

# Energy Use Chart

Many people often wonder how they can reduce their electric bill. One way is to start is to know how much electricity is used by appliances typically used in your home.

If you want a general estimate of how much electricity your home appliances consume, the list below, which provides the energy consumption (in wattage) of some typical home appliances. If you have appliances that are not listed in the table, or desire a more exact figure based on a specific appliance in your home, use the following formula to estimate the amount of energy a specific appliance consumes:

$$\frac{\text{Wattage} \times \text{Hours Used Per Day}}{1000}$$

= Daily Kilowatt-hour (kWh) consumption  
(1 kilowatt (kW) = 1,000 Watts)

Multiply this by the number of days you use the appliance during the year for the annual consumption. You can then calculate the annual cost to run an appliance by multiplying the kWh per year by your local utility's rate per kWh consumed.

For examples:

• *Window fan:*

$$\frac{200 \text{ Watts} \times 4 \text{ hours/day} \times 120 \text{ days/year}}{1000}$$

= 96 kWh · 8.5 Cents/kWh  
= \$8.16 /year

• *Personal Computer and Monitor:*

$$\frac{(120+150) \text{ Watts} \times 4 \text{ hours/day} \times 365 \text{ days/year}}{1000}$$

= 394 kWh x 8.5 Cents/kWh  
= \$33.51/year

You can usually find the wattage of most appliances stamped on the bottom or back of the appliance, or on its "nameplate." The wattage listed is the maximum power drawn by the appliance. Since many appliances have a range of settings (for example, the volume on a radio), the actual amount of power consumed depends on the setting used at any one time.

Here are some examples of the range of nameplate wattages for various household appliances:

- Aquarium = 50-1210 Watts
- Clock radio = 10
- Coffee maker = 900-1200
- Clothes washer = 350-500
- Clothes dryer = 1800-5000
- Dishwasher = 1200-2400 (using the drying feature greatly increases energy consumption)
- Dehumidifier = 785
- Electric blanket- Single/Double = 60 / 100
- Fans
  - Ceiling = 65-175
  - Window = 55-250
  - Furnace = 750
  - Whole house = 240-750
- Hair dryer = 1200-1875
- Heater (portable) = 750-1500
- Clothes Iron = 1000-1800
- Microwave oven = 750-1100
- Personal Computer
  - CPU - awake / asleep = 120 / 30 or less
  - Monitor - awake / asleep = 150 / 30 or less
  - Laptop = 50
- Radio (stereo) = 70-400
- Refrigerator (frost-free, 16 cubic feet) = 725
- Televisions
  - 19" = 65-110
  - 27" = 113
  - 36" = 133
  - 53"-61" Projection = 170
  - Flat Screen = 120
- Toaster = 800-1400
- Toaster Oven = 1225
- VCR/DVD = 17-21 / 20-25
- Vacuum cleaner = 1000-1440
- Water heater (40 gallon) = 4500-5500
- Water pump (deep well) = 250-1100
- Water bed (w/ heater, no cover) = 120-380



Refrigerators, although turned "on" all the time, actually cycle on and off at a rate that depends on a number of factors. These factors include how well it is insulated, room temperature, freezer temperature, how often the door is opened,

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if the coils are clean, if it is defrosted regularly, and the condition of the door seals. To get an approximate figure for the number of hours that a refrigerator actually operates at its maximum wattage, divide the total time the refrigerator is plugged in by three.

If the wattage is not listed on the appliance, you can still 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 cooktops, use 240 volts. The amperes might be stamped on the unit in place of the wattage. If not, find a clamp-on ammeter—an electrician's tool that clamps around one of the two wires on the appliance—to measure the current flowing through it. You can obtain this type of ammeter in stores that sell electrical and electronic equipment. Take a reading while the device is running; this is the actual amount of current being used at that instant.

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

Also note that many appliances continue to draw a small amount of power when they are switched "off." These "phantom loads" occur in most appliances that use electricity, such as VCRs, televisions, stereos, computers, and kitchen appliances. Most phantom loads will increase the appliance's energy consumption a few watts per hour. These loads can be avoided by unplugging the appliance or using a power strip and using the switch on the power strip to cut all power to the appliance.

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## Take Control Of Your Thermostat

To maximize your energy savings without sacrificing comfort, you can install an automatic setback or programmable thermostat. They adjust the temperature setting for you. While you might forget to turn down the heat before you leave for work in the morning, a programmable thermostat won't! By maintaining the highest or lowest required temperatures for four or five hours a day instead of 24 hours, a programmable thermostat can pay for itself in energy saved within four years.

Programmable thermostats have features with which you may be unfamiliar. The newest generation of residential thermostat technologies is based on microprocessors and thermistor sensors. Most of these programmable thermostats perform one or more of the following energy control functions:

They store and repeat multiple daily settings, which you can manually override without affecting the rest of the daily or weekly program.

They store six or more temperature settings a day.

They adjust heating or air conditioning turn-on times as the outside temperature changes.

Most programmable thermostats have liquid crystal temperature displays. Some have back-up battery packs that eliminate the need to reprogram the time or clock in case of a power failure. New programmable thermostats can be programmed to accommodate life style and control heating and cooling systems as needed.

There are five basic types of automatic and programmable thermostats:

electromechanical,  
digital,  
hybrid,  
occupancy, and  
light sensing.

Most programmable thermostats range in price from \$30 to \$100, except for occupancy and light sensing thermostats, which cost around \$200.

Information for this page taken from [www.doe.gov](http://www.doe.gov).

## Calling All Vendors

Because of the overwhelming success of the vendor displays at the annual meeting in past years, South River EMC will once again have vendor displays for 2005.

The 2005 Annual Meeting of Members will be held on Thursday, April 14. Vendor spaces are *free of charge* and are available on a first come, first served basis. All vendors must be reputable, legitimate businesses that offer a valuable service to our members.

Vendor booths offer an opportunity to make contact with nearly 2000 people in a relaxed, informal atmosphere.

Our past vendors have varied in available services but include heating and air conditioning, pest control, insurance, health care, catering, etc.

If you have a business and are interested in having a booth, please call Catherine O'Dell at 892-8071 or email [codell@sremc.com](mailto:codell@sremc.com) to discuss the options.

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