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**MANDATE TO CEN FOR STANDARDS FOR BIOMETHANE FOR USE IN TRANSPORT AND  
INJECTION IN NATURAL GAS PIPELINES**

**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 European Council of March 2007 reaffirmed the Community's commitment to the Community-wide development of energy from renewable sources beyond 2010. It endorsed a mandatory target of a 20 % share of energy from renewable sources in overall Community energy consumption by 2020 and a mandatory 10 % minimum target to be achieved by all Member States for the share of biofuels in transport petrol and diesel consumption by 2020, to be introduced in a cost-effective way. It stated that the binding character of the biofuel target is appropriate, subject to production being sustainable, second-generation biofuels becoming commercially available and 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 being amended to allow for adequate levels of blending.

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 mandatory objective of achieving a penetration of 10% in transport as outlined in particular in the Renewable Energy Directive<sup>1</sup>.

In recitals (2) and (12) of this Directive it is stated:

*(2) "In particular, increasing technological improvements, incentives for the use and expansion of public transport, the use of energy efficiency technologies and the use of energy from renewable sources in transport are some of the most effective tools by which the Community can reduce its dependence on imported oil in the transport sector, in*

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<sup>1</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

*which the security of energy supply problem is most acute, and influence the fuel market for transport".*

*and (12) "The use of agricultural material such as manure, slurry and other animal and organic waste for biogas production has, in view of the high greenhouse gas emission saving potential, significant environmental advantages in terms of heat and power production and its use as biofuel. Biogas installations can, as a result of their decentralised nature and the regional investment structure, contribute significantly to sustainable development in rural areas and offer farmers new income opportunities".*

Furthermore in recitals (57) and (62) of the Directive it is stated:

*(57) "There is a need to support the integration of energy from renewable sources into the transmission and distribution grid and the use of energy storage systems for integrated intermittent production of energy from renewable source."*

*and on (62): "The costs of connecting new producers of electricity and gas from renewable energy sources to the electricity and gas grids should be objective, transparent and non-discriminatory and due account should be taken of the benefit that embedded producers of electricity from renewable energy sources and local producers of gas from renewable sources bring to the electricity and gas grids."*

In Article 2, "Definitions" § (i) the Directive states:

*"The following definitions also apply:*

*i) biofuels" means liquid or gaseous fuel for transport produced from biomass;"*

Since biomethane is used in transport applications, it is a gaseous biofuel and is addressed by the Directive.

In Article 16 "Access to and operation of the grids", § (7), (9) and (10) the Directive states:

*( 7). Member States shall ensure that the charging of transmission and distribution tariffs does not discriminate against electricity from renewable energy sources, including in particular electricity from renewable energy sources produced in peripheral regions, such as island regions, and in regions of low population density. Member States shall ensure that the charging of transmission and distribution tariffs does not discriminate against gas from renewable energy sources.*

*(9). Where relevant, Member States shall assess the need to extend existing gas network infrastructure to facilitate the integration of gas from renewable energy sources.*

*(10). Where relevant, Member States shall require transmission system operators and distribution system operators in their territory to publish technical rules in line with Article 6 of Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning the common rules for the internal market in natural gas [1], in particular regarding network connection rules that include gas quality, gas odorization and gas pressure requirements. Member States shall also require transmission and distribution system operators to publish the connection tariffs to connect renewable gas sources based on transparent and non-discriminatory criteria.*

Since biomethane is injected in the natural gas grids, it is addressed by the Directive.

The above position of the Parliament and the Council and the absence of standards for biomethane, an existing renewable fuel that can be either used in transport applications or injected in the natural gas grid, provided the impetus for the Commission to submit this mandate to CEN.

## **2. REASONS FOR GIVING A MANDATE TO CEN FOR DEVELOPMENT OF STANDARDS ON BIOMETHANE**

Biomethane can be produced from both biological and thermochemical processes. The biological processes are based on upgrading biogas produced by anaerobic digestion of municipal waste streams, process residues, agriculture waste streams and energy crops such as various types of grasses as well as landfill gas by removing the carbon dioxide and other contaminants from the biogas. In thermochemical processes biomethane is produced by the catalytic treatment of synthesis gas downstream of biomass gasification processes.

Both production biomethane routes result therefore in a second generation biofuel.

In order to achieve the ambitious targets of the Renewable Energy Directive it is necessary to maximise the production and use of biomethane that is an attractive fuel especially for captive fleets such as city buses. Owing to current low exploitation of biomethane in the EU, its desired accelerated deployment necessitates the development and adoption of standards in order to ensure the high quality of fuels used in the EU market.

Given the very large unexploited potential of feedstock materials for biomethane generation, the increased production and use of biomethane will also facilitate the energy security of the European Union and contribute significantly to meeting the Kyoto objectives.

Therefore European Standards are needed to facilitate the market penetration of biomethane either as a transport fuel or as a blending component to natural gas.

## **3. MANDATE**

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

- (a) A European Standard for a quality specification for biomethane to be used as a fuel for vehicle engines,
- (b) European deliverables such as TSs or ENs for quality specification for biomethane to be injected in natural gas pipelines transporting either H-gas or L-gas. The deliverables shall include a specification (such as gas chromatography-mass spectrometry, C14 Isotope analysis or equivalent) to determine the concentration in vol % of biomethane in the pipeline.

The CEN technical experts should consider the ongoing work of the pending mandate M 400 on Gas quality, and shall refer to the parameters as defined and specified in M 400. The European deliverable shall exclude the definition of any parameters or substances that are addressed in M 400. However, it may specify more strict limits for parameters or

substances unique to biomethane if deemed technically necessary. If needed, additional parameters or substances shall be defined.

The European Standard on biomethane 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. 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 specifying the work to be carried out.

#### **4. 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, ANEC<sup>2</sup> and ECOS<sup>3</sup>, NORMAPME<sup>4</sup>, ETUI-REHS<sup>5</sup>, and ENTSO<sup>6</sup>

#### **5. EXECUTION OF THE MANDATE**

- 5.1. 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 European Commission.
- 5.2. 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.
- 5.3. 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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<sup>2</sup> European Association for the Co-ordination of Consumer Representation in Standardisation

<sup>3</sup> European Environmental Citizens Organisations for Standardisation

<sup>4</sup> European Office of Crafts, Trades and Small and Medium- Sized Enterprises for Standardisation

<sup>5</sup> European Trade Union Institute - Research, Education, Health and Safety

<sup>6</sup> European Network of Transmission System Operators for Gas