

Reference Project

Wiluna Horticulture: Regional Off Grid Solar, Storage & Bore Pumps



Project	Off-grid PV and Energy Storage
Capacity	35kWp of Solar PV Modules
Storage	40kWh of Energy Storage
Location	Wiluna, Western Australia
Constructed	October 2016

The Goals

Solar Balance was selected by key Wiluna stakeholders to supply this photovoltaic (PV) and energy storage system due to our unique capability to couple PV systems with the latest energy storage technology.

Following a severe storm, the site was islanded. The interconnection to the utility grid that powers the township of Wiluna was destroyed, prompting action for renewable energy resource. The cost of reinstating the connection to the grid was calculated to be a costly exercise and presented power reliability issues due to the isolation of the Wiluna Township.

The Approach

The system comprised of 35kWp of GCL PV Modules and an SMA/BYD energy storage system to provide

over 80% of the sites' power demand throughout the year.

A diesel generator has been coupled with the system to ensure the site is powered during instances where the battery state of charge is below its minimum threshold and no power can be sought from the PV array i.e. cloud cover.

Three solar bore pumps were also installed to reticulate water to the site throughout the year.

This project was government funded and Balance provide support for mandatory reporting.

The Results

The major benefit of the new off-grid system is to enable the site caretakers to harness the sun's energy to provide the much-needed water and power required to grow crops and sustain livestock.

Additional benefits for the site is the creation of new employment opportunities as well as their ability to offer cheaper food supply to the township and local fringe Aboriginal communities.

Referee

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