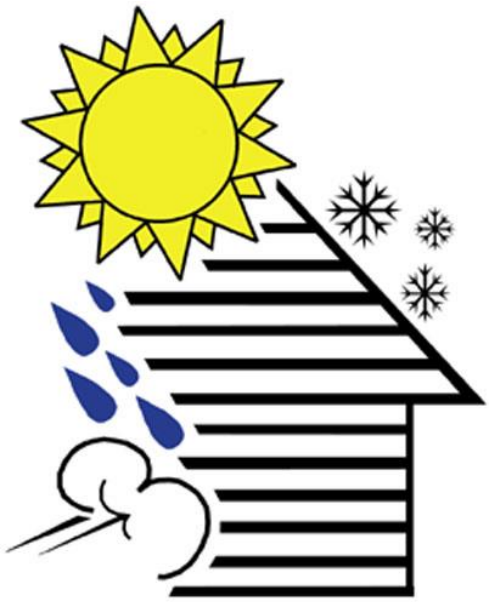
Sealing & Insulating Your Home

South Durham Green Neighbors

This is the third in a series on taking larger steps toward sustainability. You know yourself best. What would it take to get yourself to seal and insulate your home?

Will this really make a difference?

Yes! In our area, sealing and insulating the home can save 17% of the energy you use to heat and cool houses built 1970-1989 according to the federal Energy Star program. This should also make your home more comfortable by making heating and cooling more even throughout your home and by helping reduce allergens.



Motivating Yourself

What will help you stay the course and complete this project?

Is it knowing you'll be helping the environment? Heating, cooling, and ventilation account for the largest amount of end-use energy consumption in homes. Sealing and insulation can reduce your home's total carbon footprint by 12%.

How about the money saved in energy bills? Think about what you can do with the money. Will you put it toward paying off debt or perhaps save it for retirement? You may qualify for rebates from Duke Energy for sealing and insulation for your attic (up to $250) or ductwork (up to $175). See details at http://tinyurl.com/DukeSeal. Or if your household qualifies for the federal Weatherization Assistance Program, you may get valuable improvements for free. (See below.)

Do you or a loved one have allergies? Sealing the home can help control where your air is coming from. Your health may be suffering if leaky air ducts draw moldy air from a crawl space or unconditioned basement. In addition to decreasing the amount of pollen, dust and insects entering your home, sealing your house should improve humidity control and possibly reduce noise from outside.

Carrying Out the Plan

Unsure about what might really be needed? Consider getting an energy audit from either PSNC or Duke Energy. Details about Duke Energy's free home energy assessment are at http://tinyurl.com/EnergyHouseCall.

The PSNC in-home energy audit (for their customers in houses built before 4/15/1993) costs $25 and uses a blower door for a more accurate assessment. (http://tinyurl.com/PSNCInHome)

The Weatherization Assistance Program, now run out of an office in Raleigh, gives priority to low income homes with seniors, the disabled, or families with young children. Qualifying households will not only get an energy assessment with a blower door, but may get actual work done for free. Depending on the results of the assessment, this might include sealing, insulation, and repair and tune-up of heating and cooling systems. Learn more at http://resourcesforseniors.com/weather.php. (Despite the name of the site, this program includes assistance to qualifying households without seniors.)

Where to start? Sealing and insulating the attic usually gives the biggest bang for the buck. If you have storm windows, buying new windows is not the most effective way to save energy in North Carolina despite what salesmen might say.

Please note, to avoid a chimney effect inside your interior walls, plan on sealing the tops of them before you add insulation to your attic. Adding to all the insulation you need to dig through to reach the tops of walls is just making the work harder. If sealing the tops of walls is not possible, be sure to seal outlets and light switches.

Are you a do-it-yourselfer? If not, you can go straight to the section below on contractors. If you are not sure whether you want to tackle the attic or other areas yourself, check out the links at http://tinyurl.com/Seal-Insulate. This EnergyStar website provides important safety information like checking for asbestos or old wiring. It also covers other factors that might make hiring a professional a good idea.

Want to do it all yourself? After checking the safety information, take a look at A Do-It-Yourself Guide to Sealing and Insulating with EnergyStar at http://tinyurl.com/DIYsealing-insulating. This guide provides many how-to details. Or you can go to http://tinyurl.com/HowToSeal.

Need help finding a contractor? If you you'd rather have someone else tackle the job, you can find tips on working with a contractor at http://tinyurl.com/EnergyContr. And don't forget to ask your friends and neighbors for recommendations.

Getting a good carbon monoxide monitor Once your house is sealed, it becomes even more important to have a good carbon monoxide monitor with a battery backup. The Occupational Safety and Health Administration says the air of enclosed spaces (such as a home) should be maintained at not more than 50 parts per million as an eight hour average. Be sure your monitor can measure down to that level.

So, what's your plan?

References

Duke Energy. (n.d.). Home Energy House Call. Retrieved from http://www.duke-energy.com/north-carolina/savings/home-energy-house-call.asp = http://tinyurl.com/EnergyHouseCall

Duke Energy. (n.d.). Insulate and Seal. Retrieved from http://www.duke-energy.com/north-carolina/savings/insulate-seal.asp?utm_source=google&utm_medium=cpc&utm_campaign=Seal = http://tinyurl.com/DukeSeal

PSNC Energy. (n.d.). In-Home Energy Audit. Retrieved from https://www.psncenergy.com/for-my-home/save-energy-and-money/in-home-energy-audit = http://tinyurl.com/PSNCInHome

United States Environmental Protection Agency. (2007). A Do-It-Yourself Guide to Sealing and Insulating with ENERGY STAR. Retrieved from http://www.energystar.gov/ia/partners/publications/pubdocs/DIY_Guide_May_2008.pdf?7be4-c748 = http://tinyurl.com/DIYsealing-insulating

United States Environmental Protection Agency. (n.d.). A Do-It-Yourself Guide to Sealing and Insulating with ENERGY STAR. Retrieved from http://www.energystar.gov/index.cfm?c=diy.diy_index = http://tinyurl.com/HowToSeal

United States Environmental Protection Agency. (n.d.). Methodology for Estimated Energy Savings from Cost-Effective Air Sealing and Insulating. Retrieved from https://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_methodology

United States Environmental Protection Agency. (n.d.). Recommendations for Finding a Contractor. Retrieved from http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_contractors = http://tinyurl.com/EnergyContr

United States Environmental Protection Agency. (n.d.). Why Seal & Insulate. Retrieved from http://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_sealing = http://tinyurl.com/Seal-Insulate

Resources for Seniors. (2009). Weatherize your home for free. Retrieved from http://resourcesforseniors.com/weather.php (and confirmed by phone)