



HOUSEHOLD COOKING APPLIANCES

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Cooking

Cooking habits, not technology, represent the biggest potential for energy savings in the kitchen. More efficient appliances can help trim energy bills as well, although with the exception of the microwave, new cooking technologies aren't resulting in breakthrough energy savings.

Cooking with gas

Gas cookers use much less energy than their electric counterparts because the fuel is used directly for cooking.

To power an electric appliance, the fuel must first be converted into electricity at a power plant and then transmitted over long distances, typically requiring 3-4 units of fuel to produce one unit of electricity. In addition gas cookers tend to be more responsive.

The downside of cooking with gas is that it carries additional hazards, notably the combustibility of the gas itself. Gas appliances require ventilation to the outside.



Stovetops

For most of us, a stovetop is either an electric coil element or a gas burner. In recent years, however, a number of new styles have been introduced.

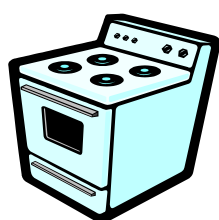
Solid discs are just like coil elements, the only difference is that they're solid, for easier cleaning, but with more thermal mass i.e. they take longer to heat up and typically use more electricity.

Radiant elements are electric coil elements placed under heat-resistant ceramic glass, again for easy cleaning. They too take longer to heat up, although their energy efficiency is comparable to standard electric coil elements.

Whatever kind of stove-top you use the following tips will help you reduce the amount of energy you use preparing a meal.

- Cover pots with lids to prevent heat from escaping - this can reduce energy use by up to two-thirds.
- When appropriate, use a pressure cooker. By cooking food at a higher temperature and pressure, cooking time is reduced dramatically and energy use is cut by 50-75%.
- Minimize heating requirements by using the smallest pan necessary. If you cook with gas, don't turn the flame on really high unless you're using a large pot.
- When boiling, use as little water as needed to do the job.
- On electric stovetops, use only flat-bottomed pans that make full contact with the element. A warped or rounded pan will waste most of the heat.

Ovens



Conventional ovens are inherently inefficient, because in order to heat up the food they must first heat up about 7kg of steel and a large amount of air.

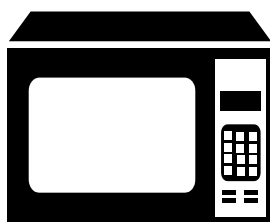
Tests indicate that as little as 6% of the energy output of a typical oven is actually absorbed by the food.

When it comes to the oven, your best bet for saving energy is to use it only when cooking large dishes or batches, and to opt instead for a smaller appliance (such as a toaster oven or microwave) whenever possible.

Here are some more tips for making optimum use of your oven:

- Cook several dishes at the same time in the oven, or cook larger portions and reheat for another meal. Reheating takes less energy than cooking, and you'll have fewer dishes to wash.
- Bake with ceramic or glass pans, which will allow you to lower the oven temperature by about 25°F.
- Use thermometers or timers to avoid overcooking.
- Don't cover oven racks with foil-this reduces heat flow and increases cooking time.
- Turn the oven off a few minutes before your food is ready; the oven will remain hot enough to finish cooking the food.

Microwaves



Microwave ovens use up to two-thirds less electricity than conventional electric ovens, and are particularly effective for reheating meals.

Microwaves heat food directly by exciting water and fat molecules in the food, which means they don't waste energy heating air and metal.

Tips for efficient microwaving:

- Keep inside surfaces clean so the microwave radiation can reach food effectively.
- Plan ahead-defrosting food in a microwave may be convenient, but defrosting it at room temperature is free.
- Zapping pre-packaged microwavable meals often uses more energy than cooking from scratch, if you count the energy used in processing, pre-cooking, packaging, and transportation.

Slow cookers

Slow cookers are suitable for a wide range of dishes including soups, casseroles, meat and pasta dishes...

They are electrically operated and very low power consumption resulting in cooking times of 4 to 6 hours. They are well suited to use during holiday expeditions to the beach or other times when you may be spending an extended period of time out of the house prior to when you intend to eat.

Their beauty is that you do not have to be back at a fixed time and the food will not seriously overcook if you end up staying for a few more pints!



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