

## The Challenge

Indian cities regularly experience temporary power cuts during daytime, sometimes up to 6 or even 8 hours per day. These power failures influence the continuity and quality of the education at school. Therefore, Sri Vidya Kendra, The Smart school, situated at the outskirts of Bangalore, decided to set up a back-up system with renewable energy in order to eliminate power cuts during school



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hours, to reduce their use of noisy, costly and polluting diesel generators and to reduce their grid-dependence.

## System components

<b>Solar modules:</b>	Renisol 14kWp
<b>Batteries:</b>	Exide 8 batteries at 12V/150Ah
<b>Inverter/Chargers:</b>	Studer Innotec, 3 Xtender XTM 4000-48 in three-phase
<b>Solar charge controller:</b>	Studer Innotec, 1 VarioTrack VT-65
<b>Racking:</b>	Roof mounted
<b>Remote communication:</b>	Studer Innotec, Xcom-LAN
<b>Grid-tie inverter capacity:</b>	Refusul 15 kW
<b>Solar modules connected to grid-tied inverter:</b>	Renisol 20 KW (only 10 KWp connected) 250Wp x 56 = 14000Wp
<b>Other:</b>	Studer Innotec, RCC-02

batteries or to inject excess energy into the grid.

The stand-alone backup system supplies electricity to common area lighting, all class rooms (including projectors, lights and fans), the science labs, the computer lab (40 computers), 4 Xerox machines and the administration block during power cuts.

## Why Studer

Studer could successfully provide the school with an AC-coupled hybrid system, combining the grid-tied system with a stand-alone backup system.

## The Solution

Founded in 2009, this modern school is situated in a picturesque, green, pollution free environment. They wanted to educate their students about renewable energy and had already installed a grid-tied solar system. However, due to particularly heavy power outages in their locality, the school could hardly use its grid-tied system. By adding 3 Xtender inverterchargers in three-phase and 8 batteries to their existing system and allocating 14kW of the existing PV panels we provided them with a renewable energy backup system with the possibility to either store the produced energy in the

## Project outcome

With its new system, the school and even the entire campus (1400 students from Play school to 12th standard) do not need to worry about power outages; they have round the clock power. There is no longer a need to run the diesel generator for extra power, which leads to big savings on diesel.

The power generated after school hours, on Sundays or during school holidays is injected into the grid with a feed-in tariff making additional incomes for the school.

## The Company

Solar Corona Energy Pvt Ltd is an emerging new player in the Solar PV industry in Southern India. Headquartered in Bangalore, Solar Corona Energy has been founded with the vision of empowering lives of people by making affordable & sustainable solar PV power solutions to all customer segments in India.

### For more information please contact:

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