



## WHAT IS HOME SEALING

Home Sealing is a process recommended by EPA to help increase the comfort and energy efficiency of your home by improving the “envelope”—the outer walls, ceiling, windows, and floors.

**To improve the envelope of your home:**

**Seal air leaks** to stop drafts and get full performance from your insulation;



**Add insulation** to stay comfortable during periods of extreme temperatures; and

**Choose ENERGY STAR qualified windows** when replacing old windows.

## THE BENEFITS OF HOME SEALING

Sealing air leaks and properly installing insulation in your home has many benefits:

- Improved comfort during winter and summer;
- Lower energy use which means lower energy bills;
- A quieter home with less noise entering from outside;
- Fewer holes for pollen, dust, pollution, and insects to enter the home; and
- Improved durability by reducing movement of moist air through the building structure.



**Effective air sealing, combined with the right amount of insulation, can make your home more comfortable and cut heating and cooling costs by up to 20%.**



CHANGE FOR THE  
BETTER WITH  
ENERGY STAR

U.S. Environmental  
Protection Agency

# Home Sealing



UNITED STATES  
ENVIRONMENTAL  
PROTECTION AGENCY  
6202J  
WASHINGTON DC 20460

Recycled/Recyclable—Printed with vegetable oil based inks on recycled paper (Minimum 50% post-consumer content)

EPA 430F-04-049 October 2004

# WHAT IS ENERGY STAR®?

ENERGY STAR is the government-backed symbol for energy efficiency. It identifies homes and more than 40 types of products and services that meet strict guidelines set by the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). With ENERGY STAR, consumers can save energy and money without sacrificing performance.

EPA also provides important recommendations on products and installations to get the most in comfort and energy savings. Saving energy will also help protect the environment by reducing air pollution and global warming associated with energy production.

# HELP PROTECT THE ENVIRONMENT

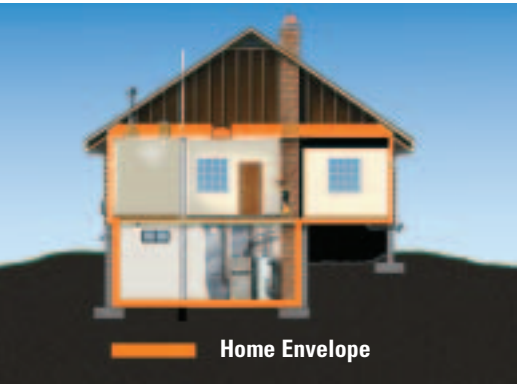
Did you know that the average home produces twice the greenhouse gases as the average car? In fact, 15 percent of all greenhouse gases are generated from the energy used in houses nationwide.

Energy used in our homes often comes from the burning of fossil fuels at power plants, which contributes to smog, acid rain, and global warming. Simply put, the less energy we use in our homes, the less air pollution we generate.



For more information on Home Sealing visit [www.energystar.gov](http://www.energystar.gov) and click on home improvement or call 1-888-STAR-YES (1-888-782-7937)

# IMPROVING YOUR HOME ENVELOPE



The exterior of your home is called the "envelope" or "shell". (See the orange line showing the envelope in the diagram above.) The envelope is made up of the outer walls, ceiling, windows and floor. Improving your envelope can make your home more comfortable, especially under extremely hot or cold conditions, and help lower your energy bills.

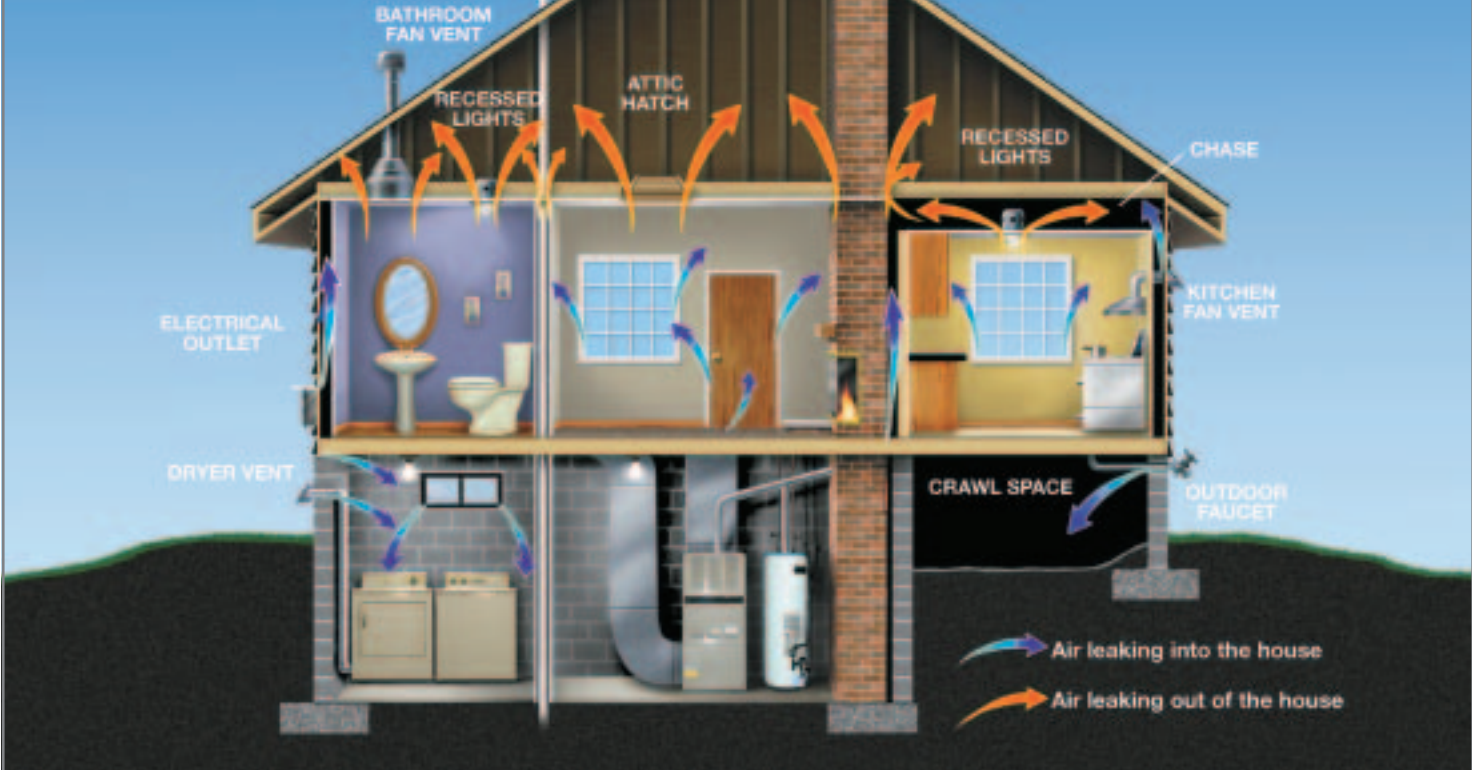
# HIDDEN AIR LEAKS

Air leaks can make your home uncomfortable. In the winter, drafty windows and doors, cold walls or ceilings, and ice build-up or ice dams on the roof are all symptoms of air leaks or poor insulation in the attic. In the summer, ceilings that are hot to the touch and upstairs rooms that are uncomfortably hot , no matter how low the A/C is set, can also be a sign of air leaks and insufficient insulation. Fixing air leaks can make your home more comfortable and help you get full performance from your insulation and your heating and cooling system. (See the house diagram on the next page showing common air leaks.)

If you add up all the hidden air leaks in your home, they can equal a hole the size of an open window—and can lead to a higher energy bill.

There are many ways to fix air leaks, such as caulking, using spray foam, and weather stripping for closing smaller cracks and gaps. Plywood, drywall, and rigid foam insulation may be used for plugging larger holes. Sheet metal and high-temperature caulking can be used to close gaps around chimneys and furnace flues.

# COMMON AIR LEAKS



# INSULATION

Adding insulation can reduce the amount of energy it takes to heat and cool your home and can help provide consistent comfort in every part of your home, especially when the outside temperatures are the most extreme. The most common types of insulation are cellulose, fiberglass, rigid foam, rock wool, and spray foam. And remember It is important to seal air leaks *before* adding insulation

It is important to seal air leaks first before adding insulation.

# ENERGY STAR QUALIFIED WINDOWS

Windows are an important part of the home envelope. If you are remodeling or building an addition, consider replacing old windows with models that have earned the ENERGY STAR. They can make you feel more comfortable, reduce UV damage to interior fabrics and can cut home heating and cooling costs.

# HOW TO GET STARTED

For the best results, EPA recommends working with a home energy professional and/or insulation contractor in your area. For recommendations on finding a contractor visit [www.energystar.gov/homeimprovement](http://www.energystar.gov/homeimprovement). These professionals offer a range of services—everything from testing your home and identifying areas for improvement to actually making the energy-saving upgrades.

After air sealing, be sure to have a professional check your home's ventilation and test combustion appliances to be sure they are properly venting.

For "handy" homeowners, there are do-it-yourself measures that you can take to improve your home's envelope. Sealing air leaks hidden in the attic and basement and adding insulation in the attic are low-cost, easy ways to improve the comfort and energy efficiency of your home yourself.