

**To Energy and Transport Directorate-General, European
Commission For Public consultation exercise, April – May 2007
Biofuel issues in the new legislation on the promotion of renewable
energy**

Response sent by EPPOA,

1. How should a biofuel sustainability system be designed?

Question 1.1: Do you think the "possible way forward" described above is feasible?

Only if the requirements outlined in the answer to Question 1.3 are fulfilled.

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.)

It would depend on the approach, and it would be lightest with the tax reductions/exemption approach. Especially for the actors.

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?

- As clearly stated in the fundamental, preliminary remarks, the Possible Way Forward should be a proactive and green solution based upon or including environmentally based tax reductions/exemption and obligations to provide engines that are 100% biofuel (PPO/ BE) compatible. The retroactive and grey solution based solely upon biofuel obligations will not suffice; biofuel obligations should only be considered as part of a diversified approach. The sustainability requirement must be set sufficiently high; 10% is ridiculously low. There must be a clear connexion between on the one hand tax reduction/exemption or subsidies and on the other hand the sustainability of the biofuel. A ranking of biofuels should be based upon a complete environmental life cycle analysis from soil to wheel (the expression well to wheel is not suitable in connexion with biofuels) including all environmental aspects and thus revealing the true sustainability, regardless of their status as first or later generation; in other words, second (and third) generation biofuels must compete on equal terms. To exemplify how the findings of a complete environmental life cycle analysis from soil to wheel may lead to surprising facts about true sustainability, a comparison between PPO, Biodiesel, and Bioethanol reveals the following differences in sustainability:
- As measured in % of the effective energy contents in the biofuel produced, the process energy amounts to 13% for PPO (just about the same value applies to fossil diesel), 23% for Bioethanol, and 26% for Biodiesel; in other words: Bioethanol and Biodiesel require twice as much process energy as does PPO;
- According to the German Ministry of Environment, PPO is harmless to the groundwater (nwg) whereas Biodiesel and Bioethanol belong to Water Hazard

Class 1 as do heavy fuel oil and a number of other oils and chemicals; this can be read at <http://www.umweltbundesamt.de/wgs-e/index.htm>;

- When comparing carbon stocks, it is important to realize that crops such as rape for PPO/Biodiesel leave much more biomass in the field than do almost all other crops including those used for Bioethanol, be it first generation or later: The total biomass produced in a rapeseed field amounts to 15 tons/ha, and in round figures, the distribution is 1 ton of PPO/Biodiesel, 2 tons of rape seed cakes (for fodder or fuel, PPO yields the best fodder), 4 tons of straw (for fuel or left as carbon stock), and 8 tons of roots (the basic carbon stock produced); as it appears, more than 50% is underground and is left in the field in any case; if the straw is ploughed down, 80% is left in the field as carbon stock;
- When comparing fertilizer use (and the accompanying energy/environmental impacts), it is important to realize that the seemingly high nitrogen requirement for crops such as rape for PPO/Biodiesel (almost as for wheat) is balanced by the fact that rape only borrows the nitrogen and gives it back to the field (plant oils are hydrocarbons); the effect is that with a proper crop rotation with rape followed by wheat, rape and wheat combined only require the same amount of fertilizers as do wheat and barley; with this, PPO/Biodiesel correspond to second generation Bioethanol
- When comparing pesticide use (and the accompanying energy/environmental impacts), it is important to realize that, contrary to general beliefs, crops such as rape for PPO/Biodiesel require much less pesticides than do almost other crops; in a Danish ministerial report on the prospects of pesticide free agriculture, grass and rape were the only crops without any significant problems, and therefore the cultivation of grass and rape would be increased in a pesticide free agriculture. As it appears, the sustainability level of PPO is exceptional. In the call for this Public consultation exercise, it has been stated that 'It should avoid any discrimination between domestic production and imports'; this however works both ways, and it has quite fundamental consequences. In order not to discriminate production in the EU which is far more environmentally regulated than in all other countries, and in order to avoid contributing to famine and destruction of biodiversity, organic carbon stocks, and environmental balance, in other countries, and to wider effects on regional and global scales, a binding agreement between the EU and prospective exporters of biofuels must be made, and it must fulfil the following criteria:
 - The entire agricultural use of land within each country should be taken into account;
 - The marginal environmental impact should be applied to the production of biofuel, including the effects of cultivation of hitherto virgin/non cultivated land in each country;
 - The exact same environmental requirements and the exact same environmental life cycle analyses should apply to all countries. Without an

agreement fulfilling the said criteria, EU will be flooded with non compliant biofuels from other countries, thus destroying the responsible efforts in the EU and contributing to unfathomable disasters in other countries and regions with severe global effects. To exemplify this, it is obvious that any increase in the production of first generation bioethanol from sugar cane anywhere in Brazil will replace other preexisting agricultural activities, chiefly food production, and these activities will have to be supplanted to other areas, including hitherto non cultivated land such as the Amazon rain forest. Therefore, any increase in first generation sugar cane based bioethanol production will be the ultimate cause of further destruction of the Amazon rain forest, no matter who actually destroys it and what is actually grown there. The same applies to other countries which may ultimately sacrifice virgin land for plant oil export to the EU. To further exemplify this, it is obvious that any increase in the production of biofuels may be the ultimate cause of shortage of food. As described above, PPO production based upon crops such as rape may form an integral part of the food production chain and at the same time contribute to the carbon stock building. Such production could be used as a benchmark to ensure responsible use of land.

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?

Yes. See also the information above about carbon stock created by crops used for PPO/Biodiesel. An environmental life cycle analysis from soil to wheel should be used to compare different crops/land use in terms of carbon stock reduction/building, based upon normal (hitherto) agricultural use.

Question 1.5: As described in the "possible way forward", criterion 3 focusses 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?

No, but as stated earlier, the environmental impact of any new cultivation of hitherto non cultivated land ultimately resulting from increased production of biofuels should be attributed to the biofuels production.

Question 1.6: How could the term "exceptional biodiversity" (in criterion 3) be defined in a way that is scientifically based, transparent and non-discriminatory?

The task will become much easier if the term 'scientifically based' is replaced by 'obvious': The term 'exceptional biodiversity' in itself implies an obviousness.

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.

As stated above, the entire agricultural use of land within each country should be taken into account, and the marginal environmental impact should be applied to the production of biofuel, including the effects of cultivation of hitherto virgin/non cultivated land in each country.

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.

As stated above, the entire agricultural use of land within each country should be taken into account, and the marginal environmental impact should be applied to the production of biofuel, including the effects of cultivation of hitherto virgin/non cultivated land in each country. Obviously, more direct and localized effects should also be included.

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: a) the type of raw materials from which biofuels are made (for example, "biofuel from cellulosic material")? b) the type of technology used to produce the biofuel (for example, "biofuels produced using a production technique that is capable of handling cellulosic material")? c) other criteria (please give details)?

The answer is c): Second generation biofuels should be defined on exactly the same criteria as the first generation biofuels, namely a complete environmental life cycle analysis of their sustainability.

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.

The second generation biofuels should just be treated as a natural part of the biofuel production.

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?

Being treated as a natural part of the biofuel production, the second generation biofuels should be subject to the same requirements and Tax reduction/exemption and to the same R&D/subsidy conditions. Obviously, development of new technologies requires support, but that applies to cultivation/ production of first generation biofuels as well.

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?

As it appears from the previous answers, the EU policy should not consist in biofuels obligations based upon such measures, but they may form part of a diversified approach. 10% non fossil fuel is still very far from a green technology.

Question 4.2: Should the legislation include measures to encourage the use of ethanol and biodiesel in high blends? If so, what?

Only as part of a diversified approach. 100% sustainable biofuel is the only truly green solution.

Question 4.3: Should the legislation include measures to encourage the use of biomethane, methanol and DME in transport? If so, what?

Not only those, but also the use of 100% PPO, Biodiesel, and Bioethanol. The obvious measures would be tax exemption for at least the greenest biofuels, and/or tax exemption/reduction for the proportion of biofuels in blends, the tax conditions being based upon the overall sustainability.

Question 4.5: 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: a) rules that allow 10% blending by volume of ethanol in ordinary petrol, plus b) rules that allow 10% blending by volume of biodiesel in ordinary diesel, plus c) 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?

Unfortunately, the 'other options for solving the problem' do not include PPO. Hopefully, this serious mistake will be corrected immediately: PPO is recognized as one of the biofuels in the EU policy, specifically in Directive 2003/30 EC. Conversion of engines to run on pure 100% PPO is a well known technology, so PPO does not present greater challenges than do biomethane, methanol, and dimethyl ether (DME) mentioned under 3. Other biofuels that can be used. The option of 100% Bioethanol is also omitted.

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)?

As it appears from the previous answer, the backbone of biofuel promotion should be taxation based on sustainability in the form of tax exemption/reduction along with the obligation to produce engines that may run on pure biofuels such as PPO for diesel type engines and Bioethanol for petrol engines. That would lead to optimized implementation of sustainable biofuels.