

Overview of solar energy

The sun's rays generate solar energy. It can be harnessed using many technologies, such as solar panels, which convert the sun's rays into usable electricity.

Types of solar-energy systems

Several types of solar-energy systems can be used to generate electricity and heat using the power of the sun. Here are some of the most common types:

- Photovoltaic (PV) systems: PV systems are the most common solar energy system and generate electricity directly from the sun's rays.
- Concentrated solar power (CSP) systems: CSP systems use mirrors or lenses to focus sunlight onto a small area, which heats a fluid to generate electricity.



Pros of solar energy

- Renewable and sustainable: Solar energy is a renewable and sustainable energy source that is used without depleting natural resources.
- Clean and emissions-free: Solar energy is a clean and emissions-free energy source, which means that it does not contribute to air pollution or carbon emissions.



Cons of solar energy

- Weather-dependent: Solar-energy systems rely on sunlight, meaning they are weather-dependent and may not be able to generate electricity during periods of low sunlight.
- High upfront costs: The upfront costs of installing solar-energy systems can be high, although the long-term cost savings can offset this initial investment.

Examples of solar-energy projects

There are many examples of solar-energy projects around the world that showcase the versatility and potential of solar power. Here are some notable examples:

- Gower Regeneration's solar farm at Dunvant is Wales' first community owned solar farm. The solar farm has a capacity of 1 MW and started generating on 31st March 2017. It receives income from sales of electricity and the site produces electricity equivalent to the needs of over 300 average households in Swansea.

