

Residential wood heating getting cleaner

EPA standards to address pollution from new wood burning appliances

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An outdoor wood boiler, or hydronic heater.

Photo by Roberta Burnes

This winter, the U.S. Environmental Protection Agency (EPA) is scheduled to update rules under the Clean Air Act that will significantly reduce fine particle pollution from new wood burning appliances. The new rules, known as New Source Performance Standards (NSPS), do not apply to existing appliances already in use.

It's been 25 years since

the EPA last issued a rule to reduce smoke pollution from wood stoves. Since that time, advances in technology have spurred the development of new wood heating appliances and better ways to reduce emissions from those appliances. So perhaps it's not surprising that the new standards have been greeted with attention and, in some cases, confusion.

We sat down with EPA's

Environmental Scientist David Cole to find out what the wood heat standards are expected to mean—and not mean—for homeowners.

Q: Why the concern over wood smoke?

DC: *Smoke from residential wood heaters contains fine particle pollution, also known as fine particulate matter or PM_{2.5}, along with other pollutants including carbon monoxide, volatile organic compounds (VOCs), black carbon and air toxics such as benzene. Smoke from residential wood heaters, which are used around the clock in some areas, can increase particle pollution to levels that pose serious health concerns. In some areas, residential wood smoke constitutes a significant portion of the fine particle pollution problem.*

Q: I have a wood burning stove in my home. Will the new standards apply to my stove?

DC: *No. The new standards will not affect existing woodstoves and other wood-burning heaters currently in use in people's homes, but only affect stoves that are manufactured after the rule becomes final. The rule also would not apply to outdoor fireplaces, pizza ovens, barbecues or chimineas and would not apply to new or existing heaters that are fueled*

solely by oil, gas or coal. In addition, the proposal would not prohibit or restrict the use of wood-burning appliances for residential heating.

Q: What wood burning appliances are covered under the new standards?

DC: *EPA first issued regulations for residential wood heaters in 1988. That rule applied only to adjustable burn-rate wood stoves (including a type of adjustable burn-rate wood stove known as a fireplace insert). Since that time, the technology for reducing emissions from wood heaters has significantly improved and now is available to make a range of wood heaters more efficient and less polluting. The proposed standards cover newly manufactured adjustable-rate wood stoves, pellet stoves, wood-fired hydronic heaters, forced-air furnaces, masonry wood heaters, and a type of previously unregulated wood stove known as a "single burn-rate" stove.*

Q: What about fireplaces and fireplace inserts?

DC: *Fireplace inserts actually are adjustable burn-rate wood stoves. These inserts are currently regulated under the 1988 rule, and will continue to be in the new rule. EPA did not propose to include fireplaces because fireplaces are not effective heaters and so they would not be subject to the rule. Fireplaces are included*

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in an EPA voluntary program that encourages manufacturers to make cleaner-burning fireplaces and retrofits available for consumers.

Q: If I want to buy or sell a used wood-burning appliance, can I?

DC: *This rule does not affect resale of used wood stoves and heaters.*

Q: Some ads are saying the rules would prohibit the sale of current models as early as next spring. Is that true?

DC: *The NSPS will reflect the significant improvements in technology since 1988, and as a result, these heaters are expected to be much cleaner and more efficient. EPA proposed a 6-month “sold at retail” provision for adjustable burn-rate wood heaters, single burn-rate heaters/stoves, and pellet heaters/stoves that were manufactured before the final rule is in effect, but not yet sold. We received a number of comments on this issue at proposal, and we’re considering them carefully as we develop the final rule.*

Q: How many wood burning appliances are there in the U.S.?

DC: *According to EPA’s 2011 National*

Emissions Inventory (NEI - Version 1), the most recent information we have, wood stoves and fireplace inserts are used in about 8 million homes in the U.S. Nearly 900,000 pellet stoves are in use. Approximately 241,000 outdoor hydronic heaters and 242,000 indoor wood-fired furnaces operate in the U.S. The masonry heater industry is relatively small, and we don’t have production numbers for these appliances. EPA estimates there are 17.5 million wood-burning fireplaces in use in the U.S. (Source: U.S. EPA Residential Wood Combustion Tool).

Q: How many wood burning appliances are there in Kentucky?

DC: *According to the same EPA inventory (2011 NEI), there are almost a half million wood burning appliances in Kentucky.*

Q: How much particle pollution is estimated to come from wood burning appliances in the U.S.?

DC: *In 2011 (from EPA’s NEI), about 390,000 tons of fine particle pollution came from wood burning appliances. That amount is about 15 percent of total fine particle pollution coming from all sources.*

Q: What can be done about particle pollution from existing wood burning appliances?

EPA has a number of tools available to help state and local governments address particle pollution from existing heaters, including “Strategies for Reducing Residential Wood Smoke.” This document was issued by EPA’s Burn Wise program, and it covers options for local regulations, voluntary programs, funding mechanisms and best burn practices - all of which can help reduce particle pollution from existing wood-burning appliances. This document is available at <http://www.epa.gov/burnwise/strategies.html>

Wood stove users should burn wood wisely and operate their appliances according to the owner’s manual. Tips on best burn practices can be found on EPA’s website at <http://www.epa.gov/burnwise/bestburn.html>

Q: When will the rules be finalized?

DC: *EPA is under a consent decree deadline to issue the final rule by Feb. 3, 2015.*

Q: When will the rules go into effect?

DC: *The rules will be effective 60 days after publication in the Federal Register.*