

# Home Energy Usage

*A guide to electrical usage of appliances to help you calculate how you spend your energy dollar*

The basic unit of measure of electric power is the watt. Appliances and electrical devices are rated to use a specific number of watts. Usually the wattage is stamped somewhere on the item.

Usage is measured in kilowatts, with a kilowatt being 1,000 watts of electricity.

Your utility bills you based on the number of kilowatts you use per hour, which is known as kilowatt-hours (kwh). If you use 1,000 watts of electricity in one hour, you have used a kwh.

To calculate how much each electrical device costs to operate, divide the total watts of the item by 1,000. Then, multiply that by the number of hours the item is used per month. Finally, multiply that by your utility's kwh charge.

If the wattage is not listed on the appliance, you can estimate it by finding the current draw (in amperes) and multiplying that by the voltage used by the appliance. Most appliances in the United States use 120 volts. Larger appliances—such as clothes dryers and electric cook-tops—use 240 volts.

When measuring the current drawn by a motor, keep in mind the meter will show about three times the current in the first second the motor starts up than is will when it is running smoothly.

Remember, too, that many appliances continue to draw a small amount of power when they are switched “off.” These “phantom loads” occur in VCRs, televisions, stereos, computers and kitchen appliances. Most phantom loads will increase the appliance's energy consumption by a few watts per hour.

These loads can be avoided by unplugging the appliance or using a power strip and turning off the switch on the power strip to cut all power to the appliance.

At right is a guide to the average wattage of various appliances. Keep in mind models vary, so yours may have a higher or lower wattage. ■

Household Item	Typical Wattage
Aquarium.....	.....50 to 1,210
Clock radio.....	.....10
Clothes iron.....	.....1,000 to 1,800
Clothes washer.....	.....350 to 500
Clothes dryer.....	.....1,800 to 5,000
Coffee maker.....	.....900 to 1,200
Dehumidifier.....	.....785
Dishwasher*.....	.....1,200 to 2,400
<i>*The drying feature greatly increases energy use</i>	
DVD player.....	.....20 to 25
Electric blanket	
Single.....	.....60
Double.....	.....100
Fans	
Ceiling.....	.....65 to 175
Window.....	.....55 to 250
Furnace.....	.....750
Whole house.....	.....240 to 750
Hair dryer.....	.....1,200 to 1,875
Heater (portable).....	.....750 to 1,500
Microwave oven.....	.....750 to 1,100
Personal computer	
CPU (awake/asleep).....	.....120/30 or less
Monitor (awake/asleep).....	.....150/30 or less
Laptop.....	.....50
Radio (stereo).....	.....400
Refrigerator	
Frost-free, 16 cubic feet.....	.....725
Television (color)	
19 inch.....	.....110
27 inch.....	.....113
36 inch.....	.....133
53- to 61-inch projection.....	.....170
Flat screen.....	.....120
Toaster.....	.....800 to 1,400
Toaster oven.....	.....1,225
VCR.....	.....17 to 21
Vacuum cleaner.....	.....1,000 to 1,440
Water heater	
40 gallon.....	.....4,500 to 5,500
Water pump (deep well)...	.....250 to 1,100
Waterbed	
With heater, no cover.....	.....120 to 380

Source: U. S. Department of Energy Office of Energy Efficiency and Renewable Energy ([www.eren.doe.gov](http://www.eren.doe.gov))