

Don't Let Your Energy Dollars Go Up the Chimney

BY JAMES DULLEY

Dear Jim: I have a standard furnace in my house, but I would like to add a wood-burning fireplace or insert for more heat and the ambiance. My existing fireplace seems to chill the house. What should I look for? – Paul M.

Dear Paul: It's not your imagination. Though it may seem contradictory, an open masonry fireplace can cool your house and result in higher overall heating costs. The fireplace opening attracts heated indoor air, then releases the warm air through the chimney. A resulting vacuum draws cold outdoor air into your house through windows, doors, and gaps anywhere. You may feel comfortable in front of the fireplace, but your heat pump or furnace runs like crazy trying to keep the rest of the house warm.

Although I do not recommend using an open fireplace during cold weather, if you really do like the ambiance of a fire, close all the doors to that room, open a window and turn the furnace thermostat down. You will still lose some heated air up the chimney from the rest of the house, but hopefully most of the air is being drawn from the open window. The loss is not as severe during mild weather because outdoor air is not as cold.

Every efficient wood-burning fireplace or insert will have tight-sealing glass doors between

QUICK TIP

Ready to get cozy by the fire? Not too fast. First you need to learn how to keep your energy dollars from floating out the chimney.



This efficient heat-circulating fireplace has the heated air outlet far above the firebox.

the room and the chimney to block the loss of already heated room air. You may be able to operate some fireplace models with the glass doors opened and just a screen covering the opening, but do not burn it this way very long. When burned properly, the efficiency of a good fireplace can be higher than an old furnace.

Burning firewood to heat your home—one of several forms of biomass heating—may qualify for a federal tax credit. Biomass sources include cord firewood, wood pellets, corn, switch grass, peanut shells, and even cherry pits, and can be burned in a variety of heating appliances. Fireplaces, wood stoves, and pellet stoves are most common. I've even burned cherry pits in my wood pellet stove. They produce a lot of heat and burn cleanly.

The tax credit applies to any biomass heating appliance placed in service during 2009 and 2010. The credit is equivalent to 30 percent of the cost (including installation), up to a maximum of \$1,500. To qualify the appliance must have an efficiency rating of 75 percent or greater. Check the specifications because not all fireplaces or stoves are this efficient; generally they range in efficiency from 70 to 90

percent. Get a manufacturer's certification statement certifying the unit meets the efficiency requirements. For details check energystar.gov/taxcredits.

When buying or upgrading a fireplace you're faced with several options. Initially you must decide between a zero-clearance or masonry fireplace. If your old fireplace is large, you may be able to fit a new unit inside. If you plan to install a fireplace somewhere else, installing a zero-clearance model is easiest. It often uses a double-walled design with insulation so it can be safely placed against wood wall studs.

A heating-circulating fireplace provides the best efficiency and most heated air output. Many of these operate without a fan and rely on the natural flow of room air around a superhot firebox. As the air gets hot, it loses density and naturally flows into the room through an upper vent. This pulls cooler air from the room in through a lower inlet to be heated.

If you want more heat output and better control of the flow of heated air, install an optional blower kit. Each manufacturer offers its own specially designed blower kit to mount on fireplaces. The better ones have thermostats and variable-speed controls for the best comfort. A blower kit can usually be added by the homeowner after installing the fireplace.

For the greatest efficiency and least amount of drafts indoors, install an outdoor combustion air kit with the fireplace. Make this decision before you install the fireplace because a duct has to run to it to bring in the outdoor air. It is often run under the floor to the front of the firebox.

Airtight fireplace inserts are often the most efficient design and provide the longest burn



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The blower speed can be adjusted based on heating needs. The blower is also controlled by a thermostat, so it shuts off automatically when the fire goes out.

time on a load of firewood and the greatest maximum heat output. They are not as stylish as a fireplace, but they provide much better control over the heat output and combustion air used. For air quality considerations, select an Environmental Protection Agency (EPA) certified model. Pellet and catalytic cord firewood models typically produce the least particulate matter.

Despite great improvements in efficiency, keep in mind some stoves and fireplace options use electricity and may not operate properly during an outage. The cost for efficient models can also be high, which makes qualifying for the federal tax credit that much more important. **KCL**

Have a question for Jim? Send inquiries to: James Dulley, Kansas Country Living, 6906 Royalgreen Dr., Cincinnati, OH 45244 or visit www.dulley.com.

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WHERE TO SHOP

The following companies offer efficient wood-burning fireplaces:

- ▶ Desa International, 866-672-6040, www.desaint.com
- ▶ Fuego Flame, 800-445-1867, www.fuegoflame.com
- ▶ Jotul, 207-797-5912, www.jotul.com
- ▶ Kozy Heat/Hussong, 800-253-4904, www.kozyheat.com
- ▶ Lennox Hearth Products, 800-953-6669, www.lennoxhearth-products.com