

Energy Efficient Kitchen Tips brought to you by



**Midwest
Energy, Inc.**

Refrigerator/Freezer

A typical home uses 600-1200 kiloWatt-hours per year for refrigeration and freezing. To become more energy efficient with refrigeration in your home, follow these tips:

- Keep your refrigerator at 37° - 40° F and your freezer at 5°F.
- Keep your refrigerator filled to capacity, but don't overcrowd to the point where doors cannot be closed or air cannot circulate.
- Vacuum the condenser coils (underneath or behind the unit) every three months or so.
- Check the condition of door gaskets by placing a dollar bill against the frame and closing the door. If the bill can be pulled out with a very gentle tug, the door should be adjusted or the gasket replaced.
- Do not put uncovered liquids in the refrigerator. The liquids give off vapors that add to the compressor workload.
- Allow hot food to cool off before putting it in the refrigerator.
- Plan ahead and remove all ingredients for each meal at one time.
- Try switching off the power-saver switch, if your refrigerator has one. If only a small amount of condensation appears, save energy and leave the switch off.

Buying Tips for a Refrigerator/Freezer

- Reduce your refrigeration electricity usage by 40 percent by replacing a 12-year-old or older unit with a new unit. An Energy Star® unit will lower usage even more.
- Select a refrigerator or freezer that is just large enough for your needs
- Look for energy-saving features such as the power-saver switch and improved insulation materials.
- If possible, locate refrigerators and freezers away from direct sunlight, ranges, and heating equipment.
- Never put a second refrigerator in the garage. If you need a second unit, put it in the basement.

Range/Oven

A typical home uses 200-700 kiloWatt-hours per year with its range/oven. To become more energy efficient with your range/oven, follow these tips:

- Only use pots and pans with flat bottoms on the stove.
- Include more stews, stir-frys, and other single-dish meals in your menus.
- Develop the habit of "lids-on" cooking to permit lower temperature settings.
- Keep reflector pans beneath stovetop heating elements bright and clean.
- Carefully measure water used for cooking to avoid having to heat more than is needed.
- Begin cooking on highest heat until liquid begins to boil. Then lower the heat control settings and allow food to simmer until fully cooked.
- Cook as much of the meal in the oven at one time as possible. Variations of 25°F still produce good results and save energy.
- Rearrange oven shelves before turning your oven on - and don't peek at food in the oven! Every time you open the oven door, 25°-50°F is lost.
- There is no need to preheat the oven for broiling or roasting.

- When preheating an oven for baking, time the preheat period carefully. Five to eight minutes should be sufficient.
- Use your microwave oven whenever possible, as it draws less than half the power of its conventional oven counterpart and cooks for a much shorter amount of time.
- Use the self-cleaning cycle only for major cleaning jobs. Start the cycle right after cooking while the oven is still hot, or wait until late in the evening when electricity usage is low.

Buying Tips for a Range/Oven

- Convection ovens use a small fan to circulate hot air around the oven. This speeds up cooking time by about 30 percent and saves the same in energy.
- Combination ovens use microwave technology and halogen lamps to cut cooking time and energy use by 66-75 percent.

Dishwasher

- Wash only full loads of dishes - but do not overload dishwasher.
- Scrape food off dishes and rinse them with cold water before placing them in the dishwasher.
- Soak or pre-wash only in the cases of burned-on or dried-on foods.
- Don't use the "rinse hold" feature on your dishwasher when you only have a few soiled dishes.

Buying tip: Look for dishwashers with internal booster heaters, so that you can set your water heater thermostat at 120°F (rather than 140°F for dishwashing purposes).

Energy-Efficient Appliances for the Kitchen

Induction Cooking

- Induction cooking is one of many advances made in home cooking. With induction cooking, surfaces stay cool while the food gets warm or hot. It uses magnetic friction to deliver heat through coils to the pots or pans on the surface. This prevents the ceramic surface from becoming hot, which prevents burns. The pots that are used must be made of magnetic materials, such as iron or steel, for the best results.
- These units have very high efficiency ratings (in terms of the amount of heat used for actual cooking versus the total amount of heat delivered by the equipment), especially when compared to gas systems.

Light Energy Ovens

- Many people use microwave ovens for a variety of cooking purposes, but they do not have the ability to grill or broil. Now, with light energy ovens, tungsten/ halogen lamps are positioned around the interior and computer-controlled "thermal-pulsing" selectively directs energy both into and onto the food. You get the size, convenience, and speed of a microwave oven, combined with the cooking ability of a regular oven or grill.
- Larger versions of these ovens have been used in commercial restaurants and hotels. Starting in December 1998, models were available for residential applications.

Energy Efficient Cooking

Which piece of cooking equipment you use and how you use it makes a big impact on how much energy you use preparing meals. Here are some tips that should help you decide where and when savings are possible in the kitchen.

- Select the right pan or appliance. Oversized pans waste energy. The pan you use should match the burner size. A 6-inch diameter pan on an 8-inch burner wastes almost half of the energy produced by the burner.

Using a separate appliance like a Crockpot can save energy when preparing foods requiring long cooking times. Pressure cookers reduce energy use 50 to 75 percent because cooking times are reduced when food is cooked at the higher temperatures created inside a pressure cooker. And when you bake, use glass and ceramic pans and you can lower the oven temperature by 25 degrees. If you're baking or roasting something for less than a half hour, use a toaster oven. They often use 1/3 to 1/2 the power needed for a conventional oven.

With flat-surface electric burners, make sure the bottom of your pans are flat-bottomed and can make good contact with the element. Uneven pan bottoms don't conduct heat to the food as well. And with electric burners, you can turn them off toward the end of the cooking time since they'll radiate heat for awhile as they cool.

- With gas cooktops, a well-shaped blue flame indicates efficient burning. A yellow flame means the burner is operating inefficiently.
- Keep lids on pans as you cook; cooking without them can require three times as much energy as cooking with them on. Look for pans with glass lids if you like to keep an eye on what you are preparing.
- When boiling foods, keep the amount of water used to a minimum. Using excess water that must be heated wastes the energy required to raise its temperature.
- Use [microwave ovens](#) when possible since they use less energy and require shorter cooking times than conventional ovens. And in the summer, they have the additional advantage of producing less heat in the kitchen.
- Defrosting frozen foods in the refrigerator will reduce cooking time. But allow enough time for defrosting to take place. It can take several days for a frozen turkey to defrost in a refrigerator.
- Self-cleaning ovens are a great convenience, but they accomplish their tasks by heating to very high temperatures and burn off spilled or accumulated food. So use them only when the oven really needs the cleaning, once a month or so. And do it right after use so it's preheated for the cleaning cycle.