



Jimmy Eavers lives in Pulaski and makes about \$900/month. Last winter his electric bills sometimes took 1/3 of his income. He was still cold. His house has no insulation.

When he called us, I knew we could help. There are some great assistance programs in Southwest Virginia like the Community Alliance for Energy Efficiency. With our expertise in building science, next year Mr. Eavers won't have to be cold.



40

Buildings in the U.S. consume 40% of all mined resources. A lot of this is pure waste. Numbers like these are the reason our company is here today. Because we can do something about it.

We bring together design and energy efficiency to enhance functional, aesthetic and market value of homes and workplaces. We provide a range of building performance services to create strategic, cost-effective, custom solutions for residential and commercial clientele.



We take our commitment to the environment so seriously, we built a company around it. That commitment means we can help Mr. Eavers. But guess which word we decided NOT to use in our mission statement?



Building Science

To make buildings sustainable (ahem!) I mean to make buildings more efficient, safer and more comfortable, we rely on building science. Building Science isn't rocket science! But we do use the same tools to look at facts and predict verifiable, measurable results.



70

We like numbers. Numbers don't lie. Here's a nice one: 70%. That's how much of the electricity produced in our country is consumed by – you guessed it – buildings. An amazing amount is wasted.



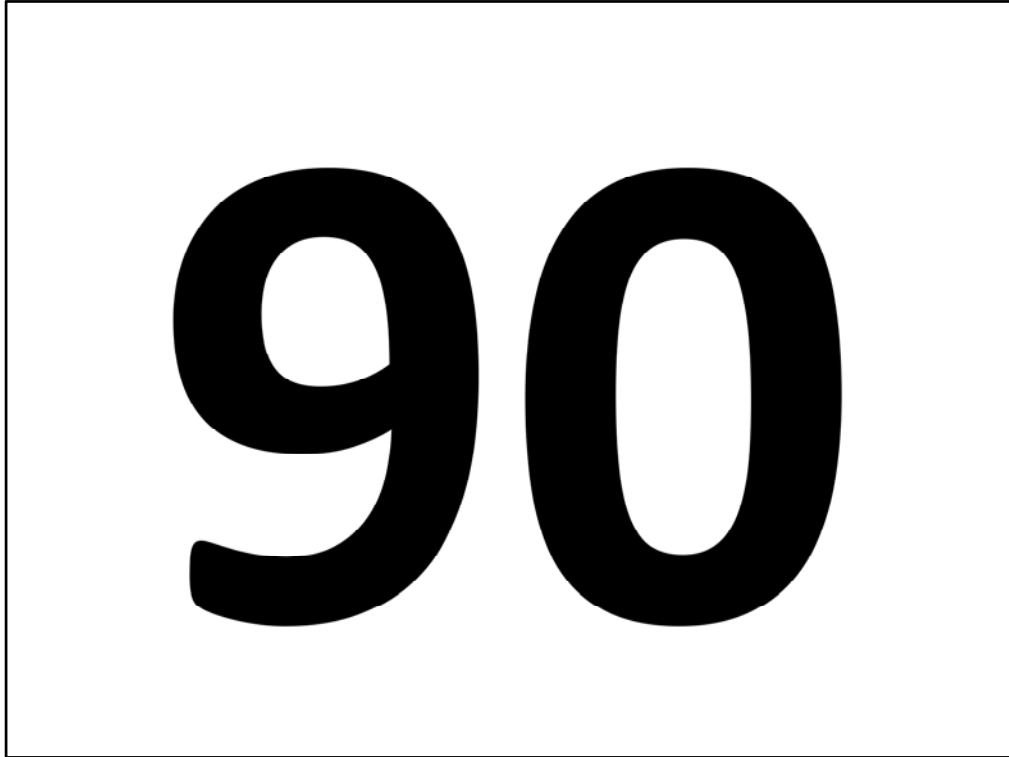
Here's a snapshot of the 'stack effect'. It robs buildings of the cooled and heated air that electricity and gas helps us create. As heat rises, cold air is brought in from the bottom of the building. So is mold. And moisture. And all of the icky stuff in the crawlspace. If you have combustion appliances in the basement, Carbon Monoxide can be sucked up into the house, too. There's more to it, but consider this:



Uncontrolled air movement into and out of building is chaotic. Building science gives us the tools we need to diagnose problems and create the best possible solutions (the ones that work). The goal is to make order out of that chaos and control the air that enters and leaves the building.



We love buildings. And we care about the people who live and work there. And Tiger, too.



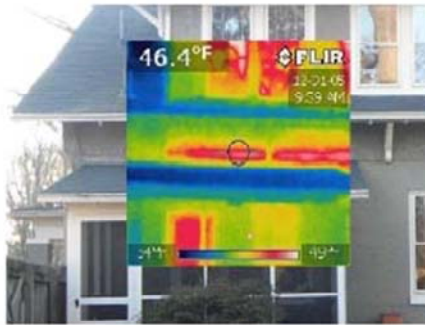
90

We spend, on average, 90% of our time **INSIDE** of our buildings. Older folks and babies might spend 99% of their time inside. And yet, because of uncontrolled airflow, our buildings don't just waste energy, they can make us sick.



The stack effect costs money. Controlling the stack effect is an investment that pays back every month. For twenty years or more! (and it's probably NOT your windows).

“The earth belongs to each of these generations during its course, fully and in its own right. The second generation receives it clear of the debts and encumbrances of the first, the third of the second, and so on. For if the first could charge it with a debt, then the earth would belong to the dead and not to the living generation. Then, no generation can contract debts greater than may be paid during the course of its own existence.”



-Thomas Jefferson

I like this juxtaposition of the way waste doesn't affect just our house, but future generations. This infrared image shows some of the places where heat is escaping a home through areas that are improperly air sealed and insulated. I wonder what Thomas Jefferson would think about this image.



20

Good news: The average yearly return on investment for properly conducted energy efficiency upgrades is about 20%. And we've seen buildings where this can be much higher – especially for commercial clients who pay the highest electricity rates!



The 2009 Energy Code (that guides current, new construction), requires programmable thermostats. But only 10% of our building stock is new each decade. This is a simple and effective upgrade for existing buildings, too! (As long as they are actually programmed, that is;)

But while you're at it, we'll seal your ducts, as well. Most homes duct systems leak 30% or more of the conditioned air into attics or other places before it even gets to the rooms. The story gets worse: 30% duct leakage translates to more than 50% loss of equipment efficiency. Yikes!



600,000,000

The Department of Energy knows that waste costs money. That's why the 2009 energy code also requires that at least 50% of all lights are energy efficient for new construction. If every existing household in America replaced just one incandescent light bulb with an equivalent cfl bulb, we would save 600 million dollars a year!



"I can still hear the wind. But I can't feel it anymore!"

– Lennox McNeary, Mom, Doctor,
and Better Building Works Client



Better Building Works™
Energy & Design Consultants

So, do it for the money. But there are more reasons to be happy once you did. Just call it '*sustainability*'.

Give us a call or email so we can help you, too.

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