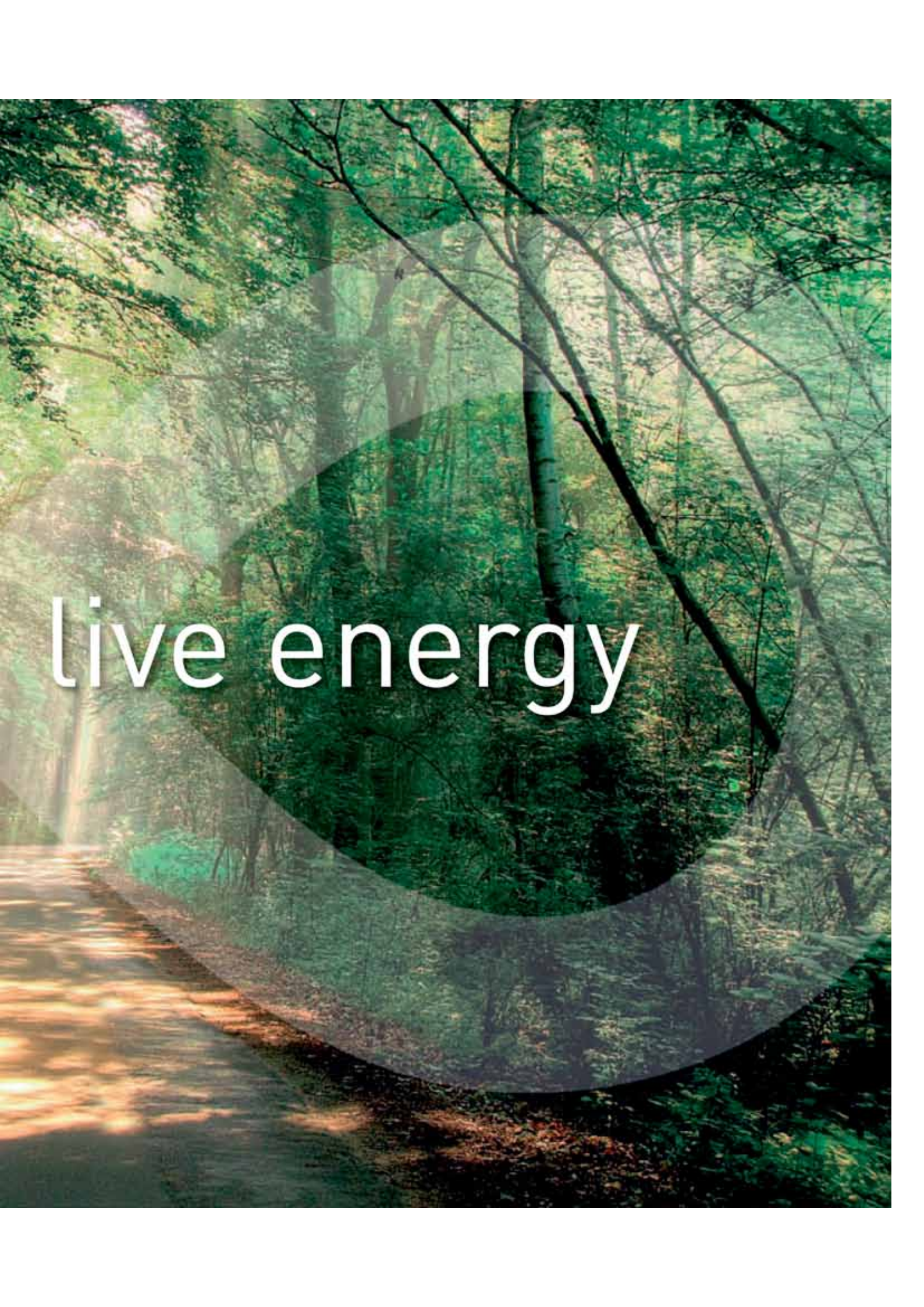


NRGBOX[®]

Think future, live energy

A photograph of a forest path with a circular overlay. The path is covered in fallen leaves and leads into a dense forest of tall trees. Sunlight filters through the canopy, creating a warm, golden glow on the path. A large, semi-transparent circle is centered over the path, containing the text "Think future," in a white, sans-serif font.

Think future,



live energy

NRGBOX Home

Born from careful research in design and designed and built entirely in Italy, NRG Box is an innovative and technological system for the independent accumulation and distribution of clean electricity from renewable sources, such as solar panels, wind blades and hydroelectric turbines.

Designed for all domestic applications that want to use sustainable energy efficiently, becoming energetically self-sufficient.

NRG Box accumulates part of the energy that is produced by solar panels or other renewable sources thanks to a sophisticated system of lithium batteries with high capacity. This allows normal homes to increase by up to 90% the share of consumption of clean energy produced by their systems.

These innovative solutions for the supply and production of electricity servicing homes allow you to exploit all the clean, self-produced energy.



NRGBOX Professional

The Professional variant of the NRG Box accumulator is a product with high technological content. It can be designed according to the requirements and needs of the individual customer, thanks to its modularity. NRG, moreover, is easily transportable without effort. It uses clean energy efficiently and allows for a more autonomous management of your energy requirements. Designed to provide high efficiency battery management, it ensures continuity of power supply for 24 hours, while maintaining the traditional network as emergency reserve. Unlike classic generators, NRG Box is absolutely silent, making it virtually undetectable.

Its easy and quick installation integrates with existing systems, without significant changes, and also comes with all the relevant safety certificates. A team of qualified technicians will be available, intervening to resolve any need in a timely and effective manner.



NRGBOX Think future, live energy

The day comes to an end, but not the energy

During the day, NRG Box allows you to accumulate the energy produced by the photovoltaic system, distributing it to your home network when it is needed, for example in the evening, when consumption is most high.

In fact, NRG Box transforms solar energy, wind and/or water into electricity thanks to its efficient batteries. NRG Box is capable of providing energy for a prolonged period, even without the contribution of renewable energy sources. The intelligent management of the electricity supply, obtained by continuous monitoring of the energy flow of the home, allows an immediate reduction in costs. With NRG Box, a family of 4 uses, in ideal conditions, 70-80% of the solar energy it produces.





24 hours of energy

Families are not all the same, each has its own energy needs. This depends on the number of family members, the type of equipment and individual consumer habits. Some people are at home during the day, others only in the morning and during the evening hours. Some of the most common appliances such as dryers, dishwashers, electric ovens and air-conditioning systems are "energy hogs", making utility costs soar. NRG Box is available with different storage capacities that are perfectly suited to every energy need. You can choose between four storage capacities (from 4.8 to 14.4 kWh) and in case of an increase in the energy you consume, the storage capacity can be enhanced further with specifically designed additional modules. So far, energy from renewable sources could be used only during daylight hours; you can now manage and store the flow intelligently during throughout the day (24 hours).



Morning

Energy produced from renewable sources is used for own consumption, using the rest to recharge the batteries of the NRG Box.



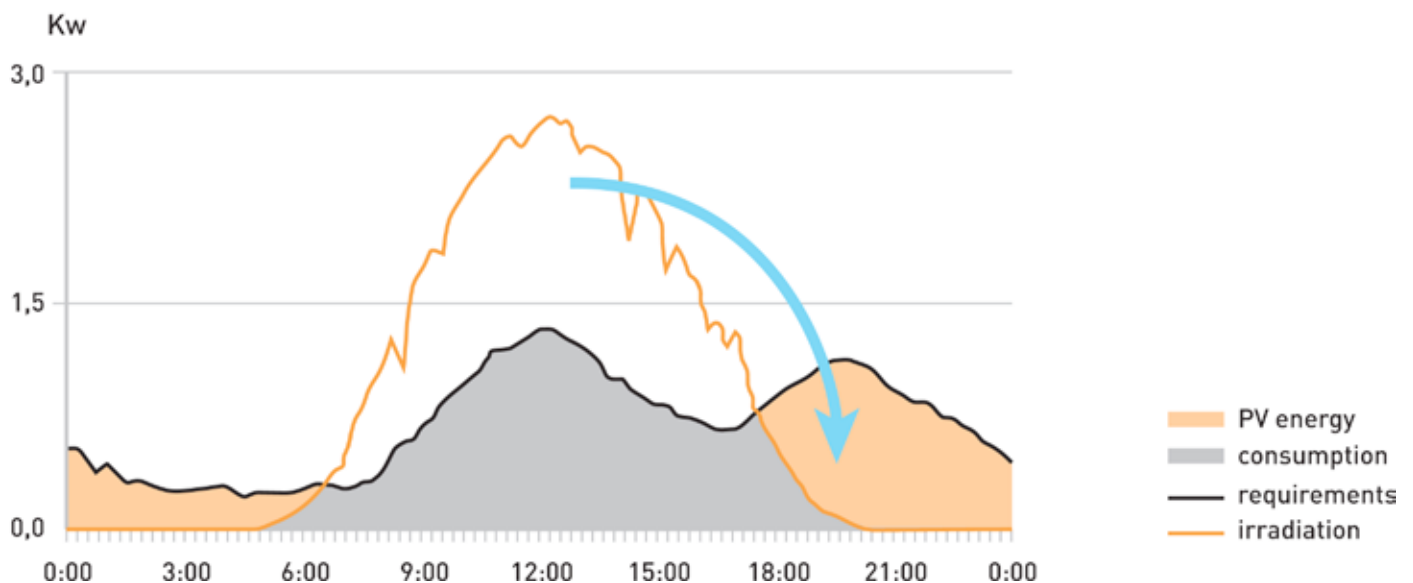
Afternoon/Evening

When the NRG Box is fully charged, the energy accumulated during the day can be used, making your home network independent from the public network.



Night

When the battery capacity is not sufficient to satisfy your energy consumption needs, NRG Box connects to the public network alone to pick up the necessary energy.



3 KWP PV PLANT PRODUCTIVITY

	LONDON		MUNICH		MILAN		ROME		PALERMO		MOGADISHU	
MONTH	E _d	E _m	E _d	E _m	E _d	E _m	E _d	E _m	E _d	E _m	E _d	E _m
JANUARY	3.30	102	3.97	123	5.31	165	7.03	218	7.70	239	13.50	418
FEBRUARY	4.86	136	6.16	173	8.69	243	9.50	266	9.28	260	14.40	404
MARCH	7.56	234	8.45	262	10.90	339	11.10	345	11.60	358	13.50	420
APRIL	10.40	312	11.00	330	11.80	354	12.50	376	12.80	385	11.90	358
MAY	10.80	336	10.60	329	12.70	393	13.60	421	13.80	428	11.70	361
JUNE	11.20	335	10.70	321	13.10	394	14.10	422	14.60	439	10.70	321
JULY	10.70	332	10.60	330	13.90	431	14.90	461	15.40	476	11.00	340
AUGUST	9.55	296	9.93	308	12.60	391	14.30	444	14.60	452	11.90	368
SEPTEMBER	8.55	256	8.58	257	11.30	340	12.40	372	12.20	365	12.40	373
OCTOBER	6.11	190	6.38	198	7.81	242	9.89	307	10.40	322	12.40	384
NOVEMBER	4.04	121	4.42	133	5.32	160	7.49	225	8.57	257	12.10	363
DECEMBER	2.87	88.9	3.40	105	5.07	157	6.56	203	7.43	230	12.50	388
Yearly average	7.51	228	7.86	239	9.89	301	11.1	338	11.5	351	12.3	375
Total for year	2740		2870		3610		4060		4210		4500	

Tilt and orientation optimised, depending on the latitude
Ed: Average daily electricity production from the given system [kWh]
Em: Average monthly electricity production from the given system [kWh]

COMPARISON BETWEEN LITHIUM AND LEAD ACID BATTERIES

TYPE	ACTUAL CAPACITY	ENERGETIC PERFORMANCE	CYCLE DURATION (DoD 80!)	TOTAL SUPPLY
Pb-Gel Piombo	10 kWh	75%	≤ 500	≤ 3750 kWh
LiFePo4 Litio	10 kWh	95%	> 2000	> 19000 kWh

As can be seen from the table above, the ratio between lead-acid and lithium batteries is 1 to 5. In summary, the short-term cost of a LifePo4 pack is higher, but owing to the duration of the batteries produces significant savings. Other advantages of LiFePo4 batteries are: compactness, cleaning (there are no corrosion problems), ease of disposal, there being no restrictions on the use of hazardous substances, low temperature sensitivity and high energy efficiency. In addition, compared to the equivalent Pb-Gel pack, it weighs less and does not require maintenance. Furthermore, numerous tests indicate that LiFePO4 batteries can withstand repeated charging and discharging cycles, with a life expectancy well over 5000 cycles.





I'm independent from electricity vendors



A peaceful life means keeping the family budget under control. At a time in history when the price of energy continues to rise, why not choose a system that makes you independent? NRG Box lets you sample energy from the public network only when needed, because thanks to its intelligent technology, it manages the energy not consumed on the spot, accumulating instead what is derived from renewable sources. Self-production, combined with an efficient accumulation system, is the ideal solution for every family that wants to save money and be independent.



My company saves on energy



A company becomes effective when it manages to reduce the cost of its energy consumption. An NRG Box energy accumulator, in addition to helping you save money on your utility bill also ensures, thanks to its technology, continuity of supply, which is essential if the network is prone to frequent blackouts. In the case of power surges, NRG Box allows you to have a continuous source of energy; in addition, unlike traditional networked systems, where in case of malfunctions, the system is automatically disconnected from the network, our island system of accumulation continues to power utilities.

NRG Box has all the safety certification; for instance, the lithium batteries with high capacity are certified RoHS, while full storage is TUV-certified.



The absence or interruption of energy supply for me are no longer a problem



Where the network is absent or subject to constant interruptions, NRG Box ensures reliability, guaranteeing continuity of service. Our storage system is able to store the energy produced during the day and redistribute it in times of greater need.

This quality makes it indispensable in many situations and working environments, especially if you think of medical studies and facilities where power quality is paramount. Health, in the near future, absolutely must focus on technological innovation in order to offer a totally reliable service to all citizens.



Your energy **anytime,**
anywhere



NRGBOX[®]

Think future, live energy

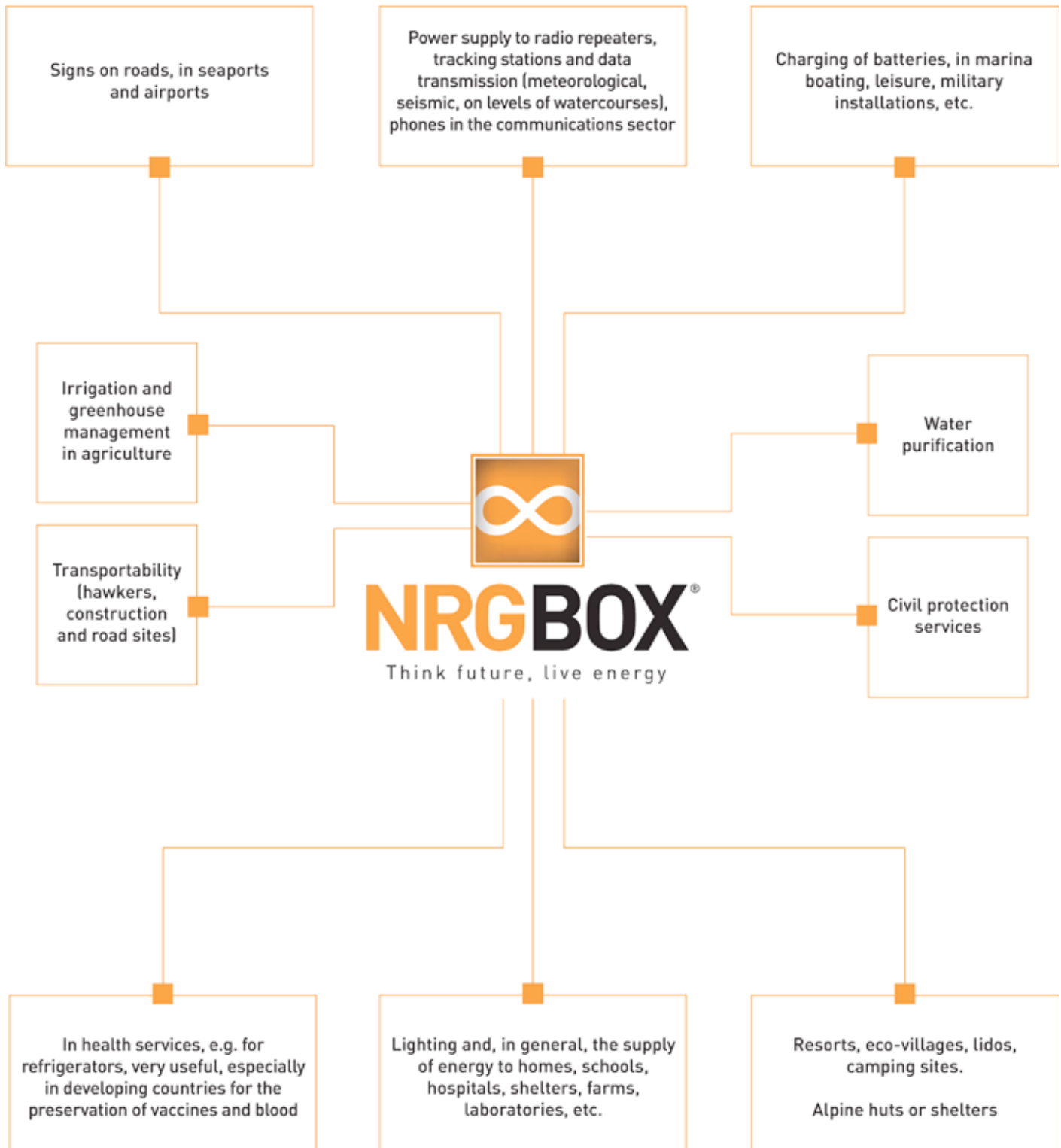
How do you explain to a child in the third world, accustomed to living in a village, in a modest home, what energy is?

The answers from our point of view could be many: energy is light, warm water... but Amir, the child of this Ethiopian village, would look at us blankly without understanding. Only by showing him the sun could we explain to him what energy is.

And the sun is, in fact, one of the sources of useful energy in these developing countries, and thanks to NRG Box this precious energy can always be available and affordable for everyone.

An energy that can even transform and provide drinking water in areas where this need is still not a human right.

Fields of application



Nature's energy should not be wasted. That's why the reliability of batteries is important.

Sun, wind and water are alternative energies to fossil fuels. They are abundant, renewable, widely distributed and support green economy in modern society. In order not to lose the potential of these energies, you must rely on a battery with high technological content, which through the use of batteries, allows you to store some of the energy that is produced and not immediately consumed.



The amount of solar energy that reaches the earth's surface is enormous, about ten thousand times greater than all the energy used by man as a whole.

Wind power is a stable source from year to year; moreover, in areas with low sunlight, it guarantees energy supply from this renewable source.

Water is a natural resource available anywhere, it has energy because it is capable of performing a "job"; it is able to move the blades of a windmill, a waterwheel or turbine.

Assistance and support: our technical expertise at your service

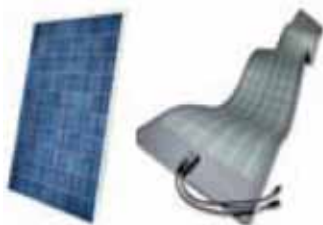


We have a team of in-house technicians able to intervene in a timely and effective manner. We also assist you during the initial assessment, bringing you all the information you need when choosing the storage system that best suits your needs and your energy consumption. Plus, since these are non-networked systems, you will avoid costly paperwork.

We are the direct contact for our customers. Our operators are at your disposal for any need every day of the week. We can provide assistance for everything related to the installation of the system, offering a warranty of 2 years at no additional charge and we also guarantee, for 10 years, up to 80% of the nominal capacity of the battery.

By choosing NRG Box, you will choose the future!

Charging methods and accessories



PHOTOVOLTAIC PANELS

Kit consisting of polycrystalline/mono-crystalline or flexible photovoltaic panels, to recharge the NRGBOX thanks to solar energy.



MOBILE STATION WITH TELESCOPIC POLE

Special trolley complete with retractable stabilizer legs for greater portability of the NRGBOX. The system consists of a telescopic pole also for the support of a "sail" of flexible photovoltaic panels, in order to make the energy supply by NRGBOX independent.



WIND TURBINE

Micro wind turbine to turn the kinetic energy possessed by the wind into electricity for charging the NRGBOX.



WATER TURBINE

Micro water turbine to recharge the NRGBOX thanks to the kinetic energy of a watercourse.



BATTERY CHARGER

Device to recharge the batteries of the NRGBOX directly with electricity drawn from the grid.

NRG Box is also customizable to suit the individual needs of the customer.

NRGBOX Home



PRODUCT NAME	NRGBOX HOME			
MODEL NAME	MH3-4.8	MH3-7.7	MH3-9.6	MH3-14.4
PV INPUT				
Recommended photovoltaic range (lfrom/to). (Wp)	2750-3000*			5500-6000**
MPPT Range (V)	1 MPPT			2 MPPT
Max. Voc voltage (V)	550			
AC OUTPUT				
Active power at output (W)	from 3000 to 6000			
Output voltage	230 Vac +/-3% PURE SINUSOID			
Overvoltage	110% for 60 sec. -130% for 10 sec. - short circuit management			
Commutation on By-Pass	True On-Line from inverter to network < 8 ms from Network to Inverter			
Total harmonic distortion (THD)	< 2.5% with full load (linear)			
STORAGE DATA				
Battery type	LiFePo4			
Storage capacity (kWh)	4.8	7.68	9.6	14.4
Storage guarantee	up to 10 years with over 80% of the residual capacity			
PERFORMANCE				
Inverter max. performance (%)	92			
Charge regulator max. performance (%)	95			
Operation	Simultaneous use of Photovoltaic Field and Batteries			
Safety	Overcharge - Short circuit - Overvoltage - Over-temperature - Deep discharge			
By-Pass (Network supply)	Automatic and Manual			
PHYSICAL CHARACTERISTICS				
DIM (w x h x d)	600x600x1700 (lxhxd)			
Weight (kg) cca.	210	230	250	305
Operating temperature	0 - 40° C			
IP - Protection class	30			
STANDARDS				
Certificates and standards	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV

* A string with 11 or 12 250 W modules with two types: on roof or on structure on ground - ** Two strings as above.

NRGBOX Professional



PRODUCT NAME	NRGBOX PROFESSIONAL			
MODEL NAME	MP3-4.8	MP3-7.7	MP3-9.6	MP3-14.4
PV INPUT				
Recommended photovoltaic range (lfrom/to). [Wp]	2750-3000*			5500-6000**
MPPT Range [V]	1 MPPT			2 MPPT
Max. Voc voltage [V]	550			
AC OUTPUT				
Active power at output [W]	from 3000 to 6000			
Output voltage	230 Vac +/-3% PURE SINUSOID			
Overvoltage	110% for 60 sec. -130% for 10 sec. - short circuit management			
Commutation on By-Pass	True On-Line from inverter to network < 8 ms from Network to Inverter			
Total harmonic distortion [THD]	< 2.5% with full load (linear)			
STORAGE DATA				
Battery type	LiFePo4			
Storage capacity [kWh]	4.8	7.68	9.6	14.4
Storage guarantee	up to 10 years with over 80% of the residual capacity			
PERFORMANCE				
Inverter max. performance [%]	92			
Charge regulator max. performance [%]	95			
Operation	Simultaneous use of Photovoltaic Field and Batteries			
Safety	Overcharge - Short circuit - Overvoltage - Over-temperature - Deep discharge			
By-Pass (Network supply)	Automatic and Manual			
PHYSICAL CHARACTERISTICS				
DIM (w x h x d)	800 x 850 x 850 l x h x d			
Weight [kg] cca.	170	190	210	265
Operating temperature	0 - 40° C			
IP - Protection class	54			
STANDARDS				
Certificates and standards	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV	Directive BT 206/95 EC IEC 62109-1 IEC 62109-2 IEC EN62040-2 IEC EN61000-6-2 IEC EN61000-6-4 EC and TUV

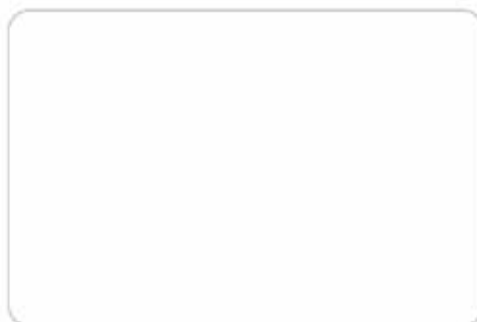
* A string with 11 or 12 250 W modules with two types: on roof or on structure on ground - ** Two strings as above.



NRGBOX®

Think future, live energy

AUTHORIZED DEALER



TECOELETTRA s.r.l.

Via Risorgimento, 18 - 35010 Limena (PD)

Tel. 049/8848015 / 8848060 r. a - Fax 049/8848015

www.nrgbox.it - info@nrgbox.it