OutBack POWER™
an EnerSys company

Motukiekie Island

OFF-GRID RESIDENTIAL CASE STUDY

SYSTEM SPECIFICATIONS	
Location	Motukiekie Island, New Zealand
System Power	3.5kW peak power, (12) 290W PV modules
Components	• FPA3 integrated system • MATE3 system display • OPTICS RE monitoring/control • Lithium battery bank
Supplier	Independent Power NZ
Installer	Kiwi Electrical Services
Commissioning	September 2017

OVERVIEW

OutBack products were an easy choice when Kiwi Electrical Services was asked to upgrade a solar power system on a remote off-grid island because they offered proven reliability and when coupled with OPTICS RE, unparalleled remote monitoring features. Due to a tight project timeline, Kiwi Electrical Services chose the FPA3, a fully pre-wired integrated system that was quick and simply to install. In addition to saving installation time onsite, OutBack's FPA3 is a fully-compliant NZ system with the correct isolation and protection devices. Another benefit to the FPA3 integrated system is the ample allowance for incoming and outgoing cables which can be used for future expansion. From the owner's perspective, the new system is very tidy and the MATE3 home screen offers information they want at a glance. Also, the intuitive function of the MATE3 allows for easy navigation should it be needed.

CHALLENGE

- Remote private island had no mains power available
- Existing off-grid system had been outgrown and was starting to fail
- Batteries were at end-of-service life with some failed cells
- Solar arrays were of various ages and system had experienced numerous generator failures

SOLUTION

- Replace old arrays with new PV arrays
- Install an OutBack FPA3 (48V, 9kW system), Juice lithium battery bank and new generator
- Tidy up existing AC distribution board and cabling

OUTCOME

- New, fully-compliant system with increased system reliability, larger storage and output capacity and remote monitoring
- Upgraded PV array had greater generation and was better suited to the high charging current of lithium-ion batteries

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