

Consumer's Guide to Home Comfort

#4: 33 Ways We at Robert H. Ranck, Inc. Lower Monthly Energy Bills In Our Own Homes



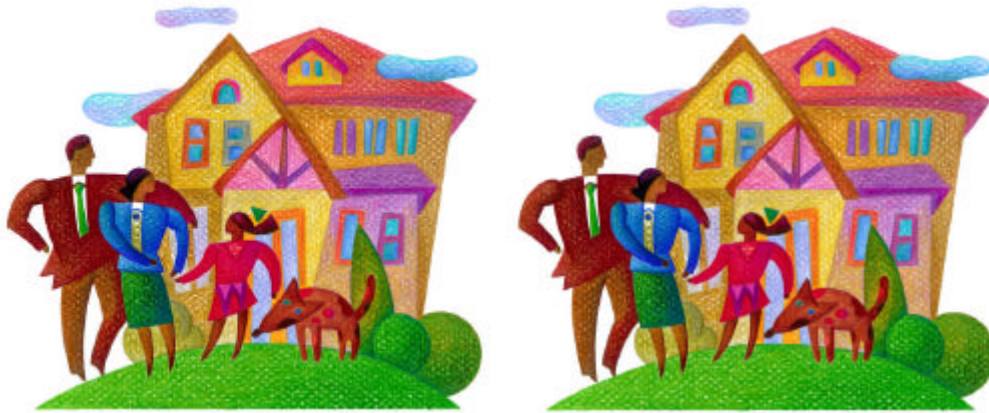
**Up to 50% of
Your Energy Dollars
May Be Escaping
From Your Home.**

- *Savings you can find at little or no additional cost.*
- *Savings you can get with modest investment.*
- *Savings you can get only with the help of a home comfort professional.*

***The more comfortable you are with your decisions,
the better we will have served you.***

Call or visit us online for these additional *Consumer Decision Guides*:

- *Guide to Choosing the Right Replacement System*
- *Checklist for Choosing the Right Contractor*
- *Healthy Air Solutions for Your Family*
- *Preventative Maintenance Agreements*
- *Clean Water Solutions*
- *Bath Design for Family Safety & Senior Comfort*



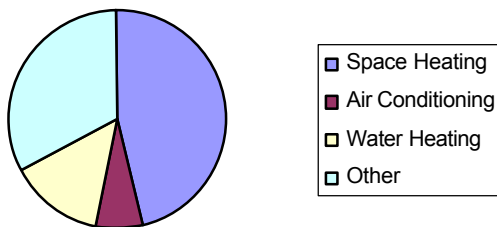
Two Families Living In Homes That Look the Same: One's Bills are Double the Other's

Home energy use is serious business. It accounts for one fifth of all energy consumed in the United States. Unfortunately, a lot of this money is simply going to waste—not to mention squandering non-renewable fossil fuels and unnecessarily releasing greenhouse gases into the atmosphere. In fact, the US Environmental Protection Agency (EPA) estimates that the typical house is responsible for almost two times the carbon dioxide emissions as the typical car. (This includes power plant emissions as well as those from home gas and oil furnaces.)

"The bottom line is, we have an economic train wreck heading our way with respect to soaring electricity rates,"

PA Secretary of Environmental Protection
Kathleen A. McGinty
in the *Philadelphia Inquirer* 9/26/07

**Estimated Lancaster Area
Household Energy Expenditures**



With the coming 2009 utility deregulation, Pennsylvania home owners will likely be hit the same kind of electric rate hikes already suffered by Delaware and Maryland homeowners who experienced increases as high as 70%.

The fact is that water heating and home comfort accounts for two-thirds of the energy expenditure of the average Lancaster area household (46% to space heating, 7% to air conditioning and 14% going to water heating). And for many families, up to half of those energy dollars are being wasted.

The Good News: There Are Things You Can Do to Reduce The Waste

- **Some You Can Do Yourself** – With Little Effort or Added Expense
- **Some You Can Do Yourself – Or Ask for Our Help** – With a Modest Investment
- **Some Solutions Are Possible Only With the Help of a Professional Heating/Cooling Expert** – Invest Now & Be Rewarded with Savings Later

Do-It-Yourself – With Little Effort or Added Expense

Year-round:

1. **Change or clean your furnace filter monthly.*** Failing to check the filter regularly can be costly. Dust and dirt can work their way into the blower and coil assemblies, reducing the system's operating efficiency and eventually damaging the motor.

In fact, more than 25% our emergency service calls are caused by simple dust and dirt clogging up vital motor parts.

***Enroll in our FREE monthly filter change reminder service.**

Call us at (717) 397-2577 or register online at www.RanckInc.com. No single action you can take will do more for the performance and life of your heating and cooling system.

2. **Do NOT try to economize by closing vents in unoccupied rooms.** Although it seems logical that cutting down the space to be heated would be more efficient, the fact is that heating and cooling systems (when they are installed properly) are precisely sized to move a specific amount of air throughout the home. Closed vents will alter the amount of air moved disturbing the balance and operation of the system. Rather than save you money, the system cycles on-and-off more frequently, wasting your energy dollars.

This is a big problem in the summertime when removing humidity is more critical to comfort than cooling. Dry air is more comfortable than moist air. With a system that is too large for the space it is cooling, the target temperature is reached before the air has had a chance to dehumidify.

And because you never feel comfortable, you tend to keep turning down the thermostat seeking relief that never comes. The result is wasted energy, wide temperature swings, damp moist air and increased chance of mold and mildew growth in your home.

To make matters worse, this ill-informed advice about closing off vents often comes from heating and cooling companies. But if you consider that the US Department of Energy (D.O.E.) reports over-sizing as **the** major problem with our industry, this is not all that surprising. According to the D.O.E., "Some national surveys have determined that well over half of all HVAC contractors do not size heating and cooling systems correctly."

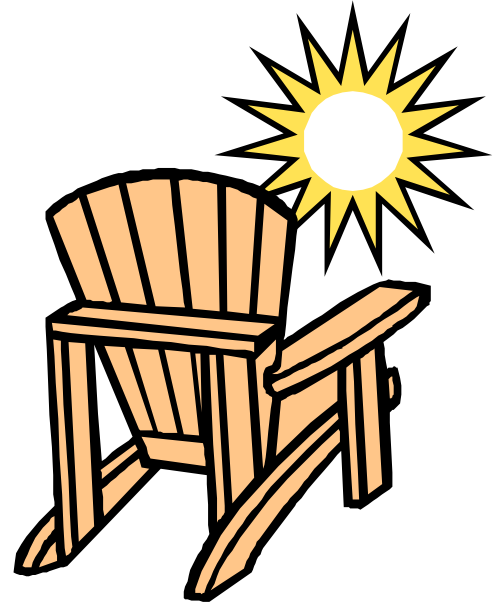


3. **Make sure vents and returns are not blocked.** One of the simplest ways to improve your home's heating and cooling efficiency is to make sure vents and returns are not blocked by furniture or draperies. By keeping these unobstructed, you will also improve circulation making your home more comfortable.
4. **If your home is heated with radiators, keep them unobstructed and free from dust.**
5. **Level your thermostat.** Your thermostat can be off by as much as ten degrees if it is not level.
6. **Use kitchen and bathroom ventilating fans sparingly.** A fan left on for one hour can suck out quite a lot of heat in the winter or cool dry air in the summer.
7. **Keep fireplace dampers and/or glass doors closed.** This literally will keep your heating and cooling dollars from going up the chimney.
8. **Set your water heater temperature to 120-125 degrees.** These are safe but comfortable temperatures for all your household uses. If you find that you are running out of hot water, the problem is not the temperature but rather the capacity of your water heater. Turning up the temperature will not solve your problem, but it will run up your bills. And with higher temperatures, family members risk scalding injuries.
9. **Wash clothes in cold water.** Take advantage of modern detergents and save.
10. **Collect and study your utility bills.** Target the months with the highest bills for special family efforts at energy conservation.

Do-It-Yourself – With Little Effort or Added Expense (continued)

Summer:

11. **Raise the thermostat when you are away from home or sleeping.** According to US Department of Energy's *Consumer's Guide to Energy Efficiency & Renewable Energy*, turning the thermostat ahead by 5 degrees for 8 hours can save around 5-10% per year.
12. **Use ceiling fans in occupied areas.** Check their direction. In the summer when you're running your air conditioner, set fans to turn slowly clockwise. The fans will not only keep the rooms more comfortable by circulating the air but will keep cool air from pooling at the floor. If you're using the fan alone for cooling, reset to turn counter-clockwise and turn up the speed.
13. **Use drapes during the day to block heat from the sun.**
14. **Keep windows and doors closed except** on cool evenings when outside temperatures are lower than room temperatures.
15. **Move lamps, televisions or other heat-producing appliances away from the air conditioner's thermostat.**



Winter:

16. **Lower the thermostat when you are away from home or sleeping.** Lancaster area households can reduce heating energy costs by about 4% for each 1 degree reduction. You can save around 10% a year by simply turning your thermostat back 10°-15° for eight hours.

NOTE: With heat pumps, the situation is different. When the heat pump is in the heating mode, setting back its thermostat can cause inefficient operation, thereby canceling out any savings. Maintaining a moderate setting is the most cost-effective practice. Some manufacturers offer programmable thermostats specifically designed to make setting back the thermostat cost effective. These use special algorithms to minimize the use of backup electric resistance heat systems. Ask us for more information.

With steam heat and radiant floor heating systems, the problem is their slow response. Times vary with different systems. If you determine your system's response time, you can use a programmable thermostat to begin its cool down well before you leave or go to bed and set the return to normal temperature in advance of your target.

17. **Use ceiling fans in occupied areas.** Check their direction. In the winter, set fans to turn slowly counter-clockwise. The blades will force warm air downward. Circulation will keep air moving and temperatures more even throughout the area.
18. **Open drapes during the day to bring in warming sunlight; close them at night to keep heat in.**
19. **Keep windows and doors closed.**



Do-It-Yourself – or Let Us Help – Save with a Modest Investment

- 20. Replace your manual thermostat with a programmable model.** According to a U.S. Department of Energy report, the typical household can save \$95 - \$145 a year for as little as a \$100 investment. Modern programmable thermostats can store and repeat multiple settings that you can manually override without affecting the rest of the daily or weekly program.

Digital models offer the most features but may be difficult for some to program. Electromechanical systems involving pegs or moving bars are more limited but far simpler to set up.

Special thermostats are available for heat pumps and steam and radiant heating systems. The most advanced and energy-efficient heating and cooling systems offer controls that respond both to temperature and humidity levels inside and outside the home. If your system has this capability, make sure your controls are taking advantage of these features. If you are not sure, ask your heating professional.

- 21. Consider the location of your thermostat.** Thermostats must be placed away from direct sunlight, drafts, doorways, skylights and windows. Otherwise, you may get “ghost readings” that lead to unnecessary furnace or air conditioner cycling. Also, make sure it is in a convenient location. If necessary, move it to a better location.
- 22. Add weather stripping to all movable joints of windows and doors and caulk any cracks.**
- 23. Seal other air leaks in your house.** The ones that whistle on windy days or where you feel drafts. Check utility cut-thru’s for pipes, gaps around electric sockets and recessed lights. All the little invisible cracks and gaps can add up to as much as an open window or door – without you even knowing it.
- 24. Replace leaky windows and doors with energy efficient replacements.** New models are not only airtight but offer insulation, multiple glazing, gas fills and energy coatings all designed to keep summer heat out and the winter heat you pay for in.
- 25. Add insulation to your attic and crawl spaces.** The average 15 year-old home has insulation between R-11 and R-15. Bring it up to R-30.
- 26. Blow insulation into un-insulated walls.**
- 27. Seal leaks in exposed ductwork.** The average home loses 15-40% of heating and cooling through leaky ductwork.
- 28. Install better venting to let summer heat escape from your attic.** The technology of attic ventilation has improved over the past decade. Older methods vent only from the top few feet – not the whole attic. Venting heat from your attic will make your family more comfortable and give you significant savings on your cooling bills.
- 29. Install an insulating blanket on your electric* water heater.** Easy to install, an insulating blanket will easily pay for itself the first year. But first, check with your owner’s manual or ask your plumbing professional. Manufacturers of some high efficiency units discourage the use of this extra insulation.
- 30. Insulate exposed hot water pipes where they run through unheated areas.** This is especially true for the first 6-9 feet coming from your storage tank. This helps with a problem of “thermosyphoning,” the tendency for hot water to rise up the supply pipe. Better yet, consider having your plumbing professional install a heat trap. This is either a valve or flexible connector put in to stop “thermosyphoning.” Many newer water heaters have this built in, but others can be retrofitted with a heat trap.

*not recommended for gas or oil water heaters.

Call on Your Heating/Cooling/Plumbing Professional Invest now – Be Rewarded with Savings Later

- 31. Schedule seasonal tune-ups and safety inspections.** Annual checkups on your water heater and heating and cooling systems by a licensed mechanical contractor are also a good idea - especially if you have a fuel-burning system. The technician should check the flues and temperature settings, examine the heat exchanger for cracks, and check the safety mechanisms. A \$100-200 annual tune-up can reduce your heating and cooling costs by five percent – and it's the best prevention against deadly carbon monoxide poisoning. If you neglect annual tune-ups, that five percent a year will accumulate. Before you know it — because the change will be gradual — you could be paying as much as 30% more for electric or fuel.
- 32. Better yet, enroll for our *Preventative Service Plan*.** Among the benefits you will enjoy are:
- **Priority service – *We service our Service Plan customers first, twenty-four hours a day.***
 - **Discounts for parts and labor**
 - **Continuous maintenance and repair of all your critical systems**
 - **Peak energy efficiencies throughout the year**
 - **Longer life for your systems**
 - **Peace of mind that comes when all safety systems are checked**

Problems will be found before systems break down. You will be spared the cold morning shower, the sudden loss of heat or air conditioning. To learn more, call us at **(717) 397-2577** or download R. H. Ranck's Consumer Guide #5 at www.RanckInc.com.

- 33. Schedule a FREE system evaluation.** If your utility costs are mounting and your aging heating/cooling or water heating system is no longer delivering the comfort it once did, you will save more by replacing it with a new energy efficient system.

We will show you how a switch from 1990's technology to today's state-of-the-art can save you as much as 59% in energy spending. We will show you how those savings will pay off today's investment and continue to build your savings years before you'll need a replacement.

We will show you your financing options and how you may take advantage of up to \$500 in home energy efficiency tax credits being offered by the Federal government. A tax credit is better than a similar tax deduction which lowers taxable income. ***The tax credit reduces the tax you pay dollar-for-dollar.*** If replacement doesn't fit your budget, we'll explain your financing options.

Check out these additional *FREE* companion decision guides at www.RanckInc.com:

- ***A Checklist for Choosing the Right Contractor:*** What to look for & what to look out for.
- ***Guide to Choosing the Right Replacement System:*** Compare home heating and cooling systems BEFORE meeting with a salesman.
- ***Healthy Home Solutions:*** Your guide to indoor air quality and better family health.
- ***Preventative Maintenance Agreements***
- ***Clean Water Solutions***
- ***Bath Design for Family Safety and Senior Comfort***

Download yours today or call **(717) 397-2577** with your request or questions.

Then, when you're ready to talk, call for your ***FREE* home comfort design consultation.**