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Mandate to CEN for standards for Fatty Acid Ethyl Ester for use in diesel engines and heating fuels

1. Background

One of the significant measures aimed at increasing the security of energy supply in the EU as well as contributing in meeting the obligation to reduce the emission of greenhouse gases accepted by the EU at Kyoto is the introduction of biofuels for transport. The transport sector accounts for more than 30% of final energy consumption in the Community and is expanding. Biofuels must also be seen in the light of the indicative objective of doubling the share of renewable energy from at present 6% to 12% of the gross inland energy consumption as outlined in particular in the Commission's White Paper on Renewable Energy Sources that was endorsed by the Council and the European Parliament¹.

In its Resolution of 18 June 1998² the European Parliament called for an increase in the market share of biofuels to 2% over five years through a package of measures, including

¹ Communication from the Commission: Energy for the future: Renewable Energy Sources - White Paper for a Community Strategy and Action Plan (COM (97) 599 final) ; Council Resolution of 8 June 1998 on renewable sources of energy (OJ no. C 198, 24.6.1998, p. 1); Resolution of the European Parliament on the above Communication from the Commission (A4-0207/98)

² OJ C 210, 6.7.1998, p. 215.

tax exemption, financial assistance for the processing industry and the establishment of a compulsory rate of biofuels for oil companies.

Furthermore the European Council meeting at Gothenburg on 15 and 16 June 2001 agreed on a Community strategy for sustainable development consisting in a set of measures, which include the development of biofuels.

In May 2003, the European Parliament and the Council adopted a Directive on the promotion of the use of biofuels or other renewable fuels for transport³ through the co-decision procedure.

In recital (13 & 14) of this Directive it is stated “(13) *New types of fuel should conform to recognised technical standards if they are to be accepted to a greater extent by customers and vehicle manufacturers and hence penetrate the market. Technical standards also form the basis for requirements concerning emissions and the monitoring of emissions. Difficulties may be encountered in ensuring that new types of fuel meet current technical standards, which, to a large extent, have been developed for conventional fossil fuels. **The Commission and standardisation bodies should monitor developments and actively adapt and develop standards, particularly volatility aspects so that new types of fuel can be introduced, whilst maintaining environmental performance requirements.***

(14) Bioethanol and biodiesel, when used for vehicles in pure form or as a blend, should comply with the quality standards laid down to ensure optimum engine performance. It is noted that in the case of biodiesel for diesel engines, where the processing option is esterification, the standard prEN 14214 of the European Committee for Standardisation (CEN) on fatty acid methyl esters (FAME) could be applied. **Accordingly, the CEN should establish appropriate standards for other transport biofuel products in the European Union”.**

In addition and following the same approach recital (27) states: “*Measures should be introduced for developing rapidly the quality standards for the biofuels to be used in the automotive sector, both as pure biofuels and as a blending component in the conventional fuels.*”.

³ 2003/30EC

It is noted that at present there are two liquid biofuels that are in some use as transport fuels in the various Member States, namely biodiesel (fatty acid methyl ester (FAME)) and bioethanol. A third one, bio-methane derived from biogas is in rather limited use in few countries, and at present its contribution as alternative fuel is relative small. For biodiesel EN 14214 has been developed by CEN.

The above position of the Parliament and the Council and the absence of standards for new types of biofuels and new blends of existing biofuels in fossil fuels provided the impetus for the Commission to submit this mandate to CEN.

2. Recent Developments

The European market is characterised by a significant and continuously growing demand for diesel fuel – about 55 volume % of the fuel used in the EU in 2005 for road transport was diesel. This is expected to grow even further at the expense of petrol. Therefore the demand for diesel fuel type replacements is significant greater than that for petrol.

Bioethanol has been used in the European market mainly as ETBE (ethyl-tertio-butyl-ether) on the basis of the specifications of the Fuel Quality Directive⁴. Mandate 344 from the Commission to CEN requested the development of a standard for bioethanol as a blending component for petrol and a CEN Workshop Agreement for E85 for use in fuel flexible vehicles. Although used in low blends (5%), as ETBE and E85, bioethanol still faces problems to penetrate the European market further. This may be due to factors such as its evaporative emissions, to the ban on the transport of ethanol blends by pipeline owners, or to fuel suppliers' limited interest in petrol substitutes.

Due to the security of energy supply issue as well as the other above mentioned policies it is of strategic importance to ensure the market uptake of bioethanol in the EU in uses other than blends for petrol. Such bioethanol alternative uses may include amongst others its direct use in modified diesel engines, its use as a blend in diesel (about 20 weight%) and its use as a replacement of fossil methanol in the production of biodiesel, or the production of fatty acid ethyl ester (FAEE) instead of FAME; being the subject of this mandate.

The replacement of fossil methanol by bioethanol in the production of biodiesel would also have the additional advantage that biodiesel would become totally a biofuel which is not the case now as about 5-10 weight % of biodiesel (FAME) is of fossil origin.

⁴ 98/70/EC

3. Reason for giving a mandate to CEN for development of standards on FAEE

Biodiesel can be produced from oil seeds and crops, used cooked oils and animal tallow. In order to achieve the targets of the biofuels directive a stable and reliable supply and demand of bioethanol and biodiesel is mandatory. The widespread use of diesel fuel in Europe as well as the eventuality of imports from either Accession or Third Countries in the future necessitates the development and adoption of standards in order to ensure the high quality of fuels sold in the EU market.

Furthermore it is of strategic importance to ensure that all bioethanol produced in the EU will have a market in addition to the environmental and security benefits of ensuring that biodiesel can be produced by 100 weight % bioproducts. Therefore there is a need to develop appropriate standards for fatty acid ethyl esters for diesel engines.

The European Union is already deliberating increasing the targets for replacing petrol and diesel for 2020. The spring European Council of 23-24 March 2006 stated that the new Energy Policy for Europe should include “Continuing the EU-wide development of renewable energies (road map) on the basis of an analysis by the Commission of how to achieve the existing targets (2010) and how to sustain in a cost-efficient manner the current efforts over the long-term e.g. considering to raise, by 2015, the share of renewable energies, considering a target of 15%, and the proportion of biofuels, considering a target of 8%”. The production of FAEE will also facilitate the energy security of the European Union and contribute significantly to meeting the Kyoto objectives.

4. Mandate

CEN is given the mandate to develop, as a first step:

- a) A European Standard for fatty acid ethyl ester to be used as a fuel for diesel engines,
This European standard should be developed on the basis of EN 14214. EN 590 should be revised to allow 5% volume/volume blend and eventually in addition to allow for a FAME/FAEE 10% volume/volume blend,
- b) A European Standard for fatty acid ethyl ester to be used as heating fuel,
This European standard should be developed on the basis of EN 14213.

European Standard on FAEE will include no unnecessarily restrictive requirements, as long as the proper functioning in the intended applications can be guaranteed.

The work to be conducted will respect the current requirements of the Directive 98/70/EC on the quality of petrol & diesel fuels. If in the course of the work conflicts arise with the requirements in Directive 98/70/EC then these should be highlighted to the Commission Services.

CEN shall provide the Commission within 4 months after the acceptance of this standardisation mandate with a Work programme to be carried out.

The Commission may extend the scope of this mandate to cover other blends of FAEE (and corresponding ones for FAME) as the European market will develop, subject to the consultation of the Committee set up pursuant to Article 5 of the Directive 98/34/EC on technical standards and regulations and information society services⁵.

5. Bodies to be associated.

The elaboration of the standards should be undertaken in co-operation with the broadest possible range of interest groups, including international and European associations. Those invited to contribute to the work should include stakeholders from the relevant industries, ANEC⁶ and ECOS⁷, NORMAPME⁸ and ETUI-REHS⁹

6. Execution of the mandate

- 6.1 CEN must provide the EC with a detailed Work programme and a timetable for the adoption of the standards needed to cover the work highlighted in section 4. CEN will execute the Work programme agreed with the EC.
- 6.2 The European standards adopted will have to be transposed into national standards and divergent national standards will have to be withdrawn from the catalogues of the Member States' national standardisation bodies within six months of the adoption of the European standards.

⁵ OJ L 204 of 21.07.98, p. 37, as amended by Directive 98/48/EC (OJ L 217 of 5/8/98, p. 18).

⁶ European Association for the Co-ordination of Consumer Representation in Standardisation

⁷ European Environmental Citizens Organisations for Standardisation

⁸ European Office of Crafts, Trades and Small and Medium- Sized Enterprises for Standardisation

⁹ European Trade Union Institute - Research, Education, Health and Safety

6.3 The standstill period referred to in Article 7 of Directive 98/34/EC of 22 June 1998 will commence on acceptance of this standardisation mandate by CEN.

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