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Statement of Central Boiler, Inc.
before the
Environment Committee
March 22, 2013

Raised Bill 1134: An Act Concerning Outdoor Wood-Burning Furnaces

Sen. Meyer, Rep. Gentile and members of the Environment Committee:

Central Boiler was established in 1984, is based in Minnesota and is the premier manufacturer of quality outdoor wood and wood pellet furnaces. At Central Boiler, one of their goals is to promote the manufacture and sale of cleaner Outdoor Wood Furnaces (OWFs). With unsurpassed commitment to the OWF industry, CB has participated in the first EPA testing of OWF products in 1995 and later partnered with the EPA to help establish testing standards for outdoor wood furnaces. Central Boiler has been participating in EPA's Voluntary Emission Reduction Program(s) since 2007 and the ongoing revisions to the Federal regulations called the New Source Performance Standards (NSPS) for OWFs. One of its many industry-leading accomplishments was the production of the first EPA Phase 1 and Phase 2 program qualified OWFs. Central Boiler and their consumers offer this product because they want to play a role in reducing our nation's dependence on foreign oil and preserving fossil fuels.

Central Boiler would like to thank the Committee for not pursuing a ban on Outdoor Wood-Burning Furnaces (OWFs) or other punitive proposals that would financially burden OWF consumers.

Central Boiler has for the last five years urged members of the Environment Committee to take a reasonable approach in updating Connecticut's statute on OWFs by simply establishing particulate matter (PM) emission limits consistent with EPA's voluntary emissions reduction program(s). By establishing a PM emission limit, Connecticut will only allow the newest and cleanest models qualified in the EPA Phase 2 Hydronic Heater Program, a PM limit of 0.32 lbs/million Btu heat output. The Phase 2 qualified models represent the latest in new technology and are very clean and efficient.

Vermont, Maine, New Hampshire, Massachusetts, Maryland, Pennsylvania, Indiana and New York have all established the same emission limit as EPA's Phase 2 Program.

All EPA Phase 2 Qualified OWFs are tested by the same EPA accredited, independent test laboratories used to certify indoor woodstoves. These independent EPA accredited test laboratories use EPA approved Test Methods specifically designed for this class of wood heating appliance. The test results are reviewed by EPA and if the OWF show emissions below the Program limits, they are deemed program qualified. The use of an output based emission limit requires that a Phase 2 OWF must be both clean and efficient. We wish that the proposal could include provisions that are less restrictive for installing EPA Phase 2 Qualified OWFs similar to other States. For example, when the State of Vermont established the EPA Phase 2 PM limits they reduced their installation requirements from 200

ft. from the nearest neighboring residence (same as current requirement in CT) to 100 feet AND removed the chimney height requirement. If Connecticut will not reduce the setback requirement, we would suggest that they establish a minimum chimney height requirement such as 17 ft. or something similar to other Phase 2 States. A summary of Phase 2 installation requirements is included with our testimony.

If the installation requirements are not reduced for EPA Phase 2 Qualified OWFs, we would suggest that language be added so that the CT DEEP is required to review the installation requirements after the New Source Performance Standards (NSPS) is enacted for OWFs.

Nonetheless, we appreciate the committee's work in this area and pledge to continue working with you to permit this alternative energy source to be used by consumers throughout the state. Thank you.

**PENDING ADDITIONAL FEDERAL REGULATIONS – REVISIONS TO THE NEW SOURCE
PERFORMANCE STANDARDS (NSPS) coming in 2013**

- NSPS is an additional US EPA regulatory tool, developed under the Federal Clean Air Act of 1970 that identifies a source of potential harmful emissions and mandates a limit on emissions from that specific source.
- Already apply to *indoor* woodstoves
- Aggressive timeline for NSPS revisions - Proposal expected by mid-to late 2013, with revision promulgation by mid-to late 2014 – these are the most recent dates presented by the U.S. EPA.
- Proposed for Outdoor Hydronic Heaters (**Outdoor Wood-Fired Furnaces**)
 - 2014 – Level 1 (proposed): PM emissions limit - 0.32 lb/MMBtu heat output with cap of 18 g/hr
 - Matches the current EPA Phase 2 voluntary program and NESCAUM model rule.

PARTICULATE MATTER (PM) EMISSIONS LIMIT – Phase 2 (II) 0.32 lbs/million Btu heat output

- U.S. EPA ≤ 0.32 lbs/million BTUs heat output, 18 g/hr cap.
 - This is the same g/hr cap set in the NSPS for indoor woodstoves.
- NESCAUM: 0.32 lbs/million Btu heat output
- Vermont: 0.32 lbs/million Btu heat output
- Maine: 0.32 lbs/million Btu heat output
- New Hampshire: 0.32 lbs/million Btu heat output
- Massachusetts: 0.32 lbs/million Btu heat output
- Maryland: 0.32 lbs/million Btu heat output
- Pennsylvania: 0.32 lbs/million Btu heat output
- Rhode Island: 0.32 lbs/million Btu heat output
- New York: 0.32 lbs/million Btu heat output
- Indiana: 0.32 lbs/million Btu heat output

SETBACK REQUIREMENTS - Phase 2 – 0.32 lbs/million Btu heat output

A strong argument can be made that no setbacks requirements are necessary for appliances that meet the EPA HH Phase 2 Program emissions limit of 0.32 lbs/million Btu heat output. Preferred setbacks are from State of Maine. It is easy and cost effective for consumers and local governments to determine setbacks with modern day range finders and local GIS mapping systems to neighboring residences and it is consistent with other State requirements.

- NESCAUM: Model Rule – no setback requirements
- Vermont: 100 ft from another residence (no chimney height requirement)
- Maine: 50 ft. from a property line or 70 feet from another residence.
- New Hampshire: 50 ft. from a property line
- Massachusetts: 50 ft from property line and 75 ft to nearest occupied building
- Maryland: setbacks are local issue
- Pennsylvania: 50 ft. from a property line
- Rhode Island: no setback requirements
- New York: 100 ft. from property line or 100 ft. from neighboring residences if on 5 contiguous acres
- Indiana: no setback requirements

CHIMNEY HEIGHT REQUIREMENTS – Phase 2 – 0.32 lbs/million Btu heat output

The requirement should be that a unit have stack height 2 feet higher than the height of adjacent structures for appliances that are EPA HH Phase 2 qualified – (0.32 lbs/MMBtu output).

- NESCAUM: Model Rule - no chimney height requirements
- Vermont: No chimney height based upon their setbacks from neighboring residences
- Maine: Taller than residence served if neighboring residences are within 300 feet.
- New Hampshire: no chimney height requirement
- Massachusetts: Taller than any roof structure within 150 feet if a residence not served is within 150 feet.
- Maryland: no chimney height requirement
- Pennsylvania: 10 ft. above the ground and according to manufacturer's recommendations.
- Rhode Island: no chimney height requirement
- New York: 18 ft. minimum or may be taller than any roof structure within 150 ft. of the hydronic heater
- Indiana: no chimney height requirement



Burn Wise Partners - Program Participation - List of Cleaner Hydronic Heaters

<http://www.epa.gov/burnwise/owhhiist.html>

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[Breathe Easier with Cleaner Outdoor Wood-Fired Heaters \(PDF\)](#) (1pg, 451k. [About PDF](#))

Below is the Phase 2 list of cleaner burning hydronic heaters that qualify for EPA's Hydronic Heater program*. Phase 2 units have a white tag and are about 90 percent cleaner than unqualified units. EPA's Phase 1 models are no longer considered "qualified" under the Program after March 31, 2010. Use of permanent labels and hang tags for these models must be discontinued on units manufactured after that date. You can find [Phase 1 archived here](#).

* The wood-burning appliances that are "qualified" under the EPA's Voluntary Hydronic Heater and Fireplace Programs are not "certified" per EPA's Wood Heater New Source Performance Standard. Contact your [state or local air quality agency](#) for clarification on the type of wood-burning appliances, if any, that may legally be installed in your area

Please Note Energy efficiency numbers that have been calculated using the current test procedure are generating numbers that do not represent actual efficiencies. As such, we have taken down the efficiency column from this web site. Please bear with us while we review this issue.

Phase 2 Qualified White Tag Models*

Manufacturer	Model Name & Number	Heat Output Rating ⁽¹⁾ (BTU/hr)	Annual Average Emission Rate (grams/hr)	Heat Output ⁽²⁾ Annual Average Emission Level (lbs/million BTU output)	Fuel Type
Northwest Manufacturing, Inc. (Woodmaster) EXIT Disclaimer	Flex-Fuel 30 KW indoor/ outdoor	117022	1.5	0.04	stick wood; batch load
Northwest Manufacturing, Inc. (Woodmaster) EXIT Disclaimer	Flex-Fuel 30 KW indoor/ outdoor	110167	1.3	0.04	wood pellets; continuous feed
Northwest Manufacturing, Inc. (Woodmaster) EXIT Disclaimer	Flex-Fuel 60 KW indoor/ outdoor	219831	2.6	0.04	stick wood; batch load
Central Boiler EXIT Disclaimer	Maxim M250	212453	1.6	0.06	wood pellets; continuous feed
Heatmor EXIT Disclaimer	200 SSP	162793	1.1	0.07	wood pellets; continuous feed
Polar Furnace EXIT Disclaimer	G3	142533	1.96	0.08	stick wood; batch load
Central Boiler EXIT Disclaimer	E-Classic 3200	261506	3.3	0.08	stick wood; batch load
Northwest Manufacturing, Inc. (Woodmaster) EXIT Disclaimer	Flex-Fuel 60 KW indoor/ outdoor	179458	3.3	0.11	wood pellets; continuous feed
Central Boiler EXIT Disclaimer	E-Classic 2400	186453	3.3	0.12	stick wood; batch load
Aqua-Therm EXIT Disclaimer	Kunzel PK-20	85969	0.7	0.13	wood pellets; continuous feed
Hawken Energy EXIT Disclaimer	GX-10	76887	2.2	0.14	stick wood; batch load

Manufacturer	Model Name & Number	Heat Output Rating ⁽¹⁾ (BTU/hr)	Annual Average Emission Rate (grams/hr)	Heat Output ⁽²⁾ Annual Average Emission Level (lbs/million BTU output)	Fuel Type
Central Boiler EXIT Disclaimer	E-Classic 1450	120529	4.7	0.18	stick wood; batch load
Heatmor EXIT Disclaimer	200 SSR II	66842	3.7	0.18	stick wood; batch load
Mahoning Outdoor Furnace, Inc. EXIT Disclaimer	Sky Series V	82594	2.44	0.18	stick wood; batch load
HeatSource1 EXIT Disclaimer	Earth Energy Series 190	87577	3.56	0.19	stick wood; batch load
Polar Furnace EXIT Disclaimer	G2	66897	3.53	0.19	stick wood; batch load
Northwest Manufacturing, Inc. (Woodmaster) EXIT Disclaimer	AFS 900	107069	2.49	0.20	wood pellets; continuous feed
Hardy Manufacturing Company EXIT Disclaimer	KBP 270	120000	2.96	0.20	wood pellets; continuous feed
Aqua-Therm EXIT Disclaimer	Kunzel PK-10	45506	0.7	0.21	wood pellets; continuous feed
Nature's Comfort, LLC EXIT Disclaimer	GT-6000	100959	5.7	0.22	stick wood; batch load
Piney Manufacturing Limited EXIT Disclaimer	Optimizer 250	78252	4.7	0.23	stick wood; batch load
Greentech Manufacturing EXIT Disclaimer	RS7400-E	116597	8.04	0.23	stick wood; batch load
Pro-Fab Industries, Inc. EXIT Disclaimer	Empyre Elite 100	48721	2.5	0.24	stick wood; batch load
Northland Dist. & Mfg Inc. EXIT Disclaimer	Empyre Elite XT100 Pristine Series 1000				
Marway Welding	Phase 2-200	65336	3.75	0.26	stick wood; batch load
Wood Doctor EXIT Disclaimer	WD-HE8000	112655	6.1	0.26	stick wood; batch load
Steel Tech Inc. (Heatmaster SS) EXIT Disclaimer	G200	80368	5.6	0.27	stick wood; batch load
Pro-Fab Industries Inc. EXIT Disclaimer	Empyre Pro Series 200	66290	8.4	0.27	stick wood; batch load
Central Boiler EXIT Disclaimer	E - Classic 1400	107459	5.5	0.27	stick wood; batch load
Heatmor EXIT Disclaimer	400 4S	160599	10.7	0.28	stick wood; batch load
Piney Manufacturing Limited EXIT Disclaimer	Optimizer 350	160421	7.3	0.30	stick wood; batch load
	KB165	73573	3.9	0.31	

Manufacturer	Model Name & Number	Heat Output Rating ⁽¹⁾ (BTU/hr)	Annual Average Emission Rate (grams/hr)	Heat Output ⁽²⁾ Annual Average Emission Level (lbs/million BTU output)	Fuel Type
Hardy Manufacturing Company EXIT Disclaimer					stick wood; batch load
Hardy Manufacturing Company EXIT Disclaimer	KB220	77135	4.5	0.31	stick wood; batch load
Central Boiler EXIT Disclaimer	E - Classic 2300	160001	6.4	0.31	stick wood; batch load
Pro-Fab Industries Inc. EXIT Disclaimer	Empyre Elite 200 Empyre Elite XT 200	64047	5.96	0.31	stick wood; batch load
Pro-Fab Industries Inc. EXIT Disclaimer	Empyre Pro Series 400	177333	6.1	0.31	stick wood; batch load
Wood Doctor EXIT Disclaimer	HE-5000	44502	4.2	0.32	stick wood; batch load

1 - Based on 8-hour test for stick wood models and 4-hour test for continuous feed models.

2 - EPA Phase 2 qualified level is 0.32 pounds of fine particles per million BTU of heat output (weighted average representing the range of burn rates expected in a year) and a maximum individual test run of 18.0 grams per hour. Typically, the maximum individual test run is the maximum heat output burn rate.