Wood Burners: Change Is In the Air

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Oldies But Goodies

On a back road in Maine, not far from where I grew up, is Bryant Stove Works. Owned by Joe and Bea Bryant, the company’s name belies its quirkier side. Yes, they do have lots of stoves. They buy, repair, and sell classic old wood stoves—the kind you remember warming your feet on at your grandparents’ farm when you were a kid. When a unique one comes into the shop, they might keep it, adding to a collection described by the Antique Stove Association in a 2011 newspaper article as the largest in the United States. Joe is one of those guys that you find sprinkled across rural America—folks that are smart enough to work for NASA but would rather stay close to family, friends, and their childhood deer hunting hot spots.

Too clever to stick with just stoves, Joe began messing with steam engines; old musical equipment (player pianos, calliopes, hurdy-gurdies, carousels, and Wurlitzers); trains; and antique cars, eventually starting what the Bryants call their museum. Want to crank up the player piano and sing the oldies but goodies for an hour or so? Joe’s up for that. Interested in wood stove technology? Joe can tell you in granular detail how clever Yankees were at solving wood stove efficiency challenges while creating functional artwork when Maine was just becoming a State in 1820.

People buy these old classic stoves from the Bryants in part for nostalgia, perhaps, but also because they work. Ask New Englanders how they survived this past year’s Christmas ice storms with extended power outages, and they’ll point to the Kineo Grand parlor stove they inherited. All that’s needed is a strong back—no circuit boards, reboots, or nozzle cleaning required.

EPA Speaks Up

There’s something new in the air, though, and it’s not wood smoke. The use of wood-burning appliances is increasing in many areas as homeowners seek out ways to reduce costs and provide heating options. According to the U.S. Energy Information Agency, 2.6 million homes rely primarily on wood heat, up 2.5 percent nationally since last winter.

For some areas of the country that are struggling to meet air quality goals and located where topography and weather conditions amplify impacts, State and local governments are imposing restrictions on wood-burning appliances. At the Federal level, the U.S. Environmental Protection Agency is responsible for regulating air quality. According to law, the EPA is required to review regulations every 8 years, but in the case of wood-burning appliances, the EPA has not changed regulations since 1988. At that time, the EPA required that all new woodstoves emit no more than 7.5 grams per hour of
particulates for noncatalytic stoves and 4.1 grams per hour for catalytic units. In order to comply with a law passed by Washington State in 1995, most woodstoves manufactured today burn at 4.5 grams per hour or less.

The EPA has been drafting regulations for quite some time, but was moved to action when Maryland and six other States sued them over outdated regulations that allowed the spread of certain types of wood boilers in October 2013. In January 2014, the EPA released the draft regulations. Once the regulations are published in the Federal Register, the EPA will accept public comments for 90 days. The regulations cover many types of wood-heating equipment, including wood stoves, pellet stoves, fireplace inserts, indoor and outdoor wood boilers or hydronic heaters, masonry heaters, and forced air furnaces. Several types, such as pellet stoves, indoor boilers, and masonry heaters, have never been regulated before.

Wood stoves and pellet stoves would have to meet the 4.5 grams/hour standard within 60 days of publishing the final rule in the Federal Register with stricter limits of 1.3 grams per hour kicking in within 5 years (the EPA proposes a second option of 8 years). Additional information about the proposed regulations and how to submit comments can be found here. The proposed rule would not affect existing woodstoves and other wood-burning heaters currently used by homeowners.

What the future holds for wood heating remains to be seen. As you’d expect, advocates for improved air quality such as the American Lung Association are ebullient about the proposed regulations. Skeptics, including a writer for Maine’s largest daily newspaper, point out that simply ensuring that those who burn wood properly season it ahead of time would go a long way in improving air quality. They also note that stove manufacturers believe that without incentives, homeowners won’t change out their old stoves and that hundreds of dollars will be added to the cost of new units.
What will be the possible unintended consequences of the new regulations? For instance, could pellet stoves, with their uniform quality fuels and thus potentially better performance, be favored over conventional, solid wood-burning stoves?

**Reasons To Be Hopeful**

Whether you’re from Maine or Missouri, it’s not bad to take a “show me” attitude with new regulations. In an oversized tent on the National Mall in Washington, DC, a small nonprofit named the Alliance for Green Heat (AGH) took the proverbial bull by the horns in November 2013. They hosted the [Woodstove Decathlon](#), sponsored by Popular Mechanics and others, that featured a competition to design next-generation wood-burning technologies.

Twelve finalists from around the world competed for the honors. The event offered educational seminars on a variety of topics as well. I played a small role in the event by participating on a panel about sustainability with DC State Forester Monica Lear and others. Competitors’ entries were ranked on several criterion, including cost, efficiency, and emissions of particulate matter.

The winning entrant was [Woodstock Soapstone](#), a New Hampshire-based company. In EPA testing (not associated with the Decathlon), the stove emitted 0.54 grams of particulates per hour with an 82 percent efficiency rating. The company says it can sell the stove for less than $2,000.

If projected efficiency gains are in fact realized, precious wood resources will be extended, your yearly wood pile won’t cost as much, and you’ll have more time to spend with your mate instead of on the
working end of a splitting maul. For homeowners with a strong environmental ethic, the new rules will result in lighter-on-the-planet consumer options more in keeping with your values.

Let’s just hope that what comes out the end of this process doesn’t have more buttons to push than one of Joe Bryant’s Wurlitzers. I’m told that most of these new heaters will probably work even with the power out—and of course you can always buy a generator. That said, I’d venture to say there are a lot of folks who appreciate the virtues of elegant simplicity. I met some very talented people at the Decathlon—I’m betting they will figure it out.