



**ENVIRONMENTAL DEFENSE FUND  
STATEMENT ON  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
PROPOSED EMISSION STANDARDS FOR WOOD SMOKE FROM  
STOVES, BOILERS AND FURNACES**

**EPA-HQ-OAR-2009-0734**

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**Public Hearing  
Boston, Massachusetts  
*February 26, 2014***

On behalf of Environmental Defense Fund and our more than 750,000 members nationwide, thank you for the opportunity to testify in support of EPA's vital proposed standards to reduce soot, carbon monoxide and toxic air pollution from new residential stoves, furnaces and boilers. This long-overdue proposal will modernize emission standards for wood stoves and establish the first nation-wide limits on harmful pollutants from wood boilers and furnaces, preventing hundreds of deaths each year and yielding billions of dollars in public health benefits. Moreover, these standards are based on proven technologies that can help consumers use less fuel to heat their homes – saving time and money. EPA should finalize these standards without delay.

[Residential Wood Smoke Contributes to Unhealthy Air](#)

Particulate pollution is a serious public health problem, and substantial amounts of that particulate pollution come from inefficient and outdated wood stoves, furnaces and boilers. Exposure to fine particulates can cause premature death and harmful effects to the cardiovascular system. People with asthma, older adults, children, and low-income families are most vulnerable to fine particulates. Studies have also associated residential wood smoke with increased risk of cardiovascular mortality, and increased incidence of asthma and other respiratory problems, especially in young children.<sup>i</sup> According to EPA, residential wood combustion results in emissions of more than 345,000 tons of fine particulates throughout the country each year – making residential wood smoke the **largest direct source of anthropogenic particulate pollution in the nation.**<sup>ii</sup> And residential wood smoke contributes an even larger share of particulate pollution in parts of the country like the Pacific Northwest, Midwest, and Northeast – including a quarter of wintertime PM pollution in parts of New Hampshire.<sup>iii</sup>

In addition to particulates, residential wood smoke is a major source of other dangerous pollutants including carbon monoxide (CO), volatile organic compounds and toxic air pollutants like benzene and formaldehyde. Residential wood smoke accounts for 44% of the nation's total emissions of polycyclic organic matter, and is responsible for 25% of all cancer risks from small sources of toxic air pollutants.<sup>iv</sup>

### Strengthening Our Clean Air Protections Against Harmful Particulates

The vital importance of cleaner air for this community and others across the nation is why I'm here today to support the NSPS proposal. And it's why EPA should finalize this important rule without delay.

The proposed rule would reduce particulate pollution across the nation by an average of more than 4,800 tons every year over the next eight years, taking into account only the emission reductions occurring in the *first year* of use for each regulated device. Because each of these devices has a lifetime of twenty years or more, and because the cumulative number of devices subject to these standards will grow year after year, these emission

reductions will compound over time. **In total, more than 1.5 million tons of PM will be reduced** during the lifetime of the devices subject to these emission standards.<sup>v</sup>

The human health benefits of this proposal are profound. The emissions reductions will result in up to **470 fewer lives lost every year** for the next 8 years. The proposed standards will also prevent 10,000 upper and lower respiratory symptoms in children ages 7-14 and 15,000 asthma attacks in kids age 6-18 – every year. EPA has found these **health benefits will have a value of up to \$4 billion annually**, almost 267 times the modest costs of the proposed rule.<sup>vi</sup>

### Modern Standards Are Long Overdue - Cleaner and More Efficient Devices are Available

It has been over a quarter of a century since the current new source standards for residential wood burning devices were adopted, even though the Clean Air Act requires that EPA review these standards and bring them up to date at least once every eight years. Not only are the current standards obsolete, many categories of residential wood burning devices – including furnaces and outdoor wood boilers– have no emission limits at all under the current NSPS.

Yet cost-effective clean technologies needed to meet more protective standards are on shelves and in use today. Dozens of wood stoves and pellet stoves already on the market are certified to meet EPA’s proposed “Step 2” standards, which are 70 to 83% lower than the current EPA standards for wood stoves.<sup>vii</sup> Several wood boilers on the market have emission rates significantly lower than those in the proposed NSPS. And EPA has estimated that over fifty wood boiler models produced in Europe, where there are more rigorous emission standards for wood boilers and a robust market for these devices, would comply with the EPA proposed standards. Given the right regulatory signals, American manufacturers are fully capable of shifting the market towards devices that are not only cleaner but also more efficient – reducing harmful emissions and saving consumers money.

## Broad Support for a Clean Air Vision

Individuals, families, communities, states, air agencies, and health and environmental groups have been calling on the EPA for more than a decade to revise these outdated standards that clearly endanger public health. Indeed, on August 28, 2012, the Environmental Council of the States (ECOS) approved a resolution calling on EPA to “act immediately to update the NSPS establishing health protective emission limits” for wood combustion devices.<sup>viii</sup>

Although there are aspects of these proposed emission standards that could be improved, we appreciate that EPA has advanced a strong proposal and we urge the Agency to promptly finalize rigorous, health-protective standards for wood stoves, furnaces and boilers.

Thank you.

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<sup>i</sup> See, e.g., U.S. Environmental Protection Agency, Integrated Science Assessment for Particulate Matter. 2009. Figure 3-3; Luke P. Naeher et al., *Woodsmoke Health Effects: A Review*, 19 *Inhalation Toxicology* 67, 82-87 (2006) (reviewing studies of wood smoke exposure and health impacts); Johnson, 1154-55 (“Numerous studies have found that exposure to the concentrations and durations of wood smoke associated with residential wood burning can cause a variety of adverse respiratory effects. These include increases in respiratory symptoms, decreases in lung function, visits to emergency departments, and hospitalizations”); Pernille Høgh Danielsen *et al.*, *Oxidative Stress, DNA Damage, and Inflammation Induced by Ambient Air and Wood Smoke Particulate Matter in Human A549 and THP-1 Cell Lines*, 24 *Chem. Res. Toxicol.* 168 (2011).

<sup>ii</sup> Proposed rule. 79 Fed. Reg. 6,330 (February 3, 2014).

<sup>iii</sup> Gil Wood, Residential Wood Heaters New Source Performance Standards (NSPS): Public Outreach on Draft Proposed Rule, Slides 5-6 (presentation dated Feb. 9, 2012) (Wood 2012).

<sup>iv</sup> 79 FR 6332.

<sup>v</sup> EPA, “Regulatory Impact Analysis (RIA) for Proposed Residential Wood Heaters NSPS Revision, Final Report;” January 2014.

<sup>vi</sup> *Id.*

<sup>vii</sup> 79 FR 6355.

<sup>viii</sup> ECOS Resolution 12-3, REGARDING NEW SOURCE PERFORMANCE STANDARDS FOR RESIDENTIAL WOOD BURNING DEVICES, Approved August 28, 2012, Colorado Springs, Colorado.