

Large solar irrigation system





Overview

What is a solar-powered irrigation system?

Solar-powered irrigation systems (SPIS) are a clean technology option for irrigation, allowing for the use of solar energy for water pumping, reducing greenhouse gas (GHG) emissions from irrigated agriculture, and substituting fossil fuels as an energy source. SPIS's long-term viability is highly dependent on how water resources are managed.

Are solar-powered irrigation systems sustainable?

Solar-powered irrigation systems (SPIS) are a clean technology option for irrigation, allowing the use solar energy for water pumping, replacing fossil fuels as energy source, and reducing greenhouse gas (GHG) emissions from irrigated agriculture. The sustainability of SPIS greatly depends on how water resources are managed.

What types of irrigation methods can be powered by solar energy?

There are different types of irrigation methods that can be powered by solar energy, each suitable for specific farming needs: 1. Surface irrigation This traditional method involves moving water across the surface of agricultural land using gravity. It is commonly used for crops like rice and wheat, where water is spread evenly over large areas. 2.

How does a solar-powered smart irrigation system work?

The flowchart illustrates the operation of a solar-powered smart irrigation system designed to maximize water and energy efficiency. The process begins with a soil moisture sensor monitoring the moisture level in the soil. If the moisture falls below a predefined threshold, the system evaluates the availability of solar energy.



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