

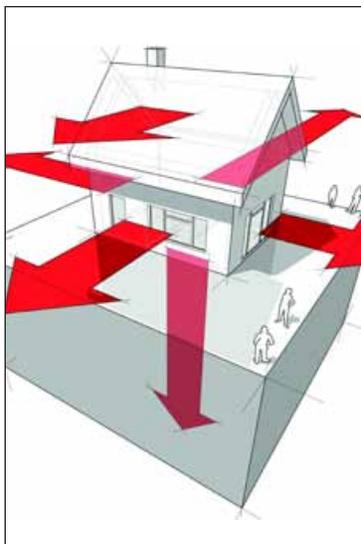
Conservation *Wise*

Energy Conservation: You CAN Make a Difference!

Saving Energy in Your Home: Heating and Cooling

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Introduction

The typical U.S. family spends approximately half of its budget on heating and cooling costs. Heating accounts for approximately 31% of annual energy bills, while cooling makes up approximately 12%. Improving the efficiency of your heating and cooling systems will not only save you money, it will also reduce emissions such as carbon dioxide, sulfur dioxide, and nitrogen oxides that can be harmful to the environment.

How Can I Save Money?

In addition to following the tips below, you can also install insulation and reduce air leaks through windows and cracks in your home. Look for additional ConservationWise publications on these topics at www.the-education-store.com.

Thermostat

- **Turn the thermostat down in winter and up in summer** to save about 10% on your heating and cooling bills.
 - *Heating*—Set the thermostat to 65–68°F (or lower) while you're awake, and reduce the temperature to 55–60° while you're away from home or sleeping. You can save as much as 1% for each degree if the setback period is at least eight hours long.
 - *Cooling*—Set the thermostat to 75–80°F (or higher) while you're home and increase the temperature to 85° if you will be away from home for an hour or more. Consider turning off the air conditioner off if no people or animals are home and if you'll be away for at least six hours.

Global Impact?

U.S. heating and cooling systems release into the environment:

- 150 million tons of carbon dioxide, which adds to global climate change.
- 12% of the nation's sulfur dioxide and 4% of its nitrogen oxides, which contributes to acid rain.

- **Use a programmable thermostat** to adjust temperatures automatically.

Energy-Efficient Alternatives

- **Cool your home with natural ventilation** (windows) or **forced ventilation** (fans).
- **Manage sunlight exposure in your home.** During heating season, open south-facing window coverings during the day. During cooling season, keep those same window coverings closed.
- **Use insulation, energy-efficient windows and doors, and window shades** to keep your home cooler.
- **Heat your home by burning wood in a fireplace** when a cost-effective source is available. This allows you to lower your thermostat while keeping living areas warm.
- **Add supplementary sources** of heat or fans where needed.
- **Replace your heating & cooling system** with an energy-efficient model.

These publications were developed with assistance from the Purdue Extension Energy Conservation Team

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Knowledge to Go

1-888-EXT-INFO

Air Flow

- **Clean or replace furnace filters** once a month (or as needed) during the heating season.
- **Keep registers, baseboard heaters, and radiators clean.**
- **Keep air flow open** to registers, baseboard heaters, and radiators. Do not block with furniture, carpeting, or drapes.
- **Insulate and seal air ducts in unheated spaces** (attics or crawl spaces). Minor duct repairs are easy to make, but ducts in unconditioned spaces should be sealed and insulated by qualified professionals using UL-approved, heat-tolerant sealing materials. Look for the Underwriters Laboratories (UL) logo.

Note: Insulating ducts in a basement will make it colder, so be aware that water pipes and drains could freeze and burst if the heat ducts in the space are fully insulated. Using an electric heating tape wrap on the pipes can prevent this. Check with a professional contractor.

- **Turn off exhaust fans** in the kitchen or bath within 20 minutes after use.

Radiators

- **Bleed trapped air from hot-water radiators** once or twice a season. Call a professional if in doubt about how to perform this task.
- **Place heat-resistant radiator reflectors between exterior walls and the radiators** to reflect heat into the room.

Purchasing Tips: Select energy-efficient products when buying new equipment.

Furnace—Look for high Annual Fuel Utilization Efficiency (AFUE) ratings. The national minimum is 78% AFUE, but some ENERGY STAR models exceed 90% AFUE.

Air conditioner—Look for a high Seasonal Energy Efficiency Ratio (SEER). The current minimum SEER is 13 for central air conditioners. ENERGY STAR models have a SEER of 14 or more.

Exhaust fan—Choose high-efficiency, low-noise fans for kitchens and bathrooms.

Ducts—Consider ones that come with insulation already installed.

Where Can I Learn More?

- Visit your local library and home improvement store.
- *Energy Savers Booklet: Tips on Saving Energy and Money at Home* (PDF download: 3.5 MB), U.S. Department of Energy, www1.eere.energy.gov/consumer/tips/
- Energy Savers website, U.S. Department of Energy, www.energysavers.gov/
- ENERGY STAR website, U.S. Department of Energy, www.energystar.gov

References

Energy Savers Booklet: Tips on Saving Energy and Money at Home, U.S. Department of Energy, www1.eere.energy.gov/consumer/tips/ (accessed 07/15/2010).

ENERGY STAR—qualified appliances fact sheet, www.energysavers.gov/your_home/appliances/ (accessed 07/25/2010).