Friends of the Earth

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Briefing

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The bad business of biofuels

According to new research (i), European taxpayers and consumers will pay a high price for the biofuels being added to transport fuels throughout the EU. In 2020, biofuels could cost European motorists an extra €18 billion (£15 billion) in petrol and diesel bills alone. This is despite biofuels not delivering on their core objective of reducing greenhouse gas (GHG) emissions. Not only will motorists and taxpayers carry a more expensive burden, but biofuels are also driving millions of people in developing countries into hunger and leaving poor communities landless. Genuine solutions for reducing transport GHG emissions remain underfunded.

Biofuel target

The EU's Renewable Energy Directive (RED) requires 10% of all energy used in transport to come from renewable sources by 2020. While Member States have various options for meeting this target, official plans suggest that this will be delivered almost entirely through industrial biofuels (ii).

In the UK, fuel suppliers have to ensure that road transport fuel includes at least 4% biofuel in 2012, rising to 5% in 2013. The UK government is to consult in 2012 on whether to meet the entire 10% EU target through the use of biofuels. The German government plans to source 12% of energy used in transport from biofuels by 2020, up from 6.25% of transport energy currently.

The economic costs of biofuel targets

The economic costs of meeting biofuel targets are the subject of two new reports by the International Institute for Sustainable Development's Global Subsidies Initiative and the FiFo Institute for Public Economics (University of Cologne).(i)

The reports examine the biofuels situation in two of the EU's most important users of biofuels: the UK and Germany. They also explore the mandates and subsidies those countries have put in place to meet their biofuel/renewable energy targets.

According to the research, car owners in particular will be footing the bill for biofuels. "In 2020, bioethanol is forecasted to be 19-41 cents (16-35 pence) more expensive than petrol per litre; biodiesel 35-50 cents (29-42 pence) more expensive than a litre of diesel." The reports assume that these increases will be passed entirely to motorists. **Overall, the studies predict extra costs to the UK consumer in 2020 to be between €1.25 - 2.28 billion (£1.0 - 1.9 billion) and to the German consumer, from €1.37 - 2.15 billion (£1.14 - 1.78 billion) per year.**

This would mean that motorists would effectively be paying for an additional litre of fuel for every full tank (ii). This would be bad for business too with a typical lorry driver (iii) spending as much as €1,660 (£1,385) per year extra on diesel because of biofuels by 2020.

An extrapolation of the reports' findings suggests that **total extra costs to vehicle owners across the EU 27 member states could be €10 – 18 billion (£8.3 - 14.8 billion) in 2020.**(iv)

Total **costs to EU motorists from 2010 to 2020 would be €94 - 126 billion (£79 –**

105 billion), assuming a linear uptake of biofuels to reach the 10% target. On the same basis, the total costs to UK motorists from 2010 to 2020 would be **€12.4 – 16.7 billion (£10 - 14 billion)**.

These are conservative cost estimates, based solely on differences in the cost of producing biofuel as opposed to the cost of producing conventional petrol and diesel. In reality, increasing biofuel levels to 10% is expected to generate even greater costs since higher biofuel content will require modifications to existing engines, components and fuel distribution infrastructure.

In addition to identifying costs falling directly on drivers, the studies highlight costs expected to fall on all tax payers. These relate, for example, to government subsidies to biofuel producers and industry, including agricultural payments (amounting to €370 million (£308 million) in Germany, and €17 million (£14 million) in the UK), as well as costs of administering biofuels targets.

Paying for damaging biofuels

The cost of biofuels is alarming because meeting EU targets will be devastating for the world's poorest people and for the environment.

There is clear evidence, including studies by the EU's Joint Research Centre (v), the UK Government's advisory Committee on Climate Change (vi) and the independent Institute for European Environmental Policy (IEEP) (vii), that biofuels can result in a significant rise in GHG emissions compared to using normal petrol and diesel. The IEEP study suggests that meeting EU biofuel targets could generate as much as 65 million tonnes (Mt) of extra CO_2 per year by 2020. That is equivalent to putting 29 million extra cars on Europe's roads. For the UK and Germany, meeting EU targets could generate an extra 13 and 9 Mt of CO_2 per year, respectively. This is like putting another 6 million cars on the road in the UK, and an extra 4 million cars on the road in Germany.

At the same time, biofuels are making millions of people go hungry, with unprecedented international consensus around the role of biofuels in world food price spikes. In June, the UN FAO, OECD, World Bank and others urged governments "to put food first"(viii) and scrap biofuel mandates and subsidies. Poor smallholding farmers are not only hit by more expensive food; their livelihoods are also being destroyed as 37 million hectares of land they eked a living from have been grabbed to produce biofuels, hitting Africa the hardest (ix). This has deprived people who are already chronically hungry of land and water for growing essential food crops.

Investing in real solutions

There are alternatives that can actually deliver reductions in GHG emissions without having the devastating social or environmental impacts attached to biofuels.

The primary aim of transport policy should be reducing fuel demand. Affordable and reliable alternatives to car use are needed, such as state-of-the-art public transport systems and significantly improved facilities for cycling and walking. In the UK, the roll out of pilot schemes such as the Department for Transport's Smarter Travel Choices, for example, could save 2.9 Mt of CO_2 in the UK alone, at a cost of only £200 million (€241 million) a year – a fraction of the cost of biofuels. A speed limit of 120 km/h (75 mph) on German motorways and 80 km/h (50 mph) on main roads would save 2.7 Mt of CO_2 immediately and generate savings for motorists.(x)

In the medium- to long-term, cars should be powered by electricity generated from renewable sources, but the immediate priority is to improve the fuel efficiency of petrol and diesel cars. European governments must push for tougher EU car fuel-efficiency standards when the existing regulation is reviewed in 2012 – cutting 130 Mt CO_2 by 2020, at negligible cost.

Footnotes

(i) Rauch A & M Thöne, Biofuels – At What Cost? Mandating ethanol and biodiesel consumption in Germany, FiFo Institute for the Global Studies Initiative (GSI) of the International Institute for Sustainable Development (IISD), Geneva, Switzerland, November 2011, http://www.globalsubsidies.org/research/biofuel-subsidies-germany

Charles C & P Wooders, Biofuels – At What Cost? Mandating ethanol and biodiesel consumption in the United Kingdom, for the Global Studies Initiative (GSI) of the International Institute for Sustainable Development (IISD), Geneva, Switzerland, August 2011, http://www.globalsubsidies.org/research/biofuel-subsidies-united-kingdom

(ii) Average price per litre January 2012 is £1.30; an average tank is taken as holding 50 litres; extra cost per litre containing 10% biofuel is 2-4 p. 50 litres x 3 p equals £1.50, i.e. more than the price of a litre of fuel.

(iii) According to the UK Continuing Survey of Road Goods Transport, a large articulated lorry got 7.6 miles per gallon in 2010, and travelled 93,000km (57,800 miles). That means it used 34,600 litres (7,600 gallons). In 2020, up to 4 p extra will be paid for fuel containing biofuel. That makes 4 x 34600 = £1,384.

(iv) Fergusson M, EU wide extrapolation of UK cost of biofuels calculations, December 2011 http://www.actionaid.org.uk/doc_lib/EUwideextrapolation.pdf

(v) Marelli L, Ramos F, Hiederer R & Koeble R, Estimate of GHG emissions from global land use change scenarios, Joint Research Centre Technical Notes, 2011, http://iet.jrc.ec.europa.eu/sites/default/files/documents/scientific_publications/technical_note_eu24817.pdf

(vi) Committee on Climate Change, Bioenergy Review, December 2011, http://www.theccc.org.uk/reports/bioenergy-review

(vii) Bowyer C, Anticipated Indirect Land Use Change Associated with Expanded Use of Biofuels and Bioliquids in the EU – An Analysis of the National Renewable Energy Action Plans, Institute for European Environmental Policy, March 2011 http://www.ieep.eu/assets/786/Analysis_of_ILUC_Based_on_the_National_Renewable_Energy_Action_Plans.pdf

(viii) Price Volatility in Food and Agricultural Markets: Policy Responses Policy Report including contributions by FAO, IFAD, IMF,OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTF 2 June 2011, http://www.oecd.org/document/20/0,3746,en_2649_37401_48152724_1_1_1_37401,00.html

(ix) Anseeuw W, Alden Wily L, Cotula L, & Taylor M, Land Rights and the Rush for Land: Findings of the Global Commercial Pressures on Land Research Project, IIED, CIRAD, International Land Coalition, November 2011, http://www.landcoalition.org/cpl/CPL-synthesis-report

(x) Umweltbundesamt, CO2-Minderung im Verkehr. Ein Sachstandsbericht des Umweltbundesamtes. Beschreibung von Maßnahmen und Aktualisierung von Potenzialen, Dessau, September 2003