HOUSEHOLD ENERGY SAVINGS SERIES

HOUSING & ENVIRONMENT

SAVING ENERGY IN YOUR OLDER HOME

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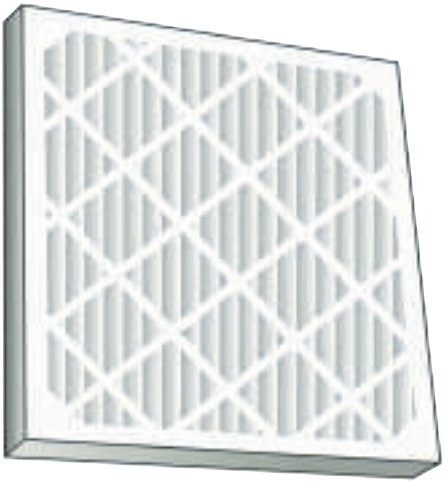
PLEATED PANEL AIR FILTER



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COOPERATIVE EXTENSION
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Some older homes are not energy-efficient, causing the residents to suffer higher energy bills and lower comfort levels. However, you can take steps to improve efficiency, safety and comfort in your older home.

ELECTRICAL SAFETY FOR OLDER HOMES

1. Ensure that the wiring in your older home is safe by having a licensed electrical inspector or electrician inspect it.

- To help prevent fires, consider installing arc fault circuit interrupters (AFCIs) on general-purpose circuits, especially on circuits for bedrooms. New homes are required to have AFCI's for bedroom circuits. Many older homes have a fuse box instead of a breaker panel; unfortunately, AFCI's cannot be installed on fuse boxes or on older breaker panels that are incompatible with new AFCI's. Therefore, you may have to replace the fuse box or breaker panel with a new breaker panel. However, the safety benefits are worth the expense.
- If your house (or an addition to your house) was built between 1965 and 1974, it may have aluminum wiring, which can be a fire hazard. You can have an electrician perform certain measures (short of replacing all of the wiring) that can make your house safer. For more information, read the Electrical Safety Foundation International's publication *Repairing Aluminum Wiring*. *

2. Take advantage of your home's current energy-saving features.

Most older homes were designed to be comfortable without air conditioning. Some of the features that make many older homes comfortable with limited energy use include awnings and eaves that block direct sunlight, high ceilings that allow warm air to rise, windows placed strategically for cross ventilation, and mature, shady landscaping.

3. Request an energy audit from your power company.

Before undertaking major energy savings measures, you should assess your home to achieve the best results for the least amount of money and time.

- Many power companies offer their customers free or discounted in-home energy audits. Contact your electricity provider for more information.
- For a more comprehensive energy audit consider paying for a home energy rating system (HERS) audit. A HERS rating can also help to secure an Energy Efficiency Mortgage (EEM) that can help pay for improvements.

4. Limit air-infiltration and weatherize your home.

Older houses may be drafty. You can reduce drafts by sealing up unwanted infiltration points. You can use an incense stick to check areas around doors, windows, fireplaces, skylights, and under cabinets to check for drafts. If the smoke begins to travel horizontally, you have found a leak. Cold, windy days are especially good times to look for air leaks.

- Seal leaks in the ductwork; ductwork is often a major source of leakage.
- Seal holes in the attic with a rigid material (such as foam board, sheet metal, or plywood). Seal seams with caulk or expanding foam. Seal the attic access panel or stairway with an airtight, insulated cover.
- Seal gaps and cracks around windows, doors, pipes, and other entry points. Use silicone caulk or spray foam rated for those applications.
- Apply weatherstripping to windows and doors.
- Close the flue damper when you are not using the fireplace.

Sources:
"A Consumers' Guide to Energy Efficiency: Space Heating and Cooling," U.S. Department of Energy, http://www.eere.energy.gov/consumerinfo/factsheets/air-cond.html.

"Energy Savers: Tips on Saving Energy and Money at Home," U.S. Department of Energy, http://www.eere.energy.gov/consumer/tips

"Indoor Electrical Safety Check," Electrical Safety Foundation International, http://www.esfi.org/esfilib/indoorsafety.pdf.

"Home Performance with Energy Star,," Southface, http://www.southface.org/web/resources&services/restech/hpes/sf-home-performance-ES.htm.

"Insulation Fact Sheet," Oak Ridge National Laboratory, http://www.ornl.gov/sci/roofs+walls/insulation.

"Preservation Brief 3: Conserving Energy in Historic Buildings," U.S. Department of the Interior, http://www.cr.nps.gov/hps/tps/briefs/presbhom.htm.

*"Repairing Aluminum Wiring," Electrical Safety Foundation International, http://www.electrical-safety.org/esfilib/documents/AlumWiring516Repair.pdf

"Right-Size Heating and Cooling Equipment," U.S. Department of Energy, http://www.southface.org/web/resources&services/publications/technical_bulletins/RS-Right-size_HVAC%2002-1490.pdf.

"Verification of ENERGY STAR Qualified New Homes," U.S. Environmental Protection Agency (EPA), http://www.energystar.gov/index.cfm?c=new_homes.hm_verification.

"Heat and Cool Smartly," U.S. EPA, http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac.

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April 2006 - HACE-E-60-03
Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, The University of Georgia Cooperative Extension and the U.S. Department of Agriculture cooperating.
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Funding for this publication provided by the ***Georgia Environmental Facilities Authority****.*

5. Add insulation to the attic.
The attic is the most cost-effective and easiest place to add insulation. Most Georgia homes should have attic insulation with an R-Value of R-49. R-value measures how effectively insulation resists heat flow. In order to receive the maximum benefit from added insulation, it is very important to seal other attic air leaks such as fixtures for lights and fans, electrical and plumbing penetrations, knee walls, and open stud cavities. For more detailed insulation guidelines, read the Oak Ridge National Laboratory's "Insulation Fact Sheet" at **http://www.ornl.gov/sci/roofs+walls/insulation**.

The Department of Energy funds a Weatherization Program that provides assistance to qualifying low-income households. Contact the Weatherization Program Manager at the Georgia Environmental Facilities Authority for more information:
Division of Energy Resources
100 Peachtree Street, NW Suite 2090, Atlanta, GA 30303
(404) 962-3000

6. Maximize heating and cooling system efficiency.

- Replace or clean your air conditioner/furnace filter at least every three months or as recommended by manufacturer. Filters have MERV ratings that indicate how well they perform; a MERV rating of 8 to 11 is recommended.
- Maintain your heating and air conditioning (HVAC) system with annual check-ups from your heating and cooling contractor.
- If you have an older HVAC system, educate yourself about the available replacement options, in case of system failure. Choose a system that is Energy Star® certified. Energy Star® HVAC equipment is 15 to 30 percent more efficient than the code compliant models often recommended.
- Installing properly sized equipment. If you install an over-sized unit, it will never reach its rated efficiency, and it will not be effective in controlling humidity. Both initial costs and operating costs will be higher, and the unit will actually cool your home less effectively than a properly sized unit.
- It is crucial that you have new HVAC systems installed properly. Choose service technicians who are certified by North American Technician Excellence (NATE). To find a contractor in your area that employs NATE-certified technicians, visit **www.natex.org**.
- Check the air exchanger and all duct joints to be sure that they are sealed with duct mastic.
- Consider installing an Energy Star® programmable thermostat to schedule appropriate temperatures for different times of the day, giving you greater control over energy use. An Energy Star® programmable thermostat can save you money each year in energy costs, and can usually pay for itself in less than a year.
- If you use a window air conditioning unit, choose a properly sized Energy Star® certified unit. Visit **www.energystar.gov** for more information.

HISTORIC HOMES

Avoid making radical or irreversible changes to a historic home. Modifications that damage your home's historic integrity are not good investments. For information about protecting your home's historic integrity while improving its energy efficiency, contact the Georgia Historic Preservation Division (GHPD) at (404) 656-2840, and ask for the Architectural Technical Services Department. You can also visit the GHPD website at **http://hpd.dnr.state.ga.us**. The National Park Service has useful information on its Technical Preservation Services page, **www.cr.nps.gov/hps/tps/ briefs/presbhom.htm**. The "Preservation Briefs" are especially helpful.

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES and the **COLLEGE OF FAMILY AND CONSUMER SCIENCES** cooperating.

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For more household energy savings information please visit the **UGA COOPERATIVE EXTENSION** website at **www.fcs.uga.edu/Housing**.