Tsuji Plastics Co., Ltd.

Republic of Uganda

Addressing Uganda's Power Shortage with a Battery-Friendly Solar System

Project Implementation

Under this project, battery-friendly solar power systems were installed for off-grid schools and small businesses.
At public facilities such as schools, lighting and charging services were provided, and the feasibility of a cost-recovery model based on charging fees was confirmed.
For small private shops, the systems addressed cooling and charging needs, and demonstration installations were carried out on the condition of replacing existing solar systems.

Project Outcomes

At schools, night lighting and charging services improved both the learning environment and safety.
In particular, more students studied at night during exam periods, confirming improvements in learning conditions.

Among small businesses, the introduction of DC refrigerators and charging services led to increased sales and customer visits.
Strong compatibility with DC appliances was also confirmed.

Across both public and private sectors, the effectiveness of reducing battery dependence and the potential for sustainable operation were demonstrated.

Future Business Development

Based on the project results, the battery-friendly solar system demonstrated in this project has proven to be a realistic and sustainable option for public facilities and small businesses in rural areas in terms of both installation and operational costs.

Moving forward, we aim to expand deployment in the following areas:

Expansion for Small Businesses

We will provide solar systems compatible with DC appliances tailored to practical needs such as refrigeration, lighting, and charging, supporting business growth in retail and service sectors.
By promoting inverter-free configurations that reduce initial costs and failure risks, we aim to position the system as an accessible and practical solution.

Expansion through Public Sector Partnerships

In collaboration with ministries and international organizations, we will pursue phased deployment in public facilities such as schools and health centers.
By applying charging-based cost-recovery models, we aim to establish sustainable operational frameworks in each region.