



People's Cooperative Services

Your Touchstone Energy® Cooperative



Calculating Electricity Use

Electricity use is typically measured and billed in “kilowatt-hours”. **One kilowatt-hour is 1,000 watts of energy operating for one hour.** The following terms are helpful in understanding energy use.

Watts:

The **rate** of electrical use **at any moment** is measured in **watts**. For example, a 100-watt light bulb uses 100 watts of energy. A typical desktop computer uses about 65 watts of energy. A typical hair dryer uses about 1,250 watts of energy.

If your appliance lists amps instead of watts, simply multiply the amps times the voltage to get watts. For example, **2.5 amps times 120 volts = 300 watts.**

$$\text{(Volts X Amps = Watts)}$$

Watt-hours:

To know how much **energy** is being used, you have to consider **how long** the electrical device is operating. When you operate a 1-watt appliance for one hour, that's a **watt-hour**. It is abbreviated as **Wh**. For example, a 100-watt light bulb operating for one hour uses 100 watt-hours (100 Wh) of energy. One 100-watt light bulb on for five hours is 500 Wh. Five 100-watt light bulbs operating for one hour is 500 Wh.

Kilowatt-hours:

Kilo is the prefix for 1,000; therefore, **one kilowatt equals 1,000 watts**. A **Kilowatt-hour (kWh)** is 1,000 watts of energy operating for one hour. For example 10 – 100 watt light bulbs operating for one hour equals 1 Kilowatt-hour (10 X 100 = 1,000 watts, divided by 1,000 = 1 kWh).

$$\frac{\text{Watts X Hours of Operation}}{1,000 \text{ watts}} = \text{kWh}$$