



# HYBRID PHOTOVOLTAIC - DIESEL APPLICATION

with MASTER 2.0, CPA & extensions

## FRENCH POLYNESIA - TAHITI

The world of energy is constantly changing and require more economical and ecological solutions; Fuel prices increases and photovoltaic cost decreases, added to the need to reduce CO2 emissions gave birth to a new method of energy production: hybrid plant.

The solar energy is linked to the external environment, it is not possible to control the production and use it as a single source, it is appropriate to complete the power with a generator in parallel.

The **MASTER 2.0** equipment meets this need for managing energy sources by running parallel the generator to the PV, and exploiting the maximum solar power when available, in order to minimize the fuel consumption.

When the photovoltaic production becomes too low, the diesel becomes the only source of production. This case study highlights the **MASTER 2.0** installed in order to synchronize and manage solar power and diesel power automatically.

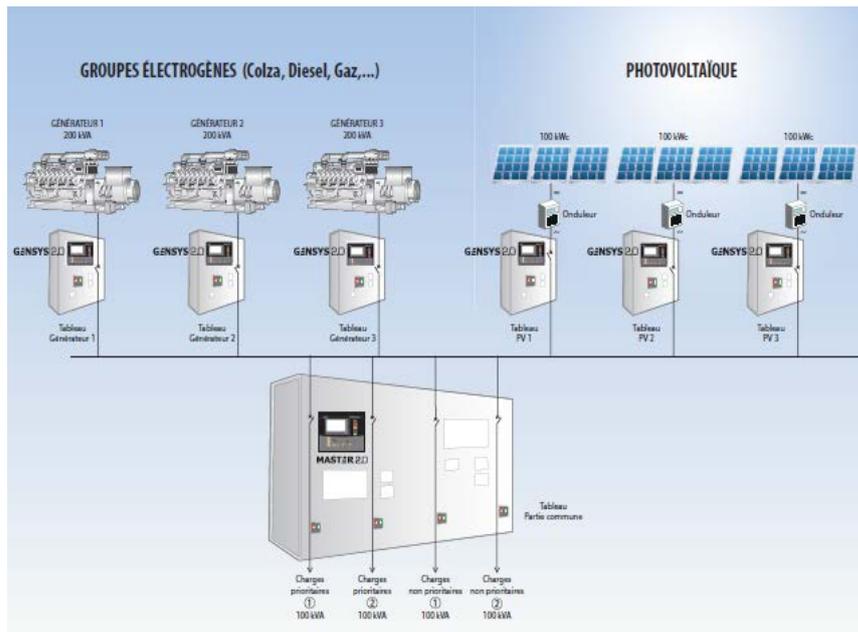
### Features specific to this project are:

- Automatic diesel generator synchronization on the solar production bus
- Automatic decoupling solar on low power production Load management of the generator on real time, based on solar available power calculation
- Sending a limit setpoint to solar power during production peak
- Management of load banks reactive power control.

### CRE TECHNOLOGY equipment used:

- MASTER2.0
- CPA (power transducer for photovoltaic power measurement)
- Extensions of inputs and outputs for controlling load banks and limiting power

## APPLICATION



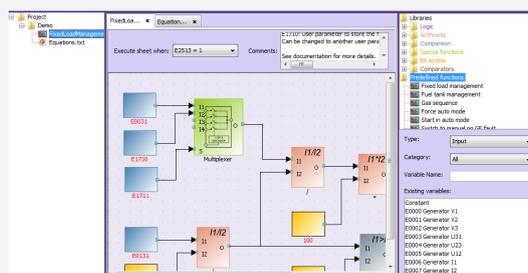
## PROGRAMMING

### EASY PLC

Program and customize your internal logical sequences

CRE TECHNOLOGY's Easy PLC is a logic editor which provides graphical interface to create PLC instructions for GENSYS2.0.

Easy PLC simplifies the process of proprietary writing instructions thanks to a user-friendly graphic environment. That includes many sheets in which the user create instructions through «operators».





EXPERT IN GENERATOR SOLUTION

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