

Case study

Off-Grid Feed Distribution System

Bagolino - Italy



The challenge

The challenge in this particular application was to guarantee a 24h / 24 power supply to a mobile system for distributing the feed in a trout farm.



FGS Energie Alternative

The system, which can be moved using motorized trolleys, had to be fully functional in all weather conditions. The system also needed to be as reliable as possible to avoid holes in production.

Why STUDER

We have chosen Studer for the great reliability of its products and above all for the strength of the machines supplied, the conditions in which the system must work are in fact very adverse because of the low temperatures and of the continuous handling of the panel in which the devices are contained. Another reason why we chose to use Studer's Inverters is linked to the fact that they have a remarkable starting capacity compared to other brands, and this is very useful in this application.

The Solution

The solution for this particular customer request was provided through the use of Studer devices mounted inside an IP65 panel. The system have been pre-programmed, mounted and wired in our laboratory in order to guarantee an easy and quick installation on the site. The studer system in this case feeds the trolley motors and a PLC. The PLC allows the trolley to return to position 0 during the night for a possible nightly charging of the battery pack, for this reason inverter-chargers have been used.

System components

The system contains the following components:

- 3x Inverter Studer Charger XTM 4000 48V
- 1x Studer RCC-02 Remote Control and Programming Centre
- 1x Studer VarioTrack VT-65
- 24x Elements OpzS 420Ah

Project outcome

This unique solution made possible the distribution of the feed to the trout of the farm without moving heavy batteries on the trolleys every day and without using other forms of external power supply that would have made the trolleys handling more difficult. Furthermore, the use of photovoltaic panels has made it possible to economize on the purchase of electricity from the national network and therefore to have a not too high pay-back time.

The Company

FGS Energie Alternative, established in 1996, immediately became a leading producer and distributor of photovoltaic systems, qualifying and specializing in the sale of off-grid systems (all those plants where there is no network connection).

A pioneer in the Renewable Energy sector in the 1990s little known, FGS Energie Alternative begins a path that will lead the company to develop and acquire excellent technical experience, focusing on off-grid island and storage photovoltaic systems. Currently FGS Energie Alternative is a supplier and point of reference in Italy for Off-Grid photovoltaic systems, with hundreds of references for plants in Eritrea, Congo, Guinea, Morocco, Egypt, Madagascar, Costa Ivory and of course also in Italy industrial sites, remote alpine areas (CAI), log cabins and much more..

For more information please contact:

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