



Congressional Renewable Energy and Energy Efficiency Expo

ENERGY STAR – We Know Energy Efficiency!

Chandler von Schrader
July 31, 2008

 Learn more at energystar.gov

Tools to Help You Improve Your Home



- ENERGY STAR Label
 - Look for it when purchasing qualifying products
 - For a list of qualified products visit energystar.gov
- Home Energy Yardstick
 - See how your energy use at home compares to other U.S. households
- Home Energy Advisor
 - Quick energy score and stepwise advice
- DIY Guide to Home Sealing
 - Find out how to add insulation and seal air leaks in your home
- Guide to Energy Efficient Heating and Cooling
 - Make smart choices to heat and cool efficiently
- Home Performance with ENERGY STAR

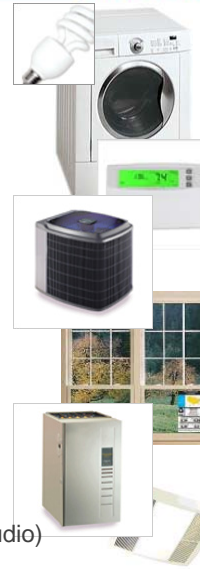
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ENERGY STAR Label



- Products that earn the ENERGY STAR
 - use less energy
 - save money and
 - help protect the environment
- Some common products include:

- | | |
|----------------------------|-----------------------------------|
| Dishwasher | Furnaces |
| Clothes washers | Heat pumps |
| Refrigerators and freezers | Central air conditioners |
| Dehumidifiers | Windows |
| Room air conditioners | Lighting |
| Room air cleaners | Ceiling fans |
| Water coolers | Insulation |
| Battery chargers | Ventilation fans |
| Cordless phones | Home electronics (TV, DVD, audio) |



Home Energy Yardstick



Enter common information about your home like age, square footage, number of occupants and energy bills for 12 months

Home Energy Performance Results
 Energy & Environmental Performance
 Your score: 4 out of 10
 Your score is below average. This means that 40% of U.S. homes use more energy. You can improve your home and use less energy too.

Decide to improve your home today

Set a goal
 Improve your home's energy efficiency by 20%
 + Improve your score from 4 to 6.7 by 2009
 + Cut Electricity use by 3,097 kWh
 + Reduce emissions by 20%.

Take Action

1. Replace your 5 most frequently used lights or the bulbs in them with ones that have earned the ENERGY STAR.
2. Look for [ENERGY STAR Products](#). Available in more than 50 product categories, including [lighting](#) and [home appliances](#).
3. [Heat and cool efficiently](#). Have your heating and cooling equipment serviced annually and remember to replace air filters regularly. Use a [programmable thermostat](#), and when it's time to replace old equipment, choose

About Your Home & Energy Use [Edit Info]

About Your Home
 Zip Code: 22046
 People Living in Home: 3
 Square Footage of Home: 1800
 Home Built: 1960s
 Heating Degree Days: 3692
 Cooling Degree Days: 1417

Energy Use from 01-Feb-2006 to 31-Jan-2007

| Use (Electricity) | Bill Amount (Electricity) |
|-------------------|---------------------------|
| 15487 kWh | \$ |


Total Source Energy Consumption: 176,491 kBtUs

Annual pollution from energy use in your home is equivalent to the emissions of 2.2 cars.

For customized energy saving options for your home:
 + [Home Advisor](#) – use this self-service online tool to enter information about your home and get estimated savings from making energy efficiency improvements.

www.energystar.gov/yardstick

Home Advisor



Improve your Home's Energy Efficiency with ENERGY STAR - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search

Address http://www.energy-star.gov/homeadvisor

ENERGY STAR Home Advisor

Enter Basic Information About Your Home

Get Recommendations from ENERGY STAR

Learn More

Potential Total Energy Savings for Homes in your Area: 31% *


Home Improvement Recommendations from ENERGY STAR*

[Print Recommendations](#)

Seal air leaks in your home


Reducing air leaks (or drafts) in your home is often the most cost-effective way to improve your home's energy efficiency and comfort. The biggest air leaks are usually hidden in the attic and the basement or crawlspace. Also, air leaks around pipes and wires, windows and doors, baseboards and outlets can all contribute to energy losses. Use caulk, spray foam, and weather stripping to reduce these leaks. Or, hire a professional to test and seal your home.

- Use the [Do-It-Yourself Guide to ENERGY STAR Home Sealing to reduce air infiltration](#)
- Hire a professional to seal your home to reduce air leaks and infiltration




Seal the leaks in your ductwork

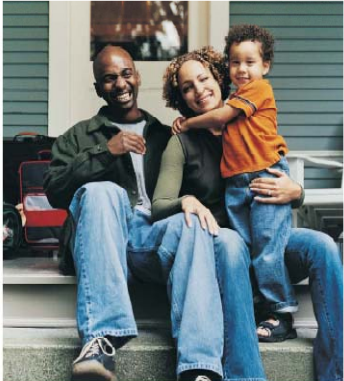
Sealing and insulating ducts can improve the efficiency of your heating and cooling system by 20 percent or more. Accessible ducts, such as those in attics, basements, crawlspaces, and garages, can be sealed using a specialized sealant called duct mastic (duct tape is not recommended) available at home improvement stores. Or, consider hiring a professional to test and seal your ductwork with an aim of achieving a



Done
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Do-It-Yourself Guide to Home Sealing





A DO-IT-YOURSELF GUIDE TO ENERGY STAR® HOME SEALING

SEALING AIR LEAKS AND ADDING ATTIC INSULATION

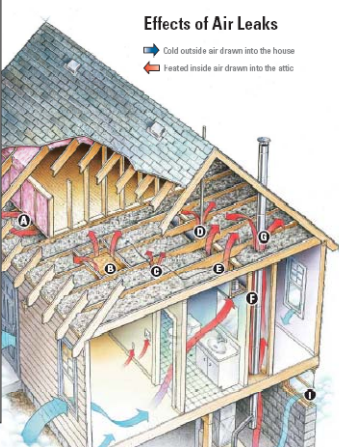


Seal Small Gaps


Use expanding foam or caulk to seal the openings around plumbing vent pipes and electrical wires (see photos 9 and 10). Be sure to wear gloves and be careful not to get expanding foam on your clothes, as the foam is very sticky and nearly impossible to remove once it sets. When the foam or caulk is dry, cover the area again with insulation.

Effects of Air Leaks

➡ Cold outside air drawn into the house
➡ Heated inside air drawn into the attic



10. STUFF GAPS WITH INSULATION



If the space around your plumbing pipe is wider than 3 inches, you may need to stuff some fiberglass insulation into the space to serve as a backup for the expanding foam. Once the fiberglass insulation is in place, follow the directions on the can to foam the space around the pipe.

Guide to Heating and Cooling





Choosing the Right Equipment

When purchasing that high efficiency... Whether you're... or other heating... set energy efficient... energy bills and...

Furnaces

Furnaces are the most common... States, running most often on gas... their heat through a duct system... than 20 years old. ENERGY STAR... deliver higher efficiency than sta...

Boilers

A boiler heats your home by burn... circulates through radiators, base... use a duct system. Boilers that h... ratings, AFUE, the Annual Fuel Use... equipment efficiency.

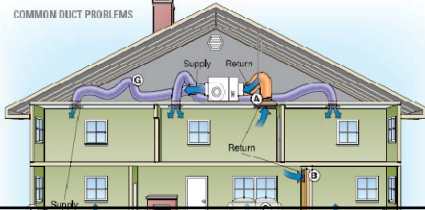
How much energy you save will v... regions likely saving more. Featur... ignition, which eliminates the nee... technologies that extract more h...

Central Air Condi...

Sealing Your Ducts


Ducts are an integral part of a forced-air system such as a furnace, heat pump, or central air conditioner, whose job is to circulate heated or cooled air evenly to every room in a house.

Poorly performing ducts can leak conditioned air and reduce your system's efficiency by as much as 20%, by causing it to work harder to keep your home at a comfortable temperature. Ducts are commonly concealed in walls, ceilings, attics, basements, or crawl spaces, which can make them difficult to access and repair. EPA recommends using a professional contractor for duct improvements. Many contractors who install heating and cooling systems also repair ductwork. For tips on selecting the right contractor, see p. 12, "Working with a Heating and Cooling Contractor."




COMMON DUCT PROBLEMS

A Guide to Energy-Efficient Heating and Cooling





ASK ABOUT ENERGY STAR



ASK ABOUT ENERGY STAR

Home Performance with ENERGY STAR






Home improvement that makes everyone more comfortable.

Home Performance with ENERGY STAR®, sponsored by Southface, offers a comprehensive, whole-house approach to home improvement and energy efficiency that will make your home more comfortable and lower your energy bills. All while helping to protect the environment. So, you can feel even more comfortable in your own home.

Find a participating contractor at southface.org/homeperformance



Sponsored by an Energy Efficiency Program Administrator


Develops a network of specially-trained contractors that evaluate homes using state-of-the-art equipment, recommend comprehensive improvements, and provide services to complete the improvements

Sponsor checks participating contractors work to verify it meets high standards based on an agreed upon protocol

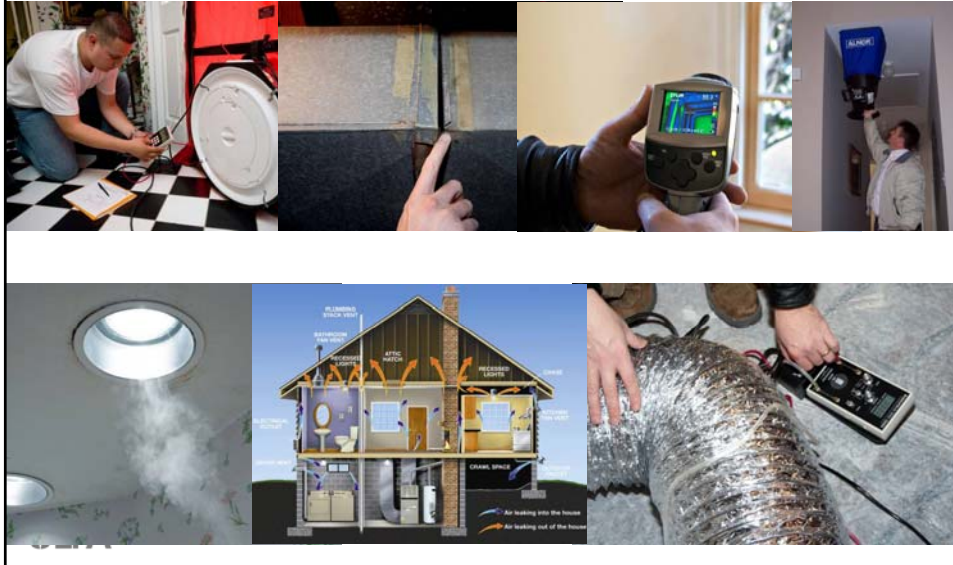
Homeowner chooses and pays for improvements based on credible information.

ENERGY STAR® is a program sponsored by the U.S. EPA and DOE, helps us all save energy and protect our environment through energy efficient products and practices.

HOME PERFORMANCE WITH ENERGY STAR



Test In (don't guess) to Determine Root Cause of Problems



Test Out for Safety and to Confirm Performance



Test out (after work)

Can include: air infiltration, HVAC air flow, duct leakage, combustion safety testing

Provides feedback to

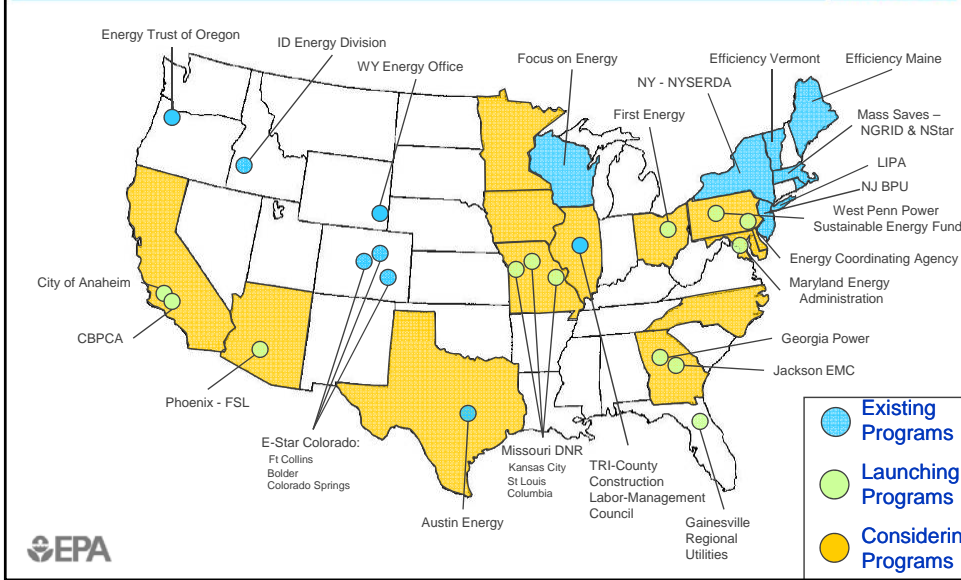
the contractor
the homeowner
the program administrator

Verified improvements and
persistent energy savings



National HPwES Activity

June 2008



Check out our Web Site

