

## **Biofuel issues in the new legislation on the promotion of renewable energy**

### **Public consultation exercise**

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

*Question 1.1:*

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

Yes, in general the way described is feasible and a timely implementation is absolutely necessary. However, if the goal of the entire approach is to really improve sustainability of biomass and biofuel production the use a broader approach which can however also be organized in a simple way is necessary (for a more detailed description please also see the attached presentation).

- It must be kept in mind that the problem we are dealing with is a global issue and of global relevance. We are talking about global commodity markets with a huge amount of international trade, especially for the biofuel feedstock: Therefore, addressing just biofuels is not enough. The certification system should be designed in a way that it is capable to cover all biomass, independent of the end use (food, feed, all bioenergy, industrial use). For example the use of palm oil is much more relevant in heat and power generation than for biofuels. Today, biomass use for biofuels is on a global perspective quite low and addressing only this part does not help to do something for overall sustainability. In addition, the system must be able to work on a global scale to at least have the chance to address leakage effects and to include additional countries. The long-term perspective should be to include more and more biomass from a rising amount of countries and independent of the end-use of the biomass.
- Having this in mind, it seems like a book and claim system is the only system capable of addressing these problems on a global scale and allowing as many participants as possible. All other systems would probably be nice-to-have but are unrealistic in today markets, would add additional costs, would always only be able to cover parts of the market, would discriminate against remote suppliers and would not be accepted by relevant stakeholders. Nevertheless if single market segments want to use for example a track and trace system this can be set up for certain premium markets or niche markets. However, to create the chance to have a positive impact on sustainability the set-up of a book and claim system should be promoted. A book and claim system would also create incentives to produce sustainable for producers that do not even produce for export markets or only produce small amounts of certain biomass.

- Generally, when talking about sustainability certification, two different aspects must be considered:
  - First of all, as the most pressing sustainability issues are related to agricultural production (conversion of high carbon content land, rainforests, biodiversity), these should be addressed by an individual certificate only covering agricultural production of the individual feedstock which can then be used independent of the final feedstock use.
  - Second, a certificate for the GHG balance of biofuels should be implemented that covers the entire production chain. This can be based on default values in the beginning. In the long run however, it must allow and must set incentives for a detailed calculation and must provide benefits for overperformers to guarantee the promotion of product and process innovations with lower GHG emissions. The GHG certificate must be able to work in a superior system, e.g. the decarbonisation strategy or other strategies that promote fuels based on their GHG performance.
- Although the JRC/EUCAR/CONCAWE study is a comprehensive and detailed study, it does not include all necessary pathways for biofuels and does not take account of some important direct and indirect land use issues. In addition, the study is not accepted by all major stakeholders, eg from the biofuels industry, and it is unlikely that other non EU countries that want to export biofuels or feedstock to Europe will accept it as it does not build upon a stakeholder dialogue.

### 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.)**

The "possible way forward" is not precise enough to really quantify costs. There are only tendencies that can be stated here:

- Generally, the additional costs depend on the strictness and amount of the criteria set. The stricter the criteria and the more criteria there are, the higher the additional administrative costs for the certification (and also for changes that are necessary in the production chains).
- Generally, the higher the traceability of the final product back to its origin, the higher the costs (additional supply chains, input/output controls, etc.). This is especially true for a track and trace system but partly also for a mass balance system. These additional costs occur at no extra benefit. The general goal to set up a book and claim system that can be entered easily by participants around the globe should be stated by the EC. It must also be kept in mind that in such a system that builds upon a certificate trade the degree of sustainability reached with certain costs is higher than in other systems creating the same amount of costs. A certain degree of sustainability can be reached in the most efficient way by using a book and claim system.

- In the medium to long run, systems will be self-financing, especially if incentives for sustainable production are high enough, e.g. by the decarbonisation strategy or other political support systems that are based on the sustainability/GHG performance of biomass production and bioenergy. Nevertheless, the most efficient system with the lowest additional cost should be chosen. According to most stakeholders and to all international players that will determine what and how commodities are traded this is a book and claim system.

### 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.**

To guarantee a sustainable production of biofuels a broader approach, as described above, is necessary (see also the presentation in the attachment). Otherwise, even if the biofuels are produced sustainably, this could be outweighed by negative effects in other areas which must be tackled as well. The set-up of a sustainability certification system using a book and claim system offers the possibility to include all countries and all biomass and to thereby guarantee a sustainable production on a much broader level. In the medium term and taking account of the EU's decarbonisation strategy a more precise calculation of the GHG benefits of single biofuels will also be necessary.

To start certification quickly and to guarantee that the most urgent sustainability problems are addressed, a few simple criteria are necessary. These must include:

- No conversion of high carbon density land and high biodiversity land.
- No activities within primary forests and secondary forests with high biodiversity (e.g. rainforests on Borneo).
- No child labor; No forced labor (if this is possible without violating international trade rules).
- Minimum amount of GHG savings (proven by default values). Gradual increases of minimum amount is possible (this approach would still guarantee that within quota systems the set amount of biofuels would enter the market).
- Further aspects, e.g. soil erosion or water use and contamination issues can be extremely important within single countries and for single feedstock. It should be possible to add these criteria.

Already existing agricultural sustainability certification systems that cover parts or all of these criteria can be integrated and must work within the systems used by the EU or by single member states. Therefore a meta-system with certain rules on how to integrate existing systems must be set up.

The proposed sustainability criteria as stated in BOX 1 are acceptable. However, defining the land use questions will be difficult and must be started quickly. In addition, as stated above, using the JRC study as a basis would probably create some acceptance problems.

#### *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?**

Theoretically, to determine the exact GHG balance this would be necessary. However, as mentioned in the document, due to methodological questions this is not possible yet. If the conversion of high carbon content land is avoided based on the implementation of criterion 2 this is sufficient. Otherwise, solving the methodological questions would delay the entire certification process and would create additional costs. Waiting for the detailed method is not justified and negative impacts on sustainability would occur while methods are developed. There are already international processes on the development of GHG calculation methodologies. It is not at all foreseeable when these processes will deliver results that can actually be used in practice for the urgent sustainability problems that must be solved quickly. If there will be a precise and implementable method in future it can still be integrated. Nevertheless, if no high carbon content land is used, positive GHG balances are very likely. This fact is sufficient to start a certification process based on the criteria mentioned above without having to wait for a detailed methodology which probably could not be used on a broad basis in practice anyway.

#### *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?**

If this land is necessary to preserve the high biodiversity land it should be included. A clear definition is needed here.

#### *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?**

Existing definitions of high nature value land could probably be used (source: FAO and UNEP).

## **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.**

This problem is hard to tackle. Reporting on how land would have developed if biofuel use had remained constant is difficult as it is hard to determine. Generally, setting up a reporting system creates insecurities as actions following the reports are unclear.

There are only two ways to really address leakage effects, i.e. indirect land use effects:

- Set up of a truly global system that is able to cover all biomass, independent of end use. This will certainly not work from the beginning on but at least this should be the long term goal of any system that is implemented.
- Another possibility is the de-listing of companies that convert high carbon content land no matter if for the production of feedstock for biofuels or any other feedstock for any other end-use. These companies would then be excluded from biofuels certification. This is a strong market interference and it is for example difficult to deal with subsidiaries but however, it would help to avoid negative indirect land use effects.

Both approaches should be combined. In contrast to other possibilities (e.g. adding certain risk factors to single countries) the proposed approaches do not discriminate against single producers and cannot have a detrimental effect like the risk-adder approach.

*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.**

This is not possible. It could only be done on a country by country basis and would discriminate single producers that do not induce any land use changes.

### **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)?

If this must be defined at all, a definition based on the type of raw material used could help. This should probably be broader than just cellulosic material and should also include other materials that are not used in the biofuel production process yet, have the potential to broaden the resource base and to reduce the competition food vs. fuel. These criteria could also be combined with a minimum amount of GHG savings which must clearly exceed the savings of first generation biofuels.

However, for the long-run, it is proposed to simply base the classification of biofuels on their GHG performance. Producing biofuels from biomass that is certified as sustainable would be a precondition for this. This is the only possibility to avoid discrimination and to reach the most important goals attached to the promotion of biofuels in an efficient way and without a political decision on future technologies. Any definition would always be arbitrary to a certain extent.

*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.**

Policies should not opt for single technologies. It would be advantageous to at least give a signal that future promotion will be based only on GHG performance with a precondition of using only biomass certified as sustainable using a simple sustainable biomass certificate as described in the presentation attached.

*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?**

If there will be an extra promotion of second generation biofuels they must also reach a certain amount of GHG savings which is higher than that of first generation biofuels. A precondition is the use of sustainable biomass.

If GHG savings (plus sustainability certificate) would be the only aspect of promotion, 2<sup>nd</sup> generation biofuels will come on the market if avoiding GHG emissions with them is efficient.

**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?**

Currently, missing standardizations for higher biofuel blends (at least E10 and B10) are the biggest hurdles. Without them, none of the biofuel targets will be reached, unless B100 and E85 will be strongly promoted again. Missing norms are also creating insecurities for investments. A clear statement on the willingness to create

E10 and B10 norms is necessary. Different approaches within the EU and single member states (e.g. single fuel and multi-fuel strategy) must be avoided.

It is important that measures to introduce an E10 or a B10 consider both the biofuel objectives and the technical requirements. While E10 problems are widely solved the implementation of B10 is risky regarding a huge part of the current automotive fleet. There is a need for a transition period and/or for a consideration of other possibilities to introduce B10, e.g. hydrogenated vegetable oil (HVO). Close co-operation between stakeholders (automotive and mineral oil industry as well as biofuel producers) is required.

Alternatively, if a high penalty is introduced that must be paid if the biofuel targets are not met solutions will be reached without the necessity for politics to lead the way. However, without the introduction of E10 and B10 reaching the biofuel targets seems unlikely.

*Question 4.2:*

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

Reaching the targets with E10/B10 and without additional fuel types seems to be the preferred option and less costly than creating new fuel types with the necessary infrastructures and vehicle adaptations. "High-bio" fuels (>E10/B10) require an adaptation of the fuel quality directive again, a large number of adapted cars and an appropriate infrastructure. Market penetration of "high bio" fuels beyond captive fleets, eg in agriculture, will be slow, even with strong incentives.

Also see question 4.1.

*Question 4.3:*

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

Again: if promotion is based on GHG abatement and on the use of biomass certified as sustainable or if a certain amount of GHG abatement of overall fuel consumption is prescribed, these additional fuels will come on the market if needed and efficient.

If only overall biofuel quota is set they will also come on the market if they are cheaper than existing biofuels.

*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?**

A regular review (every other year) is certainly helpful for politics and all market participants.

However, the signal of the mandatory target must be strong enough from the very beginning. Otherwise reviews only open escape clauses for all market participants. Consistency with the decarbonisation approach (see COM (2007) 18) has to be ensured.

*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)?**

In the long term a taxation of fuels based on carbon content or the inclusion of the transport sector in the emissions trading scheme would be most efficient. This should be clearly stated as the long-term perspective so that market participants can already take it into account.

If, in the meantime, a tax promotion shall take place it should be based on the GHG performance of the different biofuels and on the use of sustainable biomass. The sustainable biomass can certainly include resources and feedstock which are not used today for biofuel production (and do not compete with food production) and which can be categorized as second generation. Additional tax promotion could be introduced for the use of new feedstock which is not used for food and feed production.

Fachagentur Nachwachsende Rohstoffe e.V. (FNR)

meó Consulting Team