

## **EU Biofuels Policy – The Current State of the Debate**

### **Current legislation for biofuels in transport:**

The Biofuel Directive was passed in 2003 and sets a 5.75% indicative target of biofuel use by 2010. All member states are supposed to work towards that aim, although they are allowed some flexibility. This target is calculated according to energy content – biofuels yield less energy per litre than fossil fuels, so the volume will be greater than 5.75%. There is no formal legislative proposal to overturn this existing legislation.

### **Biofuels and other bioenergy in the draft Renewable Energy Directive:**

The draft Renewable Energy Directive was announced at the EU Spring Summit in 2007 and was tabled by the European Commissioner for Energy and Transport in January 2008. The version which forms the basis of the current discussion is the one agreed by the EU Parliament's Committee on Industry, Research and Energy (ITRE), the lead committee for this Directive. Now the member states will have to reach an agreement on the Renewable Energy Directive. They have set up an ad hoc working group which meets regularly and which will continue debating issues, including around the definition of marginal lands, sub-targets, interim targets, land-use change, minimum greenhouse gas savings, review of the 2020 target, etc. The European Council will formally agree what the ad hoc working group concludes and then Council, Commission and the European Parliament will negotiate to try and reach a "First Reading Agreement" which will be put before parliament, probably in November or December 2008 and also to a Council meeting. At that stage, there will be little scope for changing any parts of the Renewable Energy Directive. The only options open to MEPs will then be to agree to or reject the whole draft directive as one package.

### ***What does the current draft legislation (following the ITRE Committee vote) say about biomass and biofuels in particular?***

1. There will be a mandatory target for 'renewable energy' in the transport sector of 5% by 2015 and of 10% by 2020. This is widely expected to be met primarily from biofuels, since there is no infrastructure for hydrogen cars and there are no indications of any major shift by car manufacturers towards electric cars. Those targets are calculated by energy content, so, unless a substantial amount of electricity or hydrogen from renewable sources was used, they would translate into greater biofuel volumes than 5% or 10% of fossil fuel use.
2. There will be a review of the 2020 target in 2014 at the latest.
3. Out of the 2015 and the 2020 'renewable energy for transport' targets, 20% and 40% respectively will have to be met "*from electricity or hydrogen from renewable sources, energy from waste, residues and ligno-cellulosic biomass or algae produced in vats, or energy from feedstock grown on degraded land with a net carbon benefit regarding land use emissions over 10 years*". At present, the definition of 'degraded lands' which was adopted by the ITRE Committee is formulated in a way which would make it very difficult to be met, but that current definition is expected to be changed before the Renewable Energy Directive becomes law.
4. Biomass for heat and power will count towards the EU's overall 20% renewable energy target by 2020, together with renewable energy forms such as wind, solar or hydro power.
5. There will be social and environmental standards for all bioenergy. This does not mean that all bioenergy used in the EU has to comply with the standards, but it does mean that bioenergy that counts towards the renewable target (not just in the transport sector), including towards the target in the new Fuel Quality Directive (see below) and all biomass that is subsidised by the EU or member states must comply with them.

Whilst standards contain various conditions regarding deforestation, non-competition with food production, water and soil protection, labour conditions, land rights and protecting highly biodiverse areas, proposals to protect 'high conservation value' land and permanent grassland have been watered down or deleted. Negative indirect impacts will be ignored, except for a, probably, small proportion of the greenhouse gas

emissions from indirect land use change being taken account in greenhouse gas calculations from 2012 and even then only for bioenergy in the transport sector. On the other hand, the presumed 'greenhouse gas savings' from biofuel production will be calculated on the basis of quite sweeping assumptions regarding the 'positive' indirect impacts of biofuel co-products. This will be discussed under Questions and Answers below.

Member states will not be allowed to introduce stricter standards than the EU.

Not just the standards themselves but also the provisions for verifying whether they will be met contain serious weaknesses – see below under Questions and Answers.

5. Biofuels and other bioenergy used for transport can only be subsidised or count towards the Renewable Energy Directive or the Fuel Quality Directive target if it results in at least 45% 'greenhouse gas reductions' compared to fossil fuels in the transport sector, and in 60% reductions from 2015. However, there is no requirement for bioenergy in the heat and power sectors to result in any greenhouse gas reductions at all, although the general social and environmental criteria will apply. And furthermore, there is no requirement for biofuels to meet this requirement either until 2013 – unless they come from refineries that opened after January 2008.

6. When calculating greenhouse gas emission 'reductions', all emissions from indirect land use change will be completely ignored until 2012. After that, for biofuels which come from arable land, pasture or permanent cropland, a certain amount of greenhouse gas emissions will be added when calculating greenhouse gas balances (a so-called 'risk adder') – unless the European Commission believes that the particular feedstock is not linked to indirect land use change. The Commission will decide later how much weight will actually be given to indirect land use change in those calculations and the Council and EP will have to agree to it

### **Biofuels in the draft Fuel Quality Directive**

The new draft Fuel Quality Directive (FQD) was published by the European Commission in January 2007. Whereas the current FQD deals primarily with air pollution, the new one will also introduce a "greenhouse gas reduction target" for transport fuels. The life-cycle greenhouse gas emissions (i.e. from oil exploration to petrol or diesel or from growing biofuel feedstock to ethanol or biodiesel) for all transport fuels will have to be monitored. Between 2010 and 2020, those emissions will have to be reduced by 1% every year, or 2% every two years.

This does not mean that the overall greenhouse gas emissions from the transport sector are to be reduced: The volume of road transport in the EU is growing at well above 1% per year, yet the FQD only looks at greenhouse gases on a per-gallon basis.

The wording of the draft FQD makes it likely that much of the requirement for so-called "greenhouse gas savings" will be met through biofuels. In theory, a 10% greenhouse gas target could translate into much greater biofuel use than then target set by the Renewable Energy Directive. For a detailed analysis, see [http://www.biofuelwatch.org.uk/docs/fqd\\_briefing\\_sheet\\_3.pdf](http://www.biofuelwatch.org.uk/docs/fqd_briefing_sheet_3.pdf) . However, negotiations are still ongoing, including about the size of the target, whether there will be a review, and also about whether some of it will be deemed to have been met by oil companies buying CDM carbon credits.

It now seems almost certain that the same social and environmental standards that will be agreed for the Renewable Energy Directive will also apply to the Fuel Quality Directive. The same methods for calculating greenhouse gases, including the same default values will be used. Those default values have not yet been agreed.

The legislative process for the Fuel Quality Directive is slightly more advanced than that for the Renewable Energy Directive: Member states have reached an agreement amongst themselves and formal negotiations between the European Council, the European Commission and a representative of the Parliament's Environment Committee have started. It is likely that the new FQD will be adopted before the end of the year.

## **Questions and Answers:**

**Note: Unless stated otherwise, the answers are based on the position adopted by the ITRE Committee, which may not in all respects be the final position that the EU will adopt.**

***1. Q: Does the recent vote by the Industry, Research and Energy (ITRE) Committee represent a step away from the originally proposed 10% mandatory target?***

A: The 10% target remains in place, except that it will be subject to a review no later than 2014. In May, the European Parliament's Environment Committee had voted to lower it to 4% in 2015 and to 8-10% in 2010 but the ITRE Committee did not agree with that and instead voted for 5% by 2015 and 10% by 2010.

***2. Q: How significant are the sub-targets, i.e. the provisions that 20% of the renewable energy for transport target in 2015 and 40% in 2020 should be met from hydrogen or electricity from renewable energy, or from biofuels made from waste, solid biomass, algae or biofuels from degraded lands?***

A: Hydrogen would require extremely large infrastructure investment, but there are no plans for this. Nor are there any signs of car manufacturers switching to electric cars, or being forced to do so in future. The target will therefore first and foremost be a biofuel target. Biofuels from algae do not yet exist on a commercial scale, and nobody knows whether or when they will be available, nor what their environmental impacts, for example in terms of land requirements, would be. It is not known whether biofuels from solid biomass will be commercially available by 2015 – this will depend on technological breakthroughs. If they become available then the sub-target could create a new incentive for monoculture tree plantations, particularly in the tropics, where trees grow fastest – no improvement from current agrofuels. Another concern is the inclusion of biofuels from “degraded lands” in this sub-target. It is not clear what the final definition will be, but depending on that definition it could be a way of allowing the whole target to be met from first generation biofuels. There is a risk that large areas of land which are important for people's livelihoods and for biodiversity could be defined as ‘degraded’.

***3. Q: Have sustainability standards been improved, compared to previous proposals?***

A: Compared to the original proposal by the European Commission, there are a lot more standards and criteria and they will apply to all bioenergy under the Renewable Energy Directive and the Fuel Quality Directive (except for the requirement to reduce greenhouse gas emissions, which will only apply to the transport sector). Some basic social criteria are now included. There are still very important omissions (see above), but there are even more fundamental concerns:

+ Indirect land use change is still largely ignored, yet the indirect impacts of biofuel production (such as displacement of other forms of agriculture, pushing the agricultural frontier further into forests, or major infrastructure investment) are very often far worse than the direct impacts. Indirect impacts will be ignored completely for all biomass outside the transport sector. For the transport sector, emissions from indirect land use change are to be factored into greenhouse gas calculations, but only from 2012 (and even then the requirement to reduce greenhouse gases won't apply to biofuels from existing refineries until 2013). There is every chance that the value assigned to indirect land use change emissions will be small and in no way reflect the true impacts – if it did then it would almost certainly be impossible to meet the requirements of either the Renewable Energy Directive or the Fuel Quality Directive. Furthermore, the indirect impacts on communities, on biodiversity, soil and water will be completely ignored. On the other hand, ‘positive indirect impacts’ of biofuel production, linked to co-products will be assumed and taken into account – see Question 4 below.

+ No credible verification system has been proposed. There are problems with all existing certification proposals and schemes: They serve to certify inherently unsustainable monocultures, they have not been endorsed by the people and communities directly affected, they cannot deal with indirect impacts and they take attention away from unsustainable levels of consumption. However, there are specific problems with the current EU proposal: It is suggested that biofuels can be certified “sustainable” based on bilateral and multilateral agreements, with few concrete provisions for monitoring them. It would thus be possible for the EU to sign an agreement with the Brazilian government that certifies all Brazilian feedstock as being

sustainable for up to five years, subject to a very general statement about ‘transparency’ and ‘independent auditing’.

Furthermore, voluntary certification schemes, such as the Forest Stewardship Council (FSC) or the Roundtable for Sustainable Palm Oil (RSPO) will also be used. The details on this will be worked out by the European Commission. So far, certification has only been ‘tried and tested’ in the wood industry and no certification scheme, including the FSC has been able to ensure that certificates actually guarantee that even basic principles and standards have been met.

Whilst the list of ‘standards’ used by the EU might now look better than what the European Commission proposed, no credible verification procedures have been proposed – yet without credible verification standards themselves become meaningless.

***4. Q: Will the requirement for biofuels to have to meet greenhouse gas reduction target ensure that only ‘climate friendly biofuels’ will be used in future?***

A: No. First of all, contrary to all the claims and proposed legislation regarding ‘greenhouse gas reductions’ from biofuels, there is overwhelming evidence that virtually all biofuels are worse for the climate than fossil fuels. This is backed up by peer reviewed studies which consider indirect as well as direct climate impacts. Joseph Fargione, lead author of one of those studied, published in Science states:

“From a climate change perspective, current biofuels are worse than fossil fuels” because they cause high carbon emissions from land use change. This, according to Fargione, does not simply apply to some feedstocks: “All the biofuels we use now cause clearing of natural ecosystems for agriculture”.

Given that virtually no ‘climate-friendly’ biofuels exist, it appears that it will only be possible to meet the targets for ‘greenhouse gas reductions’ if creative or false greenhouse gas accountancy is used. The methods for calculating greenhouse gas emissions from biofuels and the default values have not yet been agreed, but some of the flaws or shortcomings are already clear:

Emissions linked to indirect land use change will be ignored until 2012 and they will almost certainly not be fully reflected in calculations after that date.

All of the methodologies and default values proposed by the European Commission and some member states so far are at odds with recent peer reviewed science and suggest that most biofuels are linked to less greenhouse gas emissions than the fossil fuels they replace. Agreements on calculation methods and default values are currently being negotiated, based on political interests rather than science.

Whilst the large emissions linked to indirect land use change will be largely ignored, the method used to calculate greenhouse gas balances will be weighted heavily in favour of biofuels by taking presumed ‘positive indirect impacts’ from biofuel co-products (byproducts) into account. For example, it will be assumed that the byproducts from ethanol and biodiesel production will replace other animal feeds, such as soya. The greenhouse gas emissions linked to the amount of soya animal feed presumed to be displaced by biofuel byproducts will then be calculated. Those emissions will be classed as ‘greenhouse gas savings’ from biofuels. Effectively, this means that a large proportion of the ‘greenhouse gas savings’ from, for example, rapeseed biodiesel stem from a presumption that using rapeseed oil for biodiesel will result in less soya being grown worldwide – whilst ignoring the fact that it will also result in more palm oil being grown.

In reality, however, not all byproducts will actually be used in the way assumed in the calculations, there is an absolute limit to how much of the biofuel product can be fed to cattle without making them ill, and the livestock industry might simply expand rather than use less soya. All greenhouse gas emissions caused by displacement from biofuel production (with the exception of a small post-2012 ‘risk adder’ for indirect land use change) will be ignored. For example, tallow, a byproduct of the livestock industry, is increasingly used as a biodiesel feedstock, rather than for making soap, detergents or other cleaning products. Soap and detergent manufacturers therefore have to import palm oil to replace the tallow which is no longer available to them, yet the climate impact of the additional palm oil will not in any way be attributed to biodiesel from tallow. The so-called ‘positive greenhouse balances’ of biofuels are thus primarily created by a methodology

which assumes and counts positive indirect impacts but by and large disregards the very high and well documented negative indirect impacts.

It will be possible to use default values in the case of all imports and some EU-grown feedstock, hence information about actual direct land use change, emissions from soil erosion, actual agrichemical use and protection, etc will not have to be collected or used.

Where member states, such as the UK government, have proposed or introduced greenhouse gas default values, tropical biofuels, such as sugar cane ethanol and, in some cases, palm oil, have been classed as generally having particularly good greenhouse gas balances because they are very 'efficient' – yet those are directly linked to the (direct and more often indirect) destruction of tropical forests, wetlands and other ecosystems and are thus major contributors to climate change. A requirement for high greenhouse gas savings could, ironically, boost those tropical feedstocks in particular.

Furthermore, there will be no requirements at all for bioenergy for heat and power (including vegetable oil for CHP plants, for example) to meet any greenhouse gas standards, nor will existing biofuel refineries have to show that they reduce greenhouse gas emissions at all prior to 2013.

**5. Q: Are there any signs that MEPs or member states might move away from the 10% mandatory target?**

A: There are no signs of any movement within the European Parliament, the Commission or the European Council towards abandoning the 10% mandatory target, despite the fact that a large number of NGOs have been raising awareness of the disastrous likely impact of such a target. There has been major lobbying in favour of the 10% target by industry, including by car manufacturers, agribusiness and biofuel companies, and also by some other governments, particularly those of Brazil and Malaysia. With the exception of the European Greens, none of main political group has come out against even the 10% mandatory target, although opinions vary amongst MEPs of the same party/political group. The Socialist Group, PSE (which includes the Labour Party in the UK and the SPD in Germany) has been particularly strong and united in their support for the 10% target.

As discussed above, the final text of the Renewable Energy Directive is still being negotiated, although any move away from the 10% target appears unlikely. Parliament will then have to vote on the Renewable Energy Directive, there will be no separate vote on biofuels. Instead, the only options for MEPs will be to accept or reject the entire Renewable Energy Directive text as agreed following negotiations.

Almuth Ernsting, 20<sup>th</sup> September 2008