

Standalone power supply systems for offgrid sites

ERM Energies, designs solar, wind and hybrid solutions to bring
power to remote loads



Technical development, Component supply

Wiring of control cabinet, support & training

Contact us for an estimation of your solar and wind projects :

Phone: +33 (0)4 90 60 05 68 / Fax: +33 (0)4 90 60 66 26 contact@erm-energies.com www.erm-energies.com

ERM Energies is a specialist in mobile power supplies and complex control cabinets for offgrid sites. These ready-to-use solutions provide productivity gains highly appreciated by our clients.

PowERM: Hybrid control Cabinets

Customized photovoltaic and wind energy sources, with a range from 6kWp up to 3kw

PowERM sets have been designed for easy installation of complex systems for autonomous, self-powered sites using renewable energy. They include :

- The regulation of energy sources (Photovoltaic, wind, hydro generator, electric generator)
- Protection and circuit breakers compliant with the NF 15-712-2 (*French norm*)
- Measurement, management and monitoring functions (functional data acquisition, information reports, remote management, auxiliary contacts to deal with overflow, group starter, etc. ...)
- An inverter-charger

PowERM cabinets are supplied ready-to-install with the necessary cables and can be put into service in less than an hour. They are designed to be intuitive and easy-to-use, to avoid any damaging manipulation by non-experienced users.



Island 24: Solar Control Cabinets

PV power up to 1400W

For the African market, Island 24 is equipped with an MPPT charge controller, an inverter-charger and fuses to ensure proper circuit protection.

It is available in two versions :

- With 2000VA 24V 230V 50Hz inverter-charger.
- With 3000VA 24V 230V 50Hz inverter-charger.



Mini PowERM: Solar Control Box

PV power up to 800Wp

The Mini PowERM has a 30A configurable controller and DC fuses to ensure the protection of the devices and short circuiting when required. It is available in two basic versions: a DC version with continuous current to power charges of 12V or 24V; and an AC version associated with an inverter to produce 230V 50Hz. The case is IP65 and can be placed outside. The Mini PowERM is compliant with the French norm NF 15-712-2.



MP2U : Mobile Power Unit

The MP2U allows you to continuously charge up to 140W, 24/7. Originally intended to power wind measurement Lidars, such as the WindCube or V2 ©ZephIR 300, it is adaptable to all types of DC or AC consumption. .

In addition, the MP2U was designed with **flexibility** in mind. The standard 500Wc photovoltaic generator can be increased by **an additional 500Wc**. A wind turbine can be installed on masts from 8 to 24 m in height. The generator can be replaced by a DMFC methanol fuel cell or a gas generator. This allows the MP2U to be functional where there is wind, sun, or both! The generator is only used to ensure emergency function in case of blackout or system failure.

The MP2U has a burglar alarm and a remote supervision that allows the operator to monitor and take control of the system (via 2G/3G network)

***Made entirely from stainless steel components compliant with marine uses.**



ERM Energies has established strong partnerships with leading global manufacturers of photovoltaic modules, inverters, controllers, batteries, light & pumping systems...



Photovoltaic Modules

- Full range of small modules from 5 to 200Wp
- *Competitive prices for all types of large-sized modules from 250Wp*
- Range of special modules (flexible, thin, etc...)



Energy Conversion



- Pumping inverters up to 5 Kw
- AC-DC chargers
- DC-DC converters
- Sinus inverters 12/24/48V ↔ 230V, 200 to 3500VA
- Inverter-chargers 12/24/48V, 1100 to 8000VA
- On-grid inverters



Energy Management and Control

- PWM and MPPT charge controllers 12/24/48V, 3 to 140A (with or without digital display)
- A programmable PN-GM controller management system and minimal energy consumption solutions with industrial automation
- Communication bridges (GSM, PSTN, etc...)
- Junction boxes 12/24/48V, 1 to 5 entries (With or without surge arrester)



Energy Storage

- Solar batteries, open lead with flat or tubular plates
 - 12V monobloc, 68 to 250Ah (C100)
 - 2V OPzS elements, 190 to 4600Ah (C120)
- Solar batteries made from sealed lead flat or tubular plates or tubular (AGM or gel technology)
 - 12V monobloc, 6.6 to 230Ah (C100)
 - OPzV 2V Elements, 240 to 3500Ah (C100)
- Lithium batteries
- Boxes for batteries: 25 to 680L

Wind Generators

- AIR breeze wind turbines, Air 30 and Air 40
- Ampair wind turbines, 100 to 600W
- Superwind wind turbines 300W
- Windspot wind turbines, 1.5kW and 3.5kW
- Bergey wind turbines 5kW, 7.5kW and 10kW
- HS Wind turbine, 25kW
- Guyed and self-rotating towers from 6 to 24 meters for wind turbines



Energy Receptors

- Lighting (LED bulbs, fluorescent, etc...)
- Refrigeration classified A++
- Ventilation

Support Structures

- Triangulated aluminum structures
- Enhanced aluminum structures
- Rooftop aluminum structures
- Masted aluminum structures
- Plastic tray consoles
- Integrated roof structures



Pumping

- Pumping inverters
- Surface pumps, Shurflo and Grundfos
- Submersible pumps, Shurflo and Grundfos
- Controllers & Accessories



Component Kits

- Public lighting
- Leisure
- Africa: Interior lighting and refrigeration

Offgrid Residential and Public Sites

Photovoltaic solutions allow for the equipping of isolated sites for which a grid connection would be too expensive: :

- Isolated habitations (Shelters, sheds, etc...)
- Remote community facilities far from electric networks
- Lighting & Public Display



Technical Training

For more than 10 years, we have been developing a range of educational training systems for photovoltaic and wind energy. Our systems are being used by more than 300 training centers around the world



Professional Applications

Photovoltaic solutions offer a number of advantages to professional applications, such as immunity to atmospheric disturbances, reliability, ease of use and ease of maintenance:

- Surveillance & Security
- Water suppliments & barriers
- Cathodic protection of metal structures



Numerous customers already **trust us**, including: **ERDF, EDF, INEO, GDF SUEZ, Orange Telecom, Bouygues Telecom**, etc...

Pompage au fil du soleil

Solar energy technology is particularly suitable for pumping equipment

- Domestic needs
- Transport of potable water
- Livestock and irrigation



The solar pumping systems are designed to supply water thanks to the sun (continuous pumping throughout the day), which prevents the need to use batteries.

Renewables advantageously replace a generator or a connection to a distant network. Before searching for transmission lines or buying a generator, consider a standalone solution. Their reliability is now an established and proven fact.



What makes us different:

- Management of **large multi-site projects**
- Design and manufacturing** of industrial solutions
- Multidisciplinary conception** (Mechanical, Electric, Electronical, Thermal and Industrial Computing)

ERM Energies is a trademark of ERM Automatismes Industriels :

- ❑ Founded in 1990, and specialized in electrifying isolated sites since 2005.
- ❑ A research and design team of 10 collaborators that allows us to respond to specific and complicated requests (Electrical, Mechanical, Electronical, Thermal and Industrial Computing).
- ❑ Nearly 40 employees on the site of Carpentras.
- ❑ Professional and certified technicians.
- ❑ Capability to develop custom electrical cabinets and metal structures

