Wood Stoves Rising Again as Popular Home Heating Method

High cost of oil and gas fuels a boom in wood stoves. But what is the cost to climate?

By Gregory M. Lamb
Staff writer of The Christian Science Monitor

George and Judith Reilly own a big antique house on the main street of Brandon, Vermont, a picturesque town on scenic Route 7. The house's front parlor doubles as a gallery to display the fabric art Judith creates in her upstairs studio.

Last spring, when oil for the house's furnace began to top $4 per gallon, Mr. Reilly did some quick calculating and decided he could save up to 50% on his heating cost this winter by installing a stove that burned sawdust pellets. Over the summer, he placed an order with first one, then another local dealer. But by October, both had failed to find him a stove. Finally, he discovered one on eBay. The only problem: Reilly had to drive his pickup truck from Vermont to Maryland to claim it. Last weekend, as nighttime temperatures dipped below freezing, he was installing his prize, which he hopes will be his main source of heat this winter.

Both traditional and pellet-burning wood stoves are in high demand as cold weather begins to grip the northern United States and Canada. Sales of wood stoves are up 55% so far this year over last, according to industry figures. And sales of wood pellet stoves are even hotter: up 135% over the same period last year.

But as people polish their stoves and admire their woodpiles, environmentalists and health officials are expressing concern that burning wood in old or poorly designed stoves could add significantly to air pollution. And although wood represents a local and renewable fuel source, its credentials as a "carbon neutral" fuel – not adding to global warming – are hazy at best.

Even the very cleanest-burning and best-maintained wood or pellet stoves release a much higher level of emissions than a typical oil furnace, a common heating fuel in the Northeastern U.S. Natural gas, the most popular heating fuel nationwide, burns even cleaner than oil.

Wood smoke "is a fairly toxic cocktail," said Lisa Rector, a senior policy analyst for NESCAUM, a nonprofit group that advises eight Northeastern U.S. states on air-pollution control issues. According to the Environmental Protection Agency (EPA), wood smoke contains a number of potent health hazards, including carbon monoxide, nitrogen oxides, and fine particulates. The American Lung Association estimates that in some locales, fireplaces and wood stoves are the source of 80% of the fine particulates found in the air.

Judging how polluting a particular wood stove is can be tricky. Since the early 1990s the EPA has mandated that new wood stoves emit no more than 7.5 grams of emissions per hour, although many models have been tested with much lower emissions. Stoves manufactured in the 1970s and '80s emitted about 42 grams per hour, according to the Hearth, Patio, and Barbecue Association (HPBA), which represents wood stove manufacturers.

But how much pollution a stove emits also depends on what is being burned.

"A tree is not a tree is not a tree," Ms. Rector said. "It is what it lives in."

Trees can pick up substances such as mercury, sulfur, or chlorine from the soil in which they grow. If the wood is not properly seasoned or wet, combustion will be less complete. (See below.) Not only will the stove give off less heat, it will pollute more.

One concern this winter is that people may decide to fire up an old wood-burning stove.

"We're still getting calls from people who have these 30-year-old [wood stoves] that their uncle gave them," said Bob Christensen, the owner of En-R-Gy Saver in Holliston, Massachusetts, which sells six brands of wood and pellet stoves. His stove sales are up about 50% this year over last.

The poster child of wood-heat pollution is the outdoor boiler, a wood furnace located in a separate outbuilding that sends hot water through underground pipes to a home or business. Outdoor wood boilers can emit 206 times more pollution than an oil furnace, or about 3,000 to 5,000 times more than a natural gas furnace, Ms. Rector said. They are often a source of complaints from neighbors who don't appreciate being bathed in smoke.

Maine, New Hampshire, and Vermont have moved to set emissions standards on outdoor boilers. Manufacturers are getting the message, said Deidra Darsa, a spokeswoman for HPBA.

"They have done an incredible job in turning their products around in the last year or so and come up with some very clean-burning products," she said. The EPA is also engaged with outdoor boiler manufacturers to set new emissions guidelines.

Because of its pollutants, wood-burning in general is most appropriate "at the urban fringe and beyond," not in cities, which are already dealing with many other sources of air pollution, said John Gulland, cofounder of woodheat.org, a nonprofit Web site that aims to offer impartial information about firewood and wood-burning stoves.

Just like oil and gas, wood gives off carbon dioxide and other greenhouse gases when burned. It also offers some carbon-saving benefits that make judging its effects on global warming difficult.

"I like to call it '75% carbon neutral,'" Mr. Gulland said.

While wood burning does release carbon dioxide and methane, advocates argue that the trees would do that anyway in the forest as they die, fall over, and decompose.

But only a portion of the CO2 from decomposition enters the atmosphere. Some remains in the soil. Meanwhile, forests absorb carbon dioxide, so maintaining forested areas that are harvested for wood is a carbon plus. If the wood being burned is scrap from a sawmill, for example, then no additional trees are being felled and no additional carbon created.

The question can quickly get knotty.

"On a scale of carbon neutrality, it's better than burning a fossil fuel, but it's not the same as wind or solar," Ms. Rector said. "It's a very complicated question. We still need to let the scientists figure it out."

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How to burn wood more cleanly

The Environmental Protection Agency (EPA) has these recommendations for people who burn wood:

- Use a properly installed and vented EPA-certified wood stove.
- Season wood outdoors through the summer and for at least six months. Properly seasoned wood is darker, has cracks in the end grain, and sounds hollow when smacked against another piece of wood.
- Store wood outdoors, stacked neatly off the ground with the top covered.
- Use clean newspaper and dry kindling to start fires.
- Have the wood stove cleaned and inspected annually.
- Don't burn household trash or cardboard. Plastics and colored inks on magazines, boxes, and wrappers give off toxic chemicals when burned.
- Never burn coated, painted, or pressure-treated wood, as it also releases toxic chemicals.
- Never burn ocean driftwood, plywood, particle board, or any wood with glue on or in it. They all release harmful chemicals when burned.
- Never burn wet, rotted, diseased, or moldy wood.

St. Ignace Council Is Paid for October Meetings

In October, payment to members of the St. Ignace City Council for attending meetings and events totaled $1,950. Meeting salaries are set, while no rules constitute what events are eligible for payment.

Council members are paid $70 for regular meetings, which are held on the first and third Monday of each month. They also receive $60 for committee meetings and for gatherings when representing the city.

The mayor receives $80 per council meeting and $70 when representing the city at other events.

Council members attended the following meetings and events, and were paid the following amounts:

Mayor Paul Grondin
$440 — Council, October 6 and 20; Negotiating Committee, October 2; Downtown Development Authority, October 10; Library Committee, October 14; Negotiating Committee, October 15. No pay for attending Mayor's Association Annual Business Meeting October 4.

Don Gustafson
$560 — Council, October 6 and 20; Negotiating Committee, October 2; Recreation Committee, October 8; Negotiating Committee, October 15; Cable Committee, October 16; Negotiating Committee, October 23; Ambulance Committee, October 27; Fort de Buade Committee, October 27.

Willie LaLonde
$440 — Council, October 6 and 20; Negotiating Committee, October 2; Housing Opportunities Made Equal, October 15; Negotiating Committee, October 16; Cable Committee, October 16; Ambulance Committee, October 27. No pay for attending Fort de Buade Committee, October 27.

Merv Wyse
$130 — Council, October 6; Cable Committee, October 16.

Paul Fullerton
$260 — Council, October 6 and 20; Ambulance Committee, October 27; Fort de Buade Committee, October 27.

Susan Tamlyn-Massaway
$140 — Council, October 6 and 20.

Tom Della-Moretta
$140 — Council, October 6 and 20.

McKenzies Mark 50th Anniversary November 2

Mary Ann and Richard McKenzie on their wedding day (left) and today.

Richard and Mary Ann McKenzie of St. Ignace celebrated their 50th wedding anniversary Sunday, November 2, 2008. They were married in Saint Joseph's Church in Newport, Rhode Island.

The bride's uncle, Manuel Moitoza, and her sister, Barbara Andrews, were the attendants.

Mr. and Mrs. McKenzie have four children, Debra of Racine, Wisconsin, Deanna of San Diego, California, Richard Jr. of St. Ignace, and Brian of Kenosha, Wisconsin. They have six grandchildren and one great-grandson.

The couple have resided in Newport, Brunswick, Maine, and Racine, prior to owning and operating the River Bend Resort near St. Ignace for the past 25 years.

An open house for family and friends will be Saturday, November 29, at their home on Mackinac Trail.

Sheriff Strait Is Named to MSA Board

Sheriff Scott Strait

Scott Strait, sheriff of Mackinac County, was elected to serve on the Michigan Sheriffs' Association's Board of Directors for the 2009 term, which begins January 1.

Sheriff Strait, who began his career as sheriff in 2004, will sit on the board with President Brian McLean, sheriff of Houghton County; Vice President James Bosscher, sheriff of Missaukee County; Secretary-treasurer Lawrence Stelma, sheriff of Kent County; Leelanau County Sheriff Michael Oltersdorf, and Jackson County Sheriff Daniel Heyns.

The association was established in 1877 to represent the state's 83 elected sheriffs and is the oldest law enforcement organization in Michigan.

Mackinac County was established in 1818.

Sheriff's Strait's staff is in charge of patrolling 651 miles of county roads, covering more than 1,000 square miles.

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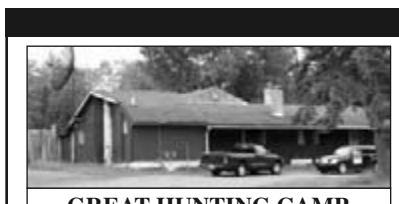

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