



14 September 2018



SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP

## RESPONSE 1: EU Policy to Burn More Wood Will Fuel Climate Change

Dear All,

As I mentioned, this post resulted in many responses. One recipient was very irked at me for posting content that isn't pro-forest products industry. To this type of comment, my response is that I try to convey "fair and balanced" information. The "**LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER-FOREST SECTOR INTEREST GROUP**" is not an advocacy content provider. It is not intended to be "Fox News" nor "CNN News". I have worked with over 100 entities including the Sierra Club, SmartWood/Rainforest Alliance, the World Bank, USAID, Weyerhaeuser, ArchWood Protection Corporation, Bayer Environmental Sciences and the Clorox Company; a wide spectrum from seemingly pro- to anti-forest products sector. I was even invited to a Dogwood Alliance meeting (which I attended). The upshot is that entities have questions; I find answers.

OK, with that out of the way, below are well thought out comments written by Andy Burns, Chief Operating Officer, Biomass Power Louisiana LLC. Relative to yesterday's climate change post.

Have a good weekend.

Regards,  
Rich

**From:** Andy Burns [<mailto:ahburns@burnsenergy.ca>]

**Sent:** Wednesday, September 12, 2018 6:35 PM

**To:** Vlosky, Richard P. <[RVlosky@agcenter.lsu.edu](mailto:RVlosky@agcenter.lsu.edu)>

**Subject:** RE: EU Policy to Burn More Wood Will Fuel Climate Change

Hi Richard,

Thanks for the stuff you are sending me. With reference to your group post from yesterday:

We have seen this type of reporting before. The idea behind burning biomass from a sustainable source is that in the area in which the biomass is harvested, the fibre basket, the growth to drain ratio must always be greater than 1. That means for every tonne of fibre harvested for fuel, we have to prove that the growth in the basket as a whole has increased by more than 1 tonne. The carbon balance considered across the basket as a whole thus shows a gradual decrease of the mass of atmospheric carbon.

The GHG generated by traditional fossil fuel sources is avoided if a fossil fuel is substituted, providing a real measurable benefit. This carbon burns and stays in the atmosphere as there is no natural sequestering offset. As part of our certification program we have to prove that all carbon emissions associated with the generation of power from a sustainable source, provides a measurable GHG saving of at least 95% under the current EU standard.

The counter argument is easy to make. It goes along these lines. Biofuel is a less saturated hydrocarbon and therefore contains a greater mass of Carbon and Oxygen than does the usual fossil fuel replacement. This means that when it burns it creates more CO<sub>2</sub> per BTU. Therefore burning biomass is bad because it generates more CO<sub>2</sub> than burning regular fossil fuel. This argument assumes that biomass fuel can never be truly sustainable. Taken to extreme, holders of this view argue that vast tracts of forest are at risk of unregulated plunder by the requirements



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**SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP** of this new wood fibre consumer. The idea that CO2 must be extracted from the atmosphere and it is this carbon that is required for tree growth is completely ignored in this argument.

The arguments get a little more sophisticated when it is applied to the life of the stand that has been harvested. Here the errors are probably more egregious. It takes 27 years to establish a stand of high value trees in Louisiana (Loblolly). It therefore takes 26 years before the stand recovers the ability to sequester the same amount of carbon it would have sequestered in the year before it was harvested in its most valuable form. The error here is that a biofuel plant cannot afford to buy fibre that is more expensive than pulp log grade. In general the materials used for fuel sourced from Silviculture and in the main will be 7 years old or younger and are usually classified as waste. In some cases 2<sup>nd</sup> thinning stock may be available at reasonable cost and in the extreme case some Chip and Saw may be considered. The economics of the conversion to fuel do not allow for a great leeway our ability to pay for fibre entering the plant. The final omission is recognition that the practice of Silviculture has an overall beneficial effect on the growth rate of the forest and if properly practiced, the health and therefore the growth rate of the entire basket can be expected to increase. At stand scale, the growth rate of the remaining trees is improved and greater biodiversity is promoted by encouragement of the underbrush.

The bottom line is that if we are not able to prove to an independent auditor that the source of the fibre entering the plant is sustainable then we have no market as our product would literally have no commercial value. We are not able, under the terms of the standard end user agreement, to sell fuel without a sustainability certificate.

This debate has raged in Europe for the past few years and it has taken diligent progress and the implementation of some strict certification requirements, standardization of the end user contracts etc. to turn the debate in the direction of proper scientific reason. As such the practice is currently recommended by more scientific institutions than the few who chose to argue against. The key is to get the message out when ever this counter argument comes up.

Finally when generating electrical power there are times of the day when lots of power is needed and others when it is not. For a number of sustainable alternates this is a problem as the Sun only shines during the day and wind farms are only efficient when there is wind. Biomass is the only sustainable alternate that is a truly dispatchable. That means it can be turned off and on as required and does not require elaborate and inefficient storage systems to make it effective. This is the real reason that utility power generators have a vested interest in getting this right.

Hope that helps

Regards



**Andy Burns**

Chief Operating Officer Biomass Power Louisiana LLC.

Andy Burns [<mailto:ahburns@burnsenergy.ca>]

**From:** Vlosky, Richard P. [<mailto:RVlosky@agcenter.lsu.edu>]

**Sent:** September-12-18 1:03 PM

**To:** Vlosky, Richard P.

**Subject:** EU Policy to Burn More Wood Will Fuel Climate Change



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Interesting perspective.....



## **EU Policy to Burn More Wood Will Fuel Climate Change**

September 12, 2018

Europe’s decision to promote the use of wood as a “renewable fuel” will likely greatly increase Europe’s greenhouse gas emissions and cause severe harm to the world’s forests, according to a new paper published in Nature Communications.

European officials on final language for a renewable energy directive earlier this summer that will almost double Europe’s use of renewable energy by 2030. Against the advice of 800 scientists, the directive now treats wood as a low-carbon fuel, meaning that whole trees or large portions of trees can be cut down deliberately to burn. Such uses go beyond papermaking wastes and other wood wastes, which have long been used for bioenergy, but not to this magnitude. The paper, co-authored by eight scientists from the United States and Europe, estimates that this bioenergy provision in the Renewable Energy Directive will lead to vast new cutting of the world’s forests. This is because additional wood equal to all of Europe’s existing wood harvests will be needed just to supply 5 percent of Europe’s energy.

The paper also estimates that using wood for energy will likely result in 10 to 15 percent in emissions from Europe’s energy use by 2050. This could occur by turning a 5 percent decrease in emissions required under the directive using solar energy or wind energy into a 5 to 10 increase by using wood.

Europe’s increased wood demand will require additional cutting in forests around the world, but the researchers explain the global impact is likely to be even greater by encouraging other countries to do the same. Already, tropical forest countries like Brazil and Indonesia have announced they, too, will try to reduce the effect of climate change by increasing their use of wood for bioenergy.

“Globally, if the world were to supply only an additional 2 percent of its energy from wood, it would need to double commercial wood harvests around the world with harsh effects on forests,” said study lead author Tim Searchinger, researcher scholar at Princeton University’s Woodrow Wilson School of Public and International Affairs.

Although wood is renewable, cutting down and burning wood for energy increases carbon in the atmosphere for decades to hundreds of years depending on a number of factors, the researchers explained. Bioenergy use in this



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form takes carbon that would otherwise remain stored in a forest and puts it into the atmosphere. Because of various inefficiencies in both the harvesting and burning process, the result is that far more carbon is emitted up smokestacks and into the air per kilowatt hour of electricity or heat than burning fossil fuels, the authors explained. While regrowing trees can eventually reabsorb the carbon, they do so slowly and, for years, may not absorb more carbon than the original forests would have continued to absorb. This results in long periods of time before bioenergy pays off the “carbon debt” of burning wood compared to fossil fuels.

The paper also explains why the European directive’s sustainability conditions would have little consequence. Even if trees are cut down “sustainably,” that does not make the wood carbon free or low carbon because of added carbon in the atmosphere for such long periods of time.

The directive also misapplies accounting rules for bioenergy originally created for the U.N. Framework Convention Climate Change (UNFCCC). Under the rules of that treaty, countries that burn wood for energy can ignore emissions, but countries where the trees were chopped must count the carbon lost from the forest. Although this rule allows countries switching from coal to wood to ignore true emissions figures, it balances out global accounting, which is the sole purpose of those rules, and does not make bioenergy carbon free.

The system does not work for national energy laws, which will be required by the directive. If power plants have strong incentives to switch from coal to carbon-neutral wood, they will burn wood regardless of any real environmental consequences. Even if countries supplying the wood report emissions through UNFCCC, those emissions are not the power plants’ problem.

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