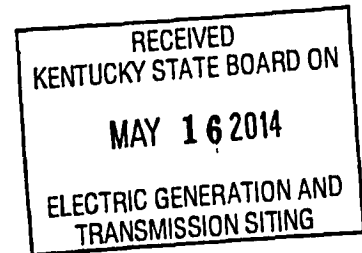


## ecoPower Generation

Commissioner David Armstrong, Chairman  
Kentucky State Board on Electric  
Generation and Transmission Siting  
P. O. Box 615  
Frankfort, KY 40602



DATE: May 14, 2014

SUBJECT: Annual Report of ecoPower Generation - Hazard, LLC  
Case No. 2009-00530

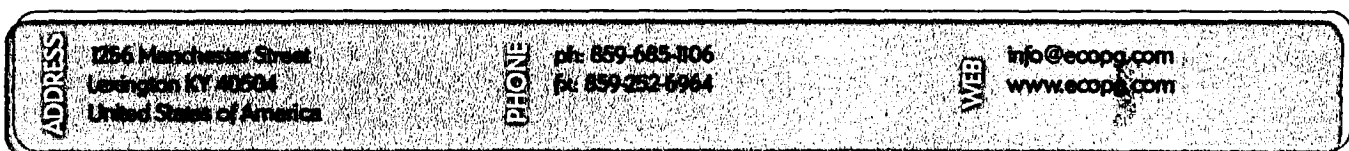
Dear Chairman Armstrong:

This annual report is submitted by ecoPower Generation - Hazard, LLC ("ecoPower") to the Kentucky State Board on Electric Generation and Transmission Siting in compliance with the Final Order in the above referenced case issued May 18, 2010. That order granted ecoPower a construction certificate for a wood-fired biomass renewable energy electric generating facility ("Project") and 1.54 miles of 69 KV transmission line to connect the Project to the electric transmission grid at the Engle substation of Kentucky Power Company ("KPC"), an operating subsidiary of American Electric Power Company. The Project will be built in the Coal Fields Industrial Park approximately ten miles north of Hazard, Kentucky.

### I. Overview

Since the previous annual report submitted on June 3, 2013, ecoPower has continued to make progress toward completing the prerequisite activities necessary to move the project to construction. This year's report is organized as follows:

- Power Purchase Agreement
- Legislation
- Economic Impact
- Engineering, Procurement & Construction ("EPC") contract
- Project Finance
- Air Permit
- Engineering and Construction
- Interconnection Agreement



### **Power Purchase Agreement**

ecoPower and KPC executed a Renewable Energy Purchase Agreement (“REPA”) on March 15, 2013, subject to certain conditions precedent. One of the requirements is that the REPA must be supported by a final unappealable order(s) of the Kentucky Public Service Commission (“Commission”). The Commission issued the order approving the REPA on October 10, 2013. On November 1, the Kentucky Industrial Utilities Consumers, an intervener in the case, appealed the order to the Franklin Circuit Court in accordance with KRS 278.410. The lack of a final order denies ecoPower the ability to finalize the financing necessary to move the Project to construction and commercial operation.

### **Legislation**

In February 2013, Senate Bill 46 was unanimously enacted by both chambers of the General Assembly. Upon the governor’s signature, Senate Bill 46 was subsequently codified as KRS 278.271. The statute allows a jurisdictional utility to request approval of a long-term power purchase contract to purchase qualifying biomass energy. The statute is permissive and enables a utility to request Commission approval. It is the utility that decides to request approval. There is no mandate or requirement to purchase any power unless the utility so chooses.

### **Economic Impact**

KRS 278.271 stipulates that the PSC may consider the economic impact and other policy directives of the Kentucky General Assembly when approving a long-term biomass power contract. As estimated in the original Siting Board application, the Project will inject over \$18 million annually into the local economy and create over 200 construction jobs and more than 500 full time permanent direct, indirect and induced jobs in Hazard and the surrounding area. It also conforms with the objectives of the Kentucky Incentives for Energy Independence Act (KRS 154.27-020) and Governor Beshear’s *Intelligent Energy Choices for Kentucky’s Future - Kentucky’s 7-Point Strategy for Energy Independence*. The Project has received pre-approval for \$20 million in tax incentives from the Kentucky Economic Development Finance Authority (“KEDFA”) through 2014. KEDFA approved an extension to the pre-approval in late 2013.

### **EPC Contract**

ecoPower continues to evaluate a firm lump sum EPC price proposal for the construction of the Project. ecoPower will not be able to give the EPC contractor a final notice to proceed until litigation over the Commission’s October 10, 2013 Order is completed and financial closure is achieved. Once the delay associated with the appeal is resolved, a more defined schedule will allow detailed negotiations of the EPC contract terms and conditions.

**Project Finance**

ecoPower has had discussions with several potential equity partners and is continuing to consider its options in the debt market.. ecoPower will adopt a financial strategy and enter into an agreement(s) with the appropriate financial entity or entities once the litigation over the Commission's October 10, 2013 Order is concluded.

**Air Permit**

As anticipated at the time of the issuance of the original air permit, in late 2012 ecoPower applied for a permit modification. The modifications were determined to be a "Minor Revision" and the modified permit was issued in March 2013. The original air permit was issued on April 23, 2010 and an eighteen month extension was granted in October 2011. Prior to the expiration of the extended permit, ecoPower received approval of the changes based on due the further design development of the boiler and air quality control systems. The minor revision was approved on April 24, 2013. The permit required commencement of construction by April 23, 2013. ecoPower timely began construction of foundations for certain fuel supply facilities prior to April 23, 2013. The Title V Operating Permit remains in place and will require renewal by June 2015.

**Engineering and Construction**

ecoPower began a limited construction program to meet air permit requirements and has continued to work with local contractors to clarify the scope of the project work. ecoPower contracted with Balis Campbell, a local Hazard based contractor for the initial foundation work. Gray Construction Co. of Lexington, Kentucky coordinated the initial site development and foundation design and construction. Work on the fuel handling foundations, particularly the chipper building foundation, involved unique construction activities due to the site being a mine spoil site. The chipper required over excavating the mine spoil by 12-15 feet below the bottom of the foundation and replacing the soil and rock in carefully compacted 12 inch lifts to assure a stable base of support. This work was finally completed on October 24, 2013. No other construction has commenced due to other regulatory matters to be discussed in subsequent sections of this report.

**Interconnection Agreement**

The transmission network to which the Project will be connected is operated by PJM Interconnection, LLC. ecoPower has made application to PJM to connect to the grid through the KPC Engle substation approximately 1.5 miles from the Plant. A feasibility study has been completed and a system impact study remains pending based on the most recent design parameters. A meeting with PJM to coordinate the timing of remaining activities to accomplish the interconnection of the project to the electric transmission grid was held in January 2014. The preliminary cost estimate for the interconnection as indicated by PJM staff is \$10,027,000. The System Impact Study ("SIS") has not been released at this time. An Interconnection Services Agreement ("ISA") will follow the formal release of the SIS later this year and will

require a significant security deposit to be tendered within 60 days of receipt of the ISA by ecoPower.

## **II. Implementation of Site Development Plan**

Full site development has not been initiated pending financial closure and further construction is being held in abeyance due to challenges to the Commission's Order in Case 2013-00144. In accordance with the REPA between ecoPower and Kentucky Power, a final unappealable order is required to move the project to financial closure. A construction storm water drainage permit was obtained prior to initiating the current limited construction and appropriate environmental compliance measures have been taken.

## **III. Local Hiring and Procurement**

Local contractors have been used to support the foundation work that has been completed. No other hiring has taken place and none is expected until construction is resumed.

## **IV. Public Comments and Responses**

There continues to be local enthusiasm for the project. However, recent publicity has been critical of the project based primarily on concerns voiced by a Massachusetts based environmental group that published a report attacking renewable energy biomass plants nationwide. ecoPower notes that a number of industry organizations have responded by pointing out that the report is not supported by prevailing scientific evidence, is not an objective study, and was not peer reviewed by any creditable parties.. Copies of articles responding to the attacks have been attached for easy reference (See Attachments A and B). Nevertheless, ecoPower has received no formal comments since the filing of its last annual report in 2013.

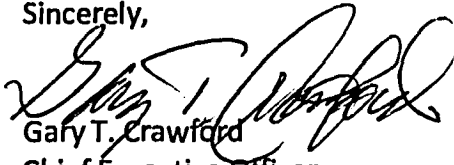
## **V. Specific Mitigation Conditions**

ecoPower remains committed to fulfilling the obligations set forth in Appendix A to the May 18, 2010 Final Order of the Siting Board granting approval of the construction certificate. ecoPower is aware of the statutory requirement that the construction certificate is "valid for a period of (2) two years after the issuance date of the last permit required to be obtained from the Energy and Environment Cabinet" (KRS 278.704(1)). The KPDES operating permit is planned to be the last permit requested and is not required to be submitted for approval until approximately 180 days before the wastewater discharge occurs. Due to the appeal of the Commission's Order in Case 2013-00144, a timeline for this activity is not available.

**VI. Summary**

ecoPower continues to sustain its commitment to the project and believes that its vision to bring jobs to Eastern Kentucky and fuel diversity to the generation of power in the Kentucky Power Company service territory is close to reality. While the delay brought on by the appeal of the Commission's Order cannot be ignored, ecoPower remains confident that the final determination of the court will allow the Project to become a reality. ecoPower appreciates the consideration and support of the Kentucky State Board on Electric Generation and Transmission Siting and fully expects to make an important contribution to the economy of Eastern Kentucky over the life of the ecoPower Generation – Hazard Project.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary T. Crawford", written over a printed name.

Gary T. Crawford  
Chief Executive Officer  
ecoPower Generation – Hazard, LLC



**Contact:**

Carrie Annand

VP, External Affairs

(202) 494-2493 / [carrie@usabiomass.org](mailto:carrie@usabiomass.org)

## **Biomass Power Association Addresses Inaccurate Report**

Rather than a scientific study, the report issued by Partnership for Policy Integrity this week should be regarded as an 81-page editorial. It showcases a fundamental misunderstanding of the science surrounding forestry and biomass, and a lack of familiarity with the state and federal laws governing energy and the environment. Governing bodies from the State of California to the nation of Denmark rightly look to biomass as a sound, proven solution for generating clean energy while keeping forests healthy, and an essential part of any renewable energy policy.

This report was not peer-reviewed, nor was it joined or supported by any credible national environmental organization. Indeed, national environmental groups like the Natural Resources Defense Council (NRDC) have endorsed the use of biomass from wood waste by facilities mentioned in the report like Plainfield Renewable Energy. In a letter to the facility, NRDC wrote: "NRDC has reviewed the plans for Plainfield Renewable Energy project and found that the categories of wood you propose to use meet our criteria for environmentally acceptable wood. In particular the standard for cleaned wood from construction and demolition debris appears to exclude all of the materials of concern to NRDC."

Placer County Air Pollution Control District, home to Cabin Creek Biomass Facility, was awarded the 2010 Clean Air Excellence Award by the Environmental Protection Agency for its public-private solution for keeping forests healthy while generating clean energy using biomass.

It is unfortunately very easy to misrepresent numbers as true science. PFPI believes it is helping the environment – but the end result of studies like this is that, if they are taken as fact, more fossil fuels will be used for power.

We continue to review the report and collect its inaccuracies. For an initial review, we took a close look at two recently permitted, very different type projects—one in California and the other in Connecticut.

### **Plainfield Renewable Energy.– Plainfield Connecticut**

The Connecticut project, called Plainfield Renewable Energy is a \$220 million biomass generation facility that uses wood derived from construction and demolition waste that would otherwise be placed in landfills, causing methane emissions—a potent greenhouse gas. When completed, it will generate enough power for 40,000 households and account for 15% of Connecticut's renewable energy. The project has strict fuel processing requirements designed to prevent the combustion of creosote or other non-wood materials.

#### *Fuel Sources and Inspection*

On the subject of wood from construction and demolition used at the facility, the report questions the efficacy of the permitting process and fuel inspection, without any supporting data and without an understanding of the process for testing and inspecting fuel (pg. 56): "...the permit does at least require testing, its provisions still appear to be contradictory and unenforceable... it is not clear how effective such sorting can be, given that the sorting facilities rely on visual inspection to remove contaminated materials from a fast-traveling conveyor belt loaded with tons of debris."

Yet, the Natural Resources Defense Council reviewed the project and in 2007 concluded that "the standard for clean wood from construction and demolition debris appears to exclude all of the

materials of concern to NRDC from an air quality and public health perspective.” The New England States for Coordinated Air Use Management—a non-profit association comprised of the six New England states—also endorsed the use of Plainfield’s fuel.

### *Climate*

From a climate perspective, Plainfield – and indeed all biomass facilities – are a no-brainer when it comes to carbon, and vastly preferable to fossil fuel facilities. In 2009, PhD ecologists—from such institutions such as Minnesota, Princeton, Dartmouth and UC Berkley—published an analysis of biomass carbon in Science Magazine. Entitled “Beneficial Biofuel—The Food, Energy and Environmental Trilemma”—the report listed fuels considered to be “biofuels done right” because of their lower life cycle greenhouse-gas emissions profile, including municipal and industrial wastes but also sustainably harvested wood and forest residues.

In calculating Plainfield’s CO2 emissions—indeed all CO2 emissions from the 88 facilities purportedly reviewed in the report, there is no attempt to analyze these emissions on a life-cycle basis. In other words, the emission calculations are simply what goes up the stack while ignoring the simple fact that carbon is “recycled” by a closed-loop process that takes carbon from the air in photosynthesis, resulting in the regrowth of plants. Because of this natural cycle, the science of greenhouse gases from biogenic sources like wood is undeniably and fundamentally different than the science of gases from geologic sources.

### **Cabin Creek Biomass Facility – Placer County, California**

What about other emissions? This is where a California facility—called Cabin Creek Biomass Facility in Placer County—is particularly revealing. In 2012, the Sequoia Foundation conducted an assessment with technical assistance from the California Department of Public Health and in collaboration with Placer County Division of Planning Services and Department of Health and Human Services. The Assessment received funds from the Health Impact project, a collaboration funded by the Robert Wood Johnson Foundation and the Pew Charitable Trusts.

In California and indeed throughout the West, wood waste materials from forests is often burned in piles—causing uncontrolled emissions—or left in forests to become fuel for fires that threaten communities and ecosystems. Sequoia compared the fate of biomass if left to openly burn in piles or in forest fires versus the controlled combustion of the fuel in a biomass facility. This “alternative fate” analysis is completely missing from PFPI’s report, and for good reason. If PFPI had done such analysis, it would have come to the same conclusion that Sequoia reached.

Specifically, for regulated pollutants—the same pollutants discussed in the PFPI report—the construction of the Cabin Creek biomass plant, which used the wood waste that traditionally had been open burned, resulted in staggering reductions in emissions—**95 to 99 percent**. Similar reductions were confirmed by Placer County in a 2011 published, peer-reviewed report in the Journal of the Air & Waste Management Association—**particulate emissions by 98%, NOX emissions by 54%, CO emissions by 97% and CO2 emissions by 17%**.

In other words, far from being a source of “pollution,” biomass energy projects like Cabin Creek are part of the solution, contributing to forest health and improving air quality. No wonder the California Energy Commission describes biomass in its Bioenergy Action Plan as an energy source that “creates jobs, provides local energy, enhances energy security, and helps protect public health and safety by reducing waste materials and fire danger.”

### **What about other claims made by PFPI?**

• *The report asserts that the DC Circuit invalidated a rule, requiring regulation of CO2 from biomass, when in fact the Court found that the Agency failed to adhere to the procedural rules in reaching that conclusion.* PFPI fails to discuss the very exhaustive regulatory proceeding now before EPA that includes a Science Advisory Board and almost three years of hearings and analysis. That proceeding, we trust, will result in the affirmation of biomass as providing carbon

benefits long recognized by many states like California and virtually every international regulatory body.

- *The report asserts that biomass plants can emit more "pollution" than fossil-fuel fired plants.* That is simply incorrect. Facilities that emit less than 250 tons are very minor contributors to overall air quality. The PSD permitting program is designed appropriately to focus on larger emitters given they are the source of the vast majority of emissions in this country. Creating unnecessary permitting hurdles for small facilities discourages investment and job creation. Some states require a Best Available Control Technology (BACT) analysis for minor sources, a BACT analysis for renewable energy sources, or have state-only limits for new NOx sources to prevent deterioration of air quality outside the PSD program. For example, the Texas Commission on Environmental Quality uses a three-tier approach to evaluate the BACT analysis in minor NSR air permit applications.

- *PFPI claims that states use exemptions like the so-called "synthetic minor" category to allow biomass plants to skirt regulations.* In fact, emission limits in synthetic minor source permits are enforceable permit conditions that must be met by the facility. The facility must operate in compliance with the emissions limits in its permits or be subject to enforcement action, permit termination, and permit revocation and reissuance as a major source permit.

- *PFPI claims that biomass plants have no restrictions on hazardous air pollutants (called "HAP emissions"), criticizing EPA for what they call lax standards.* Standards for what are called Maximum Achievable Control Technology for biomass boilers are described as lenient compared to coal (27x) especially when biomass boilers could burn up to 90% coal and are still classified as biomass boilers. In fact, EPA went through an extensive analysis of boilers in the last several years under what is called Boiler MACT, appropriately identified many different subcategories of boilers based on differences in class and type and then set MACT limits for each of the regulated pollutants. The process appropriately resulted in different HAP limits for different subcategories based on the best performing sources. Those rules are in place, going through the usual legal reviews and become effective in January 2016.

- *PFPI asserts, wrongly, that biomass boilers are burning wastes and should be regulated as incinerators.* Biomass has a long tradition of safely burning various biomass residuals that reduce reliance on fossil fuels while diverting materials from landfills and reducing harmful greenhouse gases. Biomass boilers are not designed to accept "trash." Biomass facilities aren't equipped to take municipal solid waste but, like biomass, waste-to-energy facilities have their own set of strict regulations they must comply with.



## **Attachment B 2014 Annual Report of ecoPower Generation – Hazard, LLC Case: 2009-00530**

### **Anti-Biomass Propaganda Paints Misleading Portrait of Beneficial Energy Source**

Posted on [April 3, 2014](#) by [25x25](#)

*The following guest blog is from Bill Carson, Principal of Carlson Small Power Consultants of Redding, CA. Over the last decade, Carlson has consulted in the development of 12 small biomass cogeneration facilities. Over a forty year career in energy, he has operated plants combusting gas, coal, trash, biomass and coal waste. He is the former chairman of the national Biomass Power Association, and served on the boards of 25x25, California Biomass Energy Alliance, Electric Power Supply Association, and the Independent Energy Producers of California, as well as on the Biomass Task Force of the Western Governors' Association.*

An anti-biomass energy group issued a “report” this week that is, at most, propaganda chock full of scare tactics, misstatements and half-truths so biased in its interpretation of data that it is difficult to figure out just where to start first in pointing out the obvious inadequacies of its findings.

The document, self-published by the Partnership for Policy Integrity (PPI) speciously contends that biomass electricity generation is more polluting and worse for the climate than coal.

It is not the first attack on biomass generated by those who would insist on a “business-as-usual” approach to meeting our nation’s energy needs, and it won’t be the last. But with EPA having under consideration proposals to regulate under the Clean Air Act greenhouse gas emissions resulting from energy generated by biomass in the same way it regulates these emissions from coal-fired energy generation, it’s important to address and correct the impressions left by erroneous, if not baseless, assertions.

### **Misrepresentation of Hazardous Air Pollutant (HAP) Emissions from Biomass**

Perhaps one third of the total PPI document is devoted to Hazardous Air Pollutants (HAP) emissions from biomass and the lack of regulation, control and documentation. In reality, if lead or mercury or chlorine is not present in fuel in the first place, it is not going to be present in emissions. EPA and state regulators appreciate and accept this fact, but the authors clearly do not understand it. Much is made of dioxin and HCL in the report, but virgin wood does not contain more than trace amounts of chlorine, a necessary element in in both pollutants. The vast majority of biomass fuel in the United States remains residue and waste material from the agriculture and forest products industries, and that is not expected to change. These materials do not contain the precursors for the HAPs of greatest concern. Sure, it makes great theater to talk about lowering kids test scores from mercury emissions, but if the fuel contained no mercury to begin with, it is not going to be formed in the combustion process. There are some higher order organic compounds that could be created from inefficient combustion, but EPA and the States have rightly determined that limits on CO and VOC's will assure these are controlled.

Construction and demolition debris does have some potential to generate HAP emissions, if not sorted and processed properly. However, this feedstock is only a small fraction of the overall biomass supply. Any HAP emissions generated from its combustion would be subject to the emissions thresholds established by EPA, which, if exceeded, would trigger additional regulatory controls.

### **EPA Is Not Giving Biomass a Pass on the PSD limits**

Much is also made in the PPI document of the fact that fossil fueled power plants trigger a Prevention of Significant Deterioration (PSD) review at 100 tons per year (tpy) of emission of any single pollutant, while the same trigger for biomass power occurs at 250 tpy. It's stated that this is a sweetheart deal that EPA is giving biomass, when, in reality, there is a short list of very major industries that trigger at 100 tpy such as oil refineries, chemical plants, steel mills and fossil fuel power plants. All other industry sectors use the 250 tpy trigger, and that includes biomass. The list was simply a recognition by EPA years ago that there are a few very large sectors in America with known major emissions, and then there is everyone else, including biomass. No pass is given!

### **Misunderstanding of the EPA/State Relationship**

The paper states that biomass power seeks to avoid more stringent EPA emission limits and instead finds a way to rely on more lenient state standards. In fact, the relationship was designed such that the EPA limits are a minimum, and can be exceeded by the states, but never made less stringent. The Clean Air Act was designed so that states could get “delegated authority” from EPA to run the air quality permitting program so long as they ran it in accordance with an EPA approved State Implementation Plan – a system that has been in place for more than 40 years and works just fine. If EPA believes that the state is becoming too lenient, it can pull that authority, and has in the past. The states typically do, however, have the ability to look at biomass permits in totality, recognizing that a new plant may stop open burning of agricultural waste in California, or reduce the open burning of logging slash in Georgia, and, as a result, have a dramatic positive effect on overall air quality in the local region.

The report specifically criticizes the use of “synthetic minor” permits for biomass facilities by states. This criticism is entirely without merit. The minor source permitting systems has been in place for decades, and there is no special treatment for biomass facilities. A synthetic minor permit may be obtained where a facility with a potential to emit above the “major source” threshold does not intend to actually do so. For example, an operator may design a facility to meet future demand which could, were the future demand to occur, result in major emissions. In the meantime, emissions will remain below the major source threshold. In such a case, the operator can request an enforceable permit limit that will require the facility to remain below the major source threshold. In the event the operator wishes to exceed the major source threshold in the future, it would trigger the major source permitting requirements at that time. Far from being a “loophole,” this is a common, lawful, and widespread process designed to promote efficiency and economy in the regulatory process. It is equally available to all source types and is widely approved by EPA in state implementation plans across the country.

### **Burning Biomass Is Not the Same as Burning Trash**

The paper would also have you believe that biomass plants are just closet trash burners, when the two fall into distinctly different classes. I have operated both, and believe me, the approach and regulatory requirements are miles apart. Trash is a totally mixed product that is burned unsegregated and may contain most anything. As a consequence, a dedicated trash burning plant will have to hang virtually every sophisticated type of

pollution control equipment known to man in order to be permitted. The reward for that is they will be able to charge the “tipping fee” that figures so prominently in the document. By contrast, a biomass plant can have a reasonable set of pollution controls that assures clear stack operation and NO<sub>x</sub> and CO limits that will not threaten the well being of the community. Both plants must conduct extensive air quality modeling to make sure that they meet the ambient standards established by EPA (and perhaps lowered by state regulators) and thus the plant is protective of public health. The biomass plant is much cheaper to build, but will be far more restricted on what it can burn. The wood must all be clean, and can only be from sources designated in the air quality permit. There may be testing requirements of the fuel in the pile, or even upstream at the fuel supplier, if that is what the State deems necessary. Because of these restrictions, the plant will NOT be able to charge a tipping fee and, at best, will have to pay just the transportation of the fuel. Typically, entrepreneurs will have established clean wood businesses just outside the gate of the landfill, where they will accept clean wood for free, allowing deliverers to avoid paying the landfill tipping fee on that portion of their waste stream. The system works very well and the fuel that arrives at the plant will have been sorted, cleaned, processed and run under a bank of magnets to assure it meets the plant’s permit requirements. Any failure on the part of the fuel supplier means being cut off and the end of the supplier’s business.

### **Getting the Data Wrong**

In one of many examples of the report getting the data wrong, one of the plants cited in the paper, Nippon Paper in Port Angeles, WA, is one that I know well and have worked on for years. In its characterization, the author says generally good things about the permit, but concludes that it is very likely that the plant will be a large emitter of HAPs due to the nature of its fuel supply. The paper says it has a very low PM emission limit (0.001 lb/MMBTU) - so low that it will only emit 2 tpy of particulates from a 20 megawatt plant. However, all of the above is wrong. The plant’s PM emission limit is actually 0.02 lb/MMBTU, which still keeps it comfortably within other limits discussed. The plant will burn primarily sawmill byproducts, logging slash, clean urban wood and the wood fines from their wastewater cleanup operation (referred to by the author as sludge), not exactly a recipe for large HAP emissions as claimed by the author. The logging slash will be from private lands on the Olympic Peninsula and have all been previously legally open burned in the airshed of Olympic National Park. At the plant itself, the new boiler will replace a collection of older boilers dating back to the 1950s

that currently burn wood and No.6 oil. The new boiler will actually lower emissions versus the current boilers by 68 percent for PM, 98 percent for acid gases, 12 percent for CO and 52 percent for sulfur dioxide, while increasing NOx by 20 percent. There will be no “lag” in the plant paying back its CO2 debt, as it will burn material that is currently waste and would be emitting CO2, or worse in the case of CH4 (methane), by open burning or decomposing in landfills. All of the information in this paragraph is readily available and could have been used to give credit to the project and balance the tone of the diatribe.

## **Conclusion**

In assessing the report overall, I have to say that looking at only the plant stack and concluding that it is bad is akin to looking at the needle on a smallpox shot and concluding that sharp thing will hurt the patient. Biomass needs to be looked at in totality, what it does for forestry, agriculture and waste management, not just what comes out the stack.

There is a reason biomass has not been singled out for scrutiny by the EPA, and that is because the nature of the fuel is such that it is relatively benign. Virtually every scientific organization in the world has concluded that biomass emissions are carbon neutral so long as the fuel source is sustainable. It is foolish to state that biomass emissions “can literally kill you”, when there is not one instance of that being true, especially given the fact that there is a current fleet of nearly 200 biomass plants, many of which have been in existence for 50 years or so.

The biggest supporters of biomass power are the communities and regulatory agencies that have the most experience with it. There is a good reason that the DTE coal to biomass conversion in Stockton, CA, could be successfully permitted in one of the worst air quality situations in America. That is because the San Joaquin Air Quality Management District knows that another biomass plant in the district, despite its stack emissions, will be a net benefit in air quality as it eliminates more of the open burning from agriculture that is a source of much of their problem. If a regulatory agency were to cut biomass any slack in the regulatory process it would be because he wants it to be completed as a part of his overall air quality strategy to keep the ambient contaminant levels as low as possible in his jurisdiction.