



## **"Biofuel Issues in the New Legislation on the Promotion of Renewable Energy"**

Public consultation of the Directorate-General Energy and  
Transport of the European Commission

18 June 2007

## **General**

The proposals for a new energy policy in Europe adopted by the EU on 10 January 2007 along with the targets for the introduction of renewable energies and biofuels are welcomed.

Biofuels use in member states is currently very limited. Without a sustainable EU biofuels policy, it will be very difficult to reach a 10 % share of biofuels in EU member states by 2020.

The evaluation and selection of the biofuels to be promoted will be key to making the EU biofuels policy as climate-friendly and sustainable as possible.

### **Re 1. "How should a biofuel sustainability system be designed?"**

The introduction of environmentally specific sustainability criteria that take account of the entire eco-balance is considered a reasonable approach. A classification of biofuels will require appropriate threshold values to be defined for different environmental categories above which biofuels are regarded as particularly promising.

The example of a minimum CO<sub>2</sub> reduction of 10 %, which has been suggested, is considered far too low. Biogenic fuels which do not result in a CO<sub>2</sub> reduction well above 10 % in comparison to diesel over the full well-to-wheel cycle should not be included in the relevant funding schemes.

The assessment of the various biofuel paths should take particular account of the CO<sub>2</sub> balance and the achievable space efficiency.

### **Re 3. "How should the use of second-generation biofuels be encouraged?"**

The EU target for the introduction of biofuels (10 % by 2020) is generally regarded as very ambitious.

As part of a voluntary commitment, the German gas industry has pledged to admix, by 2010, as much as 10 % of biomethane to the natural gas used as a vehicle fuel and to increase this share to 20 % by 2020.

With the situation being as it is, it can be assumed that first-generation biofuels will increasingly be used over the coming years to reach the targets. Given the EU's environmental sustainability strategy, a large-scale introduction of these fuels – and particularly imports from countries outside the EU – in an attempt to reach the EU's goals for the transport sector should be viewed critically.

For this reason, second-generation biofuels should receive particular support. This support could be in the form of a higher credit for biofuels to meet biofuel quotas (e.g. a second-generation biofuel share of 1 % would correspond to a first-generation biofuel share of 2 %) and tax incentives.

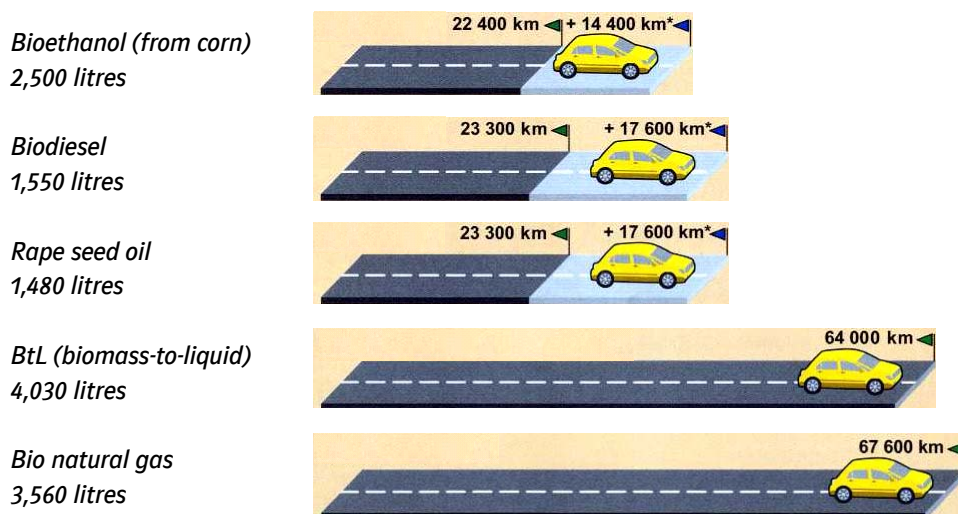
**Re 4.**

**"What further action is needed to make it possible to achieve a 10% biofuel share?"**

**Question 4.3:**

**Should the legislation include measures to encourage the use of biomethane, methanol and DME in transport? If so, what?"**

**Biomethane is a highly efficient second-generation fuel**, which is already available on a large scale. Biomethane can be produced from domestic raw materials and its chemical composition allows it to be blended with natural gas at any ratio. It could thus be transported to refuelling stations using the existing grid. Among all biofuels currently under discussion, biomethane has the highest energy yield per surface area (see graph published by Fachagentur Nachwachsende Rohstoffe e.V.).



\*Bio natural gas from secondary products (rape seed cake, pulp, straw); car mileage: Otto engine 7.4 l/100 km, diesel 6.1 l/100 km

Biomethane use across Europe must be underpinned by a **targeted promotion of compressed natural gas (CNG) as a vehicle fuel**. Natural gas used in motor vehicles can play a complementary role alongside biofuels (biomethane) with their high CO<sub>2</sub> reduction potential because the use of the fossil natural gas already reduces CO<sub>2</sub> emissions by more than 25 % when compared with petrol. The use of biomethane and the promotion of natural gas as a vehicle fuel is therefore in line with the targets set out in the EU Commission's Communication on alternative fuels for road transport COM (2001) 547 which, in addition to

the introduction of biofuels, envisages a 10 % share of natural gas in overall vehicle fuel use across the EU by 2020.

This will require focusing on a single gaseous fuel with an **EU-wide CNG strategy**. At present, fossil LPG (propane/butane) is used in some member states as a second gas in the transport sector because there are tax incentives. Unlike natural gas, LPG offers only a limited advantage in terms of climate protection over petrol. Moreover, **LPG**, which is a secondary refinery product, makes no contribution to the diversification of energy sources in the transport sector and **cannot be supplemented or replaced by available biofuels**. This advantage for natural gas over LPG should be reflected in the minimum levels of taxation for natural gas and LPG (Council Directive 2003/96/EC, Annex 1, Table A). The minimum level of taxation for natural gas should be kept at € 2.60 per GJ (H<sub>2</sub>) until 31 December 2020 so as to provide investment security for the development of a pan-European network of natural gas / biogas refuelling stations. In the second half of the 21st century, this network could then also be available for delivering hydrogen to refuelling stations.

In order to promote what is currently the only available second-generation biofuel (biomethane) it would be conceivable to also exempt the fossil fuel share from taxation provided that a certain minimum share of biomethane (e.g. 20 % until 2010, above 20 % from 2010 to 2020) is admixed to the natural gas used as a vehicle fuel. This exemption could be defined as an exceptional rule to Directive 2003/96/EC.

Gasification of biomass to produce either Synthetic Natural Gas (SNG) that can be used as transport fuel or to produce SNG and via a parallel Fischer-Tropsch synthesis produce biodiesel could give considerable amount of biofuel.

The pulp and paper industry may provide a promising route of synthetic fuels from biomass. This is the so-called "black liquor" route. Through gasification of the black liquor biodiesel can be produced with high efficiency.