

Make your heating dollars work harder for you

No matter what kind of equipment heats your home, one thing is certain: The more energy-efficient the heating system is, the lower your utility bills will be. In fact, according to the U.S. Department of Energy (DOE), the combination of a tight, well-insulated home, a properly maintained, high-efficiency heating system and reasonable thermostat settings can cut your annual heating bill by as much as one-half.

There are many things you can do to keep your home warm and comfortable at an affordable cost; they fall into two broad categories. First, **reduce the heating load on your home** by eliminating air leaks, adding insulation and promoting a change in your family's energy-wasting habits. Second, **call a professional heating and cooling contractor** to tune up and optimize the efficiency of your heating system.

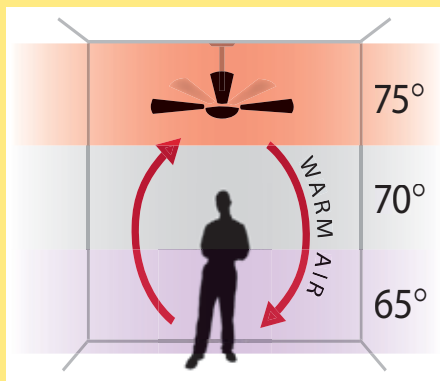
Manage the temperature inside your home

The DOE also says you can save as much as one percent on your heating bill for every degree you reduce your thermostat setting for at least eight hours per day. If you have an older thermostat, you can save heating dollars by following these suggestions.

- **When you're home, set your thermostat at 70° F. or lower.** If you feel slightly chilly, add another layer of clothing.
- **Choose a lower thermostat setting at night or when you're away.** It costs less to reheat your home to a

comfortable level than it does to heat it while you're sleeping or gone.

- **Adjust the thermostat to the temperature you need.** Setting your thermostat to a higher level than normal will not cause the system to work harder or faster to warm your home—and it may waste energy.
- **Keep the thermostat setting constant for long periods.** Frequently changing the thermostat causes the heating system to cycle and run too often, wasting energy.



To help eliminate the chilly feeling caused by temperature layering, run your ceiling fan all winter on the lowest setting—in a clockwise direction.

One of the best energy-saving investments you can make is **installing a programmable thermostat**, which will automatically handle the daily heating and cooling system temperature changes for you all year long. An Energy Star qualified programmable thermostat costs anywhere from \$40 to \$100 (or more) and can pay for itself in less than a year.

Follow these tips to stay warm and comfortable

Walk around your home with the following list to discover how many opportunities you have to reduce energy use during the winter. Most of these ideas won't cost more than a few minutes of time; the tips that do require a small outlay of cash should pay for themselves quickly through smaller heating bills.

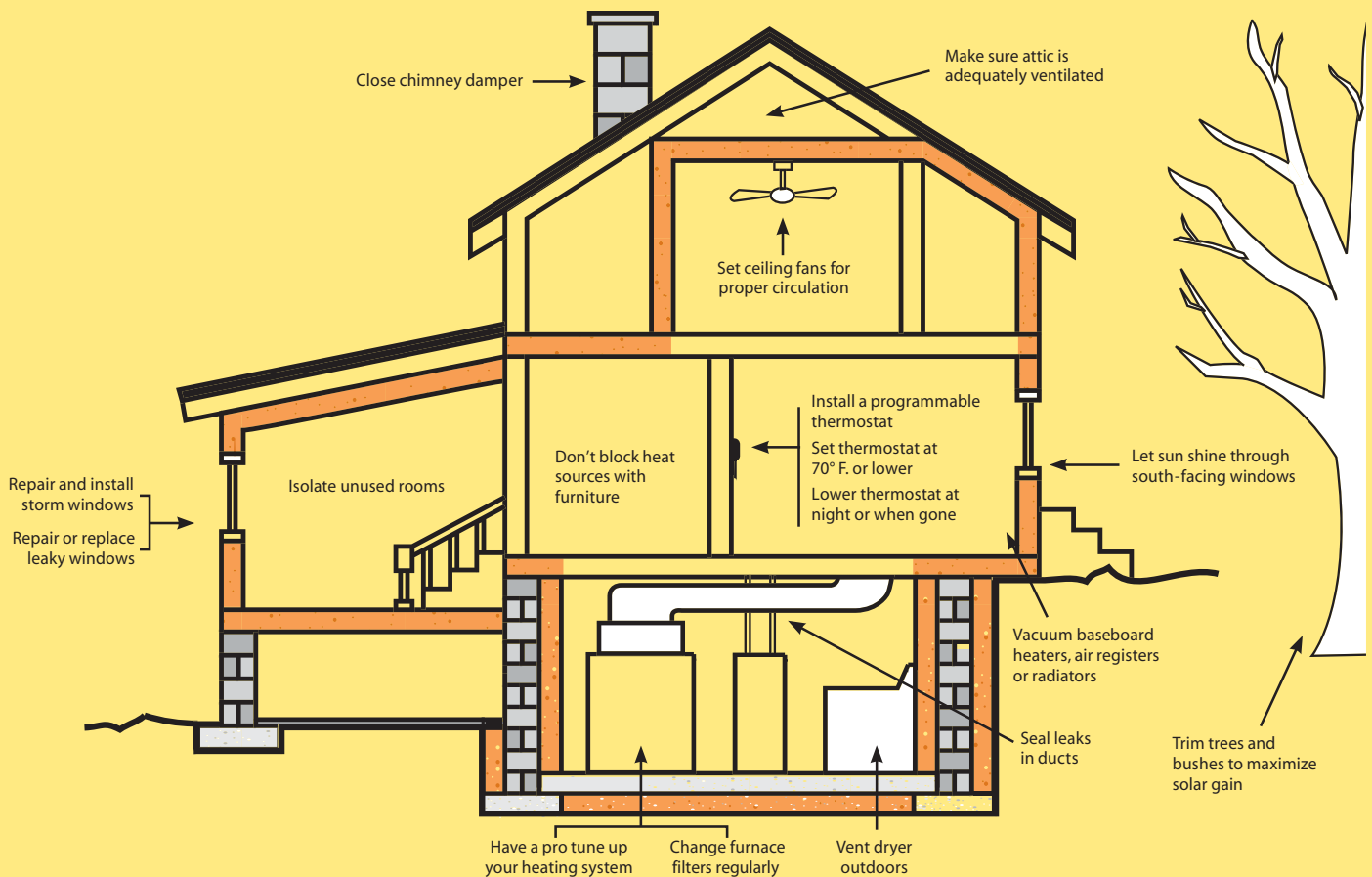
- **Open window coverings on south-facing windows to take advantage of solar heat gain.** Letting the sunshine into your home can provide enough heat to reduce the load on your heating system. As soon as the sun stops shining in, cover the windows to minimize heat loss.
- **Cover east-, north- and west-facing windows.** Heavy curtains or insulated shades are best for covering these windows and reducing chills when it's dark. Also keep these windows covered during daytime—unless you need the natural light—since there will be little solar heat gain.
- **Keep doors and windows closed as much as possible.** Besides diluting the heated air in your home, a wintry blast reaching your thermostat can fool it into thinking the whole house is too cool and signal your heating system to start unnecessarily.
- **Repair damaged storm windows.** Storm windows can reduce heat loss by 25 to 50 percent. Make sure the glass isn't cracked and that the

Check the Energy Star Web site

On the Energy Star Web site at <http://www.energystar.gov>, you'll find a lot of valuable information in the Home Improvement section. The **Home Energy Yardstick**, for example, takes about five minutes to fill out and will help you discover whether your energy use is above average. The **Remodeling Guide** gives you a list of customized energy improvements (with estimated savings) for different areas of your house. And the **Home Sealing** section offers tips on tightening your home's "envelope" to lower energy bills.

Cut energy use during peak periods

You should reduce electricity use for daily chores (such as running your clothes washer or dryer) during winter **peak periods**, when energy demand at your local electric cooperative is highest. With so many people using electricity for heating at the same time, the price of power for this period may increase because it costs more to generate electricity when consumer demand soars. Although peak hours can vary due to weather conditions and demand, they generally fall from 4 p.m. to 9 p.m. on the coldest winter days.



weather stripping is in good shape around each window's perimeter.

- **Wash south-facing windows.** Dirt and grime on windows can reflect part of the solar heat gain you'd otherwise get from these windows.
- **Trim trees and bushes in front of windows.** Deciduous trees and shrubs will drop their leaves to let in sunshine. Cut back other types that block the low winter sun.
- **Warm up your bed.** Turn down your thermostat and add blankets, quilts or an electric blanket or mattress pad to stay toasty at night.
- **Vacuum baseboard heaters, air registers or radiators.** When you see dust, dirt and lint building up, clean these devices.
- **Move furniture or window coverings that are blocking air registers, baseboard heaters or radiators.** Make sure all the heated air you're paying for is being distributed throughout the room.
- **Install radiator reflectors.** These panels will help reflect heat away from walls and into rooms.
- **Isolate unused rooms, as long as doing so will not hurt water pipes.** Turn down the thermostat in a room with baseboard heat,

or close the registers for a forced-air furnace. However, don't allow temperatures in rooms with water pipes to approach the freezing point.

- **Remove wall or window air conditioners during winter.** For a wall unit, cover the opening with a thick plywood panel backed by rigid foam insulation; caulk to ensure the unit is weather-tight. Remove a window unit, close the window and fix air leaks. If you

can't remove the air conditioner, wrap it in an insulated, waterproof cover made for the job.

- **Remove humidity from the kitchen and bathroom with a properly sized exhaust fan.** Too much humidity causes condensation and frost on windows and can damage them. But don't leave an exhaust fan on longer than necessary. In one hour, an exhaust fan can blow a house full of heated air outside. ■

BOOK ON SAVING HEATING AND COOLING DOLLARS IS FREE!

The material in this article was adapted from a new book, *Home Heating and Cooling*, just released by the Iowa Energy Center. Besides offering more details on the ideas shown here, this 24-page book also covers making the most of your air-conditioning system, discusses landscaping your yard for year-round comfort and lists sources of additional information on energy-saving topics.

The first book in the series, *Home Tightening, Insulation and Ventilation*, was released last summer and is still available. To get your free copy of one or both of these books:

- Call your local electric cooperative to see if you can stop by the office and pick up a copy.
- Download a PDF copy at the Iowa Energy Center Web site: www.energy.iastate.edu/homeseries/.
- Request a copy by e-mailing the Iowa Energy Center at iec@energy.iastate.edu.
- Call the Iowa Energy Center at 515-294-8819 to ask for a copy by mail.

