

# MFS Solutions

## Overview presentation



SUSTAINABLE SOLUTIONS

Who we are:



## **Excellence, Innovation, Compromise**

**MFS** is a subsidiary company of **MELFOSUR**, born to give the necessary both technological and professional tools in order to make our clients more competitive.

MFS IDI has as main vision the development of specialized projects in the area of R+D+I in renewables sector, achieving the creation of products with the best price-quality relation.



Keys of success  
Integration of activities for a integral service

Melfosur develops a very important activity in the area of renewables.

More than **200 MW installed**.

Leaders in the implementation of projects, development and mounting of solar photovoltaic and wind facilities.

We have managed to place renewable energies at the service of sustainable development, using the most advanced technologies to obtain the maximum efficiency and productivity.



SUSTAINABLE SOLUTIONS

## TECHNOLOGICAL PARTNERS





## SUSTAINABLE SOLUTIONS

- MICROGRID SOLUTIONS
- OFFGRID SOLUTIONS
- EV MOBILITY
- ENGINEERING & DEVELOPMENT

# MICROGRID SOLUTIONS

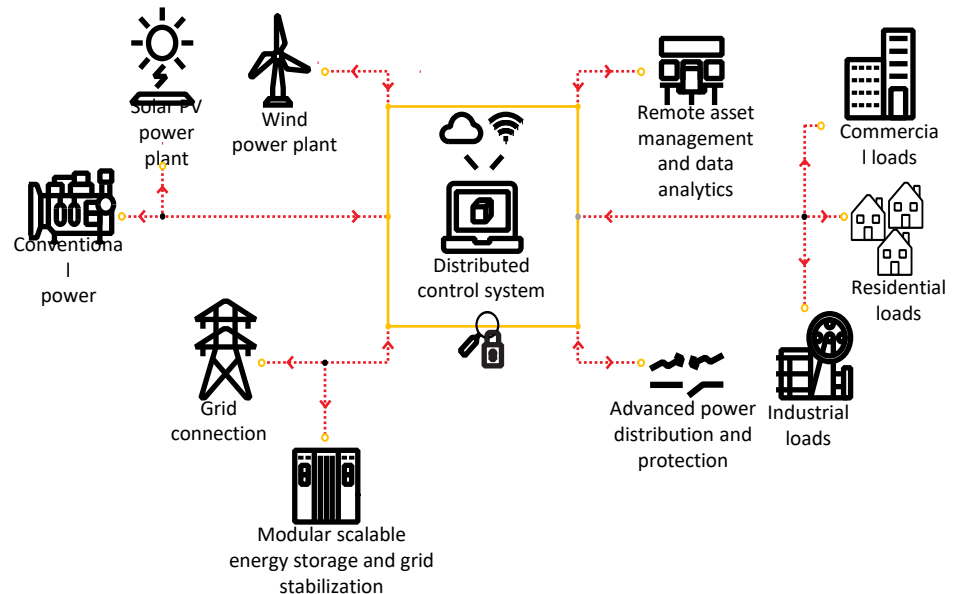


- Generation at the point of consumption and always available.

### Microgrid definition

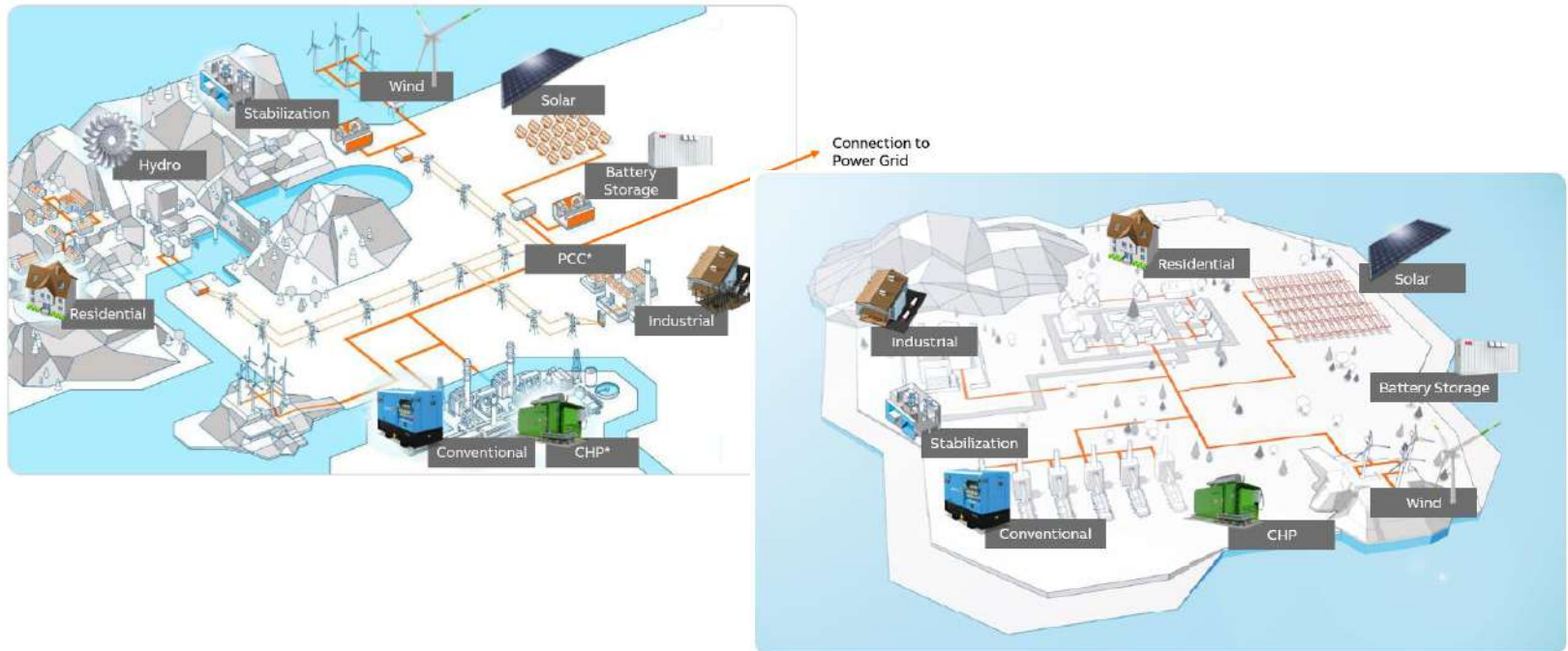
Distributed energy resources and loads that can be operated in a controlled, coordinated way either connected to the main power grid or in “islanded”\* mode.

*Microgrids are low or medium voltage grids without power transmission capabilities and are typically not geographically spread out.*



# Grid connected or Hybrid or Islanded Microgrid

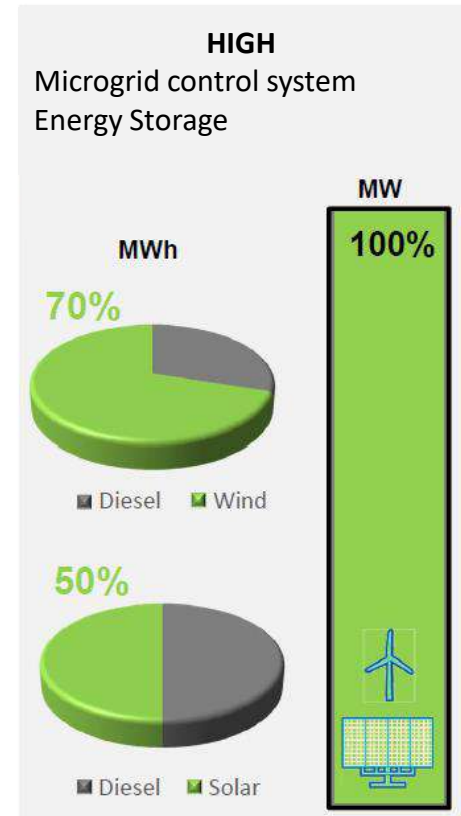
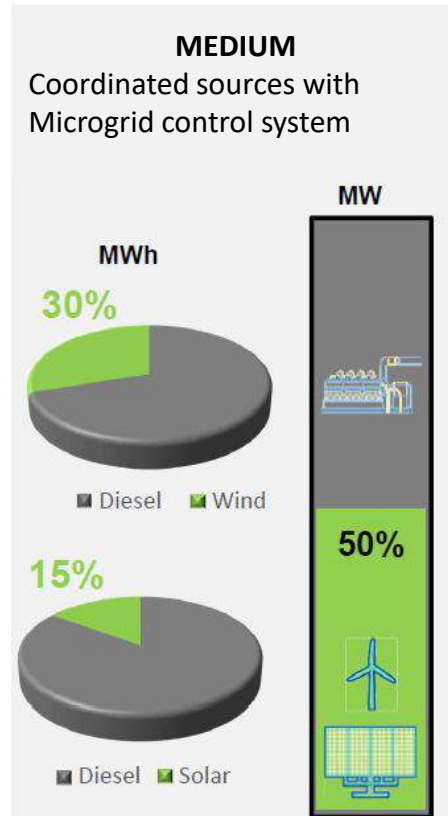
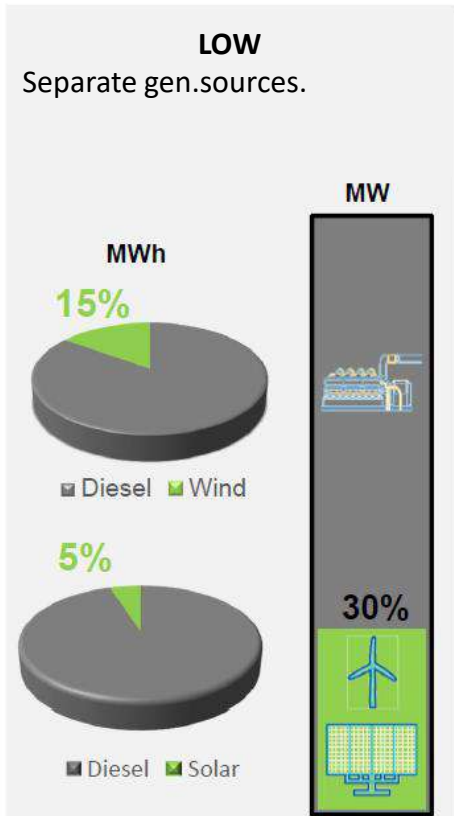
- Access to power in remote locations, power quality plus lower cost and environmental impact.





# Microgrids

- Energy Storage: high renewable penetration





## PowerBox

- “Plug and play” solution for mature & emerging markets

### Instant power wherever and whenever it is required

A reliable, modular, containerized “plug and play” solution, available in various ratings with a standardized specification for installation from small remote communities to large industries. It is easily configurable to adapt your unique needs.

#### Key Offering

- Reliable, stable and affordable power availability for both grid connected and off-grid systems
- High penetration of renewable energy into the existing grid together with the control system
- Virtual generator, handling up to 100% of renewable energy
- Optimize the renewable energy generated and reduce fuel cost
- Resilient power that protects against power disruptions of any duration from fractions of a second to prolonged outages
- **Standardized products in the range of 30 kW to 5600 kW, scalable unlimited**



# PowerBox

- “Plug and play” solution, easily configurable to adapt your unique needs

### Climate Control

Maintaining temperature inside the container within an acceptable operating limit at all times

### Lithium Ion Batteries

Battery module, Racks, and Battery Management System (BMS) Interface

- Easy maintenance
- Online replaceable
- Hot-swappable

### PBS200

PowerBox Conversion System

- Scalable
- Modular
- Grid Forming
- Virtual Generator



### Health Safety and Environment (HSE)

Ensure health and safety appropriateness for all individual components and entire system of PowerBox

### Remote Monitoring

Comprehensive solutions for unattended sites to increase productivity.

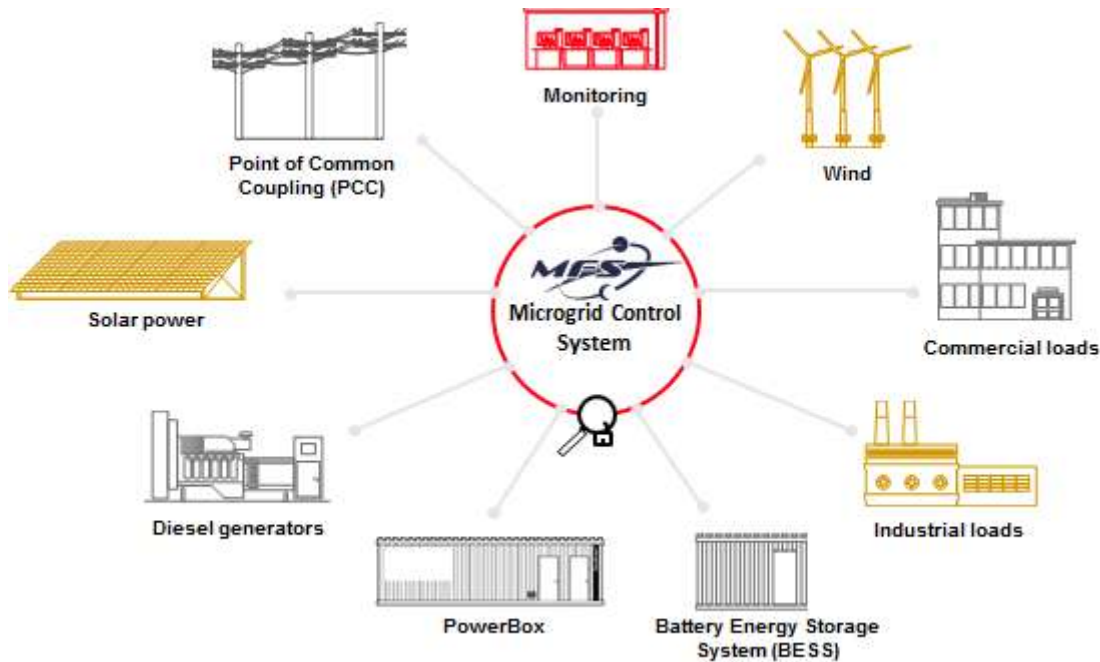
- Key Performance Indicators
- Real-time & historical data trends
- Configurable data sampling rate
- Support predictive, preventive and corrective maintenance

### Built-in PowerBox Automation

Dedicated Microgrid plus control system delivered pre-programmed to meet the application needs

# PowerBox Automation

- Scalable, flexible, expandable through distributed control



## Ecogeosolar Hybrid System

“Plug and play” Integral Solution Power Supply



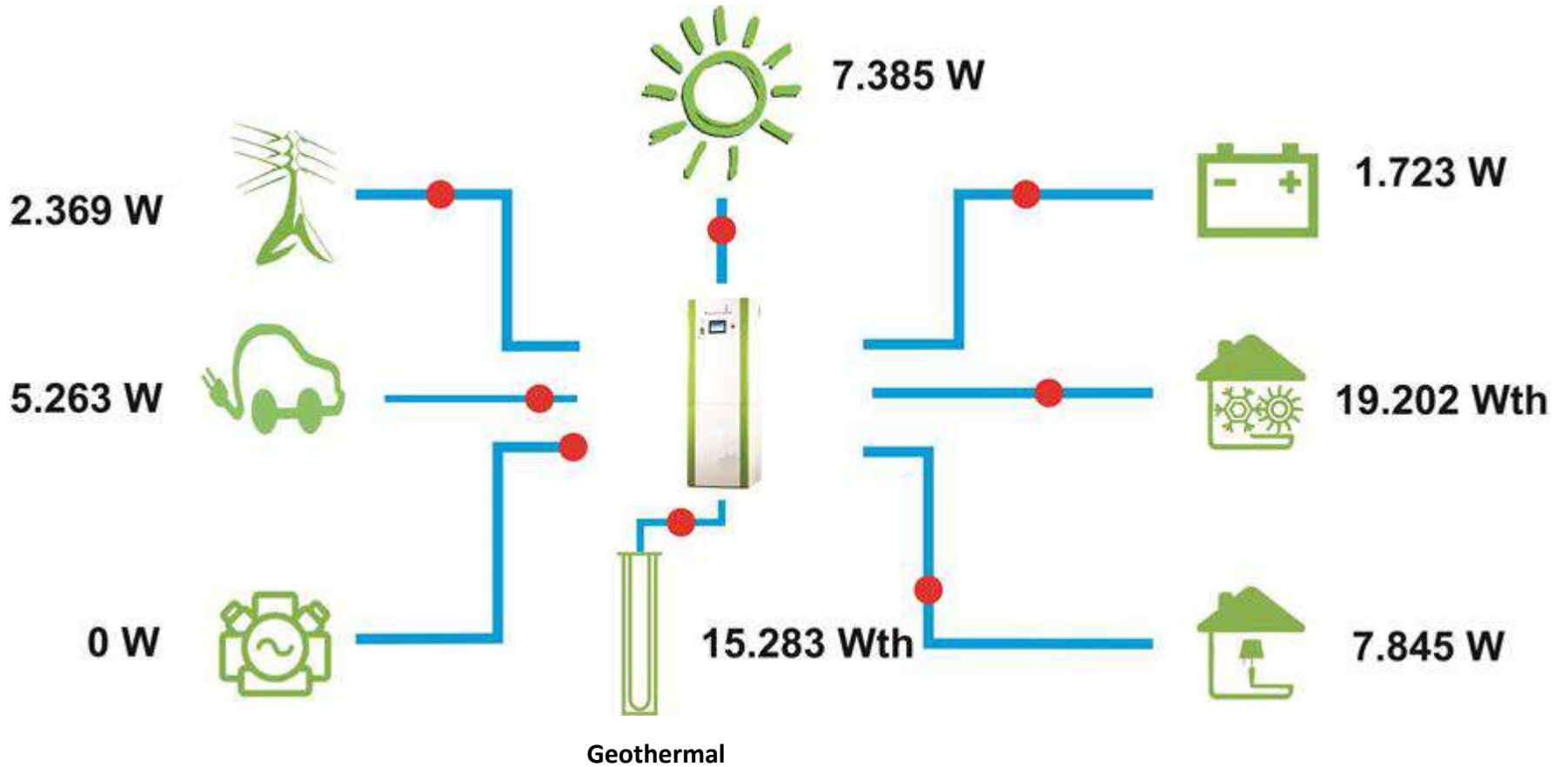


## Ecogeosolar Hybrid System





### Ecogeosolar Hybrid System





SUSTAINABLE SOLUTIONS

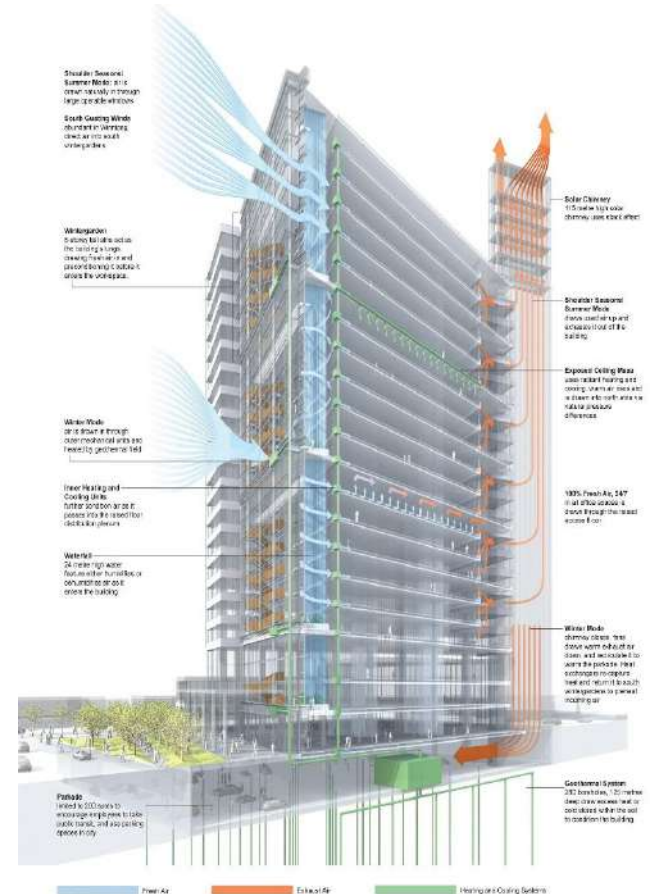
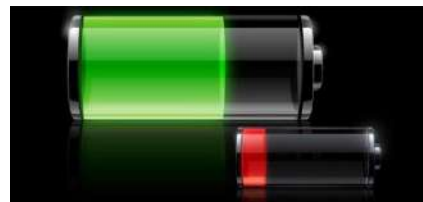
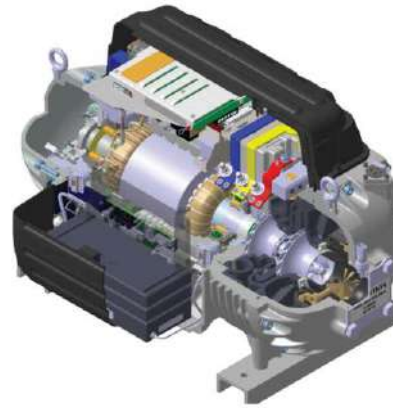
## ECOGEOSOLAR GRID COMMUNITY







# Ecogeosolar: High Power



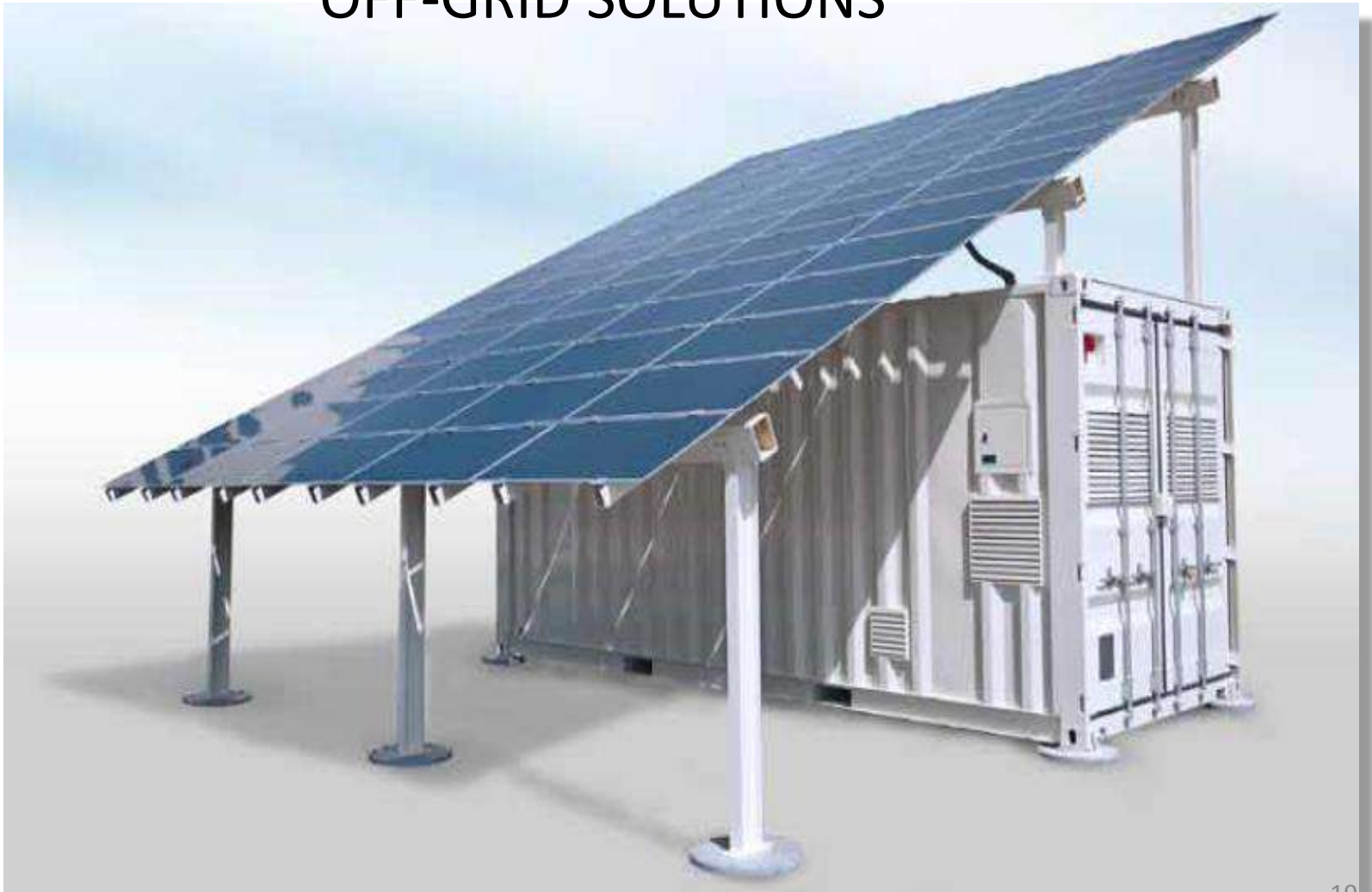


## EcogeoSolar Hibrid System: The ultimate solution

- Easy **installation**
- Grid **interaction** modes
- High **flexibility** of configuration
- Integrated **Storage** system
- Better **efficiency** in the market 98,3 % and improved loading
- Integrated HVAC system with the highest efficiency in the market. COP 5,9



## OFF-GRID SOLUTIONS





## CELLBOX

Photovoltaic hybrid system is the solution for off-grid power generation. It is the most cost-effective way of generating energy in remote areas.

- Provides 24 hours reliable power supply ( from 1 to 20 kWn) due to three different sources of energy:

PV generator

Diesel Generator

Batteries

- **Minimal O&M and Logistic Cost.**
- **Modular Ensemble from 1kw to 1 MWn Continuous Power Supply.**
- **Easy Portable**
- **Fast Mounting & Dismounting**





## CellBox: Overview- Power





## CellBox Applications:

Military Radars Power supply



Border Security Control Power supply

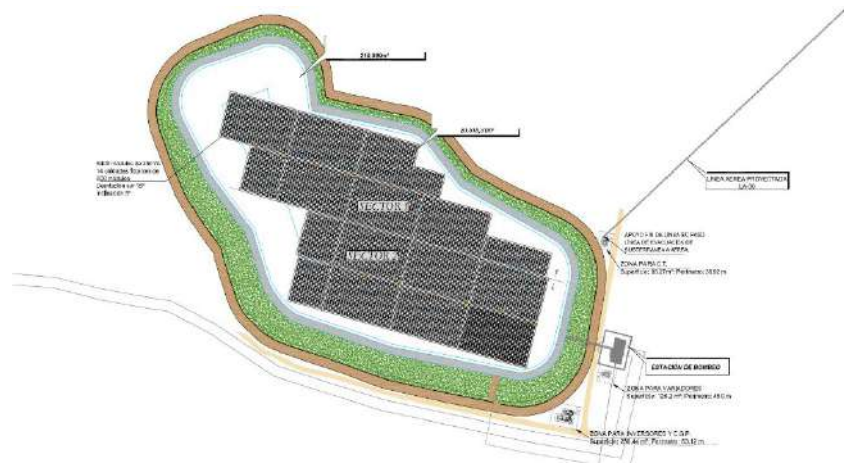


Telecommunications network





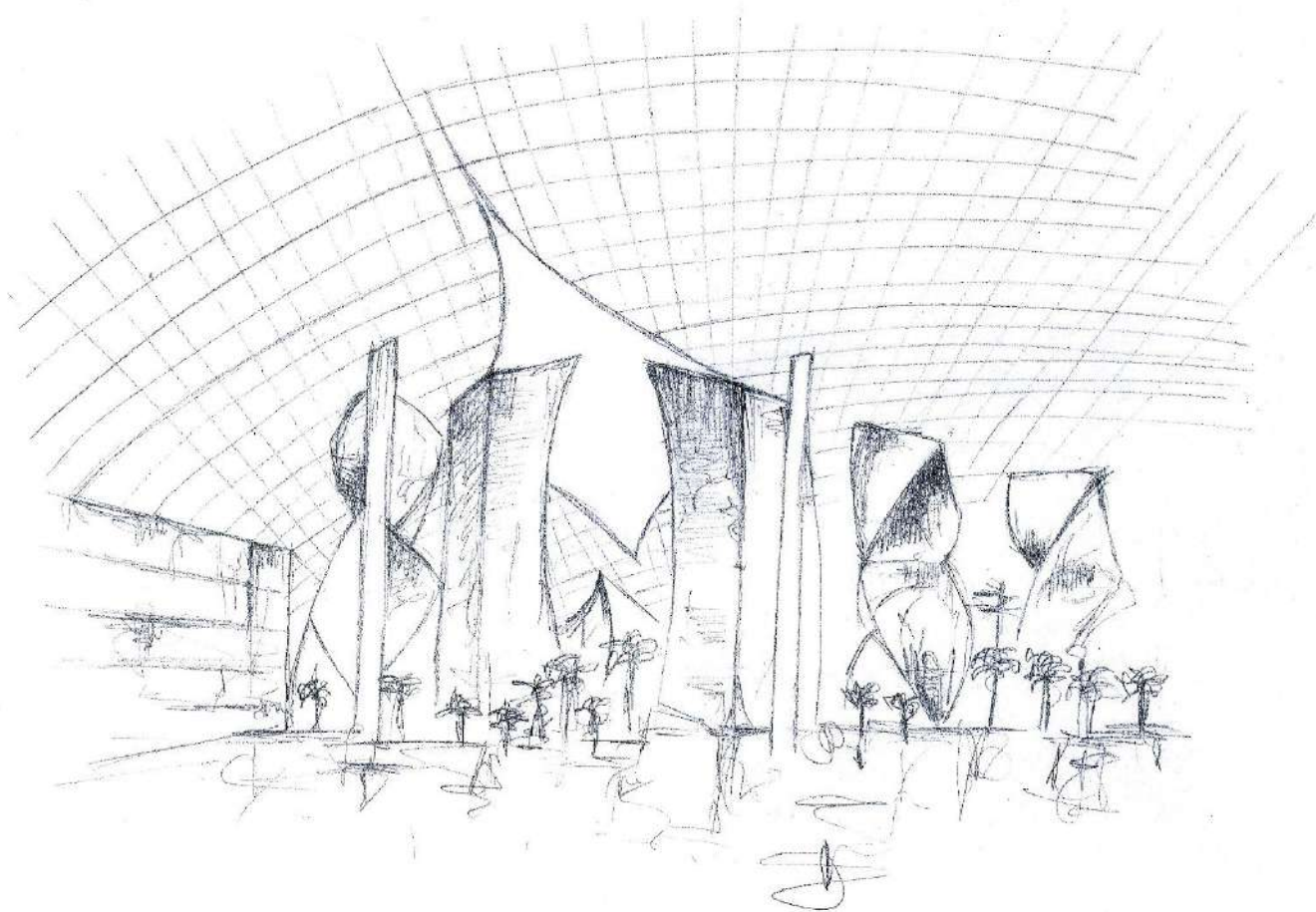
## Solar Pumping





SUSTAINABLE SOLUTIONS

# ENGINEERING & DEVELOPEMENT

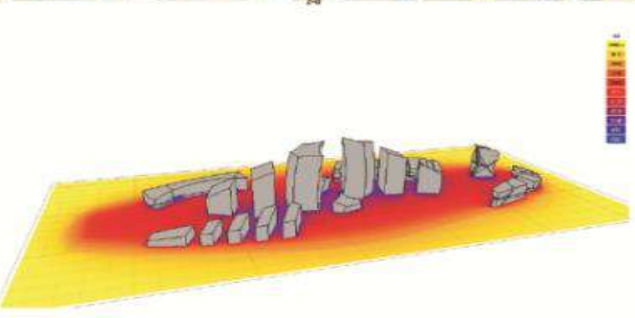
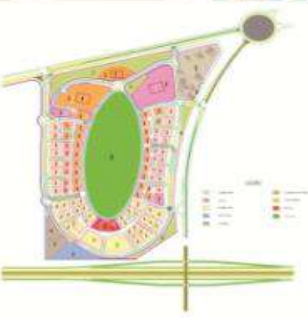
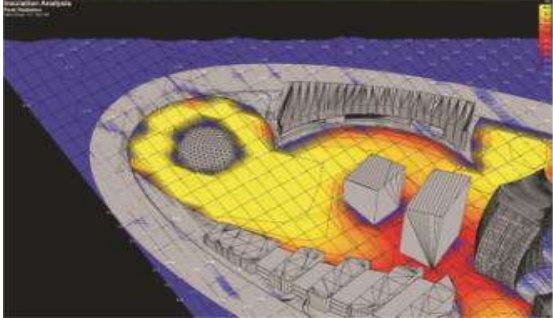






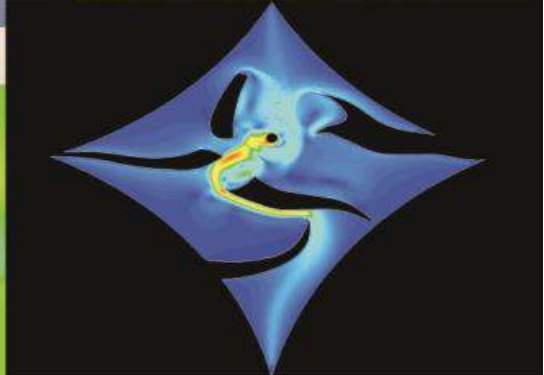
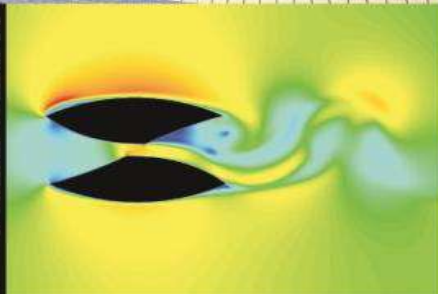
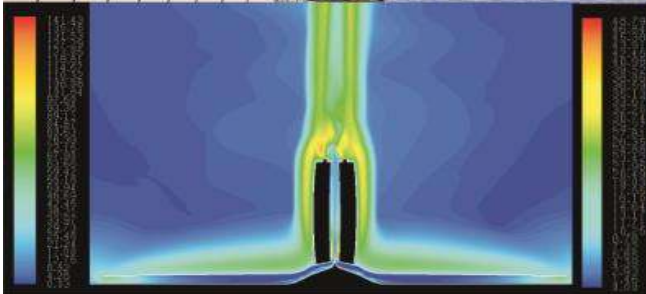
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SUSTAINABLE SOLUTIONS





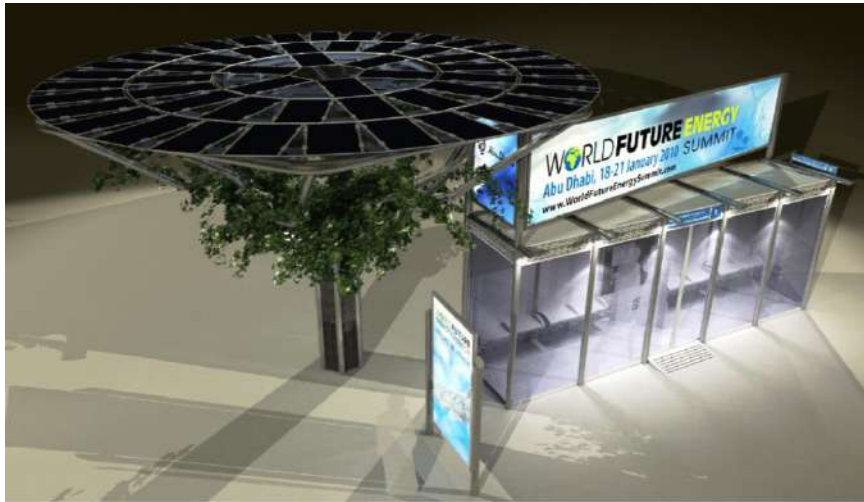
# EOLO TOWER





# ENGINEERING & DEVELOPMENT

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A member of the melfosur group



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