HOW A SOLAR PANEL WORKS

STEP 1: SUNLIGHT
Imagine a ray of sunlight as a stream of tiny particles. These particles are called photons and once they hit a solar panel, an electron is knocked loose. Certain materials such as crystal and silicon can actually absorb this energy – a property known as the “photoelectric effect” that causes them to absorb photons of light and release electrons.

STEP 2: SOLAR CELL
A solar cell is a thin-semiconductor wafer specially treated to for an electrical field. It’s positive on one side and negative on the other and electrical conductors are attached to either side to form a circuit. This circuit then captures the released electrons in the form of an electric current.

STEP 3: SOLAR PANEL (or photovoltaic panels)
A solar panel is a large collection of cells that are electrically connected to one another. These cells are then mounted into a support frame.

STEP 4: CREATING USABLE SOLAR POWER
Photovoltaic panels produce direct-current (DC) electricity, but we need alternating current (AC) to power our everyday gadgets and lights in our house. An inverter converts the DC electricity to AC electricity.

ANATOMY OF A SOLAR CELL
- Metal conductor strips
- Anti-reflective coating
- 1st silicon/thin film layer
- 2nd silicon/thin film layer
- Metal backing

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