RENEWABLE ENERGY ASSOCIATION

European Commission Consultation on Indirect Land Use Impacts of Biofuels – October 2010

Introduction

The Renewable Energy Association (REA) is the largest trade association for renewables in the UK, with over 650 corporate members. We cover the full spectrum of the renewable energy technologies across all the sectors; power, heat, transport and renewable gas.

The REA responded to the Commission's "pre-consultation" on indirect land use change in summer 2009, where we offered a commentary on the options put forward. We continue to believe that policy should reflect the best available science and that a risk-based approach offers the most pragmatic way forward.

Question 1 – Do you consider that the analytical work referred to above, and/or other analytical work in this field, provides a good basis for determining how significant indirect land use change resulting for the production of biofuels is?

NO.

The REA response to the Commission's "pre-consultation" in July 2009 set out the principles against which the efficacy of any modelling work should be judged:

- The model / assessment method must be made fully transparent to public, and parameters used must be able to be peer reviewed.
- The predictive ability of the model must be able to be tested e.g. by empirical modelling or back-testing elements of the model.
- Accounting should be done on the basis of land use changes caused by increased biofuel use, according to crop and fuel type.
- Land use changes as a result of biofuel co-products substituting for other cops or crop products should be accounted for, according to co-product use.
- Account should be taken of changes in biomass yield growth with increased demand growth for food, feed and fuel.
- Account should be taken of the magnitude and timing of biofuel policy targets.
- Account should be taken of changes in trade flows and biomass supply across regions to identify where ILUC is likely to occur.
- Account should be taken of the type of land for where ILUC is likely to occur and the carbon stocks associated with that land.
- Account should be taken of agronomic effects delivered by preceding or following crops or intercropping.

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Against these principles the analytical studies referred to in the current consultation have severe limitations, a number of which arise from the fact that General and Partial Equilibrium models were not developed to accommodate the specific characteristics relevant to indirect land use change :

- The macro-economic models lack transparency/objectivity. Assumptions are not justified and not all sources are cited.
- The assumptions made in the models and the input data used vary between the studies. For example, there is a wide variation in estimates of transport fuel demand with resulting differences in the conclusions drawn. There are also differences in the base case biofuels increase and the contribution of second generation biofuels.
- The input data itself is often subject to significant uncertainty. It is difficult to understand how uncertain input data can lead to apparently precise conclusions, as for example in the IFPRI study.
- The modelling of yield growth is inappropriate as it assumes that all the increase in demand above the estimated yield growth is met by land area change.
- The models are static and are not able to accommodate a rapidly changing regulatory and technological environment.
- Co-products, where they are included at all, are not treated in a consistent or appropriate manner in the models. In this context reports by Ensus Ltd[1] and ADAS UK Ltd[2] should be taken into account.
- Analysis of the international oil seeds market aggregates all oilseed crops which has exaggerated the ILUC impact. The analysis should disaggregate the market to allow soybean meal, as the primary product from soybean to be modelled as the marginal source of high protein animal feed.
- The GTAP model was not developed for agricultural trade or ILUC and has severe limitations. The IFPRI study attempts to compensate for this but uses arbitrary figures for a range of factors. A more detailed critique of the Global Trade and Environmental Impact Study of the EU Biofuels Mandate by the REA has been forwarded separately.
- Nevertheless, the models do show broadly that the GHG effects of ILUC are not as pronounced as might have been feared.

In conclusion, the outputs from the studies are neither clear nor consistent and therefore their conclusions are not robust and should not be used to develop policy.

Question 2 – On the basis of the available evidence, do you think that EU action is needed to address indirect land use change?

As the REA has pointed put on several occasions indirect land use change effects cannot be simply ascribed to biofuels. The available evidence does not support a

[1] "Impact of protein concentrate coproducts on net land requirement of European biofuels production" (Lywood, Pinkney, Cockerill, 2009)

[2] "Opportunities for avoidance of land use change through substitution of soyabean meal and cereals in European livestock diets with bioethanol coproducts" (Weightman, Cottrill, Wiltshire, Kindred, Sylvester-Bradley, 2009)

clear causal relationship. Indirect land use change is a function of agricultural and other land-based activities. Action to address carbon and sustainability issues in all sectors needs urgent and global attention.

The need for action on indirect land use change for biofuels will be determined as much by the anxieties/preoccupations of civil society as by the available evidence. In these circumstances, the REA believes that studies using causal-descriptive modelling could provide a more realistic approach to ILUC than the theoretical macro-economic modelling chosen in the studies. An example of this cause and effect modelling is recent work commissioned from E4Tech[3] by the UK Department for Transport, published on 19 October 2010. This type of approach has a number of advantages, notably:

- Greater transparency of assumptions and data
- A less theoretical approach grounded in the real world
- Adaptability to cater for different feedstocks
- Ability to incorporate policy developments

A cause and effect approach could be used to develop a risk-based approach to ILUC based on broad order ILUC effects by biofuel pathway. See response to question 4 below.

Question 3 – If action is to be taken, and if it is to have the effect of encouraging greater use of some categories of biofuel and/or less use of other categories of biofuel than would other wise be the case, it would be necessary to identify these categories of biofuel on the basis of the analytical work. As such, do you think it is possible to draw sufficiently reliable conclusions on whether indirect land use change impacts of biofuels vary according to:

Feedstock type

Geographical location

Land management

As stated above the REA has reservations about the available evidence as a basis for action. For example, the evidence as presented in the consultation would not support the development of specific ILUC factors as advocated by some protagonists. Suggestions that some form of temporary ILUC factor should be introduced would equally be unacceptable as this, by definition, would not be based on sound science. Such an action would also deter investors who need regulatory clarity.

Nevertheless, using causal-descriptive modelling, we believe that there would be scope for developing a risk-based approach based on biofuel pathway which will be dependent on feedstock type and, to some degree, geographical location.

[3] "A causal descriptive approach to modelling the GHG emissions associated with the indirect land use impact of biofuels", E4Tech, October 2010

Land management as a specific variable is less relevant for indirect land use change except at the international level. This is explored further in the mitigation options set out in the response to question 4 below.

Question 4 – Based on your responses to the above questions, what course of action do you think appropriate?

- ***A. Take no action for the time being, while monitoring impacts including trends in certain key parameters and, if appropriate, proposing corrective action at a later date.***
- ***B. Take action by encouraging greater use of some categories of biofuel***
- ***C. Take action by discouraging the use of some categories of biofuel***
- ***D. Take some other form of action***

As a more general observation, the REA believes that the full range of mandatory carbon and sustainability criteria set out in the Renewable Energy Directive must be implemented as a matter of urgency. The fact that so few Member States will be ready to transpose the Directive by the due date of 5 December 2010 is a matter of great regret. This is particularly the case for Member States, such the UK, who have been in the vanguard of developing carbon and sustainability criteria, but seem not to perceive the urgent need to make these rules mandatory. In this context it should be noted that the Renewable Energy Directive requires the minimum GHG saving to be 50% by 2017. While we recognise the very real issues posed by ILUC and the fact that the European Commission is required to set out a report on ILUC by the end of 2010, we fear that the debate on ILUC has become something of a distraction to the over-riding need to drive for more sustainable biofuels by implementing the mandatory sustainability rules of the Directive. Implementation of the rules will go a long way to preventing the use in the EU of unsustainable biofuels, for example those from feedstocks grown on converted wetlands or peatlands.

The REA does not believe that sufficiently robust evidence is yet available to define a definitive policy action aimed at addressing indirect land use change in the biofuels sector. Nevertheless, we would support action to:

1) Develop further work to identify biofuels with the greatest ILUC risk

This work should explore the development of a methodology aimed at incentivising "good" behaviour based on a realistic appraisal of drivers and mitigation measures, and penalising "bad" behaviour that is likely to lead to a significant increase in GHG emissions.

2) Identify ILUC mitigation measures that would reduce ILUC risk by feedstock, geographical area and, where appropriate, land management. These actions should include:
    - Strategic land use planning/zoning. This should apply internationally agreed definitions of "degraded" and "idle" land.
    - Factoring in the GHG and land use effects of the use of biofuel co-products.

- Implementation of "Responsible Cultivation Areas" in regions where this concept is appropriate.
- Integration of agricultural systems in regions where this is appropriate
- R & D support for agriculture to develop better yields and improved agronomic practices where appropriate
- Incentives, including linking reward to carbon saved, to encourage the early use of biofuel technologies and feedstocks that deliver high GHG savings

This risk-based approach would support a combination of A. and D. above, whereby action could be on-going in the development of further, more practical, research. This approach would also elucidate what action could or should be taken under B. and C. above.

In addition, the REA would advocate the following actions:

- Extend the sustainability criteria in the RED to all biomass for energy. The REA regrets that the European Commission was unable to propose an EU-wide scheme on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling, as suggested in the RED. We hope that all Member States will implement national schemes as is the intention in the UK.
- Develop a more urgent approach to giving assistance to developing countries to combat deforestation and destruction of habitats.
- Address the need to apply sustainability criteria globally to all land-based production sectors. It cannot be right for the overall health of the planet that biofuels alone are subject to strict carbon, sustainability and ILUC rules while other sectors, with the same capacity for "good" or "bad" behaviour, are not thus regulated.

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