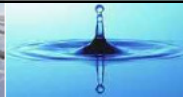


Biofuels – A European Perspective Current and Future EU Policy on Biofuels

Carbon Labelling Workshop 'Biodiesel and other Biofuels for New EU Member States'

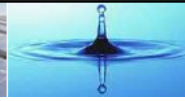
20 May 2008, Ljubljana, Slovenia

Dr. Rainer Janssen
WIP – Renewable Energies, Munich



Content

- **Potential benefits and drawbacks of biofuels**
- **The New EU Energy Policy**
- **EU Biofuels Directive**
- **National Implementation of the Biofuels Directive**
- **Directive on the Promotion of the Use of Energy from Renewable Sources (Proposal)**
- **Reduction of CO₂ Emissions from Passenger Cars**



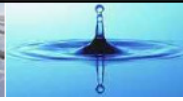
Potential Benefits of Biofuels

- Reduction of **GHG Emissions**
- Reduction of air pollution (CO, SO₂, PM)
- Improvement of **energy security**
- Reduction of oil imports, **diversification** of energy sources and technologies
- Development of new agricultural markets, income generation in rural areas



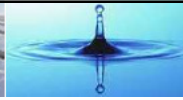
Potential Drawbacks of Biofuels

- **Higher fuel production costs**
- Increase of some pollutant emissions (NO_x, aldehyde) – compliance with emission norm EURO 4
- Vehicle/fuel system modifications – **technical limits** to blending (B/E5), limits on the vapour content of petrol
- Higher crop and crop product prices (**food-fuel competition**)
- **Negative environmental impacts**



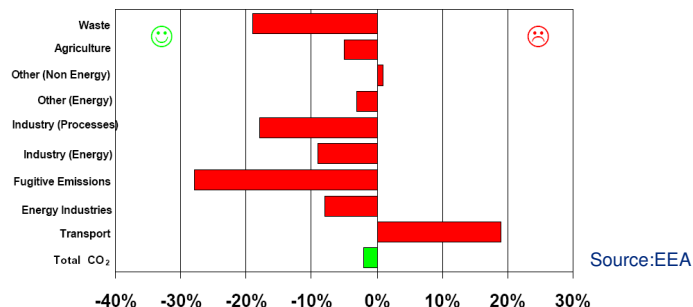
Cleaner Transport – The Wider Context

- 1997 – **EU White Paper, Energy for the future: Renewable sources of energy**
 - Increasing the contribution of RE sources from 6% to 12% of EU gross energy consumption by 2010
- 2000 – **EU Green Paper on the security of energy supply**
 - Europe imports 50% of its total energy needs
 - Import dependence of the transport sector: 80%
 - Target of 20% substitution of conventional fuels by biofuels, natural gas and hydrogen by 2020

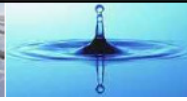


- 1997 – **Kyoto Protocol** on the reduction of GHG emissions (entered into force on 16 February 2005)
 - EU Commitment: 8% reduction of annual GHG emissions by 2010 (compared with the 1990 level)
 - Transport sector: 28% of Europe's CO₂ emissions

EU GHG Emissions (1990-1999)

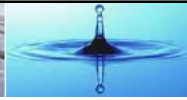


Source: EEA



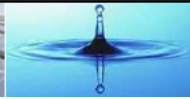
Energy Policy for Europe – Jan/March 2007

- **3 Energy Challenges: Climate Change -- Security of Supply -- Competitive EU Economy**
- **Targets and Objectives**
 - Reducing **GHG emissions by 20% by 2020** compared to 1990
 - Improving **Energy Efficiency by 20% by 2020**
 - Raising the share of **RE to 20% by 2020**
 - Increasing the level of **Biofuels in transport to 10% by 2020**
 - **National Action Plans** (Energy mix decided by MS)



EU Biofuels Directive

- Directive on the promotion of the use of biofuels or other renewable fuels for transport (2003/30/EG) – 8 May 2003
 - Directive restructuring the Community framework for the taxation of energy products and electricity (2003/96/EG) – 27 October 2003
- ➔ Legislative framework for Member States to promote biofuels (e.g. tax exemption, biofuel obligations)
- ➔ Indicative Targets
- **2% by 2005**
 - **5,75% by 2010**



EU Biofuels Directive – Timeframe

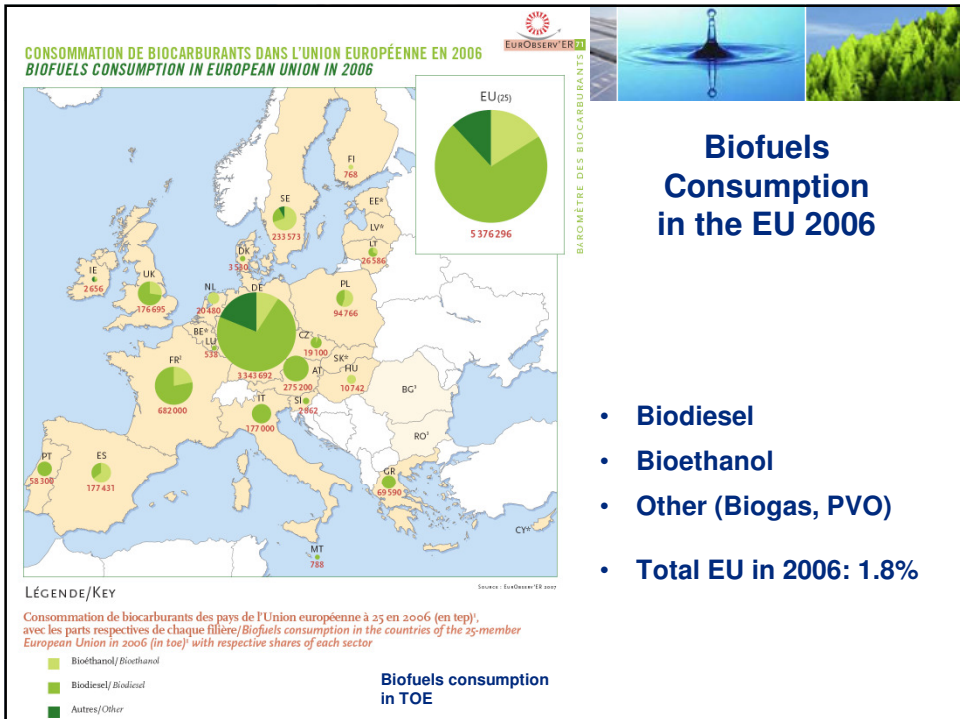
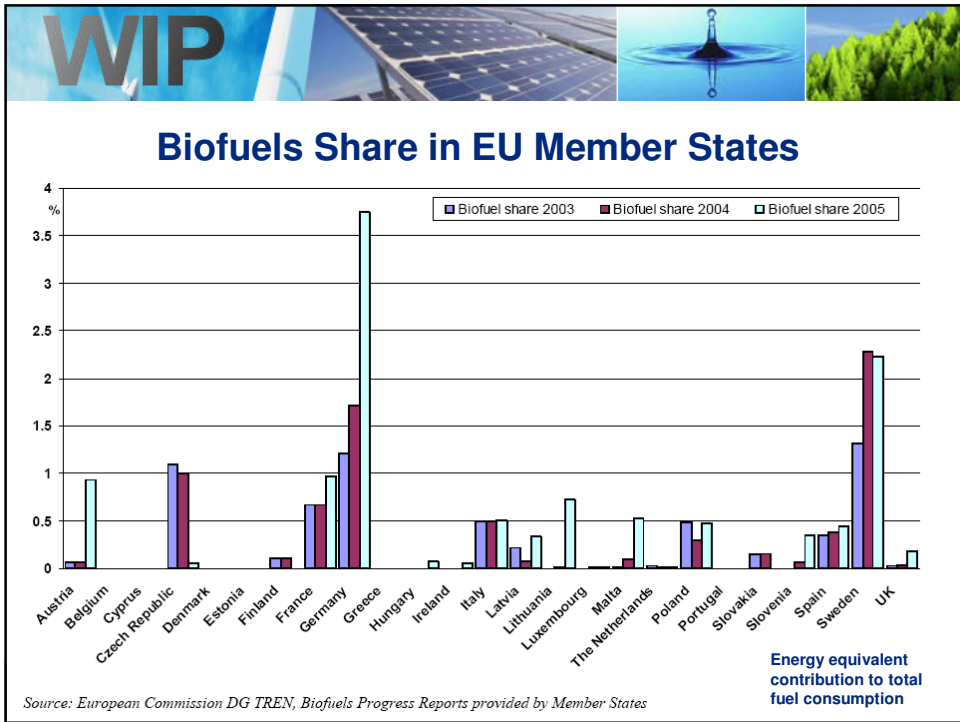


Flexibility Member States set their own indicative targets and develop national policies and measures (techn., financial, social choices)



Biofuels Directive - National Implementation

- **Member States with Biofuel Tax Exemptions:**
Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Spain, Sweden, UK
- **Member States with Biofuel Obligations:**
Austria (2005), France (2005), Slovenia (2006), Czech Republic (2007), Germany (2007), Netherlands (2007), UK (2008)




%	2006	2007	2008	2009	2010
Austria	2.50	4.30	5.75	5.75	5.75
Belgium	2.75	3.50	4.25	5.00	5.75
Cyprus					
Czech Republic	1.78	1.63	2.45	2.71	3.27
Denmark	0.10				
Estonia	2.00				5.75
Finland					
France			5.75		7.00
Germany	2.00				5.75
Greece	2.50	3.00	4.00	5.00	5.75
Hungary					5.75
Ireland	1.14	1.75	2.24		
Italy	2.00	2.00	3.00	4.00	5.00
Latvia	2.75	3.50	4.25	5.00	5.75
Lithuania					5.75
Luxembourg	2.75				5.75
Malta					
The Netherlands	2.00	2.00			5.75
Poland	1.50	2.30	²⁸	²⁹	5.75
Portugal	2.00	3.00	5.75	5.75	5.75
Slovakia	2.50	3.20	4.00	4.90	5.75
Slovenia	1.20	2.00	3.00	4.00	5.00
Spain					
Sweden					5.75
UK			2.00 ³⁰	2.80 ³¹	3.50 ³²
EU					5.45 ³³

Source: national reporting under the biofuels directive except France: response to public consultation on review of the biofuels directive.




National Indicative Targets (2006-2010)

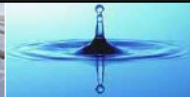


Biofuels Progress Report (Jan. 2007)

Failure of directive's target is not 'justified'
(1% in 2005 ↔ Target: 2%)

- ➔ **Signal of determination to reduce its dependence on oil and move to a low carbon economy**
- ➔ **Set minimum standards for the share of biofuels in 2020 (10%) – binding target**
- ➔ **Discourage poor-performing biofuels, encourage biofuels with good environmental and supply security performance (CARBON LABELLING)**


www.wip-munich.de
Carbon Labelling Workshop, 20 May 2008, Slovenia
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Proposal for RE Directive (23 January 2008)

Directive on the Promotion of the Use of Energy from Renewable Sources

- ➔ National Targets for the share of RE in 2020; EU-wide: 20% (e.g. Germany: 15%, Slovenia: 25%, Sweden: 49%, UK: 15%)
- ➔ Member States shall introduce appropriate measures to reach national targets
- ➔ Each Member State shall ensure that share of renewable sources in transport in 2020 is at least 10% of final consumption of energy in transport (only petrol and diesel)



Directive Art. 15 – Environmental Sustainability Criteria

Biofuels will only count to national targets, renewable energy obligations, or be eligible for financial support, if:

- ➔ GHG emission savings shall be at least 35%
(CARBON LABELLING)
- ➔ Biofuels shall not be made from raw material obtained from land with recognised high biodiversity value (e.g. undisturbed forest, highly biodiverse grassland)
- ➔ Biofuels shall not be made from raw material obtained from land with high carbon stock (e.g. wetlands, cont. forested areas)
- ➔ Agricultural raw materials cultivated in the EU shall comply with good agricultural and environmental conditions

RE/Biofuels Directive – On-going Discussion

- The RE Directive is currently under negotiation at MS level
- Heavy criticism of the 10% target is triggered by high food prices (food-fuel competition)
- Criticism includes the 'low' requirements of GHG savings, and the failure to include social criteria

➔ Green MEPs (and several NGOs) have called on the Commission to place a **moratorium on the 10% biofuel target**

➔ The Dutch Minister Cramer (Environment) demands **stricter criteria for biofuels** than those set by the EC (e.g. GHG reductions of 50% or even 60%) **(CARBON LABELLING)**

Reduction of CO₂ Emissions from Passenger Cars

Proposal of Legislative Framework in Dec. 2007

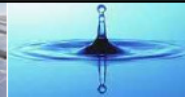
➔ EC Integrated Approach to reach objective of **120 g CO₂/km by 2012**

➔ **Mandatory target of 130 g CO₂/km** for average new car fleet by improvements of motor technology

➔ Further reduction of **10 g CO₂/km** by:

Other technological improvements (tyre pressure)

Increased use of biofuels (CARBON LABELLING)



Summary

- The new Directive on the Promotion of the Use of Energy from Renewable Sources includes a **binding target for biofuels in transport of 10% in 2020**
- Environmental sustainability criteria are introduced
 - GHG emission savings shall be at least 35%
 - No raw material from land with high biodiversity value
 - No raw material from land with high carbon stock
- **Carbon Labelling Initiatives may contribute to achieving GHG reduction targets**



THANK YOU for your attention!

Contact

Dr. Rainer Janssen
WIP – Renewable Energies
Sylvensteinstraße 2
81369 Munich
rainer.janssen@wip-munich.de
www.wip-munich.de