

NH DEPT. OF
ENVIRONMENTAL SERVICES

June 17, 2010

JUN 21 2010

RECEIVED

Thomas S. Burack, Chairman
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095

Dear Mr. Burack:

I am writing in regard to the proposed Laidlaw/PSNH biomass plant in Berlin NH that you and the NH Site Evaluation Committee are currently reviewing.

In case you haven't seen them, enclosed are four articles reporting on a study released by the Manomet Center for Conservation Sciences, and a press release for a study just released by the Environmental Working Group (www.ewg.org). These materials present facts that support what I have always believed: that biomass is not the green "carbon neutral" energy that it is touted to be.

Climate change may be the crucial issue of our time. The problem biomass presents to the environment is that wood burning biomass facilities emit more carbon per unit of electricity generated than any other energy source, and have been proven to be more harmful than coal and natural gas. Biomass is the least efficient of the three when converting energy to electricity -- only 15 to 25 percent efficient compared to 45 percent for coal and 60 percent for natural gas. The Laidlaw biomass plant will be no exception no matter how clean the wood is.

Because it is considered "carbon neutral" this Laidlaw plant will be given government green energy subsidies that promote environmentally friendly alternatives to energy production. In fact the argument that the biomass plant would be carbon neutral is false. The carbon cycle takes approximately 40 years for a tree to store the amount of carbon that is released into the atmosphere when it is burned. When the wood is incinerated in 2 seconds and the carbon is released in such a short amount of time, as opposed to the time it takes for a tree absorb the carbon, the cycle is not neutral at all. The subsidies that should go to solar and wind power are monopolized by the biomass industry making it quite possibly the worst thing for our climate.

As a NH taxpayer I do not want to pay for subsidies to an industry that is backward in its approach to energy production, and I'm concerned for my state's future. Please help stop biomass in New Hampshire by rejecting Laidlaw's biomass plant. This is an industry NH cannot afford to promote anymore.

Sincerely,



Sheridan Ellis



THE POWER OF INFORMATION

Published on Environmental Working Group (<http://www.ewg.org>)

News Release - Renewable Fuels Goals In Climate Bills Threaten Millions of Acres of Forest

Carbon accounting loophole gives power plants incentive to burn trees, emitting more CO₂ than coal and accelerating global warming

Published June 15, 2010

Washington, D.C. - At least 30 million acres of America's forests could be cut down and used for fuel at US power plants if renewable fuels and biomass provisions of current Congressional climate and energy proposals aren't radically revised. This will send a massive 4.7 billion ton pulse of carbon dioxide into the atmosphere that would accelerate global warming as it drastically erodes forests' ability to pull carbon out the atmosphere.

This perverse outcome stems from the glaring but largely overlooked Enron-style accounting practices being used by Congress, the federal Environmental Protection Agency (EPA) and state agencies to calculate carbon pollution, which falsely assume that burning biomass fuels, including trees, produces zero net carbon emissions. Close examination shows that the reverse is true: Logging and burning trees will produce a near-term surge in carbon releases -- greater than from burning coal -- while diminishing for decades the forests' ability to recapture those emissions.

EWG's analysis, [Clearcut Disaster: Carbon Loophole Threatens US Forests](#) [1], is based on U.S. Department of Energy electricity sector forecasts of the likely impacts of the House-passed American Clean Energy and Security (ACES) bill.

Why trees? Increased logging is the only way to provide sufficient fuel for the predicted growth in biomass electricity generation, because the other principal sources of fuel are simply not available in quantities anywhere near adequate to meet projected demand. Major Utilities in Ohio have already proposed to "co-fire" giant coal plants with trees, and in some cases to switch their fuel entirely to "whole tree chipping." Across the country more than 120 wood burning biomass power plants have been proposed in just the past three years.

"It's hard to imagine a more ill-conceived environmental policy," said Richard Wiles, EWG co-founder and Senior Vice President for Policy and Communications. "Coal-burning utilities and the biomass industry are promoting policies that will jeopardize millions of acres of forests while virtually guaranteeing that CO₂ reduction goals from the power energy sector are not realized."

On June 10, Massachusetts released a potentially game-changing analysis of biomass electricity generation in that state, concluding that burning trees in power plants is worse for climate change than burning coal. Over the next 40 years, the [report](#) [2] concluded, burning coal would release less carbon dioxide than cutting forests and burning the trees.

"EWG supports strong climate legislation, but the biomass carbon loophole must be fixed immediately," Wiles added. "We need climate policies that are not based on fake CO₂ reductions."

"Climate legislation supporters need to understand that biomass power can't be carbon neutral in any timeframe meaningful to addressing climate change," said Mary S. Booth, Ph.D., who co-authored the [report](#) [3] with Wiles. "Biomass power emissions need to be regulated like any other source of carbon, and incentives to use trees as fuel must be removed from climate legislation."

"Those who believe wood is the answer, need to be honest about how little it's going to contribute and how much of a mess it's going to make of our country," said Stuart L. Pimm, Ph.D - the Doris Duke Professor of Conservation Ecology, Nicholas School of the Environment at Duke University, who reviewed the [report](#) [4].

Biomass fuel would provide the majority of renewable electric power under renewables fuel standards proposed or in place at the state and federal level. Increased logging is the only way to meet the demand for this biomass because the other principal sources usually cited, such as switchgrass, agricultural and construction wastes and logging residues are simply not available in sufficient amounts.

Forests are a major force pulling carbon out of the atmosphere. Cutting them down to burn in power plants will not only inject massive amounts of stored carbon into the atmosphere, it will destroy the best defense against the buildup of atmospheric carbon.

###

EWG is a nonprofit research organization based in Washington, DC that uses the power of information to protect human health and the environment. <http://www.ewg.org> [5]

Source URL:

<http://www.ewg.org/press-release/clearcut-disaster>

Links:

[1] <http://www.ewg.org/clearcut-disaster>

[2] <http://www.ewg.org/clearcut-disaster>

[3] <http://www.ewg.org/clearcut-disaster>

[4] <http://www.ewg.org/clearcut-disaster>

[5] <http://www.ewg.org>

Biomass study causes state 'reevaluation'

By DAVE CANTON
Staff Writer

WESTFIELD — A long-awaited study of the effects of wood-burning power plants is forcing state officials to re-evaluate years of policy that called for state investment and encouragement of the biomass industry.

The state Department of Energy Resources-commissioned Manomet Study, released Thursday, found burning biomass for power generation to be far dirtier in the short term than all fossil fuel sources, including coal.

The state Secretary of Energy and Environmental Affairs, Ian Bowles, long a booster of biomass development, Thursday said the state will now have to rethink its support.

"... Now that we know that electricity from biomass harvested from New England forests is not 'carbon neutral' in a timeframe that makes sense given our legal mandate to cut greenhouse gasses, we need to re-evaluate our incentives for biomass," Bowles said in a statement.

Carbon dioxide, a gas released from combustion, is considered a "greenhouse gas," a major contributor to global warming.

The study, conducted by the Manomet Center for Conservation Sciences in Brunswick, Maine, found that contrary to the long-held belief that burning wood on an industrial scale could be considered "carbon neutral," meaning that the carbon released from burning wood

See Manomet Study, Page 5

was equal to the carbon that standing trees sequestered, is not truly the case, the study found, at least not within a short-term time frame.

The study indicates it would in some cases take up to 90 years of tree growing to equal the nearly instant release of carbon from burning wood.

Under the Global Warming Solutions Act, the commonwealth is mandated to reduce its greenhouse gas emissions — carbon dioxide is a greenhouse gas — by 80 percent by the year 2050. Given the timeframe indicated by the Manomet Study, the state would vastly increase its carbon releases until long after the 2050 deadline.

Jana Chicoine, one of the founders of Concerned Citizens of Russell, a local grassroots group that formed to oppose Russell Biomass LLC's proposal to build a 50-megawatt power plant in Russell, said this morning that she felt vindicated by the study's results.

"Looking at the newspaper headlines this morning is like reading our press releases for the past five years," she said. "We have been making this case for the past five years."

Chicoine credits Montgomery engineer Dr. Ellen Moyer with making the first comparisons between biomass and coal burning, and finding coal to be cleaner in carbon releases than wood.

Chicoine said Moyer's work indicated that in some cases the proposed Russell Biomass plant would emit one and a half times the carbon as the dirtiest coal burning plants in the state.

But, Chicoine said, the recent study does not preclude Russell Biomass LLC from building its plant in Russell and using fuels such as construction and demolition (C&D) debris or solid waste, trash, as a fuel source. Both fuels are reported to release toxins into the atmosphere upon burning. Neither C&D nor trash requires state sanctioned renewable energy credits to make a profit.

Russell Biomass's original business plan was to burn C&D. It changed its approach, promising to burn nothing but "clean wood" in its plant after growing local protest to the use of C&D. That promise came at the last public hearing in 2005.

Meg Sheehan, Environmental attorney and chairwoman of the state-wide Stop Spewing Carbon Campaign said the Manomet Study asked the wrong questions.

"We still believe it is wrong to ask how many trees can be burned. That assumes that the forests should be used for bioenergy at all," she said. "We feel burning the forests for any reason has unacceptable health risks. We appreciate the governor's leadership in calling for this study, but it ignored one of the most important aspects of the issue, and that is the public health impacts and the public health costs of the air pollution caused."

Sheehan said Stop Spewing Carbon is behind a ballot initiative to stop industrial-scale incineration of carbon-laden materials.

The state Department of Energy Resources will be holding a series of public hearings through July to review the Manomet Study and consider policy implications, working toward "potential changes to the Renewable Energy Portfolio Standard and other policy options," a release from the DOER said.

Calls to Russell Biomass LLC for comment on the Manomet Study were not returned by press time.

Calls to Secretary Bowles' office seeking comment on the other fuel sources, such as Construction and Demolition debris (C&D) and solid waste incineration for power generation were not returned by press time.

While C&D and solid waste may not be applicable for renewable energy credits under the state's renewable Energy Standard Portfolio, each releases carbon into the atmosphere. In the case of construction and demolition debris, made up primarily of wood, incineration would presumably release the same amount of carbon as forest-based woods.

ADVERTISE
CALL (413)562-4181
TODAY!

The Republican.

State study devalues biomass allure

Friday, June 11, 2010

By JOHN APPLETON

jappleton@repub.com

A scientific study released Thursday that showed burning locally harvested trees for electricity creates more greenhouse gas than coal-fired plants is dampening the state's enthusiasm for some biomass facilities such as those proposed for Russell and Greenfield.

The six-month study conducted by the Manomet Center for Conservation Sciences shows that, by 2050, burning trees and other "biomass" for heating would lead to a 25 percent reduction in greenhouse gas emissions linked to climate change compared to using oil, according to Ian A. Bowles, the state energy secretary.

But Bowles said the study showed that biomass-fired electricity would result in a 3 percent increase in greenhouse gas emissions, compared to coal-fired electricity.

"Now that we know that electricity from biomass harvested from New England forests is not 'carbon neutral' in a timeframe that makes sense given our legal mandate to cut greenhouse gas emissions, we need to re-evaluate our incentives for biomass," he said in a statement accompanying the report.

Bowles said he will put the study out for public comment over the next several months, and then he expects changes to be made in the regulatory process for biomass.

The report found that harvesting trees for biomass facilities could have "significant localized impacts on the landscape, including aesthetic impacts of locally heavy harvesting as well as potential impacts on recreation and tourism."

Plans for a biomass plant in East Springfield that would use construction debris wood for fuel are not likely to be affected by the Manomet study. Bowles said the study "does not have any implication for construction and demolition wastes."

Westfield City Councilor Mary O'Connell said she considers the study to be good news for people in her community who oppose the proposed Russell plant because of air and water quality issues and the potential for more heavy trucks on Route 20 delivering wood.

Even before the new scientific information about carbon emissions was released in the Manomet study, O'Connell said she was concerned that Westfield's \$200,000 annual expense for removing phosphorus at the wastewater treatment plant could double in order to deal with what she expects would be added to the system by a biomass plant in Russell.

"This study is very encouraging for us. It is great news," said O'Connell, who plans to become familiar with the details of the study so she can better participate in related hearings over the next few months.

Peter Bos a developer with Russell Biomass LLC, said he expects the state Department of Energy Resources to develop new policies and requirements based on the Manomet study, particularly on the findings that indicate that burning wood from sources other than New England forest harvesting is preferable in terms of climate change.

"Russell Biomass does not see this study limiting its wood supply so low that we cannot get enough wood," Boss said. "The total wood supply will allow several plants in Massachusetts." A plant is also being proposed for Pittsfield.

Meg Sheehan, the chairperson of the statewide Stop Spewing Carbon Campaign, said the study confirms what her organization has been saying about biomass for years.

"Incinerators that burn trees for electricity are dirtier than coal, per megawatt hour, and burning trees for electricity is not carbon neutral within a time frame that is meaningful to climate change," Sheehan said.

Sheehan said her organization will continue working on campaigns that are heading for November ballot questions intended to block the opening of biomass plants.

In Greenfield a proposed biomass power plant has support from Mayor William Martin and the City Council, but has raised concerns with the Board of Health and many residents who voted down measures Tuesday that would have allowed the mayor to sell water to the proposed plant.

Greenfield Board of Health Chairman David Taylor said he plans to address his board's concerns about potential emissions from the plant at the series of hearings that Bowles plans to have on the Manomet study and its implications.

The study could be seen as good news for the Belchertown school system, which was working with state on plans for combining heating systems at a few schools and installing a biomass burner to replace an oil-fired system.

The grant program Belchertown was participating in for this project was put on hold last fall when Bowles and other state officials announced they were stepping back from the entire issue for six months, while the Manomet group worked on the related science questions.

Bowles said there is nothing in the study that would prompt any change in the basic energy policy of the administration of Gov. Deval L. Patrick, who has been putting state funding, resources and carbon emission credits money into multiple efforts at moving Massachusetts toward alternative fuels and alternative energy practices.

"We are very committed to green energy for the state, for economic reasons, for environmental reasons and for consumers, who have been attached to the fossil fuel roller coaster," Bowles said.

boston.com

THIS STORY HAS BEEN FORMATTED FOR EASY PRINTING

Bay State rethinking wood power

The Boston Globe

Worse for climate than coal, study says

By Beth Daley, Globe Staff | June 11, 2010

Burning wood to generate electricity can be worse for global warming than burning coal, according to a Massachusetts-sponsored study released yesterday. That surprising conclusion immediately prompted state officials to reconsider substantial financial incentives provided to wood-burning plants.

The six-month study by the Manomet Center for Conservation Sciences in Plymouth comes amid controversy over the proposed construction of two large wood-burning power plants in Western Massachusetts.

"These findings have broad implications for clean energy and the environment in Massachusetts and beyond," said Ian Bowles, state secretary of energy and environmental affairs.

Wood burning has been promoted as a "green" energy source because growing forests can absorb the same amount of greenhouse gases that are emitted from burning wood, essentially canceling out the pollutants.

But the Manomet study shows that wood burning releases more heat-trapping carbon dioxide into the atmosphere per unit of energy than oil, coal, or natural gas.

What's more, that increase in greenhouse gases can take a far longer time for forests to absorb than previously thought — a generation or more in many cases. If a wood-burning power plant replaces a coal-fired one, it can take about 20 years before any net benefits are realized. It can take more than 90 years if a wood-burning plant replaces a natural gas plant.

The study has important implications for policy as President Obama aims to lower US greenhouse gas emissions some 80 percent by 2050 to avoid the most serious consequences of man-made climate change. Wood is projected to be one of the fastest-growing sources of renewable energy in the next decade, but if the benefits take too long to appear, policy makers under urgent deadlines may choose not to embrace it.

Advocates of wood burning said that they had not had time to read the full study but that burning wood is renewable and has been viewed as such for years.

"This industry, which has been around for 30 years, takes forest byproducts and combusts them in a way that is carbon neutral," said Bob Cleaves, president of the Biomass Power Association, a national industry group based in Maine.

Matt Wolfe of Madera Energy Inc., which is proposing a wood-burning power plant in Greenfield, said the study incorrectly assumes whole trees would be cut to fuel the power plants. Rather, he said, most wood for his plant would come from tree tops and branches left over from logging operations or from storm damage, land clearing for new development, or tree-trimming operations.

"The study is not representative on how we plan to operate," he said.

The Manomet Center analysis, however, concludes that there is only a small amount of such leftover wood, and that whole trees will have to be taken to fuel Massachusetts wood-burning power plants.

The study indicates wood burning still may make sense in certain cases. For example, heating buildings with wood is more efficient than wood-burning power plants, and it can start helping the environment by reducing greenhouse gas emissions in as little as five years.

Wood-burning's environmental benefits can vary significantly, depending on the type of wood or piece of tree being burned, what kind of fossil fuel it is replacing, what type of energy it is producing, and how people manage forests, according to Tom Walker, the study team leader. Many, but not all, types of wood burning create a "carbon debt" that growing forests gradually repay by reabsorbing gases before a "carbon dividend" begins.

Massachusetts has offered financial incentives for wood-burning power plants since 2002, considering them to be part of a portfolio of renewable power along with wind and solar. By 2020, state electricity suppliers will be required to get 15 percent of their energy from such green sources. Without the credits, wood burning is not competitive with more traditional forms of energy.

But when two large wood-burning (also called biomass) plants were proposed a few years later, in Russell and the one in Greenfield, a large and vocal group of residents opposed them, asserting they would be fueled by cutting trees on public and private lands across Massachusetts.

The controversy reached a crescendo last year, and in December, the state Department of Energy Resources suspended incentives for new wood-burning plants until the Manomet study could be completed. Now that it is, Bowles said his agency will publicly review the study this summer, and develop new rules in the fall. The suspension of credits for new plants will continue until then.

The study counters earlier estimates showing there is plenty of wood available for wood-burning power plants in the state, saying there would not be enough sustainably harvested wood to fuel even one large wood-burning plant. Walker said the study tried to look at what was "economically and socially available" from the forests, meaning in part what landowners would realistically sell.

Jana S. Chicoine, who has led the fight against the Russell plant, said she was pleased at the findings, calling the study a "policy earthquake. We always made the case this was not a NIMBY issue but a policy failure and now we have the state saying exactly the same thing," she said.

John Hagan, president of the Manomet Center, said the report leaves policy makers with key questions.

"Do you want to wait 10, 20, 30 years just to get to the point [wood burning] is as good as coal? That is a real social question: Do we as a society want to make the climate worse before it gets better?"

Beth Daley can be reached at bdaley@globe.com. ■

Report: Biomass worse than coal in short term

BY RICHIE DAVIS RECORDER STAFF

[Originally published on: Friday, June 11, 2010]

A state-sponsored study issued Thursday calls into question the benefits of wood-burning electric generating plants like the 47-megawatt Pioneer Renewable Energy plant planned for Greenfield -- depending on what kind of wood fuel they burn.

The study, by a team of scientists and policy experts led by Manomet Center for Conservation Sciences, concludes that wood-burning generators initially would produce more carbon dioxide than those burning fossil fuels like coal, oil and natural gas -- if the wood fuel came from whole trees rather than waste wood.

'These findings have broad implications for clean energy and the environment in Massachusetts and beyond,' said Energy and Environmental Affairs Secretary Ian Bowles. 'Biomass energy can be renewable over the long term and it has benefits in independence from imported fossil fuels. But now that we know that electricity from biomass harvested from New England forests is not 'carbon neutral' in a timeframe that makes sense given our legal mandate to cut greenhouse gas emissions, we need to re-evaluate our incentives for biomass.'

Carbon dioxide is a key 'greenhouse gas' contributing to climate change. But unlike fossil fuels, trees can be re-grown, so so-called biomass plants used.