The Cost of Operating Appliances

How much does it cost to operate all of your electrical appliances?

The answer depends on many factors, including: the number and kinds of appliances you use; the way you use them; how long you use them; the number of people in your household; and, the price you pay for electricity.

There are also seasonal factors. For example, in the summer, you may cook less, use your lighting for shorter periods of time and use air conditioners or fans. In the winter, your heating and cooking costs are probably higher, and your lighting will be used for more hours during the day.

The addition of new appliances–or new family members–can also increase your electricity use.

The appliances that cost the most to operate are the ones that require the greatest amount of electricity to generate heat, such as your furnace, water heater or range, or to cool, such as your air conditioning system. The cost of operating an electrical appliance is calculated using these three factors:

1. **The number of watts the appliance uses.**
2. **The number of hours the appliance is used.**
3. **The cost you pay for one kilowatt-hour (kWh) of electricity. (A kilowatt-hour is 1,000 watts of electricity used for one hour.)**

To calculate the cost of operating an appliance, multiply the wattage of the appliance by the approximate number of hours you operate the appliance (the wattage of an appliance is usually listed on the appliance). Next, divide by 1,000 – this will give you the number of kWhs the appliance uses. Finally, multiply the kWh use by your cost per kWh as shown on your electric bill.

Example: A plasma television set rated at 286 watts and operated for seven hours a day.

1. Multiply 286 watts by seven hours (286 x 7 = 2,002 watt-hours)
2. Divide by 1,000 (2,002 ÷ 1,000 = 2 kWh)
3. Multiply the kilowatt-hours by the price of electricity. Let's use 9 cents per kWh: (2 kWh x 9 cents = 18 cents)

The TV set costs approximately 18 cents a day to operate.

Typical Operating Costs of Various Appliances

Average Use	Estimated Typical Wattage	Avg. Op. Time (Hrs/mo.)	Use ($/mo.)
Air Conditioner (5,000 BTUH room unit)	900	200	$16.20
Air Conditioner (12,000 BTUH room unit)	1,500	200	$27.00
Aquarium (air pump & heater)	150	720	$9.72
Attic Fan	350	120	$3.78
Blanket (electric)	170	240	$3.67
Ceiling Fan	90	180	$1.46
Clothes Dryer (24-32 loads)	5,000	24	$10.80
Clothes Washer (24-32 loads)	550	16	$0.79
Computer (desktop)	250	120	$2.70
Computer (laptop)	75	90	$0.61
Dehumidifier (continuous)	350	720	$22.68
Dishwasher	1,200	20	$2.16
Freezer	400	120	$4.32
Furnace Fan	450	180	$7.29
Humidifier	80	200	$1.44
Lighting (7 rooms @ 60W)	420	100	$3.78
CFL Lighting (7 rooms @ 13W)	91	100	$0.82
Microwave	875	10	$0.79
Oxygen Concentrator	250	720	$16.20
Pool Pump	875	540	$42.53
Room Heater (3hrs/day)	1,200	90	$9.72
Range	12,000	10	$10.80
Refrigerator	500	120	$5.40
Hot Tub (indoors)	1,500	90	$12.15
Hot Tub (outdoors)	1,500	360	$48.60
Television (conventional 32")	130	120	$1.40
LCD (42")	216	120	$2.33
Plasma (42")	286	120	$3.09
Toaster	1,200	3	$0.32
Vacuum Cleaner	1,050	5	$0.47
Water Bed	300	540	$14.58
Well Pump	1,200	15	$1.62
Water Heater (30 gal. /1 person)	3,500	90	$28.35
Water Heater (40-50 gal. /1 person)	4,500	90	$36.45

Calculations are based on a rate of 9 cents per kilowatt-hour. Your actual rate may be different depending on where you live and the company that supplies your electricity.

** These appliances do not not run continuously. The monthly costs are based on an average time the appliances are fully operational. These times may vary depending on your usage habits.*

Watt Watchers *Using Energy Wisely*

Energy Efficiency Tips to Make Your Home More Comfortable

Insulating Your Home

According to the U.S. Department of Energy (DOE), the most common places where air escapes in homes are:

Floors, walls, ceilings	**31 percent**
Ducts	**15 percent**
Fireplace	**14 percent**
Plumbing	**13 percent**
Doors	**11 percent**
Windows	**10 percent**
Fans and vents	**4 percent**
Electric outlets	**2 percent**

Sealing leaks around doors, windows and other openings – such as pipes or ducts – with caulk or weather-stripping could cut as much as 10 percent from an average household's monthly energy bill.

Be a Watt Watcher

Be a Watt Watcher by going to *www.energystar.gov* to learn about home improvement ideas that make your home energy efficient.

ENERGY STAR PARTNER

Use Energy Wisely

- Set your thermostat between 65 and 70 degrees during the winter and 78 degrees or higher in the summer. Bear in mind that these temperatures should be modified for homes with ill or elderly persons or infants.
- You can reduce your annual heating and cooling costs by installing a programmable thermostat, setting it properly and maintaining those settings.

$ BE A WATT WATCHER: Cut your annual heating bill by as much as 10 percent per year by turning your thermostat back 10 to 15 percent for eight hours per day.

- Change or clean furnace and A/C filters once a month during the heating or cooling seasons. These units consume less energy when they can "breathe" more easily.
- Lower the thermostat on the water heater to 120 degrees to cut water heating bills without sacrificing comfort.

$ BE A WATT WATCHER: Since water-heating is a typical family's third-largest energy expense – accounting for about 14 percent of the utility bill – turning down the unit's thermostat to 120 degrees can help you save money.

- Plant evergreens on the north side of your home or the side with the prevailing winter winds. Blocking the cold winter winds will lower your heating costs. Plant deciduous trees on the west south and east sides to provide ample shade during the summer months and therefore reducing the strain on your A/C.
- Plant a tree to shade the area around and over your air conditioner, but keep the air intake area clear of branches. You'll save money by drawing air from a cool, shaded area.
- Open draperies and blinds on sunny winter days to take advantage of free solar heat. Close draperies at night to insulate against cold air outside. Do the opposite in the summer months – closing the curtains on the sunny side of the house will help keep your home cooler.