

The Challenge

Palestine has a severe energy problem. The energy production of their one functioning power plant is not sufficient to meet the country's energy needs and due to their political situation, it is difficult to import sufficient energy from neighbouring countries. The electricity is typically available for a number of hours per day and then cut for at least as many.



The Islamic University Gaza (IUG) was founded in 1978 and has currently ten faculties delivering BA., B.Sc, MA and M.Sc degrees. Until now, the university was using the utility grid for energy supply and diesel generators as backup during blackouts. As the number of blackouts became more frequent and with longer duration, the cost for the diesel generators increased and the university started to look for a new energy solution for its laboratories building.

System components

Solar modules:	SunTech 315Wp, 140kWp
Batteries:	BAE 3330Ah-48V, 2x 3330Ah, maintenance free Gel batteries
Inverter/Chargers:	Studer, 18 Xtender, XTH 8000-48, 230 Vac/50Hz
Solar charge controller:	Studer, 30 VarioTrack, VT-80
Racking:	N/A
Other:	Studer, 6 remote control, RCC-02 Studer, 6 mounting frames X-Connect Studer, 2 BSP-1200 (battery status processor)

Why Studer

Under the existing circumstances, the new system had to be flawless and it was challenging to find reliable and efficient system components. Especially as they had to be ungradable as well. With Studer's products, the system design and implementation was smooth and a great experience. Furthermore Studer's inverter/chargers enable a 3-phase supply and comes with a 5-year warranty.

The Solution

As Gaza has 320 days of sunshine per year, the IUG chose solar energy for their new backup system for the laboratory building. The system consists of two parts. Each with a 70kWp PV array, 9 XTH 8000-48 units, 15 VT-80 and a 3330Ah@C10 battery bank.

The total PV capacity of 140kWp is enough for the entire buildings lighting, which represent 40% of the buildings total energy needs.

Project outcome

The new backup system ensures the availability of power during working hours or during any occasion. The IUG is convinced by the backup systems performance and its general strategy is now to create more sustainable and environmentally friendly campuses in Gaza. They are planning retrofitting measures to existing buildings and renewable energy for their future energy generation.

The Company

PalSolar for Mechanics & Energy Solutions is an international solar energy solutions company operating in the Middle East region. Since 1980, PalSolar has been providing small and large scale solar energy solutions for industrial, commercial, and residential clients in a wide range of applications including photovoltaic systems, and industrial and domestic hot water systems.

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