

RESEARCH AND DEVELOPMENT FUND PROJECT SPOTLIGHT

Ecozen

Development of a cost-efficient thermal energy storage platform for off-grid solar freezers in Africa

Project Summary

Leveraging the patented Thermal Energy Storage (TES) technology, Ecozen Solutions will build a TES platform for the solar freezers for the informal sector in Africa.

Project Description

According to the World Bank, 536 million people in Africa lack access to grid electricity, leading to over 40% of food being lost annually due to inadequate cold chain infrastructure. Proper post-harvest handling and refrigeration are essential to maintain food freshness and nutrition. The demand for cooling solutions is high among households and small businesses for food storage and retail, but current options are insufficient.

Ecozen Solutions specialises in off-grid cold chain solutions using patented low-cost thermal energy storage. We aim to develop a thermal energy storage platform for freezers, covering volumes and temperatures for both new and existing freezers in the African market for storing frozen meat and fish.

They will use their energy storage and Internet of Things (IoT) expertise to create smart solutions tailored for the African market, starting with Nigeria. Nigeria's 50+ million people lack access to electricity and face increased petrol costs due to reduced subsidies. By conducting thorough market research and developing prototypes, they plan to support over 10 million small retailers with off-grid cold chain solutions, reducing their reliance on petrol or diesel and boosting their income.



R&D Partner

Ecozen Solutions

Organisation Founded

October 2010

Technology

Solar freezer

Project Location

India and Nigeria

