



U.S. EPA's Voluntary Program for Wood-Burning Fireplaces

Frequently Asked Questions

Why did EPA develop a voluntary wood-burning fireplace program?

Fireplaces can impact wintertime air quality in some communities. While EPA does not regulate the manufacture and use of wood-burning fireplaces, the installation and use of new, cleaner-burning fireplaces and retrofit devices in existing fireplaces will help reduce particle pollution emissions.

Are there other advantages to reducing fireplace wood smoke?

Yes, reducing wood smoke reduces particle pollution as well as other products of incomplete combustion, including carbon monoxide (CO), toxic air pollutants (e.g., benzene, formaldehyde), and climate gases (e.g., methane).

What is the difference between an EPA-certified wood stove and an EPA-qualified fireplace or fireplace retrofit device?

Free-standing wood stoves and wood stoves inserted into fireplaces manufactured since 1988 are required to be certified to meet emission standards under EPA's New Source Performance Standards (NSPS). The wood heater standards do not apply to wood-burning fireplaces.

Under EPA's voluntary wood-burning fireplace program, manufacturers may apply to become program partners. To participate, manufacturers have fireplaces or retrofit devices tested and certified by an independent laboratory. EPA reviews the test results and determines whether a fireplace or retrofit device meets the program emission level. EPA-qualified units are marked with a hangtag and included in a list on the Burn Wise website. For more information:

<http://www.epa.gov/burnwise/participation.html#fireplaces>.

What is the difference between an EPA-qualified fireplace and an EPA-qualified fireplace retrofit device?

An EPA-qualified fireplace is a newly constructed wood-burning fireplace that has been qualified by EPA on the basis of test data demonstrating that the fireplace emits 5.1 grams or less of particle pollution per kilogram of wood burned. These new fireplaces are 70 percent cleaner, on average, than existing, unqualified fireplaces. Older, unqualified fireplaces emit over 12 grams of particle pollution per kilogram of wood burned.

An EPA-qualified retrofit device is a new device for installation into an existing fireplace to reduce air pollution. Each retrofit device is qualified by EPA if test data show it reduces particle pollution emissions to 5.1 grams or less per kilogram of wood burned. These emissions tests are

conducted in a laboratory in a specific fireplace. Note that placing a qualified retrofit device in an existing fireplace should achieve significant emissions reductions, however results may vary. Some retrofit devices may be add-on emission control devices such as a catalyst. Others may be cleaner-burning devices that are inserted into an existing fireplace such as a gas/wood hybrid. These are not fireplace inserts (see next question).

What is the difference between fireplace retrofit devices and fireplace inserts?

While both fireplace retrofit devices and fireplace inserts are designed to be installed into existing fireplaces, their design and purpose are different.

- Fireplace retrofit devices are used to reduce emissions from existing fireplaces and can be qualified under EPA's voluntary wood-burning fireplace program.
- A fireplace insert is a heater that is inserted into a fireplace cavity. There are several types of fireplace inserts:
 - Cordwood-fueled inserts are essentially wood stoves designed for installation into an existing fireplace cavity. Newly manufactured units must meet requirements of EPA's wood heater New Source Performance Standards (NSPS).
 - Wood pellet and gas stoves also can be installed into the fireplace and provide significant heat. These are not currently covered by the NSPS.
 - Gas logs are another option and are cleaner-burning, but they are typically used for aesthetics and they provide much less heat to a room.

What test procedures do manufacturers have to use so that a new fireplace or fireplace retrofit device can be qualified under EPA's voluntary fireplace program?

There are two options:

Option 1.

- An ISO-accredited independent test laboratory under ISO Standard 17025 performs the testing and reporting using ASTM International Standards E2558 and E2515.
- The same ISO-accredited independent test laboratory also acts as the certification body and under ISO Standard 17020 develops a certification of conformity and performs the certifications and manufacturing facility inspections.
- EPA qualifies the fireplace or fireplace retrofit device based on the test reports and certification of conformity.

Option 2.

- An independent test laboratory accredited for testing and reporting for the wood heater NSPS performs the testing using ASTM International Standards E2558 and E2515.
- An ISO-accredited independent test laboratory acts as the certification body and performs the certifications and facility inspections under ISO Standard 17020.
- EPA qualifies the fireplace or fireplace retrofit device based on the resulting test reports and certification of conformity.

Will using an EPA-qualified retrofit device reduce emissions by the same amount in all fireplace models?

Assuming proper wood-burning practices, similar emission reductions may be expected when an EPA-qualified retrofit device is installed in existing fireplaces of similar size and material type to the fireplace tested in the laboratory.

To become EPA-qualified, retrofit devices must be tested in a fireplace in an independent accredited laboratory and certified by an ISO-accredited certification body. The test results must demonstrate that the retrofit device achieves an emissions level at or below 5.1 grams of particle pollution per kilogram of wood burned.

What is the relationship between the New Source Performance Standards (NSPS) of 7.5 grams of particle pollution per hour (g/hr) for non-catalytic wood stoves and the EPA fireplace program emissions level of 5.1 grams per kilogram of wood burned for qualified new fireplaces and fireplace retrofit devices?

The NSPS is a regulatory requirement. Newly manufactured non-catalytic wood heaters (wood stoves and fireplace inserts) must meet an emissions limit of 7.5 g/hr under the NSPS. Wood stoves that use catalysts must meet an emission limit of 4.1 g/hr. The g/hr emissions level for a wood stove is determined through testing with EPA Methods 28 and 5G or 5H. The NSPS uses the g/hr (emissions per time) format weighted for 4 different burn rates.

The fireplace program emissions level (5.1 g/kg) applies to new fireplaces and retrofit devices qualified under EPA's voluntary fireplace program. EPA-qualification with this emissions level is determined through testing with ASTM International Standards E2558 and E2515. The voluntary program uses the g/kg (emissions per amount of wood burned) format as a different measure of technology performance, considering that fireplace users typically do not adjust fireplace burn rates other than by changing the amount of wood burned at a time.