

Residential Wood Heaters NSPS Draft Proposal

March 22, 2013 Update

Does NOT represent final EPA decisions

Today's Update

- ▶ Key Changes
- ▶ Wood Stoves (and single-burn-rate stoves and pellet stoves)
- ▶ Hydronic Heaters (aka indoor and outdoor wood boilers)
- ▶ Forced-air Furnaces
- ▶ Masonry Heaters
- ▶ Test methods
 - ▶ Peak, Shorter-term Emissions
 - ▶ Cordwood Test Method
- ▶ Efficiency and Carbon Monoxide
- ▶ Timeline
- ▶ Appendix - Historical Overview

Key Changes

- ▶ Two-Step Approach Preferred for Proposal
 - ▶ The states feel strongly about the need for stringent stepped standards as soon as possible as they strive to attain and maintain the NAAQS.
 - ▶ We would propose to require compliance with Step 1 emission limits immediately and Step 2 tighter emission limits in 5 years for all subcategories (except no tighter Step 2 for masonry heaters).

- ▶ Three-Step Approach for Comment
 - ▶ We would ask for comments and environmental and economic data for potential justification of a Three-Step Approach that would require Phase 1 immediately, an interim Step 2 in 3 years, and a final Step 3 in 8 years. The emission limits would be identical for Step 2 in the Two-Step Approach and Step 3 in the Three-Step approach.
 - ▶ EPA's current preference is for the Two-Step Approach but we will consider the information submitted during the public comment period and the final rule will include the appropriate approach. We do not expect the final rule to allow individual manufacturers to choose between approaches.

Wood Stoves

Preferred Two-Step Approach for Wood Stove NSPS Proposal

- ▶ **Step 1: Washington State noncat emission level upon promulgation**
 - Over 85% of sales of EPA-certified wood stoves are models that already meet this level.

- ▶ **Step 2: “Best Systems” emission level five years after promulgation**

- ▶ We would combine catalytic and non-catalytic units under one emission limit.

- ▶ We would include single-burn-rate stoves and pellet stoves.

- ▶ We would prefer to establish an emission limit for cordwood (rather than cribs) for 2019, if possible. We appreciate the testing that labs are conducting now to help inform us of what is possible.

Hydronic Heaters

Preferred Two-Step Approach for Hydronic Heater NSPS Proposal

- ▶ **Step 1: Partnership Program Phase 2 level upon promulgation**
 - 36 hydronic heater models (27 cordwood and 9 pellet models) built by 17 U.S. manufacturers have already been qualified at this level.

- ▶ **Step 2: “Best Systems” five years after promulgation**

Forced-air Furnaces

Preferred Two-Step Approach for Forced-air Furnaces NSPS Proposal

- ▶ **Step 1: CSA B415 level upon promulgation**
 - The two primary U.S. manufacturers of forced-air furnaces both have models that can meet Step 1 already. Other manufacturers are conducting tests now.

- ▶ **Step 2: “Best Systems” five years after promulgation**

Masonry Heaters

Preferred Compliance Requirements for Masonry Heater NSPS Proposal:

- ▶ **Level Equivalent to HH upon promulgation except for small volume manufacturers.**
 - Based on data submitted by the Masonry Heater Association, over 10 models already achieve this level.
 - Many other models are expected to use a computer simulation to show that their design would be expected to achieve the NSPS level without conducting further testing.

- ▶ **For small volume manufacturers (less than 15 total units per year), compliance deadline would be 5 years after promulgation**
 - Most masonry heater manufacturers are very small businesses that produce less than 12 heaters per year.

Scope of the Rules

- ▶ We feel strongly about the need to minimize potential loopholes.

- ▶ We are considering proposing three subparts as follows:
 - Subpart AAA, aka “room heaters”
 - Adjustable burn rate stoves, single-burn rate stoves, and pellet stoves

 - Subpart QQQQ, aka “central heaters”
 - Outdoor and indoor hydronic heaters
 - Forced-air furnaces

 - Subpart RRRR
 - Masonry Heaters

Test Methods

▶ **Peak, shorter-term emissions**

- ▶ We would add multiple 1-hour filters for each test run to gather data regarding start-up and anticipated peaks.
- ▶ For Step 2, we would require compliance with emission limits at the lowest burn rate (“Category 1”) and the maximum burn rate (“Category 4”) rather than the weighted average of the four burn rates in the current NSPS.

▶ **Cordwood test method**

- ▶ We would add testing with cordwood to encourage best real-world performance. For Step 1, the manufacturer would submit test reports with both cribs and cordwood and choose which results to use for certification. For Step 2, the tests would all be with cordwood.
- ▶ We are working with states and labs and industry on the details.

▶ **Precision**

- ▶ We would propose improvements to the test methods to improve precision.

Efficiency and Carbon Monoxide

- ▶ **Efficiency**

- ▶ We would require testing and reporting but not a minimum efficiency.

- ▶ **Carbon Monoxide**

- ▶ We would require testing and reporting of CO but not an emission limit.

Timeline

- ▶ Internal Work Group Update February 14, 2013
- ▶ Draft for EPA Internal Review April 2013
- ▶ Proposal Summer 2013
- ▶ 90-day public comment period
- ▶ Promulgation (Final Rule) Summer 2014

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Appendix - Rulemaking Overview

- ▶ On February 26, 1988, EPA published the original NSPS for residential wood heaters.
- ▶ In 1995, Washington State tightened the emission limits in WA. Almost all manufacturers chose to meet the WA limits for all U.S. models. Today, over 85% of EPA-certified models meet the WA emission levels.
- ▶ In November 2009, EPA released a draft review document with preliminary draft conclusions.
- ▶ EPA conducted numerous stakeholder outreach activities and prepared the technical and economic information necessary for a draft proposal. However, the February 2012 draft proposal did not have great support and EPA began to consider other options.
- ▶ In November 2012, State and local air pollution control agencies hosted a national forum for a broad range of stakeholders (including EPA, manufacturers, health organizations, and environmental groups) to discuss the issues and potential options.
- ▶ EPA has prepared new options for the draft proposal after consideration of the information and recommendations discussed in November and in numerous follow-up discussions.
- ▶ The new options would better reflect current best systems of emission reduction and add emission limits for new appliances that were not regulated in 1988, such as indoor and outdoor wood boilers, forced-air furnaces, and single-burn-rate stoves. They would also include improvements of the repeatability of the test methods and add testing requirements to address short-term emission peaks and testing with cordwood to better represent real-world conditions.
- ▶ The monetized health benefits far exceed the costs for all options considered.