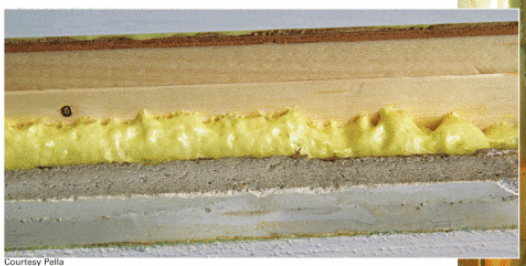
Follow this comprehensive checklist to assess your home's "greenness" and determine areas for improvement



Courtesy Pella

Courtesy Cherokee Investment Partners

Give your home an Eco-Audit

by Deborah Huso

ABOVE: An eco-audit might reveal the need to seal gaps around windows and insulate your attic.

OPPOSITE: If you must water your lawn, you can reduce water usage by installing an in-ground sprinkler system with a timer.

You've probably heard about energy audits. Many firms offer them to help homeowners cut down on energy usage and save money. But have you considered giving your home an eco-audit, which can help you determine its level of greenness?

"An eco-audit is more expansive than an energy audit," explains Diane Dandeneau, co-founder and executive director of the Boulder-based Green Heart Institute, an organization that teaches homeowners about sustainable living practices. "An energy audit focuses on the technical aspects of a building, while an eco-audit deals with how you live."

While eco-audits are becoming popular in the United Kingdom, they haven't really taken off in the United States and Canada yet. But they can be beneficial in a number of ways, since they will not only provide an indication of the size of your home's overall environmental footprint, but can also help you save money.

This, according to Dandeneau, often inspires action. She notes that 30 families for whom the Green Heart Institute recently provided eco-audits and action plans collectively saved 16 percent on energy bills over the course of five months by making their homes and their lives more eco-friendly.

Generally, an eco-audit focuses on four aspects of a home: energy conservation, water conservation, healthy living practices and green living practices. Homeowners can examine each area in

detail to determine how best to make a home more eco-friendly. Some fixes will be fairly simple and inexpensive, such as implementing a home recycling program. Others can be more time consuming and costly. However, these more extensive fixes can also reap bigger benefits, because they have a larger impact on the environment.

For instance, a home's heating and cooling system, as well as air infiltration through the building envelope, have the biggest impact on a home's eco-friendliness, says Terry Logee, technology development manager with the U.S. Department of Energy, so improvements in these areas will yield big results.

Some organizations, such as the Green Heart Institute, can provide a trained eco-auditor, who can assess your home and make suggestions for improvement. But you don't necessarily have to hire an expert. By following the comprehensive checklist on the pages that follow and evaluating your home carefully, you can take the first step in making your home more eco-friendly.

Start simple and work up to the more difficult tasks. But keep in mind that with every step you take and every improvement you make, you'll be helping to preserve our natural resources and decrease your home's environmental footprint.

1 Energy Conservation

• Check the air filters in your HVAC (heating, ventilation and air conditioning) system. Dirty filters can substantially cut down on the unit's efficiency. Check and/or clean the filters at least once a month.

• If your home's HVAC system is 10 years or older, you might benefit from replacing it with a more energy-efficient model. Heating and cooling accounts for as much as one-third to one-half of your home's total energy usage.

• Is your home's attic insulated and sealed? You can lose a lot of warmth and cool conditioned air through the roof.

• Have you sealed up the space between your home's foundation and cladding? This is an often-overlooked area for air leaks.

• Is air infiltrating around your home's windows? If so, you may need to replace them with energy-efficient models. If purchasing replacement windows is beyond your budget, consider installing low-E storm windows. You also can reduce air infiltration by sealing gaps around windows with caulk or foam, or hanging heavy curtains or shades inside the windows.

• If drafts are coming in around electrical outlets and switches, you've got a leaky

Some fixes will be fairly simple and inexpensive, while others can be more time consuming and costly.

iStockphoto


iStockphoto

ABOVE: Composting organic household waste like food scraps will divert those materials from landfills and create nutrient-rich humus for your gardens.

RIGHT: Reflective, waterproof membranes can reduce air infiltration through your home's building envelope.

OPPOSITE: Replacing old appliances with new Energy Star models will help conserve energy.

wall. Pull out the electrical boxes and insulate behind them.

• Check for old weather stripping and caulk around exterior trim, doors and windows. Replace it where it's deteriorating.

• Replace old appliances with new Energy Star models. If you can't afford new appliances, make sure you wash clothes and dishes only with full loads to cut down on multiple washings. Also, don't use hot water to wash you clothes. Here's another tip: Keep your refrigerator and freezer full as much as possible, as they run more efficiently this way.

• Replace incandescent light bulbs with compact fluorescent lamps (CFLs). They cost more than traditional bulbs, but they last five to 10 times longer and will save as much as 30 percent on your electric bill over the long-term, when compared to incandescents. Look for newer low-mercury CFLs.

• Invest in a programmable thermostat, which will automatically adjust the temperature of your home when you're away or sleeping. At the very least, set the thermostat at 70 degrees or lower in winter and layer your clothing when you're inside.

• Turn off lights, televisions, computers and small appliances when not in use.

• Check to see if your utility offers a "smart" electric meter, which will enable you to monitor your energy usage via the Internet (or in some cases via an in-house wireless readout), so you can manage it better. For instance, you can determine when best to run or switch off large appliances and other energy-hungry devices, since energy prices fluctuate during the day. As an alternative, you can use devices such as the Kill A Watt (**www.p3international.com**) to monitor the energy usage of appliances and electrical devices.

• Take advantage of the sun. Use the natural light from south-facing windows to illuminate living spaces and provide warmth during winter days. In summer, make sure west-facing windows are shaded to block the sun's heat.

• During the winter, cover wall- or window-mounted air conditioners, so cold air can't infiltrate the home.

• Schedule a blower door test to determine just how much air leakage is occurring in your home.

• Make sure your water heater is insulated, especially if it is located in an unconditioned space. Also, insulate hot water pipes in unconditioned spaces.

• Lower the temperature of your hot water heater as much as possible while still ensuring your family's comfort. About 120 degrees is usually optimal.

• Buy locally whenever possible, whether you're purchasing building materials or vegetables. The farther products have to travel to get to you, the more fuel and energy is consumed.


Courtesy DuPont

2 Water Conservation

• Install low-flow showerheads and toilets throughout your home.

• Check for leaky toilets by putting food coloring in each tank. If you see the dye in the bowl, you've got a leak. You can save up to 15 gallons of

water a day by fixing any leaks you find.

• Use native plants and grasses for landscaping, since they require less water.

• If you must water the lawn, install an in-ground sprinkler system on a timer and set it to water early in the morning or in the evening, so the water doesn't have a chance to evaporate.

• Set up a system to collect rainwater, which you can use for irrigating your lawn and garden. This can be as simple as providing a way for your gutter system to empty into a barrel or cistern.

3 Healthy Living

• Don't overseal your home. Ventilation is necessary for air quality, so don't get into a caulking frenzy and seal underneath lap siding, for example (unless there are really large gaps). Make sure your attic and crawlspaces are well ventilated to prevent moisture build-up and mold formation.

• Use environmentally friendly cleaning products. White vinegar and baking soda, for example, can do wonders for cleaning and removing stains.

• Keep lots of house plants around your home, as they help remove toxins and clean the air.

• If you're planning any redecorating projects, be sure to use paints and stains that emit low or no VOCs (volatile organic compounds). In addition, many types of materials for the home, such as carpets, cabinets, plywood and OSB (oriented strand board), can contain harmful formaldehyde-based adhesives. If you're building new or replacing any of these items, seek out healthier options and look for the Greenguard label.

Some organizations can provide a trained eco-auditor, but you don't necessarily have to hire an expert.

4 Green Living

• If you're not recycling, start separating out your glass, plastic, paper and other recyclables.

• Compost organic household waste like food scraps to reduce the amount of material going into landfills and create nutrient-rich humus for your gardens.

• If you're remodeling or building, buy locally harvested wood or use lumber certified by the Forest Stewardship Council. FSC certification means the wood has come from sustainably harvested forests.

• When possible, use building materials made from recycled products. This might include kitchen countertops made with recycled glass or carpet made from recycled carpet fibers, for instance.

• Remember that transportation is a big consumer of energy. Carpool or use the public transportation system whenever possible. If your office is close by, ride a bike or walk to work. You'll not only be helping the planet, but you'll feel better as well.

Deborah R. Huso is a freelance writer whose articles have appeared in Old House Journal, Country Home *and* Remodeling Magazine. *She's based in Blue Grass, Va.*

Courtesy Whirlpool