

Outdoor Wood-fired Hydronic Heaters

A Voluntary Partnership with the U.S. Environmental Protection Agency

What are Outdoor Wood-fired Hydronic Heaters?

A typical outdoor wood-fired hydronic heaters (OWHH) burns wood to heat water that is piped underground to a nearby structure (usually a home) resulting in heat for a building. An OWHH resembles a small shed with a smokestack, typically located on the outside of the building to be heated. Most OWHHs are sold for use in rural, cold climate areas where wood is readily available; however, OWHHs can be found throughout the United States.

The Problem

Current OWHHs are often substantially dirtier and less efficient than some other home heating devices. With smoldering fires and short smokestacks (usually no more than six to ten feet tall), OWHHs can create heavy smoke that is released close to the ground, where it is not only a nuisance but unhealthy to breathe. Smoke contains particles which can affect both the lungs and the heart.

Although these units are designed to burn dry, seasoned wood, some people use them to burn green wood, which is less efficient and generates much more smoke. Others burn household trash or construction debris, which can not only release harmful chemicals and pollution, but can be against state law.

The Solution

EPA has initiated a voluntary incentive program for manufacturers of OWHHs. EPA's primary intent is to first encourage manufacturers to produce cleaner OWHH models. EPA also wants people that plan to buy an OWHH to buy the cleanest models available, which are those that meet EPA performance levels.

The program encourages manufacturers to produce and sell cleaner, more efficient OWHHs that meet a certain performance level. To participate in the OWHH program, manufacturers commit their best efforts to develop cleaner models with the goal of distributing these units by April 2007. EPA will focus efforts on encouraging people to buy these cleaner models in areas where local authorities have determined that OWHHs are allowable. In addition, the program will include educating new and current OWHH users on the health effects of woodsmoke, what to look for when purchasing these units, and how to properly operate an OWHH.

State and Local Requirements

Each state and local regulating agency will continue to have the authority to determine if the use of OWHHs in their areas is appropriate. Many local agencies and some states have ordinances that regulate the use of OWHHs, and several states are planning additional regulations. EPA is working with several groups

associated with the OWHH industry, such as the Hearth, Patio and Barbecue Association (hpba.org), as well as numerous state and local government agencies, to reduce emissions for OWHHs. More specifically, EPA has partnered with the Northeast States for Coordinated Air Use Management (NESCAUM), to develop a model rule for new and used OWHHs. State, local, and tribal agencies can elect to use this model rule as a template to more efficiently develop regulations for OWHHs. To view the model rule in its entirety, visit nescaum.org.

Safe Wood Burning Practices

- ✓ Operate only according to manufacturer's instructions. Never start a fire with gasoline, kerosene, charcoal starter, or a propane torch.
- ✓ Do not burn any wood that does not meet the definition of clean wood.
- ✓ Build hot fires. A smoldering fire is not an efficient fire.
- ✓ Keep the doors of your OWHH closed unless you are loading or stoking the live fire.
- ✓ Regularly remove ashes from your OWHH into a metal container with a cover.
- ✓ Follow best practices for stack heights and proximity to property lines.

For further information, visit, epa.gov/woodheaters



For OWHH Manufacturers

Participating in EPA's voluntary program can be good for business. By becoming a member of the OWHH Program, manufacturers can publicly demonstrate their environmental stewardship by selling cleaner more efficient heaters. EPA has designed several easy-to-use collateral materials that can be used in promoting your efforts in this program.

How Manufacturers Can Participate in the OWHH Program

- ✓ Sign a Partnership Agreement with EPA to bring cleaner OWHH models to market.
- ✓ Use a descriptive hang tag on heaters that provides information on smoke emissions for particular OWHH models.
- ✓ Display information about the voluntary program in OWHH sales areas.
- ✓ Include text in each qualifying owner's manual on proper operation and maintenance of the OWHH including how and what to burn.
- ✓ Submit sales and test data on improved OWHH models.

For Consumers

If you are looking to purchase an OWHH, this program can help you make a more environmentally conscious investment that will be more protective of your health. This program also focuses on proper installation, maintenance, and the need for using best burn practices for existing OWHHS. Consumers can distinguish the cleaner and more efficient OWHH models by labels and descriptive hang tags that show the unit meets EPA's voluntary program performance levels. By buying a cleaner unit, OWHH consumers will not only have a cleaner, less polluting heater than the current models, but also in almost all cases, a more efficient burning unit with lower fuel costs. Please visit EPA's website in May 2007 to view a comprehensive list of cleaner, more efficient OWHH models at epa.gov/woodheaters.