

GREEN TEAM TASK

Seal Large Air Leaks

Task: Stop air leaks with caulking, foam and weather-stripping.

A house with thermal leakage is like a ship with a small hole in the bottom. Some might decide to ignore the hole and instead bail a little every morning, but the wise person realizes that laboring a little bit every day will eventually waste more energy than putting in one day of work. (<http://planetgreen.discovery.com/home-garden/sealing-thermal-envelope.html>)

Advanced: Improve insulation, windows, or other problem area in your home.

Tips for sealing air leaks: *Note: for comprehensive advice on sealing air leaks, please see http://www.energysavers.gov/your_home/insulation_airsealing/index.cfm/mytopic=11240 and follow the links for detecting air leaks, caulking, weatherstripping, etc. Also see http://www1.eere.energy.gov/consumer/tips/air_leaks.html*

The most common places for air leaks are around doors and windows, but leaks can also be found around chimneys, recessed lights and light fixtures, attic entrances, electric wires and boxes, vents and fans, plumbing utilities, water and furnace flues, and electrical outlets.

Walk around the exterior and look closely at doors, windows, and places where pipes and wires enter your house. Large gaps can be filled with expanding foam (recommended: Great Stuff for Windows and Doors -- it won't expand quite as much as regular Great Stuff). Caulk is best for cracks and gaps less than ¼" wide. A bead of caulk will stop air flow, but does not insulate.

Inside, use a stick of incense on a windy day to detect places where air is getting through. Check around windows and doors, and also around can lights in the ceiling. Caulk around windows. If doors are leaky, check to see if weather stripping is worn. Replace it with the same kind: note the make and model of the door, if possible, and/or take a sample of the existing weather stripping along with you to your local hardware store. Note that the press-on foam weather stripping available everywhere will wear out quickly and need to be replaced often.

What else you can do:

Make foam boxes to cover attic stairs, whole-house fans, and other large openings to the attic.

Install a chimney pillow or other device to stop air flowing in and out of your chimney when fireplace is not in use. (<http://www.chimneyballoon.us/chimneyballoon.html>)

The U.S. Department of Energy estimates that air leakage can add 10 percent to your annual energy bill. This equates to about \$70 per year for the average home.