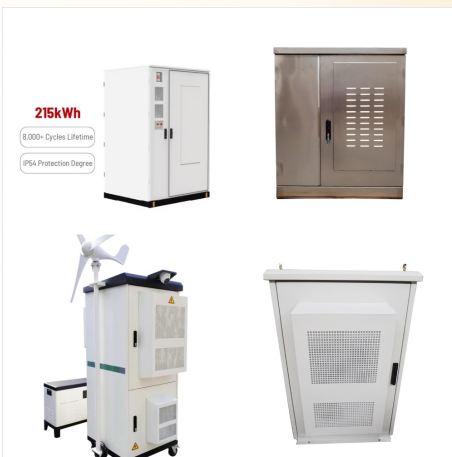




Solar energy is energy from the sun that we capture with various technologies, including solar panels. There are two main types of solar energy: photovoltaic (solar panels) and thermal. The "photovoltaic effect" is the mechanism by which solar panels harness the sun's energy to generate electricity.



solar energy, radiation from the Sun capable of producing heat, causing chemical reactions, or generating electricity. The total amount of solar energy incident on Earth is vastly in excess of the world's current and anticipated energy requirements.



The source of solar energy???the sun???is nearly limitless and can be accessed anywhere on earth at one time or another. It would take around 10 million acres of land???or only 0.4% of the area of the United States???to allow enough space for solar photovoltaics (PV) to supply all of our nation's electricity.

WHAT IS SOLAR ENERGY USED FOR



Distributed energy systems???where small-scale electricity generation and storage are located closer to users-???can help increase resilience and incorporate renewable energy. For example, microgrids could generate and distribute energy from a variety of renewable sources such as solar panels, wind turbines and energy storage systems.



Quick Summary: Solar energy is a renewable resource that lowers electricity bills and reduces carbon emissions but requires an initial investment and faces limitations like nighttime operation and geographic variability. The use of solar energy as a power source is more prevalent than ever, but it is still often misunderstood.



Solar power is generally dispatched as generation whenever it's available because it does not have operating costs like fossil-fuel generators. It can also be curtailed to avoid grid congestion or if electricity demand is low at a particular time. In 2023, about 3% of solar output in ERCOT was curtailed. In our high-growth scenario, we

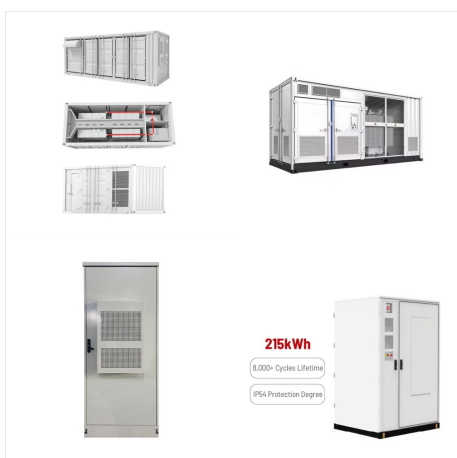
WHAT IS SOLAR ENERGY USED FOR



Solar technologies convert sunlight into electrical energy either through photovoltaic (PV) panels or through mirrors that concentrate solar radiation. This energy can be used to generate electricity or be stored in batteries or thermal storage.



Solar panels reduce your energy bills, minimize your reliance on fossil fuels, and increase your independence from your utility. They even increase the value of your home by about 4% on average, based on multiple studies.



Solar energy is a form of renewable energy, in which sunlight is turned into electricity, heat, or other forms of energy we can use. It is a "carbon-free" energy source that, once built, produces none of the greenhouse gas emissions that are driving climate change.

WHAT IS SOLAR ENERGY USED FOR



Renewable energy (or green energy) is energy from renewable natural resources that are replenished on a human timescale. The most widely used renewable energy types are solar energy, wind power, and hydropower. Bioenergy and geothermal power are also significant in some countries. Some also consider nuclear power a renewable power source



The main uses of solar energy are solar photovoltaics (PV) for electricity, solar heating and cooling (SHC) and concentrated solar power (CSP). People primarily use SHC systems for heating or cooling water and spaces (like your home).



Solar power is a form of energy conversion in which sunlight is used to generate electricity. Virtually nonpolluting and abundantly available, solar power stands in stark contrast to the combustion of fossil fuel and has become increasingly attractive to individuals, businesses, and governments on the path to sustainability.

WHAT IS SOLAR ENERGY USED FOR



Solar energy is a powerful source of energy that can be used to heat, cool, and light homes and businesses. More energy from the sun falls on the earth in one hour than is used by everyone in the world in one year. A variety of technologies convert sunlight to usable energy for buildings.



What is solar energy used for? Solar energy uses captured sunlight to create photovoltaic power (PV) or concentrated solar power (CSP) for solar heating. This energy conversion allows solar to be used to power auto motives, lights, pools, heaters, and gadgets.



Solar cells absorb the sun's energy and generate electricity. As we've explained, the solar cells that make up each solar panel do most of the heavy lifting. Through the photovoltaic effect, your solar panels produce a one-directional electrical current, called direct current (DC) electricity.

WHAT IS SOLAR ENERGY USED FOR



Solar energy is a clean and renewable energy source derived from sunlight. By using the power of solar panels, electricity can be generated and used to power homes, businesses, and communities. Solar energy offers numerous advantages, including reducing carbon emissions, saving money on electricity bills, and providing energy independence.