

New Federal US EPA Regulations for Wood-Fired Hydronic Heaters and Forced-Air Furnaces

Summary

On February 3, 2015, the U.S. Environmental Protection Agency (EPA) signed the new federal regulation 40 CFR Part 60, Subpart QQQQ, *Standards of Performance for New Hydronic Heaters and Forced-Air Furnaces*.

Effective date: May 15, 2015

The rule affects wood fired units meaning devices designed to burn wood or wood pellet fuel:

- Wood-fired Central Heaters:
 - ⇒ Outdoor Wood Boilers
 - ⇒ Indoor Wood Boilers
- Wood-fired Forced-Air Furnaces

The rule includes:

- requirements for
 - ⇒ manufacturers of hydronic heaters and forced-air furnaces,
 - ⇒ manufacturers of wood pellets,
 - ⇒ sellers of all types of regulated hydronic heaters and forced-air furnaces, and
 - ⇒ owners and operators of wood-fired hydronic heaters and forced-air furnaces;
- emissions standards;
- certification processes, test methods, and reporting requirements.

Key Regulated Specifics:

1. Wood Burners Emission Limits
2. Permanent Labeling Requirements
3. Specific Fuel Requirements
4. Owner's Manuals Requirements and other Point-of Sale Materials and Training
5. Procedures for Operation of Wood Burners

Important Compliance Dates and Facts

As of the effective date of this regulation,

- **Hydronic Heaters** *manufactured* must meet the Particulate Matter emission limit of 0.32 lb/MMBtu heat output (weighted average), with a cap of 18 grams/hour for each test run.
- **Forced-Air Furnaces** must meet work practice and operational standards of the regulation.

After December 31, 2015, retailers *may not* sell any wood fired hydronic heaters such as outdoor wood boilers, indoor wood-fired central heaters, and wood-fired forced-air furnaces that do not meet the regulatory requirements.

As of March 2016 (one year after the final rule is published), **Small Forced Air Furnaces** (< 65,000 Btu/hour heat output) must meet the Particulate Matter emission limit of 0.93 lb/MMBtu heat output (weighted average), as specified by U.S. EPA.

As of March 2017 (two years after the final rule is published), **Large Forced Air Furnaces** (≥ 65,000 Btu/hour heat output) must meet the Particulate Matter emission limit of 0.93 lb/MMBtu heat output (weighted average), as specified by U.S. EPA.

As of March 2020 (five years after the final rule is published),

- **Hydronic Heaters** must meet the Particulate Matter emission limit of 0.10 lb/MMBtu heat output for each burn rate; or the alternate limit of 0.15 lb/MMBtu heat output, as specified by U.S. EPA.
- **Forced-Air Furnaces** (all sizes) must meet the Particulate Matter emission limit of 0.15 lb/MMBtu heat output, as specified by U.S. EPA.



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Manufacturers must provide:

- Model-specific descriptions of proper operation and best practices, included in the owner's manuals;
- Training for distributors on proper operation and best practices for units;
- Written and video versions of proper operation and best practices information for purchasers/operators/users of the heaters.

Owners and operators must:

- use proper burn practices for units subject to these regulations,
- operate each unit in a manner consistent with the owner's manual,
- use only the grades of pellet fuels, wood, or wood chips specified in the owner's manual, and
- not burn improper fuel.

The rule requires manufacturers to *void the warranties* in cases of improper operation, including burning of improper fuel.

These rules DO NOT:

- Regulate heaters fueled solely by gas, oil, or coal.
- Regulate **existing** wood heaters that are already in use in or at people's homes.
- Set visible emissions limits from these heaters.
- Prohibit the use of these heaters in non-heating seasons.

Regulation and Summary Documents

The regulation and summary documents are available on-line at <https://www.epa.gov/residential-wood-heaters>

Prohibited Fuels

- Residential or commercial garbage;
- Lawn clippings or yard waste;
- Materials containing rubber, including tires;
- Materials containing plastic;
- Waste petroleum products;
- Paints or paint thinners;
- Asphalt products;
- Materials containing asbestos;
- Construction or demolition debris;
- Paper products, cardboard, plywood, or particleboard; *
- Railroad ties, pressure-treated wood, or pallets;
- Manure or animal remains;
- Salt water driftwood or other previously salt water saturated materials;
- **Unseasoned wood** (wood with a moisture content of 20% or more; or 35% or more for chip wood);
- Any materials that are not included in the warranty and owner's manual for the subject wood heater; or
- Any materials that were not included in the certification tests for the subject wood heater.

* The regulation does not prohibit the use of fire starters made from paper, cardboard, sawdust,

Assistance

For further information on the requirements of these federal standards, please contact:

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