

Buying a Secondhand Wood Stove

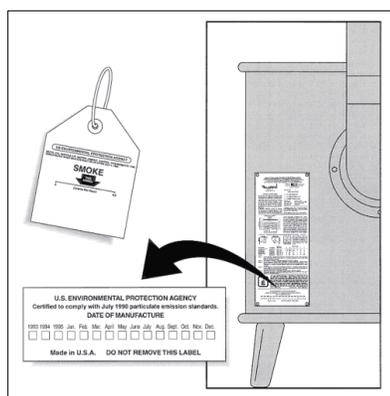
Fact Sheet FS-938
2012

When and When Not to Buy A Secondhand Stove

Wood stoves are one of the appliances that generally should be purchased new. In this paper, we will review why and why not to buy a used stove, and how and where to buy one. But first, we will discuss why not to buy one.

Price: Many secondhand stoves are overpriced. A good, used stove usually costs \$400 - \$800 and you can often get a far better, EPA certified, new one between \$650 - \$1,200. If you're going to use the stove more than twice a week during the winter, get a new one. You will end up paying less in fuel and getting more heat with less fuss and mess.

EPA Certification: If you really want a second hand stove, make sure it's certified by the EPA. Almost all stoves built since 1988 are certified. This means they emit less smoke, are more efficient, produce more heat, and are safer. They also produce less creosote so your chimney will stay cleaner.



EPA certified stoves will have this label on the back showing when they were certified. A certified stove will be more efficient, cleaner and safer.

Oddly enough, very few sellers of secondhand EPA certified stoves advertise this selling point. You will need

to figure it out. You can see a list of EPA certified stoves here: www.epa.gov/oecaerth/resources/publications/monitoring/caa/woodstoves/certifiedwood.pdf. Pellet stoves aren't required to be certified, although some are anyway.

Efficiency and Fuel Cost: An older stove typically uses more wood than a new EPA certified stove. The general rule is that an EPA certified stove is 33% more efficient than a non-certified stove, which means you will use 33% less wood every year and get the same amount of heat.

Safety I: Old and poorly installed wood stoves are a leading cause of house fires and can also produce dangerous amounts of carbon monoxide. Old stoves are more likely to leak smoke and odorless carbon monoxide into the room, releasing particulates dangerous to your lungs and.

Safety II: Another major safety issue with old stoves is that the seller rarely has the owner's manual; in most cases it cannot be found online either. Without the owner's manual, you will not know the recommended clearances to properly install the stove. You will need to rely on the clearances listed in the NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances

Laws and Codes: Most counties and one state, Washington, do not allow the installation of stoves that are not certified by the EPA or listed by UL. Make sure to check with your county code office to find out whether it's legal to install an old, uncertified stove and whether you need a permit to install it. Garrett County, Maryland, for example, does not allow installation of stoves without UL listing.



A good example of what old, uncertified stoves look like. These were being replaced by certified ones as part of an air quality improvement program in Libby Montana.

Insurance: A big reason not to buy an uncertified, secondhand stove is that it could jeopardize your insurance coverage. If your county or state does not allow you to install an old stove, or you don't get a required permit, your insurance company may deny your claim if you have a house or chimney fire.

The Environment: Old, uncertified wood stoves usually produce a lot of smoke, often between 20 - 30 grams of particulates per hour. EPA certified stoves are required to produce no more than 7.5 grams per hour and almost all new stoves are limited to 4.5. To be kind to your neighbors, don't buy a stove that belches smoke.



A stove that is 30% more efficient saves 30% in fuel costs and/or time cutting, splitting, stacking and moving it.

Sizing: We hope we have given you plenty of reasons not to buy an old, uncertified wood stove to heat your home. Having said that, we don't discourage people from buying a secondhand EPA certified stove that is in good condition. Some old, uncertified stoves such as an old Vermont Castings Resolute may still be worthwhile if you are only going to use it to heat your garage or hunting

cabin once a week. If you still want to buy a secondhand stove, here are some things to look for:

1. Glass in the Stove Door: Ceramic glass was invented in the late 1980s. If a stove has glass in it, it means it's no more than 25 - 28 years old and is most likely EPA certified. Most stoves without glass are real clunkers. Plus, if you have a fire, don't you want to see it?

2. Gaskets: Look for gaskets around the door. Gaskets help create a tight fit so that smoke cannot escape around the door. Gaskets are probably the thing that most often needs replacing. If the edge of the door has grooves but no gaskets, you need to replace them. Gaskets usually need replacing every 2 -3 years, even if they are intact.

3. Firebrick: Firebrick, which is the brick on the inside of the firebox, helps to maintain a hot, clean fire. Check to see if any firebricks are cracked or missing. A few thin cracks in the firebrick are normal, but large cracks and powdering are signs that it needs to be replaced. Fortunately, firebrick is not very expensive. Just make sure it's cut to the size you need.

4. Structural Integrity: Look for cracks in the metal and especially cracks in the seams. One way to check for cracks is to put a light bulb in the stove and check if you can see light anywhere. Make sure it is not rickety.

5. Metal Fatigue: A sign of metal fatigue include a whitish-greyish rust that forms on the upper part of the stove. Metal fatigue is an indication that the stove has been used for a long time or has been over-fired. You shouldn't purchase stoves that have been damaged in this way, they are not likely to last very long. Stoves that have a slight, white coloration may be fine and may only require repainting.



An example of a stove showing signs of metal fatigue, probably from being repeatedly overfired.

What Brands Should I Look For?

This is a tough question because there are hundreds of old brands. A very common brand of old, uncertified stoves is Fischer, which tend to be good, solid stoves and have structurally held up well over time. However, they are neither efficient nor clean burning. They do not have a window to view the fire and they may have been abused by decades of heavy use. Some non-catalytic Vermont Castings and Jøtul stoves also have held up well over time.

What Should I Avoid?

Generally, it is a good idea to avoid stoves that are not EPA certified because they tend to be less efficient and produce more smoke. It's also usually good to avoid stoves covered with rust. At the very least, rust indicates the stove has not been taken care of and possibly left outside. The rust may also be covering up other issues. Stoves that "need some work" are rarely worth the work you have to put into them, and parts may be very hard to find.



This old Franklin-style stove is more like a fireplace than an efficient wood stove. Besides being structurally questionable, it would not be an effective space heater.

How About Antique Stoves?

Ironically, really old stoves are sometimes made better than the amateur steel boxes that emerged in the 1970s and 1980s. A vibrant market for antique stoves exists in America and there are at least half a dozen craftsmen who professionally restore antique stoves. The old beauties that have lots of chrome and decoration usually fetch higher prices (between \$1,500 - \$7,000). Often they are just used for show, but some of them are still capable of heating and are at least as good as uncertified stoves made in the 1970s and 1980s. For a list of experts who appraise,

sell and restore antique stoves check:

http://www.forgreenheat.org/resources/antique_stoves.html.



Antique stoves like this are not as clean and efficient as EPA certified ones, but they probably as good as the plain steel uncertified stoves made in the 1970s and 1980s – and much better looking and can hold their value.

How about Pellet Stoves?

Pellet stoves are more like cars in that it's more important to have a professional inspect them before buying one. Also like cars, it's good to get written upkeep history to see how often the stove has been cleaned and repaired.

Obviously, test it first and make sure it runs well. Most pellet stoves are not EPA certified, nor are they required to be, but EPA certified models tend to be higher efficiency. Generally, it's more difficult to shop for a pellet stove because you can't rely on a visual inspection, like a wood stove. For an excellent article on the reliability of pellet stoves and which brands are reliable, see this article:

www.forgreenheat.org/consumer_resources/reliablepellet.html

Are Some New Stoves Uncertified?

Yes, some new stoves are still allowed to be sold even if they are not certified by the EPA. Three companies make the great majority of these stoves: Vogelzang, US Stove and SBI. They sell for between \$300 - \$600 and generally should be avoided. They are not allowed to be installed in Washington, Oregon, parts of California, Denver and a smattering of other cities and counties. As with old, uncertified stoves, they may be OK in a cabin or garage if you don't intend to use them much and install them properly. Still, a good old, uncertified Fischer stove is probably better than a new, uncertified cheap stove.

How About Secondhand Catalytic Stoves?

Catalytic stoves are typically the cleanest and most efficient class of wood stoves. However, buying a secondhand one can be tricky. We recommend avoiding the catalytic stoves made during the 1990s because so many of them had poor designs. You definitely need to inspect the catalyst and other parts around the catalyst to see if they are in working order. Annual maintenance records for used catalytic stoves are essential. New catalytic combustors can cost between \$100 and \$300. EPA certified catalytic stoves made in the past 10 years are not often on the secondhand market but could be a good purchase.

Where to Buy a Secondhand Wood Stove

Used wood and pellet stoves are heavy and expensive to ship, so they are almost always bought and sold locally. It isn't difficult to find wood and pellet stoves for sale on Craigslist. There are usually a few being sold in most regions at any given moment.

It's recommended that you don't limit your search for stoves to the Appliances section of Craigslist, but search across the entire site. Although Craigslist tends to have a wider selection, you can also find wood and pellet stoves for sale on eBay. It's often better to search for sellers on the Classifieds section of eBay than the main site. If you're a collector of old stoves, eBay is an excellent place to find antique parlor stoves from the 19th century. You can also occasionally find these for sale on Craigslist but eBay tends to have more.

What You Can Expect to Pay

Used stoves range in price from less than \$100 to over \$1,000 for some of the newer and fancier models. The cost will depend on the type of stove, materials, brand and age, heating output, how badly the seller wants to sell it, and how skilled they are at estimating its true value. Some stoves may require repairs or new parts like blowers or firebrick, which will increase the price.

An informal survey of secondhand wood stoves on Craigslist in Maryland (May 2012) revealed that the average price was \$445 for a used wood stove and \$890 for a used pellet stove. Since new wood stoves cost between \$650 - \$1,200 and new pellet stove cost between \$1,500 - \$3,000, there is a potential for savings. However, once you factor in the cost of installation and the annual

cost of fuel, your savings on the actual stove can start to seem smaller and smaller.

Maryland Region	Wood Stoves	Average Cost	Pellet Stoves	Average Cost
Annapolis	8	\$500	1	\$600
Baltimore	39	\$428	17	\$931
DC area	16	\$360	3	\$1041
Eastern Shore	10	\$457	1	\$600
Frederick	12	\$435	2	\$800
Southern Maryland	7	\$514	N/A	N/A
Western Maryland	6	\$554	2	\$700
All Regions	98	\$445	26	\$890

Source: Alliance for Green Heat, 2012

Know the Company

If you know the manufacturer and the brand of the stove, you should do some research about the company and see if it is still in business. Be wary of buying a stove that was made by a company that's no longer in business. It will probably be difficult to obtain the necessary parts if the stove breaks down or get a copy of the installation/owner manual. Plus, you want to find a brand/company that has a good reputation since you probably want to keep the stove for several years.

Questions to Ask the Seller

- How old is the stove? How many heating seasons has it been used? How often did you use it per heating season? How many cords of wood/tons of pellets did you burn on average?
- Has this model been certified by the EPA? (Look for the tag on the back of the stove.)
- Are there any repairs that must be made? When was the last time any repairs were made? Who performed the repairs and are records available?
- When was the last time the gaskets were replaced?
- Do you have the owner's manual? If not, is it available online?

- If it is a catalytic stove, when was the catalyst last replaced? Can we inspect the catalyst now?

Installing the Stove

See our fact sheet on Considerations for Your Wood or Pellet Stove Installation for more information about stove pipes, chimneys and clearances. You should not install the stove yourself unless you are an experienced professional or have a certified inspector help you and/or check your work. Depending on where your home is located, it may be necessary to pull a permit before you install. Check with your permits and inspection office, local building codes and the NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.

Additional Resources

Used Stove Buying Primer by Hearth.com:

http://www.hearth.com/econtent/index.php/wiki/Used_Stove_buying_Primer

Buying a Used Wood Stove by Sid S.:

<http://www.survivalblog.com/2012/05/buying-a-used-wood-stove-by-sid-s.html>

How to Choose a Good Wood Stove by WikiHow:

<http://www.wikihow.com/Choose-a-Good-Used-Wood-Stove>

Wood Stove Safety by Cornell Cooperative Extension:

<http://ccetompkins.org/energy/heating-wood/wood-stove-safety>

NFPA 211: Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances:

http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=211&cookie_test=1

Authors: Melissa Bollman & John Ackerly, Alliance for Green Heat, & Jonathan Kays, University of Maryland Extension



This publication, Fact Sheet FS-938, is part of a series of publications of the University of Maryland Extension and Forest Stewardship Education Program (www.naturalresources.umd.edu) in cooperation with the Alliance for Green Heat (www.forgreenheat.org). The information presented has met UME peer review standards, including internal and external technical review.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, University of Maryland, College Park, and local governments. Cheng-i Wei, Director of University of Maryland Extension. The University of Maryland is equal opportunity. The University's policies, programs, and activities are in conformance with pertinent Federal and State laws and regulations on nondiscrimination regarding race, color, religion, age, national origin, gender, sexual orientation, marital or parental status, or disability. Inquiries regarding compliance with Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Educational Amendments; Section 504 of the Rehabilitation Act of 1973; and the Americans With Disabilities Act of 1990; or related legal requirements should be directed to the Director of Human Resources Management, Office of the Dean, College of Agriculture and Natural Resources, Symons Hall, College Park, MD 20742.