HOME ECONOMICS GUIDE

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# Tips for Efficient Use of Home Appliances

*Marilyn W. Caselman*
*Family Economics and Management Specialist*



There are many sources of information on ways energy can be saved by consumers. This guide groups together some of the "tips" that relate specifically to appliances in the home. Perhaps many of these methods are already used in your home. Others suggested may be new and will be applicable to you. Many consumers find their interest in saving energy is in direct proportion to the increase of their utility bill.

## Water Heating

The amount of energy used to heat water for the home should be carefully considered when trying to conserve energy, according to a recent report by the Purdue University Cooperative Extension Service. The report states that almost 15 percent of the energy used in the home is used to heat water.

Hot water, 140°F, is needed for best results in automatic dishwashing and for many laundry loads. Hot water is needed to assure sanitation and the best detergent action in the washer and dishwasher. It also helps prevent streaking and spotting of dishes in the dishwasher.

- Change your habits and use cold water for rinsing clothes (this affects laundry results less than cooler water for wash cycle).
- Stop any water leaks. A faucet leaking one drop per second, drips about 2500 gallons a year. If it is hot water, that is doubly wasteful.
- Check insulation of hot water pipes so no more water than necessary will be heated.
- Cut down on hot water for personal use, such as showers instead of tub baths.
- A water heater should be as near as possible to the place of greatest use.
- Don't leave water running when washing or shaving.
- Clean water heaters that have heavy lime deposit build-ups.
- Use a rinse pan rather than running hot water to rinse hand-washed dishes.
- Insulate the water heater (See Guide 5995)

## Refrigerators and Freezers

The importance of low temperature storage to protect the quality and safety of foods must be stressed. But, there are ways to reduce energy use with these appliances.

- Isolate the refrigerator and freezer from heat sources such as the sun, heaters, or a range. These sources make heat enter the appliance faster so it must run more. (Efficient kitchen arrangement should not be overlooked in considering this suggestion).
- Allow space for the condenser coils, if located on the back of the refrigerator. These coils should be dust free. The coils will be behind the refrigerator toe plate, if not visible on the back of the appliance.
- To protect the quality and safety of foods, refrigerate as soon as possible. It is risky to cool many foods at room temperature before refrigerating. Try to not put too many items in at one time, however.
- If purchasing a new refrigerator, investigate models with an "energy saving switch." This may be used when the family will be gone for a period of time or when the humidity is low.
- A manual defrost refrigerator and/or freezer uses less energy—estimates are 25 to 50 percent.
- Defrost refrigerators and freezers that have ¼ inch of accumulated frost. Frost and ice reduce the machine's cooling power.
- Keep the doors shut as much as possible. At meal preparation time, for instance, think before opening the door. Get out all the items you will need at one time and replace them in one operation.
- Check the gaskets of refrigerator and freezer doors. They should be clean and should seal tightly. One test for the seal is to close the door on a piece of paper with one edge hanging out. It should drag when you pull it out. If there's no resistance, check the door gasket more closely. It may pay to replace the gasket.

- A freezer is more efficient when filled to capacity. Frozen food retains cold much better than air. Provide for air circulation within the freezer but keep it filled.
- Cover and/or wrap foods adequately. Moisture from foods left uncovered or improperly packaged causes frost build-up on the evaporator and increases operation cost.

## Cooking

- Make use of oven capacity. When planning to cook an item in the oven, either double the recipe or plan a complete oven meal.
- Preheating the oven is not essential for some items such as casseroles, roasts, etc.
- Ovens are designed to preheat in 10 minutes. Plan food preparation to preheat only for this period of time.
- Turn the oven off as soon as food is cooked.
- Match pan size to units or burners. Pans with flat bottoms and tight fitting lids will use heat more efficiently.
- Consider use of small electric appliances. They use less power than range top or oven and may be adequate for some cooking needs.
- Use the "high-low" method of range surface cookery. Start foods on high and turn to low as soon as possible. Boiling is 212°F, 100°C whether it's big bubbles or gently simmering.
- When using aluminum foil in an oven, do not allow it to block vents or heat (energy) will be lost. It also blocks circulation and is particularly dangerous in a gas oven.
- Avoid heavy and prolonged use of a range on hot days if the home has air conditioning.
- If the range has a self-clean feature, use it while the oven is still warm. This prevents another heat-up time.
- It is not efficient or safe to use a range to heat the kitchen. It is not designed to circulate heat in a room.
- If purchasing a gas range is being considered, investigate models with an electric ignition which eliminates continuously burning pilots.
- Don't be an "oven peeker." Opening the oven door interrupts the heating cycle and will increase fuel use as room air goes into oven. The average "peek" can cause the oven temperature to drop 25 to 75 degrees.
- When using a gas range, the flame should not extend beyond the bottom of the pan. A steady blue gas flame indicates a properly adjusted burner. If the flame shows traces of yellow, the burner holes may be clogged or an adjustment may be needed.
- Use a minimum of water in cooking to shorten cooking time. Low heat and snug fitting lids make this possible.
- Keep a range clean. For example, clean and shiny reflector pans underneath units or burners make heat reflection into cooking pans more efficient.

## Dishwashers and Disposers

- Use a dishwasher only when it has a full load.
- When the dishwasher cycle reaches the "dry" part of the cycle, turn to "off". The dishes will dry from heat in the appliance and save the expense of the heating portion.
- Scrape dishes before loading them in dishwasher. If they must be rinsed, use cold water.
- Cold water should be used in food waste disposers. The cold water causes fats to coagulate and this is essential to prevent clogging drain pipes. Hot water melts fats which could clog pipes as it cooled. Using cold water also prevents hot water waste.
- Clean the dishwasher screen often. Built-up food or detergent wastes energy.
- The dishwasher is not an energy-efficient plate warmer.

## Laundry

- Full loads of clothes save time, hot water, and electricity. However, overloading causes wear and strain on equipment.
- Select the appropriate water level for partial loads.
- Don't wash clothes longer than necessary.
- Dryer lint traps should be cleaned after every use for efficiency and safety.
- Vent dryers to the outside, if at all possible. The heat and moisture exhausted reduces motor strain and keeps the home cooling system from compensating for this.
- Don't overdry clothes. This is better for the fabrics, uses less dryer energy, and prevents ironing time.
- If practical, line dry some items.
- Do not overload the dryer. This is hard on the dryer, takes longer for load to dry, and causes wrinkles in clothes.

**"We have been using energy as if it were going out of style—and as a result, it is . . ."[1]**

The author acknowledges the assistance of Mary McClure, former home economics journalism student.

[1]Edward J. Metzen, Department Chairman, Family Economics and Management, College of Home Economics, University of Missouri-Columbia. (From Nov. 1975 *Journal of Home Economics* article).

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