 2005/33/EC. The delimitation between that Directive and Directive 1998/70/EC requires clarification.

References

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4 International Maritime Organisation (2005) *Prevention of Air Pollution from Ships – Report of the Working Group*, Commission webpage,
http://ec.europa.eu/environment/air/pdf/report_wg.pdf