



OFF-GRID POWER SUPPLY FOR REAO ATOLL



Easy setup of off-grid and hybrid systems

Multicluster Box for Sunny Island

Perfect conditions for a large-scale stand-alone grid: the Reao atoll in French Polynesia is located in the middle of the South Pacific, 1 350 kilometers away from Tahiti. Each day the 324 inhabitants need around 250 liters of diesel to produce electricity. The energy is primarily used to extract copra. The dried coconut kernel is processed into shredded coconut or coconut oil. The diesel generators used for this are loud, the fuel is expensive and the sooty particles heavily pollute the air.

Since 2010, a SMA stand-alone grid equipped with multicluster technology has been supplying the residents with solar energy without any noise or emissions. The diesel is now only needed in emergencies. Since then, the residents are visibly more relaxed. They are impressed with just how quiet an energy supply can be. Making the switching to renewable energy has significantly improved the health care provided to pregnant women. Instead of working amid the hammering rhythm of loud motors, the island doctor now only hears the heartbeats in the wombs of soon-to-be mothers.

The stand-alone grid equipped with the Multicluster Box is the perfect solution for the atoll. Thanks to the fully preconfigured AC distribution board, it is easy to install and can be expanded at any time to meet rising energy demands. What's more, it is easy for the local service technicians to maintain, providing yet another added plus for the local people and economy. The neighboring islands Tatakoto, Fakahina, Tureia, Ahe and Fangatau have followed suit and now also tap into the power of the sun.

System Size

- PV-Power: 140 kWp
- Battery Size: 1730 kWh

System Information

- Location: French Polynesia, Reao
- Planning and Realisation: Helio Soler Technopro, Papeete, Tahiti, French Polynesia
- Commissioning 2010

- Operator: Reao Island
- CO₂-reduction: approx. 365 tonnes
Reduction in fuel by approx 80 %
(73 000 l)

Inverters

- 18 x Sunny Island 5048
- 14 x Sunny Mini Central 10000TL
- 1 x Multicluster Box 36

The ideal solution for reliable and autonomous energy supply