

## EXCERPT FROM

# The Washington Post

### Can One Household Save the Planet?

No, but the planet can't be saved without it.

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Sunday, February 15, 2009; Page W08

... I could tell from studying our bill that even though the [cost of running our] clothes dryer might be irrelevant in the grand scheme of things, the far greater cost, to us and the environment, comes from heating and cooling. The summer is when our electricity bill spikes. Our heat is also quite expensive; it's natural gas, which is cleaner than oil or coal but still a fossil fuel and often unpredictable in price.... [O]ur most recent monthly bill was around \$350, and it will get worse before it gets better. Our house was built in 1907, back when there was little or no wall insulation; the heating units in the old part of the house are radiators, which are great but idiosyncratic, each room its own microclimate.

In the inefficiency of our heating and cooling system, we may be extreme but are nonetheless characteristic. A number of reports show that heating and cooling are enormous national energy sucks, and major strides can be made by retrofitting and insulating buildings, both commercial and residential. "The average home is responsible for twice the greenhouse gas emissions than the average car, and that's because homes in this country typically rely on fossil fuel-based energy," says [a] spokeswoman for Energy Star.... [T]he EPA has devised an Energy Star rating for new homes, which tend to be more efficient anyway; the challenge is what to do about the vast stretches of hopeless older stock, like ours. This is where behavior modification is hardest: Dominion has concluded from focus groups that people are least likely to adopt changes with big upfront costs.

The investment starts with diagnostics. Many Web sites recommend, among their easy beginner steps, getting a free energy audit from your local utility. But this is easier said than done. Neither Dominion nor Washington Gas nor Arlington County routinely provides free residential energy audits. The Maryland Energy Administration does maintain a list of trained and certified energy auditors, so I hired one of them, **Michael Whelan**, a genial architect who runs a Chevy Chase, Md., company called **Live Green**, to come over and, for \$400, tell me just how bad our home was.

"I can feel the drafts in this house," said **Whelan**, who went around closing windows, an embarrassing number of which weren't closed properly. "You'll save a lot of energy if you close your windows," he said tactfully. His final report would show that among other things, we would do well to address air leaks in the attic and basement, something that would be true for many homeowners, since it's usually more effective to make improvements to your shell before you invest in new heating and cooling equipment.

And our house leaked badly. **Whelan** performed a blower door test, which blows air out of the house and then allows him to see where the house is sucking air back in. The answer: pretty much everywhere. After saying, "Wow" and, "Oh, gosh," quite a bit, he took the data back and ran it, to find that our house uses 2 1/2 times the energy of the average home to heat and cool.

Our house was far worse than the online carbon calculators had figured. It was horrifying, and clarifying, and not really a surprise.... So, no shiny new hybrid [not necessarily the best answer to green energy-efficiency]; what money we have left after the financial collapse will probably go to sealing air leaks and weather-stripping doors and windows, getting a new air conditioning unit and installing cellulose insulation made from recycled newspapers. It was reassuring to know that newspapers are still good for something....