European Bioethanol Fuel Association

BIOFUEL ISSUES IN THE NEW LEGISLATION ON THE PROMOTION OF RENEWABLE ENERGY

Public Consultation exercise

Views of the European Bioethanol Fuel Association (eBIO)

Brussels, 30 May 2007

eBIO is a non-profit European industry association under Belgium law. It is fostering bioethanol fuel production and use in the EU as well as advocating the proper legal and regulatory framework. eBIO was Founded in May 2005 and has 39 members.

106, rue Joseph II, B-1000 Brussels • telephone: +32 2 657 66 79 • fax: +32 2 657 93 57 •
www.ebio.org

Section 1. How should a biofuel sustainability system be designed?

Question 1.1

Do you think the "possible way forward" described above is feasible?

eBIO believes the "possible way forward" is feasible on condition that the support/incentive system is:

- a single system harmonised (legal basis Article 95 of the TEC) across the European Union (as opposed, for instance, to varying national schemes).
- non-discriminatory; and
- transparent, simple, practicable.

Non-discriminatory means an equal handling and judgement on a consistent basis worldwide for the extraction/ cultivation of raw materials and biomass for all transport fuels, including biofuels as well as for all commercial applications, including biofuels, food, electricity, construction and other industrial uses. Equally, the origin of the product, from inside or outside the EU, should not result in different standards being applied.

Question 1.2

What do you think the administrative burden of an approach like the "possible way forward" would be? (If possible, please quantify your answer.)

We are unaware of any similar public policy measure that has ever previously been trialled let alone adopted. Consequently, at this stage it is not possible to assess the administrative burden.

Whatever system is put in place it needs to meet the policy goal with the least administrative burden necessary for all involved parties. To this end, eBIO recommends that the preferred system should be tested and lessons learned before the final scheme is adopted. The proposed EU pilot should be overseen by a standing committee of all stakeholders that are directly involved in the delivery of the system. This committee will manage the pilot and, when finished, will make recommendations to the Commission on the final scheme.

The final result must be a single system harmonised across the European Union, and the abandonment of varying national schemes. It should include the cost-efficient design principles:

- all sustainability criteria should be minimum acceptability hurdle criteria.
- To meet the land use criteria biomass cultivated in accordance with EU Cross Compliance rules should not need additional certification.
- The book & claim verification system should be preferred.

Question 1.3

Please give your general comments on the "possible way forward", and on how it could be implemented. Does it give an adequate level of assurance that biofuels will be sustainably produced? If you think the problem should be tackled in a different way, please say how, giving details of the procedures that would be used.

Sustainability criterion 1: Minimum greenhouse gas savings

The reduction of greenhouse gases (GHG) arising from the substitution of crude oil products are one of the three principle sustainability reasons for promoting biofuel consumption (along with reducing oil vulnerability, and investing in the European economy and creating jobs). eBIO agrees with the view that biofuels can and should be able to demonstrate that the GHG savings are net positive, and that if they are net positive the biofuel should count towards achieving the biofuels policy target.

Biofuel plants have been built to operate under national existing regimes that do not impose sustainability conditions. Biofuel plants cost millions of euros to build and require time to pay off the debt of investment. Therefore, eBIO recommends that plants in operation at the time of the entry into force of a minimum GHG savings requirement should be granted a reasonable period of time to meet this requirement. This principle of "grandfathering" is well established in European environmental policy for industrial processes such as, for example, the implementation of the Integrated Pollution Prevention and Control Directive.

In its reply to the European Commission's 2006 questionnaire on the review of progress of the biofuels policy, eBIO expressed a number of concerns over the design of default values as a means to determine GHG emissions. eBIO will endorse the use of default values for this purpose on condition that it is a full and equal partner in the establishment of these default values.

eBIO is not a partner to the JRC/EUCAR/CONCAWE well-to-wheel study. It was not invited to provide data inputs or offer its expert consideration on the subjective assumptions made by the study partners, both of which are critical to the results. Therefore, these results cannot be accepted by eBIO as the basis for default values.

The JRC/EUCAR/CONCAWE well-to-wheel study was not designed to for the purpose of setting default values and consequently is not presently entirely methodologically fit for this purpose. For instance, the study compares biofuels with oil products manufactured in a European oil refinery from a broad variety of crude oil sources. However, in terms of saving greenhouse gas emissions, biofuels consumed in Europe displace the most expensive crude oil in the global crude oil market whose extraction is foregone. The oil products that the biofuel displaces may not be consumed in Europe, but that is irrelevant to the biofuels' greenhouse gas benefits. When setting default values for the greenhouse gas impact, biofuels consumed in the EU should be compared with the most expensive crude oil in the global crude oil market whose extraction is foregone.

Sustainability criterion 2 – avoiding major reduction in carbon stocks through land use change; and Sustainability criterion 3 – avoiding major biodiversity loss from land use change

eBIO endorses these criteria.

However, we wish to underline that land use change is only an indirect indicator for the depletion of the carbon. Consequently, two design issues need to be carefully addressed:

- First, a simple definition of a land use is not necessarily an accurate measure of the carbon stock in the soil. Care should be taken that the definition does not result in carbon poor soils being included.
- Second, there are different modes of crop cultivation that result in different levels of carbon release. A simple limitation on land use change might result in a limitation that is unnecessary should certain cultivation practices be adopted.

EU cross compliance rules should fulfil the verification of these criteria. Any additional conditions would result in farmers shifting away from biofuel feedstock production.

Equivalence to cross compliance rules need to apply to feedstock production both inside and outside the EU to avoid competition distortion. Consequently, for third country feedstock producers a Meta-system should be adopted allowing for the certification of biofuel feedstocks according to benchmarked international schemes and also allowing for direct accreditation to EU cross compliance rules.

Additional criterion – minimum social standards

No biomass or fuel should be accepted for consumption in the European Union if it has been made by means of forced and/or child labour. This principle is established in European policy, for instance in the Scheme of Generalised Tariff Preferences.

Question 1.4

Carbon stock differences between land uses would be taken into account under criterion 2. Should they also be taken into account under criterion 1? If so, what method should be used to determine how the land in question would have been used if it had not been used to produce raw material for biofuels?

No, the compliance with the carbon stock land use change criterion should be a separate hurdle criterion.

Questions 1.5 and 1.6

As described in the "possible way forward", criterion 3 focuses on land uses associated with exceptional biodiversity. Should the criterion be extended to apply to land that is adjacent to land uses associated with exceptional biodiversity? If so, why? How could this land be defined?

How could the term "exceptional biodiversity" (in criterion 3) be defined in a way that is scientifically based, transparent and non-discriminatory?

No comment.

Section 2. How should overall effects on land use be monitored?

Question 2.1

Please give your comments on the "possible way forward" described above. If you think the problem should be tackled in a different way, please say how.

eBIO endorses the possible way forward as described.

Question 2.2

Do you think it is possible to link indirect land use effects to individual consignments of biofuel? If so, please say how.

For eBIO it is unclear how to link indirect land use effects to individual consignments of biofuel.

As already underlined in answer to question 1.1. eBIO strongly recommends a non-discriminatory sustainability system. Non-discriminatory means an equal handling and judgement on a consistent basis worldwide for the extraction/cultivation of raw materials for all transport fuels, including biofuels and oil products and for the cultivation of biomass for all commercial applications, including biofuels, food, electricity, construction and other industrial uses. Equally, the origin of the product, from inside or outside the EU, should not result in different standards being applied.

The inclusion of all biomass in such an assurance instrument is necessary not only to maintain a level playing field of competitiveness, but also to ensure that the expansion of raw materials for biofuels does not cause environmental damage via the ripple effect of displacement of intensive biomass production into sensitive (high carbon stock and exceptional biodiversity) areas. This argument applies equally to increased global biomass production arising from European demand for other bio-based products, including other renewable energy markets.

Section 3. How should the use of second-generation biofuels be encouraged?

Question 3.1

- How should second-generation biofuels be defined? Should the definition be based on:
- the type of raw materials from which biofuels are made (for example, "biofuel from cellulosic material")?
- the type of technology used to produce the biofuel (for example, "biofuels produced using a production technique that is capable of handling cellulosic material")?
- other criteria (please give details)?

eBIO endorses option (a) the type of raw materials from which biofuels are made (for example, "biofuel from cellulosic material")

The definition of second generation biofuels should be used to significantly extend Europe's sustainable resource capacity from an economic perspective and offer Europe a pathway to international market competitiveness. The type of technology that might process the raw material should not act as a constraint on these objectives.

Question 3.2

Please give your comments on the "possible way forward" described above. If you think the problem should be tackled in a different way, please say how.

eBIO recommends a European minimum production/consumption target of cellulose bioethanol by a certain date, for instance 1 billion litres by year 2012. Sales credits should be granted (for instance valuing one litre of cellulose ethanol as equivalent to 2.5 litres of bioethanol from traditional materials), and limited to that target. An accreditation system should be introduced to certify the cellulosic raw material. The energy crops scheme should provide additional incentives for cellulose crops for bioethanol.

Furthermore, the European Commission must make a step-up in committing funds to assist the European industry in research, development and demonstration. Biofrac reported to the Commission in 2006 that: "Further progress is thus required to bring such conversion processes to market. These include more efficient chemical and biochemical systems (new enzymes, yeasts), innovative fractionation and purification processes and efficient uses of co-products, with optimal energy integration. Additionally, the flexibility of conversion plants has to be improved in order to enable conversion of a broad range of cellulosic feedstock."

Question 3.3

Should second-generation biofuels only be able to benefit from these advantages if they also achieve a defined level of greenhouse gas savings?

eBIO agrees with the view that biofuels can and should be able to demonstrate that its greenhouse gas emissions are net positive, be they "first generation or second generation", and that if they are net positive the biofuel should count towards achieving the biofuels policy target (see 1.3).

The European heads of government stated earlier this year that the principle policy objective for second-generation biofuels should be their commercialisation. Any greater sustainability constraint placed on them compared to first-generation biofuels would be counterproductive to that goal.

Section 4. What further action is needed to make it possible to achieve a 10% biofuel share?

Question 4.1

Should the legislation include measures to ensure that diesel containing 10% biodiesel (by volume) can be placed on the market, and is in fact placed on the market?

No comment.

Question 4.2

Should the legislation include measures to encourage the use of ethanol and biodiesel in high blends? If so, what?

Yes, the legislation needs to encourage high blends and pure biofuels too.

Sweden has amply demonstrated that the benefits of alternative renewable fuels (pure biofuels and blends of biofuels greater than 30% in petrol and diesel) are much greater in terms of generating public awareness and support, than the low level blends permitted in the European standards for petrol and diesel.

Alternative renewable fuels will remain as a niche market unless the demand-side is encouraged. Again, Sweden is a shining example of just how much can be achieved in this area. Since 2005, 50% of all purchased national authority vehicles are environmentally friendly. The national government offers biofuel tax concessions to high blend and pure biofuels and reduced company car taxation. Free parking is offered in 16 cities. The national government has also imposed minimum service station supply conditions to assure vehicle manufacturers and customers alike that they can buy the fuel, and that there is clear advertising of biofuels.

Europe needs to learn from these existing practices and implement both general measures (applicable to both biofuels in petrol and diesel as well as alternative renewable fuels) and specific measures for alternative renewable fuels.

General measures include:

- Road fuel tax concessions
- Requiring public procurement across Europe to use biofuels in existing fleets and to purchase new vehicles that accept alternative renewable fuels.
- Requiring clear advertising of biofuels at public service stations to passing traffic, with clear marking on the pumps of the proportion of biofuel in the fuel.
- Information campaigns.
- Specific measures are required both to ensure the fuel infrastructure exists for the car-buying public and the auto industry and to stimulate the market.

eBIO recommends that by 2008 all new service stations should be obliged to have at least one flexiFuel pump able to provide all blends of bioethanol/petrol. Additionally, by 2010 25% of fuel pumps in the service stations of each Member State should provide bioethanol in a flexible range of blends with traditional fuels.

The EU should further provide exemptions from VAT, parking and congestion charges, road tolls, road and vehicle taxes, etc. for “alternative vehicles” using bioethanol.

Question 4.3

Should the legislation include measures to and DME in transport? If so, what?

No comment.

Question 4.5 (there is no question 4.4 in the questionnaire)

Should the legislation ask the Commission to review, by a given date, whether it is possible to be confident that the 10% target can be achieved through:

- rules that allow 10% blending by volume of ethanol in ordinary petrol, plus
- rules that allow 10% blending by volume of biodiesel in ordinary diesel, plus
- the four options listed under 'other options for solving the problem';

If so, what should the date be?

If the review were to conclude that the target is unlikely to be met, what action should the Commission take?

No, the Commission should not put this matter off. It should be addressed now in the Fuel Quality Directive 98/70/EC.

The 10% target is a minimum energy share requirement for the EU. The European Commission stated only last January that an average 14% energy share would be optimal. The Commission's published scenario for compliance with the minimum 10% biofuels target for 2020 requires 61% bioethanol and 39% other biofuels. [1]

Bioethanol in Europe is presently almost exclusively used in petrol. If one compares the Commission's expected bioethanol requirement for 2020 to meet the minimum target with its published estimation of the petrol market in 2020[2], and if we were to assume that all bioethanol in 2020 would be consumed in petrol, it would require about 30% of bioethanol in each and every litre of petrol.

The Commission's published scenario for compliance with the 10% biofuels target states that:

> "Current rules limit biofuel content to 5% ethanol in petrol and 5% biodiesel in diesel (both by volume). The European Standardisation Committee (CEN) is already working on a Commission mandate for a 10% share of biodiesel – sufficient to accommodate the volume of biodiesel referred to above. In ethanol, the highest blend currently available on a mass market is the 25% used in Brazil."

(Brazil also consumes a much smaller but increasing amount of pure bioethanol in flexfuel cars).

Car showrooms are now selling cars that will still be on the roads in 2020. The vast majority of these models still only offer warranties that accept petrol and diesel with a maximum 5% biofuel blend by volume.

It is therefore very surprising that the Commission should contemplate a future review to consider what is already clear, that the vehicle fleet is not designed to meet the minimum target let alone higher optimal levels of consumption.

By putting off this issue, the Commission locks in to the future the problem that we have today of the auto constructors complaining that some of their cars are not generally fit for purpose to meet the 5.75% target and, hence, the need for both "low" and "high" biofuel petrols.

eBIO recommends that the Directive on Fuel Quality should include minimum biofuel requirements for petrol and diesel for the year 2020, at the very least in line with the Commission's published scenario to 2020, to signal to the auto industry that cars now in the showrooms should be compatible with the 2020 minimum binding target.

Question 4.6

More generally, what role should taxation play in the promotion of biofuels (considering different situations such as low blends, high blends and second-generation biofuels)?

eBIO recommends that the 2020 target respond to the following principles:

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[1] SEC(2006)1720.

[2] European Commission DG Joint Research Centre, EUCAR and CONCAWE, 2007. Well-to-wheels analysis of future automotive fuels in the European context.

a) an internal market for biofuels; a European harmonized system (1 system only),

b) equal benefit and burden sharing between Member States, and

c) equal benefit and burden sharing (polluter pays principle) between motorists.

We conclude that the minimum 10% market share needs to be delivered foremost by an obligation across the EU backed up by sanctions that effectively guarantee compliance with the target. The obligation should be supported by complementary European and national state aids, including tax concessions and capital investment grants. An interim target should be set for the year 2015.

eBIO would like to underline the continuing importance of tax concessions as a supplementary measure to an obligation.

In principle, an obligation can provide a fuel producer/blender with the same level of incentive to supply biofuels as fiscal support. Technically, this incentive could also apply equally in terms of encouraging domestic production. However, they are not mirror policies because one is a carrot and the other a stick. Consequently, the oil industry views higher cost domestic biofuel differently under these two regimes.

Road fuel tax concessions have been an attractive tool for policy-makers to encourage innovation and demonstration of new biofuel production processes and alternative fuels.

Obligations are certainly not an appropriate tool for promoting either pure biofuels or high-level blends. Biofuels have a lower energy content than fossil fuels. With low blends of biofuels in petrol and diesel this difference is considered to be imperceptible to the driving public (though visible to fleet managers). However, the driving public does notice how much more quickly the fuel tank drains with alternative renewable fuels. Road fuel tax concessions permit price discounting to offset this negative effect, resulting in the stunning grassroots growth of the alternative fuel, E85 and FlexiFuel cars in Sweden. An obligation alone discourages sales of these alternative fuels because the fuel distributor has no economic means or reason to discount prices in line with energy content.

Additional issue: Improving bioethanol sustainability towards 2020: CO_2 capture and storage.

Biofuels reduce greenhouse gas emissions. Nevertheless, in the process of production they emit CO_2. Many biodiesel and bioethanol facilities generate their own heat and power for the production process and these combustion plants produce CO_2. Bioethanol also produces very pure renewable CO_2 during fermentation.

To date carbon capture and storage (CCS) for biofuels production has been overlooked. The cost and diseconomies of scale of CCS logistics are excessive for an infant industry and, as for all industry sectors, there are presently severe information failures regarding CCS and an absence of enabling laws and regulations. Moreover, until now, the policy interest in CCS has been almost exclusively focused on capture from large carbon-emitting sources, not on individual emission sources that are an order-of-magnitude lower and that are, in any case, already viewed as part of the solution to global warming. Nevertheless, the combined CO_2 (both fossil and renewable) emissions from this growing number of production facilities is becoming substantial, and its capture and storage could significantly add to the carbon cost-effectiveness of biofuels.

eBIO recommends that the bioethanol industry be integrated into the EU's evolving CCS policy.