



Agricultural Engineering

ENERGY MANAGEMENT SERIES

Publication 324-861

Reprinted December 1984

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ENERGY CONSERVATION IN THE RURAL HOME

Home Management Tips To Cut Heating and Cooling Costs

Heating and cooling your home may take as much as two-thirds of all the energy used there. This fact sheet suggests everyday things you can do to save energy and maintain comfort while heating and cooling your home.

Energy Efficient Use of Space

Don't heat or cool rooms not in use. Close off areas of the house that are not needed.

In summer, it is easier to keep the lower level of your house cool. If you have a choice, plan your living arrangements accordingly and cool only the rooms you need. The basement recreation room may also be used for sleeping during hot weather, reducing the need to cool bedrooms on upper levels.

Set Your Thermostat Conservatively

Begin the heating season by setting the thermostat no higher than 65° F. Turn it even lower for nighttime or while you are away for extended periods. During extremely cold weather, do not turn the thermostat so low that the heating system must labor to reach the 65° F temperature when you reset the thermostat. You may wish to install a time-clock thermostat which will automatically set back the temperature to your nighttime setting and reset it to the daytime temperature before you get up in the morning.

Turning the thermostat several degrees higher than desired when you arrive home or awaken in the morning does not speed the rate of heat delivery. It will, however, eventually run the temperature higher than necessary and waste fuel.

Avoid the temptation to turn the thermostat higher if you feel chilly. Instead, put on additional clothing for warmth or move to a sunny spot of the house.

If the house becomes warmer than necessary, set the thermostat down rather than opening windows. In fact, you may be more comfortable if you set the thermostat several degrees lower while you are working (active) and then set it higher when you relax in the evening.

In summer run the air conditioner only when and where you need cooling. Don't overcool. Set the thermostat no lower than 78° F.

A timer, to turn the air conditioner on in advance of your arrival home, will let you come home to a cool house, yet save running the air conditioning all day.

Ventilate Correctly

Before air conditioning was invented, people opened up the house at night to let it fill with cool air. In the morning when the sun began to heat up things, the house was closed until evening. This practice may have some application in your home today.

During mild weather, use a fan instead of an air conditioner. A window fan uses only a small fraction of the energy of air conditioning units. You probably can use your window air conditioning unit to circulate air and still be comfortable without using the cooling unit.

When your window air conditioner is running, close the registers from your heating system. This prevents cold air from escaping into the ductwork.

Use exhaust fans in kitchen and bathroom sparingly during cold weather. They remove the warm air from the house. During hot weather, limit the use of the exhaust fan while using the air conditioning. When the air conditioning is not being used after the temperature has dropped in the evening, the exhaust fans can be used effectively to help pull outside cooler air into the house. Remember to open a window on the opposite side of the house.

In summer, higher temperatures are easier to tolerate if the humidity level is lower than 60 percent. You may find that the use of a dehumidifier improves the comfort level and requires less energy than running the air conditioning system. Remember to keep doors and windows closed when using the dehumidifier or air conditioner. Conversely, increasing the humidity level during very cold weather will improve the comfort level.

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Watch How You Use Doors

Needless opening of outside doors during cold weather lets lots of heat out and equal amounts of cold air in.

Remind all members of the family to close the door quickly as they enter or exist. Keep in-and-out trips to a minimum.

Be sure doors are closed properly. Doors left ajar drain heat rapidly.

A simple way to keep drafts from around windows and from under doors is to make "draft chasers" to place against the closed door or window. First use a tightly woven fabric to make a tubular casing 2 to 3 inches in diameter the width of the door. Then fill it with sand and you have a "draft chaser."

If you have an attached garage, keep the doors closed. Always close the big door before opening the door into the house.

Cover Your Windows at Times

Practical benefits of keeping windows covered in cold weather are that you're more comfortable because body heat is quickly lost to cold uncovered windows; you're also curbing a major source of heat loss in most houses.

If you cover your windows with roller shades, they should be installed within the window frame, close to the glass, and fitted snugly on the sides.

Draperies are more effective when they are installed with a close-fitting cornice over the drapery or are closely fitted to the ceiling to prevent air flow over the window. Lined draperies or draperies made of a closely woven fabric are the most effective in reducing heat loss from your body when you are near a cold window.

In winter, shutters, shades, or draperies can be used effectively to reduce heat loss on the cold side of the house. On the sunny side, windows should be uncovered to let in the most solar heat.

During the summer, keep out solar heat by covering the windows when the sun strikes. Especially shade the east windows. When the sun shines strongly on them each morning, it heats the house. Next cover west windows that are exposed to the afternoon sun. Even though the summer sun may not enter south windows directly, reflected heat may be a problem on the south of the house.

Don't Forget Floors

Carpets are warmer to the touch and offer more insulation than wood, slate, or resilient floor coverings. The thicker the carpeting and padding, the greater the insulating quality. Carpet with fuzzy yarns that trap air have greater insulating qualities than carpet with smooth yarns.

In carpeted houses you feel warmer because less of your body heat is radiated to the floor. You can turn the thermostat lower and still be comfortable. For every degree you lower the thermostat, you generally save 2 or 3 percent of your heating bill.

However, if you choose between insulating under the floor of an unheated area or carpeting, remember that the insulation will be the most effective.

Placing Furniture

Place furniture far enough away from radiators, registers, and cold air return vents to permit free circulation of heated or cooled air. You will be more comfortable during extremely cold weather if you sit away from windows and outside walls.

Chairs with closed arms and backs or closed upholstered chairs will help hold body heat so you will feel warmer.

Dress For Comfort

If you are chilly when your thermostat is set at 65° F in the winter, wear additional clothing. Several layers of clothing will be more comfortable than restrictive heavy garments.

During summer heat, absorbent cotton, cotton blends, and linens provide the most comfort. Wool or woolen blends are best for cold weather wear.

Keep Extra Blankets

Two lightweight blankets that trap the air between them keep you warmer and more comfortable than one heavy blanket.

Some people may prefer an electric blanket and sleep in a cold room. But they should keep regular blankets on hand in case of electrical power outages.

House Care and Maintenance

Periodically, clean radiators or heating/cooling registers and ductwork.

Filters in the hot air heating/cooling system should be cleaned or replaced regularly to keep the air moving freely. Check to see that the condenser unit of the central air conditioning unit, located outside the house, does not become clogged with grass and leaves.

Clean windows to allow the maximum radiant heat to enter in cold weather. Shade them during hot periods.

Agriculture Fact Sheet
United States Department of Agriculture

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, and September 30, 1977, in cooperation with the U.S. Department of Agriculture, Mitchell R. Geasler, Director, Virginia Cooperative Extension Service, and Vice Provost for Extension, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061; Clinton V. Turner, Administrator, 1890 Extension Program, Virginia State University, Petersburg, Virginia 23803.