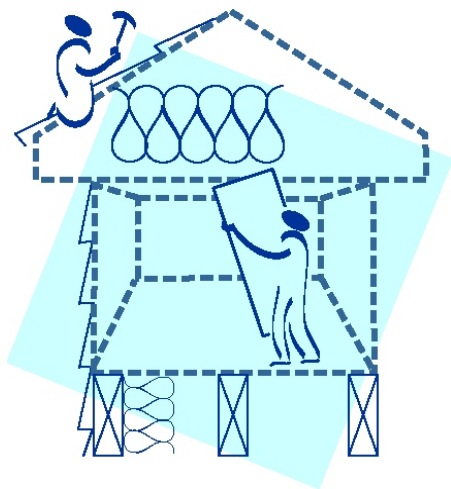


March 2004



A Resident's Guide to Warm Weather Energy Savings:

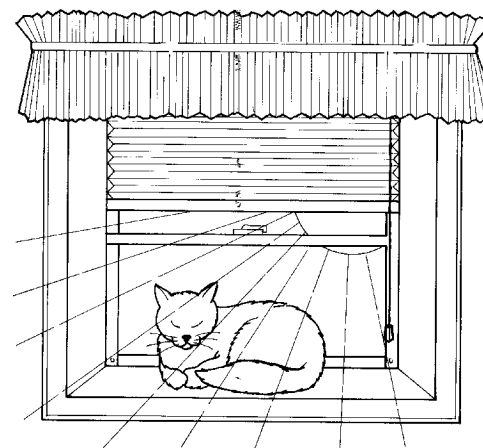
Lowering Utility Bills
without Losing Comfort

Kouba-Cavallo Associates, Inc.

Phone: 630 971-2016

E-mail: cavallo@Kouba-Cavallo.com

Web: www.Kouba-Cavallo.com



Disclaimer: The views and opinions express in this booklet are those of the author and do not necessarily reflect those of any group or agency distributing this booklet. References herein to specific products, processes, or services do not constitute or imply their endorsement, recommendation, or favoring.

James D. Cavallo, Ph.D.
Kouba-Cavallo Associates, Inc.

Dedicated to those for whom the low operating cost of housing is not a luxury.

Copyright © 2004 by Kouba-Cavallo Associates, Inc.

All rights reserved

No part of this book may be used or reproduced in any manner whatsoever without written permission of the author. This booklet may be reproduced in its original and complete form by any non-profit or public entity for distribution without charge.

Acknowledgments:

Many of the energy tips on pages 18 and 19 were drawn from *Your Energy Savings: A Resident's Handbook* by Paul Knight, who generously gave permission for their use. Many of the illustrations in this booklet were produced by a wonderfully creative team at Argonne National Laboratory with public funding from the U.S. Department of Energy and the State of Illinois. We sincerely appreciate and recognize the work and talents of Marita Moniger, Daniel Sarro, and Carol Renaud.

Internet-based Information Sources

Home Energy Magazine

www.HomeEnergy.org

Energy Star Information

www.EnergyStar.gov

U.S. Department of Energy

www.eere.energy.gov/EE/buildings.html

www.eere.energy.gov/consumerinfo/

American Council for an Energy Efficient Economy

www.ACREE.org

Rocky Mountain Institute

www.RMI.org

Alliance to Save Energy

www.ASE.org

Kouba-Cavallo Associates

www.Kouba-Cavallo.com

Books on Energy Efficiency

No-Regrets Remodeling

from the editors of Home Energy
call 510 524-5405

The Residential Energy Audit Handbook

Dale Schueman
available in good libraries

The Complete Book of Home Inspection

Norman Becker
available at many bookstores

Consumer Guide to Home Energy Savings

available from ACEEE
call 202 429-0193

The Healthy House

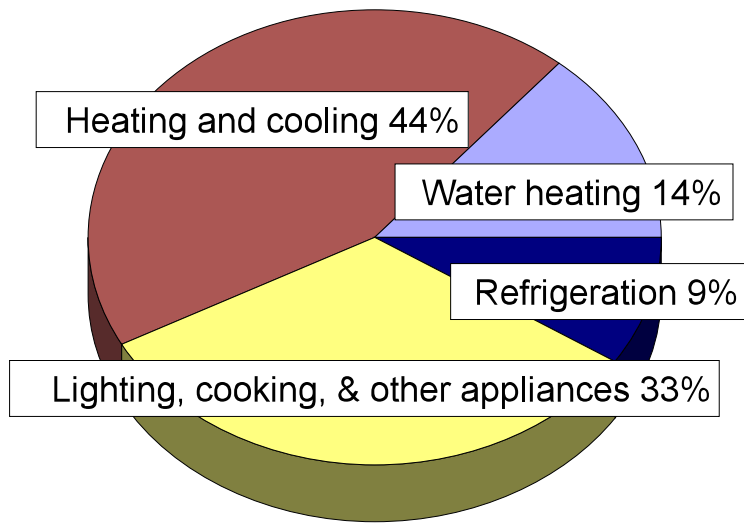
John Bower
available at many bookstores

Saving Energy Saves Money

No one likes paying their utility bill. So why do millions of Americans pay more than they need to? The typical family spends about \$1,300 each year on heating and cooking fuels, electricity, and water. But that same typical family could save energy and water totaling more than \$400 annually and put that money to other good uses. This booklet contains ideas on how you can save energy around your home. Whether you live in a single family home or an apartment building, there are things that you can do to keep money in your pocket rather than letting it go to utility bills. Also you'll learn that saving energy doesn't require you to lose comfort.

How Do You Use Energy?

Typical Energy Use in the Home



It's probably no surprise that the largest share of energy consumed around the home is used to heat and cool the air around you. If you had to pick one place to start saving energy, lowering your heating and cooling bills would make sense. But there are other areas where savings can be found, including conserving hot water and using efficient lights and appliances.

6. Hot water shouldn't be too hot. Have your water heater set no higher than 120°. Water hotter than that can be a scalding hazard.

7. Use your exhaust fans whenever you are in the bathroom. Showers can create excess moisture that will lead to mold or mildew. Also be sure to use the exhaust fan in the kitchen when cooking.

8. Don't store things in your furnace room. They could be a fire hazard.

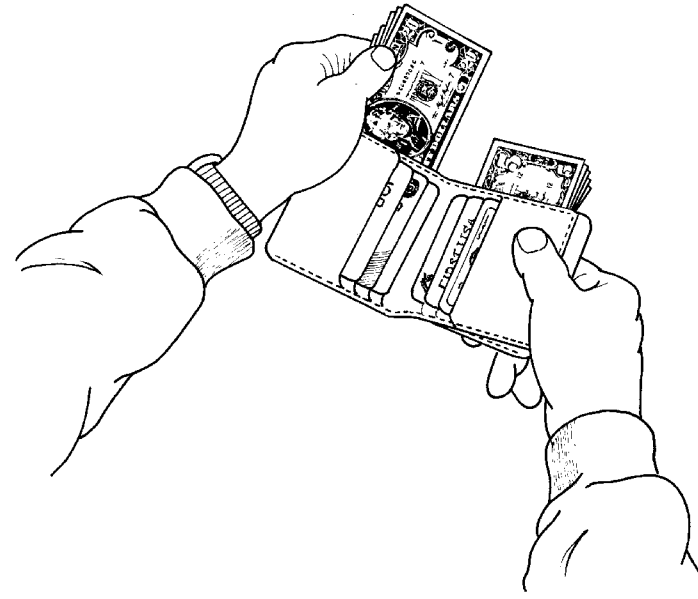
9. Whenever a light bulb burns out, replace it with a compact fluorescent light bulb.

10. Set your refrigerator to keep your food at 38°. Don't let the food compartment get too cold; it will freeze your fruits and vegetables and waste energy.

Tips for Saving Money and Staying Cool

1. Ceiling fans will help your air conditioner move cool air around the house.
2. Turn off the air conditioning and open your windows on cooler evenings or in mild weather. Window fans work well when the sun goes down.
3. Set your thermostat up by 5 degrees when leaving home for more than 3 hours. Dialing up your thermostat can save up to 10 percent on your air conditioning bill.
4. Keep your duct registers or radiators clean and clear. Don't block the cool air from getting to you.
5. Close your shades to block out the sun's heat during the daytime.

The Problem of Energy Waste



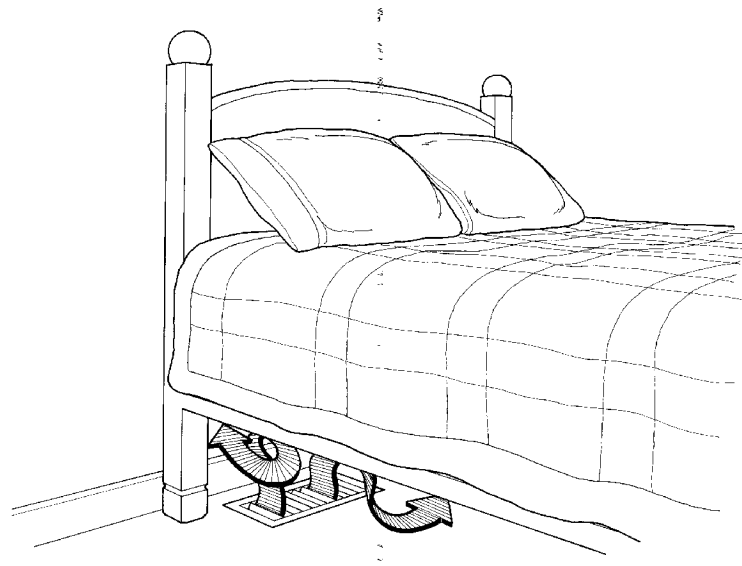
The main object of this booklet is to help you save money, but reducing energy waste without reducing your comfort is also good for the environment. Every time you save electricity, natural gas, or some other fuel, you reduce pollution. So with energy conservation, you save money and the environment.

Develop a Plan

Capturing your energy savings can take some planning. You should start by reading through this booklet and looking around your home. Ask yourself: Are there some simple, low-cost things that can be done? Almost certainly the answer will be “yes”. But you probably can also find energy conservation actions that have some cost connected with them. You may want to have an energy audit or home energy rating done on your home. If you do, ask the technician to give you both a list of the energy measures that make sense for your home, the order in which the measures should be implemented, and the things you can do yourself. Get one of the books listed on page 20 of this booklet and plan your actions intelligently.

Bring the Conditioned Air to You

Your air conditioning works best when you let the air conditioning get to you. Be sure your furniture is not blocking the way for cool air to circulate. Move your bed, sofa, chair, or bookcase away from the air vents or room air conditioner. You’ll be cooler!



Use Power Strips to Fight Phantom Load

Many electric devices around your home are never really turned off. TVs, VCRs, and DVD players usually have “instant on” features that use electricity both day and night whether you are watching them or not. One way to fight this phantom electric usage is to connect all of your entertainment devices to a power strip. When you are not using them, flip the switch off. Then you can be sure they aren’t sucking up your electricity while you are sleeping.

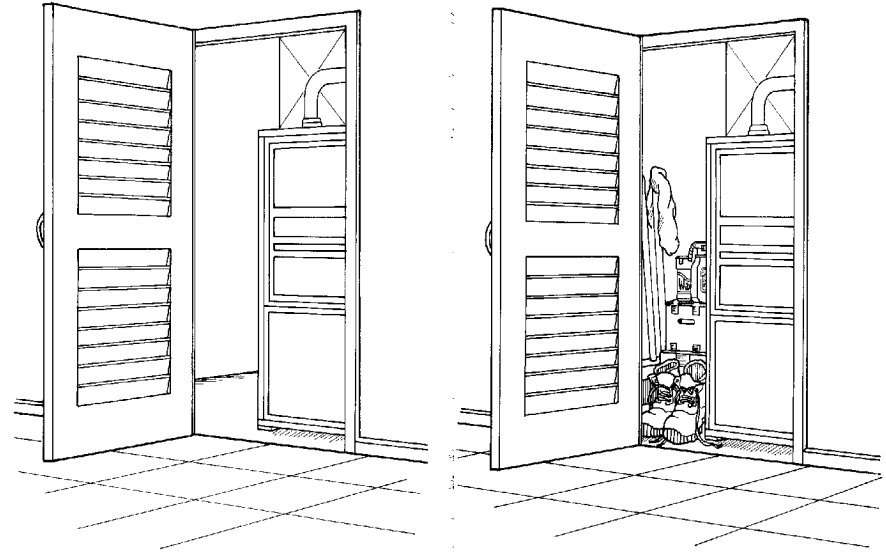
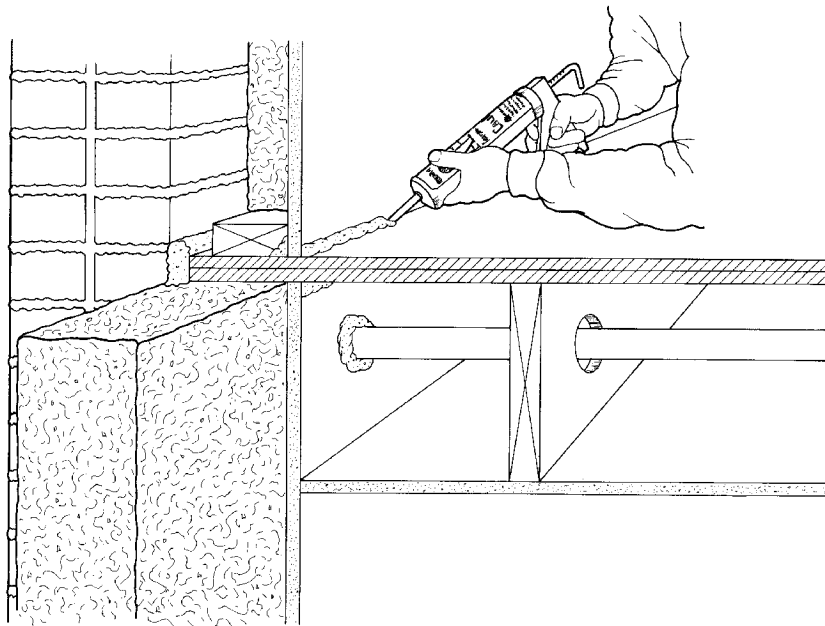
You should also make sure your computer and its monitor are turned off when not in use. It’s a costly myth that turning them on and off will burn more electricity than leaving them on.

Keep the Heat Out with Insulation

We usually think of insulation as keeping heat in, but it also will keep summer’s heat out. This is especially true in your attic which can get very hot as the sun beats down on your roof. A thick layer of insulation will keep that heat in your attic, and your air conditioner will not have to work as hard. Insulation is rated by its resistance to heat movement with an R-value. At a minimum, attics should have between R-25 (6 inches of fiberglass) in the Southeast states and R-42 (14 inches of fiberglass) in the northern tier states. It is very important to have insulation around air conditioning duct if they go through your attic or some other unconditioned space. Adding insulation to attics is often a low cost improvement and will pay for itself in large energy savings in summer and winter.

Tighten Up Your Home

One of the biggest sources of summertime discomfort is hot, humid air seeping in through holes and cracks around your home. Sealing those holes and cracks can be easy and inexpensive. Caulk and weatherstripping is all you need! That will hold in the air cooled with your air conditioner and keep out the heat and humidity.



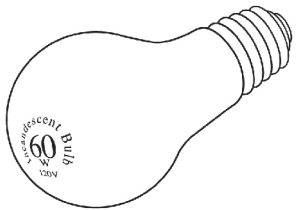
Good Idea

Bad Idea

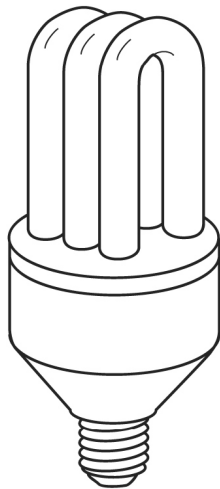
Furnace room safety is important. You should think before loading up your furnace room with lots of boxes, shoes, mops, cleaning supplies, and other clutter. Items stuffed close to a furnace or water heater are fire hazards. It is a bad idea to use your furnace room as an extra closet. A good idea is to keep the area around your furnace, air conditioner, and water heater clear. That also makes it easy to change the filter frequently!

Save Electricity with Efficient Lights

One of the best ways to save money on your electricity bills is to switch from incandescent lights to compact fluorescent lighting. Compact fluorescent bulbs use from 60% to 75% less energy!



Replace any incandescent bulbs (like the one above) in a high use area with a compact fluorescent (like the one to the right). High use areas are usually kitchens, TV rooms, front parlors, and porches - or any light left on for more than 2 hours a day.

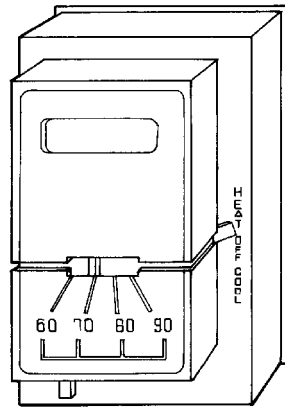
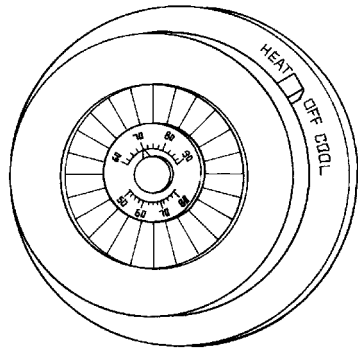


Here's what to do:

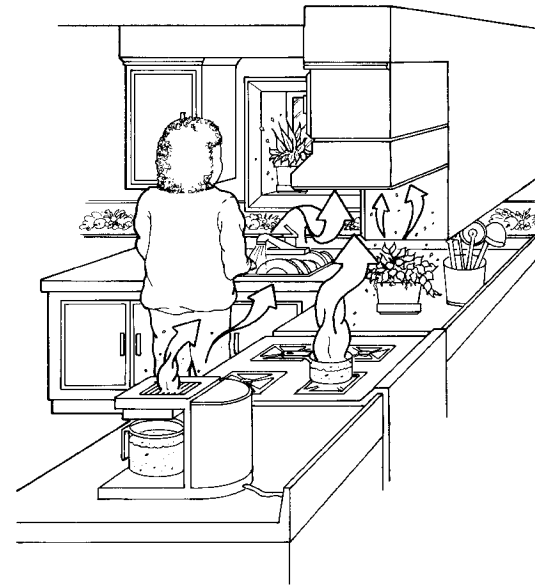
1. Find the problems: On a windy day feel around windows, doors, and exterior walls - especially near the floor and around electrical outlets.
2. Weatherize your home: Use caulk and weatherstripping to seal up the holes and cracks that you find. Caulk is cheap, and so is weatherstripping! You can save 10 % of the energy you use to air condition your home by tightening up around windows, doors, and other places where hot, humid air comes in and conditioned air escapes.
3. Ask for help: If you find that there are major drafts in your home, get help. Ask for an energy audit or home energy rating by a professional who can test your home.

Turn Up the Thermostat when You're Out

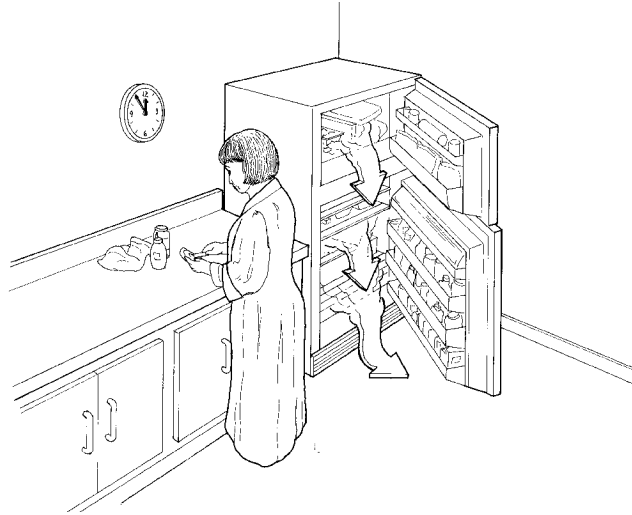
It's a myth that you can save energy dollars by leaving the temperature constant all the time. You should turn up the thermostat whenever you go out for more than 3 hours. Dialing up the temperature on your thermostat by 5 degrees will save money. When you get home, return the thermostat to 78°. You'll be cool in a few minutes.



Kitchens use a lot of energy. You can save by buying appliances that have the Energy Star label. And when you are cooking don't forget to use the lids of the pots. Food will cook faster; the kitchen won't be so hot; less moisture will fill the air; and you won't waste energy.



Refrigerators Use Lots of Energy



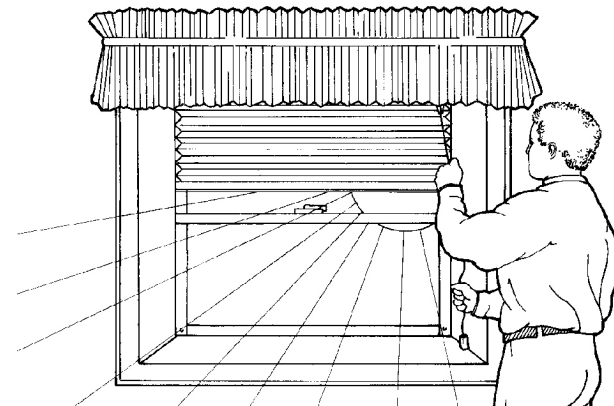
In many homes, the refrigerator is the largest electricity-using appliance. That's not a surprise when you think that it is operating 24 hours a day, 7 days a week. Help your refrigerator use less energy by:

1. Closing the refrigerator door after use
2. Not leaving the door open while deciding what to eat
3. Keeping the food compartment no lower than at 38°

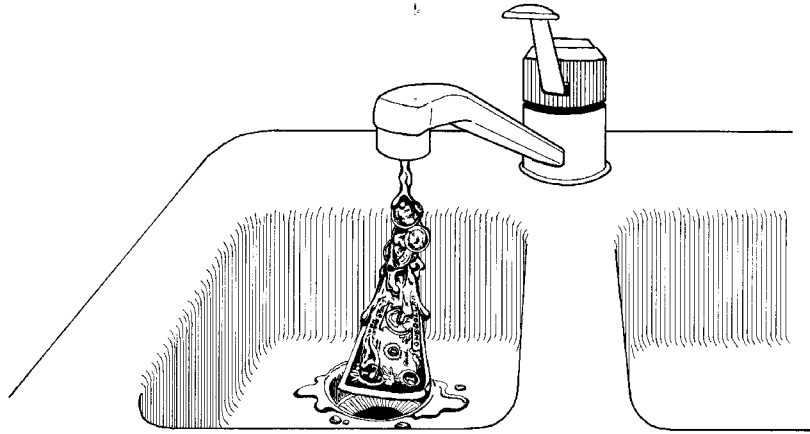
Is Heat Pouring in from Your Windows?

Windows provide free light, but the sun can make your home into an oven. Here are things you can do:

1. Close your curtains and shades by 9 o'clock each morning - especially for windows facing south or west.
2. When not using air conditioning, open windows on the shady side of the house.
3. Install awnings or plant trees and shrubs to block the direct rays of the sun.



Save Water and Energy



You can save energy and lower your utility bills by reducing your hot water usage. It takes energy to heat water!

- Fix leaky faucets
- Don't let hot water run unnecessarily, turn off the faucet after washing food or hands
- Take short showers; that will also reduce the moisture in the air that can lead to mold and mildew
- Set your water heater no higher than 120°

Use Your Exhaust Fans

The exhaust fans in your bathroom and kitchen play an important part in keeping your home clean and comfortable. Run the fans when taking showers or cooking. The fans vent moisture and odors out of your home to keep it free of mold and mildew.

