

EUROPIA position on the Biomass Action Plan COM(2005)628 and the EU Strategy on Biofuels COM(2006)34

The EU Commission recently published two papers on the promotion of the use of biomass in energy applications. While the Biomass Action Plan outlined the broad scope of the use of biomass for energy generation in both stationary and mobile applications, the EU Strategy on Biofuels exclusively deals with one aspect of the biomass strategy, the promotion of biofuels.

The oil industry acknowledges that biomass can offer advantages as an indigenous energy source to reduce dependence of imports and its Greenhouse Gas (GHG) emissions and can be a valuable energy resource in the foreseeable future.

There are, however a number of aspects which need to be considered:

1. We should make best use of EU's energy crops to achieve an optimal contribution to the objectives of GHG reduction and energy security. Biomass is a limited resource for which there are competing demands, particularly for food crops.
2. Within the energy sector use of biomass for stationary applications like heat and power generation offer the best energy efficiency and greatest GHG avoidance. Any regulatory follow-up to the Biomass Action Plan should give priority to these applications.
3. Studies carried out jointly with the Commission demonstrate that the EU cannot produce enough biofuels even to meet current indicative targets of the Biofuels Directive. Therefore, any further ambitions will require unrestricted access to imports with the added benefit of reduced costs and enhanced GHG benefits.
4. The costs of today's biofuels exceed significantly those of the conventional fuels they are expected to replace. As a consequence introduction of biofuels will cause the EU energy bill as well as food prices to increase. This will have a significant negative impact on the competitiveness of the European economies.
5. Accordingly any legislation and tax-treatment to promote the development and use of biofuels should encourage those bio-components that deliver the greatest GHG avoidance potential at the lowest costs. It should also recognize legitimate concerns expressed over environmental impact and sustainability of the cultivation of biofuel crops.¹
6. Any scheme to categorise the performance of biofuels has to be based on sound WTW principles and is both simple and transparent to manage.

¹ T&E and four other environmental groups call on the EU to commit to sustainable biofuel production, <http://www.t-e.eu/Downloads-index-req-getit-lid-409.html>, 2006.

"Biofuels Communication – NGOs express concern over draft Communication on Biofuels", Fern and others, 2006.

"Biodiesel – keine saubere Alternative", Greenpeace,

http://www.greenpeace.de/themen/sonstige_themen/feinstaub/artikel/biodiesel_keine_saubere_alternative/, 2004.

„Bio-Diesel: Mogelpackung auf Kosten der Umwelt“, Greenpeace,

http://www.greenpeace.de/themen/sonstige_themen/feinstaub/artikel/bio_diesel_mogelpackung_auf_kosten_der_umwelt/, 2004.

„Aktuelle Bewertung des Einsatzes von Rapsöl/RME im Vergleich zu Dieselmotoren“, German Federal Environmental Agency,

<http://www.umweltbundesamt.de/verkehr/kraftstoff/biodiesel/biodiesel.htm>, 2000.

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7. The Commission proposals place significant emphasis on the production of ethanol as gasoline component. Promotion of bio-ethanol will only add to Europe's already large surplus in motor gasoline of which most is exported to the US. The objective to improve security of supply with biofuels will be achieved much better by producing bio-diesel, as the EU has a diesel deficit.
8. Regulatory measures should encourage all options and technologies that enable the greatest GHG benefit and that are most cost-effective. These measures and corresponding incentives should create a level playing field for all low and zero carbon options and stimulate innovation and competition in order to maximize GHG-reduction at lowest possible costs.
9. Any measures must be based on a thorough Impact Assessment. Work is currently being undertaken to determine the most cost effective way to reduce GHG generation from light duty vehicles in the context of a Commission Impact Assessment. Results from this assessment, which are expected to be available before mid-year should help decide which options provide most scope for GHG reductions and results of this work should not be pre-judged.

The European oil industry is ready to work jointly with the Commission and other stakeholders to determine the optimal use of biomass in all energy applications.

General points

Biomass is a limited resource.

Biomass production is restricted by the quality and availability of land. Bio-waste can be an important additional resource, but is constrained by supply and logistics of collection. Biomass availability for energy applications will be limited by competing demand for higher value added applications including food and paper & pulp.

The Commissions current ambitions for road biofuels cannot be satisfied from EU25 production alone. If current EU indicative biofuels targets are to be met, imports of bio components must be facilitated and trade restrictions removed.

The JEC WTW study estimates a maximum EU combined production of conventional bio-ethanol and conventional bio-diesel of 4.2% of EU road fuels demand by 2012. Any future ambition levels should take into account competitive demands for biomass from other sectors, its impact on the cost of food crops and energy, as well as other environmental impacts e.g. on biodiversity and water quality.

Within the energy sector, direct use of biomass for heat and power applications offers greater GHG savings than transport applications and should be given priority.

Biofuels for transport is one of the least effective ways to use biomass to avoid GHG emissions. The JEC WTW study concludes that using land to produce wood for electricity production avoids 2-5 times as much GHG as using the same land area to grow crops for conventional biofuels.

Biofuels are costly

According to the Commission's own assessment EU biofuels would only become cost-competitive with sustained oil prices above ca. 110 \$/bbl for bio-ethanol and above ca. 70 \$/bbl for biodiesel.

The cost of GHG abatement through conventional biofuels is high compared with opportunities in other sectors.

The JEC WTW study shows that the cost of GHG avoided through conventional biofuels ranges from 240 to 140 €/tonne (in a crude oil price environment of 30-60 \$/bbl). This compares to a current typical marginal cost of abatement of 20-30 €/tonne GHG in other sectors.

1. Impact of biofuels

Biofuels do not significantly improve security of road fuel supply, in fact they have their own supply risks.

While biodiesel can make a small contribution to the EU's shortfall in diesel, the use of bio components in gasoline will increase Europe's already significant supply surplus.

The JEC WTW study calculates that the energy production from conventional biofuels using available European arable land amounts to less than 5% of road transport needs. Biofuel availability can fluctuate according to the prevailing weather and competing markets for agricultural products, including for food use.

Production of biofuels also requires significant fossil fuel inputs, including diesel fuel and natural gas. Increasing Europe's natural gas imports in order to produce road fuels will not materially improve Europe's overall security of supply situation.

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Security of supply is enhanced by maintaining fungibility. Supply disruptions are more likely where low-volume non-fungible fuels are supplied. Use of biofuels as blend components in fungible gasoline and diesel supplies minimises this risk.

The WTW GHG reduction performance of biofuels depends critically on the biomass source and production pathway.

The JEC WTW study shows that the biomass feedstock and production process are critical to the energy and GHG balance of current and future biofuels. Current European biofuels typically deliver 20-50% GHG reduction compared with conventional gasoline and diesel on a WTW basis. In comparison, sugar cane ethanol from Brazil can deliver up to 90% reduction, and future advanced biofuel options from cellulosic material have the potential to provide similar benefits.

If greater potential is to be realised from biomass, this will require the development of new “advanced” conversion technologies which can use a range of feedstocks including waste materials, lignocellulosis and less intensively cultivated crops. These technologies are currently under investigation to evaluate their commercial viability. However, if policy is directed solely at creating a market for today’s biofuels – principally focusing on ethanol blending – this may seriously discourage and delay the development of advanced biofuels which hold far greater economic and environmental potential.

2. Best use of biofuels

Introduction of biofuels should not compromise fuel product quality.

Fuels need to be compatible with vehicle requirements. Today’s biofuels, typically ethanol and biodiesel have different properties than conventional gasoline and diesel, and care is needed in their use to avoid vehicle performance problems.

As for conventional fuels, carefully formulated fuel specifications, set by recognised industry standardisation bodies are needed to maintain fuel quality. Specifications are needed both for the biofuel component itself and for the finished fuel blend. Biofuel blends should comply with the same fuel specifications and OEM recommendations as conventional motor fuels, to ensure that relevant emission standards are met and to avoid vehicle performance or compatibility problems. Harmonised gasoline and diesel fuel specifications should be respected, ensuring that the fungibility (exchangeability) of fuels is maintained.

3. Any future legislative framework for the introduction of biofuels should follow the following general principles

▪ **Level Playing Field**

All participants in the fuels market should be subject to the same requirements. Regulatory mechanisms should not discriminate between biofuel components and biofuel blends on the basis of their country of origin. Instead, legislative approaches should encourage biofuels that deliver the greatest GHG emission benefit.

▪ **Supply Flexibility**

Flexible mechanisms that use market forces to encourage competition will deliver the best efficiency within each national market. Mandated recipes requiring fixed amounts of biofuel in each litre must be avoided.

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Targets should be framed over total road transport fuel volumes over a defined accounting period – a so-called pooled approach. Fuels suppliers should have the maximum flexibility in terms of the type of biofuel used, the timing and distribution across a market while meeting the overall target over the accounting period. Specific biofuels targets or quotas for gasoline and diesel must be avoided.

One potential approach is the use of biofuel obligations that involve the use of a tradable biofuel certificate or credit where the use of biofuel obligations is established. In this regard the ability to accumulate and trade biofuel credits between companies is a critical element for increasing the flexibility and efficiency of biofuel use.

- **Harmonisation between countries**

Commonality of biofuel implementation mechanisms and administrative requirements between Member States is desirable to encourage the most effective use of biofuels, while not degrading the highly integrated and fungible nature of the European road transport fuel market.

- **Innovation**

Regulatory mechanisms should be framed recognising the different energy and GHG savings possible with different biofuels, and should encourage innovation by improving production efficiency and developing new and improved pathways. Regulatory mechanisms should not act as a barrier to future biofuel developments.

- **Biofuels GHG Emissions Assurance²**

Regulatory measures should encourage options that enable the greatest GHG benefit and that are the most cost-effective, ensuring that any scheme to categorise and certify the GHG performance of biofuels is based on sound WTW principles and is both simple and transparent to manage.

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² The use of the term "Assurance Scheme" here is deliberate in order to distinguish such schemes to other alternative "certification" schemes associated with biofuels that have different objectives, for example regulatory mechanisms involving tradable certificates, or proposals to introduce a common EU wide biofuel certification for excise purposes. This is the terminology that has been adopted for the UK proposal that is currently being developed by the Low Carbon Vehicle Partnership.