

A Crystal Clear Energy Choice

In South Africa, and Africa, we can make more energy than we can use from solar and other alternative sources, but what do we do when the sun goes down or the wind stops blowing?

This is the stumbling block,” says Miles Oates, chief executive officer of the Build Africa Corporation. “The question being how do we store energy?”

“Currently we rely heavily on battery technology, which unfortunately comes with faults and potential risks. Heavy, cumbersome acid and gel batteries haven’t got the longevity needed for sufficient storage and don’t produce enough power on a daily basis. There’s also the safety issue, in that they expel gases and heat and are prone to *pop*,” he explains.

A number of battery technologies currently exist on the market including acid, gel and crystal but at the forefront of energy storage is lithium. But according to Oates this technology comes with its own problems.

“Lithium comes with the risk of being a huge fire hazard. In some countries, you are required by law to put a notice outside if you have lithium on the premises so the fire department know they’re not going to be able to put the fire out as they would have to wait for it to burn itself out!” Oates shares

Oates, in his role with Build Africa, distributes Power Up

Supply systems (which were created by Inrada in the Netherlands) throughout 19 African countries.

Power Up Supply units are an environmentally-conscious alternative energy solution, harnessing and saving energy from a number of sources: solar panels, windmills, generators, or the grid. The units, just bigger than the size of an average laptop, are compact enough to be installed in a garage, lounge, kitchen, or under a desk in an office.

“Our system uses in charge® lead crystal battery technology making it the most modern battery technology available today and newly available in SA,” Oates says. “This harvested energy can be used immediately, or saved for later use. The batteries also last about 3100 cycles, so about 8.5 years on average.”

So it’s a solid battery that does not expel any gas or radiation and has a very low fire risk, making it safe to keep in homes and in offices.

“But you need to take a holistic approach when it comes to this kind of battery technology because it’s not just a battery, it’s a unique overall product specifically designed around the battery.”

The Power Up system is a holistic system where the control system is specific to the battery technology and includes a UPS, pure sine wave inverter, high tech lead crystal battery charge controller and a maximum power point tracker in a single unit. The holistic design ensures that the system will

produce 2 to 3 times the daily power of other deep cycle inverter systems and the battery banks will last up to 4 times the lifespan in comparison to the deep cycle battery types, such as lead gel and lead acid, commonly used with standard inverters.

“Linking any inverter to any battery system, which is generally the what we have become accustomed to is like trying to run a Ferrari with the engine of a Mini. It just wouldn’t work the way it’s supposed to work. The battery’s life would also be shortened and the daily output would be much less,” he concludes.

The system is easily installed, requires no maintenance, is safe for any living space, and when the electricity does go off the unit picks up power within 10 milliseconds of disconnection!