

Green Retrofitting

Being budget-conscious about home improvements often translates to being planet-conscious. >>By Donna Andrews Russell

Waste Not, Pay Not



Contractor Steve Thompson in an attic insulated with Icynene foam.

With winter just a couple of preparatory months away, it's once again time to consider what you might do to lower your cold-weather heating bills. *Louisville Magazine* asked two remodelers — Steve Thompson of Full Spectrum Construction and Ron Petaja of Petaja Builders — for their best advice on improving energy efficiency in older homes. Both are sponsors of the organization Energy Pros of Louisville, which offers free “greenovation” seminars to teach the public about energy-saving retrofits. Thompson is also a former environmental scientist and has earned the National Association of Home Builders’ Certified Green Professional designation.

Get a Home Energy Rating

Replacement windows, insulation, geothermal

heat, caulk-and-seal packages, LED lighting, solar hot water. With all the energy-saving products out there, which ones offer the biggest bang for your buck? The best way to find out is to have your home tested by professionals, says Thompson, noting, “They’ll give you a good course of action and a ballpark on your return on investment.”

LG&E has been offering a very basic Residential Energy Audit for several years. At \$25, “it’s a heck of a deal,” says program manager Ken Slattery. Expanded earlier this year, the two- to three-hour audit now includes a blower-door test for air leakage as well as basic retrofits to seal the most accessible leaks and insulate hot-water tanks and pipes. “We’re still warming up on the tightening up” aspects of the program, Slattery observes. Customers

also receive compact fluorescent bulbs, water restrictors to cut down on water use and a personalized report “showing the quickest payback items you can pursue” to save energy, says Slattery. To sign up, call (800) 356-5467 or register online at www.eon-us.com. Waiting time from sign-up to audit was about three weeks in August, though “if we have a cold snap, the waits will get longer,” he says.

Consultants such as Eric George of Building Performance Group provide much more accurate home-energy ratings using the EPA-approved Home Energy Rating System (HERS). The cost starts at \$450, depending on home size. In addition to blower-door testing, Building Performance Group tests for duct leakage and uses infrared cameras to pinpoint leakage on windy days, says George. Home-owners receive a computer report created with REM/Rate software that identifies the most cost-effective home improvements.

Insulate Your Attic and Basement

The five places where homes lose the most energy are “the roof, windows, doors, walls and floors,” says Petaja. The reason is the “stack effect” — hot air rises and escapes, lowering the pressure at the base of the house and pulling cold air indoors.

That’s why both Petaja and Thompson say the first place to start saving is the attic. Insulation can be placed on the roof deck — a good choice where space permits and heating and air-conditioning units are located in the attic — or on the floor. Both prefer sprayed-in foam to other types of insulation because it gets into every crack and crevice and offers fringe benefits, as well, such as increased comfort, sound reduction and, Thompson says, even less-frequent piano tuning.

Petaja’s other major recommendation: Insulate the band board or basement crawl space, which can account for 25 percent or more of heat loss. The cheapest route: Caulk and seal the floor joist spaces with Styrofoam insulation.

Other Advice

- Renovations, additions and even re-roofing offer opportunities to perform energy retrofits cost-effectively.
- Custom-made replacement windows, particularly for historic homes, can have one of the longest paybacks of all energy-saving retrofits.
- Insulate and seal before you buy a new furnace or air conditioner and you may be able to downsize your unit.
- Take advantage of current federal tax credits for energy retrofits. For a full listing, visit www.energystar.com