

Update on federal air pollution regulations for smaller commercial/institutional boilers

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This document provides an update concerning certain upcoming federal air pollution regulations for smaller institutional/commercial boilers, including those that burn wood. EPA is currently in the process of developing a proposed rule. Information in this document does not represent a final decision by EPA.

- EPA is under court order to propose an area source rule for boilers by July 15, 2009. The standards would set limits on the amount of hazardous air pollutants (“HAP” or “air toxics”) that may be emitted by smaller institutional/commercial boilers, including those that burn wood to provide heat or energy for schools, hospitals, prisons, manufacturing facilities, and farms.
- Wood boilers less than 20 million Btus per hour (MMBtu/hr) would most likely meet the definition of “area source” in the Clean Air Act and would therefore need to comply with the area source boilers rule. As with any rulemaking that sets emission standards, the proposed rule could change the costs of installing, operating, and/or maintaining a wood boiler.
- When the Agency establishes emission standards for a source category under section 112 of the Clean Air Act, like the boilers category, it establishes standards for both new and existing sources. The standards for new and existing sources may be identical or they may differ, depending on the facts of the particular source category at issue. The Agency is exploring whether to include different requirements for new and existing boilers in the proposed rule. Among other things, the Agency is exploring requirements for annual tune ups, work practice standards, and operator training for both new and existing boilers. Details will be available when the proposed rule is issued.
- If you are considering installing one of these smaller wood boilers, and your boiler has not commenced construction by the date of the proposal, then you will be subject to the new source requirements after EPA issues a final rule
- If you already operate one of these smaller wood boilers, EPA recommends you continue to consider technology retrofits and other strategies to reduce air pollution from the unit.
- Boilers that meet the definition of an area source will be responsible for complying with the area source rule. New boilers, those that commence construction after the date of the proposal, will need to comply with the limits on the later of startup of the boiler or the date of the final rule. The compliance deadline for existing boilers will be established in the final rule. The Clean Air Act requires that existing boilers comply with the area source rule as expeditiously as practicable, but no later than three years after the effective date of the standards.

- EPA will solicit public comment on the proposal after it is signed and before EPA issues a final rule. EPA is under a court order to issue a final rule by July 15, 2010.
- The area source rule proposal will address toxic air emissions from boilers. EPA remains concerned about the health effects associated with particle pollution in wood smoke.
- Smoke from wood boilers is made up of a complex mixture of gases and fine particle pollution. Scientific studies show an association between exposure to particle pollution and significant health problems, such as aggravated asthma, aggravation of lung and heart disease, and increased frequency and severity of respiratory symptoms such as difficulty breathing and coughing.
- To protect children, older adults and others from the adverse effects of particle pollution, EPA advises boiler operators to consider technology retrofits to reduce particle pollution from existing wood boilers, especially those at schools and hospitals.

More detail

- Area source rules are technology-based and designed to control emissions of hazardous air pollutants (HAPs or “air toxics”).
- EPA’s area source rules usually set emission limits for HAPs based on generally available control technology (GACT), which allows EPA to consider costs and economic impacts of the technology requirements. However, EPA has to set emission limits for area source boilers based on maximum achievable control technology (MACT) for mercury and polycyclic organic matter (POM) because institutional/commercial wood boilers are on the list of Clean Air Act Section 112(c)(6) source categories.
- MACT and GACT requirements on these boilers may differ for new and existing facilities. Details will be available when the proposed rule is published.
- Based on the technical information the Agency has reviewed to date, high efficiency fabric filters appear to be the leading technology for mercury reductions from boilers. EPA is also considering whether to use carbon monoxide (CO) as a surrogate for the organic HAP and total particulate matter (PM) as a surrogate for non-mercury metal HAP.
- The Agency is evaluating different monitoring, record keeping, and reporting requirements.

- The Agency is also exploring high efficiency boiler and fabric filter combinations as a possible component of an emission limit for new sources. Other items under consideration for both new and existing sources include energy audits, annual tune ups, and good combustion practices and boiler design.
- Other local, state and/or federal regulations may also apply now or in the future to institutional/commercial boilers.

Clean Air Act Definitions

Area source – Sources that emit less than 10 tons annually of a single hazardous air pollutant or less than 25 tons annually of a combination of hazardous air pollutants (HAPs). For more information about area source rules, go to <http://www.epa.gov/ttn/atw/area/arearules.html>

GACT – Stands for generally available control technology. The standards for many area sources are based on GACT.

MACT – Stands for maximum achievable control technology. MACT standards are based on the emission levels of the better-controlled and lower-emitting facilities in a category.

HAP – Stands for hazardous air pollutants. HAPs are also called air toxics or toxic air pollutants.