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POWERED FOR LIFE

# INNOVATION TO BRING EDISON'S DREAM TO LIFE

“ *We will make electricity so cheap  
that only the rich will burn candles.* ”

Thomas Alva Edison





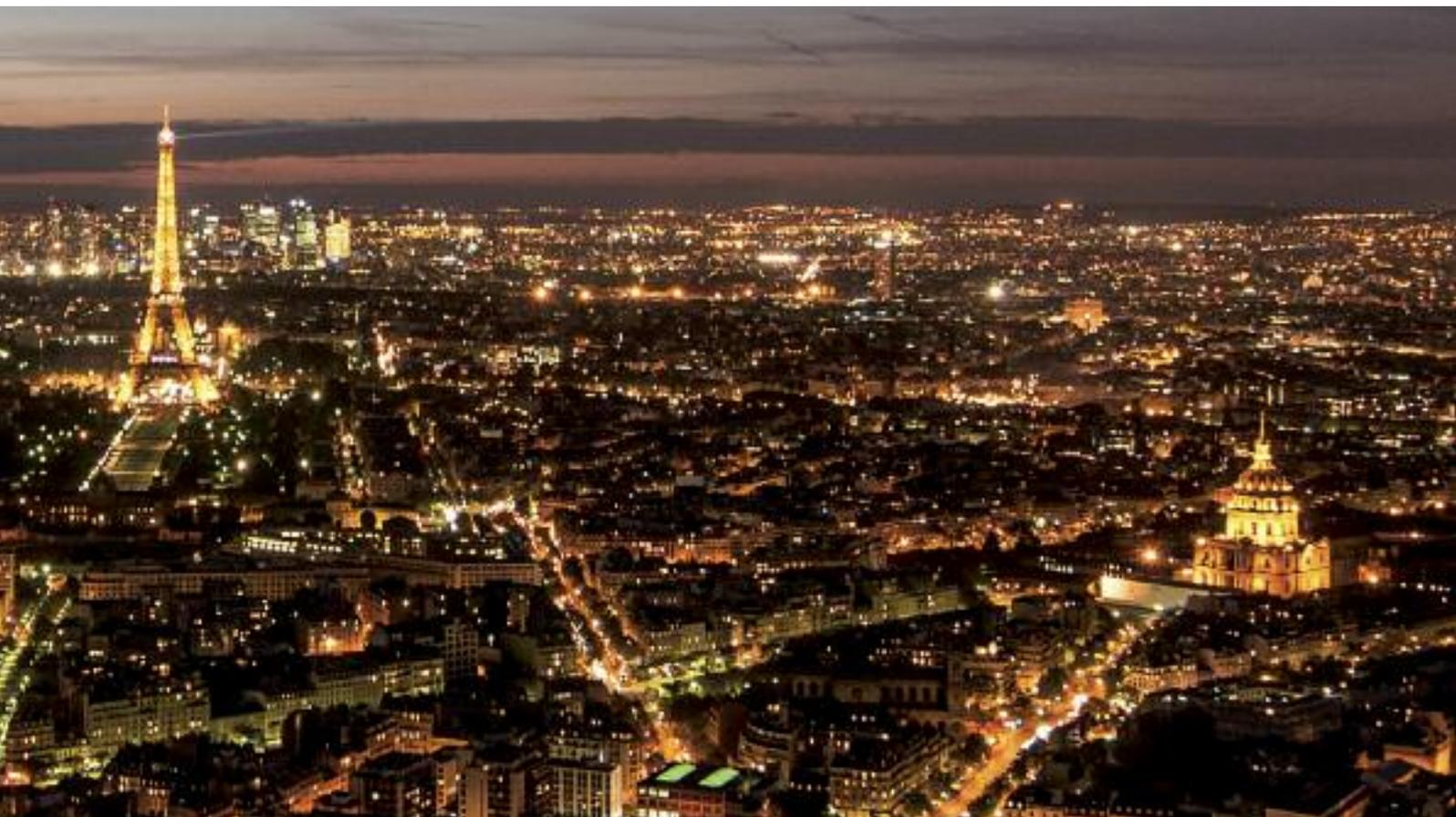
# ENERGY FOR ALL.

Pushing the boundaries in fine-tuning high-performance generators, developing systems within the scope of energy demands and the environmental requirements of our time, pushing the limits of hybridization, combining and mastering energy sources, and creating Off Grid micro-networks under extreme conditions. These are the challenges that **GELEC** faces everyday.

In France and its overseas territories, in Benelux and throughout the entire African continent, **GELEC** innovates.

## **THE SMARTNESS AT THE HEART OF OUR SYSTEMS**

Stand-alone electricity generation, for emergencies or back-up, means reliability and faultless adaptation to your facilities' needs. Our study office's engineers create tailor-made solutions, by integrating intelligent clean systems to optimise your production.



ENSURE RELIABILITY &  
**POWER**  
AT THE BEST PRICE





# THE DIESEL GENERATOR

THE BEST PRICE / QUALITY RATIO OF THE MARKET  
DIESEL ENGINES FROM 3 TO 12 CYLINDERS

Purposefully designed as real industrial tools, all our generators in our product ranges dedicated to **craftsmen, farmers and manufacturing professionals** are certified as 'heavy duty', for intensive or normal use, or for emergencies or backup.

## UNBEATABLE VALUE FOR MONEY

Carefully choosing our suppliers of equipment, materials and parts, has allowed us to reduce our purchasing costs. We work with reliable suppliers, working with highly efficient production equipment. Rational management systems, as well as a simplified production with competent sub-contractors, allow us to significantly improve our production performance.

This is how we're able to offer high-performance and safe electric generators at affordable prices. Assembler, **GELEC Thermic** has created a range of reliable and robust industrial generators, also offering all the technological developments necessary for a modern use of the equipment.

Our products are manufactured with **adherence to European standards** applicable to companies certified under ISO 9001, and are checked and tested as they leave the production line. They comply with all CE standards and are guaranteed for 1 year or 1000 hours\*.

\*Only In mainland France



**PANTHER RANGE** FROM 9 TO 68,5 KVA • **TIGER RANGE** FROM 88 TO 357 KVA • **LION RANGE** DFROM 440 TO 1700 KVA

# ALL-IN-ONE SOLUTION





# CONTAINERIZED ELECTRIC GENERATORS

THE RHINO LINE - OUTPUT BETWEEN 180 AND 2,060 KVA  
FROM 6 TO 12 CYLINDERS

## **DIESEL ELECTRIC GENERATORS IN CONTAINERS AND FITTED CONTAINERS.**

Generators in containers are used as a backup, as a grid, or for production on the grid, are easily transported over land or sea, for maximum power. Perfect for one time or ongoing needs, this solution allows you to install and use your containerized electric generator in record time.

## **LOW, MEDIUM AND HIGH TENSION APPLICATIONS**

With its synchronization, coupling and charge sharing abilities, the RHINO line stands out from the others. These electric generators can be synchronized so that you can install electric power plants up to several megawatts.

## **A SOLUTION YOU CAN USE RIGHT AWAY**

The container concept allows you to quickly have a complete "all in one" solution that is climate and burglar proof.



# OPTIMISE ENERGY SOURCES

- FREE HOT WATER
- INCREASED ENERGY EFFICIENCY
- REDUCTION OF CO2 EMISSIONS
- RECOVERY OF LOST HEAT



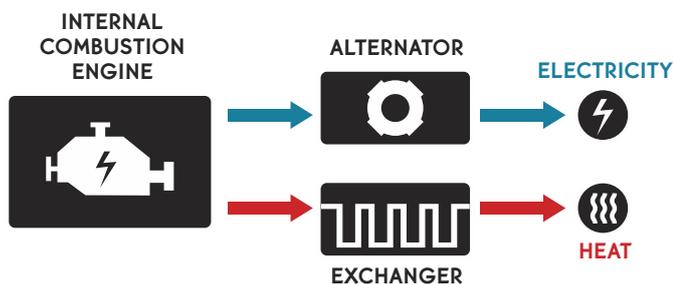


# REINVENT & ADAPT LOW AND MEDIUM POWER COGENERATION

**HEAT...  
... SIMPLY & FREELY.**

Producing electricity and heat simultaneously, and without additional cost is now possible. To optimize the energy production of its gensets, **GELEC** has integrated a small and medium-power cogeneration system (10 to 500 kW of heat) in its COGEN range. This innovation allows the unit's engine to produce heat through an exchanger. This heat, for example, can then be used to supply a central heating system or generate hot water, thus resulting in savings and autonomy for a home, base camp, isolated site, etc. A built-in thermostatic system is used to control the output temperature to within one degree.

Associated with **GELEC** hybrid technology, the **COGEN** range is able to reach energy performance thresholds never before obtained.



## THE BIOFUEL GENERATOR: A CONCENTRATE OF TECHNOLOGIES

To meet one of our client's needs, our engineering team developed this generator, which is a real concentrate of technologies. Equipped with a particles filter, running on biofuel and allowing a simultaneously production of electrical and thermal energy.(CHP).

P R E F E R  
**L O C A L**  
E N E R G Y  
S O U R C E S





# THE **BiOil**, ECOLOGICAL & ECONOMICAL GENSET

The **GELEC BiOil** groups meet the economic need to find alternative energy sources and the environmental challenges that we face today. Cleaner, more autonomous, more resistant to the weather, the **GELEC BiOil** groups have been designed to run under all the climates and in extreme conditions (up to -34°C)

## OPERATIONAL PRINCIPLE

The use of diesel is reduced to the simple starting of the engine and to the rinsing of the ducts.

As soon as the engine runs, the coolant fluid transfers the heat to the exchangers of the bicarburation system. The latter will allow to heat up the vegetable oil in order to reduce its viscosity and thus allow a perfect injection.

When the vegetable oil reaches the temperature of 65°C, a valve switches automatically the motor power supply in « oil ». mode.

When the engine is switched off, an automatic system (flush) will reinject diesel in order to drain all the ducts and the injection system.



TAMING AND  
MASTERING  
**ENERGIES**





# THE **KUB**, FIRST **FULL HYBRID** ELECTRIC GENERATOR.

The **KUB** revolutionises the universe of electric generators by displaying the amount of energy consumption and CO2 emissions, an unprecedented feature.

The precise interaction of the thermal motor, back-ups and energy flows, provides an optimal combination of efficiency and power. This smart energy management and storage ensures a significant gain in autonomy, reduces consumption and greenhouse gas emissions by one third, and lengthens the lifespan of the generator.

Almost silent, the **KUB** is incomparable in its comfort of use. The smart services (Connectenergy) bring together simplicity and connectivity to guide the user in managing its production.

It's no longer a vision, but a reality:  
**the first smart electric generator is born.**



**HYBRID**   
**TECHNOLOGY**  
BY **GELEC**





# THE H-POD, INTEGRATED INTELLIGENCE TO OPTIMISE YOUR NETWORK.

## A SECURE, AUTOMATIC AND SMART MANAGEMENT OF YOUR ENERGY.

A smart hybridization module developed by the engineers of **GELEC Hybrid Back Up**, the **H-POD** stores energy and restores it when it's needed. With its 'machine to machine' interface, it commands and communicates with production and consumption equipment.

In network or micro-network configuration, the **H-POD** can be supplied by any energy source: network, wind turbine, solar, hydroelectric, generator, fuel cell, or road vehicle. Completely programmable and configurable, it can send or receive orders to any machine or device. It can be remotely controlled from a Smartphone or PC.

An ideal solution for supplying an isolated site, supplied by an unreliable energy source or not supplied at all, the **H-POD** is able to smooth your peaks in consumption, therefore avoiding the need for an oversized installation.

Quiet and ecological, the **H-POD** reduces your installation's consumption and increases its lifespan, all while limiting its environmental noise impact.





# HOW DOES IT WORK?

In network or micro-network configuration, the HPOD can be powered by any source of energy (AC and DC): mains power supply, wind turbine, solar power, generating set, etc. **100% OF ENERGY PRODUCED IS USED.** The HPOD is able to control consumption by providing load-shedding functions over one or more circuits (load management).



## A SAFE AND STANDALONE SYSTEM

The HPOD is equipped with UPS Class (Uninterruptible Power Supply) pure sine two-way inverters **for supplying power to all types of consumer, even the most sensitive** such as electronic or computer equipment. The system **incorporates the effect of the outside temperature** in order to maximise battery performance. Using its technology, the battery bank **provides up to 24 hours of operating life and requires no maintenance.** The management method and special features of the batteries ensure a long battery life. The intelligent control unit is the true heart of the HPOD and **communicates with entry and output sources by integrating the specific requirements of each source** (inverter, control unit of a generating set, charge regulator, etc.) **and also with consumers** (air conditioning unit, water heater, etc.) to optimise power consumption. The HPOD is completely safe with its steel-treated casing mounted on a skid-type chassis-frame with lifting hooks.



Gelec Intelligent Control System



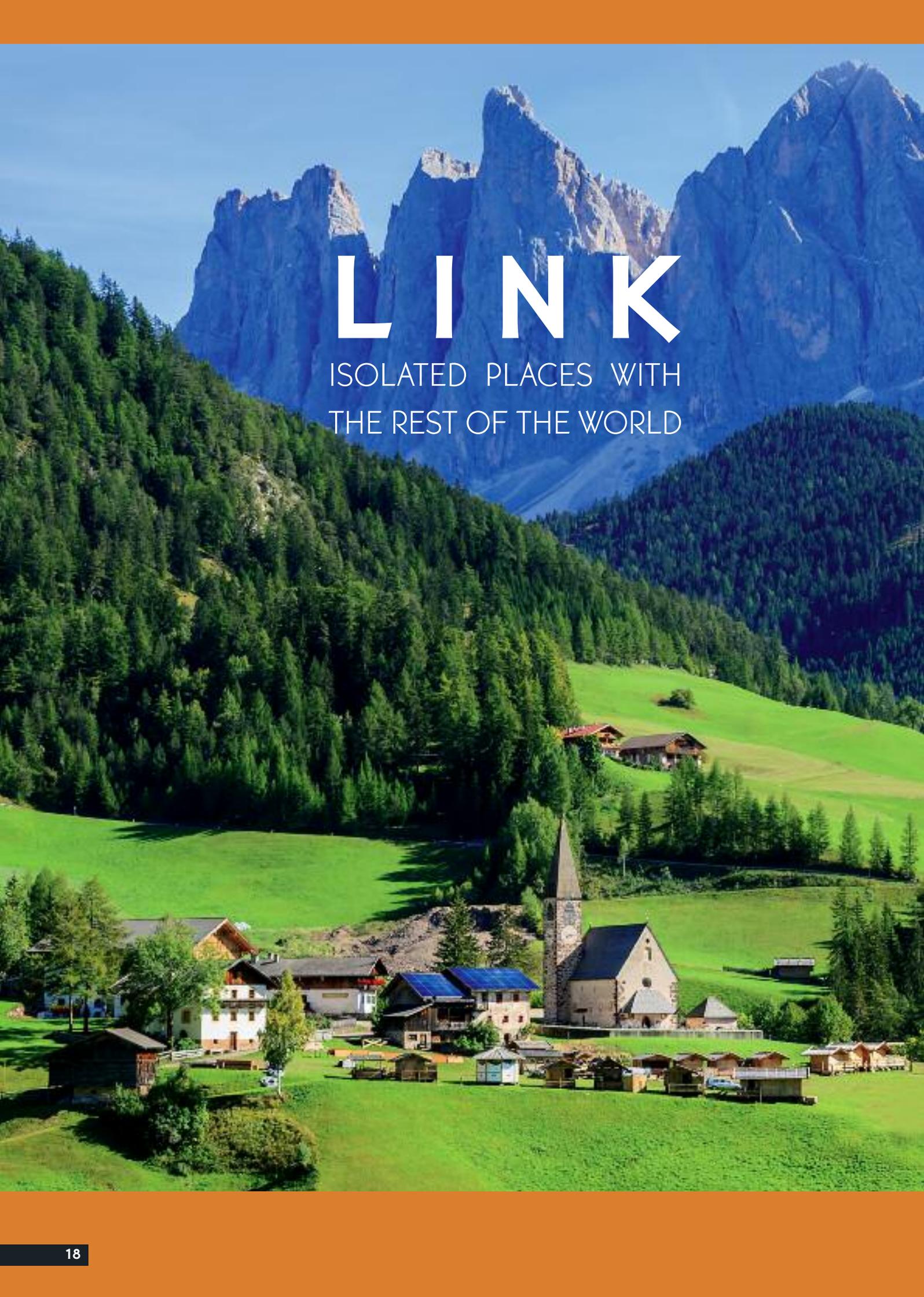
Control panel



Pure Sine two-way converter



AGM or OPZV sealed, maintenance-free battery bank. Optional OPZS



# LINK

ISOLATED PLACES WITH  
THE REST OF THE WORLD



# DEVELOPING SOLUTIONS, CREATING TAILOR-MADE NETWORKS.

Creator of Off-Grid solutions, **GELEC** develops tailor-made micro-networks, which are transportable, mobile or integrated. Its know-how and experience in electricity generation enable it to respond to constraints and problems of communities living on isolated sites, connected to no network.

## HYBRID POWER STATION, THE TRANSPORTABLE POWER PLANT

A veritable revolution in the world of electric energy, the Hybrid Power Station production unit uses several sources of energy within a single unique machine to offer a free-standing, economical and environmentally-friendly solution.

### 4 sources of energy to guarantee your autonomy

The hybrid power station is the result of an innovative technology which enables the management of different energy sources (photovoltaic, thermal, electric), through combined charger-converters, also synchronised by bus. The whole unit is run by an automat developed by Gelec Process. The energy produced is stored in a high performance battery bank. A simple and intuitive interface enables the user to control the machine.



The **MOBIL HYBRID POWER STATION** was developed by **GELEC** to satisfy the needs of companies and organisations with totally or partially transient activity. A real mobile

power station, autonomous and reliable, designed to resist extreme climates and conditions.

## A HYBRID SYSTEM THAT IS UNIQUE IN FRANCE

This HPS (Hybrid Power Station) is the first of its kind to supply an office building in France.

Our customer wanted to be self sufficient for its electrical supply and make its offices a technological showcase that were representative of its business activity. In view of this, the GELEC hybrid solution was used, especially for its technological expertise and know-how in the area of the "PV/Diesel" energy mix.

This generator has a total power of 40 kW and is powered by 125 flexible photovoltaic panels of 275 Wc, a Storage of 312 kWh, and An electric generator that operates with straight vegetable oil or recycled oil.



# MORE THAN 1000 SPARE PARTS REFERENCES IN STOCK!

Our spare parts service constantly carries a very important stock of the most usual wearing parts and consumables as well as more than a 1000 spare parts references for engine, alternator, controllers, body...





# ENSURING YOU HAVE THE BEST **AFTER-SALES SERVICE**

## **THE GUARANTEE OF A LASTING RELATIONSHIP**

When you decide to purchase a **GELEC Energy** product, you enter a world of demands and performance.

Our creator-assembler quality enables us to guarantee the monitoring of parts, and their availability at your earliest convenience.

Based in France, Africa and the overseas territories, our workshops look after the technical care of your **GELEC Energy** equipment.



A RANGE OF  
SOLUTIONS  
TAILORED TO YOUR  
**TRADE**



# OUR STUDY OFFICE READY TO HELP WITH YOUR PROJECT

Our study office and our engineers are available to develop and put into place solutions to satisfy your product needs. Mobility, sound adaptation, climate resistance, electric specificities and co-generation. Our areas of expertise enable us to offer you turnkey, tailor-made solutions.





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Your local dealer