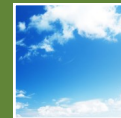




carbon footie commercial case study



Rockingham Holiday Village

Customer: Rockingham Holiday Village
Customer Size: 20 Acre – accommodation for more than 1,000 visitors
Country or Region: Perth, WA
Industry: Hospitality
Savings: \$21,000 PA

Customer Profile

Located close to pristine beaches and water based activities. Hospitality and Recreation facilities set in a 20 acre bushland tranquil setting. Provision for Caravanning, Camping & On-site Chalet Accommodation

Solution Spotlight

- 30kW Solar PV System
- \$72,000 + savings in 4 years
- 40% ROI

Tranquil Rockingham Holiday Village goes even Greener with PV Solar

The Owners of Rockingham Holiday Village are very excited about the 30kWp Solar PV System which has been installed by Energy Efficiency Specialists Carbon Footie.

This PV Solar system will enable the business to maintain competitive service rates to clients whilst also achieving their own environmental ambitions through making significant reductions in their “black” non-renewable energy consumption”.

Mr Michael Ahern, Owner

Overview

The village is situated on the outskirts of Rockingham, just a 35 minute drive from Perth CBD and set in an idyllic country-style tranquil setting amongst 20 acres of native bushland with a wide variety of flora and fauna

Facilities include:

- 170 powered sites (including 60 powered sites suitable for large & small caravans)
- Large tent-site / camping ground
- On-site vans & chalets
- Small camper's kitchen
- On-site shop - "Dixon Road Deli" located at the main entrance
- Laundromat with domestic washers & dryers
- BBQ's adjacent to the large children's playground
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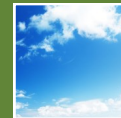
Rockingham Holiday Village prides itself on being a family focussed business, providing a variety of accommodation and recreational services. Through this aptitude they have developed and grown significantly over the past 20 years to become a site of choice for affordable holiday accommodation. With the encouragement and support of Carbon Footie, the owners have chosen to invest in the future of their business so as to reduce spiralling energy costs, and to be in the forefront of reducing carbon emissions.

The Solar PV system was commissioned (switched on), on Saturday 12th January 2013 and will not only significantly reduce the “black” energy costs of the village, but it will make a major contribution toward their own clearly stated environmental goal of reducing their carbon foot-print and impact (s) upon the environment.





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Project Assessment /Feasibility

The Premises as a whole consumes in excess of 440,000 kWh's of electricity per annum, however, it was important in the design stage to ensure that no feed-in of unused generation capacity should occur, so the minimum peak loads needed to be assessed and applied to the system size. As the village operates to some degree under a seasonal load basis, it was assessed that to obtain optimum return on investment and have no "zero return feed-in" to the grid occurring a 30kWp Solar PV System be installed to supplement the base load supply only.

The Feasibility Study concluded that the total of 30kWp Solar PV Systems would meet greater than 35% of daytime kWh consumption by the village during 10:00hrs to 16:00hrs of seasonal peak times, which is equivalent to approx. 25% of total kWh consumed during day-light hours. Based upon Rockingham Holiday Village's geographical location and orientation, the average

yield that should be obtained by the 30kWp Systems is 5.3 solar hours per day over the course of an entire year. Feasibility Study concluded that the 30kWp Solar PV systems will reduce energy costs in excess of \$21,000 per annum. For the anticipated 15-25 year long-term life span of the generating system, an estimate of total generation values exceeds \$400,000. This assessed value does not incorporate the impact of any unknown future retail electricity tariff increases.

Project Involvement:

On Hundred & Twenty x 250 watt high efficiency PV modules (manufacturer module warranty ensures an output of minimum 90% of rated value within a 10 year period, and minimum of 80% rated output at 25 years life.

Six x 5.0kWp high efficiency Dual track inverters (inverter manufacturer warranty of 10 years)

Benefits

Based upon on-going results from the monitoring of similar component

systems installed by Carbon Footie within the Perth region, a base-line output of 5kWp/kW has been established to apply when calculating the return on investment for clients.

The Clean Energy Council guidelines that can be found on their website for Perth/South West region are currently 4.4kWp/kW, note, these overall values take into consideration many locations that have a lesser irradiation exposure than the Perth central suburbs.

The total system costs, exclusive of government incentives and rebates through (STC's) Small-scale Trading Certificates was approximately \$68,000.

With the villages 2013 average kWh rate of almost 40.0 cents applied to the projected annual yields of 54,700 kWh, achievable savings compared against the retail purchase of electricity are in the region of \$21,800 per annum.

Carbon Footie estimates the payback for the total 30kWp Solar PV System (inclusive of STC rebates) to be less than three years.

For more information about other Carbon Footie customer successes please visit

www.carbonfootie.com.au/commercial/casestudies

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