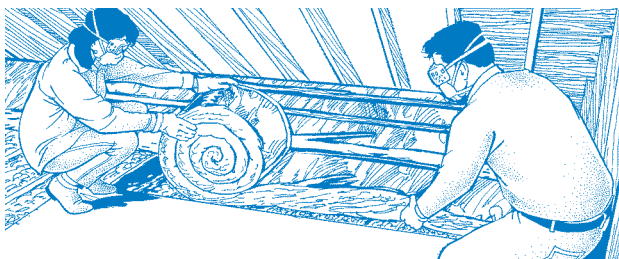


TIPS TO HEAD OFF HIGH HEATING BILLS



With crisper temperatures upon us and news stories predicting skyrocketing natural gas prices and rising oil prices this winter, homeowners now have more incentive than since the energy crisis of the 70s to take steps to ensure their homes are energy efficient. In fact, natural gas costs have already doubled from 1999 and are the highest since 1985. The price of a gallon of heating oil is up by more than 30 cents over last year. The situation is so dire that experts believe investments in energy efficiency will be well justified from a financial standpoint.

So what is a homeowner to do? There are many things that you can do that all add up to make a big difference to squeeze every last Btu out of every bit of gas or oil your heating system consumes, consider:



Upgrading Attic Insulation

Attic insulation is one of the most important things to look for to upgrade the energy-efficiency of your home. In fact, heat escaping through the attic may be responsible for up to one half of your home's entire heat loss. Check the attic and the attic door to make sure there is at least 12" of insulation. If not, upgrade to the latest recommended level of insulation for your geographic area. Proper insulation levels will also keep your home more comfortable. Upgraded fiber glass insulation levels can also help soundproof and weatherize your house for optimum living quality.

Insulating Your Basement

Insulate your basement walls if they are not already insulated. They should be insulated to at least an R-10 if they are more than 50 percent below the grade. If they are more than 50 percent above grade, they should be insulated to the same levels recommended for above grade walls.

Installing Storm Windows and Doors



Investing in storm windows and doors can cut heat loss at those sites in half. If you can, replace single pane windows with double or triple paned windows. Double and triple paned windows are even more effective as they

offer double or triple the thermal efficiency of regular windows. If you don't have storm windows, install a clear plastic film across the inside of your windows and frame. It traps a pocket of air to effectively insulate.

Installing an Automatic Setback or Programmable Thermostat

Programmable thermostats can lower or raise home temperatures around your living schedule. When you're working, program it to a cooler temperature, in the 60s. When you're back, raise it into the 70s. These measures can help you save up to 10 percent on your annual heating and cooling bill.

Insulating Your Sidewalls

Properly insulated sidewalls will help save energy and improve the comfort of your



home. The amount needed depends on your home's construction. A professional insulation contractor can help you determine how much insulation you have in your walls and suggest ways to

upgrade to today's Department of Energy (DOE) standards with unique blown-in fiber glass insulation materials.

Checking Your Furnace:

Furnaces usually last 25-30 years. Many new high-efficiency and gas heating systems are available with rating guidelines which have been developed by the Federal government. The efficiency rating for a furnace and boiler is termed AFUE (Annual Fuel Utilization Efficiency). If buying a new heating system, look for an AFUE of 80 percent or higher.

To improve the efficiency of an existing furnace, change furnace filters frequently. Also clean air registers, baseboard heaters and radiators as needed. Change forced air heating system air filters monthly as well.

Weatherstripping, Caulking and Sealing

Check to see that all air cracks around window and door facings, electrical box openings and plumbing penetrations, the joints of corner trim and siding and the joints of roof eaves are caulked and weather-stripped to avoid heat loss.

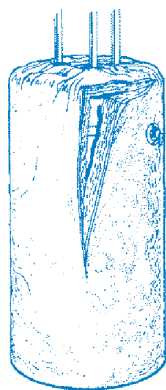


Insulating Your Floors and Crawlspace

Check for adequate levels of insulation under floors over basements and in unheated crawlspaces. Make sure floors are insulated with at least 6-1/4" thick R-19 fiber glass insulation. If the floor above feels cold to bare feet in the winter, adding insulation can help improve the comfort and energy efficiency of the room. Also, look for proper insulation levels in garages and crawlspaces.

Checking Your Water Heater For Insulation

Check to see that your water heater is well insulated. If it is not, wrap it with fiber glass insulation. If you have a gas water heater, make sure you don't cover-up the pilot light which needs access to air. An insulated water heater can help you retain as much as 5-12% of energy that would otherwise be wasted.



Installing Special Fireplace Devices/Features

Many fireplaces have the capability to circulate warm air in a room through vent



systems. Some also have automatic flue dampers which open when the fireplace is in use, but close automatically when

it is not to keep heat from escaping through the chimney. See what you have. You may want to look into this type of device if you don't already have one.

Installing Insulation Around Ducts and Pipes

Are your ducts and pipes insulated? Insulated pipes keep hot water flowing through them hotter. In the winter, insulation helps prevent pipes exposed to the cold from freezing. Insulated ducts can increase the energy efficiency of your heating and cooling system.

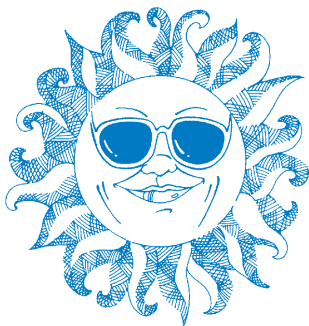
Taking Advantage of Solar Energy

The sunlight that falls on one acre of land can generate enough energy to heat and cool 80 average homes. Passive solar homes, with lots of large south-facing windows, can have up to 80 percent of their heating needs supplied by solar energy—even in colder climates.

Simply opening the drapes on sunny winter days can let sunshine in to naturally warm your home. Similarly, closing them at night can reduce heat loss.

Insulating Even Small Areas

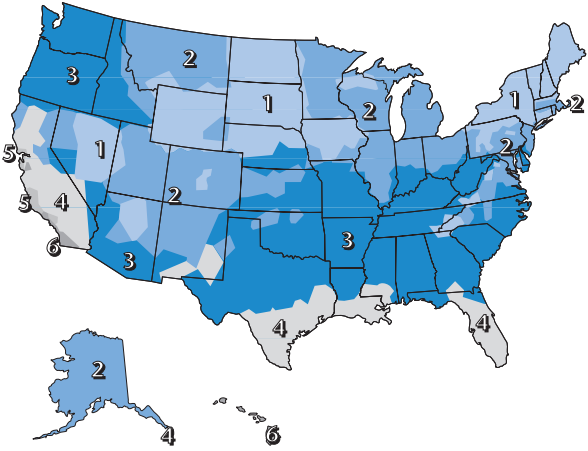
Use multi-purpose mini-type roll insulations to chink around windows and doors, around electrical outlets, and pack around window air conditioners if you are not removing them for the winter.



Installing and Using A Humidifier

If your furnace doesn't have a built-in humidifier, use a portable unit in frequently used areas within your home. The additional moisture generated will make it feel as much as 8° warmer than the actual temperature.

Department of Energy Thermal Recommendations for Homes



- (A) R-18, R-22 and R-28 exterior wall systems can be achieved by either cavity insulation or cavity insulation with insulating sheathing. For 2" x 4" walls, use either 3-1/2" thick R-15 or 3-1/2" R-13 fiber glass insulation with insulating sheathing. For 2" x 6" walls, use either 5-1/2" thick R-21 or 6-1/4" thick R-19 fiber glass insulation.
- (B) Insulate crawl space walls only if the crawl space is dry all year, the floor above is not insulated, and all ventilation to the crawl space is blocked. A vapor retarder (e.g., 4- or 6-mil polyethylene film) should be installed on the ground to reduce moisture migration into the crawl space.
- (C) No slab edge insulation is recommended.

Zone	Gas	Heat Pump	Fuel Oil	Ceiling		Wall (A)	Floor	Crawl Space (B)	Slab Edge	Basement	
				Attic	Cathedral					Interior	Exterior
1	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
2	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
3	✓	✓	✓	R-49	R-38	R-18	R-25	R-19	R-8	R-11	R-10
4	✓	✓	✓	R-38	R-38	R-13	R-13	R-19	R-4	R-11	R-4
5	✓			R-38	R-30	R-13	R-11	R-13	R-4	R-11	R-4
5		✓	✓	R-38	R-38	R-13	R-13	R-19	R-4	R-11	R-4
6	✓			R-22	R-22	R-11	R-11	R-11	(C)	R-11	R-4
6		✓	✓	R-38	R-30	R-13	R-11	R-13	R-4	R-11	R-4

For information regarding other fuel sources, visit the DOE website at: http://www.eren.doe.gov/consumerinfo/energy_savers/r-value_map.html

Planting Trees and Shrubs

Strategically planted landscaping in your yard can help reduce your energy costs.

Deciduous trees—those that drop their leaves in the fall—are

best planted in front of sunny windows, as they will allow sunlight in to warm your living area.

In addition, hardy, low-lying evergreens and shrubs planted close to the foundation of a house slow heat escape during the winter.



Installing Drapes on Windows

Drawn drapes can help keep cold air out and warm air in your home.

To conduct an audit of your home on your own, visit the Department of Energy's website at www.homeenergysaver.lbl.gov.

For more energy efficiency tips, call the CertainTeed Home Institute at 1-800-782-8777 or visit the web site at www.certainteed.com.

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