



## Case study Higher Rew Caravan and Camping Park

RENEWABLE ENERGY 4  
**DEVON**



### Introduction

Higher Rew is a family-owned and run camping park in an area of outstanding natural beauty, close to the beautiful Salcombe Estuary. The park has approximately 5 acres of well kept, gently sloping grassland. It has been terraced to provide 90 level pitches, most of which have views across South Sands Valley. Two of the family, Malcolm and Sue Squire, realised that with increasing energy prices their business was vulnerable to increased costs and they also wished to reduce its environmental impact.

### Project development

The energy use on site is mainly for electrical connections to caravans and for producing hot water for showers and washing. Two ideas were considered. The first was a wind turbine which would generate enough energy to power the site and sell energy back to the grid. The second was solar thermal panels to produce the hot water needed for showers.

Malcolm and Sue decided to opt for the solar thermal panels as the peak efficiency of this system tied in well with when the demand for hot water at the site was peak (during the summer). As the site can accommodate up to 90 caravans and tents, it would need to supply enough hot water for up to 350 showers per day.

After an initial consultation took place the client put in for planning permission for the twelve panel system, although the site has agricultural land use. The site is on the coastline and also in the AONB. The planner wanted to make a full inspection and then the parish were consulted. Finally, after no objections were made Higher Rew was awarded planning permission.

With support from the RE4D mentor, Higher Rew received 4 quotes from different installers and successfully gained a RE4D grant. The system was installed in early December 2007.

### How the system works

The 12 panel system is mounted on the roof of the shower block and provides hot water into a tank. The system has a back up immersion supply. This will help keep temperature over the legionnaire's disease safety levels of 60 degrees C.

### Costs and benefits

- Annual power generation 15390 kWh. This equates to an annual Natural Gas Saving of: 1,500 m<sup>3</sup>
- Carbon Savings - CO<sub>2</sub> emissions avoided RE 3500 kg per year
- The system cost £15,172 including VAT. The enhanced capital allowance scheme will allow Higher Rew to offset this cost against their tax.

Higher Rew received a grant of £2,167 from RE4D towards the cost of the installation

The savings will equal approximately £750 per year compared to a natural gas boiler. This equals a 20 year payback on the initial investment at current fuel prices and without any grant or capital allowance.

# Technical details

## Specification

12 panels valliant auro therm, 1000 litres dual coil hot water tank, Resol control system

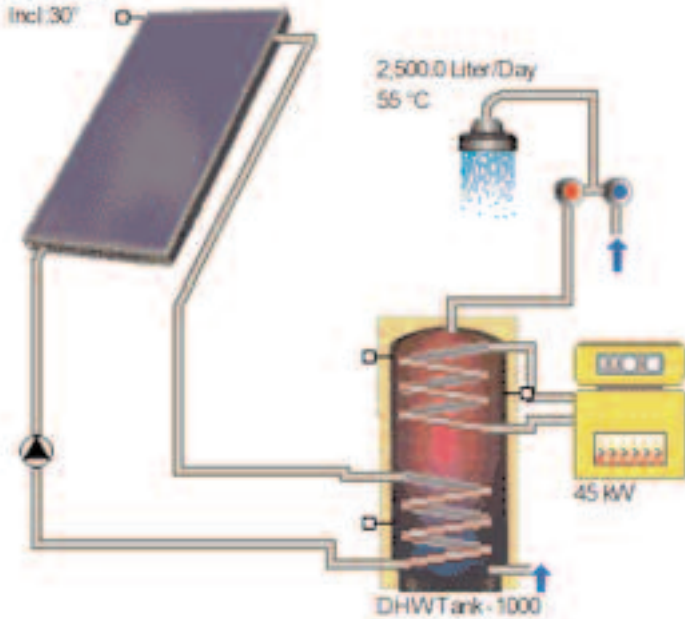
## Output

|                                     |           |                             |
|-------------------------------------|-----------|-----------------------------|
| Collector Surface Area Irradiation: | 29.30 MWh | 1,207.63 kWh/m <sup>2</sup> |
| Energy Produced by Collectors:      | 15.39 MWh | 634.40 kWh/m <sup>2</sup>   |
| Energy Produced by Collector Loop:  | 14.81 MWh | 610.37 kWh/m <sup>2</sup>   |

## Installers

The Plumbing Company

12 x auroTherm classic VFK 990/1  
 Total Gross Surface Area: 26.87m<sup>2</sup>  
 Azimuth: 0°  
 Incl: 30°



## Further information

[www.higherrew.co.uk](http://www.higherrew.co.uk)

The Plumbing Company: 01752 403368

## Contact RE4D

[www.re4d.org](http://www.re4d.org)

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For independent advice and support

## Image gallery

Controls



Accumulator tank

