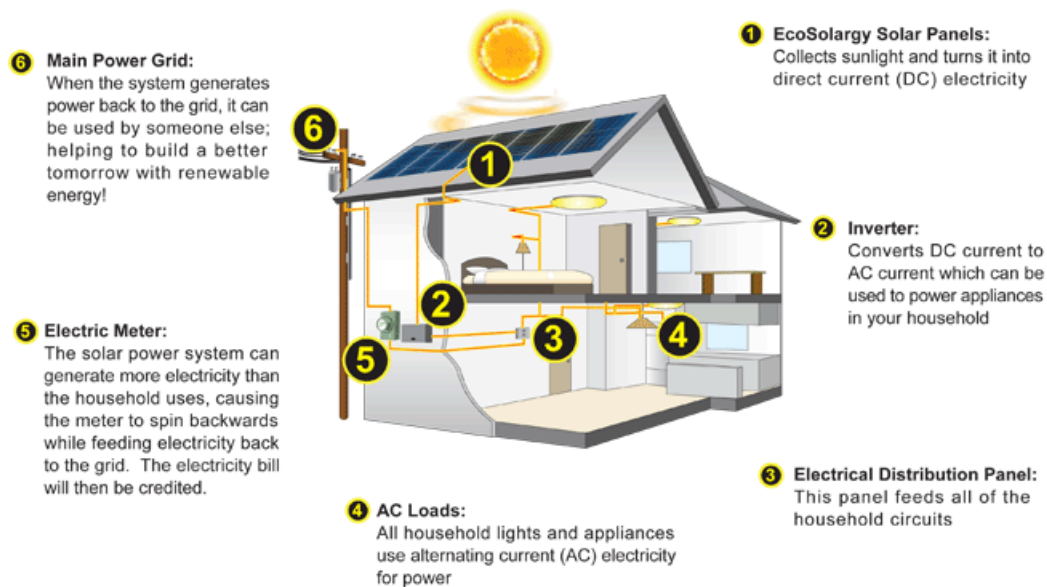


A **photovoltaic system (PV system)** is an arrangement of components designed to supply usable electric power for a variety of purposes, using the Sun as the power source. Solar power systems include several components working together to convert the sun's energy (light energy) into electrical power (electricity). A photovoltaic array (also called a solar array) consists of multiple photovoltaic modules, casually referred to as **modules or Eco-friendly solar energy panels**, to convert solar radiation (sunlight) into usable direct current (DC) electricity. Photovoltaic Solar panels generate direct current electricity at the desired voltage and current. Panels are installed on rooftops or ground-mounts. A larger grouping of solar panels constitutes an "array."



A photovoltaic system for residential, commercial, or industrial energy supply normally contains an array of photovoltaic (PV) modules, one or more DC to alternating current (AC) power converters (also known as **inverters**), The inverter transforms direct current (DC) electricity produced by the solar panels into alternating current (AC) electricity—the form of electricity used by most standard lights, motors, computers and air conditioners. Also a racking system is used that supports the solar modules, electrical wiring and interconnections, and mounting for other components made up of the remainder of the system. The **combiner box** connects multiple wires carrying the electrical current generated by individual solar panels together into a single, larger capacity wire enclosed in a **conduit**, which then flows to the inverter.

A DC safety or **DC disconnect** switch (DC circuit breaker) is used to disconnect the DC power to the inverter that has AC power going out to the Main Service Panel (MSP).

The AC safety, or **AC disconnect** switch (AC circuit breaker) is a manual switch that can be used to disconnect a building's electrical system from the solar electricity system.

Additionally, **Net-metering (Electric meter)** is used to monitor energy performance and usage. The utility meter continually measures your electrical supply; when your solar power system produces more power than you need, the meter literally spins backward, accumulating credits with the utility company that will offset your next bill.