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an EnerSys company

Camp Kernow
OFF-GRID CASE STUDY

SYSTEM SPECIFICATIONS	
Location	Camp Kernow, Cornwall, UK
System Power	63.1kW solar system
Components	• FX inverter/charger • FLEXmax 80 charge controller

OVERVIEW

Camp Kernow is a not-for-profit organization dedicated to empowering and motivating children in the United Kingdom (UK) to take action toward renewable energy adoption. Located in Cornwall, a fuel-poor area, Camp Kernow provides a practical, first-hand experience of sustainable living techniques and renewable energy technologies through outreach programs and residential camping experiences. Camp Kernow worked with technology integrator CleanEarth Energy in Cornwall, UK, to configure an off-grid system including an OutBack Power FX2024E inverter/charger and FLEXmax 80 charge controller. The goal of Camp Kernow is to immerse children in an environment where renewable energy, waste reduction and energy conservation are a way of life. Camp Kernow has worked with over 7,000 children and opened its off-grid residential center in June 2012.

CHALLENGE

- Demonstrate reliability of solar power to children
- Maximize solar harvesting to ensure continuous power for the camp's water-providing borehole system, which maintains the water supply for children and staff
- Increase renewable energy yield to power the camp's office and standby systems

SOLUTION

- Use of Maximum Power Point Tracking (MPPT) technology, as hours of sunlight in the UK are limited
- Future mobile designs train children in the process of aligning solar panels as part of camp experience
- System powers computers in the office and lighting in center and also pumps and treats water to a potable standard for children to use

OUTCOME

- FLEXmax charge controller generated 63.1kW of solar power in the first six months
- Camp Kernow earns UK government payments for the energy it generates off the utility grid
- Camp Kernow becomes a showcase for emerging sustainable technologies

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