

# Solar panels and solar energy





## Overview

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What are solar panels?

Solar panels are devices designed to absorb sunlight and convert it into usable electricity. They are a cornerstone of solar energy systems and can be found on rooftops, in solar farms, and at other installations around the world.

What are the benefits of solar panels?

**Energy Independence:** Solar allows households and countries to reduce dependence on imported energy. This enhances energy security and stabilizes energy prices by reducing reliance on volatile fossil fuel markets. **Low Maintenance:** Solar panels have no moving parts and require minimal upkeep.

How do solar panels generate usable electricity?

Solar arrays create a usable electricity system for your home by producing direct current (DC) electricity. This is achieved through the photovoltaic effect, where solar cells convert sunlight into electrical energy.

What is solar energy used for?

Solar energy is commonly used for solar water heaters and house heating. The heat from solar ponds enables the production of chemicals, food, textiles, warm greenhouses, swimming pools, and livestock buildings. Cooking and providing a power source for electronic devices can also be achieved by using solar energy. How is solar energy collected?



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