

# Solar 101 Glossary



**DC or Direct Current** - A consistent linear voltage delivery system used in batteries, automobiles, telephones, and solar power.

**AC or Alternating Current** - Electricity that flows in different directions using magnetic polarity. Its wave-like motion lends itself well to long distances and high-draw appliances.

**Volts or Charge** - Determines the electrical capacity of a circuit to maintain a current. It's the speed of electrons moving through a circuit (or the pressure behind them causing them to move).

**Amps or Current** - The flow rate of electrons.

**Resistance or Ohms** - Control the flow rate of electrons, like a nozzle on a water hose.

**Watts** - A unit of energy; what happens when flowing electrons encounter resistance.

**Amp Hours** - A unit of energy that can be used over time; 1 amp hour measures the current of 1 ampere flowing for 1 hour.

**Photovoltaic (PV) Cells** - Solar cells made of semi-conductive materials, like silicon. When sunlight hits the semiconductor in the PV cell, photons are absorbed and knock electrons loose, which then drift into the cell.

The cell is designed with positively and negatively charged semiconductors sandwiched together to create an electric field, which forces the electrons to flow toward conductive metal plates. This flow creates an energy current—once the electrons hit the metal plate, the current is directed to wires that are connected to your system.

**Easy or Soft Start Capacitor** - A product that you can add to your air conditioner to lower the startup draw by 60 percent or more.

**BMS or Battery Management System** - A system that protects batteries from over or under voltage and extreme high or low temperatures. It also balances cells for longer life.