



Spend a Little, Save a Lot

>> Or spend a whole bunch and save even more. Here are 10 ways to shave your energy bills this winter

KEITH PANDOLFI PHOTO-ILLUSTRATIONS BY VIKTOR KOEN

THIS DRAFTY, OLD BARN OF A PLACE!...Why do we have to live here?" George Bailey asks his wife after their daughter ZuZu catches cold in *It's a Wonderful Life*. We hear you, George. A lot of us ask the same question come wintertime, when our houses seem to turn against us as comfort levels plummet and heating costs rise. Heating alone accounts for almost half of the average American household's utility bills each year. No need to get angry about it, though. There are plenty of measures you can take. But first you'll need to consider which ones fit your budget and which ones have the greatest payback. Here are 10 suggestions To make life in your own drafty old house a little more wonderful.

1 | CHOKE YOUR CHIMNEY

Sure, it's nostalgia-inducing and all, but when it comes down to it, your fireplace is terribly—make that laughably—inefficient. According to the Department of Energy, a lit fireplace sucks about 24,000 cubic feet of furnace-heated air up your chimney each hour. Bonus: It's replaced by cold air that comes in the opposite direction through the same opening, causing your furnace to work extra hard to keep your house toasty. Still, we love gathering round the hearth as much as the next guy. Just remember to turn the thermostat down a little when you use it. Also, crack a window in the room where the fireplace is located and then close the door, so it doesn't suck too much warm air from the rest of the house. And remember to close your damper when it's not in use.

COST: Free.

BENEFITS: A tightly closed damper prevents up to 8 percent of furnace-heated air from going up the chimney.

PAYBACK TIME: Immediate.

2 | AIR LEAKS

Add up all those overlooked cracks, gaps, and openings around your windows, doors, plumbing, and wiring, and you may find your house has a hole the size of a Mack





Your Ideas

How do you save money and conserve resources? Send us your best tips to share with readers. Go to thisoldhouse.com/yourTOH

truck. Seal it up, and you'll save more than 10 percent on your heating bills. Start by caulking or weatherstripping around windows. For added comfort, pick up a product such as the 3M Indoor Window Kit at the hardware store. Resembling Saran wrap, the plastic sheet costs about \$20 and can be discreetly stretched over windows using double-sided tape, blow-dried for a tight fit, and peeled off come springtime. It can increase a single-paned window's R-value by up to 90 percent. Fill in cracks around door frames with caulk, and while you're at it, install a screw-on or adhesive-backed door sweep. Use expanding-foam sealants to fill in larger gaps around plumbing and electrical work, especially where pipes enter your house through exterior walls. Tackle energy suckers in overlooked places, too—like exterior wall sockets and switches. You can block them up using fitted insulation pads. Just unscrew the switch plates and pop the pads into place. COST: \$30 to \$50 for materials.

BENEFITS: Save 10 percent or more—\$50 to \$170 a year—on heating bills.

PAYBACK TIME: Six months to one year.

31 SHOW YOUR HEATING SYSTEM SOME LOVE

Soot buildup, dusty or poorly lubricated fans, flickering pilot lights, and loose fan belts can add hundreds to your heating costs each year. Getting your furnace tuned up regularly by a heating contractor can do wonders for both your wallet and your overall comfort. Natural gas-powered systems should be serviced every two to three years, while oil-fired units need a tune-up every year, since they burn dirtier. To make your system even more efficient, prevent heated air from leaking into your attic or crawl spaces by sealing ductwork with mastic duct sealant—a nontoxic,

paint-on material—or foil-backed tape. Doing so will reduce your home's air leakage and could save you a bundle in heating and cooling bills.

COST: \$75 to \$100 for the tune-up. A gallon of mastic duct sealant costs \$25; foil-backed tape costs about \$7 a roll.

BENEFITS: Furnace tune-ups save up to 10 percent or more on heating bills; sealing ductwork reduces air leakage by 15 percent and heating bills from 3 to 10 percent.

PAYBACK PERIOD: One heating season.

41 GIVE IN TO ENERGY STAR

We spend 20 percent of our electricity bills running our appliances. But we can shrink that number dramatically by replacing them with fridges, clothes washers, and dishwashers that qualify for the Energy Star. Energy Star fridges, available from major manufacturers such as GE and Frigidaire, use half as much energy as those manufactured 15 years ago and 15 percent less than new non-Energy Star models. Rated dishwashers exceed current federal energy standards by 41 percent, while Energy Star clothes washers are 40 percent more efficient than conventional models.

COST: Energy Star fridges start at around \$399 for a top-mount and \$899 for a side-by-side. Clothes washers cost \$600 and up; dishwashers start at around \$230.

BENEFITS: Save \$80 per year in energy costs for the fridge, \$110 annually on utility costs for the clothes washer, and \$30 a year on utilities for the dishwasher.

PAYBACK PERIOD: About five years for the fridge, seven to eight years for the clothes washer, and eight years for the dishwasher.

51 MAKE YOUR ATTIC MORE CUSH

The Department of Energy tells us you can reduce your heating and cooling needs by 30 percent just by adding a few hundred bucks' worth of new insulation. This is especially true if your house is more than 25 years old, from the time before building codes became more mindful of energy efficiency, and you haven't added any new batts yet. We tend to focus on the attic, but it's also wise to see how much insulation you have in crawl spaces, ceilings, basement walls, and around recessed lighting fixtures (just make sure those fixtures are designed for direct insulation contact). Check that your R-value is right for the climate where you live. In general, R-values should run between R-22 and R-49 in the attic, less in other spots. (To learn how to measure R-values and to find out the right amount of insulation for your area, go to thisoldhouse.com/shortcuts.)

COST: About \$300 for added insulation.

BENEFITS: Save 30 percent on energy bills.

PAYBACK PERIOD: Three to five years.

61 EMBRACE THE PELLET STOVE

It's not getting any cheaper to heat your house with gas or oil. But pellets—well, that's another story. Clean-burning pellet stoves can drastically cut your home heating costs. They look

like wood-burning stoves but are fueled by small pellets made from superconcentrated sawdust. Pour them into the stove's hopper, and they're fed automatically into a burn chamber; a fan blows the hot air into your house. There are freestanding models as well as fireplace inserts, which vent through a stainless-steel lining that runs up your chimney. (For more information on pellet stoves, visit thisoldhouse.com/shortcuts.)
COST: A Kozi Model 100 pellet stove costs about \$2,000. Pellets: \$6 for a 40-pound bag.
BENEFITS: 50 percent or more off heating bills.
PAYBACK PERIOD: Three to five years.

7 | TAKE CHEAPER SHOWERS

Next time you take a shower, remember this: Heating water accounts for up to 11 percent of our utility bills. If your water heater is more than a decade old, that number could be even greater. Switching it out for a new, more efficient electric storage model could save you 10 to 20 percent on heating bills. You might also think about gas and tankless units, which save 30 and 40 percent on water heating, respectively. And let's not forget solar water heaters. At \$3,500 to \$4,800 installed, they're more expensive than conventional heaters, but they have longer lives (about 20 years) and pay for themselves in energy savings in about half that time. If you're not ready to buy a new water heater just yet, ratchet up your existing unit's efficiency with a water-heater blanket. It costs just 15 bucks and will save you between 4 and 9 percent on your heating bills.
COST: An energy-efficient electric water heater runs around \$750 installed.
BENEFITS: Save up to 20 percent on water heating bills.
PAYBACK PERIOD: Three to four years.

8 | 3 SOME PERFECT STORMS

Did you know that 10 to 25 percent of your heating and cooling costs might be flying right out your windows? If you're not quite ready to fork out the \$12,000 or more you'll need to put in new, high-efficiency units, then installing storm windows is your best option. Triple-track windows—they hold two glass sash and one screen that slide up and down on separate tracks—from Larson Manufacturing cost about \$100 each and can reduce heat loss through your existing windows by 25 percent (even more if fitted over inefficient single-pane windows). They may not be as pretty as replacement windows, but sometimes it's better to feel good than look good.
COST: \$1,200 for a dozen.
BENEFITS: Reduce heat loss by 25 percent or more. Easy to install, and cheaper than replacement windows.
PAYBACK PERIOD: 2 to 5 years.

9 | ADDRES THE BEAST IN THE BASEMENT

If you've tried all of the energy-saving recommendations above but still find your house too cold and inefficient, then maybe—just maybe—it's time to consider replacing your

furnace. The average life span for a gas- or oil-fired unit is between 15 and 20 years. Along with fridges and dishwashers, Energy Star also certifies furnaces from companies such as Bryant, Carrier, and York, among many others. Most are at least 15 percent more efficient than standard models and can save you up to 20 percent on heating costs.

Not sure if it's worth the money? Add up your fuel bills for last winter, then multiply that sum by 20 percent. Divide the result into the cost of buying and installing the new system, about \$3,000 or so, and you'll see how many years it will take to recoup your investment.
COST: \$2,000 to \$3,000.
BENEFITS: Increased energy savings and a quieter, more comfortable home.
PAYBACK PERIOD: Two to five years.

10 | 1 SELL YOUR HOUSE

That is, as long as any new pad you buy is certified by Energy Star. These newly constructed homes meet the performance standards established by the EPA and Department of Energy, consuming 30 percent less energy than standard homes, thanks to features such as enhanced insulation levels, high-performance windows, air sealing and ventilation, and high-efficiency heating and cooling equipment. If you already have a building plan worked out for your new home, then making the upgrades for Energy Star certification costs just 1 to 3 percent more but pays for itself immediately. According to Energy Star, their upgrades add just \$10 to \$15 per month to your mortgage payment but save you around \$25 to \$45 per month on your utility bills.
COST: 1 to 3 percent more on construction costs.
BENEFITS: The most energy-efficient home on your block.
PAYBACK PERIOD: Immediate. •

Next time you take a shower,
remember that heating water
eats up 11 percent of your
household utility bills.

