

Solar Energy Production

Photons In, Electrons Out: The Magic of Solar Energy

Solar panels **convert light** into electricity, which is why they work in the cold and even with indirect sun.

Photons

Tempered glass

Solar cell

Electrons are collected on the metal wires to create a circuit.

How Solar Works

The rows of solar modules track the sun's position.

Solar modules convert the sunlight into Direct Current (DC) electrical energy.

Combiner boxes combine the DC electrical output from multiple rows of solar modules into a single output.

The inverter converts the DC electrical energy to Alternating Current (AC) electrical energy.

The solar facility breaker and protective relays ensure safe and reliable operation of the facility.

Carbon-free energy produced by the array is delivered by MGE's distribution system to our customers.

Large DC cables deliver the electrical energy to one of the inverters on-site.

The transformers step up the inverter output voltage to distribution system voltage levels.

The solar facility meter is also housed in this equipment which measures several electrical parameters such as energy, power, voltage, and current.