

How can solar-powered cold storage improve rural livelihoods in Nigeria?

In 2020-2021, we implemented an intervention to rebuild rural livelihoods in conflict-affected northeast Nigeria by building solar-powered cold storage facilities that can reduce food loss and increase consumption of perishable, micronutrient-rich horticulture products; increase incomes of market agents and producers; and improve employment.

Is solar-powered cold storage a viable technology?

Solar-powered cold storage can be a viable technology to address the dual goals of meeting growing electricity needs for transforming the global agrifood system while mitigating climate change through reduced carbon emissions. Lastly, our analyses inspire various policy options to capitalize on solar-powered cold storage.

What are solar-powered cold storage facilities?

The seven solar-powered cold storage facilities aim to store fruits and vegetables in a temperature-controlled environment. This contributes to improving local livelihoods by reducing food loss, improving nutrition intake, and generating new employment, especially among women.

Can solar-powered cold storage improve agrifood system modernization?

These improvements characterize essential elements of agrifood system modernization. Solar-powered cold storage can be one of the potentially viable technological triggers for such a process, particularly in developing regions like northeast Nigeria.

Why is solar based cold storage system intervention important?

Solar-based sustainable cold storage system intervention can reduce the environmental impact and energy consumption issues raised due to the demand for cold storage systems. It may also play a vital role in addressing the issue of post-harvest losses at production sites to preserve food security.

What is solar cold storage?

Solar cold storage usually relies on continuous energy input or battery-based backup systems to supply constant energy for night-time and cloudy weather conditions. Solar intermittency and variability have increased the demand for adequate energy storage.

You can store your products 24/7 regardless of the grid power anywhere you like with Termodizayn solar-powered container type cold storages. With container type cold rooms operating with solar energy, you can easily solve cold storage ...

Our innovation, ColdHubs, is a "plug and play" modular, solar-powered walk-in cold room, for 24/7 off-grid storage and preservation of perishable foods. It adequately addresses the problem of ...

Nigerian invention ColdHubs is the first refrigeration system designed specifically for off-grid areas. The design employs rooftop solar panels that can generate enough electricity to power the units in all weather ...

Coldwell Solar is the solar company that agricultural and commercial customers trust to make the transition to solar as painless as possible. Founded in 1986, Coldwell Solar is the leading ...

Solar powered cold storage is expected to improve post-harvest losses by 30-50%, per proxy cold storage data (23). Solar powered cold storage can lead to increases in revenue of more than ...

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Solar-powered cold rooms enable farmers in Nigeria to store produce at cooler temperatures, reducing food loss and strengthening the region's agricultural infrastructure. Each year, nearly a third of all food is lost ...

Solar Powered Cold Storage Reducing energy costs for cold storage refrigeration facilities. Refrigerated warehouses have one of the highest electric energy consumption rates in the commercial building sector. Using solar panels for ...

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