

Case Study: Remote Train Monitoring & Control Station

System Stats

Application: Commercial Off-Grid System
Location: Far North SA
Installed: Nov 2014
Key Brands: SMA, Tindo Solar, BAE, Surefoot, Clenergy

Load Analysis

Ave Demand: 10.5kWh/day
Load Requirement: 430W
Load Timeframe: 24/7, all year



Objectives & Site Considerations

An off-grid system was required to power trackside monitoring and computer equipment 24/7.

The harsh conditions and remote location meant that the power system's reliability, robustness, and redundancy was critical to maintain uninterrupted power.

Installation crews would be required to meet rigorous client-specific safety training and conduct detailed pre-planning before accessing the site. The difficult location and demanding project requirements provided a unique opportunity to the Off-Grid Energy team, who welcomed the challenge of the design brief.

System Design

The system design and components were selected to meet the load requirements of the site, and the standard of quality required by the client. The equipment needed to be capable of withstanding temperatures commonly higher than 45°C during summer.

Multiple failsafe systems were added into the design to ensure power reliability was not compromised.

- 2 x SMA SI6.0 Inverter Charger
- 32 x Tindo Solar 250W Modules
- 2 x SMA SB4000TL Solar Inverters
- 2 x 48V PVV770 BAE Battery Banks
- SMA Webbox Remote Monitoring

Project Outcome

After two years of operation the system has not had a power outage or required a technician visit. Remote monitoring allows assessment of system performance and proactive addressing of any system warnings before they become an issue. This system design can be applied to any remote application as an alternative to using a fuel-powered generator.

"The CEO personally asked for a brief to be presented to the company board in the US on the outcomes of the project. Feedback was extremely positive. We cannot be more happy. Good job, well done!"

Off-Grid Energy Australia

Off-Grid Energy is a designer and installer of high quality battery storage systems for a range of applications.

We are a national company who pride ourselves on friendly and lasting customer service, sustainable business practices, and cutting edge technology.

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