# ORTRONIC *System*


*The Ortronic System is the Best Solution for “Off Grid” or “Off Generator” Electrification as well as Back Up Emergency Generation in “On Grid” Applications*

**GREEN PLANET COMPANY**

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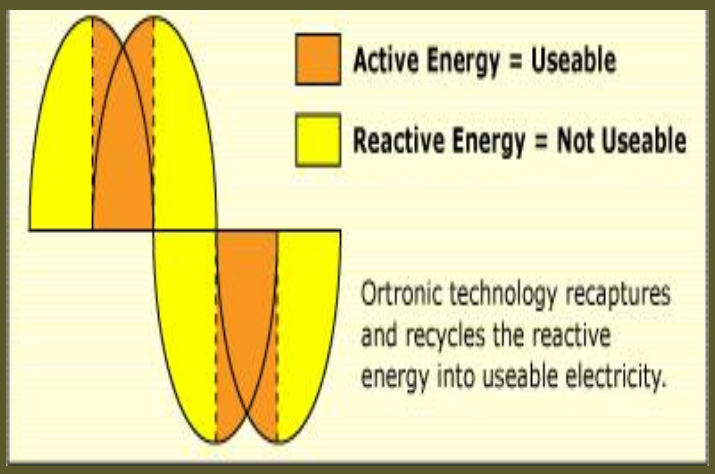
The ortronic microchip technology is **the only technology in the world that recovers reactive energy**, converting industrial machineries and commercial electrical inductive motors, including household appliances, into **"Generators of FREE Energy"** for users, thereby saving over 50% more energy than any other known technology. This is the new, cutting edge, and revolutionary concept of electrical power generation, and unsurpassed electrical energy efficiency and conservation.


## UNIQUE ADVANTAGES

- Recovers and utilizes "useless" electricity to perform work and be useful. It generates real alternating current. The ORTRONIC systems technology **multiplies the reactive energy before transforming it into real energy.**
- Reduces the quantity of energy consumed to produce AC current.
- On the basis of real load power, the ORTRONIC converter performs 95% - 97% compared to the 20% - 90% of conventional converters today.
- It charges the electrical warehouse from the generator, in one-phase or three-phase mode, without the need for a transformer.
- **It is the only known electronic technology that eliminates the brake forces in the three phase electrical systems conditions.**
- **It does NOT cause harmonics.**
- Cuts the volume of noxious and "greenhouse" gases produced in the generation of electricity.
- Provides user tremendous cost savings in the consumption of electricity.
- Requires little or no regular maintenance.

- Regarding motor efficiency, given that it does not use transformers or filters in the generation of alternating current, the ORTRONIC can generate real alternating current of up to 20,000 cycles per second, which would be equivalent to 900,000 revolutions per minute. Its frequency precision is 20 microseconds per cycle, or 0.001%.
- For the alternative energy use, the ORTRONIC optimizes asynchronous wind turbines which makes better use of wind energy.

# The “Ortronic” Technology – Ultimate Solution for Power Efficiency




## A Brief Technology Historical Glimpse

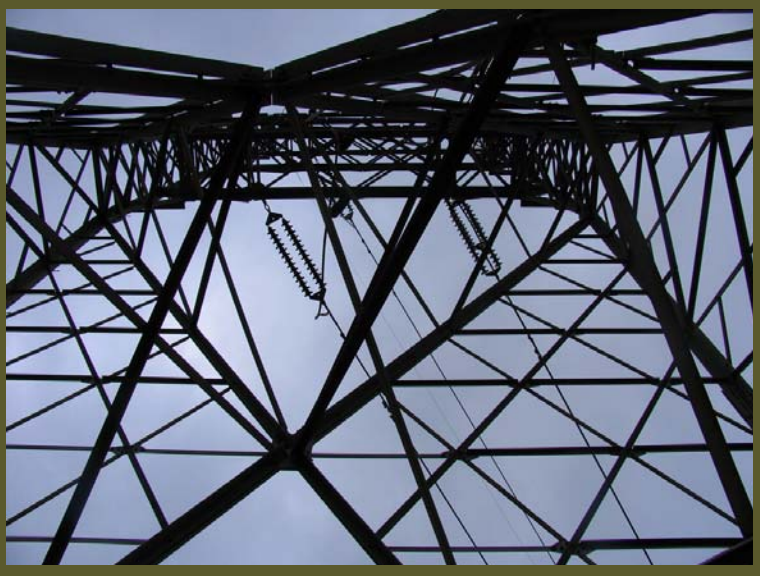
The ORTRONIC Technology was developed by Mr. Juan Ortigosa a former NASA research engineer in Spain during the APOLLO program (1963-1972) and head of the USAF electronics and communications laboratory in Europe. During the 1960's he began researching reactive energy.

In the 1980’s Mr. Ortigosa engineered a way to capture reactive energy electronically and called the method **ORTRONIC** (**ORT**igosa-elect**RONIC**).

At the center point of the ORTRONIC systems application is the U.S. and international patented *Ortronic Microchip* Technology, which revolutionizes the distribution of electric power. It electronically produces genuine AC energy from DC energy - WITHOUT USING A MECHANICAL GENERATOR.

Essentially, the technology recycles reactive energy, which is produced in a conventional AC cycle into usable electricity. ORTRONIC does this electronically -- capturing the reactive charges through a patented microchip circuitry, and storing those charges in a battery bank. The batteries then send the stored DC energy back to the ORTRONIC converter where it is re-converted into AC energy for use by any load.

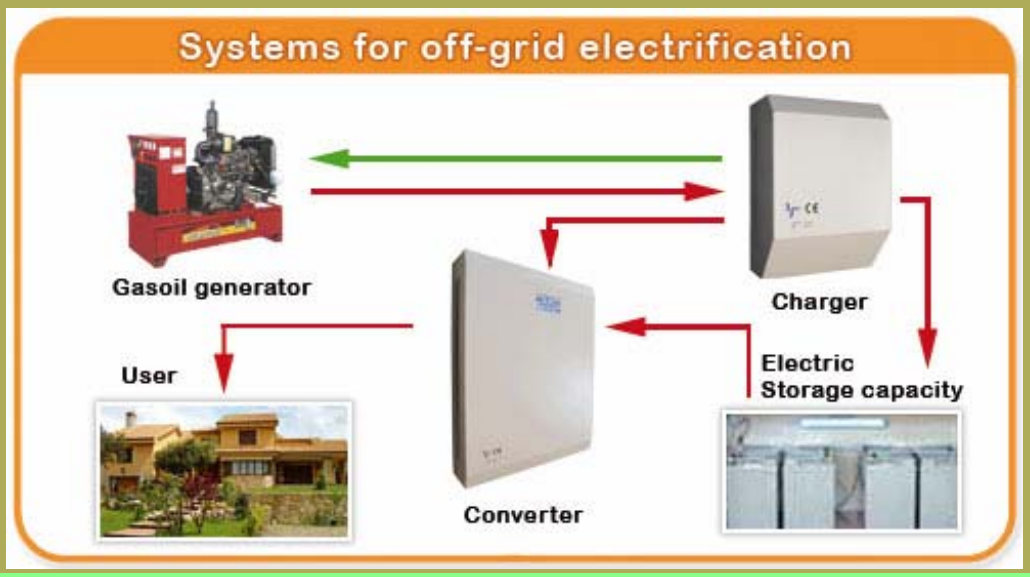
Reactive Energy is electrical energy that is “produced” by inductive coils, which are found in all electrical motors, fluorescent ballasts, induction heating coils and other electrical devices used in homes and in industries. When AC energy is delivered to a load (a business or home) composed of lighting fixtures and electrical appliances, much of that energy is used to produce light and to turn motors (Active Energy). But another portion of the energy (Reactive) in the load circuit, which is produced by the motors and other inductive elements in the load itself, remains in the circuit without being used. Unless it is eliminated, it simply flows around in the circuit and becomes a costly load on the generator. The ORTRONIC is the only technology in the world to date that captures and recycles this reactive energy and turns it into usable electricity. As a result, the ORTRONIC System provides both the solution for energy savings and power optimization that will see enormous economic benefits to all consumers of power.



# ORTRONIC Systems Applications

The ORTRONIC technology has numerous applications as a revolutionary advancement in electronic technology, including, but not limited to “Off-Grid Electrification”, Emergency System for Blackouts, Energy Supply for Irrigation and Water Pumping, for Cellular Phone Sites, for Water Treatment, for Recreational Boats, Electric Vehicles, Submarines and Outer Space Stations.

The technology is very useful for industrial and commercial facilities that need to cope up with the rising costs of electricity, or those facilities that run on renewable and alternative energy sources, or those that plan to generate power through such natural sources without incurring high infrastructural costs.




**Suggested Locations:** *Rural Villages, Mobile Phone Stations, Cell Sites, Radio/TV Antennas, Hotels, Border Posts, Military Camps, Technological Parks, Commercial Buildings, Private Power Generation Facilities.*

## Operational Schema

The ORTRONIC automatically starts the generator – which is 3 to 5 hours out of every 24 hours.

ORTRONIC controls the level of battery discharge, delivering a starting power signal to the generator for battery recharge when the gel type batteries reach 60% of their capacity.

The ORTRONIC takes direct current from batteries (and from the charger when the generator is activated), turning it into an alternating current.

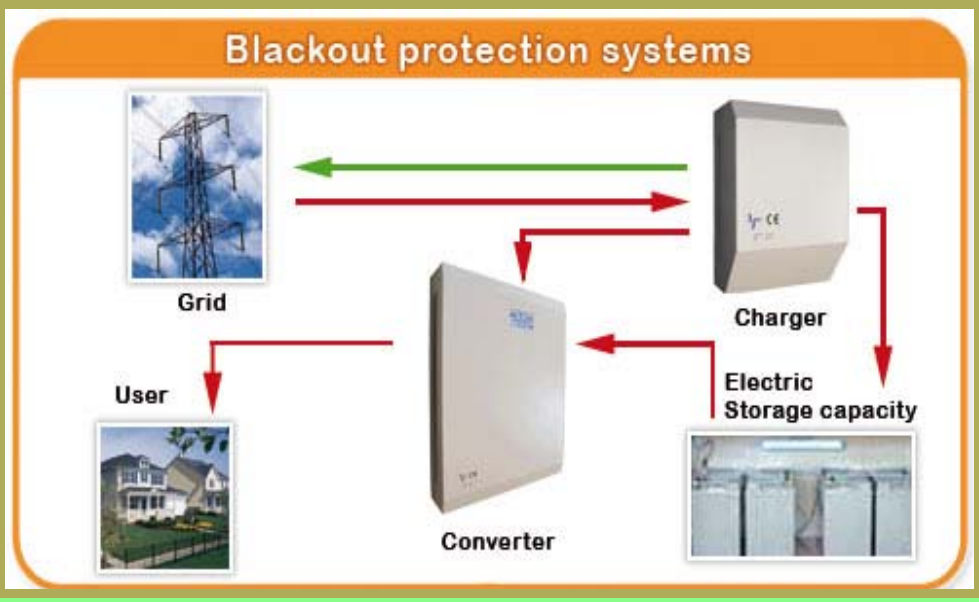
## Operational Schema

The ORTRONIC main unit is fed DC energy by the charger and/or the batteries, and then converts the DC to AC power.

The ORTRONIC Charger then maintains batteries at full charge while utility power is available,

While the utility power is available and used, the ORTRONIC charger converts AC, feeding power to the main ORTRONIC unit while simultaneously charging the batteries.

The facilities are connected to the Utility Grid through the SIGFRED System.




**Suggested Locations:** *Any locations where blackouts are an emergency, hospitals, offices, commercial establishments, call centers, elevators, IT facilities.*

# ORTRONIC Systems At Work Today in the Cell Phone Industry!

Cell Site Location: Caribbean
Cell Tower Load: 2.5 kW
220 Volts
60 Hz
Cell Site Generator: Lister Petter LLD140 (A) rated at 12.8 kW in standby use.

For the deployment of the ORTRONIC Systems, those equipments that were furnished were:

1 – 8KW Inverter
1 – Charger, 40 Amps per phase (for 8KW use)
23 – 12 V, 200 AMP Batteries

## Over 80% In Energy Savings Monthly

FINDINGS:

The generator fully charged the batteries in just three hours and then operated with the inverter, charger and batteries. The batteries were taken only to a sixty percent (60%) depth of discharge on each cycle. The formula used to determine the “off-generator” time was as follows:

Total Daily Load = 2,500 watts (2.5 KW) x 24 hours = 60,000 KWH per day.

22 (Number of batteries, one is used for charger) x 12 V x 200 (AMPs) x .6 (depth of discharge) x 1.3 (capture of reactive energy) = 41,184 KWH of storage per cycle.

41,184 / 60,000 = .6864

0.6864 x 24 (hours per day) = 16.47 projected hours off generator per cycle (3 hours of generator usage).

*The Actual Test of this Exact Load and Equipment Yielded 19.6 Hours OFF the Generator*

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