

# EPA's Phase 2 Voluntary Partnership Program: Outdoor Wood-Fired Heaters

EPA and manufacturers of outdoor wood-fired heaters are joining forces to make heaters available that are dramatically cleaner – about 90 percent – than units not qualified under the voluntary partnership program. These heaters will display EPA's white hang tag which means they are among the cleanest units on the market.

## Wood Heaters and Smoke

Outdoor wood-fired heaters, also called outdoor wood boilers or hydronic heaters, burn wood to heat water, which is piped underground to provide heat for homes and other buildings. Use of these heaters has increased in recent years, prompting complaints about smoke and the health effects of the particle pollution it contains.

## Cleaner Heaters through Partnerships

In January 2007, EPA launched a voluntary program to reduce outdoor wood heater emissions. Under the first phase of the program, participating manufacturers made units that are 70 percent cleaner than pre-program models. These models meet a smoke emissions level of 0.60 pounds per million Btu heat input.

Also in January 2007, the Northeastern States for Coordinated Air Use Management (NESCAM) issued a model regulation that state and local governments can tailor to address their specific situations. A number of states, including Vermont, Maine, Connecticut and New Hampshire, have adopted rules.

Phase 2 heaters, available beginning in late 2008, are even cleaner than the Phase 1 models. Qualified Phase 2 units must meet smoke emission levels of 0.32 pounds per million Btu heat output. That's 90 percent cleaner than pre-program models. Indoor hydronic heaters and units fueled by other biomass, such as wood pellets, sawdust and corn, also may qualify as Phase 2 models. Coal, oil and gas heaters are not included.

Replacing a pre-program wood heater with a more efficient EPA-qualified unit can significantly reduce pollution in your community.

## Models qualified under EPA's Voluntary Program

Phase 1: 15 qualified models are 70% cleaner than unqualified models. Phase 1 models display an orange hang tag.

Phase 2: 6 qualified models are 90% cleaner than unqualified models. Phase 2 models display a white hang tag.



## **What is a Hydronic Heater?**

Hydronic heaters can also be called outdoor wood boilers or outdoor wood furnaces. These heaters typically use wood to heat water that is piped to a nearby building (usually a home), providing both heat and hot water to the structure. An outdoor hydronic heater resembles a small shed with a short smokestack and is usually located outside of the building to be heated. Hydronic heaters may use other biomass as fuel. Some may be located indoors in furnace rooms. For purposes of EPA's voluntary program oil, coal or gas heaters are not included.

## **How do I know which units are cleaner? How much cleaner are they?**

Units that have a white hang tag meet EPA's Phase 2 emission levels and are 90 percent cleaner than unqualified units.

Units that have an orange hang tag meet EPA's Phase 1 emission levels and are 70 percent cleaner than unqualified units.

## **What are the health effects of smoke from hydronic heaters?**

Numerous scientific studies report potentially serious adverse health effects from breathing smoke emitted by residential wood combustion. Smoke contains both fine particle pollution (PM<sub>2.5</sub>) and a number of air toxics. Fine particle pollution is linked to a variety of health problems, including aggravated asthma, reduced lung function, development of chronic bronchitis, irregular heartbeat, and premature death in people with heart and lung disease.

## **Should I replace my old outdoor wood boiler or hydronic heater?**

If you have an old wood heater, consider replacing it with a cleaner heating device that qualifies for the EPA white hang tag.

## **Does it matter what people burn in hydronic heaters?**

Yes! Use of the wrong fuels in a hydronic heater can decrease the efficiency of your heater and can increase pollution. If you have a hydronic heater, only use fuels recommended by the manufacturer.

## **Where can I find additional information on hydronic heaters?**

Check [www.epa.gov/woodheaters](http://www.epa.gov/woodheaters) for updates on qualified models. For further information contact Gil Wood, [wood.gil@epa.gov](mailto:wood.gil@epa.gov), 919-541-5272.



For more information about hydronic heaters, go to [www.epa.gov/woodheaters](http://www.epa.gov/woodheaters)