

Striking an efficient balance in the wood-burning debate

By Tom Watson
Special to The Seattle Times

Humans have burned wood for heat for more than 15,000 years, so you would think we'd have it all figured out by now.

But it's still a work in progress. Although the efficiency of new woodstoves and fireplaces continues to improve, concerns have grown about the hazards of wood smoke, especially from older or improperly used units.

From changing regulations to new technology, let's burn through some common consumer questions about heating with wood.

Q: Is it true that we now have stricter burn bans?

A: Yes. As the result of new state and federal air quality regulations, the Puget Sound Clean Air Agency (www.pscleanair.org) beefed up its burn-ban program this winter. During a Stage 2 ban, no burning is allowed in any woodstove, wood-burning fireplace, fireplace insert or pellet stove unless it's your only heat source. A Stage 1 ban applies only to fireplaces, uncertified woodstoves and fireplace inserts.

The first Stage 2 burn ban this winter was called on Jan. 19 for King, Pierce, Snohomish and Kitsap counties during a spell of stagnant weather, and it lasted for five days. This was our first Stage 2 ban since 1991.

Q: Why is there so much concern about wood smoke?

A: Tiny particles and other pollutants in smoke can cause many health problems, including asthma, heart attacks and cancer. A University of Washington study found that Seattle preschool children who live in neighborhoods with higher wood-smoke levels had more symptoms of respiratory disease.

Q: Then is a gas fireplace the way to go?

A: Gas or electric fireplaces do not produce neighborhood pollution. But wood heat does have advantages, if you have a clean-burning system. Wood is a renewable resource, and because it's a biomass fuel — not a fossil fuel like oil or gas — it doesn't contribute to global warming nearly as much. Wood also often costs less than other types of heat.

Q: Which woodstoves are most efficient?

A: Older fireplaces, woodstoves and fireplace inserts typically waste a lot of fuel and have a heating efficiency rating of less than 50 percent. Newer, certified models of those types of units will usually be more than 60 percent efficient, while pellet stoves generally exceed 75 percent efficiency. The U.S. Environmental Protection Agency offers a list of certified stoves and tips for proper wood-burning practices at www.epa.gov/woodstoves.

Q: Pellet stoves sound great. What should I know about them?

A: Starting at about \$1,700, pellet stoves are more expensive than most other woodstoves and fireplaces. Since they require electricity, you can't use pellet stoves during power outages. In addition, the cost and availability of wood pellet fuel (usually made from compressed sawdust) can fluctuate widely. But in terms of efficiency and reduced smoke pollution, pellet stoves are hard to beat.

They also have local connections. Jerry Whitfield, a Boeing engineer and inventor, developed the modern residential pellet stove in the Seattle area in the early 1980s. Today, 60 percent of wood pellet stoves on the market are manufactured in Washington state, according to U.S. Sen. Maria Cantwell's office.

Q: Does the government offer any incentives to buy clean-burning fireplaces or stoves?

A: The big news is that the economic-stimulus bill signed Feb. 17 by President Obama includes a 30 percent tax credit for 2009 and 2010 for biomass stoves with 75 percent efficiency, which should include nearly all pellet stoves. Visit www.hpba.org for more info.

So, as Seattle native Jimi Hendrix sang, "Let me stand next to your fire." Just make sure it burns clean.

Tom Watson is project manager for King County's Recycling and Environmental Services.

Reach him at tom.watson@kingcounty.gov, 206-296-4481 or www.KCecoconsumer.com

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