

eco@home • heating and cooling

SAVE ENERGY, MONEY, AND TIME AROUND THE HOUSE

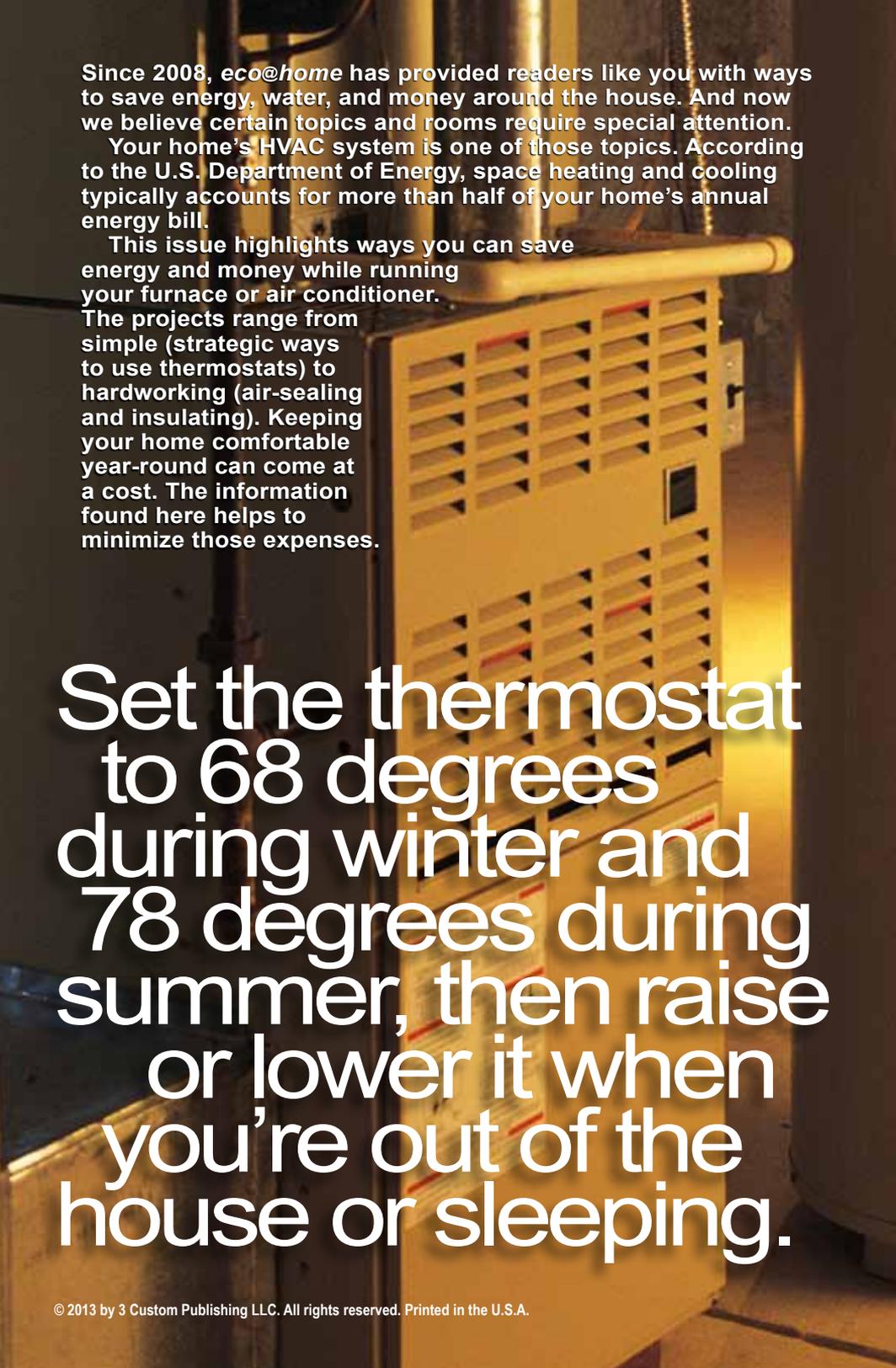


**Thermostat
Efficiency Explained**

**3 Ways to Get Your Home
Ready for Winter**

Keep Your Cool

Ceiling Fan Smarts



Since 2008, *eco@home* has provided readers like you with ways to save energy, water, and money around the house. And now we believe certain topics and rooms require special attention.

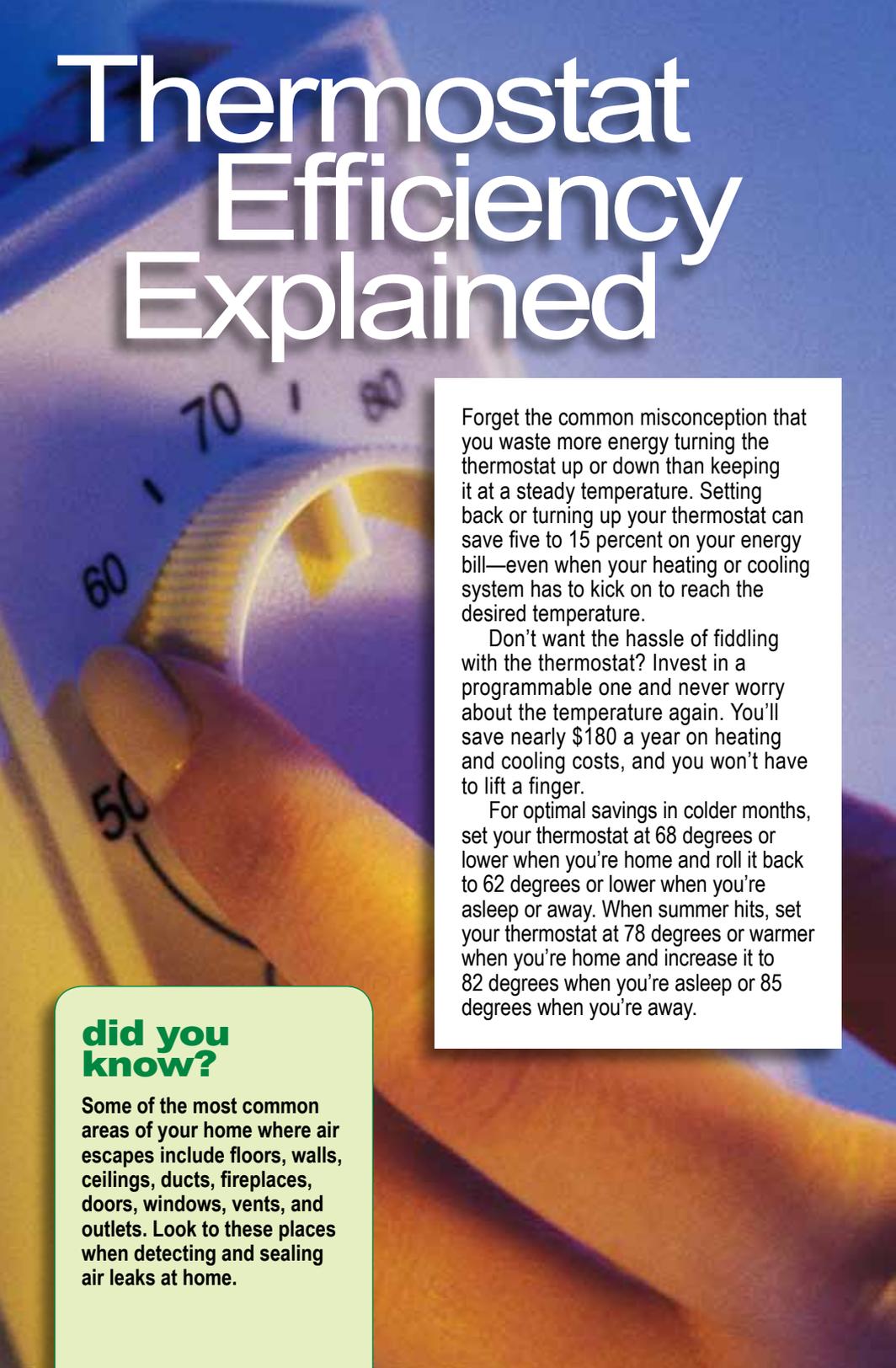
Your home's HVAC system is one of those topics. According to the U.S. Department of Energy, space heating and cooling typically accounts for more than half of your home's annual energy bill.

This issue highlights ways you can save energy and money while running your furnace or air conditioner.

The projects range from simple (strategic ways to use thermostats) to hardworking (air-sealing and insulating). Keeping your home comfortable year-round can come at a cost. The information found here helps to minimize those expenses.

Set the thermostat to 68 degrees during winter and 78 degrees during summer, then raise or lower it when you're out of the house or sleeping.

Thermostat Efficiency Explained



Forget the common misconception that you waste more energy turning the thermostat up or down than keeping it at a steady temperature. Setting back or turning up your thermostat can save five to 15 percent on your energy bill—even when your heating or cooling system has to kick on to reach the desired temperature.

Don't want the hassle of fiddling with the thermostat? Invest in a programmable one and never worry about the temperature again. You'll save nearly \$180 a year on heating and cooling costs, and you won't have to lift a finger.

For optimal savings in colder months, set your thermostat at 68 degrees or lower when you're home and roll it back to 62 degrees or lower when you're asleep or away. When summer hits, set your thermostat at 78 degrees or warmer when you're home and increase it to 82 degrees when you're asleep or 85 degrees when you're away.

did you know?

Some of the most common areas of your home where air escapes include floors, walls, ceilings, ducts, fireplaces, doors, windows, vents, and outlets. Look to these places when detecting and sealing air leaks at home.



3 Ways to Get Your Home Ready for Winter

The best time to prepare for the heating season is long before cold weather sets in. A few key steps taken before temperatures plummet can add up to major savings, which will come in handy considering that the average American household spends \$1,900 annually on energy bills, according to ENERGY STAR®.

1.) Seal. Air escapes from leaks located all over your home—so much so that in the average house it's like having a window open year-round. Hunt down and seal leaks to reduce your energy bills by as much as 10 percent. Begin by weather-stripping or caulking around windows and doors, ductwork, and floor vents. Pay special attention to the attic and basement. In addition, caulk around items such as plumbing pipes, gas pipes, electrical wiring, and dryer vents where they enter the house.

2.) Insulate. Properly insulating your home ensures the heat you pay for stays inside. To determine the right insulation R-value for your location, visit [energy.gov/energysaver/articles/tips-insulation](https://www.energy.gov/energysaver/articles/tips-insulation). Then begin by insulating the attic, where the most heat is lost. If your foundation walls aren't insulated, it's a good idea to tackle those as well.

3.) Maintain. Proper maintenance of your heating system ensures it operates as efficiently as possible, which can lower your energy bills. Before you begin using your heating system, have it inspected by a licensed professional. And be sure to change your HVAC filter every month or two to maximize heating efficiency.



**try this
today...**

Use your ceiling fan year-round to help reduce your energy bills all year. When it moves counterclockwise, the fan will circulate cool air during the summer; reverse it and you'll keep warm air moving through your home in the winter.

Keep Your Cool

Early spring is the best time to make sure your air conditioner is ready for warmer weather—an inefficient unit can cause your cooling bills to soar with the temperatures. Here's how to whip your air conditioner into shape:

Schedule a tune-up. To ensure that your air conditioning unit runs efficiently, have it professionally inspected. Catching even the smallest problems before summer reduces the chances of it breaking down during a heat wave. Ask your service technician to measure airflow, inspect the electrical components and controls, clear the drain, and check the refrigerant levels. If your refrigerant needs recharging, the unit may cost as much as 20 percent more to operate. Also make sure the duct system is properly sealed for good airflow—as much as 20 percent of conditioned air escapes from the ducts, according to ENERGY STAR®.

Clean it up. Trim bushes, plants, and other foliage back at least two feet from your outdoor unit, which is called the condenser. After you shut off electrical power to the air conditioner, remove dirt and debris from the outside face of the condenser using a vacuum with a soft brush attachment. And gently straighten bent fins—the blades surrounding the unit—with a fin comb. To remove gunk from the inside of the condenser, remove the top part containing the fan, and then vacuum to remove debris. While you're at it, if you can get to the evaporator (the accessible part of the unit found indoors), clean it by vacuuming debris from the blower compartment.

Change the filter. Clogged, dirty filters restrict airflow, making your air conditioner work harder—and use more energy—to keep you cool and to improve your home's air quality. A clean filter reduces energy consumption anywhere from 5 to 15 percent—that's why it's important to check filters once a month, and clean and replace them as necessary.

Ceiling Fan Smarts

Rather than cranking up your air conditioner this summer, beat the heat by turning on a ceiling fan. Ceiling fans don't just provide cooling comfort from sizzling summer heat—they offer equally soothing relief on your energy bills. In fact, ceiling fans can save as much as 14 percent on summer cooling costs. Learn how to make the most of your ceiling fan:

Reap the benefits

Ceiling fans use less than a tenth of the energy consumed by air conditioning and can make a room feel up to 8 degrees cooler, which means you can turn up the thermostat when you're using one. "The beauty of a ceiling fan is that it can help you reduce the amount of energy used to cool your home," says Denise Durrett, ENERGY STAR® communications manager.

And fans come in a variety of styles and prices, so you can select models that fit the style of your rooms and your budget. To boost your savings even more, be sure to install compact fluorescent bulbs in ceiling fans that include light fixtures.

Pick the perfect fan

When shopping for a new ceiling fan, be sure to look for the ENERGY STAR label. Ceiling fan/light combination units with the ENERGY STAR label are approximately 50 percent more efficient than basic fan/light units, which can add up to yearly savings on energy bills. These models also move air at least 15 percent more efficiently than a typical fan.

The key is to choose a fan that best fits the size of the room (*see chart, right*). If you want to cool a very large

room, it may help to install a few fans. And if you're planning to install the fan in a humid location, such as a bathroom or kitchen, purchase a model with an Underwriters Laboratories Damp Location rating. These fans boast special features that stand up to moisture.

Also make sure to select the proper mounting system. Standard mounts, which have a 3- to 5-inch downrod, extend from the ceiling bracket to the top of the fan. Extended mounts are used for higher ceilings. Flush mounts anchor the fan directly against the ceiling, and sloped mounts are perfect for angled or vaulted ceilings.

Maintain your fan

If your fan has a reversible switch that allows you to change the rotation of the blades, operate the fan in a counterclockwise direction during the summer. The counterclockwise position pushes air downward, so you should feel a cool breeze when standing under the fan. In the winter, reverse the motor to operate the fan in a clockwise direction. This forces warmer air near the ceiling down into the room.

And just as you would flip the light switch when leaving the room, shut the fan off when you're not in the room for a period of time. "Ceiling fans cool you—not the room," Durrett says. "They don't do any good if no one's in the room."

Choosing the Right Fan Size

Room Dimensions	Blade Length
Up to 75 sq. ft.	29"–36"
76 to 144 sq. ft.	36"–42"
144 to 225 sq. ft.	44"
225 to 400 sq. ft.	50"–54"

Courtesy of ENERGY STAR®