

Hybrid Renewable Energy Source System Place n' Plug

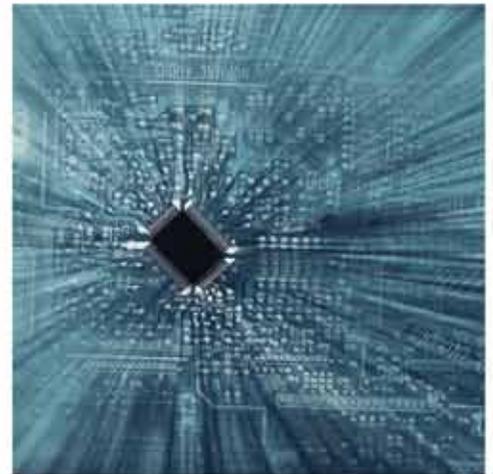
The "smartest" electricity production hybrid system



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N.S.E Ltd

*Networking
System
Excellence*



Our company

Pn'P

NSE Ltd (Networking System Excellence) is a Greek company that, since 2000 is active in the field of **high technology systems that save energy and produce green energy.**

In our days the issue of energy coverage, especially for big companies that own off-grid installations, has become a serious problem, due to the constant rise in the fuel prices and the international pressures for gas emissions' reduction. **NSE Ltd** is pioneering, by developing high technology systems that provide integral solutions to these problems.

It is one of the first companies internationally that got involved with the issue of reducing the fuel consumption. Since its foundation in 2000, it produces fuel reduction systems and hybrid systems for big or small installations.

It undertakes the manufacturing of the systems, the distribution, the transportation, the installation, to put them in operation and the after sales support, establishing, with its customers, **a long lasting relationship based on communication, co-operation and trust.**

Its great experience, its innovating and reliable integrated systems and the quality after sales support have lead to **NSE Ltd's** recognition in the field of green development.

Our success is your satisfaction!

We are by your side to suggest the best solution for your particular need!

Suitable for ...

... off the grid Installations

... remote areas

... tropical climates and sub-Saharan areas

... difficult to reach areas, with restricted equipment installation space

One more innovation by NSE Ltd. Take advantage of the power of sun and wind to supply your installation in the easiest and more reliable way.



What is Place n'Plug (Pn'P) ?

It is a hybrid renewable energy source system in one or more containers. It is placed at your site and then plugged to your installation within a few minutes. It supplies uninterrupted energy 24 hours a day, 365 days a year, preferably from the sun or the wind but also there is an option for a backup diesel generator.

Main characteristics:

- * Autonomous energy system
- * Suitable for tropical climates and sub-Saharan areas
- * Environmental friendly
- * Low cost
- * Long-life
- * Totally safe and reliable
- * Easy to transport and to install
- * No need for on-site assembly and wiring
- * Very little and quite simple maintenance
- * No need of skilled personnel
- * Operation monitored and supported "on-line" by supervising centre
- * Help desk service available for local personnel support

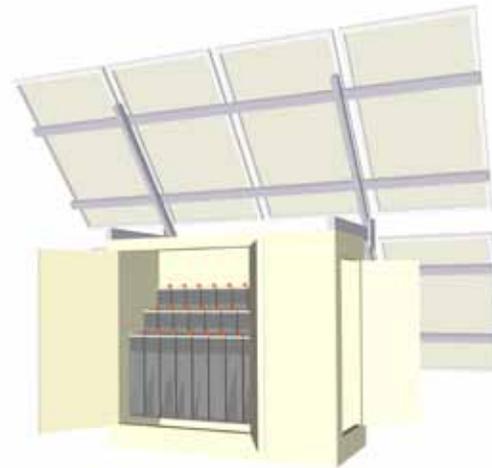


Place n' Plug description

The container of 2.0X0.80X1.60 m (LXWXH) and weight 1 tone is a robust and all weather shelter proof against water, dust, wind and temperature.



High quality battery bank. The Battery Cell Level Control system (BCLC) developed by NSE Ltd is used for the precise control and maintenance of the storage battery for many years of trouble-free service.



The photovoltaics (PV panels) incorporated to each container are of 2 kWp.

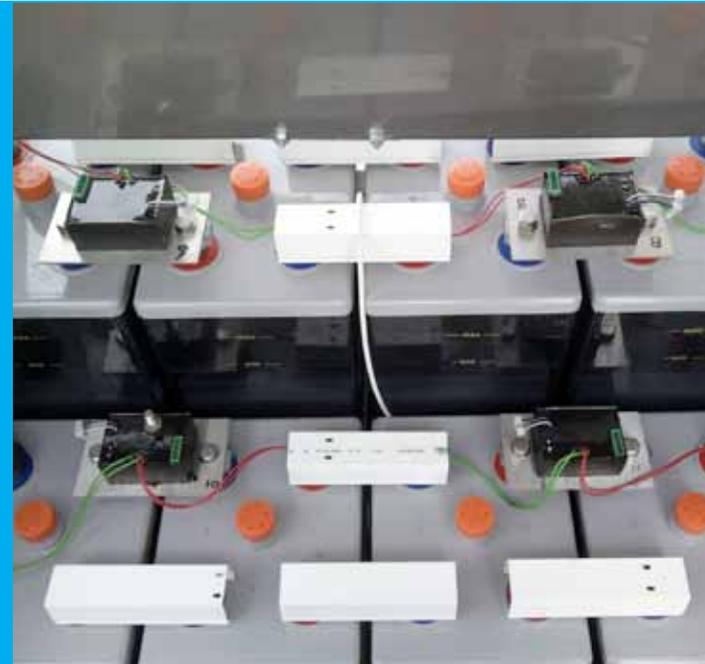


A built in anemometer evaluates the wind potential. Within some months (based on the wind measurement results) we decide if the wind potential of the area is sufficient for the installation of a wind turbine.

Battery Cell Level Control

The Battery Cell Level Control is an innovation developed by NSE Ltd. It monitors and maintains individually, according to its specific "personality", each one of the 24 accumulator elements of the battery bank.

Slight deviations in battery element behavior are readily fixed, before they turn to non-reversible defects. Also water loss from battery electrolyte is minimized. By incorporating the Battery Cell Level Control technology in its hybrid systems, NSE Ltd. increases their reliability by increasing the service life of their batteries.



Pn'P

Easy transportation and installation

Place n' Plug is delivered as a 2.0X1.4X1.7 meter, 1 tone, easily handled, all weather container. It has incorporated everything required for its operation, including 2 kWp photovoltaic panels. The PV panels are retracted to minimize volume for transportation. When placed at the operation site they are extended in a few minutes. Operation starts immediately. All tests and adjustments have been completed at the factory.

System Control and Management

Although the Place n' Plug is a fully automatic stand-alone system, it is continuously monitored through a sophisticated telemonitoring system. Therefore, after the installation we monitor its performance, we collect statistic data that will help to its best adjustment as well as to prevent future damages, etc and also we upgrade the software whenever necessary to keep the system up to date. This is how we guarantee the highest reliability, long life and the lowest maintenance cost possible.

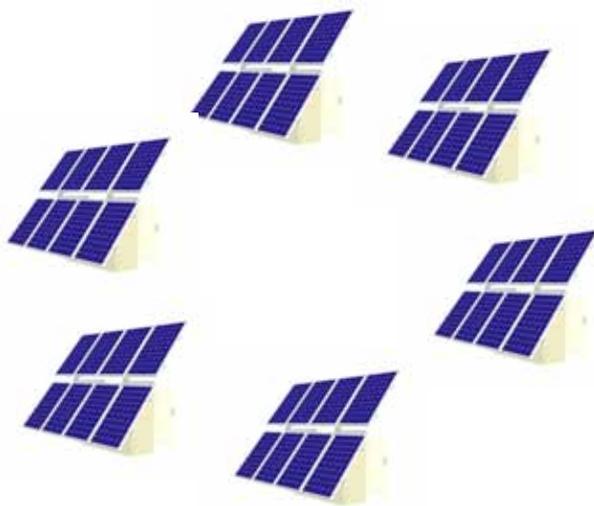
Our customers themselves can also monitor their systems in real-time mode as well as in history mode, make charts and excel tables with the data they need, etc. through a very user friendly interface for windows pc. There is also the possibility of remote controls on the system by the customers on loads of their own choice.



Modular & expandable

Pn'P

If more power is required, one or more similar units can be simply added to form a mini grid. Optionally they may be connected in parallel or can form a three phase system.



Place n ' Plug diesel

An optional unit is available with a backup diesel generator and a 1000 Lt oil tank. It has the same size with the main units and has also 2kWp photovoltaic panels on top. It is interconnected with the system and will run automatically in cases of energy shortages (due to extended cloudy periods or without wind).



Technical characteristics

Pn'P

AC power output

5 kW continuous
20 kW surge

Energy sources

2 kWp from photovoltaics
3.5 kW AltEneR wind turbine (diameter 3m)

Battery capacity

600Ah. 30 kWh

Container

Dimensions: 2x0,80x1,60 (LxWxH)
Weight: 1 tone
Material: Stainless steel

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For further information contact us at
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