

ELECTRICAL CONSERVATION TIPS

HEATING

1. Insulate your home to adequate standards. It's the most important single step toward saving energy in the home. Before building a new home, check your utility company for insulation standards which it may require as a prerequisite for service connections.
2. Add insulation to your existing home where possible. Your home should have a minimum R-30 insulation in the ceiling or attic. For advice on insulating your home, see an insulation contractor.
3. Choose window sizes and types that will not only save you energy but give optimum light and view. Larger glass areas increase heat loss and gain. Try to hold glass area to 15 percent or less of the square feet of floor space.
4. Select low emissive or insulated glass for windows throughout your home. It keeps heat inside during winter and outside in the summer.
5. Install wood- or metal-frame storm windows to provide a second thickness of glass and a layer of still air that retards heat transmission.
6. Replace broken window glass, worn weather stripping, and improperly fitting doors.
7. Install a tight-fitting damper and glass doors on your fireplace, and close them when you're not using the fireplace. When dampers are open, they allow the natural draft of chimneys to pull heated air from inside your home in winter and draw cool air from inside your home in summer. Install an outside air vent on a new fireplace so the fireplace can draw outside instead of inside air for combustion.
8. Locate your heating thermostat on an inside wall away from windows and doors. Cold drafts will cause the thermostat to keep your heating system running, even when the rest of your house is warm.
9. Consider the installation a heat pump in your home to benefit from the most energy efficient heating system you can buy. You'll also get air conditioning because the heat pump reverses operation in summer to give you cooling comfort.
10. Keep the overhead door of an attached garage closed to block cold air from infiltrating your house. Also, keep the connecting door to the house and heated basement closed.

11. Close hot-air registers and radiator valves in unused rooms with all types of heating systems, except a heat pump. For zoned systems, such as ceiling cable or baseboard, set the thermostat back in unused areas.
12. Make sure draperies and furniture aren't blocking the registers in your house.
13. Open draperies on south-facing windows on sunny winter days to take advantage of available solar heat.
14. Use bath and kitchen exhaust fans only when needed during the heating season. Fans draw heated air out of your home.
15. Set your heating thermostat as low as comfort permits. Each degree over 68 degrees F. can add three percent to the amount of energy needed for heating; each degree below 68 degrees F. can save about the same amount of energy.
16. Lower the thermostat a degree or two before you entertain a large group of people.
17. Check your furnace filter at least once a month during the heating season and clean or replace it as needed.
18. Oil the motor and/or fan bearings of your forced-air furnace according to manufacturer's instructions. This will extend the life of the equipment.

WATER HEATING

19. Set the temperature control on your water heater to 120 degrees F., 140 degrees F. if you have a dishwasher. The higher the temperature of the water sitting in the tank waiting for you to use, the more heat it loses.
20. Locate your water heater as close as possible to the point of greatest hot water use. Hot water remaining in a supply pipe after you turn off the tap eventually cools and is wasted. The longer the supply pipe the more heat lost.
21. Insulate long, hot water supply pipes.
22. Use the smallest practical diameter for hot water supply pipes to minimize heat loss and to reduce the volume of trapped water.
23. Install a large capacity noninsulated tempering tank in the supply line to the water heater when possible. A tempering tank raises the temperature of water before it enters the water heater. The higher the temperature of the water going into the heater, the less energy it needs to reach the desired temperature.

24. Insulate your water heater with a special insulating kit or by wrapping the tank with R-19 insulation. Remember to leave openings around electrical connections, thermostats, heating elements, gas supply lines, air intake, and the drain valve.

25. Add flow restrictors to showerheads and hot water faucets. These inexpensive and easily installed devices reduce the amount of energy and hot water you use.

26. Repair leaky faucets promptly. A steady drip can waste gallons of hot water per month.

27. Encourage family members to take short showers instead of tub baths. The average person uses about half as much hot water in a shower as in a tub.

28. Turn off running water when shaving or brushing your teeth and fill a dishpan with rinse water instead of letting the faucet run while you do dishes by hand.

29. Use cold water when operating your garbage disposal. It saves energy and solidifies the grease, which is then ground up and flushed away.

COOLING

30. Consider installing an add-on heat pump in your home to receive air-conditioned comfort in summer and low-cost heating in winter.

31. Insulate your home to keep warm air out...cooler air in. Your attic should have R-30 insulation. Contact an insulation contractor for insulation standards for the rest of your home.

32. Ventilate your attic to relieve heat buildup caused by the sun. Continuous ridge and soffit venting is better than gable vents alone.

33. Improve air flow in the attic of your existing home by adding or enlarging vents, if necessary.

34. Seek professional help in determining the size of cooling equipment you need. Avoid over-sized units. They draw more energy than necessary and cannot properly dehumidify, leaving you with a cold, clammy feeling.

35. Select air conditioning equipment on the basis of its Energy Efficiency Ratio (EER). You can calculate the EER for window units or central systems by dividing the cooling capacity, expressed in BTUH, by the electric power input, expressed in watts. Generally, an EER of 13 or more is excellent; 11 or 12 is good; 10 is just adequate. Avoid equipment with an EER below 10.

36. Locate the compressor units of central air conditioning and heat pump systems in an outside area shaded by the house or by plantings. Keep your unit clean and free of any plant overgrowth or debris that might interfere with air circulation.

36. Locate window air conditioners on the north side of your house. Direct sunlight on your unit makes it work harder.

38. Set the cooling thermostat as high as comfort permits. The higher the setting, the more energy you save.

39. Shut air vents in the rooms you are cooling with a window unit so cool air can't escape.

40. Close registers and turn off window air conditioners in unused rooms. Keep doors to unused rooms closed. Do not close registers if you have central air conditioning or a heat pump.

41. Draw shades or draperies to block the sunlight during the hottest part of the day.

42. Install awnings over windows exposed to direct sunlight.

43. Run kitchen and bath exhaust fans only long enough to rid the house of unwanted vapor, smoke, and odors during the summer. Running them too long allows cool air to escape.

44. Position heat-producing appliances such as lamps and TV sets away from the cooling thermostat. Heat from equipment may cause the thermostat to read a temperature higher than the true room temperature. It could lead to overcooling the entire house.

45. Check air conditioner filters at least once a month during the summer and clean or replace them as needed.

REFRIGERATION

46. Select refrigerator and freezer sizes that are just large enough for your family's needs. Anything larger uses more energy than necessary.

47. Keep refrigerators and freezers filled to capacity, but don't overcrowd to the point where air cannot circulate freely around food.

48. Vacuum condenser coils in the back or at the bottom of your refrigerator every three months or so. Dust-covered coils impair the efficiency of compressor operation and increase energy usage.

49. Make sure refrigerators and freezers have tight-fitting door gaskets to prevent infiltration to warm air. Check your gasket by placing a 150-watt trouble light inside your

refrigerator. If you see light shining through to the darkened room, your door requires adjustment or a new gasket.

50. Use the yellow Energy Guide labels found on new refrigerators or freezers to help you buy the most energy-efficient models. The labels compare average annual operating costs of various models.

51. Use the power-save switch if you have one on your refrigerator. This will allow you to turn off the heating elements imbedded in the walls of your refrigerator that prevent condensation on the exterior surface. Generally, moisture forms only in humid weather, so activate the elements during summer months if needed. Check your use-and-care manual for specific instructions.

52. Turn down your refrigerator and remove perishables before going on an extended vacation.

53. Do not place uncovered liquids in your refrigerator. In addition to absorbing undesirable flavors, the liquids give off vapors that add to the compressor workload.

54. Remove all ingredients for a meal from the refrigerator or freezer at one time. Each time you open the door the compressor has to run a bit longer to replace the cool air that spills out. A chest-type freezer is less likely than an upright freezer to lose cold air when you open the door.

55. Discourage leisurely open-door inspections of refrigerator contents by family members looking for snacks.

56. Locate refrigerators and freezers away from direct sunlight and other warm-air sources such as ranges and dishwashers.

57. Do not allow ice to accumulate more than one-fourth inch on manual defrost refrigerators and freezers.

COOKING

58. Use pots and pans with absolutely flat bottoms on your range. To cook efficiently, heat must transfer directly from the surface element to the pan. Warped bottoms leave an air gap which provides an escape route for heat.

59. Select pots and pans that are the right size to completely cover the surface element. When any part of the surface element is exposed, you're wasting heat and energy.

60. Keep reflector pans beneath surface elements shiny and clean. Shiny pans reflect heat rays onto pan bottoms; dull pans absorb the heat.

61. Develop the habit of "lids on" cooking. Tight-fitting lids help keep heat in a pan, permitting you to use lower temperature settings and shorter cooking times.
62. Heat only the amount of water you need for cooking. The water will boil faster if you cover it with a lid.
63. Start vegetables on high heat in a covered pan. When steam appears around the lid, lower the heat setting and allow food to simmer until done.
64. Plan one-dish meals in a slow cooker. Such meals require less energy than those calling for the use of the oven plus two or three surface elements.
65. Make more use of your pressure cooker. It cuts cooking time to one-third that of conventional methods.
66. Consider cooking small quantities of food in appliances such as an electric toaster oven, skillet, or grill instead of your oven. Portable appliances generally use about one-third the electricity of your oven. Also, consider using smaller coffee makers if you only want one or two cups of coffee.
67. Use your microwave oven instead of your conventional electric oven whenever possible. Microwaves can cook food in one-fourth or less the normal cooking time.
68. Prepare your whole meal in the oven at the same time. Often you can simultaneously cook foods that have different cooking temperatures. Variations of 25 degrees usually produce favorable cooking results.
69. Carefully time your preheat period when baking. Generally, five to eight minutes is sufficient. There is no need to preheat for broiling, roasting or cooking most casseroles.
70. Rearrange oven shelves before turning on the oven to prevent wasteful heat escape.
71. Avoid opening the oven door for a "peek" when baking. Each time you open the door, a considerable portion of the heat escapes.
72. Activate the self-cleaning cycle on your electric oven only when the oven is heavily soiled. Start the cycle right after using the oven while it is still hot.
73. Never use an oven to heat the kitchen or dry clothing. It wastes energy and can be hazardous.

LIGHTING

74. Check the wattages of the incandescent light bulbs in your house. In many cases, you can substitute lower wattage bulbs and get more light for the same amount of energy.

Look for the lumens of a bulb instead of watts. Lumens indicate the brightness of the bulb. Watts only tell you the amount of power it takes to make the bulb work.

75. Use long-life bulbs only when advantageous, such as in hard-to-reach places. They give less light than standard incandescent bulbs of the same wattage.

76. Urge everyone to turn off lights when leaving a room. Having wall switches in convenient places helps everyone remember.

77. Select lighting fixtures on the basis of their efficiency. Fluorescent lamps produce about four times as much light per watt as incandescent bulbs.

78. Install fixtures on two or three separate circuits in large rooms where you may need high levels of lighting periodically but not all the time.

79. Use three-way switches or dimmer control switches to keep lighting levels low whenever possible.

80. Install photo-electric controls and timers to turn off outdoor lights during the day.

81. Clean lighting fixtures regularly. Dust on lamps, reflectors and light bulbs impairs lighting efficiency.

82. Locate floor, table and wall lamps in the corner of a room rather than against a flat wall. Lamps in corners reflect light from two wall surfaces instead of one, and therefore, give you more light.

83. Choose light colors for walls, ceilings, floors and furniture. Light colors reflect light. Dark colors absorb light and require higher bulb wattages.

LAUNDERING

84. Sort clothes and schedule laundering so you can wash only full loads. It takes almost as much electricity to run a small load as it does a full one.

85. Set the water selector on your washer to warm or cold for most loads. Very few loads require hot water for washing. Tests indicate that cold-water detergents thoroughly clean most fabrics in warm or cold water with considerable savings on the energy required for water heating.

86. Always use cold water for rinse cycles.

87. Use the amount of laundry detergent manufacturers recommend. Oversudsing hampers effective washing action and may require extra rinsing which uses more energy.

88. Dry only full loads in your dryer but don't overload. It causes excessive wrinkling.

89. Avoid over drying. This wastes energy and harms fabrics as well.
90. Remove clothes from the dryer as soon as it stops, before wrinkles have time to set. Clothes you promptly fold or place on hangers require little or no ironing so you can save electricity as well as your own energy.
91. Clean the lint filter after each drying cycle.
92. Locate your dryer in a place ventilated with fresh, dry air. Circulating humid air through the machine increases drying time and the energy needed to run it.

GENERAL

93. Clean or replace air filters on exhaust fans, humidifiers and other electric appliances. Clogged filters impair performance and cause units to run longer.
94. Turn off the television when nobody's watching.
95. Iron fabrics that require a cooler iron first and work up to those requiring higher heat. An iron heats faster than it cools, so it's quicker to go from low to high than the reverse. You'll use less energy.
96. Turn off the iron a few minutes before you finish ironing and complete the rest of your clothes with the heat remaining in the iron.
97. Turn off the iron when the telephone or door bell interrupts your work.
98. Store dirty dishes in the dishwasher until you have a full load. Dishwashers draw the same amount of power whether you operate them full or half empty.
99. If your dishwasher has a power-save switch, use it to bypass the drying cycle. The electric heating element for drying uses a considerable amount of energy.
100. Dry your hair with a towel instead of blow drying it. Many hair dryers consume as much energy as an electric toaster, plus you use them for longer periods.