“SOLAR MOBILE MINI GRID PLUG AND PLAY”

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SUMMARY

- TECHNOLOGY
- PORTABLE
- PLUG & PLAY SOLUTION
- HOW DOES IT WORK UNDER EXTREME TEMPERATURE?
- HOW DO YOU PROTECT YOUR MINI GRID
- MONITORING SYSTEM
- WHAT’S ABOUT THE LITHIUM BATTERY?

TECHNOLOGY

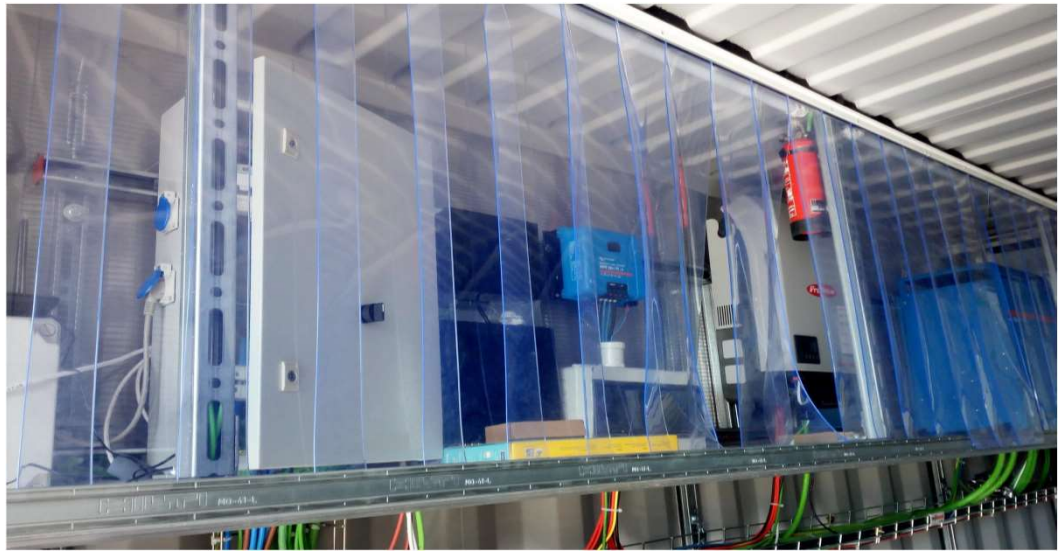
This technology is an autonomous device that acts as an uninterruptible and emission free solar energy generator, allowing steady electrical self supply disconnected to the grid. In fact, it could be used as an alternative to usual diesel genset in places where the traditional grid is unsuitable, non existent or remote.

PORTABLE

This solar system is easily portable thanks to the fact that all the mechanisms are integrated in a shipping container and the connection/disconnection takes place in a few minutes. Just open it, and start supplying green energy where you need it.

PLUG & PLAY SOLUTION

It is a mobile, pre installed and factory tested Mini Grid which integrates all the essential components for supplying electricity autonomously in a certified container (Plug Play). It can easily be sent and used anywhere. Our solutions are ready to arrive and start working.



HOW DOES IT WORK UNDER EXTREME TEMPERATURE?

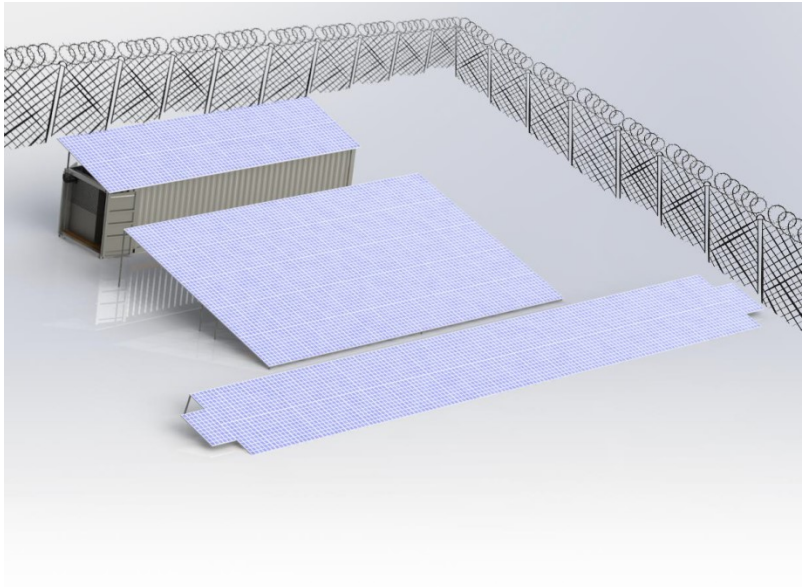
It features a bimetallic relay which turns on/off an airconditioning depending on an regulable range of temperature. The airconditioning will be responsible for providing the most comfortable working conditions. Moreover, equipments will be covered by PVC strip curtains which allow us to maintain adequate temperature and protect to the dust.

HOW DO YOU PROTECT YOUR MINI GRID?

It uses the most advanced security measures in order to protect the steady work of the equipment. Our solution includes an optional access control to guarantee in order to only staff members manage the system. Furthermore, a 360 degree camera is embed to capture everything inside the container. Finally, the container is combined with a fire extinguishing system.

HOW DO YOU PROTECT YOUR MINI GRID?

The PV array and the container could be protected by a strong metallic fence covering all the system.



MONITORING SYSTEM

The remote monitoring system allows to check the status and behavior of every subsystem, see consumptions instantly, apply for configuration changes to the devices, analyze alarms, etc remotely.

The use of this technology has brought many advantages such as:

- High Depth of Discharge (DOD)
- High energy density (100Wh/kg aprox. for the complete package)
- High power, up to 1C of discharge
- High efficiency (95%)
- Maintenance free
- Intelligent BMS (Battery Management System): Monitors, voltage and temperature for every cell, measures charge/discharge current, calculates SOC (State of Charge) and SOH (State of Health) and estimate life cycle. Allow communication with chargers, motors and monitoring devices.

WHAT'S ABOUT LITHIUM STORAGE?

We offer ion lithium batteries due to the advantages compared to other technologies. Firstly, in case of ion lithium batteries, the depth of discharge (Dod) is typically at or under 90%, while it is at 60% for low maintenance lead acid batteries. For the sake of the simplicity, it means that stationary batteries can be just discharged up to 55-60% and ion lithium batteries up to 90-95%. Therefore, whether we work with lithium batteries, we won't need to duplicate the number of them.

Regarding to the offered ion lithium batteries, we can obtain 6100 cyles of life at 70%. However, using low maintenance lead acid batteries can just obtain 2800 cycles at 70% as well. To sum up, ion lithium batteries are more durable than stationary batteries.

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