

First biofuels, now biomass: is the EU driving another BioMess?

While Europe's first biomass trade exchange opens tomorrow in the Netherlands, a Greenpeace report¹ shows how European energy policies are contributing to forest degradation in Canada. Wood pellet exports from Canadian forests to Europe have grown by 700 percent in less than eight years. The production of forest biomass in Canada increasingly comes from felling natural forests. This threatens the health of forests across the country and will increase carbon emissions for decades, even centuries. The European Union (EU) must stop driving forest degradation in Canada and other parts of the world by establishing a mandatory sustainability scheme for the production and use of forest biomass in electricity, heating and cooling.

New research from Canada

The new report *Fuelling a BioMess* documents how various Canadian provinces have recently opened public forests to large-scale extraction of forest biomass for energy production, without adequate environmental guidelines. Some of this production is intended for export to the EU.

In Canada, forest bioenergy was once a sensible, small-scale and local solution to produce heat and power by using mill and pulp residues at the plant. This is no longer the case. The switch is made from wood manufacturing-based to forest-based biomass production which represents a drastic shift in the way forests are used and is rapidly evolving into a destructive, industrial-scale practice, threatening the health of forest ecosystems.

The report serves as a good example of why using forest biomass for energy production can cause problems unless strict carbon accounting and sustainability requirements are put in place.

EU bioenergy policy creates new markets with no environmental safeguards

In 2009, the European Union adopted the Renewable Energy Directive (EU-RED) to increase the share of renewable energy and reduce greenhouse gas emissions. The EU-RED requires EU countries to ensure that 20 percent of their final energy consumption in 2020 comes from renewable energy sources, including bioenergy. Three categories of fuels are mainly used to produce bioenergy: biomass for electricity, heating and cooling; biofuels; and bioliquids.

Some mandatory sustainability (albeit inadequate) requirements have been established at EU level to regulate the production of biofuels and bioliquids. In contrast, the solid and gaseous forms of biomass are not subject to any EU regulation.²

Analysis of national plans³ reveals that energy production from solid biomass in EU countries is anticipated to rise from 53 million tonnes of Oil Equivalent (Mtoe) in 2005 to 90 Mtoe in 2020, of which 13 Mtoe in the electricity sector (a 160 percent increase over 2005 levels) and 77 Mtoe in the heat and power sector (up 60 percent from 2005).⁴ The plans show that *indirect* sources of biomass from forestry (forest industry by-products such as sawdust and black liquor) are, to a great extent, already being used. The biggest increase

¹ Fuelling a BioMess, why burning trees for energy will harm people, the climate and forests, published here: www.greenpeace.ca/biomess

² In 2010, the European Commission made recommendations on voluntary sustainability criteria for solid and gaseous biomass used in electricity, heating and cooling.

³ National Renewable Energy Plan. Each EU Member State had to deliver a NREAP to the European Commission in order to show how they planned to reach the EU-RED target of 20 percent renewable energy in 2020.

⁴ Energy Research Centre of the Netherlands (ECN), Beurskens L. W. M. and Hekkenberg M., Renewable Energy Projections as Published in the National Renewable Energy Action Plans of the European Member States, February 2011, p.239

of solid biomass is therefore expected to come from *direct* forest sources (fellings, residues from fellings and other).⁵

This means that direct pressure on forests is expected to increase. This could threaten the biodiversity, carbon stocks and health of forests.

EU increases imports of woody biomass from Canada

Over recent years, the trade in refined products such as wood pellets⁶ has been growing strongly and is expected to increase further. Wood pellet exports from Canadian forests to Europe were about 1.2 million tons in 2010, a 700 percent increase in less than 8 years. Canadian pellet production capacity is expected to increase ten-fold by 2020.

In 2010, the EU imported 2.5 million tonnes of wood pellets, roughly one third of which went to the Netherlands. The UK imported a further 20 percent, with Belgium, Denmark, Italy and Sweden taking the rest. Canada, and to a lesser extent Russia and the USA, currently produce the large majority of the wood pellets imported into the EU.⁷

In the port of Rotterdam, Europe's first exchange for trading wood pellets will open on 3 November. According to the energy exchange, the global wood pellet market "could grow six-fold by 2020"⁸.

Greenpeace EU political demands

Existing policies do not ensure that the production and use of biomass - whether locally produced or imported - does not damage forests, the climate and biodiversity. Unless a political solution to the problem is found now, the green reputation of wood-based bioenergy might suffer the same damage as biofuels.

We ask the EU and its member states to establish *a mandatory sustainability scheme* for the production and use of forest biomass for electricity, heating and cooling production which:

- Ensures that wood-based bioenergy is produced in a way which results in significant reduction of greenhouse gas emissions, while increasing the total forest and other terrestrial carbon stocks and preserving critical forest and other ecosystem services and the biodiversity upon which they depend.
- Prohibits sourcing or deriving bioenergy commodities from intact forests, lands with high-biodiversity value, wetlands and peat lands ("no-go areas"), including from plantations made by the conversion of such areas, natural forests or fertile agricultural lands.
- Prevents the harvest and combustion of standing trees (regardless of quality, i.e. whether commercial, non-commercial, damaged or diseased) for the production of electricity or heat.
- Takes into account the upfront carbon debt⁹ of wood-based bioenergy and the length of time required for the emissions to become carbon neutral, when performing carbon lifecycle assessments of wood-based energy.

Additionally, Greenpeace urges the EU to develop a new approach to promote resource efficiency for forest biomass, to ensure that what is used by the forest-based industries for materials and energy feedstocks is limited to what forests can reasonably and sustainably supply. The notion that forest biomass is infinitely available in quantities sufficient to meet an ever increasing demand is plainly wrong and will lead to bad policies that could aggravate the environmental and climate crises.

⁵ European Commission Directorate-General for Energy, State of play of EU biomass policy and update on biofuels policy. Presentation to Forestry & Cork Advisory Group, February 2011.

⁶ Wood pellets are small particles typically created by compressing woody material.

⁷ Energy Research Centre of the Netherlands (ECN), Beurskens L. W. M. and Hekkenberg M., Renewable Energy Projections as Published in the National Renewable Energy Action Plans of the European Member States, February 2011, p.239.

⁸ Statement APX Endex, 29 September 2011.

⁹ Harvesting or extraction of biomass from existing forests determines an immediate, one-off release of the carbon stored in the vegetation and soils which can be likened to incurring a carbon debt with the atmosphere. The size of such debt depends on the type of land affected and on the type of biomass extracted.