



Many Americans are bracing for high heating bills this year, but the frosty New England winter won't put a chill on Erik Fey and Kathleen Ruddy-Fey's energy budget. The Feys are one of many families reducing their costly household oil or gas dependence by turning to a traditional fuel with newfound popularity: wood.

The Feys first used a wood stove to supplement heat in their New Hampshire home, then migrated to sustainable wood pellets and have never looked back. "I was hooked immediately: no more wood piles, or chopping wood; no more wood critters crawling around inside, or wood debris scattered on the floor," Kathleen said. "And it made sense to use the leftovers from wood use and production. We were feeling very green about our decision."

The pellets burn better than firewood, too. "Pellets are much cleaner in terms of emissions," said John Ackerly of the Alliance for Green Heat, a nonprofit organization that advocates the use of high-efficiency wood for home heating. "They are a low-moisture, consistent, dense wood product. Wood can be variable, and when people burn wet wood in a stove they produce a lot of emissions. Wood can be very operator-dependent." (See related quiz: [What You Don't Know About Home Heating](#))

But perhaps the best green advantage for the Feys is the stack of cash they save on heating bills for their 250-year-old hipped roof colonial in rural New Boston, New Hampshire.

Just last week, Erik said, he had a discussion with his fuel-oil supplier about how little oil they use—less than one 275-gallon (1,040-liter) tank per year. At the going New Hampshire rate of \$3.75 a gallon, the family might spend just \$725 this year on oil. The six tons of pellets they feed into their stove each winter (at about \$213 a ton) add another \$1,280 for a total annual heat bill of only about \$2,000. "Our oil guy said that some people fill up five to six times per

year," Kathleen said. "If we filled our oil tank five times a year, that would cost about \$5,000."

Feeding the flames with 40-pound (18-kilogram) bags of pellets still takes a bit of work, the Feys report, but the payoff in savings—and comfort—is well worth the extra effort.

### Wood Heating Is Catching Fire

The Feys are not alone. So many American households are returning to the nation's original heating fuel—often in modern energy-saving pellet stoves—that the U.S. government's energy forecasters this month for the first time ever included an analysis of firewood and pellets in the annual Winter Fuels Outlook.

More than 20 percent of New England households that use heating oil also use wood as a source of heat, said U.S. Energy Information Administration (EIA) analyst Chip Berry. That number is about twice the national rate. New England happens to be the region of the United States that is most dependent on heating oil, which is now by far the most expensive home heating option.

Only 6 percent of U.S. households depend on heating oil, but 80 percent of them are in the Northeast—many of them in places with no pipeline connection to far cheaper natural gas, the heating fuel of choice for more than half of American homes. With the average U.S. household that uses heating oil expected to spend \$1,909 on fuel this winter, well over three times the forecast average price for home heating with natural gas (\$804), it's no wonder New Englanders are turning to wood. (See "With Record Heating Oil Prices Expected, Homes Dash to Gas")

About 38 percent of all U.S. households rely on electricity for keeping comfortable in winter, making it the nation's second most popular heating fuel. But its use is concentrated in the South, where there's far less need for winter heating. About 5 percent of homes rely on propane, which is typically delivered to homes in tanks, and is almost as expensive as heating oil.

Berry manages the EIA's Residential Energy Consumption Survey (RECS), which provides data

on how Americans heat their homes. According to the most recent (2009) data, Berry said, about 12 percent of American homes use wood, primarily as a secondary source of heat in homes that use heating oil or propane.

That EIA report notes that wood use has grown during the past decade after 20 years of steady decline during the 1980s and 1990s. "The results of the 2009 RECS show that wood is a significant source of heat in many U.S. homes, and wood consumption is almost as much as heating oil consumption," Berry said. "Given these facts, EIA felt it was important to begin noting wood as part of the Winter Fuels Outlook."

Colorado and the Pacific Northwest are other hotbeds of such wood use, according to the EIA. Other organizations confirm that the practice is growing. "The American Community Survey (U.S. Census Bureau) estimates that households using wood as a main source of heat increased from 1.87 million in 2005 to 2.47 million in 2011," EIA's Berry noted.

### Sometimes-Forgotten Fuel

Ackerly of the of the pro-wood Alliance for Green Heat said wood already is a major part of the rural energy mix that may be overlooked by some decision-makers based in cities like Washington, D.C.

"It's very close, but wood creates more BTUs [British thermal units] in America for home heating than propane does," Ackerly said. "And it's also very close to catching up to oil. In a couple of years, I think it will be producing more BTUs for home heating than fuel oil. At that point it would be the No. 3 fuel in terms of heat production."

Currently, wood produces 0.5 quadrillion BTU (quads) per year, propane 0.49 quads, and oil 0.6 quads, according to EIA statistics.

Not surprisingly, people who live in rural areas are far more likely to heat with wood. The EIA survey results show 22 percent of rural American homes burn wood for heat, compared to only 8 percent of their urban counterparts.

Many wood users simply burn firewood or wood scraps, and about half of them save money by cutting the wood themselves. Only about 6 percent of America's wood-burning households use pellets, according to EIA stats. But pellets have some environmental advantages over firewood, according to Ackerly, in addition to conveniences like those enjoyed by the Feys.

Cleaner-burning pellets are produced from waste products such as lumber mill sawdust, and chips or scraps left over from lumbering or tree thinning. "Trees aren't cut down specifically to make pellets," Ackerly explained, "although most firewood sources are mom-and-pop-type operations that use a lot of dead and fallen timber and generally harvest wood sustainably."

The EIA is forecasting winter 2012-13 oil and gas prices to be about the same as last year's. But because last winter was so mild in much of the country, consumers are likely to burn more fuel and can expect their oil or gas bills to increase an estimated 15 percent or more, according to the agency.

EIA doesn't currently offer such forecasting or other price information for wood products. Ackerly hopes that will change, particularly in light of the tough times ahead.

"It's such an affordable way to heat. It's a real benefit for the consumer if the government could include this information, because people are having to make some tough decisions, with oil prices going up," he said. "You don't want to exclude some of the most affordable fuels and also the most renewable heating fuels."