

Summary of Requirements for Woodstoves and Pellet Stoves

On February 3, 2015, the U.S. Environmental Protection Agency (EPA) updated its clean air standards for residential wood heaters to make new heaters significantly cleaner and improve air quality in communities where people burn wood for heat. The updates, which are based on improved wood heater technology, strengthen the emissions standards for new woodstoves, while establishing the first-ever federal air standards for previously unregulated new wood heaters, including outdoor and indoor wood-fired boilers (also known as hydronic heaters), indoor wood-fired forced air furnaces, and single burn-rate woodstoves. The final rule, known as New Source Performance Standards (NSPS), will phase in emission limits over a five-year period, beginning this year. The standards apply only to new wood heaters and will not affect wood heaters already in use in homes.

REQUIREMENTS FOR NEW WOODSTOVES AND PELLET STOVES

- **Woodstoves** are usually made of cast iron or steel and burn split logs (called cordwood) to provide heat. EPA's proposed updates would limit the amount of harmful particle pollution, also known as particulate matter (PM), from two types of newly manufactured woodstoves: adjustable burn-rate woodstoves; and single burn-rate woodstoves. The limits also are expected to reduce emissions of other pollutants found in wood smoke.
 - *Adjustable burn-rate woodstoves (already subject to EPA requirements)* are designed to allow the owner to adjust the airflow to change the rate at which wood burns. EPA estimates that nearly 86,000 adjustable burn-rate stoves will be sold this year.
 - EPA's final rule updates existing emission limits for adjustable burn-rate stoves in two steps over a five-year period:
 - **Step 1:** The rule becomes effective 60 days after it is published in the Federal Register. At that time, PM emissions limits will be identical to those currently required by the State of Washington for noncatalytic stoves. Most adjustable-rate woodstoves manufactured and sold in the U.S. today already meet the Washington state emission standards; these stoves will be deemed automatically certified under the final rule.
 - To ease the transition to cleaner stoves, EPA's final rule will allow woodstove retailers to sell existing inventory until December 31, 2015. After that date, any new woodstoves sold at retail in the U.S. must meet the Step 1 emissions limit.
 - **Step 2:** Five years after the effective date of the rule, woodstoves will have to meet stronger emissions limits (see table below).

- *Single burn-rate woodstoves (previously not subject to EPA requirements)* are designed so the owner cannot adjust the airflow. EPA estimates that nearly 27,000 adjustable burn-rate stoves will be sold this year.
 - Single burn-rate stoves will have to meet the same emission limits as adjustable burn-rate stoves, in the same two steps.
- **Pellet stoves** are similar in external appearance to woodstoves but burn a fuel made of ground, dried wood and other biomass wastes that are compressed to form pellets. Owners pour pellets into a hopper, which feeds the pellets automatically into the stove. Unlike woodstoves, most pellet stoves need electricity to operate. EPA estimates that about 88,000 pellet stoves will be sold this year.
 - Most pellet stoves were exempt from EPA’s NSPS for Residential Wood Heaters, which was issued in 1988. Under today’s final rule, all pellet stoves will have to meet the same emission limits as for woodstoves, in the same two-step process.

Emissions Limits for New Woodstoves and Pellet Stoves		
Step	PM Limit	Compliance Deadline
Step 1: For all stoves without current EPA certification	<ul style="list-style-type: none"> ● 4.5 grams per hour of operation for catalytic and noncatalytic stoves ● Limit is for crib testing. If tested with cordwood, emissions test method must be approved, and stoves must meet crib wood limit. 	60 days after final rule is published in the Federal Register.
Step 2: All woodstoves and pellet stoves	<ul style="list-style-type: none"> ● 2.0 grams per hour for catalytic and noncatalytic stoves, if emissions are tested using cribs ● Alternative limit: 2.5 grams per hour, if tested with cord wood; method must be approved 	5 years after the effective date of the final rule.

DETERMINING COMPLIANCE

- To improve compliance and consumer confidence, the final standards require testing and certification. To reduce potential certification delays, EPA will allow a conditional certification for up to one year. To obtain the conditional certification, manufacturers must submit a complete certification application that includes a full emissions test report from an EPA-accredited laboratory and that meets other application requirements. After one year, internationally accredited

laboratories and certification bodies must be used for testing and certification. EPA will also review the tests and make the results available to consumers on a website.

- Woodstoves sold in the United States will be required to have a permanent label indicating they are EPA-certified to meet emission limits in the final rule. This label will signal to consumers that the heater meets EPA standards.
- Each model line subject to the rules will be required to demonstrate compliance through performance testing, similar to requirements of the 1988 woodstove regulations. Under that certification program, manufacturers have one representative appliance tested by an accredited laboratory to demonstrate compliance for an entire model line. This approach will minimize testing costs for manufacturers.
- The final rule also includes test methods that manufacturers will have to use to determine PM emissions and demonstrate compliance for each emissions limit in the rule. Based on public comment on the proposed rule and additional review, EPA has determined that the agency does not yet have sufficient data to require woodstoves to be tested using fires that burn cordwood (split wood) at this time. Instead, manufacturers will be required to test emissions using fires that burn lumber assembled in standardized configurations known as “cribs” – the same type of testing used for the 1988 woodstove standards.
- EPA believes emissions testing using cordwood is important, because it presents a more realistic picture of emissions from wood heaters in daily use. The agency will allow manufacturers to test emissions using cordwood both for the 2015 (Step 1) and the 2020 (Step 2) emissions limits. Manufacturers choosing to test with cordwood will be required to have EPA approval of the test method.
- In addition, to encourage further development of cordwood test methods, EPA is including an alternative Step 2 emissions limit based on cordwood testing. Manufacturers may test using either cribs or cordwood in Step 2, and must meet the limit corresponding to the type of test they choose. (Manufacturers testing with cordwood for Step 1 must meet the same emissions limit as those testing using cribs.)
- Any manufacturer that tests woodstoves using cordwood will be allowed to use a special EPA label that will recognize that emissions from cordwood testing more closely reflect likely emissions from in-home use. Use of this label is voluntary.

For additional information

- For additional information on today’s final rule, see <http://www2.epa.gov/residential-wood-heaters> .