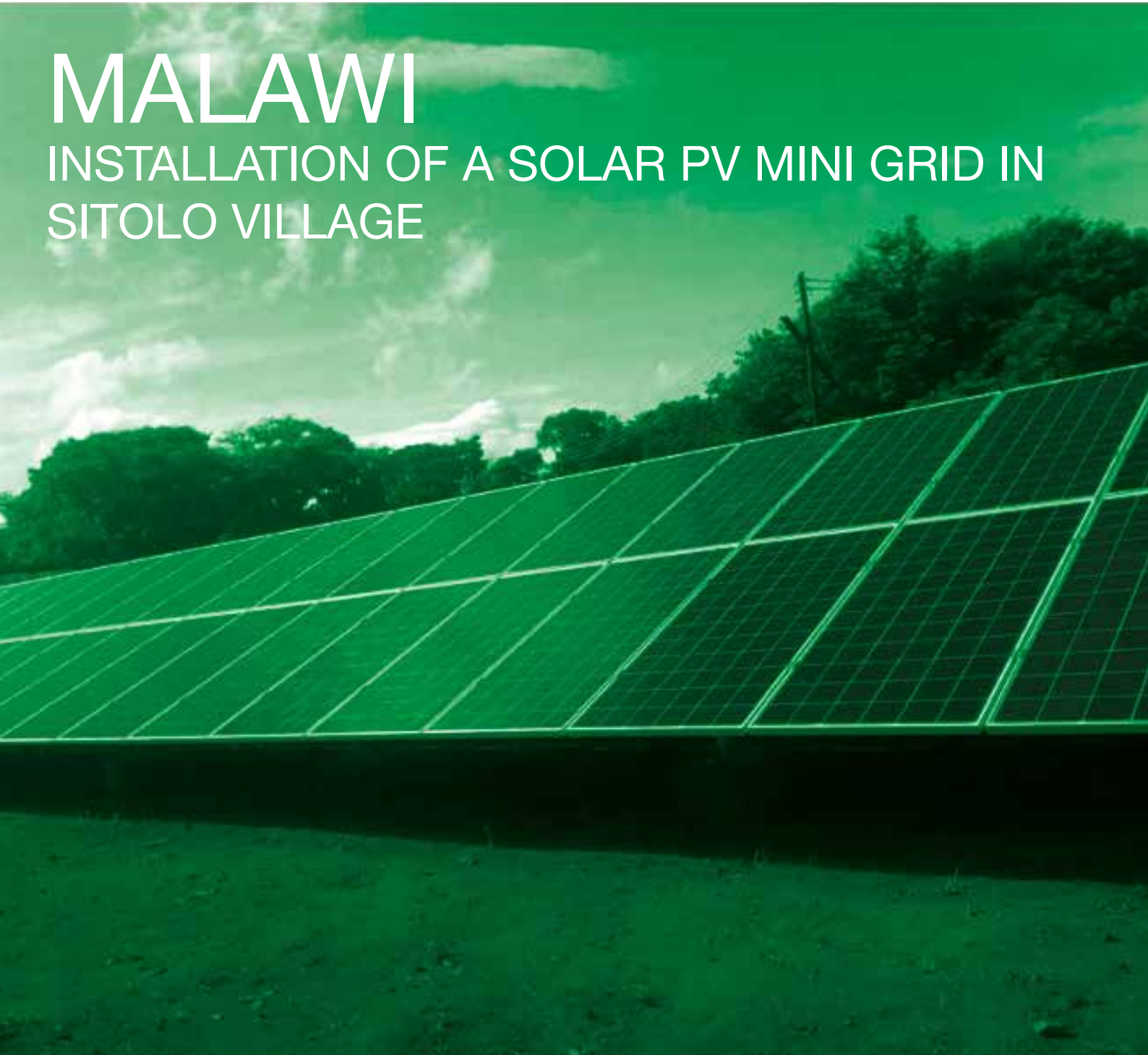


MALAWI

INSTALLATION OF A SOLAR PV MINI GRID IN SITOLO VILLAGE



INSTALLATION OF A 80KWP/950KWH SOLAR OFF-GRID MINI GRID FOR SITOLO VILLAGE –MALAWI-



The context

The UNDP Malawi country office in Lilongwe supervises and fund rural electrification projects in Malawi, supporting deployment of renewable energy, improving electricity access rate in the country.

Sitolo village, located in the Mchinji district, is not connected to the public grid network. Access to electricity was therefore inexistent before the installation of the mini-grid, limiting economic activities and development.

The solar hybrid system has been specified according a UN Energy Efficiency survey. The goal was to have solar power to provide all of the required energy, and only one diesel generator as a back-up in case of severe weather conditions or system failure.

This first project in Mchinji district is likely to become the base of a multi-site mini grid including nearby villages.

Our missions

Dimensioning, procurement and integration, onsite installation & commissioning of an **off-grid containerized solar system** well adapted to the Sitolo remote site.

The system consists of:

- 2 sets of ground mounting PV panels
- 2 banks of lead carbon (Pb-C) batteries (948kWh total)

- 1 100kW 3-phase inverter/charger with an embedded 100kW MPPT
- 1 Turnkey 40ft HC container including air-conditioner and smoke detectors

Having worked closely with our local partner, the future operator and UNDP, we took responsibility for the overall project in order to ensure a perfect integration of the solar farm and a maximization of the performance:

- Design of the installation meeting IEC standards
- Selection, procurement & factory tests of the material
- International and national logistics
- Installation (electrical and civil works)
- On-site commissioning & training
- 3-year Maintenance contract.

We are also monitoring the production of the solar farms and ensure after-sales service for several years.

Even if no internet connection is available on site, we implemented an off-grid solution with manual uploads every month by the site operator, to ensure all stakeholders can access the project operational data on our REEMon web-based platform anywhere, anytime.



A few figures about the project:

- 80 kWp of PV power installed
- 948 kWh of Energy storage
- 150 Households connected and several businesses: Grocery, Barber shop, Maize Mill, the school and Health Center & six Street Lights.

Our added value

As EPC contractor and system integrator, Enviroearth, acquired over the years, a rich experience in installing solar farms and environmental monitoring stations around the world.

We organize and coordinate civil works, train the local operators and beneficiaries, for medium-sized PV solar farms or hybrid power plants, grid-tie or fully off-grid.

Our projects take us to many remote and heavily constrained areas,

(Tristan Da Cunha, Easter Island, Cape Verde, Madagascar, South Sudan, Sierra-Leone, Papua New Guinea, Antarctica...), enhancing our know-how related to these challenging areas and conditions.