

financing destruction:
the Subsidy scheme behind biofuels
and biomass

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Biofuels and Biomass

How subsidies are fuelling the problem

- What are the UK's energy obligations? Where can it act independently?
- Unmasking Biomass
- What are we consuming in the UK
- How the subsidy scheme works
- What we can do

What are biofuels and biomass?

Some definitions

- **Biomass:** *'the biodegradable fraction of products, waste and residues from biological origin'*
 - e.g. wood, dung – things that burn & can therefore give out energy
- **Biofuels:** *'liquid or gaseous **fuel for transport** produced from biomass.'*
 - Can be bioethanol or biodiesel (ethanol – distilled from sugar, so from sugary plants like maize; biodiesel; from oil, so from fatty plants like palm oil)
- **Bioliqids:** *'liquid fuel **for energy purposes other than for transport**, including electricity and heating and cooling, produced from biomass'*

The United Kingdom

EU mandatory targets

General target: 15% renewable electricity -2020
Transport target: 10% renewables in the transport sector by 2020

15% renewable electricity by 2020

→ implemented through Renewable Obligation Order:

1. Can come from a range of renewable technologies, not just biomass or biofuels
2. Renewable Obligation Certificate scheme: ROCs are green certificates awarded to generators of renewables, and they can trade these

10% renewables in transport

→ implemented through Renewable Transport Fuel Obligation ('RTFO'):

1. Mandatory target of 5% by 2013 across UK
2. Subsidised through certification scheme: 'RTFCs' granted for suppliers, which can be traded.

Unmasking Biomass:

(1) Pressure on availability of land

UK Govt, Renewable Energy Roadmap, July 2011:

*'Bioenergy could, if suitable feedstocks are available, deliver around **half of the total generation** we estimate will be required to meet our 15% target by 2020.'*

European Environment Agency Scientific Committee, Sept 2011:

*'Several reports have suggested that bioenergy could or should provide **20% to 50% of the world's energy needs** in coming decades. Doing so **would require doubling or tripling the total amount** of plant material currently harvested from the planet's land. Such an increase in harvested material would **compete with other needs, such as providing food for a growing population, and would place enormous pressures on the Earth's land-based ecosystems.**'*

Unmasking Biomass

(2) Putting the world's forests at risk

- **E.g. Forth Energy Biomass Proposals (Scot):**
 - **5.3 million tonnes wood per yr required**
 - **0.4 mn tonnes wood available in Scotland per year**
 - **Letter from US Campaigners to Scot ministers, Mar 2011:**

This large scale destruction and conversion of forest in the southeastern US has been undertaken to supply already existing demands and projected growth. What's more, the US has its' own growing demand for biomass electricity and heat... Demand for biomass to burn in Scottish power plants will be additional to the above.'

Unmasking Biomass:

(3) Carbon debt overlooked



Burung Indonesia, courtesy of Eka Tresnawan

- Directive 2009/28: Energy From Biomass To Produce 35% Greenhouse Gas Emissions Savings (UK: 60% savings target)
- Presumes no carbon dioxide emissions arise from combustion of biomass (carbon neutrality)
- Therefore a whole section of emissions unaccounted for

Unmasking Biomass: (3) Carbon debt overlooked (contd)

UK Government Correspondence, Aug 2011

'Yes, the combustion of sustainable biomass for energy is considered carbon neutral'

EEA Scientific Committee, Sept 2011

'This mistaken assumption results in a serious accounting error.'

'Legislation that encourages the substitution of fossil fuels by bioenergy, irrespective of the biomass source, may even result in increased carbon emissions, thereby accelerating global warming'

'Accounting standards for GHGs should fully reflect all changes in the amount of carbon stored by ecosystems and in the uptake and loss of carbon from them that result from the production and use of bioenergy.'

Unmasking Biomass

Human Rights abuses ignored (1)

- Alternative to cutting forests: buying up 'idle' or 'marginal' land

'We are staying here until we die. We are not leaving the fight because the only thing that keeps us alive is our relationship to the land' – Arnaldo Dominguez, member of Pariri Community

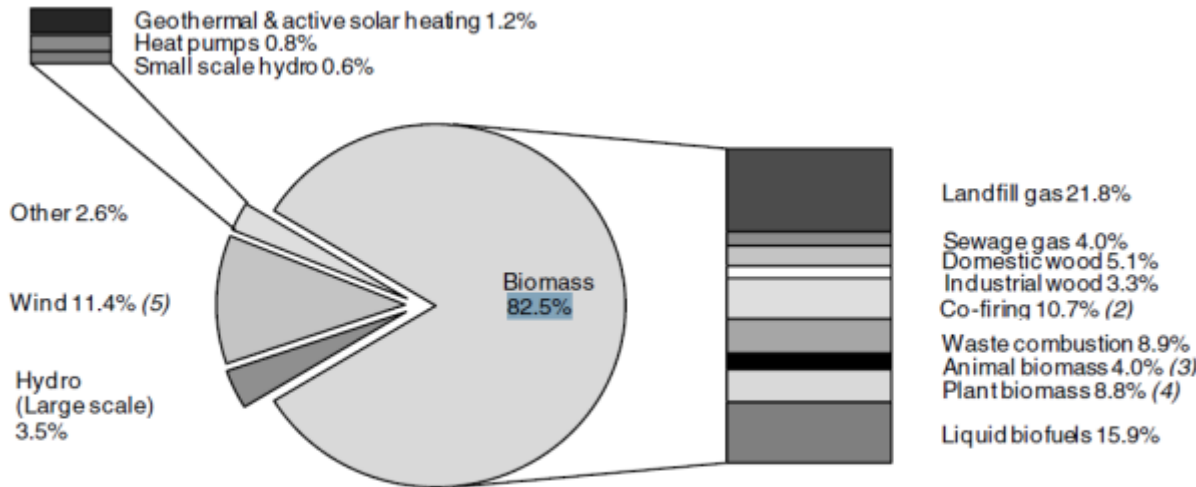
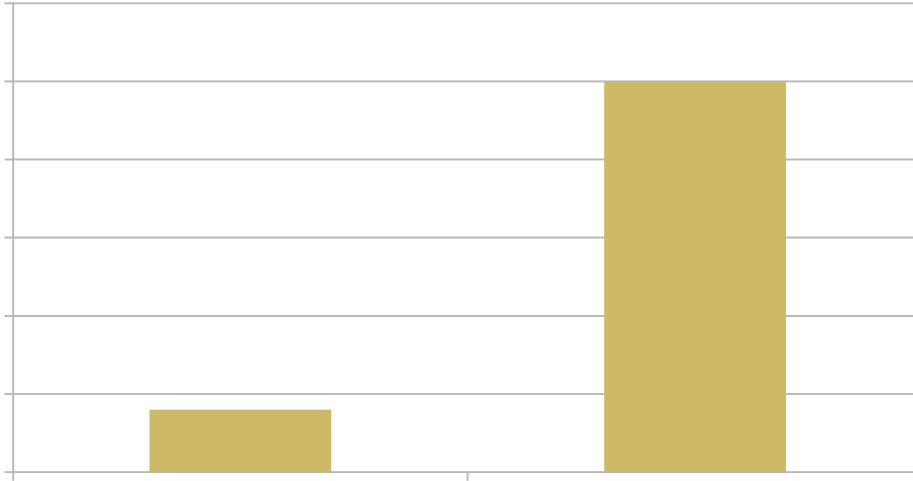


Unmasking Biomass: Human Rights abuses (2)

- Beginning to be documented
- MGT Power: permission for 299MW biomass plant; awaiting planning permission for a second
- Will require 150000 ha land
- Land to be supplied by Suzano Papel (Northeast Brazil)
- Accused of land-grabbing by local NGOs

How much are we using?

Woody Biomass in the electricity sector



Total renewables used= 7,650 thousand tonnes of oil equivalent (ktoe)

- Renewable energy in UK: 6.8% total energy generation. **82.5% of this is from biomass**

- Currently **8 operating power stations**

- Another **42 power stations** proposed

- Tonnage of wood which can be sourced from Britain: **10 million**

- Tonnage of wood required by biomass powers, if approved: **60 million**

How much are we using?

Bioliquids in the electricity sector

- No large power stations as yet; several have been approved, including:
- W4B granted planning permission: 50MW power plant (Bristol); 18.5MW Power Plant (Portland, Dorset)
- Able to burn any type of fuel – if construction begins will be burning equiv of all palm oil used in transport fuels
- Construction depends on outcome of subsidy review

Fuelling our consumption habits:

Renewable Obligation Certificates (ROCs)

Electricity suppliers obliged to provide % age electricity from renewable sources
(currently 12.4%)

For each Megawatt of renewable electricity, a number of ROCs is given (between 0.5
– 2 dep)

This ROC carries a market value (currently £48.70)

Electricity suppliers can therefore buy or sell their ROCs

ROCs are effectively subsidies

Subsidies → guaranteed £££ → boom

How much money??

Subsidies available for bioenergy power stations, if approved:

£3 billion per year

Energy Source	ROCs per MWh
Offshore Wind	1.5
Onshore Wind	1
Wave	2
Tidal	2
Solar	2
Geothermal	2
Co-firing of Biomass	0.5
Co-firing of Energy Crops	1
Co-firing of Biomass with CHP	1
Co-firing of Energy Crop with CHP	1.5
Dedicated Biomass	2
Dedicated Energy Crops	2
Dedicated Biomass with CHP	2
Dedicated Energy Crops with CHP	2

Review of the banding system

The number of ROCs that each renewable energy technology is eligible to receive will soon be up for review through a **public consultation**

Will this public process present an opportunity to make our voices heard....?

Will the government take into account human rights and environmental prerogatives?

Business as usual: Growth, growth, growth = cut, cut, cut

Drax Chief Exec, D Thompson: *"The level of financial support is inadequate to burn biomass in very large quantities at current market rates"* (2 Aug)



Renewable Energy Agency: *Biomass a "proven, practical, secure source of low-carbon energy"* (24 Aug)

UK Energy Min, Charles Hendry: *"We want a balanced energy portfolio and we want biomass to play a central role in this. I am confident that the bioenergy industry can deliver our ambition for around 6GW of biomass electricity by 2020...."* (23 Aug)

ONLY WHEN THE LAST TREE HAS DIED & THE LAST RIVER HAS BEEN POISONED & THE LAST FISH HAS BEEN CAUGHT WILL WE REALISE THAT WE CANNOT EAT MONEY.

The logo features a stylized tree with a spiral at its base and several fish swimming below it. The text is arranged in a grid-like pattern around these elements.

19TH CENTURY CREE INDIAN

What We Can Do (1)

Resist individual planning applications



**SAY
NO
TO
COED BACH
POWER STATION**

What We Can Do (2)

Take the power back to the people: oppose the subsidy scheme for electricity from biofuels and biomass:

- **Support** our work
- **Read** our new publication on the ROCs consultation
- **Write** to your MP about the consultation
- **Respond** to the consultation as an individual or an organisation
- **Attend** a demonstration against subsidies for bioenergy: 22 October

Thank you

