

The Challenge

For the past six years, Telefónica, one of the largest telecommunications companies in the world, has actively been working on reducing the diesel consumption of its base stations around the world. They have taken several initiatives in this direction such as replacing the old telecommunications equipment with modern electronics, to use renewable energy, mainly solar power, to generate energy and to use deep cycle gel batteries to create hybrid systems.



Q-Energy Perú

Why Studer

Studer inverters and MPPT solar charge controllers are working perfectly together offering a fully integrated and synchronized energy system.

Furthermore, Studer products are meeting the telecom market's demanding requirements in terms of reliability.

System components

- Solar modules:** Polycrystal Solar Moduls YINGLI, 85Wp, 12 Vdc
- Batteries:** Sonnenschein, Línea A602 Solar
- Inverter/Chargers:** Studer Xtender XTM 4000-48, 230 Vac, 60 Hz
- Solar charge controller:** VarioString Studer VS-70
- Other:** Studer RCC-03
Studer BTS-01
Studer Xcom-LAN
Studer BSP 500

The Solution

As the base stations used diesel generators for energy supply previously, it was a natural step forward to create hybrid solar systems. In these systems renewable energy is generated in the solar panels, stored in batteries and managed by the inverter/chargers. The diesel generators are mainly used for backup.

By using Studer's highly efficient "battery priority function", which gives priority to using renewable energy, Telefónica has drastically reduced the generator running times, saving diesel and improving generator lifetime. In some cases they have even completely removed the diesel generators and relocated them to other base stations.

Project outcome

The savings due to the reduced use of diesel has allowed Telefónica to recover the investment cost in less than two years. As there is currently more energy available, the base stations have the possibility to install more telecommunications equipment.

The Company

Telefónica S.A. is a Spanish multinational telecommunications company, headquartered in Madrid, Spain. The company is ranked as the most important telecommunications company in Europe and the fifth in the world.

Q-Energy Peru, is a Peruvian company that has been developing renewable energy projects for 8 years, mainly with photovoltaic energy. "Since our foundation, we are very interested in innovation and in developing projects that allow our customers to capitalize on their investments on the short term. For Telefónica, we tailor made solutions for the stations in accordance with their different energy requirements and found an important partner in Studer ". Aldo Rosas, Project Manager of Q-Energy.

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