



Policies to Promote Biogas in the EU

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First Biofuels Directive

- **2003/30/EC**

Targets (indicative):

2% by end 2005
5.75% by 2010

To be Repealed by 01-01-2012)

European Parliament Report on Biogas

“Sustainable Agriculture and Biogas” (29.11.2007)

Report says biogas:

- production avoids problems with animal manure
- production achieves high level of sustainability (also for Biowaste)
- should be treated equally for “green electricity” and “green gas” production and grid injection

The New Renewables Directive

“Promotion of the use of energy from renewable sources” [COM(2008)19] (23.01.2008)

Co-decision procedure concluded:

European Parliament (Industry, Research and Energy Committee) & the European Council

Adopted - March 26th 2009 by Parliament and April 6th by Council, to be published as (2009/???) / EC) in May

The New Renewables Directive

Definitions:

"biomass" means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste;

The New Renewables Directive

- Key issues during Parliament and Council discussions:
 1. Mandatory targets
 2. Sustainability criteria

The New Renewables Directive

- Target for 2020: “energy from renewable sources in all forms of transport is at least 10% of final consumption (in each Member State)”

Article 3 (4):

- a) For calculation, the total of petrol, diesel, biofuels for transport and electricity is taken into account.*
- b) All types of renewable used in all forms of transport shall be taken into account*
- c) For electricity, its consumption shall be considered to be 2.5 times the energy content of the biomass input.*

The New Renewables Directive

So, the 10% target is not limited to biofuels as the only source of renewable energy for transport

Electricity is an important component of the renewable fuel mix - and so is hydrogen

Note: there is no intermediate target for "biofuels" before 2020. Also, there is no specified mix of individual contributions of biofuels and electricity to the 2020 target

The New Renewables Directive

- **Grid Access: Electricity and Gas**

Article 16 (7):

Member States shall ensure that charging of transmission and distribution tariffs does not discriminate against electricity from renewable sources, in particular in peripheral regions.

Member States shall ensure that charging of transmission and distribution tariffs does not discriminate against gas from renewable sources

The New Renewables Directive

- Grid Access: Electricity and Gas

Article 16 (9):

Where relevant, Member States shall assess the need to extend existing gas network infrastructure to facilitate integration of gas from renewable sources

Article 16 (10):

Where relevant, Member States shall require grid operators to publish technical rules regarding network connection (viz. gas quality, odoration, pressure) and publish connection tariffs for renewable gas sources

The New Renewables Directive

- Sustainability

Article 17 (2)

The greenhouse gas (GHG) emission saving from use of biofuels shall be 35%

With effect from 2017 the GHG saving shall be 50%. For new installations starting production after 2017 the target shall be 60%

Savings shall be calculated according to the method defined in Article 19(1)

The New Renewables Directive

- Sustainability

Article 17 (3 & 5)

Defines land not to be used for biofuel feedstock production (e.g. primary forest, areas with protected ecosystem, natural grasslands, previously undrained peatlands)

Article 17 (9)

The Commission shall report on requirements for a sustainability scheme for energy uses from biomass, other than biofuels, by December 31st 2009.

The New Renewables Directive

- Calculation of GHG Impact

Article 19 (1)

Defines the method for calculation, using the methodology given in Annex V.C. Typical and default values for GHG emissions from defined stages of the production pathway are given in Annex V.D & E

Here, we see the clear difference between the GHGs for biofuels produced from energy crops and those produced from wastes/residues

The New Renewables Directive

- Calculation of GHG Impact

Article 19 (6)

Concerning the as yet unquantified effects of Indirect Land Use Change (ILUC), safeguards to be provided to ensure certainty for investment undertaken before the ILUC methodology is applied. So, for installations producing biofuels before 2014, measures shall not apply before 2018, provided they then achieve a GHG saving of at least 45%*

** Report on ILUC effects due by 31-12-2010*

The New Renewables Directive

- Specific Provisions for Biofuels

Article 21 (2)

For purposes of compliance with national renewable energy obligations, the contribution made by biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material shall be considered to be 2x that made by other biofuels

(i.e. promotion of 2nd generation biofuels)

Some life cycle assessment examples

- Typical GHG savings compared with fossil petrol/diesel
(Annex V.A)

<i>Biogas* from municipal organic waste</i>	<i>80%</i>
<i>Biogas* from wet manure</i>	<i>84%</i>
<i>Biogas* from dry manure</i>	<i>86%</i>
<i>Rapeseed biodiesel</i>	<i>45%</i>
<i>Palm oil biodiesel (process not specified)</i>	<i>36%</i>
<i>Palm oil biodiesel (CH₄ capture at mill)</i>	<i>62%</i>
<i>Sugar beet ethanol</i>	<i>61%</i>
<i>Sugar cane ethanol</i>	<i>71%</i>

(in the form of compressed biomethane compatible with natural gas)*

Some life cycle assessment examples

- Estimated GHG savings - "2nd generation biofuels*" (Annex V.B)

<i>Farmed wood F-T diesel</i>	<i>93%</i>
<i>Waste wood F-T diesel</i>	<i>95%</i>
<i>Wheat straw ethanol</i>	<i>87%</i>
<i>Farmed wood ethanol</i>	<i>76%</i>
<i>Waste wood ethanol</i>	<i>80%</i>

**The text actually refers to, "biofuels that are not, or in negligible quantities, on the market in January 2008"
So, is biogas a second generation biofuel ???*

Biowaste

- **Biowaste is one component of the new EU Waste Framework Directive: 2008/98/EC (Article 22)**

Member States shall encourage:

- (a) the separate collection of bio-waste with a view to composting and digestion;*
- (b) the treatment of bio-waste in a way that fulfils a high level of environmental protection;*
- (c) the use of environmentally safe materials produced from bio-waste.*

The Commission shall carry out an assessment on the management of bio-waste.

The assessment shall examine the opportunity of setting minimum requirements for bio-waste management and quality criteria for compost and digestate from bio-waste.

Market Support

- **Proposed European Standards for Biogas**

DG TREN is preparing to provide a mandate to CEN* to formulate new standards supporting the exploitation of biofuels, particularly biogas.

Specific examples of standards:

- composition of biogas for injection into natural gas pipelines
- composition of different grades of digestate/compost from biogas production for use as organic fertiliser

* The European Standards Organisation

Thank you

Relevant References and Contact Details

- **Energy and Climate Change website:**
http://ec.europa.eu/energy/strategies/2008/2008_01_climate_change_en.htm
- **Europa – Biomass/Biogas/Biofuels:**
http://ec.europa.eu/energy/res/sectors/bioenergy_en.htm
- **Waste Framework Directive:**
<http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2008:312:SOM:EN:HTML>
- **Contact Point for Waste and Biomass Related Activities at JRC-
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