

July 6, 2020

Andrew Wheeler, Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OAR-2018-0195

Re: *Comments on Proposed Amendments to Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters, and Forced-Air Furnaces*

Dear Administrator Wheeler:

The Northeast States for Coordinated Air Use Management (NESCAUM) offer the following comments on the U.S. Environmental Protection Agency (EPA) Notice of Proposed Rulemaking (NPRM) *Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces* [85 Fed. Reg. 31224 (May 22, 2020)]. The NPRM would extend the deadline for liquidating Step 1 appliances from May 15, 2020 to November 30, 2020, citing issues related to COVID-19 as the basis for the extension. This action would delay full implementation of the 2015 New Source Performance Standards (NSPS) by 199 days, as EPA states that it plans to exercise low enforcement against sales of Step 1 appliances prior to issuing a final rule. NESCAUM requests that EPA abandon this proposal, and increase and improve the efficacy of EPA's enforcement activities for this sector.

NESCAUM is the regional association of state air pollution control agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. Our member agencies have the primary responsibility in their states for implementing clean air programs that achieve the public health and environmental protection goals of the federal Clean Air Act. Because wood burning is a significant source of ambient particulate matter (PM) in many areas of the NESCAUM region, and wood stoves are often used for many years after purchase, the proposed extension will diminish air quality and harm public health in our states over an extended period far beyond this sell-through period.

In 2015, 11 percent (approximately 12.5 million) of U.S. households used wood as an energy source, mainly for space heating. Of these, 3.5 million households used wood as their primary heating fuel. Wood burning rates are particularly high in the northeastern United States. In 2015,

the residential wood burning rate in the Northeast was 50 percent higher than the U.S. average; with the Northeast responsible for 31 percent of total national residential wood consumption.<sup>1</sup> According to the U.S. Census Bureau, 15 percent of Vermont households, 10 percent of those in Maine, and 7 percent of New Hampshire households burned wood in 2017, as compared to 2 percent of the households in the U.S. as a whole. Between 2010 and 2017, the number of households burning wood for heat increased by 21 percent in the Northeast, and by only 5 percent nationally.<sup>2</sup>

While wood burning represents a relatively small portion of the residential heating market, its public health and air quality impacts are substantial. In the northeast states, residential wood heating is one of the largest sources of direct PM emissions. According to EPA's 2017 National Emissions Inventory, residential wood heating contributes 98 percent of the 344,876 tons of the fine particulate matter (PM<sub>2.5</sub>) emitted annually from the residential heating source category. In the eight NESCAUM states, residential wood heating contributes 23 percent of the PM<sub>2.5</sub> emitted annually from all sectors, making it the single largest direct source of PM<sub>2.5</sub> emissions in the NESCAUM region.<sup>3</sup>

Residential wood heating is also responsible for 44 percent of all human-related polycyclic organic matter (POM) emissions and 62 percent of the polycyclic aromatic hydrocarbon (PAH) emissions, which have been identified as probable human carcinogens. Per EPA's own analysis, this source category is responsible for 20 percent of all stationary and mobile source POM emissions, 50 percent of all area source cancer risks, and 8 percent of the overall noncancer (respiratory) risk (*see* Attachment 2).<sup>4</sup>

Ambient air quality studies indicate that residential wood combustion is the dominant source of ambient total fine particulate carbon levels in the Northeast during the winter, contributing at times over 70 percent of observed PM<sub>2.5</sub>.<sup>5</sup> Inhalation of PM<sub>2.5</sub> increases the risk of premature mortality, as well as increased risk of a variety of other cardiac and respiratory effects, including

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<sup>1</sup> U.S. Energy Information Administration, *Residential Energy Consumption Survey*, Table HC6.7 (revised May 2018). At <https://www.eia.gov/consumption/residential/data/2015/hc/php/hc6.7.php> (accessed June 19, 2020).

<sup>2</sup> U.S. Census Bureau. 2019. 2017 data from American Community Survey 5-Year Estimates, House Heating Fuel, ID B25040.

<sup>3</sup> US EPA, *2017 National Emissions Inventory* (*see* Attachment 1).

<sup>4</sup> Brockman, L., 2018. "Introduction to Hearth Appliances, Nature and Magnitude of Residential Wood Smoke," US EPA.

<sup>5</sup> Allen, G. and Rector, L. "Characterization of Residential Woodsmoke PM<sub>2.5</sub> in the Adirondacks of New York State," *Aerosol Air Qual. Res.* 2020, doi: <https://doi.org/10.4209/aaqr.2020.01.0005>; Schichtel, B.A., Hand, J.L., Barna, M.G., Gebhart, K.A., Copeland, S., Vimont, J., and Malm, W.D. "Origin of Fine Particulate Carbon in the Rural United States," *Environ. Sci. Technol.* 51:9846-9855 (2017), doi: <https://doi.org/10.1021/acs.est.7b00645>; Allen, G.A., Miller, P.J., Rector, L.J., Brauer, M. and Su, J.G. "Characterization of Valley Winter Woodsmoke Concentrations in Northern NY Using Highly Time-Resolved Measurements," *Aerosol Air Qual. Res.* 11:519-530 (2011), doi: <https://doi.org/10.4209/aaqr.2011.03.0031>.

nonfatal heart attacks, aggravated asthma, and decreased lung function.<sup>6</sup> A recent study has linked exposure to elevated PM<sub>2.5</sub> levels with increased COVID-19 death rates.<sup>7</sup>

While COVID-19 restrictions might have affected small, specialty hearth retailers in those states with strong health-protective stay-at-home orders, EPA could have employed 60 days of enforcement discretion for the sale of Step 1 appliances this summer to provide relief to those retailers. Instead, EPA is proposing to allow an across-the-board extension to the sell-through period that provides at least 199 additional days of sales past the May 15<sup>th</sup> deadline. This extension will include the peak fall selling period, a period of time when sales are significantly higher than would have occurred during the 50 days of unsubstantiated lost sales in the low-demand spring period.

In simply proposing a sell-through due to COVID-19, EPA fails to recognize or consider other relief options already available to small businesses, both retailers and manufacturers. Section 165(i) of the tax code allows businesses to write off inventory losses that are due to natural disasters such as a pandemic on either their 2019 or 2020 tax returns. Companies may also be eligible for tax relief by filing for an overestimation of taxes (Form 4466) on their 2019 and 2020 taxes. Congress has provided COVID-19 relief loan opportunities (including loan payback forgiveness) for small businesses, such as the Paycheck Protection Program, the Economic Injury Disaster Loan Emergency Advance, and other programs available through the Small Business Administration.<sup>8</sup> Finally, retailers may have insurance coverage that would provide them financial reimbursement as well. These examples illustrate EPA's lack of consideration of other existing relief options to retailers and manufacturers that would make this proposal unnecessary. Without such a review of other available options, commenters are left in the dark on alternatives to EPA's singular focus on an extraordinary suspension of the May 15<sup>th</sup> Step 2 NSPS requirements.

To date, the NESCAUM states have realized only nominal emission reductions from the revised NSPS for residential wood heaters. Nearly all the devices sold in our region already met the Step 1 emission standards before 2015. Many of our states have long enforced emission standards for hydronic heaters that are at least as stringent as the 2015 Step 1 NSPS. For the NESCAUM region, emission benefits only begin to accrue with the sale of Step 2 units.

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<sup>6</sup> USEPA Office of Research and Development, "Integrated Science Assessment for Particulate Matter," December 2019, EPA/660/R-19/188.

<sup>7</sup> Wu, X., Nethery, R.C., Sabath, B.M., Braun, D., and Dominici, F. "Exposure to air pollution and COVID-19 mortality in the United States." medRxiv 2020.04.05.20054502, doi: <https://doi.org/10.1101/2020.04.05.20054502>.

<sup>8</sup> U.S. Small Business Administration, *Coronavirus Relief Options*, <https://www.sba.gov/funding-programs/loans/coronavirus-relief-options>, (2020).

Providing additional time to sell Step 1 units will continue to increase and expand the air pollution issues this source category causes in the NESCAUM states.

The following items further detail NESCAUM's concerns with the proposed rule.

**1. Lacks Legal Authority and Puts Retailers and Consumers in Legal Jeopardy**

As in its earlier proposal, EPA has again failed to present a legal basis for allowing a sell-through. Section §111(b)(1)(B) of the Clean Air Act (CAA) specifies that performance standards must be effective upon promulgation of NSPS or revisions thereof. Consequently, NESCAUM does not believe that EPA has the legal authority to extend the May 15, 2020 deadline after which units that do not meet the Step 2 requirements can be sold.

In addition, CAA §111(e) states that it is unlawful to operate a new source in violation of a performance standard. Selling Step 1 heating devices after May 15, 2020 that owners could not lawfully operate for their intended purpose may constitute consumer fraud. As a result, the sell-through provision raises legal issues under state consumer protection laws, and EPA's proposal, if finalized, may put the retailer and consumer at risk of violating state law.

**2. Harms Manufacturers that Developed Step 2 Products in Good Faith Within the Required Period**

The additional time for Step 1 sales will be detrimental to manufacturers that invested resources to develop cleaner products consistent with the 2020 Step 2 NSPS effective date. For example, Lamppa Manufacturing presented at EPA's June 8<sup>th</sup> public hearing some of the steps the company took to design and test its new products, which included the owner cashing in his retirement funds to pay for compliance testing. The proposed extension would undercut and serve as competitive penalty for such good-faith investments should EPA follow through on this NPRM. As a precedential matter, a post-NSPS relaxation by EPA discourages future innovation by rewarding manufacturers who choose to postpone investments in cleaner technologies in the expectation that industry inaction will be rewarded with extended compliance timelines.

As with any new emission standards, it is the responsibility of the regulated industry to properly plan for future changes in standards and ensure that only compliant products are made available for sale at the time such measures go into effect. From a review of EPA's certification database during EPA's previously proposed sell-through rule, commenters identified more than 95 pellet, catalytic and non-catalytic wood heater models produced by 37 different manufacturers with Step 2 certifications.<sup>9</sup> Furthermore, more than 100 additional models from more than 8 manufacturers were certified to Step 1 but had reported emissions levels below the Step 2

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<sup>9</sup> USEPA, Response to Comments on Proposed Sell-Through Amendment and Pellet Fuel Requirements in the 'Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces', March 10, 2020, p. 196.

standard. Clearly, retailers had a wealth of Step 2 models, representing a variety of technologies, to choose from to populate their retail sales floors, but chose not to do so. Public health and the environment should not be made to pay for poor planning and risky business decisions made by some manufacturers and retailers that had five years to prepare for this transition.

### **3. Inappropriately Introduces a Retail Sales Component to BSER**

Under CAA §111(b), EPA is required to review and, if improved technology has been demonstrated, revise an NSPS every eight years. The NSPS specifies a numerical emission limit based on the best system of emission reduction (BSER), rather than prescribing a specific technology. The 2015 NSPS provided a five year period for achieving compliance with the Step 2 emission limit specified in that regulation, which was determined through a BSER evaluation. The current proposal states that “important elements in determining the BSER include the costs and environmental impacts on consumers of delaying production while wood heating devices are designed, tested, field evaluated, and certified.” The proposal then cites the need to provide the full five year timeline afforded by the rule for achieving BSER as the basis for the proposed extension, even though BSER is a technology development provision not related to retail sales. Sell-throughs address inventory management issues and do not serve to advance technology development. The proposed additional sell-through period violates EPA’s determination of the BSER completed in the 2015 rulemaking.

### **4. Lacks a Regulatory Analysis to Support the Proposed Rule**

The CAA requires that a proposed rulemaking “shall be accompanied by a statement of its basis and purpose” and that

The statement of basis and purpose shall include a summary of–

- (A) the factual data on which the proposed rule is based;
- (B) the methodology used in obtaining the data and in analyzing the data; and
- (C) the major legal interpretations and policy considerations underlying the proposed rule.

The CAA goes on to stipulate that “(a)ll data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.” [42 U.S.C. § 7607(d)(3)]

In contradiction to this statutory requirement, the proposal lacks any reasoned analysis to support the proposed sell-through, as EPA fails to estimate, analyze, or document the impacts of COVID-19 on this sector. EPA did not undertake any effort to estimate the number of sales lost between March 15 and May 15, nor did EPA estimate the number of purchases that would take place over a prolonged period of low enforcement combined with the extended sell-through period allowed by this proposed rule. Absent this analysis, EPA cannot determine that this

proposal would result in no more sales of Step 1 devices than would have occurred absent the pandemic.

Based on an analysis of available data found by NESCAUM, it is reasonable to expect that EPA's proposal will result in significantly more Step 1 appliances being sold and installed than otherwise would have been absent the COVID-19 pandemic. Our ability to find publicly available information demonstrates that EPA's lack of analysis is not due to a lack of data.

*A. Closure of Retail Sales Outlets*

Underlying EPA's proposal is an assumption that all state rules regarding retail sales and stay-at-home orders applied to all outlets equally. In fact, many sales outlets for these appliances did not close. Large retail outlets such as Home Depot, Lowes, Tractor Supply, Northern Tool, Ace Hardware, True Value Hardware, and others remained open, and online sales options continued to be available for many retailers. Therefore, EPA's assumption that all retail outlets were similarly impacted lacks a basis. It is the position of the NESCAUM states that no mass retailer should be allowed to sell Step 1 devices after May 15, 2020.

*B. Equivalency of Sales*

In proposing this rule, EPA failed to account for the difference in sales activity in late spring versus the fall timeframe. Underlying EPA's proposal is an assumption that retailers lost significant sales during the March 15 to May 15, 2020 period due to COVID-19 restrictions. Information supplied by industry to EPA over the last several years contradict that assumption. Industry statements indicate that wood appliance sales typically fall off during late spring:

- The U.S. Stove Co. commented on the 2018 NPRM that "*Stores are typically set with wood heating product displays shortly prior to Labor Day, and after the New Year they begin to transition and replace heating product with spring lawn and garden items. Effectively 4 months on the showroom floor as a selling season.*"<sup>10</sup>
- In testimony to Congress, Frank Moore of Hardy Heaters stated, "*In reality, the heating season of 2019-2020 is the deadline for Step 2. May isn't exactly the time of year when people are thinking about buying a new wood heater.*"<sup>11</sup> (Attachment 3).
- The U.S. Stove Co.'s testimony to the Senate Committee on Environment and Public

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<sup>10</sup> USEPA, Response to Comments on Proposed Sell-Through Amendment and Pellet Fuel Requirements in the 'Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces', March 10, 2020, p. 203.

<sup>11</sup> Testimony of F. Moore, President & Owner, Hardy Manufacturing Co., Inc. before the House Committee on Energy & Commerce, Subcommittee on the Environment in Support of H.R. 453 (the Relief from New Source Performance Standards Act) September 13, 2017.

Works further defined the peak sales season as September through March.<sup>12</sup>  
(Attachment 4)

- Comments on EPA’s 2018 RIA provide additional evidence that the selling season typically starts with Labor Day in September and ends in mid-winter, as one specialty retailer articulated in its comments to EPA, “*Our selling season is roughly September thru February.*”<sup>13</sup>

Industry’s statements do not support EPA’s implicit “no additional Step 1 sales” assumption resulting from this proposal. Instead, they indicate that this modification will increase the sales of Step 1 stoves over those that would have occurred absent the COVID-19 restrictions because it allows for sales during a higher demand period than the March 15 to May 15 period. EPA could have obtained detailed monthly sales data from the industry using its authority under §114 of the Clean Air Act; however, to our knowledge it has not undertaken any effort to obtain data for such an analysis. Absent factual support for its position that no additional sales of Step 1 appliance will occur under this proposal, EPA’s assumption lacks a foundation.

*C. Lack of showing that stranded inventory is directly tied to COVID-19*

EPA failed to provide adequate documentation that stranded inventory at retailers is directly tied to COVID-19 impacts. In the proposal, EPA cites a letter from the industry’s trade group Hearth, Patio & Barbecue Association (HPBA) quoting its retail members (Attachment 5). HPBA subsequently provided EPA with an excel file containing additional details. However, the information HPBA provides includes numerous reasons unrelated to COVID-19 for why retailers continued to hold inventory, including consumer preference, weather conditions, and pre-COVID economic conditions. These are the same conditions that EPA determined in its April 2, 2020 rulemaking did not warrant an additional sell-through period. Additionally, industry statements included in EPA’s Response to Comments from that earlier rule proposal provides numerous estimates of typical inventory carryover in the sector, such as the following statement by the U.S. Stove Co.:

Obviously, in a perfect world, all retailers would want to sell 100 percent sell-through at the end of the season, but this is not reality. Regardless of how strong the selling season is or how deep their end-of-season clearance sales are, there is always

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<sup>12</sup> Statement of P. Williams, Vice President of Business Intelligence, United States Stove Company before the Senate Committee on Environment & Public Works Subcommittee on Clean Air and Nuclear Safety November 14, 2017.

<sup>13</sup> USEPA, Response to Comments on Proposed Sell-Through Amendment and Pellet Fuel Requirements in the ‘Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces’, March 10, 2020, p. 201.

carryover. When I say carryover, I'm talking about the products for that season. Mass merchant retailers tend to carry over somewhere between 25 percent to 30 percent of their purchases for the season. This percentage is split up between QQQQ and AAA, as stated previously. Retailers look at these as the same products, just wood-burning appliances.<sup>14</sup>

The additional selling season for Step 1 appliances provided by this proposal would harm those who planned properly and reward those who did not. Rather than to offset impacts from COVID-19, EPA's proposal to delay enforcement of the 2020 standards and to grant a sell-through period appears largely designed to provide economic relief to regulated entities that failed to make timely decisions on cleaner technologies. The existing rule already has a host of provisions that provided flexibility and accommodated industry concerns raised during the rulemaking process. Any changes to the implementation schedule would constitute a competitive penalty for those manufacturers that made good-faith decisions and investments to develop and sell Step 2-compliant products consistent with that rule.

#### **5. Lacks a Cost-Benefit Analysis of the Proposed Rule's Impacts**

EPA does not quantify or even qualitatively identify the costs and benefits of this proposal. Executive Order 12886 sets out the need for cost-benefit analyses, stating:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.<sup>15</sup>

The proposed rule contains none of the required analyses. The "Summary of Cost, Environmental, and Economic Impacts Section" of the proposal does not include any information about the impact of the rule on the economy, emissions, or public health. The proposal assesses no other alternative approaches already available to retailers and manufacturers.

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<sup>14</sup> USEPA, Response to Comments on Proposed Sell-Through Amendment and Pellet Fuel Requirements in the 'Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces', March 10, 2020, p. 203.

<sup>15</sup> *Executive Order 12866*, Regulatory Planning and Review, Sept. 30, 1993; Office of Management and Budget Circular A-4, Sept. 17, 2003.



EPA states that it was unable to quantify what, if any, impacts may occur due to its proposal and requests comments on this issue. By asking commenters to do such an analysis for EPA, EPA is neglecting its responsibility to fully assess the impact of EPA's own regulatory activities, and provides no information that would allow commenters to reasonably anticipate and comment upon the results of such an analysis.

Using data readily available to EPA, NESCAUM finds that contrary to EPA's assertion that "the amendments will not have a significant effect on emissions" [85 Fed. Reg. 31124, at 31129], this proposal could result in approximately 7,600 to 24,000 additional tons of direct PM emissions over an assumed 20-year in-use lifetime of additional Step 1 appliances sold, and result in significant public health costs (details included in Attachment 6 memorandum with accompanying spreadsheet). Even at the low end of estimated excess emissions, the public health costs could outweigh the proposal's benefits by an order of magnitude.

Table 1 shows the comparative cumulative costs and benefits calculated by NESCAUM and based on EPA's approach in its 2018 Supplemental Regulatory Impact Analysis (RIA) for the NSPS.<sup>16</sup> NESCAUM calculated impacts associated with four different sell-through scenarios (Scenarios A-D).

Scenario A assumes additional sales of stranded inventory without manufacturers adding extra Step 1 inventory in expectation of a sell-through, which is EPA's "Scenario 2" in its 2018 Supplemental RIA.

Scenario B assumes additional sales of stranded inventory with manufacturers adding extra Step 1 inventory in expectation of a sell-through extension, which is EPA's "Scenario 3" in its 2018 Supplemental RIA.

Scenario C estimates an additional 20 percent of 2020 sales of Step 1 appliances could occur under the proposed rule. NESCAUM arrived at this estimate based on an HPBA survey of retailers that was submitted to EPA. This survey obtained data from approximately 10 percent of HPBA members, and found that on average, retailers had 11.5 Step 1 appliances currently on-hand. Multiplying the average number of stoves by the estimated number of retail outlets indicated that approximately 20 percent of 2020 sales would consist of additional Step 1 appliances. This estimated volume of on-hand inventory is similar to Scenario B, which is based on EPA's Supplemental RIA "Scenario 3" that assumed increased inventory in anticipation of a sell-through extension.

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<sup>16</sup> USEPA, Supplemental Regulatory Impact Analysis (RIA) for "Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces," November 2018. Available at: [https://www.epa.gov/sites/production/files/2018-11/documents/wood\\_heaters\\_proposal\\_nsps\\_supp\\_ria\\_final.pdf](https://www.epa.gov/sites/production/files/2018-11/documents/wood_heaters_proposal_nsps_supp_ria_final.pdf).

Scenario D estimates an additional 50 percent of a single year's sales would be Step 1 appliances. This scenario uses the anticipated timeframe from May 15, 2020 to the proposed end date of November 30, 2020 (199 days), which is ~50% of a year, and assumes the vast majority of appliances sold during this time period will be Step 1 appliances. Scenario D also assumes that retailers would use significant cost reductions to drive half a year's sales to Step 1 appliances. This is presented as a worst-case scenario under EPA's proposed timeframe.

With regard to Scenario D, we note that EPA has not attempted to quantify the number of Step 1 appliances that could be sold due to the low enforcement priority it has signaled to industry. A survey of online retailers found 16 out of 20 online retailers have continued selling Step 1 appliances for immediate delivery after the May 15<sup>th</sup> prohibition (Attachment 7).

NESCAUM analyzed cumulative impacts of excess emissions occurring over a conservatively assumed 20-year useful life for Step 1 appliances. NESCAUM calculated forgone public health benefits (i.e., costs in Table 1) ranging from \$2.4 to \$17.4 billion (2020\$, 3% discount rate). Comparing the benefits to the industry versus projected health costs to the public finds that the public could bear an order of magnitude higher costs than the benefits gained by industry. Dependent on the assumed amount of additional sales, the ratio of industry benefits to public health costs of this rule ranges from 1:28 (low range – Scenarios C & D) to 1:73 (high range – Scenarios A & B).

**Table 1. Comparative Cumulative Costs and Benefits of Proposed Sell-Through Provisions (3% Discount Rate / 2020\$ in millions / 20-year appliance lifetime)**

Scenario	Industry Benefits	Public Health Costs	Public Health Costs	Ratio – Low	Ratio - High
	(total)	(total – low)	(total – high)		
Scenario A	\$76	\$2,448	\$5,511	1:32	1:73
Scenario B	\$114	\$3,669	\$8,260	1:32	1:73
Scenario C	\$112	\$3,097	\$6,973	1:28	1:62
Scenario D	\$280	\$7,736	\$17,417	1:28	1:62

While Scenarios A and B rely on previous EPA projections, EPA may have underestimated 2019 shipments in the proposed rule and the 2018 Supplemental RIA. Comparing EPA *a priori* estimates to HPBA actual shipment data shows that EPA underpredicted sales and shipments by 40 percent (Attachment 8). If industry's own numbers cited at EPA's June 8, 2020 hearing on this proposed rule are close to correct, the forgone emission benefits may be at least an order of

magnitude greater than assumed in EPA’s Supplemental RIA, and is most similar to Scenario D in this analysis.

NESCAUM believes that EPA also overstates the cost to manufacturers from stranded inventory. The Agency failed to acknowledge that manufacturers have multiple avenues to continue sales of these appliances, beyond allowing a sell-through period. As currently is the practice for many QQQQ manufacturers, they did not stop selling or manufacturing uncertified appliances. Instead, companies sell these appliances under the guise of “light commercial,” “commercial,” or “light commercial rural” that are not covered by the NSPS.<sup>17</sup> Manufacturers of these products have also found avenues to continue selling non-Step 2 appliances by rebranding the units as coal-only (which we find questionable). Additionally, sales of Step 1 units will still be legal outside the U.S., where many manufacturers have distribution networks. Manufacturers can take back unsold inventory from retailers and use their international distribution chains to minimize losses.

In Table 1, the largest share of monetized health costs is attributable to increased premature mortality. Scaling to avoided premature mortality from EPA’s 2015 residential wood heater NSPS RIA,<sup>18</sup> Table 2 presents the estimated ranges of increased premature mortality for the four scenarios in our analysis.

**Table 2. Estimated Increase in Premature Mortality over Assumed 20-year Appliance Lifetime (expressed as total premature mortality over 20 years)**

Scenario	Premature Mortality (Krewski)	Premature Mortality (Lepeule)
Scenario A	331	746
Scenario B	497	1118
Scenario C	419	943
Scenario D	1048	2359

Our analysis only accounts for the public health impacts from excess PM<sub>2.5</sub> emissions. Other factors also influence real-world costs and benefits. Step 2-compliant devices will emit lower levels of volatile organic compounds, air toxics, and carbon monoxide than the Step 1 units they replace. Further, Step 2 units burn more efficiently, which will provide consumers with

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<sup>17</sup> Examples of this practice can be found at <http://hardyheater.com/Products/products.html> and <https://centralboiler.com/products/classic/> (accessed on June 11, 2020).

<sup>18</sup> USEPA, Regulatory Impact Analysis (RIA) for Residential Wood Heaters NSPS Revision, Final Report, EPA-452/R-15-001, February 2015 (Tables 7-2 and 7-3).

significant savings in fuel costs over the lifetime of the units. Continuing to allow the sale of Step 1 appliances after the Step 2 effective date would result in a loss of these benefits over the assumed 20-year lifetime of these units and increase the amount of forgone benefits created by this proposed rule. EPA's previous Supplemental RIA noted other environmental and economic benefits as well, but did not quantify these.

As we have demonstrated here, there is sufficient information available to EPA to develop a proper regulatory analysis for the proposed sell-through and compare it to other viable alternative options. By lacking such an analysis, EPA provides no reasoned justification for the proposed delay in implementing the Step 2 standards.

**6. Inappropriately Extends the Proposed Sell-through by Including an Official Statement of Low Enforcement Priority**

EPA's signaling of low enforcement priority for continued Step 1 sales after May 15, 2020 in effect gives all portions of the industry a six-month extension beyond the existing May 15<sup>th</sup> legal prohibition. This is exacerbated by EPA's historical poor track record for enforcement in this sector. In the past five years, to the best of our knowledge, EPA has only undertaken one minor enforcement action, despite NESCAUM raising substantive issues and details on non-compliant manufacturers to the Agency as highlighted in Attachment 9.

In addition, NESCAUM's review of EPA-approved test reports used to certify model lines found significant issues with the efficacy of EPA's certification program. In reviewing publicly available test reports, NESCAUM has yet to find a single failed certification test, which strains credulity that every device ever tested for certification would have passed. Under 40 C.F.R. §60.533(b)(5), manufacturers must submit, "[a]ll documentation pertaining to a valid certification test ... Documentation must include ... any data not used in the calculations and, for any test runs not completed, the data collected during the test run and the reason(s) that the test run was not completed and why." The lack of data on failed runs or units raises serious concerns about the integrity of the current certification testing schema and EPA's oversight of the reported tests. For EPA to publicly state that this sector will now become an even lower enforcement priority raises serious concerns about the Agency's commitment to protecting the public from this significant source of air pollution.

**7. Provides No Assurance that Manufacturers Will Cease Making or Shipping Step 1 Devices During the Proposed Sell-through Extension**

The basis for the sell-through is to allow retailers time to make up for lost sales due to COVID-19. However, the proposal's applicability includes both manufacturers and retailers. With EPA indicating that it is giving a low enforcement priority during this period, we have little confidence in the Agency's willingness to ensure that manufacturers have, in actuality, stopped making Step 1 appliances for sale in the U.S. during this time.

Even if manufacturers have indeed stopped making Step 1 appliances for the domestic market, there is still no evidence supporting the need to provide them the opportunity to ship additional Step 1 inventory to retailers after May 15, 2020. We find it highly questionable that retailers would have ordered Step 1 appliances from manufacturers with less than 60 days remaining before the Step 2 deadline. EPA should explicitly state that manufacturers cannot distribute additional Step 1 appliances to retailers after May 15, 2020, and that this will be enforced by the Agency.

**8. Further Prolongs Step 2 Implementation After More than 20 Years of No Change**

Under the Clean Air Act NSPS provisions, EPA is required to review and, if improved technology has been demonstrated, revise standards every eight years. The first NSPS was promulgated in 1988, and it took EPA 27 years to update these standards even though significant technological innovations occurred in the 1990s. And in reality, the 2015 rule offered no real emission reductions until 2020 when Step 2 standards became effective. This is already an unreasonably long period of time during which the states and the public have waited for needed air pollutant reductions and technology innovation from this sector.

For many regions of the country, emission benefits only begin to accrue when Step 2 emission standards take effect. In 2015, approximately 85 percent of wood stoves already met Step 1 emission standards, and in the NESCAUM region, regulations for QQQQ units were in place as early as 2007. The 2015 NSPS was more than generous in providing the industry with five years to comply with the Step 2 standards, a full three years longer than the 1988 rule allowed. With such an already extraordinary lead time, no further delay in fully implementing the NSPS is needed or warranted. The 2020 standards are long overdue, supported by the record established in the 2015 rulemaking, and should be implemented and enforced immediately.

**9. Creates a Patchwork Across States Where Step 1 Devices Will and Will Not Be Allowed for Continued Sale**

EPA's rulemaking does not account for states, counties, and municipalities that adopted regulations or took delegation from EPA on this NSPS. Those areas of the country will now need to undertake significant efforts to inform industry that a sell-through will not be allowed in their areas and create a patchwork of regulations that will make compliance by manufacturers more difficult.

**10. Fails to Evaluate Impacts on Environmental Justice and Low-Income Communities**

Data supplied to the docket from retailers indicate that they will be selling Step 1 appliances at deeply discounted prices to ensure sell-through of all stranded inventory. Additional time to sell stranded inventory will encourage sales of Step 1 appliances over Step 2 appliances by those who can least afford exposure to high emitting devices. Not only will these families install units that emit at higher levels than Step 2 appliances, but their exposure will likely be greater based

on EIA data that indicates low-income families burn twice as much wood as those with incomes over \$60,000 per year.<sup>19</sup>

### **Conclusion**

While these are unprecedented times, EPA's proposal to extend sales of Step 1 devices beyond May 15, 2020 goes well beyond the burden COVID-19 placed on the affected sector. The proposed sell-through will lead to excess particulate matter emissions that increase the risk of premature mortality and other adverse health outcomes. Rather than providing relief, EPA's proposal threatens to compound adverse respiratory impacts at a time when COVID-19 is a continuing threat to human health. Conservatively estimating the monetized public health costs indicates that the extended opportunity to sell additional Step 1 appliances will result in an order of magnitude greater costs imposed upon the public compared to the benefits received by retailers and manufacturers. Depending on the volume of excess Step 1 appliances sold, it can result in hundreds to several thousand premature deaths.

The 2015 revisions to the NSPS for residential wood heating appliances were the first since 1988. No further delay in fully implementing the NSPS is needed or warranted. The 2020 standards, which are long overdue and supported by the record established in the 2015 rulemaking, can be substantially met by industry today. Furthermore, the Step 2 requirements are among the most cost-effective control strategies promulgated for PM<sub>2.5</sub> to protect public health. The value of forgone air quality benefits that would occur with EPA's proposed Step 1 sell-through period far exceeds the projected cost to industry for complying with the existing rule. And affected retailers and manufacturers have other options available to them to recoup lost revenue, such as Small Business Administration loan programs and access to non-domestic markets.

The proposed rule is entirely absent of data supporting its need and provides no analysis demonstrating that the remedy is appropriate. Manufacturers and retailers had 60 months to prepare for Step 2 implementation. With less than two months left in the five year period, the industry claims unsold inventory is due to COVID-19, while providing conflicting public statements as to the sources of its problems. As with the past proposed sell-through rule, EPA and industry fail to provide data to support this extension. Instead, this rule rewards those who failed to plan appropriately and punishes those who planned well.

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<sup>19</sup> US Energy Information Administration, *Increase in wood as main source of household heating most notable in the Northeast* (March 17, 2014). Available at <https://www.eia.gov/todayinenergy/detail.php?id=15431> (accessed June 19, 2020).

Finally, the proposal fails to clearly articulate a legal, environmental, or economic basis to move forward with the rule changes. These are well understood and fundamental elements that federal regulatory agencies must include to ensure informed public comment.

For all the foregoing reasons, NESCAUM urges EPA to abandon this proposal, and increase and improve the efficacy of EPA's enforcement activities for this sector.

Sincerely,



Paul J. Miller  
Executive Director

Encs: Attachments 1-9

cc: NESCAUM Directors  
Lynne Hamjian, EPA R1  
Richard Ruvo, EPA R2

## Attachment 1

Submitted separately



## Attachment 2

# **EPA Residential Wood Smoke Programs**

Larry Brockman

Office of Air Quality Planning and Standards

RTP, NC

December 1, 2016

# EPA's Residential Wood Smoke Program: Major Components

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- EPA's Wood Heater NSPS
- Wood Burning Appliance Changeout/Retrofit Projects
- Fireplace Voluntary Program
- Burn Wise Education Campaign

# Wood Heater New Source Performance Standards (NSPS)

- Revised standards effective May 15, 2015.
- 2015 rule broadens applicability of 1988 NSPS
- 1988 rule only covered “room heaters”:
  - adjustable burn-rate wood stoves
  - fireplace inserts and some pellet stoves
- 2015 rule added:
  - single burn-rate wood stoves
  - all pellet stoves
  - “Central Heaters” hydronic heaters and forced-air furnaces.
- NSPS phases in emission limits in two steps over five years
  - Step 1, May 2015
  - Step 2, May 2020

## NSPS Delegation of Implementation and Enforcement Authority

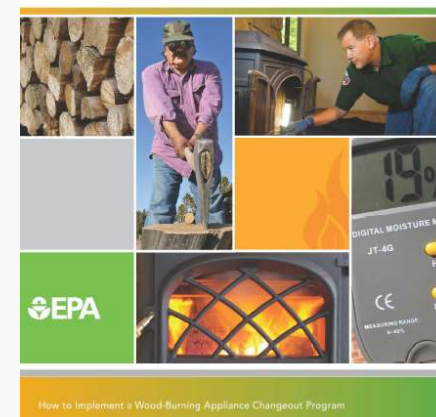
- Clean Air Act Section 111(c) directs the Administrator to:
  - delegate to each State, as appropriate, authority to implement and enforce NSPS sources located in a State.
- EPA encourages:
  - State and local agencies to take partial delegation of the NSPS or conduct outreach activities to help ensure rule compliance.

# Wood Burning Appliance Changeout/Retrofit Project Support

- Technical Assistance
- Guidance Documents
- Funding Opportunities

# EPA Guidance Documents

- *Wood-burning Appliance Changeout Guide (2014)*
  - Recommendations and tips to state, tribal and local areas looking to implement a changeout program.
- *Financing Options for Wood-burning Appliance Programs (2014)*
  - Identifies and briefly describes federal, state, local, non-profit and third party programs that may fund changeouts and weatherization



## Examples of Past EPA Changeout Funding

- Clean Air Act (CAA) Section 103: Research focus
- CAA Section 105: Implementing programs for the prevention and control of air pollution
- Targeted Airshed Grants: to reduce air pollution in nonattainment areas ranked as the top five most polluted areas relative to EPA ozone, annual or 24-hour PM<sub>2.5</sub> standards.



# EPA Settlements and Wood Burning Appliance Replacement Projects

## Since 2010:

- ~25 EPA settlements included “Wood stoves”
- Approximately \$20 million
- 14 replacement projects completed
- Approximately 3,750 devices replaced
- Estimated PM<sub>2.5</sub> emission reductions:
  - 100 tons/year
  - 2000 tons over life of replacement

## Fireplace Partnership Program

- Encourages the development and sale of a new generation of lower-emitting “EPA-qualified” fireplaces that burn cord wood.
- Includes “EPA-qualified” retrofits devices.



## Burn Wise Education Campaign

A EPA voluntary partnership program: emphasizes *burning the right wood, the right way, in the right appliance* to protect your home, health, and the air we breathe.

**Goal:** To promote upgrades to cleaner burning technologies, educate users on how to properly use their wood burning appliance and to ensure they understand the benefits (improved efficiency, safer home and family) of upgrading and proper operation.

## What Burn Wise Tools are Available?

- Tip Sheet
- Posters
- Brochures
- Postcard
- Tear Pads
- Wood Shed Construction Plans
- Videos
- Social Media



\* Free hard copies are currently available for most tools

## Burn Wise Tools

# Target Audience & Distribution Channels

- Target Audience: Current and future owners of wood burning appliances
- Distribution Channels:
  - Hearth retail stores
  - Wood burning appliance manufacturers
  - Chimney sweeps
  - Non-profit organizations
  - **States, Local, Tribal agencies**



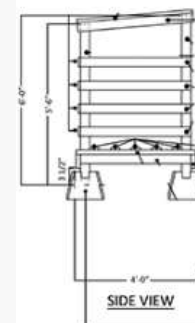
## Recent and Current Projects

### “How to Build a Wood Shed” Video

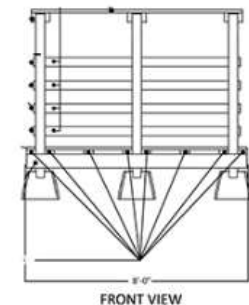
Completion Date: December 2016

### Modular Wood Shed (Courtesy of the Makah Nation, WA)

- Holds about one cords of wood
- Light enough to move by hand
- Easy to fabricate with mostly straight cuts and no mitered corners or joints
- Uses outdoor treated woods for the structure and liquid roofing primer for the roof
- Connectors and fasteners are galvanized
- Roof and sides are finished to owner specifications (e.g. composition, metal, wood shakes, etc.)
- Footings provided by owner (concrete post bases or pavers)



- (1) 1/2" x 4 x 8 CEDAR PLYWOOD ROOF. ATTACH WITH (2) 1 1/2" LONG DECK SCREWS EVERY 6" ALONG 2 x 4 RAFTERS. APPLY LIQUID ROOF TO TOP SIDE OF PLYWOOD AFTER SECURING TO 2 X 4 RAFTER.
- (2) 2 x 4 x 4" LONG ROOF RAFTERS. ATTACH WITH (2) 3" LONG DECK SCREWS @ EACH POST.
- (3) 1 x 4 x 8" BACK SLATS WITH AIRSPACE BETWEEN EACH SLAT. ATTACH WITH (2) 1 1/2" DECK SCREWS @ EACH POST.
- (4) 1 x 4 x 4" SIDE SLATS WITH AIRSPACE BETWEEN EACH SLAT. ATTACH WITH (2) 1 1/2" DECK SCREWS @ EACH POST.
- (5) 1 x 4 x 8" FLOOR SLATS NEXT TO, AND SPACED EVENLY BETWEEN POSTS. ATTACH WITH (2) 1 1/2" LONG DECK SCREWS @ EACH 2 X 4 FLOOR JOIST.
- (6) 2 x 4 x 4" LONG FLOOR JOISTS. ATTACH WITH (2) 3" LONG DECK SCREWS @ EACH CONNECTION TO 2 X 6 FLOOR FRAME.
- (7) 4 x 4 x 6" HIGH POSTS IN THE FRONT AND (3) 4 x 4 x 5'-6" HIGH POSTS IN THE BACK. ATTACH EACH POST TO THE 2X6X6 FRONT AND BACK FLOOR FRAME WITH 3 - 1/4" x 6" POWER LAG SCREWS.
- (8) 2 x 6 x 8" LONG FLOOR SUPPORT AT FRONT AND BACK AND (2) 2 x 4 x 4" 45° ON THE SIDES.
- (9) 12" CONCRETE DECK BLOCKS UNDER EACH POST.



## Recent and Current Projects

### “Wood Smoke and Your Heart” Videos

Completion Date: January 2017



## Recent and Current Projects

Completion Date:  
December 2016

### Why and How to Use a Wood Moisture Meter

#### Why should I use a wood moisture meter?

Burning wet wood is a waste of energy. Wood burns most efficiently when the moisture content is between 15% - 20%. When a live tree is cut the moisture content can be greater than 50%, (i.e., half of the weight of the wood is water).

Too much water in the wood reduces the temperature in the stove preventing the wood from completely burning (water puts out fires). Incomplete combustion results in smoke (wasted energy) going up the chimney and creates creosote (a fire hazard). The smoke can also negatively impact your air quality inside and outside your home.



#### How do I test my firewood with a wood moisture meter?

Split the firewood, then shortly after (less than 24 hours), stick the prongs of the wood moisture meter into the newly split side of the wood. This ensures you are testing the inside of the wood and not just the outer layer of the wood. Also, stick the wood so the prongs run parallel with the grain of the wood and test 2-3 different locations for the most accurate reading. If possible, test the wood when the outside temperature is 50°F - 90°F. Lower wood temperatures result in lower indicated moisture content. See correction table: <http://www.delmhorst.com/correction-tables#temperature>. You can purchase a basic moisture meter online or at most hardware stores for around \$15.00 - \$40.00.

##### Step 1:

Split the wood



##### Step 2:

Test newly split side



Ready to Burn



Not Ready to Burn



#### How to Season Your Firewood?

To season your wood split (split wood dries much faster), stack, cover the top and store your wood for at least 6-12 months.

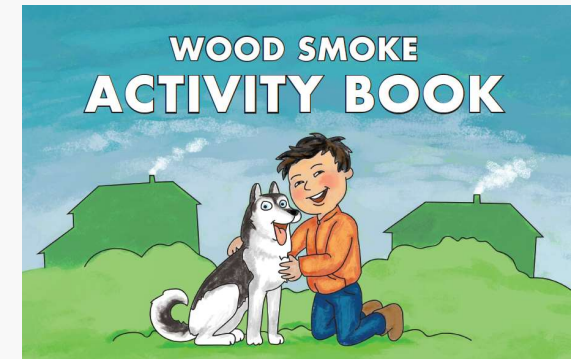
For more information go to <http://www.epa.gov/burnwise>.

Burn Wise Split, Stack, Cover and Store Video- <http://www.youtube.com/watch?v=y01-Zrh11s>



## Potential Projects:

- Kids Wood Smoke Activity Book



- Chimney Sweeps Burn Wise Accreditation



- Burn Wise Partnership with Fire Departments



## In Summary, Addressing Residential Wood Smoke Can:

- Help areas attain the PM<sub>2.5</sub> health standards
- Prevent other areas from slipping into non-attainment
- Decrease of short term PM<sub>2.5</sub> peak exposures from wood smoke
- Supports EJ & community-based air toxics program
- Reduces pollutants impacting climate change (black carbon and CH<sub>4</sub>)
- Improve indoor air quality

## Questions/Comments/Feedback?

Larry Brockman, [brockman.larry@epa.gov](mailto:brockman.larry@epa.gov)  
919-541-5398

## Attachment 3



## **Hardy Manufacturing Co., Inc.**

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12345 Road 505 • Philadelphia, MS 39350  
Phone (601) 656-5866 • Fax (601) 656-4559  
[www.hardyheater.com](http://www.hardyheater.com) • [info@hardyheater.com](mailto:info@hardyheater.com)

**Testimony of Frank Moore, President & Owner, Hardy Manufacturing Co., Inc.  
before the  
House Committee on Energy & Commerce  
Subcommittee on the Environment  
In Support of H.R. 453 (the Relief from New Source Performance Standards Act)  
September 13, 2017**

**Chairman Shimkus, Ranking Member Tonko, Members of the Subcommittee:**

Good morning. On behalf of Hardy Manufacturing and the entire stove and heater (hearth) industry, I would like to thank the Chair and members of the Subcommittee for holding this hearing today on the Relief from New Source Performance Standards Act (H.R. 453).

My name is Frank Moore and I am the President and Owner of Hardy Manufacturing Co. We are a small family-owned business. My father-in-law developed and patented the Outdoor Hydronic Heater in the late 70's.<sup>1</sup> This product was developed because of the very unstable price of fuel oil and propane for farmers and rural dwelling industrial workers who had their own firewood to heat their homes and were trying to make ends meet in a difficult economic time. Those needs continue today.

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<sup>1</sup> A hydronic heater (also known as a wood boiler) heats an entire home. The product typically looks like a small shed when installed outside. It is fueled by wood or pellets to heat water. The water is then pumped through the home through warming baseboards, radiators, and/or radiant tubing in floors or ceilings of the home or any related buildings such as barns and greenhouses.

I'd first like to make clear that we don't oppose federal standards for wood-burning appliances. In fact, we asked EPA to set national standards so the industry would have uniformity and predictability, which translates to lower costs for consumers due to increased manufacturing efficiencies. Having a federal standard is vital for the success and future of our industry. Today I am testifying on behalf of all manufacturers and retailers, most of whom are small businesses, who manufacture or sell one of the three categories of appliances impacted by the EPA's emissions standards for new residential wood heaters: (1) hydronic heaters, (2) wood and pellet stoves, and (3) wood furnaces.

As a small business we provide jobs for about 50 people with payrolls exceeding \$2 million. We also have over 400 dealers nationally that depend on the sales and service of this product. Over the past few years our sales and payroll has been cut in half partly because of the economy but mainly of fear that this type of heating appliance is too expensive and could be banned from use to heat families' homes. We have been at the forefront in developing a clean-burning Outdoor Wood-burning Heater for the past 10 years. We have built a test laboratory in-house and invested over \$1 million in research and development on developing a clean-burning Outdoor Hydronic Heater. We have been driven by three requirements: (1) it must pass the EPA's test; (2) it must be durable and easy to operate; and (3) it must be affordable for families who are being pinched by the economy.

## REQUIREMENTS OF TODAY'S STANDARDS

When the EPA finalized its New Source Performance Standards (NSPS) for New Residential Wood Heaters; New Residential Hydronic Heaters and Forced-Air Furnaces in February 2015, the wood heater industry was encouraged to see that reasonable standards had been set for Step 1 of the rule, which took effect May 15, 2015. Step 1 updated the already-established requirements for woodstoves, tightening the emissions limit to 4.5 grams of particulate matter per hour (g/hr). Prior to the 2015 NSPS, woodstoves had a limit of 7.5 g/hr. Pellet stoves are now required to be tested and certified by EPA while prior to 2015 they were not mandated to be tested.

Hydronic heaters and wood furnaces didn't have any federal requirements in place before 2015. Hydronic heater manufacturers, including Hardy Manufacturing, worked for years with EPA to develop a voluntary program that hydronic heaters could be tested to and be considered "EPA-qualified." The standards for hydronic heaters in Step 1 of the final NSPS included the requirements of that voluntary program. Hydronic heaters reduced emissions by 90 percent with Step 1 of the NSPS, going from completely unregulated to having a federal rule establishing an emissions limit of 0.32 pounds per million British Thermal Units (lb/mmBtu) weighted average.<sup>2</sup> Wood furnaces faced an even greater challenge, since the product category didn't have a voluntary program before the final EPA rule. Today, all new residential stoves and central heaters are subject to EPA's Step 1 standards.

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<sup>2</sup> A weighted average is an average of all the test runs completed during testing. The average for Step 1 must be at or below 0.32 lb/mmBtu.

However, Step 2 of the rule, set to take effect May 15, 2020, dramatically departs from the data-driven nature behind development of Step 1. For hydronic heaters, which have already reduced emissions by 90 percent, EPA wants us to squeeze out additional emissions reductions, forcing this industry to reduce emissions by 98 percent in just five short years between Step 1 and Step 2 coming into effect. Step 2 would set an emissions limit of 0.10 lb/mmBtu for each of four individual burn rates (i.e. a particular test run) when testing with crib wood or 0.15 lb/mmBtu if tested with cord wood.<sup>3</sup> This is much different from what's required in Step 1 with very little time for transition between these two sets of standards in the rule.

We have spent years and millions of dollars industry-wide to develop sellable products based on test protocols that use weighted averages as the requirement for compliance. Even if a product can meet the Step 2 requirements, I believe it would not be consumer friendly, durable or affordable. To my knowledge there is not enough data to support that change.

## **WE ARE FACING A FUTURE LOGJAM IN TEST LABS**

Assuming we have developed the technology, the entire industry – hundreds of products – must have products tested by one of five EPA-approved testing labs. With hundreds of appliances needing to be tested between now and 2020, there simply isn't enough capacity and time to provide equal opportunity and access to test labs to get all these products approved in time. For example, one large testing lab told us it has

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<sup>3</sup> Unlike the requirements of Step 2, Step 2 requires hydronic heater manufacturers to meet a lower emissions limit (0.10 lb/mmBtu or 0.15 lb/mmBtu) during each individual test run, not the average of those test runs. Crib wood is dry pine, essentially a set of two-by-fours. Cord wood is regular firewood.



processed a total of 14 wood heaters in 12 months and one was sent back to the manufacturer for more work. Another lab, in the same time period, processed six appliances and 50 percent had to be sent back to the manufacturer to be redesigned. These numbers don't represent test labs at capacity as many manufacturers are still in the R&D stage.

Following valid testing by an EPA approved lab, manufacturers must then obtain a certificate of conformity from a third-party certifier. At the end of it all, EPA must review the entire certification package, which can take longer a considerable amount of time if there are any questions. All certification applications must go through EPA! Since most of the new cleanup technologies have to be invented and then developed to meet the Step 2 standards, there will be huge surge in testing needs as we get closer to the deadline with not enough capacity to get them approved in time. An additional three years allows the pressure to be lifted from the test labs and manufacturers to enable a steady stream of fully-developed products to be tested and reviewed by EPA.

If anyone has driven to a football game on a big game day, like the Egg Bowl where Mississippi State plays Ole Miss, everyone is going to the same place around the same time. You can't control what time the game starts or when the parking lots open in the morning around the stadium. You have no choice but to face traffic and delays on that route to the stadium. The one way into the stadium area acts as a funnel and can add a significant amount of time to reaching your destination and enjoying the game. You can make plans in advance, but you're still going to have to wait in line. Like the main road that leads to the football stadium, the test labs have a certain amount of space. If you try to push that space beyond its limits, everyone experiences a

slowdown due to the pressure to make it through to your destination, the big game, or EPA certification.

With May 15, 2020 quickly approaching, there will be more and more pressure put on test labs. In order to have products on retailers' shelves by May 2020 that meet Step 2, manufacturers must have products certified by EPA by the summer of 2018. Any manufacturer that begins testing after that point faces a high risk of not having products ready to pitch to retailers for the 2019-2020 heating season. If everything goes well in testing, the testing process takes about a week. But the time it takes for EPA to complete its review is uncertain, as EPA may have questions about the report or the manufacturer may have to go back to R&D before testing is even completed. Without a variety of clean and efficient products for consumers to choose from, the future of this industry and air quality will face many more challenges.

## **SMALL BUSINESSES SUFFER THE MOST**

Manufacturers such as myself have made significant investments in R&D just to meet Step 1 of this rule. The majority of our industry, with one or two exceptions, is comprised entirely of small businesses. Our industry trade association, the Hearth, Patio & Barbecue Association (HPBA), found that R&D costs between \$200,000 and \$500,000, for each model, and can take more than a year to complete a prototype product. In addition to R&D costs, the average cost for lab space and time in a test lab costs about \$20,000 or more, depending on how well the testing goes. These costs are then passed on to the consumer in the final retail price per unit. The R&D and testing that has to be done for today's more complicated engineering needs has increased the

price of products in a market that is highly price-sensitive, but some stability in the regulatory arena will allow those prices to lower as manufacturers recoup the costs expended in developing a final product.

The burden of spreading out these costs is much higher for small manufacturers. A larger manufacturer that sells 10,000 units a year can spread out the cost, for example, of \$320,000 for development of one model by adding an extra \$32 per unit to recoup the cost within a year. For a larger manufacturer that has to re-test up 30 models before 2020, they will have a total cost of \$9.6 million. A small manufacturer that sells perhaps 1,500 units a year with that same per unit expense will have fewer units to spread that \$320,000 cost and will have to add \$213 to the price of each unit.

***Small businesses will be hit hardest.***

One small woodstove manufacturer, Kuma Stoves, located in Rathdrum, Idaho, employs 11 people, most of whom are the owner's family. The impact of this rule affects an entire family; this is a “do or die” moment for the future of the company as well as for the family. I understand that Kuma Stoves has no doubts about being able to eventually comply with the Step 2 standard for woodstoves, but they simply need more time. Being one of the smaller companies within the woodstove industry, it will simply take more R&D and lab time given the lack of resources that other larger companies may have. Further, it will take more time to recoup the cost of development, testing, and certification because they will need to spread out the cost of compliance over fewer units sold compared to larger

manufacturers who sell more units and can spread out costs more widely.

Like many others in this part of the industry, for Kuma Stoves it isn't a matter of not being able or not wanting to comply, it is a matter of not enough time to comply in time for 2020.

At a time when public officials talk about promoting US small businesses, this rule as currently planned would have the opposite effect. Our industry and EPA alike need the effective date of Step 2 to be pushed back by three years in order to address technical issues with Step 2 and empower manufacturers to create the next generation of clean-burning wood heaters. Most NSPS standards are reviewed no more frequently than every eight years. This revision combines two revisions within one five year time period.

For some manufacturers, especially hydronic heater and wood furnace manufacturers, the move to Step 2 is much too soon for them to be able to recuperate from Step 1 losses. To date, very few wood furnaces and hydronic heaters have shown that they can meet the Step 2 standards. To further add to the mix, EPA is granting manufacturers, on a case-by-case basis, the ability to make changes to the test method to make it easier to pass. However, it is very difficult to determine with public information which products were tested under modified conditions. The playing field isn't balanced and it appears that it is being manipulated by EPA to justify their prior policy decisions. Already, manufacturers are considering how they can survive the storm that is to come with Step 2. Some manufacturers have made significant layoffs in anticipation of Step 2 and the need for any action that helps them survive, if at all. The

majority of factories in this industry are located in rural small- to-medium-sized towns and communities because that is where this industry started.

***The 2020 rule is impacting business decisions, today.***

Central Boiler, the largest manufacturer of outdoor hydronic heaters in the United States, located in Greenbush, Minnesota, expresses concern with meeting the fast approaching NSPS Step 2 deadline and the absence of a sell-through provision. Dennis Brazier, owner and CEO of Central Boiler states, "With no sell-through provision in the 2020 NSPS requirement, manufacturers would by now essentially need to have products that meet the demanding requirements and we do not. This is critical in order to keep supply in the pipeline, allow dealerships adequate time to completely sell and replace their Step 1 inventory prior to the 2020 deadline. The 2020 NSPS requirement doesn't truly give manufacturers and dealers five years to comply without a sell-through provision, nor does it give manufacturers enough time for adequate product testing and consumer education. It is for these reasons I appeal for a 3-year extension to comply with Step 2 of the NSPS."

The current EPA rules require that ALL wood-burning appliances sold after May 15, 2020 meet step 2 standards. That means that a significant majority of appliances currently or soon-to-be on the market – despite meeting standards promulgated less than three years ago – will be able to be sold even though they were manufactured prior to the May 2020 date. For many of us that means we must invent the technology, test it

and have it certified by EPA by the summer of 2018 in order to have products in stores by the May 2020 deadline. In reality, the heating season of 2019-2020 is the deadline for Step 2. May isn't exactly the time of year when people are thinking about buying a new wood heater. Retailers will only buy products from manufacturers in 2019 (or sooner) that already meet the Step 2 requirements.

***Retailers have made these concerns clear in business decisions.***

One furnace manufacturer witnessed the near-collapse of the furnace industry in 2016 due to uncertainty in the regulatory world. Combined with new regulations, election-related changes, and an unusually warm winter, it was a horrible year, especially for the wood furnace industry. Retailers are risk averse and didn't want to buy products leading up to 2016 that they might not be able to sell in later heating seasons. Between 2015 and 2016, this manufacturer reported a significant (more than 50 percent) decrease in volume. This year is thankfully looking to be a normal year, thanks to more political certainty, but this story is not unique to the furnace industry and will occur again as uncertainty strikes this industry in the lead-up to 2020.

For hydronic heaters, EPA is currently allowing manufacturers to use a U.S.-based method or a European method which is considered far easier to pass than the U.S. method. For Step 2, by contrast, EPA will not allow products tested with the European method during Step 1 to be manufactured or sold after the Step 2 May 15, 2020 effective date. To the public looking at EPA's list of EPA-certified hydronic

heaters, it looks like there are dozens of appliances that can meet Step 2 because they hit lower numbers using the European method. In reality, all of those products will need to be re-tested with the U.S. method if they want to be on the market after May 2020. The methods are very different. For example, the U.S. method requires that testing begins the moment before the fire is lit, starting with what we call a “cold start.” The European method doesn’t require a cold start. Testing in our lab showed that units tested and passed using the European method were significantly dirtier when tested using the U.S. method. In fact, one European-tested model that supposedly can achieve the Step 2 limit did not even come close to meeting the requirements when tested using the U.S. method. Certifying units that were tested using the European test method amounts to an unfair advantage and this uneven playing field directly impacts sales of American-made units.

All of these challenges force industry concentration and mergers, of bigger companies buying up smaller companies, or smaller companies simply going out of business. This is already happening today.

## **WHAT DOES THIS MEAN FOR CONSUMERS?**

Many things in life are not impossible. Meeting Step 2 is not impossible, as EPA will tell you. However, being forced to meet this part of the rule in such a tight timeframe will increase the cost of appliances that do make it through testing. You can either take the time to efficiently develop a very clean burning product at a low cost or you can expedite the process and end up with a product that passes the Step 2 test

(perhaps just one lucky test series) but it doesn't work as well as it could for the consumer and the price point will start out high.

***Clean, effective, and affordable products need time for development.***

One woodstove manufacturer, located in Morrisville, Vermont, makes very attractive, unique, and clean woodstoves made out of soapstone and cast iron. All 13 of their current EPA approved models are cleaner than EPA's current emissions limit of 4.5 g/hr. In order to redesign or create new models that might meet Step 2, changes that would need to be made, in such a short time frame, would dramatically increase the price of the product by \$800 to \$1,000. It is likely that consumers wouldn't pay this premium. With more time, manufacturers could find a more elegant and effective solution to decrease emissions even further than we already have.

Like manufacturers, retailers are making business decisions right now based on the Step 2 2020 requirements. It can sometimes take up to five years for a retailer to sell a hearth product from the time they purchase it from a manufacturer. With that in mind, many retailers aren't purchasing products from manufacturers that don't already meet the 2020 requirements. Even though it is still 2017, in practice the effective date is already having an impact. Manufacturers could be performing R&D on bringing down prices of existing products and making them more appealing to consumers looking for alternative and affordable ways to provide heat for their family, but instead many



manufacturers are focused on getting at least one of their products into compliance with the 2020 requirements.

## **CLEAN AIR IMPACTS**

The requirements of Step 2 will make products even more expensive and less affordable for consumers, hindering the real goal here: to help air quality. Although products that pass Step 2 will have lower tested emissions rates, more people will hold onto older stoves and repair them rather than replace them with newer EPA-certified appliances. Across the U.S., woodstove changeout programs have removed thousands of older non EPA-certified appliances and replaced them with newer, more efficient and cleaner burning EPA-certified stoves. This is where the largest emissions reductions are gained, not from regulations.

### ***Stove changeout programs work.***

In one town, Libby, Montana, the entire town had all non EPA-certified stoves removed and replaced with EPA-certified stoves. The local air quality agency measured particulate matter levels indoors and outdoors before and after the changeout. A year later, measurements during winter months showed an average of a 72 percent improvement in indoor air quality and a 28 percent improvement in outdoor air quality.<sup>4</sup>

But, if the price of products increases, fewer appliances will be able to be changed out and less emissions reductions will be realized.

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<sup>4</sup> Hearth, Patio & Barbecue Association. (2008). *Preliminary Report: Clearing the Smoke: The Woodstove Changeout in Libby, Montana*. Retrieved from <https://www.hpba.org/Initiatives/Woodstove-Changeouts/Success-Stories/Libby-Montana-Changeout>

Before the NSPS was updated in 2015, woodstoves were already regulated by the first NSPS, which was last amended in 1990. The current NSPS regulated pellet stoves, hydronic heaters, and wood furnaces for the first time. By EPA's own estimate, the Step 1 hydronic heater standard represents a 90 percent reduction in emissions compared to uncontrolled appliances. All products covered by this rule will remain regulated by Step 1 regardless of when Step 2 comes into effect. Delaying Step 2 by three years will have a very minor impact on the environment.

## **CONCLUSION**

By not delaying the Step 2 effective date, more harm would be done due to the reasons discussed above. More time will allow my company and the rest of the industry to develop less expensive alternatives that will encourage consumers to replace their older appliances with today's (and tomorrow's) latest technologies.

My company has worked in good faith with EPA and the state air agencies to develop reasonable standards for outdoor hydronic heaters. Our industry wants federal standards, but they need to be achievable and not put the majority of an industry out of business. I urge you to pass H.R. 453 and give more time to an industry that has made millions of dollars in investments to develop affordable and independent heating options for our customers, your constituents. This is a commonsense request that isn't asking for a mountain to be moved, only the effective date of a not-yet-in-effect rule that wasn't given enough time to come to fruition. Our company will continue experiencing a

downward spiral if we don't get this extension. Thank you for your time and listening to me today. I am now happy to answer any questions you may have.

## Attachment 4



# UNITED STATES STOVE COMPANY

Tradition, Quality, & Value since 1869

**Statement of Paul Williams, Vice President of Business Intelligence, United States  
Stove Company  
before the  
Senate Committee on Environment & Public Works  
Subcommittee on Clean Air and Nuclear Safety  
November 14, 2017**

Thank you Chairwoman Capito, Ranking Member Whitehouse, and members of the Subcommittee for holding this hearing today on S. 1857.

My name is Paul Williams and I am the Vice President of Business Intelligence at United States (U.S.) Stove Company. Our company is a fourth generation, family-owned small business that manufactures heating appliances with headquarters in rural middle Tennessee, where we are the third-largest employer in the area, and manufacturing in Bridgeport, Alabama, where we are the second-largest employer. We provide jobs for over 150 people. We offer a full range of affordable heating products, covering a broad variety of product types including wood and coal stoves, wood and pellet stoves, wood furnaces, coal furnaces and boilers, wood- and pellet-burning outdoor cooking appliances, and various gas and oil-fueled products.

As a cornerstone of the industry, started in 1869, we became the largest woodstove manufacturer in the world after the U.S. Civil War. Our growth continued with acquisitions until the early part of the 1900s when World War I and the Great Depression produced a difficult economy. U.S. Stove Company rebounded after these tough times and again experienced growth through the popular mail-order catalog business of Sears, Roebuck & Company. The rollercoaster ride continued through World War II and the oil embargo in the early 1970s. Being in business continually since 1869, it is our many years of experience that affords us a unique insight of our industry, our customers, and our own company.

All of our wood- and pellet-fueled residential heating appliances are affected by the EPA's emissions standards, known as New Source Performance Standards (NSPS) for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces. Today I am speaking on behalf of all manufacturers and retailers – most of whom are small businesses – who manufacture or sell one or more of the three categories of appliances impacted by these standards: (1) wood and pellet stoves, (2) forced-air furnaces ("wood furnaces"), and (3) hydronic heaters. The first set of NSPS standards ("Step 1") began to come into effect May 15, 2015, while Step 2 will come into effect May 15, 2020. It is important to understand that products not meeting the

Step 2 standard cannot be manufactured or sold after May 2020. That means that the significantly cleaner Step 1 products we just finished developing will not be available to consumers at that time.

I want to strongly emphasize that we support federal standards for wood heating appliances. Our veteran management team, with more than 150 years of combined industry experience, contributed in developing the first NSPS in the 1980s and worked closely with the EPA and other stakeholders in developing today's standards. We have a firm grasp on the importance of environmental responsibility in new product development and associated costs, achievable timetables and getting products to market, along with many variables that affect the retail landscape. However, today's standards must be implemented within a reasonable timeframe in which we can develop cost-effective means of achieving emissions limits. We want to partner with EPA to produce regulations that improve air quality while at the same time preventing an economic disaster for our industry.

Without extra time to meet Step 2, the wood heater market will be adversely affected by reduced consumer choice and major price increases, impacting the end consumers' ability to purchase cleaner products to replace older, non EPA-certified appliances. Reduced sales will ripple through the industry hurting retailers and manufacturing jobs. For U.S. Stove, we'd have more time to ***try to*** properly design and test woodburning products that are safe and reliable for consumers while effectively meeting the required emissions limits. Keep in mind that people trust us and our products enough to have a live fire in their home. We take that responsibility seriously. We test our products for safety and durability, not just for emissions. We need more time to accomplish the task at hand.

## **TIMING AND SEASONAL IMPACTS**

After 148 years, U.S. Stove Company is still a leading supplier of renewable energy-fueled alternative heating systems to the big retail chains and independently-owned farm implement and hardware stores. Our substantial penetration in these segments gives us a major market share and keen understanding of product demand, changes, and profitability with these price-sensitive retail partners. Our typical customers live in rural communities and are low-to-middle income families looking for affordable sources of heat. We pride ourselves in providing a diverse variety of affordable heating options for consumers, and throughout the different divisions in our company we sell products designed to be the most affordable and some of the most reliable alternative options in the market.

Since woodburning products are used seasonally, there are seasonal windows of opportunity for selling them that can make or break a company. As a manufacturer, we are currently in the final, third phase of seasonal product demand, between September and December, the main selling season. On average, sales volume diminishes by the end of February. Retailers will attempt to balance inventory in preparation for spring seasonal supplies such as lawnmowers, grass seed, and grills.

With most of the companies in our industry being small businesses, their inventory is their banking collateral, which affords them their cash flow. The harmonious seasonal relationship between the manufacturer, retailer, and customer is a tricky one and presents multiple challenges.

**Small retailers and consumers are being affected, today.**

Take the example of one of our accounts in West Virginia, Persinger Supply in Prichard, WV. We have worked with Dusty Vanzandt there for two decades. The Step 1 wood furnaces standards (which went into effect in 2016 for small furnaces and 2017 for larger furnaces) have already affected his sales, mostly because the units are more expensive and there is less consumer choice. In 2015, he sold 42 furnaces. Last year in 2016, that number dropped to 11. So far this year, he has sold 8 furnaces. We attribute this reduced demand solely to price increases. The wood furnace market is still adjusting to this NSPS Step 1 regulation. Before this rule, the cost of a wood furnace was \$1,000. Now, an EPA-certified furnace costs \$2,000 at retail. As mentioned earlier, price-sensitive retailers and consumers cannot stomach 100 percent price increases very well. This will hopefully settle over time, but without more time to try to meet Step 2 this part of the wood heater industry will no longer exist. We have concerns about the effect of price increases in other product categories as well.

Although the effective date of Step 2 is May 15, 2020, in reality we need to have products ready for Step 2 by October 2018. Here is why: In October 2018, larger retailers will review available product lines of all companies and evaluate which products they'll sell in the 2019-2020 heating season. May 2019 falls at the time when retailers submit their purchase orders to manufacturers for products they will sell in the 2019-2020 heating season. Retailers are not going to purchase products that they won't be able to sell after the next heating season.

This means we need to know exactly which products we'll be presenting and manufacturing months before meeting with retailers in fall 2018. If we don't have a product certified and ready to be presented at that point, we miss out on an entire year of business for a product line. This reduces product choice for the consumer and limits opportunities for small business retailers. Figure 1 illustrates the business cycle we face with a large retailer. EPA certification of a product must happen before it can go through any of the below steps.

**Figure 1. Business Cycle for Manufacturers of Residential Wood Heaters:  
Timeline for a Large Retailer (i.e. Lowes, Home Depot)**

2018	2018-2019	2019			2019-2020
<i>September - October</i>	<i>November - January</i>	<i>February - April</i>	<i>May</i>	<i>June - July</i>	<i>September - March</i>
Manufacturer meets with retailer(s) to review process and appliances	Manufacturer purchases steel and other materials in advance of production	Manufacturer starts production to fulfill estimated purchase orders (PO)	Retailer submits PO to manufacturer	Appliances are shipped to distribution facilities to be sent to retailers	Peak selling time

In the face of this extended business cycle, we need to have our EPA certificates in hand no later than early fall 2018 – less than a year from now. As a practical reality, we cannot offer for sale or produce any products that aren't Step 2-compliant by that point. After the retailer reviews appliances and prices, we purchase the steel and other materials in advance of production. We start production for fulfilling purchase orders between February and April of 2019. Throughout the summer, we ship appliances to distribution facilities to be sent to retailers in time for the fall selling season.

**Retailers are already basing business decisions on 2020.**

One manufacturer has told us that during their most recent October line review meeting with a large retailer, the nation-wide retailer stated that they wouldn't be purchasing any products in the future that didn't meet the 2020 standard. This decision was made in fear of being stranded with products in stores that couldn't be sold after May 15, 2020, even though we are well over two years away from that effective date.

**EMISSIONS AND SAFETY TESTING STANDARDS THAT WE FACE**

Extending the Step 2 effective date by three years would allow the heating industry to feasibly amortize our time-based resources and the available company finances for design, development, and testing of new products over a more achievable period of time to try to be able to offer compliant products ready for the marketplace.

Our company has been heavily affected by the NSPS as we manufacture products for the U.S. market that are in four of five affected product categories (wood and pellet stoves, single burn rate woodstoves, and wood furnaces). One of these products, wood furnaces, was previously unregulated prior to the NSPS rule. Under the NSPS rule, standards for furnaces had different effective dates, with regulations for small furnaces coming into effect in May 2016 and for large furnaces in May 2017. It takes a large capital investment and anywhere from nine to 15 months to bring a single product from concept to a finished item ready for market. Plus the time it takes to receive a certificate from EPA. Up to this point, meeting these deadlines has consumed ALL the available time-based resources our company has at its disposal as well as all available working capital for new product research, development, and testing. Now we



have to start this process all over again since our products in the furnace category don't yet meet the 2020 standards.

Without more time to test products, which would be provided by S. 1857, U.S. Stove Company will very likely only be able to offer a very limited product line by the 2020 compliance deadline. With limited products to offer for sale, our company will lose key accounts and customers, which would ultimately compromise the viability of our company and the people we employ moving forward. We currently offer 46 wood burning appliance models. Looking ahead to 2020, we expect to have all pellet stoves (13) pass, but they will have to be re-tested at around \$20,000 per model. We will likely have less than five woodstove models (down from 28) to sell in 2020 and **no furnaces** that will meet the 2020 standards. That is nearly a two thirds reduction in the appliance models we offer today. Here we will experience significant cost between \$250,000 to \$500,000 per model for research and development and testing expenses to try to meet 2020 requirements.

The testing process and test lab is very similar to making a trip to the DMV. You wait in line at the DMV for a few hours with all of your necessary paperwork in-hand. You get to the front of the line, but you are told that you are missing one form. You then have to get out of line, find and fill out that one form, and then get back in line and start all over again. When we have to start over testing, we still have to re-apply with the lab for lab space. There are other manufacturers who have signed up months in advance, as we do, for test lab space. With only five test labs in North America accredited by EPA to test wood heaters, a test lab logjam will worsen as we get closer to the 2020 effective date. Some manufacturers, even if they feel their product is ready for final testing, often need to wait months for their appointment with a testing lab.

After completing and passing emissions testing at the lab, we then have to wait months for EPA to review our test report and certify our product as EPA-certified. For wood furnaces, after receiving an EPA certificate for emissions, we still need to test the units for safety and durability. This process can also take months. If any changes need to be made after safety and durability testing, that unit has to again be re-tested for emissions at a lab and again certified by EPA since changes were made. As you can see, this process takes time, sometimes over a year, before a new or modified product can even make it to market to the consumer.

We are very concerned about EPA's ability to certify products by 2018. In addition, we face a log jam getting products tested by the five test labs approved by EPA to test wood heaters. In one year, one lab processed 14 wood heaters. Another processed only six appliances and half were sent back for more work. Once the lab approves it, the EPA has to review the test results, often taking 3-4 months for this industry. As the deadline gets closer, hundreds of appliances will need EPA testing and certification in a very short timeframe. There is not enough capacity to get through the process in time.

With the current backlog of test reports to be reviewed at EPA's Office of Enforcement and Compliance Assurance (OECA) (currently in excess of three months per model in our experience), the government's ability to issue a certificate for our appliances alone would create such a backlog it would decimate the industry. Even if investment capital and time allotted for design, development, and testing were not an issue, U.S. Stove Company (and all the other products manufactured by the wood heater industry) would not be certified in time.

This issue of testing and certification delays continues today for us and other wood heater manufacturers. We predicted much of this would happen in our 2014 comments to EPA on the proposed NSPS, which can be found as an attachment to this statement. Much of what we warned EPA about in 2014 is described in this statement as these issues did occur as foreseen by industry.

## **IMPACTS ON AIR QUALITY**

Delaying Step 2 by three years (from May 15, 2020 to May 15, 2023) will not have a significant impact on air quality. Two of the regulated product categories (furnaces and hydronic heaters) were not regulated before the rule came into effect in May 2015. Those products have made significant emissions reductions since 2015. For instance, EPA estimated that the Step 1 standard for hydronic heaters represented over a 90% reduction in emissions. All products covered by the NSPS will remain regulated under Step 1 if Congress were to grant an extension of Step 2. In order to achieve meaningful reductions in emissions, we have to motivate end-users to replace the older pre-NSPS heaters (the vast majority of heaters in use today) with new ones. To do that, the new units need to be affordable and available.

### **Changeout programs produce results.**

As an example, one changeout program in Libby, Montana replaced the entire town's 1,130 older woodstoves and replaced them with newer, EPA-certified stoves. Research done by the University of Montana showed that indoor air quality improved by 70 percent in the winter after the changeout program compared to the year before the program. Outdoor air quality was found to have improved by 30 percent.<sup>1</sup>

The true emission reductions come from changeout programs: replacing older, non EPA-certified wood heaters with today's new, EPA-certified appliances. However, if the price of appliances increases, two things will happen. First, there is an incentive for consumers to repair their higher emitting, uncontrolled appliances rather than replace them with EPA-certified appliances. Second, there will be less opportunity to change out as many units as possible. If furnace or hydronic heater manufacturers are regulated out of existence, there won't be any suitable option for a consumer looking for

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<sup>1</sup> Hearth, Patio & Barbecue Association. (2008). *Preliminary Report: Clearing the Smoke: The Woodstove Changeout in Libby, Montana*. Retrieved from [https://www.hpba.org/Portals/26/Documents/Government%20Affairs/Libby\\_Report-Final.pdf?ver=2017-06-13-082448-233](https://www.hpba.org/Portals/26/Documents/Government%20Affairs/Libby_Report-Final.pdf?ver=2017-06-13-082448-233)

a 1-to-1 replacement for their wood heater. Why strive for perfection at the cost of eliminating part of an industry? And the irony is that in a rush to improve air quality in a hurry-up process, we are creating incentives to hold onto older, much dirtier products for longer and slow down air quality improvements.

## **CONCLUSION**

Without this extension of Step 2, I fear that my company, the hearth industry, and consumers (your constituents) would needlessly suffer as a result. Our industry wants federal standards, but they must be cost-effective and achievable. With more time, provided by S. 1857, we can continue with R&D and testing as we work to try to meet Step 2 of this regulation. The existing deadline is infeasible. I thank the subcommittee for the opportunity to provide feedback on the current and future impacts of the EPA's emissions standards for wood heaters.

**ATTACHMENT**

U.S. STOVE COMPANY WRITTEN COMMENTS SUBMITTED TO EPA ON  
PROPOSED RULE: NEW SOURCE PERFORMANCE STANDARDS FOR NEW  
RESIDENTIAL WOOD HEATERS, NEW RESIDENTIAL HYDRONIC HEATERS AND  
FORCED-AIR FURNACES

(APRIL 30, 2014)

**United States Stove Company**  
**Written Comments**  
**On**  
**Environmental Protection Agency**  
**Proposed New and Revised New Source Performance Standards**  
**For New Residential Wood Heaters, New Residential Hydronic Heaters and**  
**Forced Air Furnaces and New Residential Masonry Fireplaces**  
**April 30, 2014**

**I. Executive Summary**

United States Stove Company (USSC) submits these written comments to highlight areas of agreement, concerns, interest and our recommendations regarding the Environmental Protection Agency's (EPA) new and revised New Source Performance Standards (NSPS) for hearth appliances under Section III of the Clean Air Act, published in the Federal Register on February 3, 2014.

While we are in agreement with the EPA that review of particulate standards for our appliances is warranted, we have concerns about:

- 1) the use of defined and proven testing protocols to realistic emission requirements;
- 2) the proposed compliance transition period and limitations to sell product at retail;
- 3) the economic impact of the proposed rule on our industry, manufacturers, retailers and consumers; and
- 4) real-world issues, consequences and unintended adverse outcomes if the proposed rule is implemented as currently written.

USSC wants to partner with the EPA to produce regulations which improve air quality while at the same time preventing an economic disaster for our industry. In short, we agree with the EPA's goal, but we disagree with the flawed process it proposes to use to accomplish it. We strongly disagree with Step 2 limits in all product categories, for reasons that the Hearth Patio and Barbecue Association (HPBA) has enumerated in its detailed comments. We know that if these limits are imposed, this industry will be devastated to the point that it will no longer exist in any meaningful capacity.

Many manufacturers, including USSC, produce several categories of products that are facing regulation, most for the first time in history, which greatly exacerbates problems on all fronts. Not only are we faced with a "crash course" to bring our products into compliance with the proposed NSPS's, we are also faced with daunting challenges in deciding how we address retail markets<sup>1</sup>, the immense financial

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<sup>1</sup> See Corrected Transcript April 1, 2014 (A80197F) for Public Hearing: Proposed Revisions to the Standards of Performance for New Residential Wood Heaters, February 26, 2014 page 10 lines 1-8: At the public hearing in Boston, MA on February 26, 2014, Greg Green of the EPA stated that it is not the Agency's intent for the proposed NSPS to affect wood heater inventory for stores and any heater currently in home use. We are sure Mr. Green was being sincere and straightforward in his statement. As noted above, the impact of the rule, as currently proposed, is contrary EPA's stated intent.

burden of short term compliance and most importantly, our own ability to make a profit while doing so. Given adequate time and reasonable emission goals, the industry will develop compliant products as the market demands, but the key to doing so is having a reasonable pragmatic time frame within which to do so. In order for us to help the EPA improve the emission performance of wood burning products, common sense demands that sufficient time must be allowed for manufacturers to design, test and perfect compliant products for the market.

As a responsible, family-owned small business with a long history of excellence in seasonal appliance development and manufacturing, a founding member of the HPBA and an active participant in the development of the first NSPS for our industry, it is our strong desire and commitment to partner with the EPA, HPBA and other interested parties to achieve responsible standards that are essential to properly addressing the economic concerns, energy needs and air quality issues that are now at the forefront of national and state agendas. These are complicated issues demanding reasonable, common sense compromise between the regulating body and our industry. Failure to do so will be catastrophic to many worthy small businesses, including USSC.

## **II. Our History and Unique Perspective**

We are a fourth generation family owned small business which is the oldest manufacturer of affordable renewable energy powered heating appliances in the United States. Headquartered in the small town of South Pittsburg, TN, we now operate four facilities in four states: Tennessee, Alabama, Michigan, and Oregon. We offer a full range of affordable heating products, covering a broad range of appliance types, all of which are affected by EPA's proposed NSPS.

As a cornerstone of the industry, our early years produced great success as we became the largest wood stove manufacturer in the world after the Civil War. Our growth continued with acquisitions until the early part of the 1900's when World War I and the Great Depression produced a difficult economy. USSC rebounded through these tough times and again experienced growth through the popular mail-order catalog business of Sears, Roebuck & Company. The rollercoaster ride continued through World War II and the oil embargo in the early 70's. Being in business continually since 1869, we have endured many personal and economic hardships. Forged during wars and the Great Depression to an oil shortage and market collapses, it is our many years of experience that affords us the unique insight on our industry, our customer and our own company.

Our veteran management team, with over 150 years of combined industry experience, was instrumental in developing the first NSPS and has worked closely with participants to respond responsibly to the proposed NSPS. These industry professionals have a firm grasp on the importance of environmental responsibility in new product development and associated costs, achievable timetables and getting items to market, along with the many variables that affect the retail landscape. Their input is the basis for these comments.

## **III. Our Commercial Partners and Seasonal Markets**

After 145 years, USSC is still a leading supplier of renewable energy fueled alternative heating appliances to the big retail chains and independently owned farm implement and hardware stores. Our substantial penetration in these segments gives us a major market share and keen understanding of product

demand, turns and profitability with these price sensitive retail partners. We pride ourselves in providing a full range of affordable heating options for the consumer, and throughout the different divisions in our company we sell products designed to be the most affordable and some of the most reliable alternative options in the market. Due to our distinct niche in the marketplace, we bear the main burden of providing affordable wood-fueled heating to American families. Our scope goes far beyond our abilities to just provide affordable heating, as we also provide a full range of products that serve the builder/contractor and specialty hearth markets through our Breckwell, Vogelzang, Ashley and HomComfort brands.

Since wood burning products are used seasonally, there are seasonal windows of opportunity for selling them that can make or break a company. At retail, the bulk of the heating appliance selling season runs from around Labor Day to December. Depending on winter weather conditions or special sales promotion events, Q1 sales figures can vary greatly (up to 300% swings observed over the past 5 years). On average, sales volume diminishes by the end of February. Retailers will attempt to balance inventory in preparation for spring seasonal supplies. Lawnmowers, grills and pools are the next challenge for the seasonal buyer. With most of the small businesses in manufacturing for this market, their inventory is their banking collateral, and it affords them their cash flow. The harmonious seasonal relationship between the manufacturer, retailer and customer is a tricky one and presents multiple challenges.

At the manufacturing level, we see seasonal product demand in three phases. The **first phase** is actually the last (December-March). How effective were the marketing efforts and how well did we do in the season? How is the inventory pipeline? These questions are often impacted by events or uncontrollable variables. With heating appliances, was there a winter? Was there a driving force, beyond marketing efforts, that impacted sales? In recent years fuel supply shortages, fluctuations in weather patterns and economic conditions affect inventories both positively and negatively. Once the inventory situation is evaluated, we enter the **second market phase** (April-September). This is the stocking stage and produces an initial surge of product entering the market place. Balanced with what is left in the pipeline and marketing expectations, long lead time items are critical challenges during this seasonal phase and the next. Product that is a little late is often too late. The **third seasonal phase** (September-December) is in-season demand and fulfillment. It is considered the reaction phase. How is demand reacting to the marketing efforts and what is the manufacturer's ability to supply the inventory needed? Balancing resources and communications are critical in each phase where mistakes can be magnified leading to disastrous results. When we introduce or launch new products for the year, there is typically a soft cutoff date in the middle of the second phase (April-September) during which if product is not ready to ship, it will not be picked up by our retailers and the capital investment in the product will have to be borne by the manufacturer for another year.

Having a network of financially healthy manufacturers and retailers is **the key** to maintaining a healthy industry and is the **vital link** to offering the consumer new compliant products. The market phases and characteristics described above have a direct impact on determining what a reasonable time frame is for implementation and compliance with any new NSPS affecting our products.

We have organized our comments based on the products we currently sell that are directly affected by the proposed NSPS: wood heaters, wood pellet heaters, forced-air furnaces, and single burn rate wood heaters. Each one of these products presents a unique set of circumstances that warrant explanation. We have contributed to the comment efforts of the HPBA, both financially and substantively, regarding the proposed NSPS so we will not repeat those points. As industry experts we can help EPA achieve its ultimate goal of emission reductions by offering advice on setting realistic and justified emissions limits. We can also advise on providing adequate transition time relief, including grandfathering, so that in a

reasonable time frame we can develop cost effective means of achieving those limits so the market will with not be adversely impacted by major price increases, and the end consumer is able to buy cleaner products to replace their older non-NSPS compliant products.

#### **IV. Financial Impact of Compliance**

USSC has 51 skus that were previously exempt under the current Subpart AAA: 15 pellet heaters (\$15,000), 19 being single burn rate or utility heaters (\$356,250), 17 forced-air furnaces (\$356,250). There are an additional 2 adjustable burn rate wood heaters (\$356,250) that are not Step 1 compliant. In some product categories the EPA estimate of \$356,250<sup>2</sup> for compliant unit development is too low. We will nevertheless use the EPA estimate for single burn rate heater, forced-air furnaces, and adjustable burn rate heaters in our analysis since EPA clearly noted that this was an assumed number for all product categories. Also, in the case of pellet heaters, we believe that they can meet Step 1 of the proposed NSPS in most cases and thus we will assume \$15,000 as testing, shipping, and administrative costs associated with becoming EPA certified. Combining the costs in all categories, we estimate that the capital investment due upon promulgation under the proposed compliance timelines to continue business as usual would be in excess of \$13.5 million. This level of investment is not financially viable in a short timeframe. As a small business, we do not have the liquid capital and we cannot borrow enough money for research and development to meet those financial demands. The limits and testing methodologies for all categories of our products make proposed Step 2 unachievable. For that reason, we are unable to provide a realistic cost estimate to bring our products into compliance.

#### **V. A Practical Overall of the Proposed NSPS**

The Step 2 emissions requirements together with the proposed methodologies are currently impractical and unachievable. Pushing the limits beyond Step 1 is not the "Best System for Emission Reduction" (BSER) mandated in Chapter 111 of the Clean Air Act, because the requirements are not achievable and cost effective for the industry. Ironically, the proposed Step 2 limits will ultimately not achieve the goal of reducing overall emissions from wood burning appliances in any meaningful way, and will surely reduce the overall size of the woodstove marketplace to virtual non-existence. The HPBA has provided ample information demonstrating why Step 2 limits and methodology are not achievable. In order to achieve meaningful reductions in emissions we have to motivate end-users to replace the older pre-NSPS heaters (the vast majority of heaters in use) in the marketplace with new ones. In order to do that, the new units need to be affordable.

All wood burning appliances require time for design, testing, and production processes to ensure they are safe, cost-effective, and compliant products for the marketplace. It is not unusual to take up to 3 years to develop a wood heating product from concept to production. Certification of compliance 60 days after promulgation in the case of pellet heaters, single burn rate heaters, and forced-air furnaces is unrealistic. With the current backlogs in the Office of Enforcement and Compliance Assurance (OECA) (currently in excess of 4 months per model in our experience), the government's ability to produce a certificate for our appliances alone would create such a backlog it would decimate the industry. USSC would have 53 different products under review by OECA around the date of promulgation – even if doing so is financially and possible and on an achievable timeline – which is certainly not the case. OECA has certified less than 1,000 products in the past 25 years - an average of slightly less than 40 products

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<sup>2</sup>See 79 Fed. Reg. at 6350



annually. Even if investment capital and time allotted for design, development and testing were not an issue, USSC products alone exceed the annual OECA average of certificates issued under the proposed NSPS. We can assume that other manufactures will have a similar certification needs. If OECA cannot perform better than it is operating today, we can safely assume that it cannot meet the needs of this industry up to and after promulgation. The impact of such a bottleneck on our industry is obvious.

Finally, investment capital is important for operation. If any business does not have adequate cash flow, it will not survive. If products do not have time to sell out in the supply chains after promulgation, an undue burden will immediately be placed on retailers, distributors and ultimately the manufacturers. Reasonable time for retail sales is paramount to the financial health and viability of our industry.

## **VI. Adjustable Burn Rate Wood Heaters**

USSC endorses HPBA's comments on adjustable burn rate wood heaters and the proposed test methods associated with them. We endorse and accept the proposed Step 1 limit of 4.5 g/hr. We believe this emission standard, along with including products that are currently exempted under the Subpart AAA, will achieve the EPA's goal of improving overall air quality on a national scale without damaging the industry to the point where the replacement of older non-compliant products in the industry will not occur.

## **VII. Wood Pellet Heaters**

USSC also endorses HPBA's comments concerning wood pellet stoves and the proposed test methods associated with them. We endorse and accept the proposed Step 1 limit of 4.5 g/hr and the use of ASTM E2779-10(Standard Method for Determining Particulate Matter Emissions from Pellet Heaters) in its entirety. Since wood pellet stoves were a previously unaffected appliance under the current NSPS, and since most manufacturers of wood pellet stoves will be impacted by the proposal in multiple product categories, and since the almost certain potential for “logjams” in the testing labs, we recommend the following transition relief for wood pellet stoves which would be concurrent with the previous NSPS:

- Compliance extension of at least 1 year after promulgation of the proposed rule; and
- Authorization for retail sell through of at least 2 years after the compliance date of the proposed rule.

## **VIII. Forced-Air Furnaces**

USSC endorses the HPBA's comments regarding forced air furnaces. We would like to expand on several points made in HPBA's comments.

EPA proposes to regulate forced-air furnaces under Subpart QQQQ (Standards of Performance for New Residential Hydronic Heaters and Forced Air Furnaces) along with hydronic heaters under the category of central heaters. The two technologies are vastly different. As defined in the proposed NSPS a residential forced-air furnace is “a fuel burning device designed to burn wood or wood pellet fuel that warms spaces other than the space where the furnace is located, by distribution of air heated by the furnace through ducts”<sup>3</sup> and a residential hydronic heater is “a fuel burning device designed to burn

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<sup>3</sup>See 79 Fed. Reg. at 6384

wood or wood pellet fuel for the purpose of heating building space and/or water through the distribution typically through pipes, of a fluid heated in the device, typically water or a water and antifreeze mixture.”<sup>4</sup> According to these definitions, forced-air furnaces utilize a heat distribution media of air while hydronic heaters use a heat distribution media of water. Water is roughly 1000 times more dense than air and has over 4 times the specific heat vs. air. In simple terms that means that water is a much better storage media for heat. Due to its greater heat storage capacity, water allows hydronic heaters to operate at their optimum burn rates or “sweet spot” to achieve relatively clean burns without overheating, even when the thermostat is not demanding heat. By comparison, forced-air furnaces have virtually no heat storage capabilities with their distribution media and are not able to consistently operate in their “sweet spot” due to many safety concerns and common use habits by the end users. We also would like to emphasize that there has been no EPA or state voluntary program for warm air furnaces as there has been for hydronic heaters.

There are significant differences in size and weight of these two appliances. Hydronic heaters are typically designed to be installed outdoors, so the manufacturer is not constrained by size or weight limits to their product for modifications. On the other hand, forced-air furnaces are made to be installed indoors in a basement or utility room. Because of this, manufacturers are restricted to size and weight of the appliance for installation. With this premise, it is important to realize the manufacturer is restricted by size and weight for add-on technologies to improve emissions. This presents a significant design and engineering challenge.

In its comments, HPBA makes a distinction between small and large furnaces with a differentiation point at 65,000 BTU/hr of ducted output, and acknowledges that there are several (approximately 4) furnaces that are currently compliant with B415.1-10 when tested through an accredited lab. All of these products would be classified as a smaller furnace by this definition. It is important to note that smaller furnaces are primarily designed for supplemental heating of homes, while larger furnaces are designed to be whole home heaters. There are no known large furnaces by definition that have been tested and certified to the limits of B415.1-10.

To the best of our knowledge, all of the furnaces that are currently listed to B415.1-10 (the same standard and limits listed in the proposed NSPS) are manufactured in Canada, so they are immediately able to comply with subpart QQQQ from a design and testing standpoint. No major American forced-air furnace manufacturer currently produces a furnace that meets the requirements of B415.1-10, while Canadian manufacturers of forced-air furnaces have already made the investment into their products to meet step 1 emissions requirements of the proposed rule in order to sell into their markets. As clearly stated in the docket from public comment, through the economics of NAFTA, in its present form the proposed NSPS directly promotes Canadian based manufacturing at the expense of American manufacturers all of which are American small business that support American jobs and families.

USSC is the largest forced air furnace manufacturer in the US. Supporting evidence to that claim will be submitted under CBI, if requested by EPA. We emphasize that we do not currently have a furnace that meets the requirements and limits of B415-1-10. The proposed NSPS states that “Given that the largest U.S. forced-air furnace manufacturer already has a catalytic model meeting 0.06 lb/MMBtu, we think the 6 years of lead time is sufficient time in which to conduct R&D to produce comparably lower emitting model lines.” This statement is incorrect. USSC did not make it and no evidence of a cordwood burning forced-air furnace has been produced on a device currently meeting 0.06 lb/MMBtu.

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<sup>4</sup>See 79 Fed. Reg. at 6384

In light of the clear favoritism of Canadian based manufacturers and the lack of any voluntary program (which has lasted approximately 8 years for the other heater type under Subpart QQQQ) for this device, we request the following transition relief broken down between smaller and larger forced air furnaces.

For smaller furnaces:

- Compliance extension of at least 1 year after promulgation of the proposed NSPS; and
- Permitted retail sell through at least 3 years after promulgation of the proposed NSPS.

These aspects of the transition relief we request are consistent with phase 2 allowances under current subpart AAA. The previous NSPS for Wood Heaters was regulating previously unaffected facilities and provide 2 years to comply and two years following that compliance date to sell through product at retail.

Since there are no large furnaces on the market today that are certified to B415.1-10 and thus no BSER to establish limits on said furnaces we request the following in transition relief.

For large furnaces:

- Compliance extension of at least 3 year after promulgation of the proposed NSPS; and
- Permitted retail sell through at least 5 years after promulgation of the proposed NSPS.

USSC fully supports the HPBA's comments on grandfathering provisions for warm air furnaces. It is of the utmost importance that if a product is compliant with the proposed emissions requirements before the effective date of this proposed NSPS, and certified through an EPA accredited third party laboratory, it should be granted a certificate of compliance of no less than 5 years from the date of certification.

It is very important to note that modifications to the existing non-affected facilities are required to comply with the proposed NSPS. If modifications are made to an existing safety listed appliance, verification that an appliance is safe for the end user through a manufacturer's life testing protocols and retesting to safety standard will be required. In short, modifications to the emissions reduction technology of an appliance require re-testing to safety standards for safety assurance. This requirement further exacerbates the burden on the manufacturer of bringing a product to market under the proposed time line.

On p. 6344 of Volume 79 of the Federal Register (the proposed NSPS), the preamble includes in Table 5 the Proposed Approach Subpart QQQQ PM Emissions Standards limits for Forced Air Furnaces for Step 1 at 0.93 lb/MMBtu and Step 2 at 0.06 lb/MMBtu and Table 6 for the Alternate Approach for Forced Air Furnaces for Step 1 at 0.93 lb/MMBtu and Step 2 at 0.15 lb/MMBtu and Step 3 at 0.06 lb/MMBtu. But, when referencing the rule, section 60.5474 (4) (b) (3) states "2015 forced-air furnaces particulate matter emission limit: 0.93 lb/million Btu (0.40 g/megajoule) heat output and 7.5 g/hr (0.017 lb/hr) as determined by the test methods and procedures in 60.5476."

These statements are contradictory and contrary to the information presented in the Preamble. We request the 7.5 g/hr requirement be struck from the document as this must be a typographical error, since both reporting numbers cannot be correlated. This is also not consistent with the reporting limit as stated in CSA B415.1-10. The EPA as stated that CSA B415.1-10 will be the proposed test method in this under Subpart QQQQ.

## **IX. Single Burn Rate Heaters**

Single burn rate heaters are defined in the proposed NSPS as a heater that does not have an adjustable damper. However the exemption for single burn rate heaters, often termed utility heaters, has been defined in the past as an appliance that cannot be dampened down below a burn rate of 5kg/hr when tested in accordance with Method 28A. Because of that burn rate, it was exempt from the current subpart AAA requirements. These types of heaters typically do not have sophisticated emissions controls and are designed specifically to meet a heating need at a sensitive price point. These devices are the most affordable forms of wood heating in the marketplace, and as the EPA has noted represent a significant segment of the wood heating marketplace.

Since HPBA is not providing extensive comment on single burn rate wood heaters, we would like to address some of the points on which the EPA had requested specific comment. Single burn rate wood heaters have been grouped into the room heater category under Subpart AAA. For room heaters, EPA is proposing that the effective date for compliance is upon promulgation of the rule and a six month sell-through for retail. They requested specific comment on a 1 year compliance extension<sup>5</sup>.

We believe that a compliance extension of over one year is paramount for this type of heater, along with extra time for retail sell-through, for the following reasons:

1. Until the rule making is final, a manufacturer does not know conclusively what test method to apply to a product. Since a Single Burn Rate appliance was classified as a non-affected facility, a manufacturer cannot realistically be expected to produce compliant products upon promulgation.
2. As stated in the proposed NSPS, the Single Burn Rate appliances have previously been defined as a non-affected facility. Manufacturers of these appliances need time to design, test and produce products to the proposed NSPS which will be addressed later in this document.
3. With the first NSPS, the EPA allowed two years for compliance for adjustable burn rate wood heaters and an additional 2 years for retail sell through. USSC is requesting this same time line for the category of appliances. The two years for compliance will allow for R & D testing and then time for compliance testing in a lab. The two years of sell-through following the compliance date will allow retailers to clear out their inventory. It is important to note that if the compliance deadline is May 2015, retailers will not be selling heating products until October at the earliest. The proposed sell-through will not allow retailers time to release their current product.

We are in agreement with the EPA's proposal<sup>6</sup> of using the appendix of ASTM E2780-10 in its entirety for compliance testing of this appliance category.

In the Preamble, the EPA describes the number of single burn rate stoves sold each year<sup>7</sup>. USSC does not dispute this estimate and we would like to note that we have the largest market share in this product category. This product type represents a major revenue stream for this company and, as previously noted, we want to work with EPA to achieve improved air quality through the reduction of wood burning emissions. We need to settle on a solution that will achieve real emissions reductions and not decimate a product category through an unreasonably short timeline. Give us adequate time to develop effective technology to incorporate into these devices that can meet emission requirements and still be safe and cost effective to the end-user.

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<sup>5</sup>See 79 Fed. Reg. at 6340

<sup>6</sup>See 79 Fed. Reg. at 6342

<sup>7</sup>See 79 Fed. Reg. at 6357

We do not agree with the comments made on this page of the preamble that “some models would require modifications.....” All models will require modifications to be compliant. These models do not have any technology built into the appliance for emissions reduction. Therefore, considerable time will be required to research, develop and incorporate new technology into each model, and then send the appliance for testing at a lab. To expect a manufacturer to be compliant with this category on the day of promulgation is unreasonable and most likely impossible when you factor in the time at the lab and the amount of time the OECA is taking to review each test report. For the above timing requirements, USSC again requests from EPA that the timing of compliance be extended from the proposed date. We request the timing of the phase in for single burn rate heaters follow the timing of Phase 2 of the original NSPS for wood heaters:

- Compliance extension of at least 2 years after promulgation of the proposed NSPS; and
- Permitted retail sell through at least 4 years after promulgation of the proposed NSPS.

The EPA makes reference<sup>8</sup> to the additional cost to manufacture a lower emitting single burn rate heater. This comment does not clearly define how the \$100 dollars was determined. If this comment is referring to the added material costs of manufacturing, then it is fairly accurate. It is, however, important to note that the cost of producing a lower emitting single burn rate heater far exceeds the cost of the materials. We estimate the additional costs associated with bringing single burn rate heaters into compliance would be \$250 of manufacturing cost. Please note this cost increase is at the manufacturing cost level, not the retail price level – which would be more.

The EPA requested comments on the Alternative Step 1 approach<sup>9</sup>. As previously discussed, we are very concerned with the amount of time given to bringing this appliance category to the proposed compliance standard. We strongly disagree with the Alternative Approach as this would place additional burden on compliance. We have already explained that the proposed Approach is too aggressive for ALL parties involved. The Alternative Approach is even more aggressive and is completely unacceptable. We request that EPA adhere to the proposed approach and eliminate Step 2 until the next review of the NSPS. There is no BDT to cordwood fuel being used for emissions testing, so, as discussed in the Wood Heater Module presented by HPBA, Step 2 should be reviewed after data is submitted with the next NSPS review.

As noted this category of appliances is also referred to as “utility heaters”. These products provide a source of heat for those that would otherwise be unable to afford a heater in their home. As a manufacturer, we are deeply concerned with the additional cost burden this will place on the consumer by not having a “utility heater” category. We understand the importance of improving the air quality. We also understand the importance of providing a “utility” style wood heater for the consumer.

## **X. Other Pertinent Observations**

In the Preamble you request comments<sup>10</sup> on the requirement of the “direct distribution manufacturers and retailers providing moisture meters to the consumer at the time of sale. It also states that “some manufacturers include a moisture meter for their operators”.

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<sup>8</sup>See 79 Fed. Reg. at 6351

<sup>9</sup>See 79 Fed. Reg. at 6363

<sup>10</sup>See 79 Fed. Reg. at 6364

First of all, to propose that a moisture meter be required to be included with the sale of a wood heater is unreasonable. The retail consumer will not use this piece of equipment. As anyone knows who has ever used one, it is very easy to break a pin on this type of gauge. This poses a risk of harm to the user, plus once broken, it is very unlikely the retail consumer would fix or replace it.

Second, the comment that “some manufacturers include a moisture meter for their operators” is unfounded. We have surveyed the top hearth manufacturers and HPBA and we could not document one manufacturer supplying a moisture meter with their product. The last comment does not make any sense. Who is the operator? Operator of what?

It is important to point out, split cordwood seasons very well one or two years after being cut. The manufacturer’s instructions (as the Preamble points out) clearly guide the consumer on the proper seasoning of fuel for their product for proper operation.

The requirement to have retailers include a moisture meter is an undue cost burden and would not improve the maintenance of the consumer’s fuel or performance.

## **XI. Conclusion**

Meaningful and enduring emission reduction that advances the state of the art, while preserving the time tested benefits of products consumers rely on to provide for their basic needs, can only be achieved through mutually beneficial partnerships between government and industry. The new and revised New Source Performance Standards for wood burning appliances used by consumers contains an admirable, meaningful and cost-effective step forward. Unfortunately, it also proposes one or potentially two additional steps too far. If taken now, these extra steps will lead to the destruction of a successful American industry that has been forged over several generations and will not benefit the American consumer or achieve meaningful reductions of emissions from wood burning appliances in the United States. Please don't let that happen.

Respectfully submitted:

United States Stove Company  
227 Industrial Park  
South Pittsburg, TN 37380  
800-750-2723  
paul@usstove.com

## Attachment 5



1901 NORTH MOORE STREET, SUITE 600  
ARLINGTON, VA 22209 USA  
P: (703) 522-0086 • F: (703) 522-0548  
hpbamail@hpba.org • [www.hpba.org](http://www.hpba.org)

March 24, 2020

The Honorable Andrew Wheeler  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave NW  
Washington, DC 20460

Re: Request for emergency extension of Step 1 sell-through due to COVID-19 crisis

The Hearth, Patio & Barbecue Association (HPBA) writes to you today requesting emergency relief for an industry that is in dire straights during these uncertain times. EPA made the decision not to grant any sell-through relief for any appliances regulated by the Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces. (RIN 2060-AU00) HPBA disagrees with the assertion in the Final Rule that “statements from manufacturers and retailers asserting economic harm from stranded inventory if a retail sell-through was not allowed ... were not supported by contextual data.” Even though data was provided prior to the February 12, 2019 close of the comment period, it was difficult for industry to accurately estimate the impacts of the May 15, 2020 deadline at that time – 15 months and a more than a full selling season prior to the prohibition on sale of Step 1 appliances.

Retailers of wood and pellet stoves and other wood heating products have been hard at work over the past few years trying to sell all remaining products that do not meet the Step 2 requirements. During a normal year, retailers would use the early spring timeframe to sell those Step 1 stoves that they could not sell during the heating season. With the COVID-19 outbreak, everything has changed.

Business has come to a complete standstill for small retailers across the United States. A growing number of states have ordered or advised any “non-essential” businesses to close their doors. Any hope of selling those remaining Step 1 stoves has been crushed under the weight of public efforts to stem the spread of COVID-19. February through April can be a busy time for retailers, many of whom offer steep discounts (particularly this year), as price-conscious consumers look for deals at the end of the season.

Even in states where dealers can remain open, the impacts of closures, public health and safety warnings, and a terrified public have had devastating consequences for hearth retailers. Not only have sales come to a complete standstill, but some products that have already been sold have been returned or sales cancelled because customers don’t want installers in their home during quarantine, or installers are unable to get to a home because of a community lockdown.



HPBA surveyed our retailer and distributor members. Within 72 hours, we received responses from 183 retailers (employing more than 500 people), identifying almost \$4 million in product will be stranded with the denial of any sell-through beyond May 15, 2020. In addition, some of our members supply major home center chains, and report that over \$10 million worth of product will not sell in time and must be repurchased. This may even call into question the continued existence of these small manufacturers. It is worth noting that these manufacturing companies are in rural areas. Compared to the relief packages being considered by Congress, these figures may not appear to be much, but for small businesses in mostly rural areas, the loss of jobs will be a significant shock to the local economies.

**We ask for an extension of the retail sell-by date for Step 1 product to December 31, 2020 to give retailers time to sell their soon-to-be stranded products. Without this relief, especially in combination with impacts all small businesses are facing at this time due to COVID-19, numerous stores will close permanently.**

Following this letter is feedback we received from small retailers and distributors in just a few days last week.

Thank you for your consideration,

A handwritten signature in black ink that reads "Jack V. Goldman". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

Jack Goldman  
President & CEO  
Hearth, Patio & Barbecue Association

## **What plans or sales have been disrupted and what is happening in communities?**

Below is the feedback we received from retailers and distributors, organized by state. We have removed any information that could identify individual businesses as many are fearful of being targeted for future enforcement action.

### **Alabama**

- “Our showroom has been completely empty since Thursday March 12, 2020. Our outside sales/ inspections are not having any immediate sales due to the Corona Virus outbreak as everyone has decided to wait and see what is going to happen with their jobs and the stock market.”

### **Alaska**

- “The vast majority of our sells takes place in 4 months: Aug, Sept, Oct, Nov. We survive on repairs and chimney sweeps most of the year. As of Jan 1st till today, March 19th, we've sold 2 stoves. The installation cannot take place till May. We've ran full page advertising sale on stoves and deals on spring installation. However it is difficult to sells stoves when we cannot install them for months due to Alaska's harsh weather condition.”

### **Arkansas**

- “Even with social media posts, clearance signage, and use of online sales sites, now that COVID-19 represents a very real potential to many, our showroom has gone from several people a day to several a week. A majority of all sales in the last week and a half have been people getting their last few bags of pellets for the season. At a time where people are worried school and business closing, or about stores being able to stock commodities; our ability to sell through our remaining Phase I stoves has dwindled to almost nothing. This is a small, family owned business. Loss of revenue from COVID-19 coupled with the loss of capital by us scraping our remaining stoves will be financially devastating to our business.

I am the lone salesman for this store. Up until the last year or so, we have used family members to help with sales during the off season. As a husband and father of three, I have a family that is depending on me for this job. The current climate certainly lends itself to the real possibility of me losing my job, and my ability to take care of my family. I imagine many others in the industry have similar stories.”

### **California**

- “We have closed the store to customers but remain inside to answer phones and receive deliveries. 2 people are working from home. Our installers are limiting their installations for now. Anticipate sales will be down at least 30% or more.”
- “We are one of the oldest hearth dealers in California, established in 1960. The COVID-19 virus has certainly affected our foot traffic at our retail location. With only 6 employees, we try to take of any “early buy” purchasing options we can; the current crisis, coupled with the

Northern California fires over the last few years, has left us with an overstock of wood-burning products. People aren't out currently, and the fires created a general sensitivity to wood-fired appliances. We normally sell anywhere from 20-30 wood-burning appliances annually, and another 40+ pellet appliances. 2020 has not followed any trend I've seen in the 30+ years I've been in the trade.

It is my belief that many small retailers, like us, will suffer at the end of this. Manufacturers consider those units bought and paid for. They will be our 'boat anchors' come May."

- "Foot traffic is way down due to the hysteria surrounding COVID-19 which makes it difficult to sell through the step one units."
- "The impact of coronavirus will impact the hearth industry significantly. The risk of 7 grams of particulate versus 2 grams per hour is minuscule compared to the economic impact. Please consider and vote showing mercy."
- "We were anticipating having a large sale in April, but I am unsure if we will be able to. We may have to close our doors, because my office employees are getting concerned about coming into work. We are taking as many precautions as we can, but if the virus progresses we could be left with a lot of step 1 products."
- "I cut staff to 3."
- "Just showing my concerns with the deadline for sell through on the non 2020 compliant stoves. We employ about 53 employees. We have been in business for over 50 years. It seems that having a cut and dried time frame for selling out of a non-compliant stove is a little over the top. Now with the COVID-19 closures going on and cancelling of events I am not sure how some businesses will survive let alone trying to sell out of a non-compliant stoves (without little to no profit at this point with the deadline coming up). We rely on two big events with lots of exposure to show and sell our product each year and they have both been canceled. A Home Show and a City wide event called Cool April Nights. Our business is very much influenced by weather and we had a record of 0" of rain for February and 80 degree temps, which has not helped in selling heating products. With all of that said please push for an extension on the non-compliant deadline."

## **Colorado**

- "All plans and sales have been disrupted. Down 60%"
- "Prior customer interest has been put on hold due to financial uncertainty"

## **Connecticut**

- "Coronavirus has stopped our floor traffic to sell the last remaining stoves in stock."
- "Winter Savings Sale – lack of traffic, not able to get people into our showrooms based on the Coronavirus."

- “Both the number of customer visits and purchasing have evaporated because the shoppers have been refocused on basics like toilet paper and being told they should shelter in place or limit shopping and gathering activities. Further, the economic impact to furloughed employees diminishes their spending and we now have the largest employers, the casinos, shuttered. We have instructed our advertising media to cut our ad spend in half as a result. The virus has also crippled world markets including oil prices in an added wound to the prospects of sales.”
- “Now, more than ever, with the coronavirus effecting all of our daily wellbeing this EPA change out has us on the brink of shut down. We have 17 units left to move out. The price markdowns are drastic. But the city is a ghost town as no one ventures out of their home. Hard to make sales when we are told to stay home. Businesses are struggling and some won't make it. People will lose their jobs and many already have. Many are sick, will get sick, or worse. And right now, many are feeling isolated. The EPA should step in line with other government agencies in the attempt of trying to help in these difficult times, not create more hardships. And we would gladly trade all 17 wood stoves for 17 respirators and give them to people who really need help. Stay healthy. Be safe.”

## **Delaware**

- “Due to Governor mandates in our state we have canceled our large end of season event, and are experiencing much lower than normal floor traffic.”

## **Georgia**

- “We have already discounted the remaining product by 50% and posted for sale/promotion on all of our electronic media venues. We have signage indicating clearance/moving sale outside the store and have email-blasted our entire client list. With the current state of affairs our store traffic has dropped to almost zero.”
- “We have had our store traffic drop by 95% in the last week. Our sales are off the same amount on a week to week basis and it does not look good to improve any time soon. I am not sure what to do at this point but to wait it out. It does not look good.” (Georgia and North Carolina locations)

## **Illinois**

- “We were in the process of a close out sale that we were advertising in the local magazines, papers & electronic media. We have 4 full time employees that are being affected by the current shut down. At present we have less than 1 customer per day coming into our stores where we would normally have a least a couple dozen.”
- “Showroom traffic is very minimal due to coronavirus state mandated rules. Cannot sell product if no one can see to purchase. In home service is limited to emergency only to minimize exposure to our service team, so no installations can happen. Homeowner addition purchases are being cancelled due to uncertainty of income.”

- “All upcoming weekend sales events officially cancelled through at least end of April - Local building economy just dropped off a cliff - We are confident that without actually paying people to take these stoves off of our hands, there is no way in this world we will be rid of them in time.”
- “Covid 19 Disrupted Commercial traffic to our store, which will make selling stage 1 inventory harder by deadline.”
- “Our advertising on radio, TV, and newspaper has been suspended; on-line advertising continues, although it now focuses more on items for delivery/pick-up rather than installed products.”
- “COVID-19 has really made our customers uncertain about spending money right now.”
- “All office, installation, and support staff have been reduced to 24 hour work weeks in an attempt to give everyone enough income to make ends meet without using earned PTO time. Retail floor traffic and sales have dropped to almost nothing and installations are difficult to get scheduled with the concerns.” (Illinois and Wisconsin locations)
- “We have cut our hours in half as people have called and cancelled appointments. We are putting 2 of the full time employees on Unemployment.”

## **Indiana**

- “We are a one store business that has been open for over 50 years. We have scaled back our operation and we will probably close for at least two weeks because of the coronavirus.”
- “We have had to shut down completely in the last two weeks because we have had 6 cases of the Coronavirus in our area.”

## **Iowa**

- “All these Step 1 stoves/inserts are reduced at least 25% below what we paid for them. I have only been able to sell one in the last 8 weeks. I have used radio advertising and social media boosted to a 50 miles radius to sell these items. The coronavirus is causing panic in the marketplace and no one is walking through our doors. We are hoping social media will help but right now people are holding on to their money for necessities only. Unless we are allowed to sell through longer, we don't know what to do with the inventory that we have. Our history is alternative fuel and we have slowly moved more into the gas and electric market since LP gas has remained low. We have continued to follow EPA guidelines and change our wood/pellet inventory accordingly.

We are in a rural area of Iowa where many people still want to burn wood or pellets so offering gas and electric only puts a strain on our business. To maintain our business here wood stoves are a must with pellet stoves a secondary option for those customers. We need to be able to sell our old inventory so we can get 2020 certified stoves and insert. The pandemic is adding factor that will surely make it difficult for us to survive.”

- “We are currently running advertisements with discounted pricing on our 2 remaining stoves.”
- “I have zero foot traffic and with the markets in freefall and MANY local businesses closed and employees not working it will be quite a feat to sell my remaining product.”

## Kentucky

- “Roughly 5 sales of existing step 1 products have been canceled or postponed. Overall sales for March (MTD) are 18% lower than March (MTD) 2019.”
- “We are not able to do sales promotions, like Winter Clearance Sales due to the COVID-19 outbreak due to people having to stay in. Store traffic has been reduced drastically and the consumer for wood has not had the opportunity to come in.”

## Maine

- “Two locations. Had to suspend current “winter clearance event” sale and take ads off the radio - not sure if we can remain open for enough hours to sell through these stoves.”
- “There is no economic activity. We have two service calls for next week. This week, we have a full schedule, about 25 service calls. No one coming into the store. No phone calls. About \$15,000 to be lost. 2 weeks worth of payroll. Maybe a bit more. We might have a couple of them sold but the deals not done yet and everybody is spooked.”
- “While we have worked hard and had sales to successfully move out most of our soon to be obsolete product but the remaining product are ones which fit a limited number of niches and, even with substantial discounts being offered, require time to find the right customer.”
- “Today we have locked our front doors to protect our employees and customers and hopefully the country from any further spread of COVID-19. If our small contribution can help flatten the curve and save lives we are all in. We will do our best to keep our 8 employees as long as it takes, but at some point with our doors shuttered we may have to shut down. We still have 26 non 2020 stoves to sell. We have reduced prices and have been moving them until now. I am confident an extension on the sell thru deadline would allow us to move out the remaining product once we can re-open. Our business has been here since 1974, and will get thru this. PLEASE GIVE US THIS EXTENSION.”
- “Due to coronavirus, consumers have stop coming in. We need help. Mandate, like all business, it is putting us and employees out of work, please help us. p.s. we have 50 stove and fireplaces that must be sold. Do the right thing, thank you.”
- “As a 40 year old established small mom- pop business, our challenges are to complete these pre 2020 sales timely, in an environment where customers are urged to stay home, compounded by self limiting our exposure in the business as owners due to our age ..all the while working to accommodate employees with unexpected child care responsibilities as schools are now closed for a month. Our son, our key salesman and single parent, is now working remotely at home while caring and online schooling his twins as he is

uncomfortable with the risk of the grandparent child care option. Our other key employee is a veteran army reservist who I hope is allowed to stay with us through this all. Today our governor urged non essential businesses to close for 2 weeks however we remain open at this time as we have incoming freight. Store traffic is non existent everywhere i am told. Certainly in our shop. All sit down restaurants were ordered closed as of 8:00 tonight. We are 4 employees and have service sub contractors who depend on our sales for a portion of their income."

## **Maryland**

- "Our showroom foot traffic has been dramatically reduced due to COVID-19, keeping people from seeing the inventory we have for sale."
- "We have reduced the price of the stoves to cost and have no one interested because no one is shopping. I may be forced to start giving a bag of toilet paper with every stove purchase."
- "We had our end of burn season sale February 26th through March 8th and we were approximately 30% down from last year's sale."
- "How many Step 1 stoves do you have? Approximately 50 Units ( Currently Unsold ) ... However we added 2 Units yesterday because customers canceled sales stating that they did not want to move forward due to the concerns over the Coronavirus. Both issues were money, job loss concerns and did not want installers in the home. This number could easily rise to 75 Units (25) Units sold but not installed ) with potential cancellations. In addition to the obvious loss of inventory, I have a marketing and advertising push for "Year End Clearance Sale" that was planned to start next week with an outlay of over \$20,000 over two weeks. This plan was developed months ago to clear out remaining non - compliant units. The biggest issue for all dealers has been the record breaking warmth this winter that has dramatically impacted demand. Either way I had a big blow out planned for next couple of weeks to clear things out." (Maryland and New Jersey locations)

## **Massachusetts**

- "Our spring sales are effectively cancelled because no one is leaving their homes. We are also concerned because there is an expectation that Massachusetts may impose a shelter-in-place order similar to San Francisco to deter spread of the virus."
- "We can't afford to take a loss like this. We are a wholesale distributor. About a third of the stoves were purchased in 2014-2015 before that new standard came out. These were still current models in 2019. The wood stove market has been soft the last few years, that's why we still have so many stoves left. We have 6 employees. We have offered them to our customers at our cost for the last several months, again the soft market didn't do much to help move the inventory."
- "We are closed for the next two weeks, at least. We plan to make sure every one of our 8 employees is paid during this pandemic. Our local homeshow was scheduled for the third week of March and has now been cancelled. Our hope was this would be our final push to get rid of the remaining non 2020 stoves. We currently have 20 stoves that we were hoping to

sell through by the May deadline. This pandemic is having a HUGE impact on our ability to do so. I am hoping the EPA can see their way clear to giving us the same compassion that we are giving our customers and employees during this unfortunate time. We totalled the value of the remaining 20 and wholesale cost would be about \$30,535. That's huge loss for a small business like ours."

- "We have very little traffic coming through the doors due to the current situation."
- "We have 8 employees and are no longer doing installs or service in people's homes until further notice. We have no one coming into the shop except to purchase a few bags of pellets or propane. We are discussing closing for the next few weeks to see what happens and trying to keep our staff protected."
- "Our current End-of-Season Spring Clearance sale is doing nothing (people are at grocery stores in anticipation of any area lockdowns."
- "With this current virus there has been almost no traffic shopping in our place of business. We don't see ourselves selling them before the deadline."
- "We had planned on holding a "tent sale" this spring but had to cancel due to Covid-19." (Massachusetts and Rhode Island locations)
- "I am closing the storefront a couple weeks. Hopefully we can find a way to get rid of them or write them off."
- "Cut back on hours, not doing routine service calls, only service calls for out-of-service problems as well as installations already scheduled. Taking extreme caution educating employees, in store posting signs for keeping six-foot distances, washing hands, cleaning all surfaces, asking customers if they have illness in the home. We are open, but are seeing very little traffic in the store. Trying to keep paychecks paid, but if necessary, we will have to lay off."
- "We are closing for at least one month."

## **Michigan**

- "SPRING SALES EVENT THAT USUALLY DRAWS 100+ PEOPLE WAS CANCELED TO MAINTAIN SOCIAL DISTANCE."
- "We have 2 stores with a total of 16 employees. Since this started we have NO traffic. If they don't allow any sell through this could severely hurt our business and all involved. Please pass this on to whoever might be able to help."
- "At this time we are seeing much reduced store traffic do to the Virus situation. I believe this will have a big impact on our ability to move these stoves by the current deadline. To be stuck with these units we would have a loss of at least 25,000.00 dollars. That amounts to 4-5 weeks payroll."



- “Walk in's - Like a Ghost town.”
- “We have 17 Step 1 stoves left to sell. We have averaged 87 total stoves sold throughout the last 2 years. We normally run a layaway sale through April 15th, and part the final step of our step 1 close out included our advertisement during that sale that includes clearances prices on our step 1 stoves that is just now below cost for final liquidation. People are getting the message to stay home and not shop (restaurants in MI are closed except for takeout) and this will disrupt our final step of our closeout plan.”
- “Since the outbreak the showroom traffic has dropped off over 80%. Some people are putting off repairs and running electric heaters instead of having a tech come into the home. Lot's of people are worried and not letting us in to work.”
- “It is still unknown as to if we are to close the store, but there is virtually no traffic. We have reduced hours.”
- “Major sale of Step 1 product clearance has been disrupted.”
- “Since the scare of the virus we have been open with limited people working. 5 working, 6 people laid off. I highly doubt we will be able to move these stoves with the problems we are facing in the next months. We are getting very few calls for emergencies and next to no customers coming in to the store. We sold some wood pellets Thursday that was about all we had for business. It has been a very warm winter here so it had already slowed a bit before the virus hit, now business is about stopped completely.”

## **Minnesota**

- “We have been forced to limit store hours which limits our ability to sell these step one stoves. Depending on the progress we are likely going to have to limit hours worked. The fear caused by COVID-19 has slowed store traffic a great deal. With the money on the above step 1 stoves already invested in the product, an allowed sell through period would greatly help our bottom line, more importantly keep our current staff fully employed.”
- “Shortened hours due to the virus outbreak, customer traffic has slowed WAY down. Like most within the last 12 hours we have reduced hours going forward and will likely be cutting staff by the end of next week.”
- “Had our local home show last weekend and attendance was lacking. Customers have cancelled estimates/previews as they do not want anybody in the home.”
- “Traffic is way off - and our bbq demos are cancelled.”
- “All of our plans for 2020 are disrupted at this point. (in prediction we will lose \$400k-\$500k per month at the current rate. If the government shuts down business, we will lose \$650k per month).”
- “Our largest show of the year, Arrowhead Home and builder show, has been cancelled. Last year this show produced six percent of our gross sales for the year. Foot traffic in the store

has stopped. We have furloughed one service tech and reduced hours for the office staff, and plan to reduce additional staff hours in the following weeks.”

## **Missouri**

- “While I have been able to sell 3 in stock Phase 1 units over the past 2-3 months, Covid-19 has brought our entire company to almost a screeching halt. While I had a plan of action to try to offload these units, in the wake of this virus outbreak, I will most likely end up eating these units as bad debt should the May 15 deadline remain intact. We have been blowing these out at cost for months but now the season is over and very doubtful these will sell. Business has been disrupted dramatically since the virus outbreak and seems it will get worse.”
- “We have had zero foot traffic and the phone calls have slowed down dramatically.”
- “Planned on holding an End of season sale/ Foot Traffic has been bad.”
- “Our floor traffic has gotten almost flat at this time! We need more time to sell!! Please help!”

## **New Hampshire**

- “What plans/sales have been disrupted: Slower foot traffic, slower than normal sales, people not spending, just waiting to see what's going to happen.”
- “No sales events have been interrupted currently but I imagine it will as door swings have declined significantly in the passing weeks, and continue to decline as the days roll on. In addition, clients are postponing technicians and installers coming into their homes. Even as a sales guy I have already had 2 site inspections cancel this week as people are concerned for their health and safety (which is understandable). Sales will continue to slow. Sales, and sales events will be impacted over the next several weeks/months. The hardest part about this is that no one buys wood stoves on May 14th... these next few weeks into early April will be a lot of hearth dealers best shot at getting rid of their 2019 inventory, and the next few weeks will likely be some of the most impacted times by this virus.”
- “Last Summer we ceased purchasing any Step 1 models that had comparable Step 2 alternatives available, but several of our manufacturers didn't have Step 2 alternatives ready until just a few months ago (some still aren't ready.) Each year we have a large "Spring Cleaning Sale" promotion in March where we clear out previous year inventory, and this year we marked down Step 1 models to our cost (meaning no profit) to make sure they clear out. Normally we would easily clear out as many units as we have left during the annual promotion, and in the first few days we were off to a good start, but with the current National Emergency our store traffic is now almost zero and our customer base is being financially impacted in ways that make them unlikely to be able to purchase a stove before the May 15th deadline.”
- “Our late winter early spring step 1 spring sell off sale has been affected by the Coronavirus repercussions. Mainly the Federal and State Governments advisories/recommendations to

utilize social distancing, stay away from places where 10 or more people gather (NH) and the public's general fear have slowed our business to a crawl at this point in time. Our plans are to wait and see the economic impact and evaluate conditions on a daily basis."

- "We are remaining open at this time but each day we see a big drop in walk-ins as well as phone calls. Honestly, this is our historic slow period anyway but it certainly feels more ominous than usual and I don't anticipate it getting better in the next six weeks or more. We felt confident that we could easily sell the remaining stoves prior to this outbreak but again, now it is unclear. In fact, I am wondering how many current contracts/sales orders will be cancelled from our clients because of the overall uncertainty of this ongoing crisis."
- "We've had several jobs cancel due to people not wanting service techs in their home. We also had 2 restaurant jobs cancel due the cash flow issues with restaurants and bars being closed. The phones just aren't ringing and there hasn't been foot traffic in the store due to the "social distancing" requirement. We have 5 Step 1 stoves left. Our entire showroom was changed over during the peak season but these is inventory that just hasn't sold. Our sales were primarily pellet and gas this year with limited wood sales. This is strange for us, our market is usually the opposite."
- "Business has been slow this past year and now it is DEAD! No one is coming through the door in spite of print and radio ads. And signage out front. Discounts are not bringing in the customers, either."

We are a small "mom & pop" shop with one, sometimes two additional employees with only one location. We are going to take a huge hit if we cannot sell through the Step 1 stoves. The emissions of the stoves we have in stock are very low as it is, and would not make any measurable impact on the environment if they were to be sold. It is really sad that a committee of few have dug their feet in the sand to affect thousands, just because they can."

- "Our sales right now are ... non-existent."

## **New Jersey**

- "How many Step 1 stoves do you have? Approximately 50 Units (Currently Unsold) However we added 2 Units yesterday because customers canceled sales stating that they did not want to move forward due to the concerns over the Coronavirus. Both issues were money, job loss concerns and did not want installers in the home. This number could easily rise to 75 Units (25) Units sold but not installed) with potential cancellations. In addition to the obvious loss of inventory. I have a marketing and advertising push for "Year End Clearance Sale" that was planned to start next week with an outlay of over \$20,000 over two weeks. This plan was developed months ago to clear out remaining non – compliant units. The biggest issue for all dealers has been the record breaking warmth this winter that has dramatically impacted demand. Either way I had a big blow out planned for next couple of weeks to clear things out." (Maryland and New Jersey locations)
- "Currently 50% off sale, no traffic at this time. Warren County, NJ and surrounding areas have minimal virus outbreaks, but no foot traffic on Saturday which is our best day. Customers are staying home."

- “Store closed due to virus, no traffic, no sales. Approx \$27,000 loss between units, venting, labor.”
- “We had planned a very aggressive marketing plan to sell them off prior to the May 15, 2020 deadline, however with the current Covid-19 issue myself and my twelve employees are respecting the request to quarantine making it unlikely that these stoves will find new homes any time soon.”

## **Nevada**

- “We have had to shut down Saturdays so far and may eventually shut down temporarily.”

## **New York**

- “Since the Coronavirus outbreak, the phone is barely ringing, and little to no customers visiting our store.”
- “We are seeing reduced store traffic, but everything is changing by the hour.”
- “Showroom closed for two weeks.”
- “Money, and often their investments in “display stoves” comes out of their own pockets. Preventing these dealers from selling off these perfectly good stoves is hurtful and damaging to the industry! All the stoves that meet the 2015 standards already burn close to the 2020 standards, so extending these sales will NOT do any harm to the environment! BUT, it will negatively affect all the small businesses that still have some remaining stock.”
- “We have seen sales on these units stop over the past 2-3 weeks with concerns in the world with the virus and economy. We’ve had several orders for non-2020 units canceled by dealers due to their customers canceling or postponing jobs due to financial concerns. The customers are saying they still want the units, but are concerned with their current financial situation and are asking to have the units installed later in 2020. We offered these dealers great discounts on product to help move inventory through, of which the dealers sold the product at equal discounts. If the customers wait until after May 15th, 2020 they will not be able to purchase these units that they had already intended to buy and will most likely back up of any purchase. The recent events is going to cause hardship.”
- “Although this is normally our slow season, our in store sales have dropped to zero. All of our customers have stopped spending money on anything that is not a necessity. Within the next week or so we will have to make the decision on if we will have to close entirely. This will hurt our more vulnerable customers as they will still need stove repairs, and pellets for their heat.”
- “Unfortunately, we started seeing uncertainty in the market and an end to the selling season much earlier than we have in recent years due to the COVID-19 crisis. We have had little to no activity at the store for going on weeks. This week, we are closed to the public, and

employees will be filing for unemployment. Due to financial market conditions and volatility, I don't think it's possible to vacate the remaining models without doing so at a great loss."

## **North Carolina**

- "We have 6 employees and have recently invested \$10,000 in an ad campaign as an attempt to sell them just before COVID-19 struck. Traffic has stopped."
- "We've had zero walk in traffic since Monday and jobs that were currently on the schedule are being canceled by the homeowners out of fear."
- "Business nearly halted...much shutdown ...opportunity to sell these dwindling by the minute. Projects on back burner for most people. Question even keeping showroom open."
- "Floor traffic is dead, may have to lay off installers."
- "We have had our store traffic drop by 95% in the last week. Our sales are off the same amount on a week to week basis and it does not look good to improve any time soon. I am not sure what to do at this point but to wait it out. It does not look good on selling those six stove though." (North Carolina and Georgia locations)
- "We have closed our doors to the public and are doing our best to give our six employees hours in the morning, cleaning , repairing thins at the store and out doing some on site projects which haven't been finished while waiting for parts and shipments."

## **North Dakota**

- "We have zero walk in traffic at this time, only people that we have been working on getting a project going for before the Covid-19 virus. Hopefully we have a little extra time to get rid of the units or we must eat the money spent on inventory of them, zero profit...cost of advertising is gone also then."

## **Ohio**

- "We are a small business the impact from people scared to get out, let alone short window to sell in, we cannot absorb the cost don't know if we can stay in business."
- "Due to the adverse issues going on I will be forced to lay off 2 of my employees at the end of March until business picks back up. What plans/sales have been disrupted - Installing new units and building improvements have been halted dot the sudden stoppage of sales since this outbreak. I typically sell 2 to 3 stoves a week and during the spring time sell 8 to 10 gas grills a week. Over the last 2 weeks I have sold 0 of both products."
- "The store traffic has gone from very heavy this time of year. To just about nobody. The stoves that people do want to buy don't want us to deliver until this virus passes over. Which is good thinking and I don't want to send my guys out either. So to sum this up. We need this deadline extended or my company whom is already losing sales will have to take another loss in May. Thank you for listening."

- “We have two sales set up. One is being impacted from the virus, the other was not successful due to warm weather.”
- “Customer traffic is much lower as compared to previous years at this time. Coming out of the winter season, it will be difficult to move the wood burning product before the deadline.”
- “Everything is shut down – people are scared both to shop in stores for fear of catching something and to make large purchases for fear of the economy not recovering any time soon. Traffic and sales are way down as a result with no idea of when things will go back to normal.”
- “We have our hours the same but no traffic. The phones are dead, the media is saying to stay home except for nonessential business. Most people don’t feel a wood or pellet stove/insert is essential particularly since we are looking at spring and it’s been a very mild winter. Demand is way down. The virus restrictions are killing the little there has been.”

## **Oklahoma**

- “Big ad campaign started 3 weeks ago and is not bringing in customers...First week was good but last 2 have been zero.”

## **Oregon**

- “We are located on border of Washington State a National Hot Bed for Covid19. The state of Wa. and Or. have instructed everyone to limit there leaving home only for essential items which has literally halted floor traffic regardless of T.V. advertising stating we are open for business. We are now out of Woodstove Season which makes it near impossible to move these stoves.”
- “Plans and sales have been disrupted with the impact of the coronavirus and we strongly urge the EPA to extend the sell-through date for these stoves. We currently have two install technicians out sick and are under quarantine. With a small business and under staffed, we are having a difficult time selling our inventory because of the extended wait times.”
- “Store traffic for new products is practically nonexistent, which is highly unusual for this time of year. Store hours will be cut back by 55% starting next week for 30-45 days, then be re-evaluated. We have not yet laid off any employees, but hourly workers will have hours cut back to 25 hours.”

## **Pennsylvania**

- “Both our retail stores are closed to the public because of corona virus. PA State “strongly recommends” so we are complying.”
- “We are willing to dispose of all of these units at or below cost. Perfect storm conditions: seasonal slowdown, mild weather, very low heating oil prices, stock market crash,

impending recession. It is highly unlikely that we will see any buyers between now and May 15.”

- “We started a sale at the beginning of the month that we are calling March Mania End of Season Clearance and just as the advertising kicked in and we were starting to get some traction this coronavirus shutdown hit (Pennsylvania’s governor has ordered a shutdown of non-essential businesses). We weren’t waiting until now to sell them off; this is the third iteration of the sale, we had Holiday and New Years’ versions previously, increasing the discount each time. Given the extraordinary nature of this pandemic I don’t think some relief is coming out of left field here.”
- “Home shows have been canceled, customers staying home, people fearful of economic downturn holding off on making big purchases.”
- “About 3 sales of woods stoves have been disrupted as of today. Plans we had to mark down them down further and advertise in the paper we typically do as well as online.”
- “Closed for 14 days due to order by Governor Tom Wolf. And urged by President Trump. We are a high risk household with 2 kids who have Crohns Disease and my husband/owner who has diabetes.”
- “Obviously the Coronavirus had slowed down retail traffic into our store. Despite the state of PA recommending most businesses close we have maintained normal hours so far. But given how the media scarred the general consumer people are not traveling so of course our retail volume is down. An extension of the 2020 May deadline would of course be helpful to not only our store but to most Hearth Dealers in general...Everyone is in the same boat.”
- “As of March 6, 2020: \*NO SALES; \*NO CUSTOMERS INTO OUR STORE; \*Stove Sales have been disrupted/non existent and waiting to hear whats the next step our company needs to take.”
- “As of Tuesday when Governor closed non-essential retail establishments, we laid off 3 FT positions.). What plans/sales have been disrupted: Showroom has had little foot-traffic as the COVID-10 Pandemic started to spread. We have historically moved over 30 units in March. (This year, while only the 18th we have moved 3...there is no way our sales volume will increase as only more restrictions are on the horizon.”
- “Sales have slowed down quite a bit this week.”
- “To make things worse we have lost our only chimney sweep crew and 2 install crews do to the COVID 19 Virus. We have 1 location and usually 25 employees. At this moment we have lost 7 employees for one reason or another due to this virus. We will most likely not meet the deadline for clearance of last year’s E.P.A. Appliances. We have been trying to clear product out around cost the last 7 months. But it hasn't been as successful as we hoped with the warm winter.”

- “We were supposed to have a clearance sale to move the remainder of the phase 1 units but have had to delay the sale due to the present health crisis.”

## **Rhode Island**

- “We had planned on holding a “tent sale” this spring but had to cancel due to Covid-19.” (Rhode Island and Massachusetts locations)

## **South Dakota**

- “As of 3/18/20 traffic is low due to the Virus.”

## **Tennessee**

- “Since the start of restrictive movement policy and the fear factor that the public is going through our traffic in the store has dropped drastically. We have reduced the prices on these significantly but with the current situation it is unlikely that we will be able to move all of these units. We will try some other means to stimulate interest but we feel that more time is needed. We respectfully ask that you request on behalf of all dealers at least a 6 month extension. Worst case scenario we would welcome even a 90 day extension. We have been dropping the price on these units in some cases below our cost. But if we can’t get the traffic to the store we can’t move the product.”
- “We are right now looking at laying off 3 of our office staff as business has slowed to a crawl. We will probably have to reduce our store hours as that leaves me as the only one in the office full time.”
- “The Corona virus has just about shut business down. Schools, government offices, restaurants, are shutting down. Even some grocery stores in our area have announced they are shutting the doors as soon as their stock is gone. Our loss by having no other choice but to literally give away this huge inventory investment, even with tax breaks, will be devastating, especially to my 76 year old husband and partner.

We have been working over a 100 hours a week to try to keep up with the advertising, marking products down and it is just not going to work. We have worked very hard all these to build a successful business supporting 16 employees and their families, We were near being able to retire, only now, we are afraid we will not make it through and may lose this business and our retirement. A Mom & Pop business (especially at our age range) just cannot sustain a total loss to their inventory at this stage in our lives. We would appreciate some compassion and aid so we can get additional time to sell of the stoves and pull through this, so our family’s lives, as well as the lives of the families of our 16 staff members will not be wrecked by loss of their jobs after we get through this corona virus difficulty. Of course, sales Sales and more SALES! We had signage outside and inside the store as well. From one themed sale to another, advertising in different venues from print – local newspapers, several “shopper” publications with wide reach, online on local classified online ads, Craigslist and Ebay. Google ads, Facebook posts and ads. We did sell quite a few in Sept. and October, but we had a whole lot to start with. After the holidays, no amount of advertising at



highly discounted prices seemed to change the lack of interest. Even marking them down to the 50%- 60% off range has not attracted customers at this time.”

## **Texas**

- “We started the year with somewhere less than 150 units. We now are down to around 25 mostly Hearthstone units. With the turn in the economy I doubt we will sell through. We went through this in...what the 80’s. I would not say we have ignored but I am not living my life around this. I feel for small Mom and Pop that get caught with 3-4 units. They are sunk. It is enough to deal with all the changing regulations, tax laws and new competition online but with all of this we have put together stellar years.”
- “We have worked and worked to sell the 41 units since October. We just sold one to a couple but they will not come to our store due to the COVID 19 outbreak. We have seen our walk-in traffic decrease last week and less this week. We have calls asking if we are open. Our builders, which is a large part of our business are seeing a slow down too.”
- “We were going to have a big sale the week after Easter but that is ‘to be determined’ now.”
- “We had plans to build a new larger building, already had land lined up to buy and plans drawn up, that’s on hold now.”
- “Store traffic has gone to 0, orders from customers have been postponed or cancelled all together until further notice. Some new construction builders have shut down work sites, until further notice. Customers will not allow us into their homes to preform requested work and or service calls.”

## **Vermont**

- “Sales are still good but traffic has definitely slowed this last week and customers are starting to reschedule March jobs into June.”

## **Virginia**

- “Things have tanked. We will have to give them away at the beginning of May.”
- “We have no idea where we will be come May 15th but even with an aggressive 25% off we have no sales of stoves in March and only two phone contacts about wood stoves of any kind.”

## **Washington**

- “Our sales are off 50% since the National Emergency was announced. We stand to lose \$50,000-\$60,000 if our remaining Step 1 product goes unsold.”
- “The COVID-19 fears and resulting governmental restrictions to avoid going out in public have significantly and detrimentally affected our ability to sell these products before the current deadline. We have a single location store with 6 employees. Since the government

requirements for social distancing, our store traffic has all but ceased. We join our voices in appealing this deadline as it is detrimental to our business and seek relief for this burden due to these exceptional circumstances.”

- “Disrupted Plans/Sales: Home and Garden Show March 21st and 22<sup>nd</sup> was cancelled.”
- “We had to cancel our Two County Home Show (Mar 27-29), Service has been postponed for older customers, We have Annual Spring/Summer Cleanings (April 1st – July 31st) which gets us thru the off season, Service calls and installations we can do are taking longer because of all the protocol for Covid-19 virus we have had to implement, Employee’s (3) working from Home, Store traffic and over counter sales has dropped dramatically.”
- “What plans/sales have been disrupted: Our Spring Sale and Skagit Valley Home Show.”

## **Wisconsin**

- “I have fourteen employees, one with an immune system compromised child, and three employees over 60 years of age. In considering closing my locations I have decided I cannot afford the financial sacrifice my family would endure not selling these brand new products. I have thus decided because of the policy of the EPA of not allowing a sell through period that I will have to keep all employees on staff and my locations open in order to not endure the financial hardship that the coronavirus will inevitably cause on top of having to destroy inventory. Extraordinary times require extraordinary actions and our governmental agency (EPA) is failing its citizens miserably.”
- “We will be having our annual anniversary sale in April, but with the arbitrary depression, people will not be making purchases as normal do to either not working or people not coming into their personal business and spending money. We normally make in the one month sales what we would do in a “in season” month. This will hurt us and our employees.”
- “The retail value on these products is over \$20,000 and we have already reduced the sale prices to our cost (or below) but the majority of consumers have little interest in shopping for a cold weather seasonal product as Spring is approaching and are now very hesitant to spend money and won’t leave their home as the Coronavirus has overtaken the minds of everyone. We definitely need more time. December 31st, 2020, as a minimum, would help greatly, as that is the time of year consumers search for this type of heating product and look for deals around the holidays to finalize a purchase.”
- “Was going to have a spring sale. But now nobody is spending money.”
- “New proposals are being signed very slow if any. If we don’t see improvement in the economy and this situation within a month we could be in trouble. We had a sports show signed up for this weekend. Because this situation is an act beyond the expos control we are out the deposit of \$2000 and out \$3000 of brochures and banners that we bought for the event. This is definitely hurting the pocket books and account payables.”

- “Due to the COVID-19 virus it will be extremely unlikely to sell off inventory by May 15th, already we have customers delaying and or cancelling projects, I'm sure this is only going to get worse in the next month or so. Sure would be practical to extend deadline on the inventory sell off. As of this week things have slowed down to a trickle form what is normal business this time of year (70 % less/down).”
- “All office, installation, and support staff have been reduced to 24 hour work weeks in an attempt to give everyone enough income to make ends meet without using earned PTO time. Retail floor traffic and sales have dropped to almost nothing and installations are difficult to get scheduled with the concerns.” (Wisconsin and Illinois locations)
- “The impact of the covid 19 warnings and restrictions has led to a 90% reduction in foot and phone traffic into our fireplace store. Virtually no new sales are happening. If there is no sell thru allowance this will be another economic impact in an already economical stressful year. Please do what you can to allow a reasonable sell thru period for these units be cleared out.”

## **Wyoming**

- “Customers are financially capped. We have had multiple already sold step 1 units try to back out in the last two day, but due to the fact that we won't be able to sell them in time we have had to tell them no.”

## Attachment 6

Attachment 6 spreadsheet submitted separately

## MEMORANDUM

To: EPA Docket ID No. EPA-HQ-OAR-2018-0195 for *Proposed Amendments to Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters, and Forced-Air Furnaces* [85 Fed. Reg. 31124 (May 22, 2020)]

Date: July 6, 2020

Re: Estimating annual excess PM<sub>2.5</sub> emissions and forgone health benefits (health costs) from proposed sell-through extension

This memo describes the approach in the accompanying spreadsheet to estimate excess direct PM<sub>2.5</sub> emissions and health costs if the NSPS Step 2 limits are delayed and additional Step 1 appliances are allowed to be sold under the U.S. Environmental Protection Agency's (EPA's) proposed sell-through of Step 1 units after the May 15, 2020 prohibition [85 Fed. Reg. 31124 (May 22, 2020)]. As part of the proposal, EPA also announced it is placing low enforcement priority on additional Step 1 unit sales after the May 15<sup>th</sup> prohibition and prior to any final rule decision. EPA's public statement on low enforcement priority can also induce additional sales of Step 1 appliances prior to any final action taken on EPA's proposal.

In addition to the spreadsheet, two additional documents are attached that were used in estimating the excess PM emissions and Step 1 sales in this analysis:

1. January 30, 2015 memorandum from EC/R Inc. to EPA that is the source of the assumed emission rates and other data used in the spreadsheet calculations.
2. Table A-8 in Appendix A from the November 20, 2018 Supplemental Regulatory Impact Analysis (RIA) for the proposed "Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces" (EPA-HQ-OAR-2018-0195) that provides EPA estimates of health impacts and costs from wood device PM emissions on a national scale.

The attached spreadsheet is annotated to indicate assumptions taken from the EC/R memo and other sources used in developing the scenarios in this analysis. The following sections describe assumptions and details used in estimating forgone health benefits from the proposed sell-through.

1. Emission rates:

We use the same Step 1 and Step 2 rates given in the EC/R memo to EPA. EPA used these rates in the final 2015 NSPS RIA (Feb. 2015)<sup>1</sup> and the supplemental 2018 RIA

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<sup>1</sup> USEPA, Regulatory Impact Analysis (RIA) for Residential Wood Heaters NSPS Revision, Final Report, EPA-452/R-15-001, February 2015.

(Nov. 2018).<sup>2</sup> The significant share of PM<sub>2.5</sub> reductions from Step 1 in the RIAs occurs from single burn rate stoves, indoor cordwood furnaces, and hydronic heating systems. Most emission reductions from residential stoves do not happen until Step 2 implementation because most stoves already met Step 1 levels prior to the final 2015 NSPS.

2. Appliance lifetime:

We assume a 20-year in-use lifespan for all device types, as was used in the 2015 RIA. However, the 1998 review of the Residential Wood Heater NSPS and other analyses suggest that appliance lifetimes could range decades longer.<sup>3,4</sup>

3. Scenarios:

In this analysis, we constructed four scenarios to provide low and high bounds of possible outcomes through increased sales of Step 1 appliances allowed under the EPA proposal.

- i. Scenario A assumes additional sales of stranded inventory without manufacturers adding extra Step 1 inventory in expectation of a sell-through (EPA 2018 RIA Scenario 2).
- ii. Scenario B assumes additional sales of stranded inventory with manufacturers adding extra Step 1 inventory in expectation of a sell-through (EPA 2018 RIA Scenario 3).
- iii. Scenario C uses an analysis of HPBA data that indicates the responding retail outlets (about 10% of HPBA members) had, on average, 12 units still available for sell after May 15, 2020. If this applies across all retailers, we estimate there is potentially 20% of a year's inventory remaining for sale after May 15, 2020. This estimated volume of on-hand inventory is similar to the above Scenario B.
- iv. Scenario D assumes that the proposed rule coupled with EPA's announced low enforcement priority provides 199 days to full implementation of Step 2. This is about half of a calendar year, therefore we assume 50% of a typical year's volume can still be potentially sold. This scenario assumes that all sales through November 20, 2020 will be Step 1 inventory.

4. Cost analysis:

For estimating annual excess avoidable health incidences and costs, we directly scaled the estimated annual excess PM<sub>2.5</sub> emissions from each of the four scenarios by the

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<sup>2</sup> USEPA, Supplemental Regulatory Impact Analysis (RIA) for "Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces," November 2018. Available at: [https://www.epa.gov/sites/production/files/2018-11/documents/wood\\_heaters\\_proposal\\_nsps\\_supp\\_ria\\_final.pdf](https://www.epa.gov/sites/production/files/2018-11/documents/wood_heaters_proposal_nsps_supp_ria_final.pdf).

<sup>3</sup> Houck, J., "Residential Wood Combustion Technology Review Volume 1. Technical Report - EPA-600/R-98-174a." U.S. Environmental Protection Agency Office of Research and Development, December 1998, Washington, DC.

<sup>4</sup> Houck, J., "Residential Wood Combustion— PM<sub>2.5</sub> Emissions." WESTAR PM<sub>2.5</sub> Emission Inventory Workshop; Reno, Nevada July 22-23, 1998.

PM2.5 emissions and health impacts from EPA's November 2018 RIA for the Supplemental Proposed NSPS, as shown in the spreadsheet. For forgone health benefits (i.e., health costs in this proposal), we use the EPA values from the 2018 Supplemental RIA in dollars per ton of estimated excess PM emissions. As done in the 2018 Supplemental RIA, the range in estimated health costs is based on estimates from Krewski<sup>5</sup> (low end) and Lepeule<sup>6</sup> (high end). The annual monetized \$2016 health costs in the 2018 Supplemental RIA were converted to \$2020 for comparison to industry benefits from increased Step 1 sales in 2020. Starting in 2021, the health costs are based on the sum of annual excess PM2.5 emissions during the assumed appliance life-time of 20 years using 3% and 7% discount rates.

In sum, the scenarios show that public health costs (foregone health benefits) outweigh benefits to industry by 28 to 73 times using a 3% discount rate, and by 18 to 47 times using a 7% discount rate.

---

<sup>5</sup> Krewski, D., Jerrett, M., Burnett, R.T., Ma, R., Hughes, E., Shi, Y., *et al.* 2009. *Extended follow-up and spatial analysis of the American Cancer Society study linking particulate air pollution and mortality*. HEI Research Report, 140, Health Effects Institute, Boston, MA.

<sup>6</sup> Lepeule, J., Laden, F., Dockery, D., Schwartz, J. 2012. "Chronic Exposure to Fine Particles and Mortality: An Extended Follow-Up of the Harvard Six Cities Study from 1974 to 2009." *Environ Health Perspect.* Jul;120(7):965-70.

## Attachment 7



<b>Store</b>	<b>Selling Step 1 as of June 9, 2020 (Y/N)</b>
Ace Hardware	N
Amazon	Y
eFireplaceStore	Y
Fireplaces Direct	Y
Fireplaces R Us	Y
Home Depot	Y
HVAC Direct	Y
Lowes	Y
Menards	Y
Northern Tool	Y
Obadiah's Woodstoves	Y
Stovers Liquidation	Y
Tractor Supply Co.	Y
True Value	N
Walmart	Y
Woodland Direct	Y
Woodstovepro.com	Y

## Wood Stoves:

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Buck Stove Model 81 Non-Cat: x

efireplacestore.com/bsc-fp81g.html#caption

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ORDER ONLINE OR CALL  
**1.800.203.1642**

Fireplaces Fireplace Inserts Stoves Gas Logs Heaters Fireplace Mantels Fireplace Accessories Chimneys & Venting Outdoor Living Guides & Articles

**HURRY! END OF THE WEEK BLOWOUT SALE - Sale Prices End in 13:13:33 seconds!**

Home > Stoves > Wood Burning Stoves > Buck Stove Model 81 Non-Catalytic Wood Stove - Gold Door



**Buck Stove Model 81 Non-Catalytic Wood Stove - Gold Door**

Write a Review See 1 Question & 1 Answer

**Sale Price: \$2,734.00 & FREE Shipping**

List Price: ~~\$3,359.99~~  
You Save: ~~\$625.99~~ (19%)

**In Stock.**  
\* Usually Ships Same Business Day.

**CONFIGURE**

- Color: Black
- Product Dimensions: 30 1/4" FW x 25 5/8" RW x 25 3/4" D x 23 3/16" H
- Fuel Type: Wood
- Max BTU Output: 45,001 to 50,000
- Specific Use: Mobile Home Approved

See complete product details >>

CHOOSE STOVE CONFIGURATION (Required to Complete Unit) [More Info](#)

4.4 ★★★★★  
Google Customer Reviews

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FREE DESIGN & QUOTE

Buck Stove Model 81 Non-Catalytic Wood Stove

Link: <https://www.efireplacestore.com/bsc-fp81g.html#caption>

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Buck Stove Model 91 Catalytic: x

efireplacestore.com/bsc-fp91.html

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Home > Stoves > Wood Burning Stoves > Buck Stove Model 91 Catalytic Wood Stove - Black Door



**Buck Stove Model 91 Catalytic Wood Stove - Black Door**

Write a Review Ask a Question

**Sale Price: \$2,892.00 & FREE Shipping**

List Price: ~~\$3,559.99~~  
You Save: ~~\$667.99~~ (19%)

**In Stock.**  
\* Usually Ships Same Business Day.

**CONFIGURE**

See complete product details >>

CHOOSE STOVE CONFIGURATION (Required to Complete Unit) [More Info](#)

4.4 ★★★★★  
Google Customer Reviews

Buck Stove Model 91 Catalytic Wood Stove

Link: <https://www.efireplacestore.com/bsc-fp91.html>

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Superior WXS2021 Wood-Burni x

efireplacestore.com/sup-wxs2021.html

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**HURRY! END OF THE WEEK BLOWOUT SALE - Sale Prices End in 12:56:7 seconds!**

Home > Stoves > Wood Burning Stoves > Superior WXS2021 Wood-Burning Free Standing Stove

Write a Review See 3 Questions & 3 Answers

**Superior WXS2021 Wood-Burning Free Standing Stove**

**Sale Price: \$1,559.70 & FREE Shipping**

List Price: ~~\$4,919.99~~  
You Save: \$360.29 (19%)

**In Stock.**  
\* Usually Ships Same Business Day.

**ADD TO CART**

USER MANUAL  
 SPEC SHEET  
 SALES PROMOTION

- Rugged steel stove with ceramic glass door for optimum heat transfer
- EPA phase II certified and Washington State approved wood heater
- 2.1 cubic foot firebox that accepts up to 20" log size
- Includes real firebrick and integrated ash lip
- Combustion air control lever

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Superior WXS2021 Wood-Burning Free Standing Stove

Link: <https://www.efireplacestore.com/sup-wxs2021.html>

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woodstove.com/index.php/palladian

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**Wood Stoves**

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Ideal Steel Hybrid  
- Geared 2U Design Book  
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Progress Hybrid  
Fireview Catalytic  
Keystone Catalytic

**The Palladian Soapstone Wood Stove**  
An Architectural Beauty!

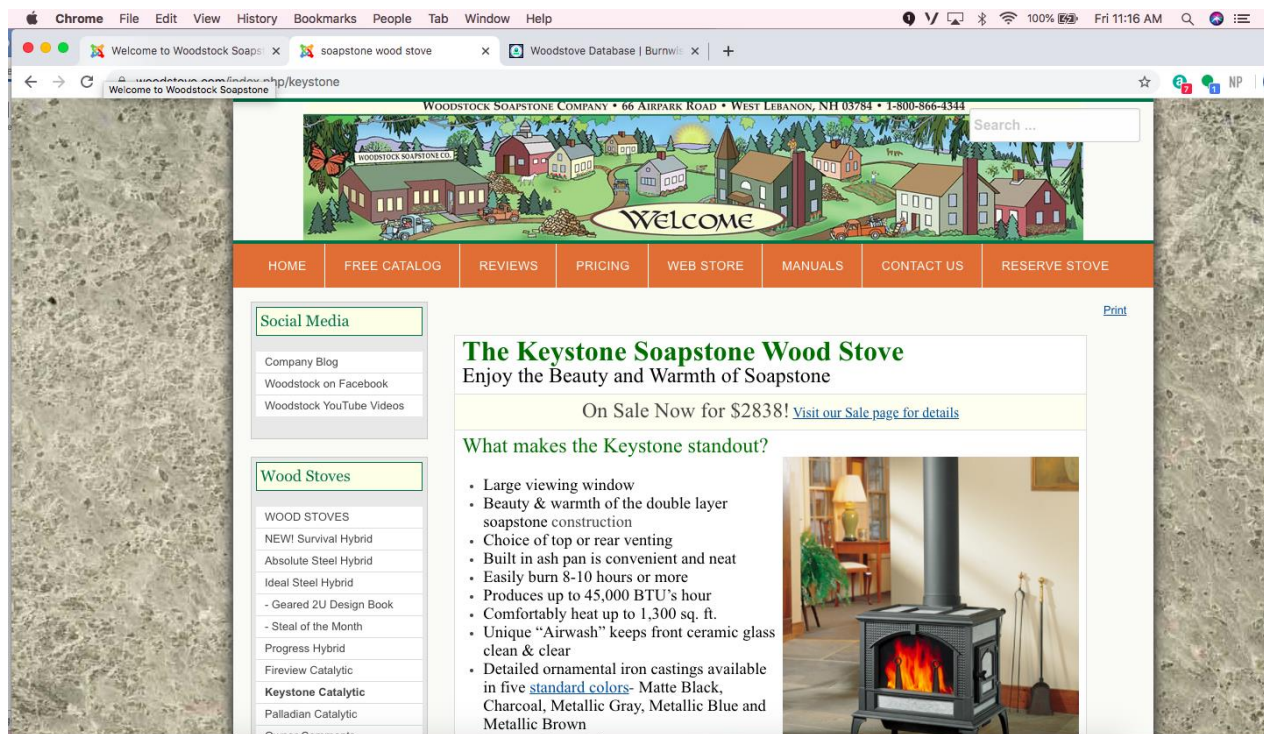
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- A beautiful Palladian viewing window
- Beauty & warmth of the double layer soapstone construction
- Choice of top or rear venting
- Built in ash pan is convenient and neat
- Easily burn 8-10 hours or more, produces up to 45,000 BTU's per hour
- Comfortably heat up to 1,300 sq. ft.
- Unique "Airwash" keeps front ceramic glass clean & clear
- Detailed ornamental iron castings available in five [standard colors](#)- Matte Black, Charcoal, Metallic Gray, Metallic Blue and Metallic Brown

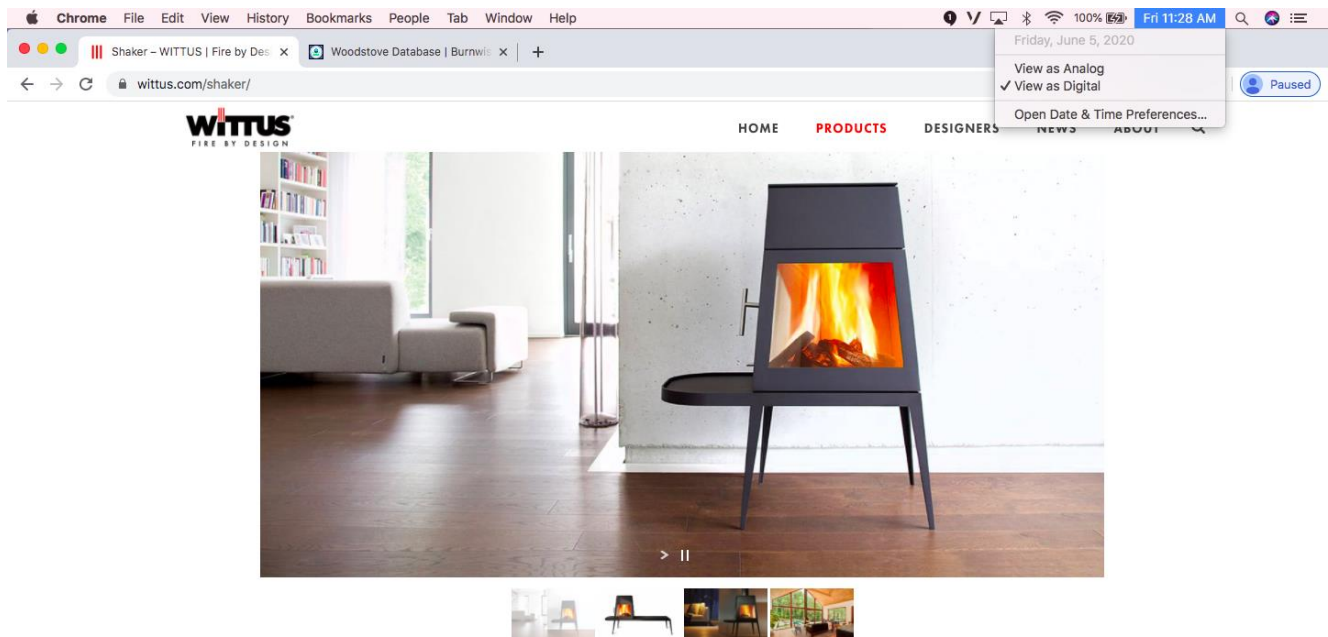
Palladian Model 202

Link: <https://www.woodstove.com/index.php/palladian>



Keystone Model 204

Link: <https://cfpub.epa.gov/oarweb/woodstove/index.cfm?fuseaction=app.searchResults>

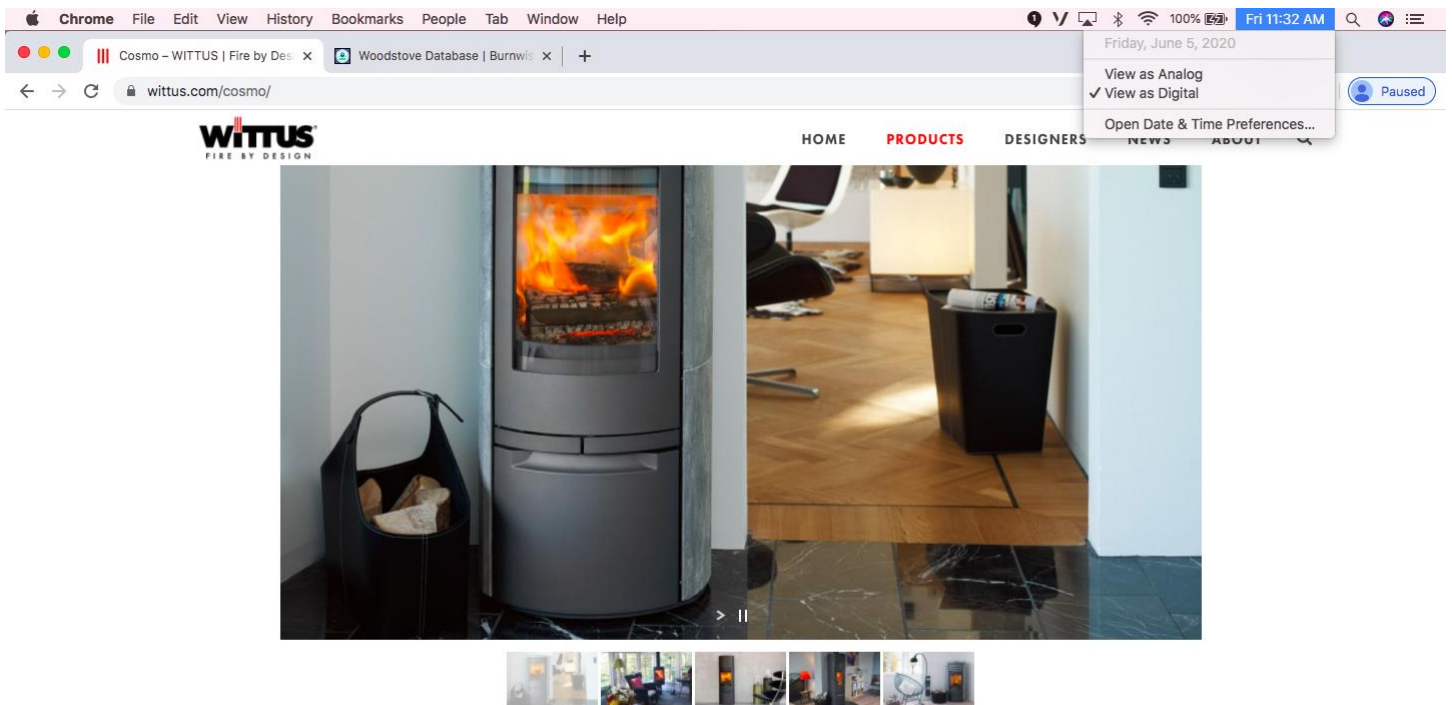


The Shaker Stove

Shaker

Link: <https://wittus.com/shaker/>

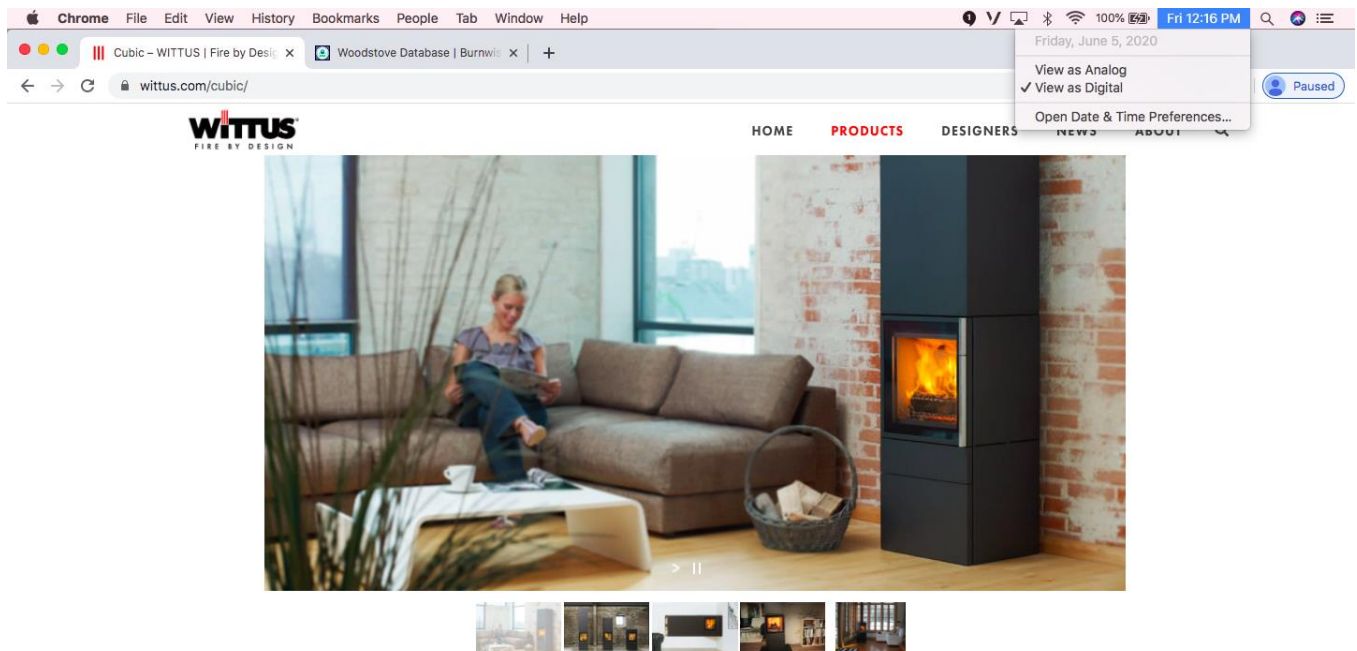




## The Cosmo Stove

Cosmo

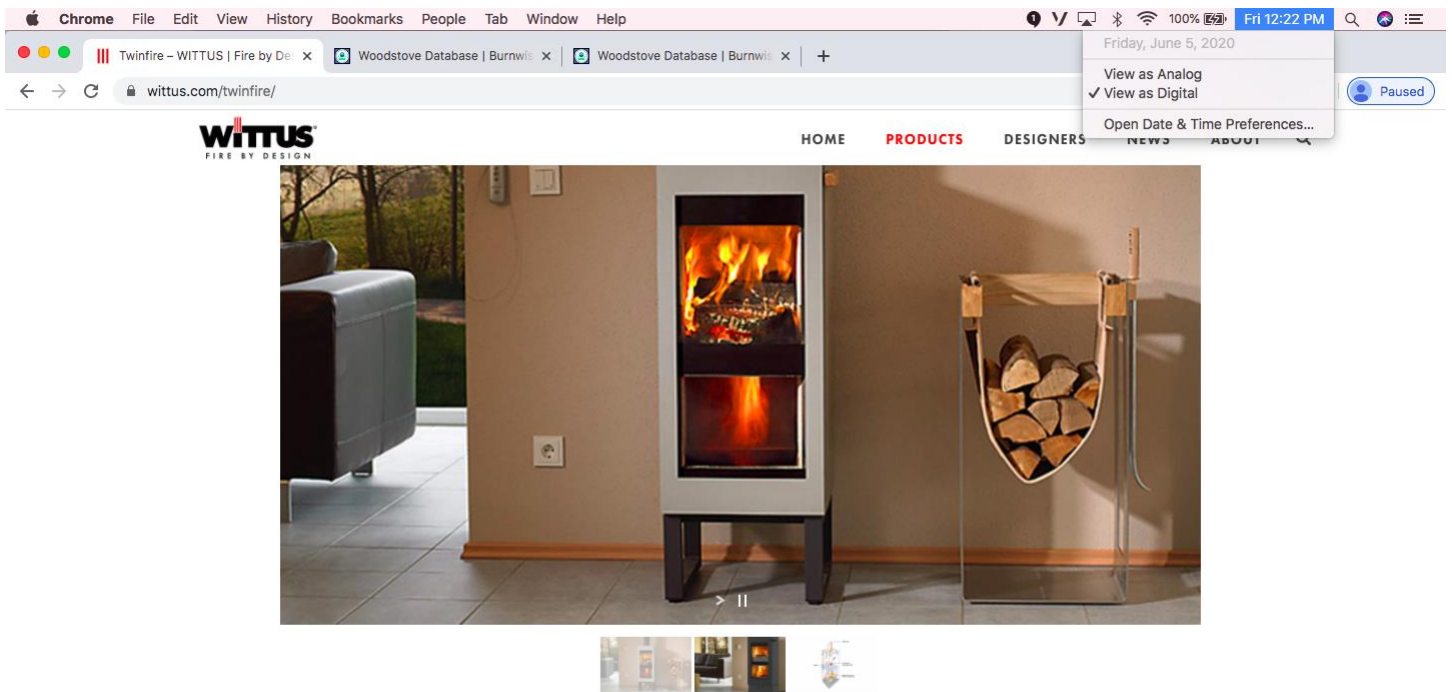
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## The Cubic Series

Cubic

Link: <https://wittus.com/cubic/>



## Twinfire Stoves

Twinfire

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## Wood Boilers:


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**Canadian's** 1-800-968-8604  
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### Econoburn EBW200-170 EPA Wood Gasification Boiler

☆☆☆☆☆ 0 Reviews

The Econoburn boilers remain as one of the best American made gasification boilers in the industry. Each Econoburn boiler is constructed of heavy duty 1/4" ASME Grade SA-36 carbon steel and is double-welded for superior strength and durability. Econoburn's advanced two-stage gasification process is the heart of its advanced "closed" system and enables these boilers to achieve optimal thermal efficiency from wood fuel sources.

Price: \$10,995.00

Product Code: EBW200-170

### Econoburn EBW200-170

Link: <https://www.discountstoves.net/econoburn-indoor-wood-boiler-p/ebw200-170.htm>

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## CENTRAL BOILER E-CLASSIC®

### E-Classic Outdoor Wood Furnace


3250 OPTIONS

#### E-Classic 3250 Titanium Series - Specifications

*In the U.S., this appliance is for non-residential applications only.*

Door - 22.5"W x 28.5"H  
Firebox Length - 40"  
Firebox Volume - 32 cu ft  
Weight - 3,240 lbs  
Water Capacity - 410 gal.  
Supply/Return Ports, 3/4" - 2 each  
Supply/Return Ports, 1-1/4" - 1 each  
Measurements and Foundation Dimensions - [Illustration](#)  
Manufacturer's Rated Heat Output Capacity - 245,000 Btu/hr\*

**LIMITED TIME SPECIAL OFFERS**  
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**COLOR OPTIONS**

Color selections are close representations but are limited by processing and

Included with outdoor furnace - Water Test Kit, Cleaning Rod, Scraper Tool, Ground Rod Kit, Heat Exchanger Scraper and two 4-foot chimney sections

### E-Classic 3250

Link: <https://centralboiler.com/products/e-classic/>



## Wood Furnaces:

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woodstoves.net/crown-royal/pristine-epa-outdoor-wood-furnace.htm

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- Commercial Wood Boilers
- Wood Boilers
- Wood Cookstoves
- Wood Fireplaces
- Outdoor Wood Fireplaces
- See-Thru Wood Fireplaces
- Commercial Wood Furnaces
- Wood Furnaces
- Wood Inserts
- Wood Soapstone Stoves
- Wood Stoves


### Pellet Burning Products

- Multi-Fuel / Corn Stoves
- Commercial Pellet Boilers
- Pellet Boilers
- Pellet Furnaces
- Pellet Inserts
- Pellet Stoves

### Gas Burning Products

- Gas Cookstoves
- Gas Furnaces
- Gas Boilers

## Crown Royal Pristine Phase II Wood Furnace



The Pristine Series Wood furnaces are manufactured with the most advanced heat exchanger tube technology that achieves improved combustion and has greater efficiency than traditional furnaces. This allows it to be one of the few EPA Phase 2 Qualified Outdoor Wood Furnaces on the market!

The Crown Royal Pristine Wood Furnace offers improved combustion and thermal efficiency, fewer emissions, all resulting in less wood consumption = saving more dollars \$\$ for your pocket. The Pristine Wood Furnace is clean burning, energy efficient, easy maintenance, reliable design, extended burn times, refires automatically, smoke free combustion, renewable heating source and reduced carbon foot print.

Obadiah's WOODSTOVES 1-800-968-8604 WWW.WOODSTOVES.NET

Description Specifications Photos (8) Pricing Videos (1) Add Review

**Crown Royal Pristine Wood Furnace Gasification Process:** Gasification happens when a regular fire burns at temperatures of 395°F to 535°F releasing gases from the wood. These gasses are known as synthesis gas or syngas. Syngases are found to contain 50%-80% heat content from wood. Traditional furnaces

## Crown Royal Pristine Phase II Wood Furnace

Link: <https://woodstoves.net/crown-royal/pristine-epa-outdoor-wood-furnace.htm>

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woodstoves.net/woodmaster/maxim-m255-pe.htm

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- Wood Boilers
- Wood Cookstoves
- Wood Fireplaces
- Outdoor Wood Fireplaces
- See-Thru Wood Fireplaces
- Commercial Wood Furnaces
- Wood Furnaces
- Wood Inserts
- Wood Soapstone Stoves
- Wood Stoves


### Pellet Burning Products

- Multi-Fuel / Corn Stoves
- Commercial Pellet Boilers
- Pellet Boilers
- Pellet Furnaces
- Pellet Inserts
- Pellet Stoves

### Gas Burning Products

- Gas Cookstoves
- Gas Furnaces
- Gas Boilers

## Maxim M255 PE



Using a simple idea and some of the most technologically advanced ways to heat using wood pellets or corn, the Maxim Outdoor Furnace with the large integrated hopper and extended burn time break the cycle of the constant loading and maintenance usually required by pellet furnaces.

Page Revised 3-10-20

Obadiah's WOODSTOVES 1-800-968-8604 WWW.WOODSTOVES.NET

Description Specifications Photos (2) Pricing Add Review

The Maxim Outdoor Coor and Wood Pellet Furnace with a large integrated hopper and extended burn time break the cycle of the constant loading and maintenance usually required by pellet furnaces. Take the guesswork out of operating with the FireStar combustion controller. Using a simple idea and some of the most technologically advanced ways to heat using wood pellets or corn, the Maxim provides heat to not just one room, but multiple rooms at different temperatures or even a room in your garage! The heated water circulates through the insulated underground pipes to the buildings being heated, it then transfers the heat energy by either direct circulation or moving through one or more heat

## Maxim M255 PE

Link: <https://woodstoves.net/woodmaster/maxim-m255-pe.htm>



## Attachment 8

Submitted separately

## Attachment 9

## Lisa Rector

---

**From:** Lisa Rector  
**Sent:** Monday, February 11, 2019 10:00 PM  
**To:** 'Rafael Sanchez'  
**Cc:** Rob Lischinsky; Boyd, Rochelle; French, Chuck  
**Subject:** uncertified boilers for residential applications

As we have been looking into boiler costs we have come across several websites that appear to be selling uncertified boilers that I thought I would bring these companies to your attention:

- <http://www.aqua-therm.com/outdoor-boiler.htm>
- <https://earthoutdoorfurnaces.com/>
- <http://www.royalfurnace.com/>

We have also found the appliances for sale on retailer websites. I can pass that information along as well, if it is of interest.

Lisa



**Lisa Rector**, Policy and Program Director at **NESCAUM**

89 South Street, Suite 602, Boston, Massachusetts, 02111 | 802.899.5306 | 617.259.2095 | Fax: 617.742.9162

| [lrector@nescaum.org](mailto:lrector@nescaum.org)

## Lisa Rector

---

**From:** Lisa Rector  
**Sent:** Wednesday, March 20, 2019 7:07 AM  
**To:** Lischinsky, Robert; 'Rafael Sanchez'  
**Subject:** Another manufacturer selling uncertified devices

I found another company selling stoves and furnaces that does not appear to be on EPA's list:  
<http://www.energyking.com/>



**Lisa Rector**, Policy and Program Director at **NESCAUM**

89 South Street, Suite 602, Boston, Massachusetts, 02111 | 802.899.5306 | 617.259.2095 | Fax: 617.742.9162  
| [lrector@nescaum.org](mailto:lrector@nescaum.org)

## Lisa Rector

---

**From:** Lisa Rector  
**Sent:** Wednesday, March 20, 2019 8:38 AM  
**To:** Lischinsky, Robert; 'Rafael Sanchez'  
**Subject:** and another one selling uncertified units

<http://www.outdoorwoodfurnaceboiler.com/>



**Lisa Rector**, Policy and Program Director at **NESCAUM**

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| [lrector@nescaum.org](mailto:lrector@nescaum.org)

## **Lisa Rector**

---

**From:** Lisa Rector  
**Sent:** Wednesday, March 20, 2019 8:47 AM  
**To:** Lischinsky, Robert; 'Rafael Sanchez'  
**Subject:** and another

Here's another uncertified boiler on sale online:

<http://benjaminheating.com/products/dutch-oven-models-110-and-180-wood-fired-boilers/>



**Lisa Rector**, Policy and Program Director at **NESCAUM**

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