

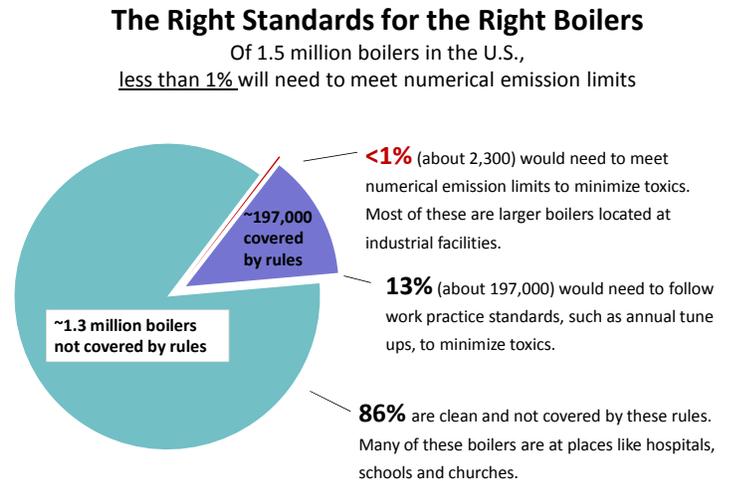
# FACT SHEET: Adjustments for Major and Area Source Boilers and Certain Incinerators

## SUMMARY OVERVIEW

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### ACTION

- On December 20, 2012, the U.S. Environmental Protection Agency (EPA) finalized a specific set of adjustments to Clean Air Act standards, originally finalized in March 2011, for boilers and certain solid waste incinerators.
  - These adjustments maintain extensive public health protections achieved by the March 2011 standards by reducing toxic air pollution, including mercury and particle pollution.
  - At the same time, these adjustments increase the rules' flexibility and address concerns raised by stakeholders.
  - The specific set of adjustments address new data provided to the agency and additional information about real-world performance and conditions under which affected boilers and incinerators operate.
  - These adjustments maintain the dramatic cuts in the cost of implementation that were achieved in the final standards issued in March 2011.
  - Major source and affected area source boilers will have three years to comply and can be granted a fourth year if needed to install controls; EPA also has tools to address, on a case-by-case basis, additional concerns arising for individual sources.
- This fact sheet provides an overview of the key adjustments made to the March 2011 standards and highlights the benefits that will continue to be achieved.



### WHAT DO THE ADJUSTMENTS COVER?

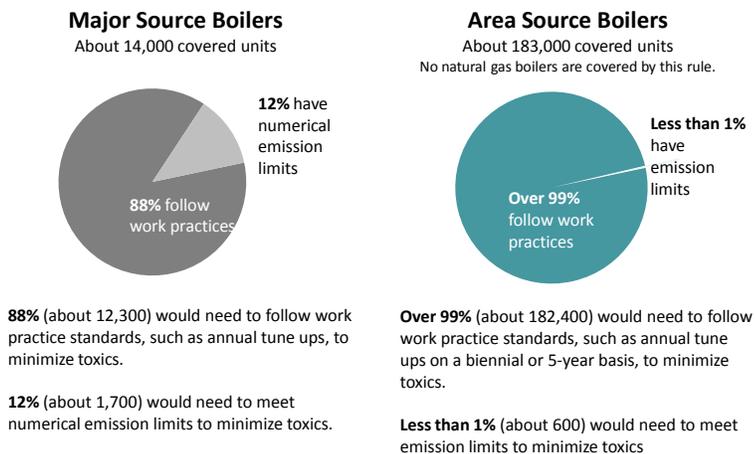
- Using a wide variety of fuels, including coal, oil, natural gas and biomass, boilers are used to power heavy machinery, provide heat for industrial and manufacturing processes in addition to a number of other uses.
- The adjusted standards require only the largest and highest emitting units to add pollution controls or take steps to reduce air pollution, making the standards affordable, protective and practical.
- Boilers at large sources of air toxics emissions are known as major source boilers. They are located at large sources of air pollutants, including refineries, chemical plants, and other industrial facilities.

- Boilers located at small sources of air toxics emissions are known as area source boilers. These are located at universities, hospitals, hotels and commercial buildings.

- A commercial and industrial solid waste incinerator (CISWI) unit is a device that is used to burn solid waste at a commercial or industrial facility. This includes units designed to discard solid waste; energy recovery units designed to recover heat that combust solid waste; and waste burning kilns that combust solid waste in the manufacturing of a product. There are 106 CISWI units covered by these standards

- In a separate but related action, EPA revised the non-hazardous secondary materials rule (NHSM). This rule defines which materials are, or are not, “solid waste” when burned in combustion units. The NHSM rule helps determine which standards, either boiler or CISWI, a unit that burns these materials will be required to meet.

### Breakdown of Major and Area Source Boilers



The adjustments from the March 2011 final standards to the 2012 final standards address new data provided to the agency and additional information about real-world performance and conditions under which boilers and incinerators operate

| Toxic Pollutants                        | Emission Reductions from All Rules Combined (tons per year) |                      |
|---|---|----------------------|
|   | March 2011 Final Rule                                       | 2012 Final Standards |
| Mercury                                 | 1.6   | 2.0 – 3.0            |
| Non-mercury metals                      | 3,000   | 2,100                |
| Hydrogen Chloride                       | 30,500  | 40,500               |
| Particulate Matter (PM <sub>2.5</sub> ) | 30,000  | 18,000               |
| Sulfur Dioxide                          | 450,000   | 580,000              |

Source: U.S. EPA Regulatory Impact Analysis

### HEALTH BENEFITS ARE MAINTAINED

These adjustments have retained the significant health benefits and resulted in rules that are simpler to implement, while maintaining the dramatic cuts in the cost of implementation that were achieved in the final rules issued in March 2011. Specifically, these adjustments:

- Retain important emissions reductions** of pollutants such as mercury, particle pollution, sulfur dioxide, dioxin, lead, and nitrogen dioxide. These pollutants can cause a range of dangerous

health effects - from developmental disabilities in children to cancer, heart disease and premature death.

- **Maintain direct benefits to many communities** where people live very close to these units.
- **Will avoid up to 8,100 premature deaths**, 5,100 heart attacks, and 52,000 asthma attacks.
- **Continue to be cost effective**, with EPA estimating that Americans will receive \$13 to \$29 in health benefits for every dollar spent to meet the final standards. In addition, EPA's analysis shows a small net increase in jobs

## KEY ADJUSTMENTS

The adjustments were made in response to multiple requests for reconsideration of certain aspects of the 2011 rules and recognize the diverse and complex range of boiler uses and fuels. EPA made data driven adjustments that reflect the real world operating conditions of specific types of boilers, while maintaining significant emission reductions. The latest and best information provided during the rule development and reconsideration processes resulted in EPA:

- **Adjusting emission limits** for certain pollutants in certain categories of major boilers and CISWI. Because EPA followed the Clean Air Act, the changes resulted in both less and more stringent emission limits, depending on what the new data demonstrated. A detailed summary of these changes is available in the Technical Overview Fact Sheet at <http://www.epa.gov/airquality/combustion/actions.html>
- **Adding to and refining the list of the subcategories** of boilers that EPA uses to provide the right standards for the right boilers. Each subcategory has its own list of requirements that recognizes what is achievable.
- **Allowing the necessary time to implement the standards** by establishing the compliance deadlines for major boilers and CISWI units in 2016 and 2018, respectively. These units will have three to five years, respectively, to comply with these adjusted standards, and can do so with proven, currently available technologies.
- **Maintaining numerical emission limits for the highest emitting 0.4 percent of all boilers.** These will not apply to 86 percent of all boilers in the United States because these boilers burn clean natural gas and emit little toxic air pollution. The rest would need to follow work practice standards, such as annual tune-ups, to minimize toxics.

## ADDITIONAL FEDERAL ASSISTANCE

- The U.S. Department of Energy, through its regional Clean Energy Application Centers, will provide site-specific technical and cost information to the major source facilities that are currently burning coal or oil in their boilers. Assistance includes:
  - Technical experts to visit these facilities and discuss opportunities to develop compliance strategies, such as combined heat and power that are cleaner, more energy efficient, and that can have a positive economic return for the plant over time.
  - Information on potential funding and financing opportunities including financial incentives available at the local, state, utility and federal level as well as private financing.

- The U.S. Department of Agriculture (USDA) will be reaching out to facilities with boilers that burn biomass to make sure that operators understand the regulation, its cost- and energy-saving features, and the benefits that can accrue as a result.
  - USDA will provide practical information such as what the work practice standards are, and advice on how to conduct an energy audit, and a tune-up.

## **BACKGROUND**

- At the time EPA finalized standards for these sources in March 2011, EPA also announced it was reconsidering the final standards under a Clean Air Act process that allows the agency to seek additional public review and comment to ensure full transparency. In the following months, EPA received more than 50 petitions to reconsider, clarify, and amend certain provisions of the final rules.
- In December 2011, EPA proposed adjustments to the March 2011 standards. In that proposal, the agency addressed and requested comment on the issues identified in the reconsideration and subsequent petitions and has considered the additional information, data and public comments that were submitted to the agency.
- Based on public comment and additional data provided, EPA made final adjustments to the March 2011 standards, maintaining public health protections through significant reductions in toxic air emissions, including mercury and particle pollution, while increasing the flexibility, consistency and achievability of these standards.