

1. HOW SHOULD A BIOFUEL SUSTAINABILITY SYSTEM BE DESIGNED?

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

Yes, indeed we think this should be the principle way forward!

As one of the main goals of the European legislation for energy is the reduction of greenhouse gas emissions (GHG), without any doubt the saving of GHG should be the main criterion when incorporating a new legislation on the promotion of bio fuels.

In this respect the JRC/EUCAR/Convawe “well-to-wheel” study could only be an example for the definition of “default values” for net GHG savings. First of all the variety of conversion routes for bio fuels is manifold.

In this respect for instance the GHG balance for the production of ethanol could lead to high GHG savings via the sugar cane route while producing the process energy from the residual biogas whereas via corn route with lignite for process energy production could result in low or negative without GHG savings. Hence the calculation methodology for GHG saving should be revised insuring that all stakeholder have the chance in participating the elaboration. In this context the study “The greenhouse gas calculation methodology for biomass-based electricity, heat and fuels” by the Project Group “Sustainable Production of Biomass” / Netherlands could be the baseline for further elaboration ¹.

Furthermore the JRC/EUCAR/Convawe “well-to-wheel” study is not including the production of bio diesel based on by-products like animal fats and used cooking oils (UCO). The German IFEU-Institute made a survey on GHG savings of nearly all available bio fuels worldwide². They stated that especially bio diesel made from animal fats and used cooking oils (UCO) have the most efficient GHG savings (figure 1). This survey showed also that it is not a question of a specific technique but always the use of specific raw materials, their availability and their by-product usage! Consequently animal by-products should be included when incorporating a new legislation on promotion of bio fuel.

¹ www.senternovem.nl/mmfiles/The_greenhouse_gas_calculation_methodology_for_biomass-based_electricity_heat_and_fuels_tcm24-221151.pdf

² IFEU: CO₂-neutrale Wege zukünftiger Mobilität durch Biokraftstoffe: Eine Bestandsaufnahme:

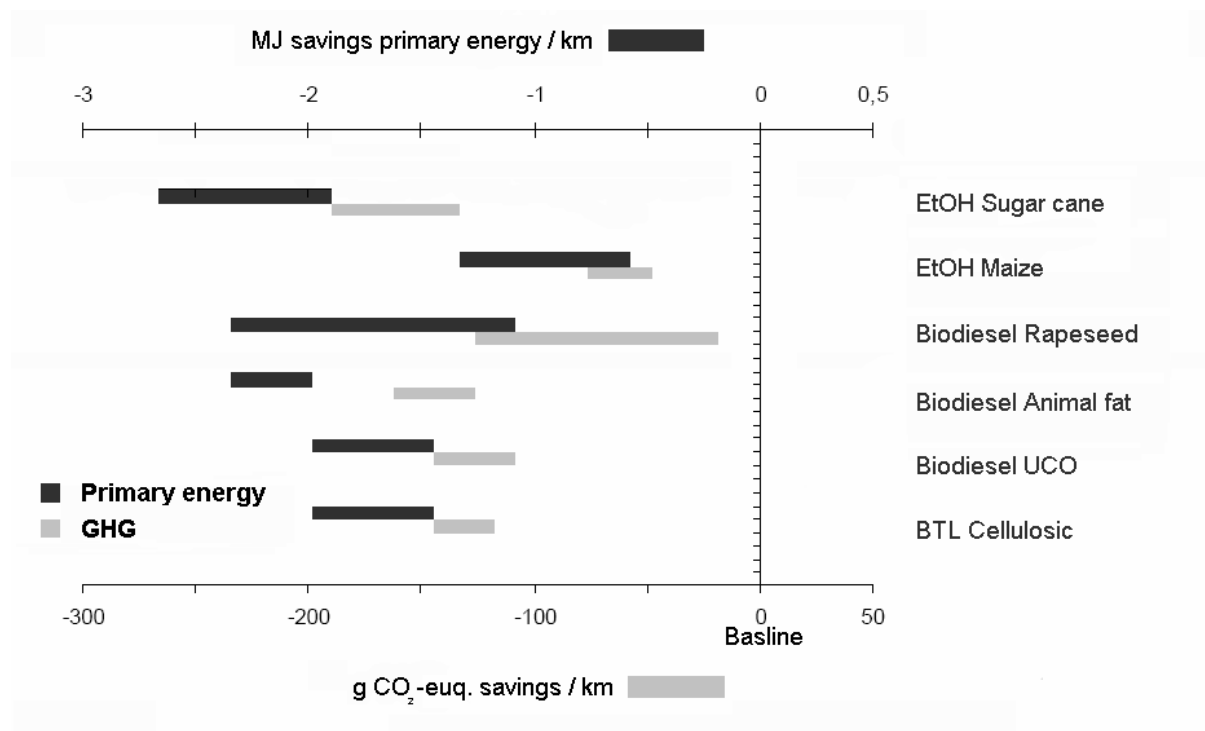


Figure 1: Primary energy and GHG balance2

This is even more relevant in the context of the increasing land using conflicts. Due to the fact that these residues would never fail the criterion 2 and 3 member states should be encouraged to use them by giving extra credits. They should not only focus on energy crops and their influence on carbon stocks, biodiversity or the competition fuel / food and excluding by-products as very important raw material.

For that reason we state that criterion No. 1 is more essential than the other ones but nevertheless they will be very helpful to evaluate the sustainability criteria especially for fuels or raw materials produced in non member states.

The EU should not only promote bio fuels made from by-products but also hinder member states to exclude them from their bio fuel promotion scheme like Germany actually does in the "Biokraftstoffquotengesetz" (bio fuel quota law). This law promotes only animal fat based bio diesel if it is made from fat fit for human consumption or feeding fat (i.e. that Germany allows only feed and food for fuel). It will stop any promotion for animal fat based bio diesel from 2012 and nevertheless it promotes only bio diesel fitting the CFPP which will never be the case for animal fat based bio diesel. It was agreed at CEN that CFPP has not be fulfilled for blending because it is definitely not necessary. These severe burdens on a product with these excellent LCA and GHG savings can not be accepted by the EU and should therefore be prohibited specifically.

Question 1.2: What do you think the administrative burden of an approach like the "possible way forward" would be?

The supervision of sustainability criteria is undoubtedly necessary but it must be practical and pragmatic. The accomplishing of paperwork must not absorb the greenhouse gas savings. Thus the efforts must be well balanced.

The administrative burden mainly depends on the verification systems being used. First models are discussed in the Commission and for example in Germany by *meo consulting* on behalf of the

German Federal Ministry of Food, Agriculture and Consumer Protection. From our point of view the “book and claim” seems to be preferable comparing to the other systems (track and trace; mass balance), as far as the system

- has relatively low implementation and operation cost,
- can be “easily” and “rapidly” implemented worldwide due to small numbers of verification moments and
- the participants of the system will not be hampered in their daily activities.

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 bio fuels will be sustainable 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.

As mentioned in answer to question 1.1 with respect to the criteria 2 and 3 the focus on raw materials must include more and more by-products such as animal fats, used cooking oils and others. Regardless whether it is a benchmark system, a certification system or a system based on bilateral agreements it must always be transparent and traceable.

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 bio fuels?

This question is not linked to the use of by-products like animal fats and therefore not our main focus.

Question 1.5: 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?

This question is not linked to the use of by-products like animal fats and therefore not our main focus.

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?

This question is not linked to the use of by-products like animal fats and therefore not our main focus.

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 question is not linked to the use of by-products like animal fats and therefore not our main focus.

Question 2.2: Do you think it is possible to link indirect land use effects to individual consignments of bio fuel? If so, please say how.

As mentioned before by-products are not concerned by this discussion! Nevertheless it must be clear that a system giving credits for this reason (or any other not yet mentioned here) do not discriminate by-products! The use of by-products itself is an acknowledged GHG saving method particularly where these by-products must otherwise be disposed of. This should be accredited.

3. HOW SHOULD THE USE OF SECOND-GENERATION BIOFUELS BE ENCOURAGED?

Question 3.1: How should second-generation bio fuels be defined? Should the definition be based on:

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

The main reasons for the promotion of bio fuels are to gain independence from oil imports, to promote rural areas and to reduce GHG emissions. Hence the definition of "eligible" and so called second generation bio fuels should support these goals. Therefore it seems to be more appropriate to put the focus on feedstock-, energy- and CO₂-efficiency.

On this account the bio fuels must be produced in a sustainable way including cultivation and harvest of raw materials, transport, production etc. The ongoing discussion about the use of cellulosic materials does not fit all these requests! Is cellulosic material as such sustainable including the one from rain forests, mangroves, and palm plantation? Will possible deforestation, erosion or even desertification not be assessed?

The same question must be asked discussing special techniques (point b). If the production process itself is harmful to the environment spoiling water, air and energy then it must be obviously stopped. Even the finest technique must be evaluated like the common available: The potential to reduce GHG emissions!

We think that cellulosic material as all other material like palm oil and the production processes must provide objective evidence of their sustainability. Only a holistic approach will fit the

sustainability criteria in a global world. Due to that also the use of by-products like glycerine or proteins (from soy or rape) for feed or food must be incorporated in the holistic approach.

EU Commissioner Mrs. FissaidBoel said that the definition of second generation bio fuels should be mainly based on the use of agricultural by-products of all provenience. This includes cellulosic material as well as animal by-products or by-products from the food and drink industry. Especially their use has a high GHG emissions saving potential but nevertheless also their use must fit the sustainability criteria discussed.

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.

We think that this above mentioned technique/cellulose bonus is not in line with the global goal of the promotion of bio fuels! Only pure sustainability criteria should be the basis for subsidies!

Question 3.3: Should second-generation bio fuels only be able to benefit from these advantages if they also achieve a defined level of greenhouse gas savings?

Definitely yes! Otherwise it will be a step back instead of a step forward!

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% bio diesel (by volume) can be placed on the market, and is in fact placed on the market?

Different examples show that in the most cases the technique is possible to fit the political standards / targets:

- substitution of lead in the antiknock additive
- use of high bio diesel blends in trucks

Since years the target to increase the bio diesel blend is well known and accepted. We should not stop on this way; therefore the 10% blending is a must on the way forward.

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

Yes! The success story of bio fuels in Germany (the European leader in bio fuel production) was mainly based on the use of high blend (B-100). Additionally the promotion of bio diesel as such arouses the public awareness of the need for bio fuels! For this reason bio fuels are very well accepted in Germany.

But also international higher blends, like the B-20³ in the US, are enjoying a broad acceptance by the major engine companies. Most have stated formally that the use of blends up to B20 will not

³ Defined under the ASTM D-6751 specification

void their parts and workmanship warranties. In the US there have been over 45 million miles of successful, problem-free, real-world operation with B-20 blends in a wide variety of engines, climates, and applications⁴.

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

Yes, if all discussed sustainability criteria are fulfilled! Especially biomethane from manure, sewage sludge or other organic residues has a high GHG emission reduction potential!

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 bio diesel 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?

We strongly believe that a 10% blending is feasible, but on the other hand also a credit system / certification system based on higher blends should be allowed and promoted. Such a credit system could help to reach higher overall blending, even before the European Committee on Standardisation will amend the diesel standard to allow 10% bio fuel (bio diesel or bio ethanol) blend.

Question 4.6: More generally, what role should taxation play in the promotion of bio fuels (considering different situations such as low blends, high blends and second-generation bio fuels)?

The commission should be open for both systems: Blending obligations and tax incentives (even for higher blends!). At present both are necessary to compensate for the disadvantages in the production costs to achieve the advantages of the greenhouse gas savings.

The EU must introduce mandatory targets if member states fail to achieve the indicative targets so far laid down by the EU.

Bonn, Germany, 13 June 2007

⁴ www.biodiesel.org/resources/fuelfactsheets/standards_and_warranties.shtml