Select the best batteries to optimize your renewable energy system

Different batteries have different capabilities that serve different purposes. Choosing the best batteries for renewable energy storage can really improve the way you use electricity that is produced by your "green energy" system.

AGM LEAD ACID BATTERIES

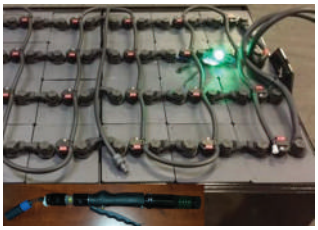
AGM (Absorbed Glass Mat) sealed battery technology was initially developed for military applications where power, weight, safety and reliability were paramount considerations. AGM batteries are sealed lead acid batteries VRSLAB (Valve Regulated Sealed Lead-Acid Battery), sometimes referred to as VRLA (Valve Regulated Lead Acid). Several manufacturers produce AGM batteries, but our batteries of choice are manufactured by **EnerSys**. The high-end sealed lead-acid batteries VRSLAB continue to be used extensively by the military, electric utilities and in the field of communications. These AGM batteries are also deployed with great success for renewable energy systems in the residential, commercial, institutional and industrial sectors.

DEEP DISCHARGE SEALED LEAD ACID BATTERIES

This type of sealed battery represents the ideal choice for smaller renewable energy projects that have less load to support, battery maintenance and autonomy in the residential or cottage country sectors. These batteries can be used with both off-grid or dedicated partial grid support systems. The reasonable price range and no-need to top-up batteries approach make them ideally suited for essential electrical load support for homes, businesses and organizations all sorts.

WET LEAD ACID BATTERIES

These batteries are cheaper than sealed batteries and will typically have a longer useable life, provided that they are properly maintained. The nominal capacity available for a wet battery typically surpasses that of a sealed battery in ampere-hour (Ah). These batteries are deployed for smaller scale renewable energy systems, such as a cottage, hunting camp or facility where regular maintenance can be assured. These are widely used on farms where energy storage is dedicated to important loads such as water pumps in support to growing activities or essential motors.



WET TUBULAR LEAD-ACID BATTERIES WITH APPLICATOR

These are the best lead-acid batteries for energy storage. They have a great tolerance at deep discharge levels and boast a long service life. However, like all lead-acid batteries, the more they are discharged at a great depth of discharge (DOD, plus the increased number of cycles, decrease the service life of the batteries. They are typically in a metal case with integrated interconnect cables and an applicator that ensures the proper water level for proper operation and long life. They are available in a wide range of capabilities. These batteries have the best stored energy to cost ratio, if service life is taken into account. They are deployed in the field of transport and for large-scale residential, commercial and industrial applications.

LITHIUM-ION BATTERIES

Lithium-ion batteries offer a great support capacity for renewable energy systems. They are very expensive but offer a long service life. They offer a 10 year performance guarantee, which is very impressive. They have the ability to charge quickly and discharge quickly depending on the electrical load that needs to be supported. The management of these battery systems is very sophisticated and very sensitive to voltage fluctuations. They are deployed to support large renewable energy systems in the residential and commercial sectors for both on-grid and off-grid, plus they are a great Time of Use (TOU) battery system. Currently, for lithium batteries this is the best technology available. We've selected **Generac** as our lithium-ion battery of choice.

LITHIUM-PHOSPHATE BATTERIES

Lithium-phosphate batteries are an excellent choice for residential and commercial facilities that use renewable energy systems with grid support. They are not optimized for off-grid deployments. These batteries have a very constant discharge voltage and they can deliver virtually full power until the battery cells reach a set low discharged limit, which greatly simplifies or even eliminates the need for voltage regulation circuitry. These batteries are guaranteed for 10,000 duty cycles, which means a longer service life than lithium-ion batteries.

FOR MORE INFORMATION, CONTACT:

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