

Attorneys General of New York, Connecticut, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Oregon, Rhode Island, Vermont, and Washington and the Puget Sound Air Quality Agency

February 13, 2019

Re: Advance Notice of Proposed Rulemaking for Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces, published at 83 Fed. Reg. 61,585 (Nov. 30, 2018); Agency Docket No. EPA-HQ-OAR-2018-0196

The Attorneys General of New York, Connecticut, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Oregon, Rhode Island, Vermont, and Washington and the Puget Sound Air Quality Agency (the States) submit these comments on the Environmental Protection Agency's above-referenced advance notice of proposed rulemaking concerning emission standards for new residential wood-burning heating devices. The States oppose any effort by EPA to either extend the May 2020 compliance dates or weaken the emission standards. The current standards are both necessary to protect public health and feasible for manufacturers to achieve. Any weakening of those standards would violate the Clean Air Act.

1. Hazards of Wood Smoke

Wood-burning devices emit multiple pollutants that endanger human health. These pollutants include fine particulate matter (PM_{2.5}), carbon monoxide (CO), polycyclic aromatic hydrocarbons (PAHs), and polycyclic organic matter (POM). The Centers for Disease Control determined that PAHs are reasonably expected to cause cancer.¹

Multiple studies show the dangers of PM_{2.5}. For example, a 2018 study published in the Proceedings of the National Academy of Sciences attributed an estimated 4 million deaths worldwide to PM_{2.5} in 2015.² Another study found that increases in particulate matter were associated with increases in mortality, and the risks were greatest among certain groups, including African-Americans and people with Medicaid eligibility.³ In 2013, acknowledging these dangers, EPA revised its National Ambient Air Quality Standards for PM_{2.5} to provide more protection for public health. 78 Fed. Reg. 3,086, 3,103 (Jan. 15, 2013).

¹ Centers for Disease Control, *Toxic Substances Portal: Polycyclic Aromatic Hydrocarbons (PAH)*, available at: <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=121&tid=25>.

² Burnett, et al. *Global Estimates of Mortality Associated with Long-Term Exposure to Outdoor fine Particulate Matter*, Proceedings of the National Academy of Sciences, July 23, 2018, at 2.

³ Di, et al., *Air Pollution and Mortality in the Medicare Population*, 376 New England Journal of Medicine 2513, 2520-21 (2017).

It is well established that particulate matter from poorly-controlled wood-burning devices causes public health hazards in the States. For example, these devices pose a particular danger to rural areas in New York.⁴ New York is the nation's second largest consumer of wood for heating, with approximately 150,000 homes using wood for primary heat and 500,000 homes for supplemental heat.⁵ In rural New York counties, residential wood burning causes 90 percent of carbonaceous, fine particles/aerosols.⁶ To put this in perspective, as shown in Figure 1 below, residential wood heating contributes more PM_{2.5} emissions to New York's air than the electricity generation and the transportation sectors combined.⁷ To reduce PM_{2.5} emissions, while encouraging the sustainable use of our forest resources, New York has become a leader in the research, development, and demonstration of the next generation of wood heaters through the Renewable Heat New York program.

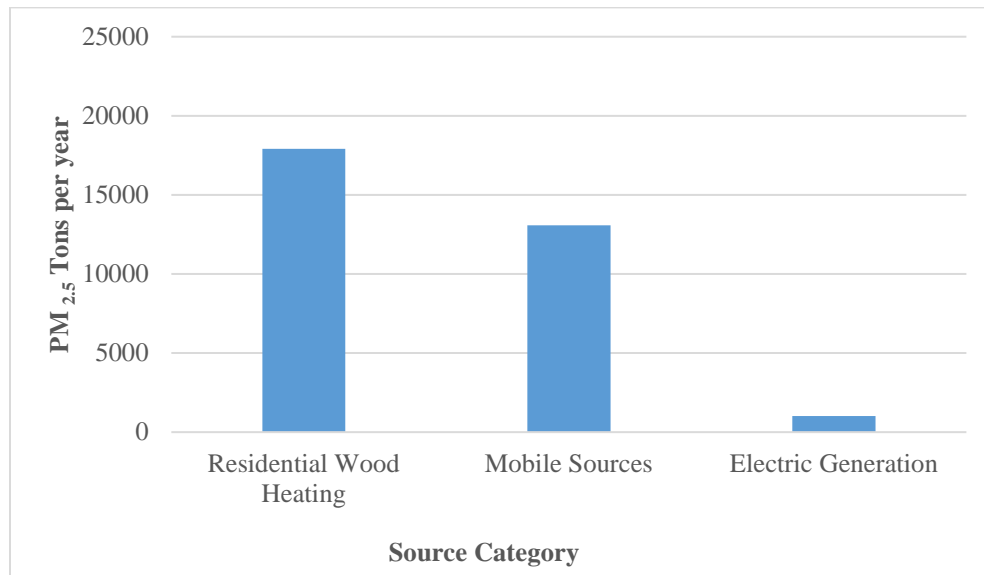
⁴ New York State Energy Research & Development Authority, No. 10-02, *Spatial Modeling and Monitoring of Residential Wood Smoke Across a Non-Urban Upstate New York Region*, xvii-xix, 4-1 (Feb. 2010) (finding that in a seven-county area of upstate New York, "very high spikes in wood smoke concentrations" of over 100 micrograms per cubic meter were observed and that 26% of the monitored population was exposed to elevated residential wood smoke), available at <https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Biomass-Solar-Wind/monitoring-residential-woodsmoke.pdf>.

⁵ New York State Energy Research & Development Authority, No. 15-26, *New York State Wood Heat Report: An Energy, Environmental, and Market Assessment*, S-1 (April 2016), available at: <https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Biomass-Solar-Wind/15-26-NYS-Wood-Heat-Report.pdf>.

⁶ New York State Department of Health, *Fine Particulate Matter Concentrations in Outdoor Air Near Outdoor Wood-Fired Boilers*, 1 (Jan. 2013) available at: https://www.health.ny.gov/environmental/outdoors/air/owb/docs/owb_report.pdf.

⁷ New York State Energy Research & Development Authority, No. 15-26, *New York State Wood Heat Report: An Energy, Environmental, and Market Assessment*, 31.

Figure 1: Comparison of PM_{2.5} Emissions from Residential Wood Heating, Mobile Sources, and Electric Generating Stations in New York.



In Massachusetts, because of the serious health problems and nuisance conditions that result from wood-burning appliances, more than 30 municipalities have enacted regulations, by-laws or ordinances that place restrictions on the use of outdoor wood-fired boilers. *See, e.g.*, Barre, Chapter 310, § 310-1 - § 310-8; Belchertown, Chapter 294, § 294-1 - § 294-9. Many of the regulations have been approved by the Massachusetts Department of Environmental Protection pursuant to M.G.L. c. 111, § 31C. *See generally*, <https://www.mass.gov/guides/heating-your-home-with-a-wood-burning-appliance>.

A 2015 survey conducted by the Vermont Department of Forests, Parks & Recreation revealed that 20.1% of Vermont households use wood as a primary heating fuel, and 38% of Vermont households burned wood for at least some space heating. Vermont Department of Forests, Parks & Recreation, Vermont Residential Fuel Assessment for the 2014-2015 Heating Season (March 2016) at 2, *available at*: https://fpr.vermont.gov/sites/fpr/files/About_the_Department/Library/Library/FINAL_2015%20Residential%20Fuel%20Assessment%20Report.pdf. The survey also revealed that 12.1% of Vermont households used wood pellets for primary or supplemental heating. *Id.* at 13. Data compiled by EPA in 2015 ranked Vermont number one among the states in per capita fine particle emissions from residential wood burning. *See* Wilson Ring, *Vermont No. 1 in Per Capita Wood Stove Emissions*, Burlington Free Press, March 14, 2015, *available at*: www.burlingtonfreepress.com/story/news/local/2015/03/14/vermont-per-capita-wood-stove-emissions/24784007/.

Vermont addresses fine particle emissions from residential wood burning through a state regulation, which was updated effective December 15, 2016. 16-3-100 Vt. Code. R. § 5-204. The regulation prohibits the sale, distribution, purchase, installation and operation of wood heaters and central heaters (defined to include hydronic heaters (wood boilers) and forced air furnaces), which are not certified by EPA as meeting standards and requirements put in place through the

2015 Rule. It also imposes restrictions on allowable fuels and siting restrictions on outdoor wood boilers. As the Vermont regulation is tied to the federal rule, weakening of the 2015 NSPS may adversely affect Vermont's efforts to address fine particle pollution from residential wood burning through state regulation.

2. Regulation of Wood-Burning Devices Under the Clean Air Act

Section 111(b)(1)(A) of the Clean Air Act requires EPA to list categories of stationary sources that “cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health and welfare.” 42 U.S.C. § 7411(b)(1)(A). EPA must establish New Source Performance Standards (NSPS) for listed categories of stationary sources based on the best system of emission reduction the Administrator determines has been adequately demonstrated. *Id.* § 7411(b)(1)(B). A system of emission reduction is adequately demonstrated if the standard of performance is achievable, that is, “if a technology can reasonably be projected to be available to new sources at the time they are constructed that will allow them to meet the standard.” 79 Fed. Reg. 1,430, 1,463 (Jan. 8, 2014). “The standards should be stringent in order to force the development of improved technology.” *Sierra Club v. Costle*, 657 F.2d 298, 325 (D.C. Cir. 1981). EPA must review and, as appropriate, revise, the NSPS for stationary sources at least every eight years. 42 U.S.C. § 7411(b)(1)(B).

The 1988 NSPS

In 1988, in response to a lawsuit filed by New York and the Natural Resources Defense Council, EPA determined that PM_{2.5} emitted from residential wood heaters causes or contributes significantly to air pollution that may reasonably be anticipated to endanger public health or welfare and therefore established a NSPS for new and modified wood heaters. *See* 53 Fed. Reg. 5,873 (Feb. 26, 1988); 40 C.F.R. Part 60, Subpart AAA. The 1988 standards required manufacturers to limit PM_{2.5} emissions to 4.1 grams per hour (“g/hr”) from catalytic wood heaters and 7.5 g/hr from non-catalytic heaters. 40 C.F.R. § 60.532(b)(1) & (2). EPA exempted indoor and outdoor residential wood boilers (also known as “hydronic heaters”)⁸ from the 1988 standards. *See* 40 C.F.R. §§ 60.530(h)(2) & 60.531 (exempting and defining “boilers”). EPA did not regulate residential boilers in 1988 because it lacked sufficient data to set a standard for boilers. *See* 52 Fed. Reg. 4,994, 4,999 (Feb. 18, 1987).

The States' 2013 Deadline Lawsuit

After EPA failed to timely update the 1988 NSPS, in August 2013, New York, Connecticut, Maryland, Massachusetts, Oregon, Rhode Island, Vermont, and the Puget Sound Air Quality Agency sent a notice letter to EPA notifying the agency that it was in violation of a nondiscretionary duty under 42 U.S.C. § 7411(b)(1)(A) and (B) to timely review and, as appropriate, revise the NSPS for new wood heaters. In their letter, the States explained that not only were the NSPS for new wood heaters obsolete, but that the agency's exemption of

⁸ For ease of reading, this comment refers to wood boilers and hydronic heaters interchangeably, even though they may generate heat by distinct means. Also for ease of reading, this comment uses the term wood heaters to mean both wood stoves and pellet stoves.

residential wood boilers from regulation was also outdated in light of the increased prevalence of these devices (and their resulting pollution) since the 1988 rulemaking. The States notified EPA of their intention to commence a lawsuit if the agency did not correct the violations within 60 days.

In October 2013, after EPA failed to correct the violations, the States filed a complaint in federal district court, *New York v. McCarthy* (D.D.C. Civil No. 13-1553). The case was consolidated with a similar lawsuit brought by public health advocacy organizations, *American Lung Assoc. v. McCarthy* (D.D.C. Civil No. 13-1555). Following EPA's issuance of a proposed rule to update the NSPS and negotiations among the parties, EPA lodged a consent decree with the court on April 28, 2014 to resolve the case. The consent decree required EPA to promulgate final NSPS in February 2015. *See New York v. McCarthy*, Doc. # 27-1 (April 28, 2014).

The 2015 NSPS

In March 2015, EPA promulgated an updated NSPS for new residential wood heaters and established NSPS for particulate matter from new residential wood boilers and forced-air furnaces. *See* 80 Fed. Reg. 13,672 (Mar. 16, 2015). The 2015 rule applies to manufacturers, retailers, owners and operators of wood heaters, wood boilers, and forced-air furnaces. *Id.* at 13,674, 13,676; *see, e.g.*, 40 C.F.R. § 60.530(a) (wood heaters). Compliance with the rule's "step one" standards was required shortly after the rule's promulgation because many of the devices already on the market met these requirements.

EPA gave manufacturers and retailers an additional five years, until May 15, 2020, to comply with the more stringent "step two" standards. The Agency adopted the stepped approach to emissions limits to ease the transition for manufacturers. *Id.* at 13,673. Citing the fact that many manufacturers are small businesses, and evidence in the record that some manufacturers could take up to five years to develop, test, evaluate, and certify new models, EPA provided for a five-year compliance period. *Id.* at 13,676. At the time of the proposed rule, several of the States objected to the five-year phase-in period as unnecessarily long in light of the presence of some step two compliant devices on the market and the timely need for pollution reductions from wood-burning devices due to the seriousness of the ongoing public health risks.

As shown in Table 1 below, the step two standards represent a significant reduction in the amount of permissible PM_{2.5} emissions from wood-burning devices:

Table 1: 2015 New Source Performance Standards (80 Fed. Reg. at 13,685)

	Step One Limit (May 15, 2015)	Step Two Limit (May 15, 2020)
Wood Boilers (Hydronic Heaters)	0.32 lbs/mmBTU	0.10 lbs/mmBTU (or 0.15 if tested with cordwood)
Wood Heaters (Wood Stoves and Pellet Stoves)	4.5 g/hr	2.0 g/hr (or 2.5 if tested with cordwood)
Forced Air Furnaces	0.93 lbs/mmBTU* <i>*Effective date February 2016 for small units; February 2017 for large units</i>	0.15 lbs/mmBTU

These reductions from the step one to step two emissions are significant. For wood boilers, the step two units are approximately three times cleaner. For forced-air furnaces, the difference is even more stark—the step two units are approximately six times cleaner.

EPA analyzed the expected costs and benefits of the 2015 NSPS and found that the benefits of the standards overwhelmingly outweighed the costs of industry compliance. EPA estimated that the rule would save between \$3.1 billion and \$7.6 billion, depending on the estimate and discount rate. *Id.* at 13,694. In contrast, EPA estimated that the rule would cost \$43.7 million—meaning that the benefits would outweigh the costs by approximately one hundred to one. *Id.* at 13,692. Much of the savings occurred from reduced premature mortality attributable to decreased particulate matter emissions. *Id.* at 13,694.

Manufacturers' Challenge to the 2015 NSPS

Shortly after the 2015 rule was promulgated, the Hearth, Patio & Barbecue Association (HPBA) challenged it. *Hearth, Patio & Barbecue Ass'n v. EPA* (D.C. Cir. No. 15-1056). In its initial filings, HPBA alleged that EPA had acted arbitrarily and capriciously and contrary to the Clean Air Act in revising the NSPS for new wood heaters and in establishing NSPS for new wood boilers and forced air furnaces. In November 2015, several of the States filed a notice of intent to participate as amicus curiae in support of EPA's defense of the NSPS.

More than three years later, however, the litigation has not advanced. HPBA, with EPA's consent, filed unopposed motions to extend the briefing schedule in the case on six different occasions, each of which the court granted. In those motions, HPBA cited ongoing negotiations with EPA that could resolve certain issues in the litigation as a basis for the extensions. In 2018,

EPA moved for two additional extensions, citing its plan to issue proposed rules to revise aspects of the 2015 NSPS. Last week, on February 7, the court granted EPA's motion to have the litigation held in abeyance in light of its pending rulemakings to revise the 2015 NSPS, described below. Had the litigation continued when initially brought, there would have been ample time for a ruling from the court on whether the standards were justified based on the evidence in the record.

Proposed Two-Year Sell Through Period

On November 30, 2018, EPA proposed to amend the 2015 standards to allow a two-year sell-through period for wood boilers and forced-air furnaces. 83 Fed. Reg. 61,574 (Nov. 30, 2018). On January 14, 2019, the Attorneys General of New York, Maryland, Massachusetts, Minnesota, Oregon, Vermont, and Washington, and the Puget Sound Air Quality Agency opposed the proposed sell-through provision, explaining that it would violate the Clean Air Act and lead to increased particulate matter pollution that harms our residents. Comment submitted by the Attorneys General of New York, Maryland, Massachusetts, Minnesota, Oregon, Vermont, and Washington, and the Puget Sound Air Quality Agency (Jan. 14, 2019), *available at*: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0195-0066>. The comments explained that: EPA lacks authority under section 111(b) of the Act to allow a sell-through period; section 111(e) of the Act would prohibit installation and operation of step one wood-burning devices after May 15, 2020; EPA failed to explain the legal basis for the proposed sell-through period in the preamble of the proposed rule, in violation of section 307's rulemaking requirements; EPA cannot justify the proposed rule with evidence in the record; and, the sale of wood-burning devices that consumers cannot lawfully operate may constitute consumer fraud under state law.

Advance Notice of Proposed Rulemaking for Amendments to the 2015 NSPS

Also on November 30, 2018, EPA issued an advance notice of proposed rulemaking that seeks comment on ten areas relevant to the 2015 NSPS: (1) test methods—transition to cord wood; (2) the feasibility of the step two compliance date of May 15, 2020; (3) the step two emission limit for forced-air furnaces; (4) the step two emission limit for hydronic heaters; (5) the step two emission limit based on weighted averages versus individual burn rates for hydronic heaters and forced-air furnaces; (6) the step two emission limit for wood heaters; (7) the EPA compliance audit testing; (8) ISO-accredited third-party review; (9) electronic reporting tool (ERT); and (10) warranty requirements for certified appliances. The States submit these comments on the aspects of the advance notice concerning the compliance deadline and emission standards.

3. Comments on Feasibility of the Compliance Date and Emissions Standards

Feasibility of May 2020 Step Two Compliance Date

The step two compliance date is feasible and necessary to protect public health. Any delay in the implementation of the step two standards would have significant adverse public health consequences. To illustrate the public health impacts of delay, EPA's proposed two-year

sell-through of wood boilers and forced-air furnaces alone would result in foregone public health benefits of \$90 million to \$230 million. 83 Fed. Reg. at 61,582-61,583. Further, as the States explained in their January 14, 2019 comments to EPA on the proposed sell-through rule, EPA underestimated the foregone public health benefits. Comment of Attorneys General (Jan. 14, 2019) at 11. Thus, any delay in implementing the step two standards will likely have similarly large costs to public health long into the future.

Moreover, EPA has not provided any basis to change its previous determination that five years was an adequate amount of time for manufacturers to develop cleaner burning devices. 80 Fed. Reg. at 13,686-13,687. In selecting that time period, EPA relied on the time that some manufacturers contended they would need for research and development of cleaner-burning devices and the agency's concern regarding "logjams" with laboratories involved in testing and certifying models as achieving the NSPS. 79 Fed. Reg. at 6,332, 6,355. The Attorneys General of New York, Maryland, and Massachusetts objected to this line of reasoning in their 2014 comments based on the evidence then that manufacturers could comply with the standards more quickly, and argued for a shorter compliance period. Comment submitted by the Attorneys General of the States of New York and Maryland and the Commonwealth of Massachusetts (May 5, 2014) at 6, *available at*: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2009-0734-1477>. Even if a five-year compliance period was initially warranted, EPA failed to offer information to demonstrate that any further extension is justified.

Indeed, as EPA's website shows, many manufacturers already have built, and are selling, step two compliant heaters, boilers, and furnaces. Regarding wood boilers and forced-air furnaces, EPA stated in the advance notice that there are nine wood boilers and one forced-air furnace that can meet the step two standards. 83 Fed. Reg. at 61,589. However, these numbers appear to represent only certified models from the March 2018 list. A review of EPA's more recent list, from June 2018, shows that there are approximately 70 wood boiler models that, although only currently certified for step one standards, emit at levels that would also meet the step two emissions limits. *See* U.S. Environmental Protection Agency, List of EPA Certified Hydronic Heaters (June 2018); *available at*: <https://www.epa.gov/compliance/list-epa-certified-hydronic-heaters>; *see also* New York State Department of Environmental Conservation, List of NYS Certified Outdoor Wood Boiler Models, *available at*: <https://www.dec.ny.gov/chemical/73694.html> (listing seven wood boiler models that meet the step two standards). By the same reasoning, the June 2018 list for certified forced-air furnaces shows that there are at least two models that meet the step two standards. U.S. Environmental Protection Agency, List of EPA Certified Forced-Air Furnaces (June 2018), *available at*: <https://www.epa.gov/compliance/list-epa-certified-forced-air-furnaces>.

Likewise, an extension of the deadline for new wood heaters (i.e., wood stoves) is not justified. EPA acknowledges that in March 2018, 78 wood heater models met the step two standards. 83 Fed. Reg. at 61,589. Moreover, the October 2018 list shows over 200 models with emissions below the step two standards, even if EPA has not yet certified all of those models. U.S. Environmental Protection Agency, List of EPA Certified Wood Stoves (Oct. 2018), *available at*: <https://www.epa.gov/compliance/list-epa-certified-wood-stoves>. There are different types of wood heater models, including catalytic, non-catalytic and pellet models, with emissions

rates below the step two standards. *See id.* The existence of many models that already meet or exceed the step two standards indicates that the May 2020 compliance date is feasible.

Furthermore, if EPA extends the compliance deadlines, the manufacturers prepared to sell step-two compliant models would be unfairly harmed. For instance, Tarm Biomass, which has wood boilers that meet the step two standards, opposes a delay in implementing the 2015 NSPS. December 5, 2018 letter from Scott Nichols of Tarm Biomass to EPA, *available at*: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0195-0019>. Tarm Biomass is developing new step two compliant models. *Id.* Companies like Tarm Biomass would suffer business losses if EPA delays implementation of the step two standards. *See id.* EPA should not promulgate a rule that incentivizes delay at the expense of diligent manufacturers and public health.

In contrast, some companies may have chosen not to diligently pursue research and development for the step two standards. To illustrate, at an EPA public hearing for the proposed rule on December 17, 2018, a representative for Hearth and Home Technologies stated that her company had engaged in research and development for the past twenty-four months. However, EPA put industry on formal notice by the proposed NSPS issued in February 2014 (five years ago) that EPA would strengthen the particulate matter standards, and manufacturers knew of the final emission standards in March 2015. Additionally, manufacturers had the opportunity to promptly litigate the legality of the 2015 NSPS, but, as explained above, apparently chose instead to repeatedly delay that litigation (presumably to try to convince EPA to weaken the standards). To the extent these companies delayed in moving ahead to develop step two compliant devices, that was a conscious choice that should not be rewarded with delayed implementation of the standards.

In addition, EPA already rejected setting the step two compliance date past May 2020. In the 2014 proposed rule for the NSPS, EPA considered applying an eight-year phase-in period. 79 Fed. Reg. at 6,343, 6,362. This eight-year period had three steps, the final of which would be more protective than the current standards. *Id.* EPA rejected this lengthy compliance period as unnecessary in light of the evidence. 80 Fed. Reg. at 13,677-13,678, 13,687. Similarly, EPA also already determined that the costs in foregone public health benefits of any delay would outweigh industry savings by a factor of approximately ten to one, and the true numbers may be even greater. *See* 83 Fed. Reg. at 61,582-61,583. EPA has not offered any new information that contradicts its conclusions in 2015.

Finally, allowing manufacturers more time now would be inconsistent with the statutory structure, which requires EPA to review, and as necessary, revise, the NSPS at least every eight years. 42 U.S.C. § 7411(b)(1)(B). Extending the compliance deadline would place the phase-in period close to eight years long, which is inconsistent with EPA's mandate to review the standards every eight years. *See id.*

Feasibility of Step Two Emissions Limits for Wood Boilers and Forced-Air Furnaces

Aside from maintaining the current compliance date, EPA should not weaken the step two standards because these standards are necessary to protect public health and are fully

achievable by the industry. Regarding the public health benefits, as EPA previously found, and as discussed above, the benefits of the stricter emissions limits in foregone health costs would amount to billions of dollars, and would outweigh manufacturers' compliance costs by a factor of approximately one hundred to one. 80 Fed. Reg. at 13,692, 13,694. Weakening the standards thus would greatly increase costs to public health while only saving small amounts of industry compliance costs.

The step two standards for wood boilers and forced-air furnaces are also feasible. The existence of approximately 70 wood boiler models that meet step two standards demonstrates that these standards are achievable. Companies have had ample time to adapt to the standards after receiving notice in the 2014 proposed rule, as evidenced by the fact that many companies have been able to make compliant models.

EPA previously determined that the step two standards are reasonable for forced-air furnaces. 80 Fed. Reg. at 13,680. At least two manufacturers make furnaces that can meet the step two standards, and one of those companies, Lamppa Manufacturing, opposes any change to the step two standards for forced-air furnaces. December 7, 2018 Letter from Daryl Lamppa to EPA, available at: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0196-0010>. As Mr. Lamppa points out, manufacturers who have worked to develop step two compliant furnaces will be harmed if EPA weakens the step two standards. *See id.*

The standards are also reasonable in light of the fact that some states have regulated wood boiler particulate matter emissions at levels that meet or exceed the step one standards for years before the 2015 NSPS. New York has had its own step-one equivalent regulations for outdoor wood boilers since 2011. *See* 6 NYCRR Pt. 247. Maine allows installation of outdoor wood boilers without regard to setback requirements if the boilers limit PM_{2.5} emissions to 0.06 lbs/MMBtu, which is stricter than the step two standards. 06-096 Me. Code R. Ch. 150, § 3(A)(3). The existence of these limits for years, and models that meet those limits, indicates that the step two limits are feasible.

Moreover, the 2015 NSPS standards already were less protective than the standards EPA proposed in 2014. EPA proposed stricter step two standards for wood boilers and forced-air furnaces of 0.06 lbs/MMBtu. 79 Fed. Reg. 6,330, 6,333 (Feb. 3, 2014). The Attorneys General of New York, Maryland, and Massachusetts supported these restrictions as feasible in light of devices already on the market and in development. Comment of Attorneys General (May 5, 2014) at 7-8. EPA's decision to impose a less stringent step two standard of 0.10 lbs/MMBtu—despite the evidence in the record supporting a more protective standard—further establishes the reasonableness of maintaining the current level of the standard.

Additionally, regulating wood boilers and requiring them to meet stringent emission limitations will not cause an undue burden on manufacturers, as the experience of the European Union demonstrates. Starting in the 1990s, the European Union placed more stringent limits on wood-burning devices. A study found that a pellet-fired wood boiler compliant with European emission standards significantly outperformed outdoor wood boilers manufactured in the U.S.,

emitting approximately 94 percent less PM_{2.5}, 92-93 percent less CO, and 89-99 percent less PAHs than the *cleanest* outdoor wood boiler, while using about 33-45 percent less fuel.⁹

Feasibility of Step Two Emissions Limits for Residential Wood Heaters

EPA also seeks comment on whether to revise the step two standards for wood heaters. For many of the reasons discussed above with respect to wood boilers and forced-air furnaces, such as the availability of models meeting step two standards and the amount of time industry has already had to comply, the step two limits for wood heaters are feasible and necessary.

The existence of hundreds of wood heaters, including catalytic, non-catalytic and pellet models, that can meet the step two standards as of October 2018 also shows that it is feasible. U.S. Environmental Protection Agency, List of EPA Certified Wood Stoves (Oct. 2018). Even EPA admits that in March 2018 there were at least 78 models of wood heaters certified to meet the step two standards. 83 Fed. Reg. at 61,589. With all of these options, there is no need to loosen standards for wood heaters that manufacturers can already readily attain.

Furthermore, as with wood boilers, some states have had standards that meet or exceed the current step one standards for many years. Since 1995, the State of Washington has required manufacturers to limit emissions from catalytic wood heaters to 2.5 g/hr and non-catalytic wood heaters to 4.5 g/hr. Wash. Rev. Code § 70.94.457(1)(a); *see also* 79 Fed. Reg. at 6,355 (describing these standards). The limit of 2.5 g/hr is over 40 percent more stringent than the step one standards, and only slightly above the step two limits.

Finally, the evidence shows that the 2.0 g/hr emission limit is already too lax. In 2014, EPA proposed to set a limit of 1.3 g/hr, which the Attorneys General of New York, Maryland, and Massachusetts supported based on demonstrated cost effective design technologies that could reduce emissions. 79 Fed. Reg. at 6,355; Comment of Attorneys General (May 5, 2014) at 5-7. EPA should use the NSPS and section 111 to “authorize standards of performance that promote technological improvement.” 79 Fed. Reg. at 1,465 (citing *Sierra Club v. Costle*, 657 F.2d at 325 and the legislative history of section 111). Given the importance of the step two standards in reducing emissions and their feasibility in light of existing units that meet those standards, there is no reason for EPA to weaken the step two standards for wood heaters.

Weakening the Step Two Standards Would Violate the Clean Air Act

In light of the compelling evidence of the feasibility of the step two standards, any weakening or delay of those standards would be inconsistent with section 111(b). As discussed above, section 111(b) requires EPA to set standards based on the best system of emission reduction the Administrator determines has been adequately demonstrated. 42 U.S.C. § 7411. As

⁹ New York State Energy Research and Development Authority, *Environmental, Energy Market, and Health Characterization of Wood-Fired Hydronic Heater Technologies*, S-11 to S-13, S-18 (June 2012), available at: <https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Environmental/Wood-Fired-Hydronic-Heater-Tech.pdf>.

the evidence shows, and EPA determined, the step two standards are feasible. Therefore, any weakening of those standards would violate the Act.

In addition, weakening the NSPS would violate the anti-backsliding provision of the Clean Air Act. Section 193 of the Act provides that no control requirement in effect in any nonattainment area before November 15, 1990 may be altered unless the revision insures equivalent or greater emissions reductions. 42 U.S.C. § 7515. As the 2015 NSPS regulates emissions of wood-burning devices throughout the country, including in areas that are nonattainment for particulate matter, weakening the step two standards without requiring commensurate reductions would violate this prohibition. *See American Lung Ass'n v. Kean*, 856 F. Supp. 903, 917 (D.N.J. 1994) (holding that states could not revise standards “unless equivalent or more restrictive standards are adopted”).

4. Conclusion

For the reasons stated above, EPA should not alter the 2015 NSPS. The 2015 performance standards as promulgated are necessary to protect public health from the dangers of particulate matter pollution and are readily achievable.

Sincerely,

FOR THE STATE OF NEW YORK

LETITIA JAMES

Attorney General of the State of New York

By: /s/ Nicholas C. Buttino

NICHOLAS C. BUTTINO

MICHAEL J. MYERS

Assistant Attorneys General

Environmental Protection Bureau

The Capitol

Albany, NY 12224

(518) 776-2406

nicholas.buttino@ag.ny.gov

FOR THE STATE OF CONNECTICUT

WILLIAM TONG
Attorney General of State of Connecticut

By: /s/ Scott N. Koschwitz
SCOTT N. KOSCHWITZ
MATTHEW I. LEVINE
Assistant Attorneys General
State of Connecticut
Office of the Attorney General
P.O. Box 120
55 Elm Street
Hartford, CT 06141-0120
(860) 808-5250

FOR THE STATE OF MARYLAND

BRIAN E. FROSH
Attorney General of the State of Maryland

By: /s/ Michael F. Strande
MICHAEL F. STRANDE
Assistant Attorney General
Maryland Office of the Attorney General
Maryland Department of the Environment
1800 Washington Boulevard
Suite 6048
Baltimore, Maryland 21230
Phone: (410) 537-3421
Fax: (410) 537-3943
Email: mstrande@mde.state.md.us

FOR THE STATE OF ILLINOIS

KWAME RAOUL
Attorney General of the State of Illinois

By: /s/ Jason E. James
JASON E. JAMES
Assistant Attorney General
Matthew J. Dunn
Chief, Environmental Enf./Asbestos Litig.
Div.
Office of the Attorney General
Environmental Bureau
69 W. Washington St., 18th Floor
Chicago, IL 60602
(312) 814-0660

THE COMMONWEALTH OF
MASSACHUSETTS

MAURA HEALEY
Attorney General of the
Commonwealth of Massachusetts

By: /s/ Carol Iancu
CAROL IANCU
Assistant Attorney General
Massachusetts Office of the Attorney General
Environmental Protection Division
One Ashburton Place, 18th Floor
Boston, MA 02108
(617) 963-2428
carol.iancu@mass.gov

FOR THE STATE OF MINNESOTA

KEITH ELLISON
Attorney General of the State of Minnesota

By: /s/Max Kieley
MAX KEILEY
Assistant Attorney General
445 Minnesota Street, Suite 900
St. Paul, Minnesota 55101-2127
(651) 757-1244

FOR THE STATE OF OREGON

ELLEN F. ROSENBLUM
Attorney General of the State of Oregon

By: /s/ Steve Novick
STEVE NOVICK
Special Assistant Attorney General
Natural Resources Section
General Counsel Division
Oregon Department of Justice
100 SW Market
Portland, OR 97201
(971) 673-1891

FOR THE STATE OF VERMONT

THOMAS J. DONOVAN, JR.
Attorney General of the State of Vermont

By: /s/ Nicholas F. Persampieri
NICHOLAS F. PERSAMPIERI
Assistant Attorney General
Office of the Attorney General
109 State Street
Montpelier, VT 05609
(802) 828-3186
nick.persampieri@vermont.gov

FOR THE STATE OF NEW JERSEY

GURBIR GREWAL
Attorney General of the State of New Jersey

By: /s/ Lisa Morelli
LISA MORELLI
Deputy Attorney General
Department of Law and Public Safety
Division of Law
R.J. Hughes Justice Complex
25 Market Street
Trenton, New Jersey 08625-093
609-376-2708
609-341-5031 (facsimile)
lisa.morelli@law.njoag.gov

FOR THE STATE OF RHODE ISLAND

PETER F. NERONHA
Attorney General of the State of Rhode Island

By: /s/ Gregory S. Schultz
GREGORY S. SCHULTZ
Special Assistant Attorney General
RI Office of the Attorney General
150 South Main Street
Providence RI 02903
(401) 274-4400
gschultz@riag.ri.gov

FOR THE STATE OF WASHINGTON

ROBERT W. FERGUSON
Attorney General of the State of Washington

By: /s/ Katharine G. Shirey
KATHARINE G. SHIREY
Assistant Attorney General
Office of the Attorney General
P.O. Box 40117
Olympia, Washington 98504
Tel: (360) 586-6769
Email: kays1@atg.wa.gov

FOR PUGET SOUND CLEAN AIR
AGENCY

By: /s/ Jennifer A. Dold

Jennifer A. Dold

General Counsel

1904 Third Avenue, Suite 105

Seattle WA USA 98101

206.689.4015

jenniferd@pscleanair.org