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Europe's Green Energy Portfolio Up in Smoke?

(note: this article was the result of a Genetically Engineered Trees and Bioenergy awareness-raising tour through Europe that was co-sponsored by Global Justice Ecology Project, Global Forest Coalition, BiofuelWatch and Friends of the Earth. Wood-based bioenergy is one of the demands for wood that is driving the development of genetically engineered trees.)

By Stephen Leahy BERLIN, Jun 7, 2010 (IPS) - Europe seems hell-bent on burning the world's forests for bioenergy, even as it offers billions of euros to save them, critics say. The dirty secret of Europe's vaunted green energy revolution is the fact that 68.5 percent of its renewable energy portfolio comes from biofuels and burning wood for energy, according to a report released in Brussels last week. Modern technologies like wind and solar get all the press, but burning wood is well, prehistoric.

"We estimate at least 27 million tonnes of wood biomass will be needed annually to supply planned power stations in the UK (United Kingdom) alone," said Almuth Ernsting from Biofuelwatch, a British NGO focused on bioenergy issues.

In a story broken by IPS last fall, at least one million hectares of forest annually will be needed to feed the dozens of planned wood-fired power plants in Britain alone. The Netherlands is already burning one million tonnes of wood. Germany is up 23 million cubic meters (16.5 million tonnes) - mostly imported - and plans to double this figure by 2020, said the report, "Wood Based Bioenergy: The Green Lie".

"It's getting pretty scary," Ernsting, a report co-author, told IPS.

There is already a huge problem of deforestation without bioenergy, said Anne Petermann, executive director of the Global Justice Ecology Project, an international environmental NGO based in the U.S.

Deforestation has long been a dangerously intractable problem, eating up 13 to 16 million hectares every year and responsible for 20 percent of the global warming emissions that are destabilising the climate.

"Current deforestation is having serious impacts on forests and forest peoples around the world," Petermann said in a phone interview. The centrepiece of Europe's climate-change reduction strategy is the production of 20 percent of its energy from renewable sources by 2020. That objective has become a classic "good idea gone wrong", said Petermann. She was in Brussels to tell members of the European Parliament their policies are killing forests and hurting indigenous and local forest peoples.

"We have an enormous deforestation problem already, there is no way massive increases in wood to feed bioenergy furnaces could ever be sustainable," she said.

It turns out not many of members of the European Parliament were interested in learning about that, or the fact that particulate emissions from wood-burning are worse than coal, putting public health at risk. In the U.S. scientists, have been warning about the health risks posed from biomass burning since these emit more fine particulates than coal. These invisible particles can damage lungs and make asthma worse, Petermann said. Nor did European legislators really want to know the truth about the "big lie" that burning wood for energy is carbon- neutral, she said.

The assumption underlying the shift from burning coal to burning wood is that while burning wood results in CO₂ emissions, trees can be planted to absorb those emissions as they grow. The simple metric is this: burn a million hectares a year, plant a million hectares a year and voila - clean, green carbon-neutral energy.

Of course, a tree doesn't grow as fast as it burns. So it will be 20 years, maybe 15 years for some special fast-grow genetically-engineered species being readied, before the carbon is absorbed. All assuming the replacement tree gets enough water, doesn't get a disease and avoids insects and forest fires.

Then there is all the energy and emissions involved in cutting, processing and shipping wood many thousands of kilometres from Africa, South America and Canada. So plant a few more trees to make up the difference, which incidentally could also be done to offset emissions from coal.

"There is no data proving wood biomass energy is carbon neutral," said Ernsting. Even if wood biomass energy was net-carbon neutral, there is the long lag time it takes to achieve neutrality. An inconvenient but fundamental climate science recommendation has been that global emissions need to peak before 2020. Burning wood for energy is little better than coal in that regard, said Petermann.

However, that CO₂-peak-before-2020 warning from climate scientists, including the authoritative Intergovernmental Panel on Climate Change (IPCC), is now being completely ignored as politically unrealistic. Instead, policy makers have widely adopted the notion that it is okay if CO₂ concentrations go dangerously higher for a decade or two because not only will there be big emissions reductions in the future, we will be able to pull down CO₂ levels from what's already up there.

That is a failure to understand some basic science, experts say. CO₂ emissions today will warm the atmosphere for the next 100 years. But even worse is the problem of tipping points. If the global temperature rises above two degrees C, scientists believe it is almost certain the Arctic sea ice will be gone in the summer, leading to the melting of large regions of permafrost - which releases more CO₂, and especially methane, a far more potent greenhouse gas. There would be no pulling back from this and other feedback loops like the melt of the Greenland ice sheet or glaciers in the Himalayas.

"Wood biomass energy is twice as crazy an idea as maize ethanol was," said Helena Paul of EcoNexus, a public interest research organisation and science watchdog based in Oxford, England.

Heavily subsidized maize (corn) based ethanol production in the U.S. drove up food prices worldwide, and increased water pollution and fertiliser use in the U.S. with little, if any, reductions in greenhouse gas emissions by most analyses. Many of the same corporate interests - agribusiness, biotech, energy - are investing and convincing governments to subsidise wood bioenergy, Paul told IPS from the resumed climate negotiations in Bonn, Germany last week.

Subsidies in Britain paid as Renewable Obligation Certificates will cost taxpayers about three billion dollars a year for the biomass power plants currently under construction or planned, reports Robert Palgrave of Biofuelwatch.

"Where is all the spare land to grow all those trees?" Paul asked. A recent analysis published in the journal Science has bioenergy lands covering half of the planet's arable lands by 2065. "The potential for disaster is absolutely enormous if this takes off in Europe and America," Paul said.

(END) <http://www.globaljusticeecology.org>