



Project Overview

Location:

Mediterranean Island off Sicily, Italy

Completed:

April, 2010

Installation Type:

Off-Grid pv solar with battery storage, and generator backup

System Size:

7 kW of solar, 1250 AH battery bank, 10kW LPG generator

Inverter Platform:

(2) Outback VFX 3048e FLEXware

Electrical Distribution:

230VAC 50Hz – European standards

Comments

Project was to provide power to a "dumoso" built in 800 AD located on a remote island in the Mediterranean. The dumoso was previously a productive mill producing locally harvested olive oil and wine by traditional means (without power) and is being converted into a comfortable vacation home with modern conveniences.

Challenge

The challenges for this project were immense given the extreme remote location and unprecedented installation in the area. Nearly all equipment, tools, and materials would need to be determined and shipped to the site in advance of the installation phase, or purchased in Europe and delivered to the site unseen. Given the European location, the system would need to accommodate European standards and operating voltages. The site is on the fringe of a nature preserve so treading lightly and being sensitive to the impact on viewing areas and aesthetics are important.

Solution

A ground mounting array with a mechanical room built in the style of traditional buildings housing the inverters, batteries, and back-up generator were designed and built. The house would be used as a vacation home, so provisions were made to keep the system healthy during extended low load periods, followed by high load periods. The backup generator was capable of running in manual/auto modes or being completely shut off from the system so as to not allow unwanted starting during "away periods". A remote monitoring system was installed for monitoring basic system operation.

Results

The system was installed, commissioned, and is supporting the mechanical room solar radiant equipment and the site as planned. With electricity at the site, the remainder of the renovation process can continue and this centuries old site can be brought back to life. The client has been extremely pleased with the level of commitment to such a challenging project which has seen numerous hurdles and taken an extended period and to complete.



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