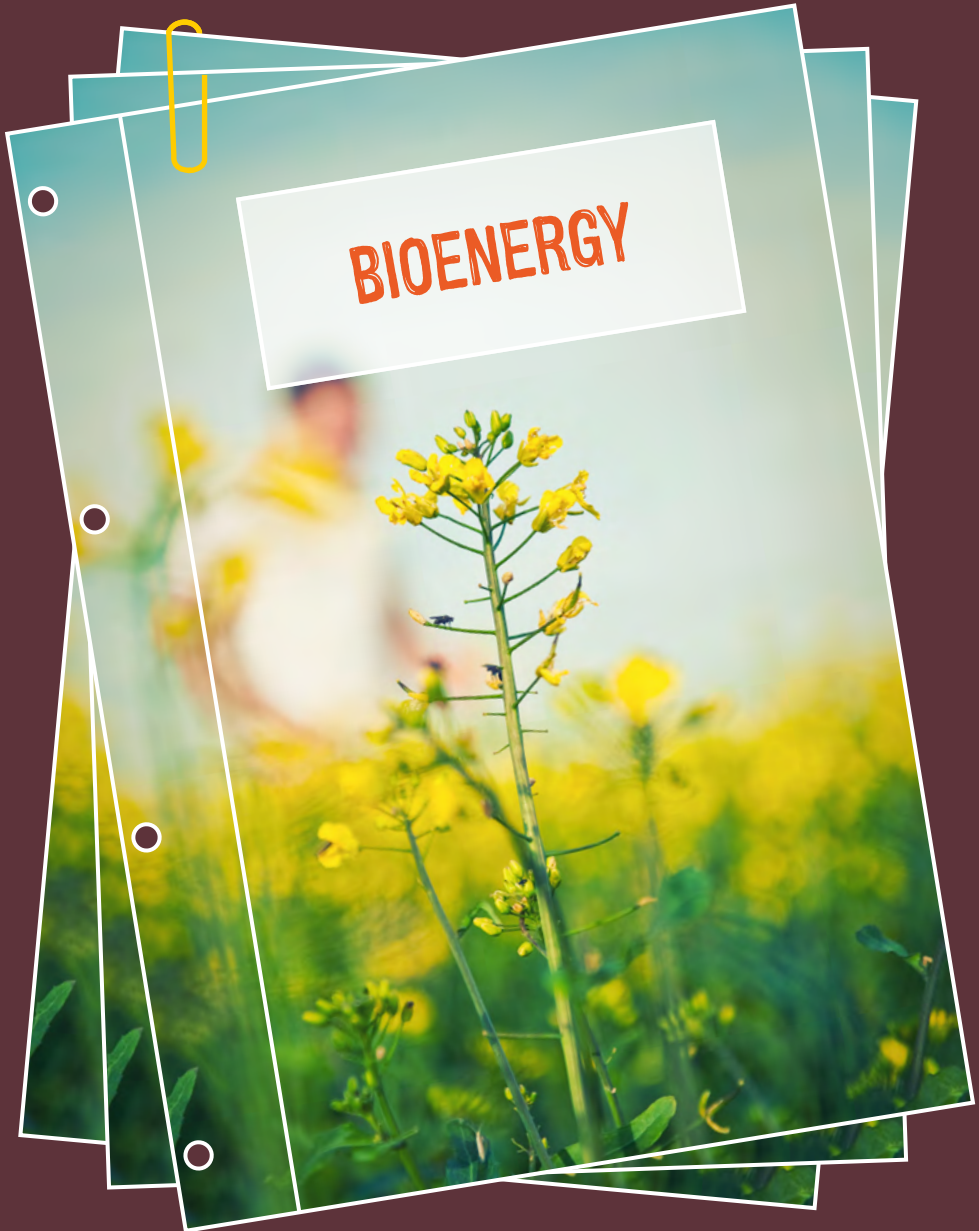


**Our Position Paper on:**



## IN A NUTSHELL

Bioenergy comes from organic material – things like wood and crops – that contains stored energy from sunlight. This renewable energy source has a role in fighting climate change but only if it can reduce greenhouse gas emissions without damaging natural systems or people's livelihoods. However, industrial-scale tree burning or converting crops to biofuels can lead to more pollution than fossil fuels. One day, new sources of bioenergy may be developed (eg algae), but right now only small-scale bioenergy initiatives using waste products are sustainable. Many governments' ambitions for bioenergy are far too big to be sustainable.

## THE FACTS

**1** Europe's biofuel target could lead to up to 56 million tonnes of extra CO<sub>2</sub> emissions per year, equivalent to 26 million additional cars on Europe's roads, according to a report by the Institute for European Environmental Policy (IEEP).

**2** If the land used to produce biofuels for the EU in 2008 had been used to produce wheat and maize instead, it could have fed 127 million people for the entire year.

## THE PROBLEM

In order to prevent dangerous climate change, societies need to stop running on fossil fuels. Bioenergy could help, if it's from sustainable sources, but currently most of it isn't.

Most biofuels for cars come from crops. Industrial-scale cultivation of these crops competes with food production, encourages land grabs, and can lead to massive greenhouse gas emissions when forests are cleared to make way for plantations. When biogas – another source of bioenergy – is produced from purpose-grown crops, it leads to similar problems.

When power stations provide energy by burning imported wood chips from whole trees, they release more carbon pollution into the air than can be converted back into stored energy by new

trees. This imbalance cancels out any potential benefits bioenergy offers to our climate.

If trees are burned rather than used for building, more concrete and other resources must replace them, increasing its negative impact.

Additional demand for wood on a large scale also increases the threat to ecologically valuable forest habitats worldwide.

We do need bioenergy, but we need to use it well, and within sustainable limits. Too many governments see biomass as a cheap alternative to options such as solar energy or wind power, without properly calculating the carbon emissions or weighing up whether it harms the environment or competes with food supplies.

## WHAT WE THINK

Friends of the Earth has identified a global energy pathway that shows how we can avoid dangerous climate change without significantly increasing our use of bioenergy (see [tool.globalcalculator.org/foe](http://tool.globalcalculator.org/foe)).

*To use biofuels well we need to:*

- **Re-evaluate our position** – The UK Government’s ambitions for bioenergy are unsustainable. We need to limit our pursuit of biofuels to what we can source sustainably and domestically. The EU must scrap its 2020 target for 10 per cent of all transport fuels to be biofuels.
- **Phase out use of damaging agricultural-crop biofuels** – As a first step we should limit the use of crop-based biofuels to the current level and phase out any support for them after 2020.
- **Penalise harmful bioenergy production** – Growing crop-based biofuels can push food production out to previously uncultivated areas, such as forests, and increase carbon emissions. We should introduce penalties for cultivation of biofuel that harms the environment.
- **Be realistic about the potential for biofuel from commercial waste** – Waste products like cooking oil can help bring down transport emissions but only meet 1 per cent of our fuel needs. Due to their low availability, they should be saved for vehicles where green electricity is not an option, eg for heavy goods vehicles.
- **Pursue biofuel research** – Biofuel sources like algae or organic waste could offer a more sustainable solution, but are still poorly understood and a long way from being commercially available. We support

increased research into advanced biofuels, but caution against basing policy around these technologies until we know more about their potential benefits and risks.

- **Introduce correct carbon accounting for bioenergy** – The Department of Energy and Climate Change has developed a bioenergy carbon calculator (called BEAC). It shows that the burning of biomass is not carbon neutral because of changes to forest carbon stocks. We advocate the use of bioenergy carbon calculators – like BEAC – for policy making.
- **Generate low-carbon biogas sustainably** – Farm waste and sewage can provide low-carbon biogas through anaerobic digestion (AD). This is good news, but we should not support the large-scale use of agricultural crops exclusively for AD.
- **Rethink wood burning** – We must end the practice of burning whole trees imported from overseas and face up to the indirect increase in greenhouse gas emissions caused by woody biofuels. We should only ever use large amounts of raw materials if this results in a real decrease in emissions.



## KEY REFERENCES

Friends of the Earth's global energy pathway: [www.foe.co.uk/blog/climate-change-hope](http://www.foe.co.uk/blog/climate-change-hope)

Friends of the Earth (2013), Biofuels – A Change of Course. Why the European Parliament and Council must reform EU biofuel policy now: [www.foe.co.uk/sites/default/files/downloads/biofuels\\_change\\_course.pdf](http://www.foe.co.uk/sites/default/files/downloads/biofuels_change_course.pdf)

Friends of the Earth, RSPB & Greenpeace (2013), Burning Wood for Power Generation: The Key Issues Explained: [www.foe.co.uk/sites/default/files/downloads/burning\\_wood\\_key\\_issues.pdf](http://www.foe.co.uk/sites/default/files/downloads/burning_wood_key_issues.pdf)

Friends of the Earth, RSPB & Greenpeace (2012), Dirtier than coal? Why Government plans to subsidise burning trees are bad news for the planet: [www.foe.co.uk/sites/default/files/downloads/dirtier\\_than\\_coal.pdf](http://www.foe.co.uk/sites/default/files/downloads/dirtier_than_coal.pdf)

Friends of the Earth Europe et al. (2011), Driving to Destruction: The impacts of Europe's biofuel plans on carbon emissions and land: [www.foe.co.uk/sites/default/files/downloads/driving\\_to\\_destruction.pdf](http://www.foe.co.uk/sites/default/files/downloads/driving_to_destruction.pdf)

To give us feedback please visit: [www.foe.co.uk/feedbackcomment.html](http://www.foe.co.uk/feedbackcomment.html)