

22.2 Using Electrical Energy

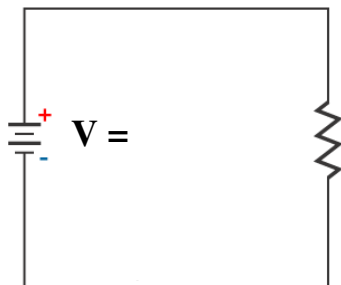
- Electrical energy is converted into many other forms of energy:
 - kinetic, sound, light, thermal...
- the devices that do this are very important in our lives
 - motors, speakers, lamps, TVs, heaters, air conditioners...



Electric Power (P)

- energy per unit time ($P = E / t$) converted by an electric circuit into another form of energy
- rate of using energy.

I =



- power dissipated in a resistor is proportional to...
- energy transferred...
- Kilowatt-hour
 - unit of electric energy that you buy from the “Power” company
 - 1000 watts delivered for 3600 seconds (1 hour)
 - 1 kWh = 3.6×10^6 Joules

- example:

Space heater draws 15.0 A @ 120 V. What does it cost to use for 5.00 hours per day for 30 days if a kWh cost \$0.11?