



Living lab Kenya

KENYA

Kisegi , Homabay county



Kisegi – Solar energy hub

The rural demonstration is taking place in Kisegi village, Homabay county, Kenya (latitude: -0.6402, 34.0612). It is located in Kenya's Lake Victoria region. In the community, there is one public primary and one public secondary school, as well as a sub-district hospital. The nearest beach is Nyangwethe beach, which is 3 kilometers away along a difficult dirt road. Kisegi has a population of around 6000 people. The main economic activities in Kisegi are fishing, subsistence farming and small-scale horticultural farming. The energy system's concept in Kisegit houses PV modules, central battery storage, and balance-of-system (BoS). The system aims to power the many use cases as well as the battery storage system. The system size requirements, pricing, performance, and dependability are all addressed while selecting modules for the energy hub system sizing.



The Kisegi, Humabay Solar Energy Hub

Technologies tested

The Solar energy hub in Katito aims to generate sustainable off-grid electricity, with sector linkages such as fishing, water pumping, water purification, and e-mobility, and combining energy solutions with local Info Spots for access to information, on energy, climate change and digital skills.

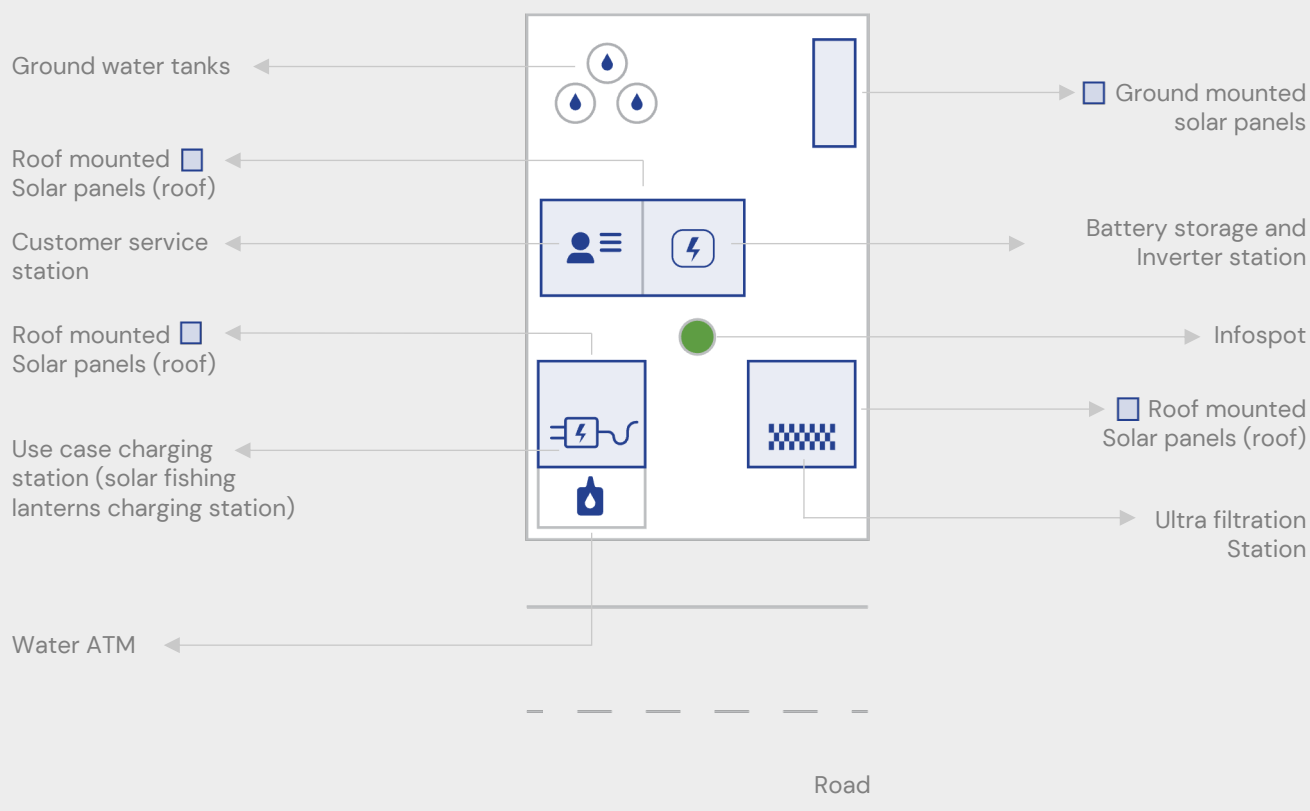
The solar charging hub houses PV modules, central Li-ion battery storage, and balance-of-system (BoS) to increase energy accessibility for a range of electrical needs within the local community.

Leading Partners



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Asset(s)	Total number	Specifications
Solar roof	1	38.16 kWp
Batteries	12	55.2 kWh
Waterpump	1	Portable solar water pump (surface pump)
Water tanks	3	25,000 L
Ultra Filtration system	1	2 cubic meters per hour drinking water purification system
Water ATM	1	20 liters for 10 Kshs
Lanterns/lantern charging system	300	Solar powered lanterns

Where is the water coming from?

The source of water is Lake Victoria which is approximately about 200m away. The water is pumped using a portable solar pump powered by a lithium ion battery and purified using an ultrafiltration system and UV treatment before dispensing at the water ATM all these are powered by solar energy.

Where are the motorbikes parked?

There are no motorbikes in the rural living lab. Currently, two use cases are being piloted which are: solar fishing lanterns for Omena night fishing and clean potable water.