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HAWKEN ENERGY



December 15, 2009

Environmental Quality Board
PO Box 8477
Harrisburg, PA 17105-8477

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INDEPENDENT REGULATORY
COMMISSION

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ENVIRONMENTAL QUALITY BOARD

Re: COVER LETTER SUMMARY ONLY

Dear Board:

The following one-page summary only comments are being provided in response to Proposed Rulemaking on Outdoor Wood-Fired Boilers dated Saturday, October 17, 2009. In summary, we strongly urge the board to NOT adopt the proposed rulemaking for the following reasons:

1. The Proposal was prepared using grossly flawed data.
2. The Proposal will severely damage the economy of the Commonwealth of Pennsylvania by killing jobs, and by increasing heating costs for many businesses and homeowners by over 400 percent.
3. The Proposal will expose the board and the Commonwealth to a potentially enormous legal liability associated with deaths and injuries resulting from carbon monoxide poisoning and house fires.
4. The Proposal will dramatically increase the emissions of greenhouse gasses.
5. The Commonwealth consists of largely rural areas where outdoor wood-fired boilers (OWBs) do not impact anyone. Broad regulation of OWBs throughout the entire Commonwealth would be overly burdensome to citizens in most areas of the Commonwealth. Therefore, any necessary regulation should be established at the local municipal level in densely populated areas only.

Please see my detailed letter for further data.

Sincerely,

Warren W. Walborn
President & CEO

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Re: Proposed Rulemaking [25 PA. Code CHS. 121 and 123] Outdoor Wood-Fired Boilers

Dear Board:

The following comments are being provided in response to Proposed Rulemaking on Outdoor Wood-Fired Boilers dated Saturday, October 17, 2009.

In summary, we strongly urge the board to NOT adopt the proposed rulemaking ("Proposal" or "Regulation") for the following reasons:

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3. The Proposal will expose the board and the Commonwealth to a potentially enormous legal liability associated with deaths and injuries resulting from carbon monoxide poisoning and house fires.
4. The Proposal will dramatically increase the emissions of greenhouse gasses.
5. The Commonwealth consists of largely rural areas where outdoor wood-fired boilers (OWBs) do not impact anyone. Broad regulation of OWBs throughout the entire Commonwealth would be overly burdensome to citizens in most areas of the Commonwealth. Therefore, any necessary regulation should be established at the local municipal level in densely populated areas only.

I will now provide the following data to substantiate the above points:

This Proposal Was Prepared Using Grossly Flawed Data

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1. Proposal Data False – Qualifying Model Cost:

The proposed rulemaking states as follows:

“It is estimated that cleaner units may be approximately 15% more expensive because of the changes made to improve efficiency...”

This is completely false. Note the table below that compares a Standard OWB to a “Cleaner Unit” – this table shows that the “Cleaner Unit” costs 72 percent more, AND it produces less than HALF the amount of heat!

Comparison	Standard OWB	“Cleaner Unit”	Disadvantage of “Cleaner Unit”
Example Model	Hawken Energy HE-1100	Central Boiler E-Classic 1400	
EPA Phase 2 Certified?	No	Yes	
Retail Price	\$5,595	\$9,630 ¹	72% Higher cost
BTU Output	225,000 BTU/hr	107,500 BTU/hr	48% of the BTU output

Thus, the proposed rulemaking is claiming false data to make the case for the Regulation.

Result of this Regulation? PA CITIZENS WILL BE BURDENED WITH SUCH HIGH COSTS FOR THESE “CLEANER UNITS” THAT THEY WILL LIKELY NOT BE ABLE TO AFFORD THEM. As a result, more fossil fuels will be burned in the Commonwealth, thus creating more greenhouse gas emissions. Fossil fuel costs are much higher than biomass (wood) cost. Our Commonwealth consists primarily of heavily-wooded, rural areas. It makes no sense to burden the citizens of our entire Commonwealth with a rule that really only applies to a few densely populated areas that comprise a tiny fraction of our Commonwealth.

2. Proposed Data False – Cost of Chimney Stack Extensions

The proposed rulemaking makes misleading statements attempting to convince the reader that the cost of becoming compliant with their new stack height requirements would be

¹ This is the lowest discounted price found – some Central dealers were known to charge over \$12,000 for this model.

minimal. This is completely false. An average cost for a homeowner to make this modification to an existing OWB would be \$815.00.

The proposed rulemaking states as follows:

"A review of ...internet catalog indicated that the cost would be between \$73 and \$84 for a 2-foot section of chimney pipe and between \$119 and \$145 for a 4-foot section of chimney pipe."

This is simply false and misleading because these costs do not represent all the parts necessary for such an extension, these costs also do not include tax, shipping and installation, and these costs shown are for the wrong parts that do not even meet certain manufacturer specifications!

A proper cost analysis would need to include the following parts:

Part	Average Cost ²
Adapter/Collar	\$56.00
Triple Wall Extension piece	\$277.00
Roof bracket	\$100.00
Chimney Tee	\$242.00
Tax	\$40.00
Installation	\$100.00
Total	\$815.00

Result of this Regulation? This high cost of compliance with the ordinance will force citizens to ignore the Regulation, shut off their OWBs and burn fossil fuels, or bear this high burdensome cost to become compliant with the Regulation.

3. Proposed Data False – Data Used to Support Rulemaking Has Been Discredited

The "Proposed Rulemaking" claims as follows: "The emissions, health effects and the nuisance factor created by the use of OWBs are a major concern to the Department." As evidence for this concern, the proposed rulemaking quotes "facts" from the "Northeast States for Coordinated Air Use Management" or "NESCAUM." However, the NESCAUM reported analysis has been resoundingly debunked – see attached letter from Philip H. Gitlen of Whiteman Osterman & Hanna dated April 21, 2006³.

² See the following website for many of these parts that meet manufacturers' specifications:
http://www.zoobler.com/browse.php?c=Heating%20%28Indoor%29_Chimney%20Systems_Wood%20%28Rigid%29&fluesize=8&style=list&style=grid

³ See attached letter

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In this letter, Mr. Gitlen, who is an attorney from Albany, New York, states that "NESCAUM makes a number of statements of fact regarding OWBs ... which are completely inaccurate." For example, the actual cover of the report contains a photo of an OWB that appears to be emitting a large amount of smoke. However, upon closer examination, it is clear that this OWB is being operated incorrectly thus forcing steam to escape from a relief vent! So from the very beginning of the report, a misleading photo is shown on the cover of the report attempting to convince the reader that OWBs emit large amounts of smoke, when in fact, the photo only shows steam escaping (properly) from an improperly operated OWB.

Other facts disproving the NESCAUM report are as follows:

- NESCAUM's statements regarding particulate matter are misleading because NESCAUM ignores EPA data which shows that the rate of particulate emissions from OWBs is similar to the rate of emissions from certified woodstoves.
- NESCAUM's statements regarding low stack heights for OWBs is incorrect
- NESCAUM's statement that OWBs are not designed to achieve secondary combustion is incorrect
- NESCAUM repeatedly misrepresents EPA test data
- NESCAUM's presentation of near-source emission monitoring is misleading because NESCAUM fails to disclose that emissions from an OWB with proper stack heights comply with national ambient air quality standards.
- And many other facts disproving the NESCAUM report are also included in this letter.

The bottom line here is that the Board cannot justify this proposed rulemaking based on the flawed NESCAUM findings.

The Proposal Will Severely Damage the Economy of the Commonwealth of Pennsylvania

4. Burning Wood Saves Money for Businesses and Homeowners

Per Btu, wood is much less expensive than fossil fuels – at current prices, natural gas is three times the cost of wood, propane is five times the cost of wood, and electricity is seven times the cost of wood⁴. Does the Board really wish to subject the citizens of

⁴ http://hawkenenergy.com/images/legacy/cost_comparison_chart.gif

Pennsylvania to the high cost such expensive fossil fuels, or the high cost and low output of EPA-approved devices?

The high cost of energy for home heating has financially crippled many homeowners nationwide. The Commonwealth of Pennsylvania should be looking for ways to provide its citizens a way to stay warm in their homes, without facing financial disaster.

5. Burning Wood Helps the PA Economy by Saving Jobs

The harvesting and burning of wood is an important economic factor in Pennsylvania. It reduces our dependence on foreign energy companies and it supports our local economy. There is no billion dollar wood fuel utility that will profit from wood burning or multinational corporations involved in the wood heat business. Most businesses that supply furnaces are small manufacturers and retailers. Local workers who chop firewood and chimney sweeps who service wood-heating systems get the benefit of local dollars.

Hawken Energy has 24 Authorized Factory Representatives in the Commonwealth of Pennsylvania who support their families at least in part by selling and installing Hawken OWBs. Many of these Reps have employees working for them as well, all of whom would face the possibility of losing their livelihood should the proposed Regulation be adopted.

Result of Regulation? Pennsylvania will lose jobs to big foreign oil companies.

6. This Regulation Would Harm the PA Economy Because of Its High Cost of Compliance

See Sections 1 above. Note that given the extremely high cost of "EPA-approved" devices, very few units are being sold. One company that sold only EPA-approved devices, Greenwood Technologies, has gone bankrupt and is currently liquidating under Chapter 7 of the bankruptcy code. Again, these units cost much more – in some cases they are twice the cost of standard OWBs – and they typically produce less than half the BTU output. Therefore their excessive cost would overly burden citizens of the Commonwealth.

The stack height requirement would also overly burden citizens of the Commonwealth with very high compliance costs. See Section 2 above.

7. This Regulation Would Harm the PA Economy Because It Does Not Consider The Forecasted Future High Cost of Fossil Fuels

What fuel will be used when the world runs out of oil – which is expected to happen within 50 years? The world is running out of fossil fuels. In a few years, the world's inhabitants will have consumed one-half of the known fossil fuel reserves. Once this happens, fuel prices will skyrocket as fears of "running out" will become more of a reality.

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"The volume of the world's petroleum reserves is important because of the fear that the oil will run out. This fear should be expected, because the estimated remaining one trillion barrels of crude oil is only enough to supply the world for about 50 years. This prediction is based on the present world consumption; however, world consumption is expected to increase."⁵

Within 10 years, experts project the world oil demand will exceed production capacity by 20 million barrels per day. This will result in astronomical fuel prices to level the supply/demand curve. PA homeowners will be forced to find and pursue alternative heating methods; low-cost wood and other biomass fuels will enable PA homeowners to heat their homes without becoming financially crippled, unless your proposed Regulation is adopted.

See footnotes below for more information on the reality of "peak oil"⁶

Result of Regulation? Such Regulation, if adopted without the foresight of expected future fossil fuel energy costs, will damage the PA economy, as home heating costs rise.

The Proposal Will Expose the Board and the Commonwealth To a Potentially Enormous Legal Liability Associated with Deaths and Injuries Resulting from Carbon Monoxide Poisoning and House Fires.

8. Legal Liability

Given the cost of this proposed rulemaking on citizens of our Commonwealth, many citizens will not be able to afford these high regulatory costs and will be forced to use indoor-fired heating appliances. Such indoor-fired heating appliances are dangerous – such dangers include, among other things, serious injury and even death from carbon monoxide poisoning and house fires.

Outdoor wood boilers take combustion outdoors. Therefore, households and businesses can reduce their insurance costs by using outdoor furnaces since outdoor combustion eliminates many risks of fire damage, and carbon monoxide poisoning.

1. ⁵ <http://hypertextbook.com/facts/2000/EvanAbel.shtml>

⁶ <http://www.youtube.com/watch?v=rqdw7yhEplk>
http://en.wikipedia.org/wiki/Peak_oil
<http://www.peakoil.net/>

Result of Regulation? The high cost of compliance with this Regulation will lead businesses and homeowners away from using wood as a fuel in an outdoor appliance. The result will inevitably be deaths and injuries from fires and carbon monoxide poisoning (among others) that will lead to costly litigation against the Board and the Commonwealth. Does the Environmental Quality Board of Pennsylvania really want to subject our citizens to the risk of death? And does the Board really want to subject our Commonwealth to the cost of inevitable lawsuits resulting from such deaths?

The Proposal Will Dramatically Increase the Emissions of Greenhouse Gasses.

9. Wood is A Renewable Fuel

Wood has been safely used as a fuel since the beginning of recorded history – longer than any other fuel. Fossil fuels have only been used for heating since the early 1900s. Prior to this, wood had been the primary fuel for as long as Planet Earth had been inhabited by man.

Wood is a renewable fuel. One of the reasons wood is such a perfect fuel is because it is renewable. This means that it can be “restored and replenished by nature in a period of time that is compatible with our human use”. The heat released from wood is actually stored energy from the sun--released when consumed in a wood burning device. Wood is an abundant resource in this country that is easily sustained. Provided they are cared for and managed properly, our forests can be a perpetual source of fuel, unlike gas, oil, and coal, which are being depleted at a rate that is astonishingly faster than the millions of years it took Nature to make them.

10. Fossil Fuels Produce Excessive Greenhouse Gasses – Wood Does Not

Wood burning is completely safe in terms of “Greenhouse Gasses” - All fuels produce carbon dioxide, the primary greenhouse gas, when they burn. When the atmospheric concentration of greenhouse gasses increases, they cause the average global temperature to rise.

Wood differs from the fossil fuels coal, oil and gas, because it is part of the natural carbon/carbon dioxide cycle. As a tree grows, it absorbs carbon dioxide from the air and stores it in the wood as carbon, which makes up about half of the weight of wood. When the wood is burned, carbon dioxide is released back into the atmosphere. No additional carbon is released because the same amount of carbon dioxide would be released if the tree died and were left to rot on the forest floor. The carbon in coal, oil and gas, by contrast, are taken from underground stores, usually from overseas, where they were deposited by Nature, and released into the air without means for equal reabsorption. When trees are used for energy, a part of the forest's annual growth is diverted from the natural decay and forest fire cycle into our homes to heat them. Firewood is a natural

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energy product from the forest. Burning wood actually helps reduce greenhouse gas emissions by displacing the use of oil, gas and coal.

The US Government states clearly that wood burning is not harmful to the environment in terms of Greenhouse Gasses: "Under international greenhouse gas accounting methods developed by the Intergovernmental Panel on Climate Change, biogenic carbon is part of the natural carbon balance and it will not add to atmospheric concentrations of carbon dioxide. Reporters may wish to use an emission factor of zero for wood, wood waste, and other biomass fuels in which the carbon is entirely biogenic."⁷

Result of Regulation? Since this Regulation dramatically increases the cost of using wood as a fuel, fossil fuel use will increase thus increasing the volume of harmful greenhouse gas emissions.

The Commonwealth Consists of Largely Rural Areas Where OWBs Do Not Impact Anyone. Broad Regulation of OWBs Throughout the Entire Commonwealth Would Be Overly Burdensome to Citizens In Most Areas of the Commonwealth. Therefore, Any Necessary Regulation Should Be Established at the Local Municipal Level in Densely Populated Areas Only.

11. Common Sense

Unfortunately, there is some incorrect information being spread around about wood burning. We are unsure of the exact reason this information is being spread – perhaps the large foreign oil companies are threatened by wood burning, or perhaps people are just afraid of something new and different. When automobiles started to become popular, they were opposed by those who favored horses and buggies. Times change, we adapt to these changes, and we move on – this is progress and it is why we as Americans are so successful.

Those opposed to burning wood make it sound like wood is the worst fuel in the world, and that it is somehow dangerous. After reading some of this misinformation, one feels almost like they should seal up their fireplace and turn up the fuel oil furnace! After quiet reflection, however, one realizes that any argument that burning wood is somehow more harmful than burning fossil fuels is preposterous.

Though the use of any resource has an environmental impact, the use of wood as a fuel is much more in keeping with the natural cycles of ecosystem Earth. The heat produced by

⁷ <http://www.eia.doe.gov/oiaf/1605/coefficients.html>

burning firewood is actually the warmth of the sun, stored in trees through the process of photosynthesis. When the sun abandons us during the cold dark days of winter, we liberate the sun's heat through the "reverse photosynthesis" of burning. Like every other cycle in Nature, every process has its opposite.

Wood is a reliable fuel. In the midst of a winter storm when the power goes out or during an energy crisis rolling blackout, homeowners can still heat with wood. It gives both heat and comfort during times of emergency. Wood also gives freedom. Having the ability to burn wood for heat in a home gives more freedom and options for fuel. Many homeowners live away from natural gas pipelines and are forced to purchase much more costly fuels such as propane or fuel oil. Wood fuel allows a homeowner to no longer be dependent on large energy utilities that may or may not be able to supply energy.

Conclusion

In conclusion, the Commonwealth consists primarily of heavily-wooded, rural areas. It makes no sense to burden the citizens of our entire Commonwealth with a rule that really only applies to densely populated areas that constitute a tiny portion of the Commonwealth. Any needed regulation should be left to local municipalities. Accordingly, we recommend that the Board NOT adopt the proposed, or any regulation of OWBs. Such regulations can be easily managed by local municipalities of densely populated areas.

Please feel free to contact me with any questions you may have.

Sincerely,



Warren W. Walborn
President & CEO

For Information Purposes – Hawken Energy, Inc. is the fourth-largest outdoor wood furnace manufacturer in the United States. Hawken has become known as an industry leader in providing high-quality, low-cost heating solutions for homeowners and businesses, while utilizing renewable energy fuels. All Hawken furnaces are manufactured in America.

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