

2 June 2011

Department for Transport
Zone 1/32, Great Minster House
76 Marsham Street
London SW1P 4DR

Dear Sir / Madam

Re: Consultation on proposals to implement Articles 7a to 7e of the EU Fuel Quality Directive requiring suppliers to reduce the lifecycle greenhouse gas intensity of transport fuels and introducing sustainability criteria for biofuels

Thank you for the opportunity to comment on the implementation of the Fuel Quality Directive (FQD). I write on behalf of the Nuffield Council on Bioethics and my comments are drawn from its recent report *Biofuels: ethical issues*, published in April 2011.

We have already submitted a detailed response to the DfT's consultation on the implementation of the transport elements of the Renewable Energy Directive (RED). In that submission, we respond to individual questions and points raised, describing how the recommendations in our report should be implemented specifically in amending the Renewable Transport Fuels Obligation (RTFO).

We are unable to comment on many of the questions in the FQD consultation owing to their technical and specialist nature. Instead, here we provide an overview of the Council's report, including its main conclusions and recommendations. We then draw attention to the Council's conclusions on greenhouse gas emissions (GHG) associated with biofuels, which relate to how different biofuel types should be certified in terms of their GHG emissions.

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Overview of *Biofuels: ethical issues*

Method

Despite vigorous debate around biofuels, there has been little systematic ethical analysis of the field to inform current policy discussions around renewable energy, land use and climate change. This led the Council, 18 months ago, to set up an expert working group to consider the ethical issues raised by both current and potential future approaches to biofuels. The group was chaired by Professor Joyce Tait of Edinburgh University and included members with expertise in science, the environment, ethics, law, policy, economics, the commercial sector, energy security, and sustainable and international development. To inform its deliberations, the Working Party held a three-month public consultation, during which 90 contributions were received from a wide range of organisations and individuals. It also held a series of 'fact-finding meetings' with, for example, non-governmental organisations, scientists, industry and policy makers. Full details of the method of working and a summary of the consultation responses can be found in the report.

Biofuels: current and new approaches

Biofuels are one of the few available alternatives to fossil fuels used for transport. Driven by the global challenges of climate change, energy security and economic development, policies such as the RED have led to a rapid expansion in biofuel production around the world over the past decade.

However, current methods of biofuel production – the so-called 'first generation' biofuels – have been associated with serious environmental and social harms. In the US, the rapid increase in ethanol production from corn was blamed for contributing to the increase in the price of corn and other grains. There were also disputes over whether corn-based ethanol produces fewer overall greenhouse gas emissions than fossil fuels. In Brazil, large-scale biofuel production from sugar cane was criticised for contributing to deforestation in rich habitat areas and leading to biodiversity losses. Concerns were also raised about abuses of workers' rights, including contemporary slavery and informal child labour. Biodiesel production in Malaysia using palm oil has also not been without criticism, with evidence of biodiversity losses, including the already endangered orang-utan, and so-called 'land grabs' by producers looking to obtain land for growing biofuel crops.

Both the demand for biofuels created by policy and the emergence of harms with some current biofuel production has prompted research into new approaches to biofuel production, using for example lignocellulosic and algal feedstocks. Research is focussing on biofuels that have the potential to be produced without harm to the environment or local populations; are in minimal competition with food production; need minimal input of resources such as land and water; can be processed efficiently to yield high-quality liquid biofuels; and are deliverable in sufficient quantities. However, while these approaches show considerable promise, commercial-scale production is still some years away.

It is difficult to predict exactly which technologies will successfully emerge. However, the lessons learned from current biofuels must be integral in the development of new ones in order not to repeat the mistakes of the past. Meanwhile, it is clear that established biofuels will continue to play a role while new products emerge, and mechanisms to mitigate their negative effects are imperative.

Ethical framework

By drawing on moral values such as human rights, solidarity, sustainability, stewardship and justice, the Nuffield Council report sets out six ethical principles that policy makers should use to evaluate biofuel technologies and guide policy development:

1. Biofuels development should not be at the expense of people's essential rights (including access to sufficient food and water, health rights, work rights and land entitlements).
2. Biofuels should be environmentally sustainable.
3. Biofuels should contribute to a net reduction of total greenhouse gas emissions and not exacerbate global climate change.
4. Biofuels should develop in accordance with trade principles that are fair and recognise the rights of people to just reward (including labour rights and intellectual property rights).
5. Costs and benefits of biofuels should be distributed in an equitable way.

The Council then considered whether there may be a duty to develop biofuels in the face of global climate change. To address this a sixth Principle is proposed:

6. If the first five Principles are respected and if biofuels can play a crucial role in mitigating dangerous climate change then, depending on certain key considerations, there is a duty to develop such biofuels.

These additional key considerations are: absolute cost; alternative energy sources; opportunity costs; the existing degree of uncertainty; irreversibility; degree of participation; and the overarching notion of proportionate governance.

Main conclusions and recommendations

Testing existing policy against the ethical principles, we conclude that the UK RTFO and the European RED – which effectively set mandatory targets for biofuel production – encourage unethical practices by stimulating rapid expansion of biofuel production without also putting in place appropriate safeguards. We thus recommend:

- **Current UK and European national biofuel targets should be replaced with a more sophisticated target-based strategy that considers the wider consequences of biofuel production.**
- **The strategy should incorporate a comprehensive ethical standard based on our Ethical Principles and should be enforced through a certification scheme. Certification should apply to all biofuels supplied in the UK and Europe that are counted toward biofuel targets.**
- **The EU should provide financial support and advice to countries that might find it difficult to certify biofuels in this way.**
- **Biofuels policies and future sustainability initiatives should not discourage local, small-scale biofuel production, particularly in developing countries that experience fuel poverty.**
- **The ethical standard and associated certification scheme should ideally be applied to all similar technologies and products to guide decision making in a wider policy context.**

We also find that current UK and EU policies include few incentives for the development of new biofuel technologies. Thus, we recommend:

- **Policy makers should incentivise research and development of new biofuels technologies that need less land and other resources, avoid social and environmental harms, and reduce greenhouse gas emissions.**

Accounting for GHG emissions for biofuels

In the report, we recommend that different biofuel types should be certified on the basis of their life cycle GHG emissions according to the attributional life cycle assessment, and based on a single international standard. Such certification should be complemented by a robust regulatory mechanism to ensure compliance. Furthermore, we suggest that the standard should be drawn up by the original authors of the Renewable Energy Directive, including the Joint Research Centre and the subsequent regulators who must translate EC policy into individual Member State practice.

We urge the UK Government, when discussing how GHG emissions for biofuels should be calculated, to take the lead in calling for and enabling the development of a single international standard as we have described.

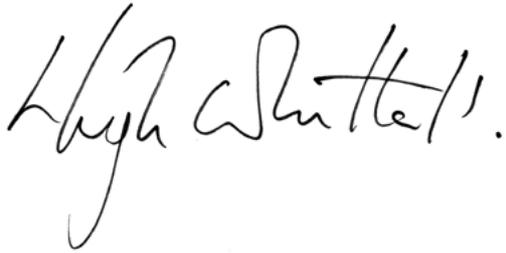
Dealing with land use change

We recommend that policies on land use change should be set within a global, co-ordinated response to climate change, with strong international and local measures to prevent destruction of high carbon stocks such as rainforests, wetlands and peatlands. We are aware that the Commission is currently assessing a shortlist of

policy options regarding indirect land use change. We call on the UK Government to lead on establishing land use change policies within a global co-ordinated response to climate change.

Please do not hesitate to contact me if you would like to discuss any of these points further. Full details of the Council's report and recommendations are available through the Council's website at: www.nuffieldbioethics.org/biofuels

Yours sincerely

A handwritten signature in black ink that reads "Hugh Whittall". The signature is written in a cursive style with a large initial 'H' and a long, sweeping tail on the 'l'.

Hugh Whittall

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