

40-foot solar-powered container for agricultural irrigation in the Middle East





Overview

Can solar-powered irrigation be used in agriculture?

In the agricultural sector, solar-powered irrigation can be particularly successful to overcome the frequently occurring energy shortages causing disruption of supply needed for lifting and distributing irrigation water. Challenges, however, remain in the monitoring and governance of abstraction through water pumping systems.

Are solar-powered irrigation systems a sustainable solution?

One of the most promising solutions to emerge is the use of Solar-Powered Irrigation Systems (SPIS's), which harness solar energy to power irrigation pumps. These systems, combined with advanced control technologies, are revolutionising farming practices, offering a sustainable path forward for the industry. The Challenge of Traditional Irrigation.

Can solar technology be used for smallholder agriculture?

In this regard, appropriate upscaling of solar technology for smallholder agriculture needs to encompass the entire value chain in agriculture (Sims et al., 2015). Pilot projects tend to focus on one aspect of scaling solar irrigation, and as such, value chain development is often excluded from solar irrigation projects.

Are solar irrigation systems a viable alternative to petrol & diesel water lifting?

A second driver for solar irrigation is that solar water lifting can be a cost-effective way to secure food production and sustain livelihoods, because solar pumps can be cheaper alternatives to petrol and diesel water lifting technologies (Hartung and Pluschke, 2018).



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