



# TANZANIA

## CONTAINERIZED HYBRID PV SOLAR SYSTEM AT THE UN HOUSE BUILDING, DAR ES SALAAM

# INSTALLATION OF A CONTAINERIZED 227KWP /123KWH HYBRID SOLAR PV SYSTEM



## The context

The Smart Facilities program, supervised and funded by the UNDP, aims at reducing greenhouse gases emissions as well as the operating costs of their country offices and other UN-managed or supported buildings.

The UN country office, located in Dar Es Salaam, is connected to a very unreliable local grid network. They have been using diesel generators to power the offices during frequent brownouts, inducing high fuel consumption and expensive energy bills.

The solar hybrid system has been dimensioned and designed by Enviroearth according a UN Energy Efficiency survey to provide most of the required energy using only one diesel generator as a back-up.

In parallel of this upgrade, significant reductions in operating consumption have been achieved through upgrades to energy efficient equipment.

The UN house Solar System is currently the biggest single solar Hybrid power plant site in the country. This initiative contributes to the active promotion and adoption of the sustainable energy in Tanzania.



## Our missions

Enviroearth mission consisted in the supply and installation of 1 hybrid containerized solar system with 227kWp of PV, a 122.8kWh Lithium Ion battery bank, connected to grid and to the existing power generator;

The project included:

- Assessment of the needs & Site survey
- Civil Works by local partner with roof and carport PV panels implementation
- Integration and factory tests of the Solar generator
- International and local logistics
- On-site installation Commissioning & Training
- Maintenance contract

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

The monitoring unit ensures no current is fed back into the grid or the diesel generator, and is sending data to our web-based monitoring platform for all project stakeholders to view it.

## A few figures about the project:

- 227 kWp of power installed
- 122.8 kWh of Energy storage system
- 70% of Electricity Consumption covered by solar energy
- Annual GHG offset of 68 tons of CO2
- US\$34,600 saving cost annually

## 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.

