

EXPLANATORY MEMORANDUM TO
THE SULPHUR CONTENT OF LIQUID FUELS (ENGLAND AND WALES)
REGULATIONS 2007

2007 No.79

1. This explanatory memorandum has been prepared by the Department for Environment, Food and Rural Affairs and is laid before Parliament by Command of Her Majesty.

2. Description

2.1. This Statutory Instrument replaces the Sulphur Content of Liquid Fuels (England and Wales) Regulations 2000 (Statutory Instrument 2000 No. 1460), which transposed the Sulphur Content of Liquid Fuels Directive (1999/32/EC). The Sulphur Content of Liquid Fuels (England and Wales) Regulations 2007 also transpose the provisions of Directive 1999/23/EC as amended by Directive 2005/33/EC, except the marine provisions.

3. Matters of special interest to the Joint Committee on Statutory Instruments

3.1. None.

4. Legislative Background

4.1. Use of fuels in land-based activities are already controlled under the Sulphur Content of Liquid Fuels Directive (SCLFD) 1999/32/EC, for example, limiting the sulphur content of heavy fuel oil to 1 per cent by mass from 1 January 2003 and gas oil (including marine gas oil) to 0.2 per cent by mass from 1 July 2000 (0.1 per by mass from 1 January 2008). However, the SCLFD does not apply to other liquid fuels used by sea-going ships.

4.2. This Statutory Instrument implement the land based provision of Directive 2005/33/EC which are minor technical amendments, for example changes to definitions of fuels, which allow for the separation of provisions relating to land based fuels and, marine fuels.

Marine provisions of Directive 2005/33/EC

4.3. There is already an international instrument on air pollution from ships – MARPOL Annex VI – which was adopted by the International Maritime Organisation in 1997 and for which policy responsibility falls with the Department for Transport. The Maritime and Coastguard Agency are implementing the MARPOL Annex VI requirements. Directive 2005/33/EC complement Annex VI in a number of respects and would add the force of Community law to it.

4.4. Because of the relationship between the two instruments, the approach adopted for transposition is that the Department for Environment, Food and Rural Affairs

would transpose the land based elements of Directive 2005/33/EC since they already have responsibility for the original Directive (1999/32/EC).

- 4.5. The marine provisions of Directive 2005/33/EC and MARPOL Annex VI are to be transposed using one set of Regulations, by the Maritime and Coastguard Agency. This would avoid the possibility of generating confusion and/or extra costs for the maritime industry. The Maritime and Coastguard Agency have extensive experience of implementing and enforcing legislation and, of the operating practices of, the maritime sector.
- 4.6. This approach would be in line with the principles of the Davidson Review. Neil Davidson QC published, on 28 November 2006, his final report on how the UK implements European Union legislation along with recommendations to the Government. One aspect of his review was 'Double Banking' - where European Union legislation covers the same ground as domestic legislation and the two regimes have not been fully streamlined.
- 4.7. The Scrutiny History for the Directive is attached at Annex A

5. Territorial Extent and Application

- 5.1. This instrument applies to England and Wales.
- 5.2. Equivalent legislation to these Regulations is expected to be made in respect of Scotland and Northern Ireland by their respective administrations.

6. European Convention on Human Rights

- 6.1. As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

- 7.1. Emissions of sulphur dioxide (SO₂) from the maritime sector in Europe are projected to surpass total emissions from all land-based sources by 2020 according to the European Commission's Clean Air For Europe (CAFE) emission estimates¹, assuming no action is taken. This is due in a large part to considerable reductions made by shoreside industry and other terrestrial sources. To address the significant health and environmental impacts of ship emissions, the European Commission adopted an EU strategy in November 2002 to reduce such emissions. The aim of the strategy is to define the contribution made by ships to atmospheric emissions and environmental problems in the European Union as well as to set out a broad series of objectives, actions and recommendations for reducing these emissions over a 10 year time period.
- 7.2. One result of the Commission's strategy was the Sulphur Content of Marine Fuels Directive (SCMFD - Directive 2005/33/EC)² which came into force on 6 July

¹ <http://europa.eu.int/comm/environment/air/cafef/index.htm>

² Directive 2005/33/EC of the European Parliament and of the Council of 6 July 2005 amending Directive 1999/32/EC as regards the sulphur content of marine fuels

2005 amending the existing Sulphur Content of Liquid Fuels Directive (SCLFD - Directive 1999/32/EC)³. The Directive should be transposed into UK law by 11 August 2006. A copy of the Directive is available from the web link below:

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&numdoc=52002PC0595&lg=EN

Health and environmental effects

- 7.3. Sulphur dioxide (SO₂) is mainly emitted as a by-product of burning fuels containing sulphur. SO₂ is an irritant gas that, in high concentrations, provokes bronchoconstriction: i.e. narrowing of the airways. Epidemiological studies, including some in the UK, have shown, as in the case of particles, that day to day variations in concentrations of SO₂ are associated with the number of deaths occurring each day and also with admissions to hospital for the treatment of respiratory diseases. There is also evidence linking concentrations of SO₂ with chest symptoms and with the use of bronchodilator therapies. There is evidence from the United States⁴ that long term exposure to itself may be linked to losses in life expectancy. The same studies also indicated that sulphate particles, produced by oxidation of SO₂ may increase the risk of death. Sulphur dioxide is also a major cause of acidification of terrestrial and aquatic ecosystems. Despite significant improvements over the past two decades there are still areas in the UK and elsewhere in Europe where targets are not attained.

Marine requirements of the Directive

- 7.4. The Maritime and Coastguard Agency will implement the marine requirements of the Directive under separate legislation. The basic obligations of the Directive are:
- (i) A 1.5% sulphur limit for fuels used by all ships in the SO_x Emission Control Areas of the Baltic Sea, from 11 August 2006 and, the North Sea and English Channel from either 11 August 2007 or 12 months after the entry into force of the International Maritime Organisation designation, whichever is the earlier;
 - (ii) A 1.5% sulphur limit for fuels used by passenger ships on regular services between EU ports, from 11 August 2006;
 - (iii) A 0.1% sulphur limit on fuel used by inland waterway vessels and by ships at berth in EU ports, from 1 January 2010;

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

⁴ Pope CA, Thun MJ, Namboodiri MM, Dockery DW, Evans JS, Speizer FE, Heath CW. (1995) Particulate air pollution as a predictor of mortality in a prospective study of US adults. *Am J Resp Crit Care Med*; **151**: 669-674; Health Effects Institute (2000) Reanalysis of the Harvard Six-Cities Study and American Cancer Study of air pollution and mortality: a special report of the Institute's Particle Epidemiology Reanalysis Project. Health Effects Institute, Cambridge, USA; Pope *et al* (2002) Lung cancer, cardiopulmonary mortality and long-term exposure to fine particulate air pollution. *J Am. Med. Assoc.* **287**, 1132-1141.

- (iv) A ban on the marketing of marine diesel oils with sulphur content exceeding 1.5% by mass, from 11 August 2006, and;
- (v) A ban on the marketing of marine gas oils with sulphur content exceeding 0.1% by mass, from 1 January 2010

Consultation

- 7.5. The Government consulted on implementation of the land based elements of the Directive from 26 July to 20 October 2006. There was a low level of public interest to the consultation.
- 7.6. The Government consulted approximately 200 stakeholders: industry bodies; oil companies; environmental organisations; health organisations and; local authorities. A full list of the consultees is available from the following weblink:

<http://www.defra.gov.uk/corporate/consult/sulphurcontent-marinefuels/consultlist.htm>
- 7.7. The consultation attracted 2 responses. There is general support for the Government's preferred approach to implementation of the Directive. The full summary of the consultation responses can be found via the following weblink:

<http://www.defra.gov.uk/corporate/consult/sulphurcontent-marinefuels/index.htm>
- 7.8. The Government's final implementation plan for transposition of the Directive after consideration of the consultation responses, can be found via the following weblink:

<http://www.defra.gov.uk/environment/airquality/eu-int/eu-directives/sulphur/smlf.htm>
- 7.9. Due to the minor and, technical nature of the land based elements of the policy, it is not considered to be politically or legally important.

8. Impact

- 8.1. No significant costs or benefits arise from the land-based elements of the Directive. Therefore, no Regulatory Impact Assessment is required in respect of these elements. However, we have undertaken a qualitative assessment of the possible costs and benefits and this is summarised at Annex B.
- 8.2. This instrument has no impact on business, charities or voluntary bodies.
- 8.3. There is no impact on the public sector.

9. Contact

- 9.1. Ian Oldfield at the Department for Environment, Food and Rural Affairs, Tel: 020 7082 8405 or e-mail: <mailto:ian.oldfield@defra.gsi.gov.uk> can answer any queries regarding the instrument.

Annex A – Scrutiny history for the Sulphur Content of Marine Fuels Directive, 2005/33/EC.

(1) EM 14933/02 of 16 January 2003

Commons:

Politically Important. Cleared 17 December 2003

Lords:

Sifted to Sub-Committee B on 8 January 2004 cleared 30th January 2004

SEM 14933/02 of 07 July 2003

Commons: Not Cleared 16 July 2003.

Awaiting refined estimates on RIA.

Politically Important - Cleared 17 December 2003 along with "2nd" SEM 12142/03

Lords: Referred to sub Committee D on 15 July 2003.

Cleared 30th January 2004 by Sub-Committee B.

(2) EM 12142/03 of 17 September 2003

Commons: Politically Important. Not cleared. 15/10/03

Lords: Cleared by letter 20th November

SEM 12142/03 of 30 November 2003

Commons: PI Cleared 17 December 2003 along with SEM 14933/02

Lords: Cleared from scrutiny 09 December 2003

Annex B - Qualitative assessment of costs and benefits arising from the land based provisions of the Sulphur Content of Marine Fuels Directive, 2005/33/EC.

Table 1 Qualitative assessment of costs and benefits arising from changes to the land based provisions of the SCMFD.

SCMFD Article/no.	Benefit	Costs
Article 1(1)(a) New provision - excludes fuels intended for the purposes of research and testing.	Allowing fuels not meeting the requirements of the Directive will encourage innovation, a key driver of productivity. However, it is not possible to quantify the scale of benefits which may arise from innovation.	There will be an increase in sulphur emissions, although this is likely to be small in comparison with overall sulphur emissions.
Article 1(2) The definitions of gas oil, heavy fuel oil and marine fuel, are amended to reflect the separation of provisions for marine and land-based fuels.	Allows for the differential treatment of fuels used in land based installations and those for marine purposes. Benefits will arise from controls on marine fuels and will be quantified in the Regulatory Impact Assessment for implementation of the marine provisions.	Administrative costs of making the changes.
Article 1(3) Updated to take into account amendments to Directive 88/609/EEC (the Large Combustion Plant Directive) by Directive 2001/80/EC (the revised Large Combustion Plant Directive)	Improves enforcement as this change reflects restrictions without the need to refer to the legislation implementing the revised Large Combustion Plant Directive. However, benefits are likely to be small as regulators may be familiar with both sets of legislation.	Administrative costs of making the changes.
Article 1(4)(a) Deletes ' <i>including marine gas oil</i> '. Removes 'marine gas oil' from provision. Reflects separation of land-based and marine based provisions.	Allows for the differential treatment of fuels used in land based installations and those for marine purposes. Benefits will arise from controls on marine fuels and will be quantified in the Regulatory Impact Assessment for implementation of the marine provisions.	Administrative costs of making the changes.

The costs and benefits arising from the marine elements of the SCMFD will be detailed in a Regulatory Impact Assessment which will be published by the Maritime and Coastguard Agency along with their consultation on implementation within the UK of the marine elements of the Directive.