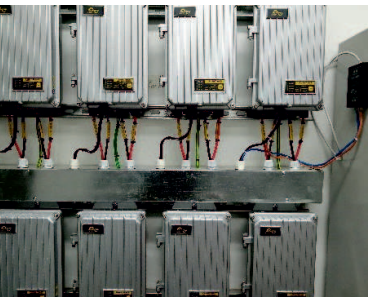
Case study
Off grid System at K.A.CARE
Al Uyaynah
Kingdom of Saudi Arabia

The challenge

K.A.CARE weather monitoring station experience frequent and long duration blackouts due to the failure of diesel generators. To reduce the maintenance / repair cost of diesel generator and to have a stable power supply, K.A.CARE started to look for a new




Innovative Systems

energy solution for their weather monitoring station and to take the advantage of KSA's climate by installing a 39.6kWp solar system on their weather monitoring station at Al Uyayanah, near Riyadh, KSA. Our exclusive partner M/s Innovative Systems were involved in installing, testing and commissioning of the subject energy solution.

Why STUDER

Because of location reliability of the system is critically important. Temperature and dust levels in this part of KSA gets high and Studer devices robustness and performance in the harsh climates appealed to the customer. The setup of the system is also easy in terms of charge cycles of batteries because the VarioString units are synchronized with the Xtender. With Studer's products, the system design and implementation is smooth and great experience. Further studer's inverter/charger enables 3 phase supply and comes with 5 years warranty. The generator auto start is also managed very easily by battery SOC, voltage and /or time of the day.

Property

Owner: K.A.CARE (King Abdullah City for Atomic and Renewable Energy), Government (Scientific & Research)

The Solution

The total PV capacity 39.6kWp is enough for complete connected load of the system with one day of battery autonomy. It ensures continuous power supply to the station with a backup system that includes Studer components and energy storage. With this system it is possible to control environment where the batteries and power electronics installed. Maintenance also much more manageable and also easier to clean and maintain the solar panels.

System components

120x PV modules capacity (330Wp)
48x Storage Batteries (2317Ah @ C10) lead acid maintenance free.
3x Studer xtm 4000-48-01 Inverter/Charge Xtender
10x Studer vt 65 VarioTrack MPPT solar charge controller
1x Studer bsp 1200 Battery status processor
1x Studer rcc 02 Remote control
1x Studer xcom-lan internet based communication set

Project outcome

This backup storage system ensures continuous power supply to the station. With this robust system design, the lifespan of system components are prolonged. The oversized PV array ensures the full recharge of storage batteries and Studer power electronics managing all aspects of system functionality and remote communication capabilities. The system can be managed from anywhere in the world via Studer online portal.

The Company

Innovative Systems (Isys) offers small and large scale solar energy solutions for residential, industrial and commercial clients. ISys is also exclusive agent for Studer and other solar companies and it operates from Riyadh, Kingdom of Saudi Arabia, and has business and technology partners around the globe.

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