

# Appliances and Electrical Devices

Electrical devices account for percent over 30 of the average household's energy consumption, with refrigerators, televisions, cable boxes, clothes washers, and clothes dryers at the top of the consumption list. Home electronics and home office machines are also a significant and growing category of electricity users.



## Refrigerators

The easiest way to save energy with your refrigerator is through temperature settings. Most people keep their refrigerators colder than necessary. Setting the temperature in the "Smart Zone," 38-40 degrees, ensures that you use the minimum amount of energy to keep your food fresh. The freezer should be set to 5 degrees, while stand alone freezers should be set to 0 degrees for long term storage. Also, energy can be conserved by making sure the cold air inside the refrigerator stays there. Minimize the time that the refrigerator door is open by deciding what you want before opening the door. Also, check your refrigerator door seals to see if they are airtight. Test them by closing the door over a piece of paper so it is half in and half out. If you can pull the paper out easily, the latch may need adjustment or the seal may need replacing. If the appliance is more than 10 years old, you might consider buying a new unit.

Ninety-percent of the energy used by clothes washers is for heating the water. Using cold water detergents will allow you to wash in cold water, saving significantly on laundry costs. Another way to save is by only washing full loads. Newer, "horizontal axis" front-loading washing machines spin at a much higher rate, removing more water from clothes than regular, top-loading machines. This means clothes need less time in the dryer.

## Computers/Electronics

One of the easiest ways to save energy with computers, printers, and monitors is to simply turn them off when they are not in use, rather than leaving them in a "sleep" or "standby" mode. Turning computers off saves energy and will not harm the equipment.

## Laundry

Electric clothes dryers can often use 5,000 watts of electricity. That's the same as operating fifty 100 watt light bulbs. Drying only full loads, cleaning the lint filter after each load, and not over-drying your clothes are three effective ways to save. The dryer vent hose should also be cleaned periodically to ensure that lint is not building up and blocking the vent. Blockages in the vent hose cause the dryer to work harder, use more energy, and can also be a fire hazard. Newer dryers will sense when the laundry is dry and shut off automatically, saving energy.

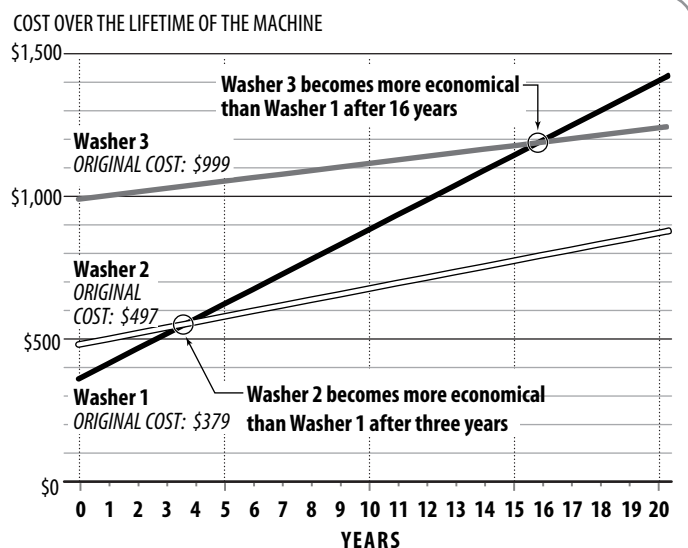
### Washing Machine Payback Period

Spending a little bit more money on an energy efficient appliance could save you several hundred dollars over the lifetime of the product. The payback period could be shorter than you think!



	WASHER 1	WASHER 2	WASHER 3
Original Cost	\$379	\$497	\$999
Estimated Annual Electricity Use	427 kWh	160 kWh	102 kWh
Price of Electricity (per kWh)	\$0.12	\$0.12	\$0.12
Operating Cost per Year	\$51.24	\$19.20	\$12.24

Data: NEED Analysis of washing machine EnergyGuide labels



Check to see that the computer's power options are set to save energy during periods the computer is on, but not being used. Screensavers should be disabled, too, as they keep the monitor on instead of allowing it to go into a sleep mode.

Many electrical devices use electricity even when they are turned off. This type of electricity consumption is known as a phantom load, because it can easily go unnoticed. Phantom loads are also known as standby power or leaking electricity.

Phantom loads exist in many electronic or electrical devices found at home. Equipment with electronic clocks, timers, or remote controls, portable equipment, and office equipment with wall cubes (small box-shaped plugs that plug into AC outlets to power appliances) all have phantom loads. These devices can consume anywhere from 1-40 watts even when turned off. You can use a watt meter to see if devices are using power when they are turned off. These devices can be plugged into a smart power strip, which can turn off multiple devices when the strip is not in use.

### Shopping for New Appliances and Electronics

When you shop for a new appliance, consider both price tags. The first one covers the purchase price. The second price tag is the cost of operating the appliance. You'll pay the second price tag on your utility bill every month for as long as you own the appliance. An energy efficient appliance will often cost more, but will save money in energy costs. An energy efficient model is almost always a better deal.

When shopping for a new electrical device or appliance, look for the ENERGY STAR® label—your assurance that the product saves energy. ENERGY STAR® appliances have been identified by the U.S. Environmental Protection Agency and Department of Energy as the most energy efficient products in their classes.

Equipping our homes only with products with the ENERGY STAR® label, will reduce our energy bills, as well as greenhouse gas emissions by a significant amount. A list of appliances meeting energy efficient standards can be found on the ENERGY STAR® website at [www.energystar.gov](http://www.energystar.gov).

Another way to determine which appliance is more energy efficient is to compare energy usage using the bright yellow and black EnergyGuide labels found on most appliances, as required by the Federal Government. Although these labels do not say which appliance is the most efficient, they provide the estimated annual energy consumption and average operating cost of each appliance so you can compare them.

Ways to save with appliances and electronics:

- Turn off equipment and appliances when not in use
- Set refrigerator and freezer temperatures in the "Smart Zone"
- Wash and dry full loads of laundry
- Use a cold water clothes wash cycle
- Enable power management settings on computers/peripherals and disable screensavers
- Use power strips to eliminate "phantom loads"

## Electrical Devices



Television



DVR



Laptop



Game Console



DVD Player

These are common electrical devices that continue to draw power even when they are turned off. Cutting off power completely will save energy and money. Do this by unplugging the device or using a power strip.

### ENERGYGUIDE LABEL

