

ABOUT THE HOUSE

Saving Energy On the Cheap

BY GWENDOLYN BOUNDS

WITH HIGHER heating and electricity costs on the horizon, and the economy teetering on a freefall this week, it seems prudent to muster a few energy-saving efforts around the house.

For the past nine months, I've investigated a range of big-ticket investments to help cut my home's energy costs—from solar panels and geothermal wells to "tankless" water heaters. Down the road, I'll likely invest in some of these. But meantime I've managed to trim bills by taking a few smaller eco-steps.

Energy experts have preached these tactics for years—from dumping an old upright freezer for a chest model, to unplugging printers, TVs and cellphone chargers when they aren't needed—yet I've always wondered just how much I'd really save.

The good news: The little steps work. My electricity consumption this year has dropped 687 kwh from the same period a year ago; in the past two months alone, I saved about \$86. Keeping that up, I'd be on target to save roughly \$500—or nearly 40% of last year's electricity bills—over the next 12 months. And by just

dialing back my water heater to 120 degrees this summer and increasing cold-water washing, I probably cut the cost of washing laundry by 20% or more, according to the Rocky Mountain Institute, a Snowmass, Colo.-based nonprofit devoted to energy-efficiency research.

"In this economy, people are looking for easy things to do," says Maria Vargas, spokeswoman for the federal government's Energy Star program, which puts its seal on select energy-efficient products and guides consumers on home improvements.

These measures also will make future big-ticket investments pay off faster. "One of the most frustrating things is showing people that it doesn't matter if you are heating and cooling with a green machine if your house isn't energy efficient," says Bruce Harley, technical director of Conservation Services Group, a Westborough, Mass.-based energy-services firm and author of "Insulate and Weatherize."

Here are eight steps I've taken:

■ **Chest freezer swap**

Why it helps: Chest freezers consume 10% to 25% less energy than comparable uprights because cold air doesn't spill out of the door
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Making the Grade: An Energy Star-qualified chest freezer.

Whitpool

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when opened, according to the Department of Energy. Manual-defrost models use 35% to 40% less energy than comparable automatic-defrost models, which may also dehydrate food, causing "freezer burn."

Cost: \$298 for a 10-cubic-foot Energy Star Whirlpool chest freezer at Lowe's.

Savings: My large 1998 upright 20-cubic-foot freezer cost an estimated \$77* a year to operate and sat mostly empty. The slimmer new one costs about \$30 to run annually. To calculate how much your old freezer or fridge costs and what a new model would save, go to recyclemyoldfridge.com.

■ Dialing back dryer use & hot-water washing

Why it helps: Clothes lines may seem rather Depression era, but then, there was this week's stock market plunge. The average electric dryer is an energy hog, consuming about 970 kwh a year, according to the Rocky Mountain Institute. While newer models are more efficient and shut off when clothes are dry, going au naturel can save more. I use an indoor drying rack for about half my wash.

Cost: \$32 at Amazon.com for a chrome Polder folding dryer rack; \$96 for a retractable line unit at breezedryer.com.

Savings: Cutting out 50% of electric drying saves about \$52 a year.* Bonus cost cut: Switching from hot to warm water can cut laundry energy usage in half, according to DOE.

■ Unplugged

Why it helps: There's a hidden price tag to the DVRs, iPods and cellphones proliferating at home. Even when fully charged or in off or standby mode, many plugged-in devices still draw, or "leak," power to operate remote controls, clocks and other needs. That costs the average household about \$100 each year. The worst offenders: TVs and computer printers, according to Dan Kammen, professor in the energy-resources group at University of California, Berkeley. "Even when they're doing nothing, these draw more than a CFL light bulb in the on mode." His solution: Unplug when possible and use power-strip surge protectors to make it easier. An inexpensive "electricity meter" can help pinpoint energy-guzzling appliances. Also, look for Energy Star-rated electronics.

Cost: PowerSquid surge protector, \$49.95 at powersquid.com; Kill A Watt Electricity Power Meter, \$29.95 at cableorganizer.com.

Savings: Eliminating "leaking" could save 9% to 12% on monthly electricity bills, according to Mr. Kammen.

■ Cut incandescent-dependency

Why it helps: Thomas Edison's incandescent invention turns 90% of the energy used into heat and only 10% into light. The new winners: compact fluorescent light bulbs (CFLs), light-emitting diodes (LEDs) and certain halogens. Energy Star CFLs use 75% less energy (though re-



Getty Images (stone, hemp); Associated Press (bulbs)

Fire, wind and light: Some little ways to help save energy.

quire special disposal because they contain mercury) than incandescents and now come in three-way and dimmable models, while LEDs use up to 90% less electricity. This year, I've switched nearly all my lamps and dimmable track lighting to CFL or low-voltage halogens; my kitchen under-cabinet lighting is LED.

Cost: CFL prices range from \$2 to \$15 at most lighting retailers; \$385 for 20 linear feet of LEDs from Borealis Lighting (borealislighting.com).

Savings: Lighting costs \$50 to \$150 a year in energy bills for the average U.S. household, according to the Rocky Mountain Institute. The Department of Energy estimates newer technologies can cut lighting-energy usage by 50% to 75%.

■ A little caulk, a little savings

Why it helps: Many homes are poorly insulated and sealed against air leaks. While the biggest gains can be had by sealing ductwork and adding new insulation, drafty windows and door frames are an uncomfortable problem that's cheaper to improve. Often it's the space between the window and its rough opening that needs to be sealed, according to Mr. Harley of CSG. He recommends using paintable, siliconized acrylic caulk inside to seal areas where window trim meets the wall and frame. Weather stripping, caulk and "sweeps" that attach to the bottom of a door to thwart drafts can help entryways.

Cost: \$3.72 at greendepot.com for a tube of Titebond Painters Plus Caulk.

Savings: The Energy Star program estimates homeowners can save up to 20% on heating and cooling costs by sealing and insulating.

■ "Low-e" windows

Why it helps: If windows must be replaced, look for double-paned ones with "Low-e"—for "low emissivity"—coatings and gas filling, such as argon and krypton, between panes. This can improve thermal performance and reduce UV ray penetration, which fades furniture and rugs. The government lists criteria for windows to be classified Energy Star on energystar.gov; U-factor refers to how well a window insulates while the Solar Heat Gain Coefficient (SHGC) tells how much it blocks heat. I replaced several damaged west-facing windows with insulated glass that met the Energy Star standards.

Cost: About \$20 to \$50 more per window for Low-e and gas fills, assuming same frame and sash, according to Mr. Harley.

Savings: Choosing Energy Star windows can save \$126-\$465 a year when replacing single-pane windows; \$27-\$111 a year over double-pane, clear glass replacement windows.

■ Energy Star appliances

Why it helps: Appliances account for about 20% of your household's energy consumption with refrigerators, clothes washers and clothes dryers leading the way. Energy Star-quali-

fied appliances use 10%-50% energy and water than standard models. In a recent kitchen renovation, I replaced my new 20-year-old refrigerator dishwasher with models that qualified.

Cost: \$0 to a few hundred dollars more for Energy Star products, depending on appliance and manufacturer.

Savings: Changing to Energy Star appliances can save \$7 a year for most homes. The estimated price to operate my fridge: \$151 a year versus \$52 the new one*.

■ Return to the wood stove

Why it helps: With household spending on heating fuels expected to climb 17% this winter according to the U.S. Energy Information Administration, many homeowners are seeking alternative heat sources like wood pellet stoves, which use renewable resources.

Cost: Typically \$3,000-\$4,200 with installation, according to the Hearth Patio & Barbecue Association.

Savings: While a larger front investment than other steps, on average a hearth appliance can save 20% to 40% heating bills. Several Web sites including the EIA's (www.eia.doe.gov/neic/experts/heatcalc.xls) and pelletheat.org offer fuel comparison calculators.

*Savings based on national residential electricity price average of 10.77 cents per kwh for months ending May, according to U.S. Energy Information Administration.