The video says that the earth absorbs 173 thousand terawatts of solar energy. This is ten thousand times the power used by the world's population. Solar panels consist of small blocks of the so-called solar battery. Widely used solar cells are made of silicon, the most common element on Earth. In a solar cell, crystalline silicon is sandwiched between conducting layers. Each silicon atom is connected to its neighbors by four strong bonds that hold the electrons in place so that no current can flow. A silicon solar cell uses two different layers of silicon. N-type silicon has additional electrons, and p-type silicon has additional electron spaces called holes. Where two types of silicon meet, electrons can wander through p/n compounds, leaving a positive charge on one side and creating a negative charge on the other.

When one of these photons hits a silicon cell with enough energy, it can knock an electron out of its bond, leaving a hole in its Wake. The electron is attracted to the n-side, while the hole is attracted to the p-side. Mobile electrons are collected using thin metal fingers at the top of the cell. From there, they flow to external circuits, which is like turning on a light bulb.

Electrons are the only moving parts in the solar cell, and they all go back to where they came from. There is nothing to wear down or waste, so solar panels can last for decades.