

# Case Study: Mini-Grid System Remote Operations Station

## System Stats

**Application:** Off-Grid, Multiple Building Mini-Grid System  
**Location:** Flinders Ranges, SA  
**Installed:** Feb 2013  
**Key Suppliers:** SMA, Tindo Solar, Battery Energy Aust, Clenergy

## Load Analysis

**Ave Demand:** 110kWh/day  
**Phase Requirement:** 3 phase  
**Design Surge:** 58kW



## Objectives & Site Considerations

The requirement for a renewable power solution for this project was primarily to reduce the on-going fuel consumption and maintenance costs of the remote facility. In addition, the promotion of clean and sustainable energy sources was a factor in the choice of the power system investment.

At peak occupancy the property accommodates 40 people for a short time, but for most of the year there is only one or two people on site.

The power system for this not-for-profit organisation would be funded by a private investment trust.

## System Design

Property loads included pumps, workshop and office equipment, cooking equipment, fridges/freezers, and lighting.

The desert-like conditions dictated a choice of reliable and robust solar modules, and the pre-assembled equipment container included passive cooling features.

- 128kWh Battery Energy VRLA batteries
- 52x Tindo Solar 250W Modules (18kW)
- 44kVA Kohler Diesel Generator
- 6 x SMA SI5048 Inverter Chargers
- 3 x SMA SMC6000 Solar Inverters

## Project Outcome

Apart from the long-term financial and environmental benefits of the renewable mini-grid system, the property is now much quieter with reduced noise pollution removed, and cleaner with less fuel & oils kept on site. The diesel fuel savings from the installation of the system will have a payback of roughly four years.

*"The consultation, support and service during the development of specifications for the plant was exceptional. The standard of workmanship on the plant is outstanding. The installation whilst carried out in very trying conditions, was first-rate."*

## Off-Grid Energy Australia

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## Contact Us

1300 334 839  
info@offgridenergy.com.au  
www.offgridenergy.com.au