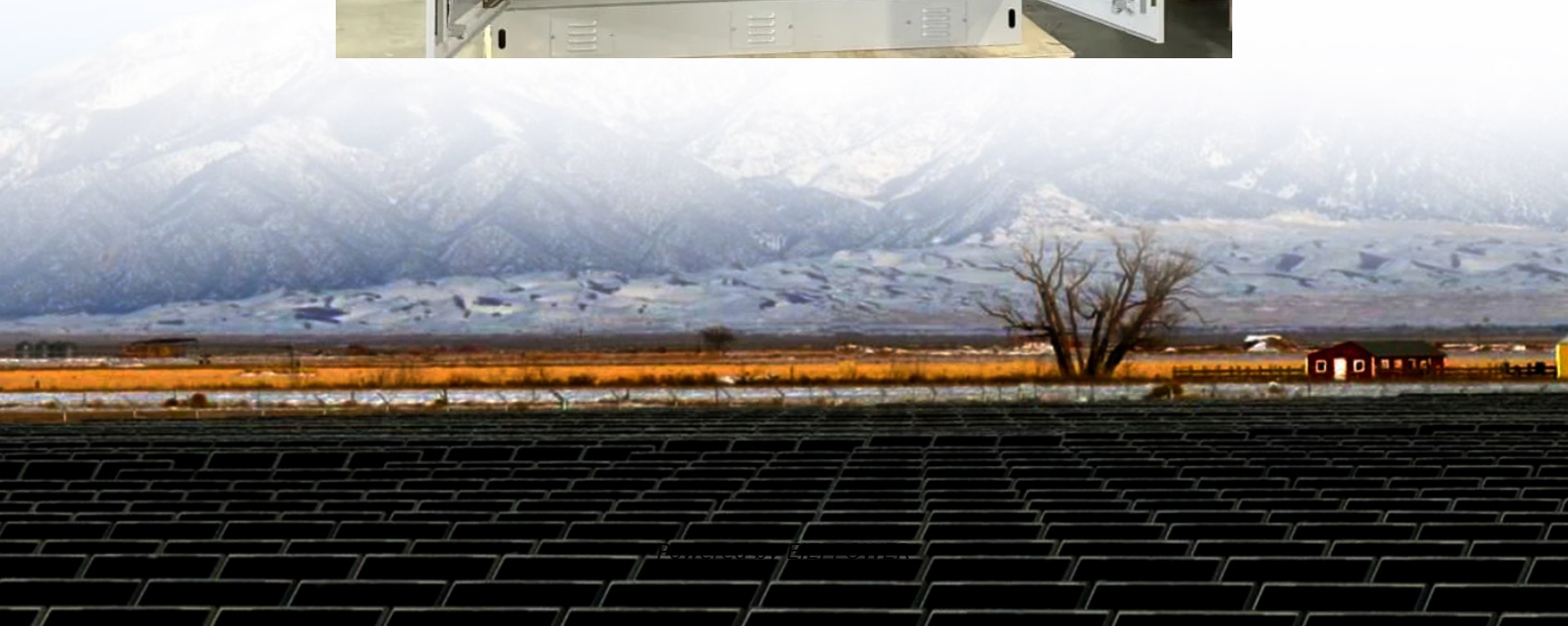


Solar panels converted to electricity





Overview

A photovoltaic (PV) cell, commonly called a solar cell, is a nonmechanical device that converts sunlight directly into electricity. Some PV cells can convert artificial light into electricity. Can solar power be converted to electrical energy?

The quest to use the sun's energy has made solar panel electricity conversion both possible and more efficient. The sun can power the world's energy needs in just an hour and a half of sunlight. This shows how crucial it is to turn solar energy to electrical energy.

How do solar panels convert energy?

The core of this energy conversion happens in photovoltaic (PV) cells, which are the building blocks of solar panels. Most PV cells are made of semiconductor materials like silicon. When sunlight strikes the surface of the PV cell, the energy from the photons knocks electrons loose from the atoms in the semiconductor.

How is solar energy generated?

Solar energy - Electricity Generation: Solar radiation may be converted directly into solar power (electricity) by solar cells, or photovoltaic cells. In such cells, a small electric voltage is generated when light strikes the junction between a metal and a semiconductor (such as silicon) or the junction between two different semiconductors.

How do solar photovoltaic cells work?

Solar photovoltaic cells are grouped in panels, and panels can be grouped into arrays of different sizes to power water pumps, power individual homes, or provide utility-scale electricity generation. Source: National Renewable Energy Laboratory (copyrighted)



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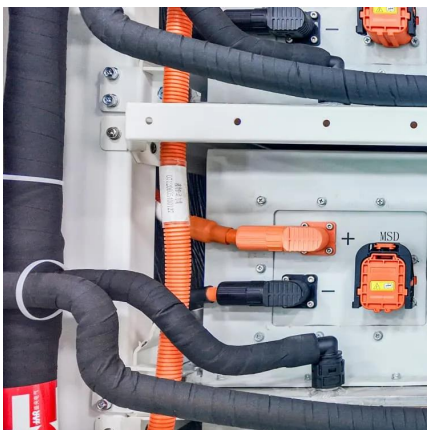
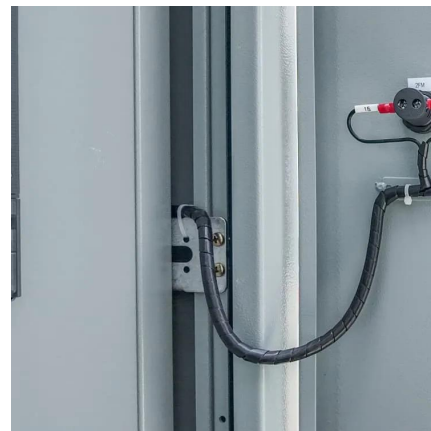


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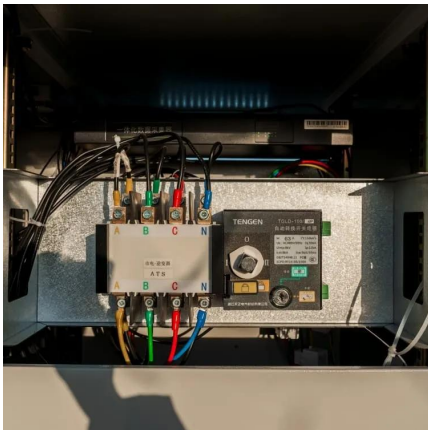
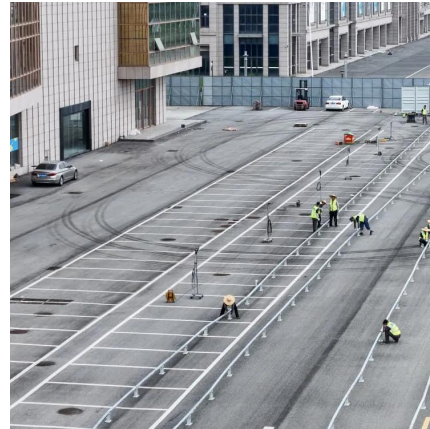
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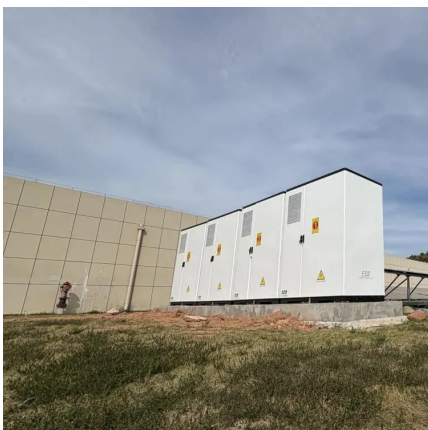
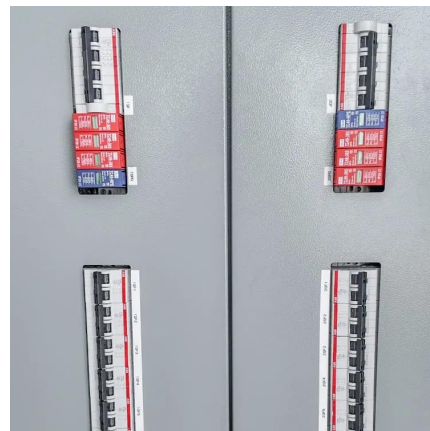


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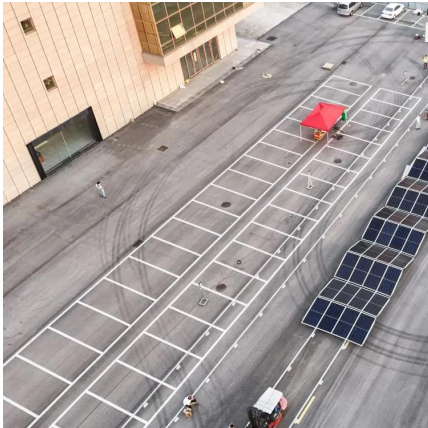
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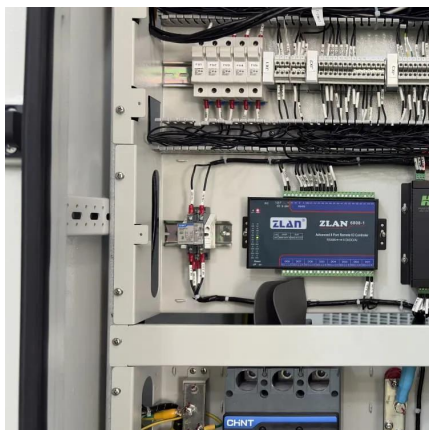


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