CHRISTIAN BUILDING INSPECTORS INCORPORATED ®

Home Tips®

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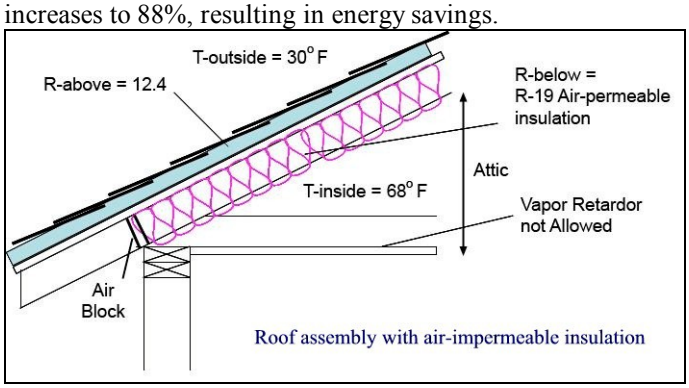
Q & A

Unvented Attics?

We've been hearing a lot about unvented attics. How does this work and does it really save money?

The concept of building attics as conditioned, unvented spaces has grown in acceptance in recent years, and this construction method has been advocated by the U.S. Department of Energy's Building America program. A principal benefit of conditioned attics is that ductwork located in the attic is not exposed to extreme conditions.

With ducts inside the conditioned space, energy loss from leaks and heat conduction from the ducts is much less severe. The 2006 International Energy Conservation Code® specifies a default efficiency of 80% for forced-air systems, if ducts are located in an unconditioned attic. Where the distribution system is run entirely in conditioned space, such as a conditioned attic, the default distribution system efficiency increases to 88%, resulting in energy savings.



A new set of requirements allowing unvented, conditioned attic assemblies is contained in Section R806.4 of the 2006 International Residential Code® (IRC). The 2006 IRC requires that the surface under the roof deck, where moisture would condense, be maintained above 45°F on average during the coldest month. The 2007 Supplement of the IRC simplifies this by specifying the insulation levels that will maintain this temperature.

The IRC requires air-impermeable insulation to prevent moisture reaching the underside of the roof deck in all but climate zones 2Band 3B. If air-permeable insulation is used in the exempt zones, rigid board insulation may be needed above the structural roof sheathing to keep the underside of the roof deck above 45°F for the coldest month.

The IRC prohibits the use of a vapor retarder between the conditioned attic and the top-story ceiling of the house so that any moisture that does collect in the attic can escape into the house. A final requirement is that if wood shingles or shakes are used, they must be separated by a ¼-inch air space from the roofing felt over the structural sheathing.

For more information, see the Code Note, Conditioned Attics, at http://resourcecenter.pnl.gov/cocoon/morf/ResourceCenter/article/1520

For the full requirements of the 2007 Supplement for the IRC, See Section R806.4 of the code http://www.iccsafe.org/cs/codes/2007-08cycle/2007Supplement/IRC07S.pdf

Source: U.S. Department of Energy's *Setting the Standard* newsletter.

Heating Bill Out Of Sight?

Our heating bills have been going up every winter. What can we do to cut down some of the cost?

The typical U.S. family spends $1,300 a year on home energy bills, and some of that energy is wasted. Heating, ventilating and air conditioning units are inefficient, windows leak conditioned air, and appliances devour energy.

This is money out of your pocket, and it's bad news for the environment—electricity generated by fossil fuels for a single home puts more carbon dioxide into the air than two average cars.

The Good News?

Well, maybe using so much energy—especially in the form of fossil fuels—is going out of style. Homeowners and renters know that saving energy means saving money, and they're realizing that it does not mean sacrificing functionality. There are many things you can do to save energy, ranging from long-term investments to simple no- or low-cost changes. In fact, simple adjustments—like letting your dishes air dry—add up to significant savings.

Looking for long-term savings? Because we use-and waste-energy in so many ways, there are plenty of options for cutting back. If you replace 25% of your lights in high-use areas with fluorescents, you can save about 50% of your lighting energy bill. In the market for a new appliance? Invest a little extra money in an energy-efficient product and save more money in the long run. If you're building an addition to your home, double-paned windows and proper insulation will reduce your heating and cooling costs, and strategically placed windows will provide daylighting. From water heating to landscaping, most areas of your home offer opportunities to save.

But we will always need energy, and that's why many homeowners are turning to renewable energy sources for a cleaner, more sustainable choice. This can mean investing in solar panels to supply your home's electricity or purchasing a solar water heater. It can also mean installing ground source heat pumps that use the heat of the earth to moderate the

temperature of your home. In many areas, utility companies offer clean energy options such as wind power.

And that's not all. While you're at the business of saving money, you'll help reduce dependence on fossil fuels, which increases domestic security. You'll also help the environment. In 2000, residences accounted for 20% of U.S. energy-related carbon dioxide emissions—that's 313.4 million metric tons of carbon dioxide. Saving energy also goes hand in hand with other sustainable choices, like saving water and using more friendly materials and products, like paint, carpet, and cleaners. This is good news for the environment, but it also improves the health of your home, so you can breathe easy.

So, where to start? A home energy audit will help you determine what changes will save the most energy and money. The web site at http://www1.eere.energy.gov/consumer/tips/ is full of useful tips for saving energy, and http://hes.lbl.gov/ allows you to plug in specific information about your home to find out where you have the most potential for savings.

By now, chances are you've come up with a much better way to spend your money than sending it out your single-paned window. A college savings fund, perhaps, or a water-saving clothes washer? Or how about that vacation you've been dreaming about?

Source: U.S. Department of Energy's *Energy Solutions for Your Building*.

If you have a question, comment or home tip, email us at rodharrison@christianbuildinginspectors.com.

You Spoke, We Listened....

Due to popular demand we are adding back to our list of services both Radon and Mold Screening. Radon is $175.00 and tested with a Sun Nuclear Radon Monitor which takes a continuous reading. Mold pricing will vary.

Due To The Increase In Distribution Cost, We Have Discontinued The Delivery Of Home Tips To Your Office. To Receive Them By Email, Just Drop Us A Note At: RodHarrison@ ChristianBuildingInspectors.com.

Quote Of The Month

"SECURITY IS MOSTLY A SUPERSTITION. IT DOES NOT EXIST IN NATURE, NOR DO THE CHILDREN OF MEN AS A WHOLE EXPERIENCE IT. AVOIDING DANGER IS NO SAFER IN THE LONG RUN THAN OUTRIGHT EXPOSURE. LIFE IS EITHER A DARING ADVENTURE OR NOTHING."

HELEN KELLER

A Tip Of The Hat To:

Patrick Nicholson
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Thank You

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