

Back Biomass Campaign Response to the Economist

On 6th April 2013, *The Economist* published two articles (a [report](#) and an [editorial](#)) attacking the role of biomass in our energy mix. The articles featured an unusual number of inaccuracies and assumptions for *The Economist*. The response below from the Back Biomass campaign corrects the main inaccuracies from the articles:

INACCURACY #1: that biomass “is putting pressure on companies that use wood as an input”

The Economist claims that biomass has caused wood prices to go “through the roof”. The evidence indicates that the opposite is true. There is clear data to show that UK wood prices closely mirror international trends and price increases over the last 8 years.¹ Biomass takes wood fibres with little or no other market, such as thinnings, off-cuts and less marketable wood. This provides extra revenue, which encourages investment and growth in forests, helping to stimulate increased wood supplies.

In the UK, the Government actually believes the biomass industry can play a key part in making it economically viable to manage forests, and also that biomass supply chains have huge potential to increase overall supplies of wood. Wood supplies actually rose 7% between 2007 and 2010. DECC’s Bioenergy Strategy suggests this was the result of rising demand for wood fuel being met by the development of wood fuel supply chains, rather than a reduction in the demand for wood from sawmill or wood panels.

Additionally, increases in managed woodlands (as a result of greater demand for biomass) is seen as one of the factors behind a 15% real terms drop in the price of wood between 1996 and 2011.²

Looking ahead, projections from AEA suggest the global price of biofeed is likely to increase by no more than 10% between 2010 and 2020, after which they will level out and remain roughly unchanged in real terms.³

INACCURACY #2: that carbon emitted in the supply chain “decreases the amount of carbon saved by switching to wood”

The UK Government’s Sustainability Criteria require an independently verified minimum 60% Greenhouse Gas saving (compared to the EU fossil fuel grid average) across the whole biomass supply chain – including, processing, storing, transporting and reforestation. This is a full lifecycle measurement, applying to the whole supply chain and not just ‘stack emissions’ (those at the combustion stage of the fuel). This means across the supply chain biomass must always demonstrate significant carbon emissions savings. Some generators are already significantly exceeding the minimum 60% emissions reduction

¹ Bioenergy Strategy Analytical Annex URN: 12D/078 April 2012

² An increase in supply of forestry products has contributed to an easing of inflationary wood price pressures. Data on wood prices can be found in ‘Coniferous Standing Sales Price Index for Great Britain’ (Fisher Index year ending September 2006 =100, real terms) Forestry Commission, 2011

³ AEA UK and Global Bioenergy Resource 2010 – Final report to DECC

(compared to the EU fossil fuels grid average). If the criteria are not met, biomass generators will not receive the Government support required to make their businesses economically viable.

The two models of delivering biomass make this possible both on a local and global scale:

- Biomass can be grown locally in the UK, often very near the point of use, significantly reducing transport emissions, whilst also stimulating local supply chains and rural economies.
- Shipping, the main transportation method for biomass, is very carbon-efficient. For example, transporting a large shipment of biomass from North America has a similar carbon footprint to transporting a similar load 200 miles by road in the 1,600 lorries that would be required.

INACCURACY #3: that biomass claims to be “carbon neutral”

Biomass is demonstrably low-carbon, but it is not necessarily carbon-neutral.

Burning fossil fuels releases carbon that has been removed from the atmosphere millions of years ago, while biomass returns carbon to the atmosphere that has only recently been absorbed. Unlike fossil fuels, sustainable biomass provides for new organic material to be grown which reabsorbs the carbon released in the generation process as part of the natural carbon cycle. At the point of combustion, the carbon emissions from generating energy using sustainable biomass are significantly lower than those created by burning from fossil fuels. Even taking into account carbon life cycle emissions, sustainable-biomass-generated electricity can produce 35-85%⁴ less emissions than that produced using fossil fuels. The new **Government Sustainability Criteria** require generators to demonstrate *at least* a 60% reduction in **Greenhouse Gases**, compared to the EU fossil fuels grid average, in order to receive financial support.

Using biomass to generate electricity therefore ‘displaces’ or saves carbon that would otherwise be released through the burning of fossil fuels. Energy experts such as the **International Energy Agency** and the **International Panel on Climate Change** agree, and have demonstrated that properly managed forest biomass resources are therefore ‘low carbon.’

INACCURACY #4: drawing on a paper by Tim Searchinger, *The Economist* says “if whole trees are used to produce energy, as they sometimes are, they increase carbon emissions compared with coal”.

The ‘evidence’ used by Professor Searchinger is in fact based entirely on one theoretical scenario involving using all of the wood products in a forest for bioenergy, which does not reflect real-world practice. The original peer-reviewed research (from which the scenario was extracted) undertaken by experts for the UK Department of Energy notes this fact, and the Department was so dismayed by the misuse of its data that it felt was compelled to issue several clarifications and supplementary notes to set the record straight.⁵

⁴ Biomass Energy Centre: Carbon emissions of different fuels
http://www.biomassenergycentre.org.uk/portal/page?_pageid=75,163182&_dad=portal&_schema=PORTAL

⁵ For example, <http://blog.decc.gov.uk/2012/11/22/using-wood-for-bioenergy/> and https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65618/7014-bioenergy-strategy-supplementary-note-carbon-impac.pdf



Much of the data used to support arguments on the carbon impact of biomass (including the now widely discredited report by Searchinger, which was not subject to peer review) is based on a fundamental misunderstanding of **forestry management**. Sustainably managed forests are not harvested in their entirety and then entirely regrown. In reality, landowners manage their forests as a whole landscape, by harvesting and regrowing different sections ('stands' or 'plots') at different stages. One stand may just have new saplings growing while another comprises mature trees about to be harvested. This makes financial sense for foresters (because it ensures stable income), while maximising growth rates and ensuring carbon is absorbed faster. Clearing forest floors of deadwood and employing anti-wildfire measures are also standard management techniques used to encourage rapid, healthy growth and optimal carbon absorption. In this way, sustainable forestry techniques ensure that levels of stored carbon in a well-managed forest remain balanced or even increase over time, creating a 'carbon credit'.

Even if this method did not make sense environmentally and economically, the Government's Sustainability Criteria mean that even with greater demand for biomass, we can be sure the impact will be at least a 60% less emissions compared to the EU fossil fuel grid average. Demonstrating this reduction in fossil fuels will clearly only be possible in forests where the rate of harvesting is outmatched by the rate of replenishment.

The UK requires a balanced energy mix, but there is no one technology that provides a 'silver bullet' solution. Biomass is the fourth most abundant fuel on our planet and as the only low-carbon and renewable baseload energy source biomass has a vital role to play in helping deliver the UK's and Europe's carbon savings and renewable energy targets.