PERSPECTIVE

The Forgotten Fuel

HEATING A HOME OFTEN COMES DOWN TO CHOOSING BETWEEN OIL OR GAS. BUT THERE'S A BETTER, GREENER SOLUTION: WOOD. **BY ELIZABETH GEHRMAN**

When I finally finished the outrageously expensive gut-renovation of my two-family East Boston cape in 2004, I was surprised and grateful to hear that the boilers, at least, would keep sputtering away for a few more years without replacement. But my reprieve didn't last long, and last January I had to concede defeat when the tenants' unit went. Then, a few weeks later, as if grieving its lost friend, the one for my apartment died as well. I would have liked to go solar, but who has the time or money to deal with such a complicated task when it feels like 30 below as you step out of the shower in the morning?

If I had known then what I know now, though, I might have been able to assuage my guilt over my three-story home's Sasquatch-sized carbon footprint with relative ease using wood-pellet heating.

Wood pellets, made of compressed sawdust, can heat a house efficiently through either of two technologies: stoves or boilers. New Englanders are familiar with wood stoves, which cost about $2,500 to $4,000 to install. But few are aware of the huge environmental benefits stoves – particularly those fueled by pellets, which burn cleaner and more efficiently than cord wood – provide over oil and natural-gas heat.

Stoves account for the vast majority of pellet heating in the United States; but in Europe, a newer technology – pellet boilers – are used in about half of the wood-heated homes. Either way, the average 2,500-square-foot home requires about one 40-pound bag of pellets a day. With wood stoves, the homeowner dumps the pellets in manually; with boilers, you don't have to lift a finger. Once or twice a year, you get the pellets – four to six tons of them – delivered directly into what's called a flexible bag silo in your basement. The silo is five feet high and takes up about 30 square feet of storage space. It's similar to the old coal chutes your parents might remember. That space requirement is no small factor, and some homes can't be adapted for this system.

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Depending on the size of your house, how many heating zones you have, and the quality of the technology you choose (do you want the home-heating equivalent of a Saab or a Lamborghini?), pellet boilers can cost from $6,000 to $13,000. It's a little more than the cost to install traditional boilers, but the investment pays off after a few years. If I had gone with wood-pellet stoves or boilers instead of natural gas, for example, I would have saved 10 to 15 percent a year on my heating bills; those who use them to replace oil or propane heat save 50 percent.

Each of the half-dozen environmental groups I called thought heating with wood was a good idea, especially in New England, which uses more home-heating oil than any other region of the country. "The key points are that using wood for heat reduces dependence on fossil fuels," says Andy Finton, director of conservation science at the Massachusetts chapter of the Nature Conservancy. "And that reduces the carbon footprint of producing heat, and can also encourage forest landowners not to sell for development or other uses." The clearcutting that some worry about is mainly due to suburban sprawl, Finton maintains, adding that because pellets are made from compressed sawdust, they create a use for smaller parts of the tree, all the way down to the twigs.

Wood heat is considered carbon-neutral because it uses living plant matter. And since trees are one of New England's great natural, renewable resources (Maine and New Hampshire come in first and second nationwide in percent of forest cover per square mile), the environmental and financial costs of trucking the pellets to your home are a lot lower than they are to send you oil from the Middle East. Even counting the energy needed to manufacture the pellets and get them to you, they are much more eco-friendly than that highly touted alternative fuel, ethanol.

Aside from the initial cost and space considerations, the only drawback is that because wood-pellet stoves and boilers are 80 to 90 percent efficient, they don't provide the signature smell of winter in New England that comes from wood-burning fireplaces. But somehow I think I could have lived with that.

Elizabeth Gehrman writes the "On the Block" column for the Globe Magazine. *Send comments to magazine@globe.com.*

ILLUSTRATION BY RICH LILLASH