

# 10KW

## ON GRID ROOFTOP SOLAR PV SYSTEM ON DUNCRAIG MEDICAL CENTRE

Perth, WA

### A Case Study



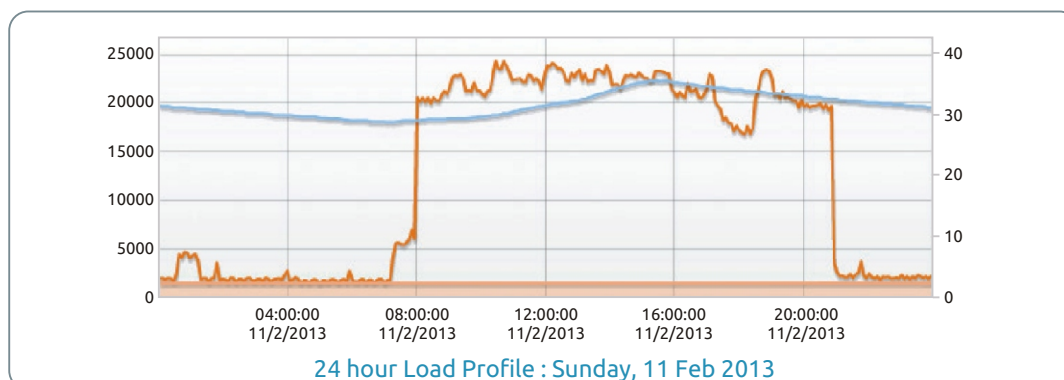
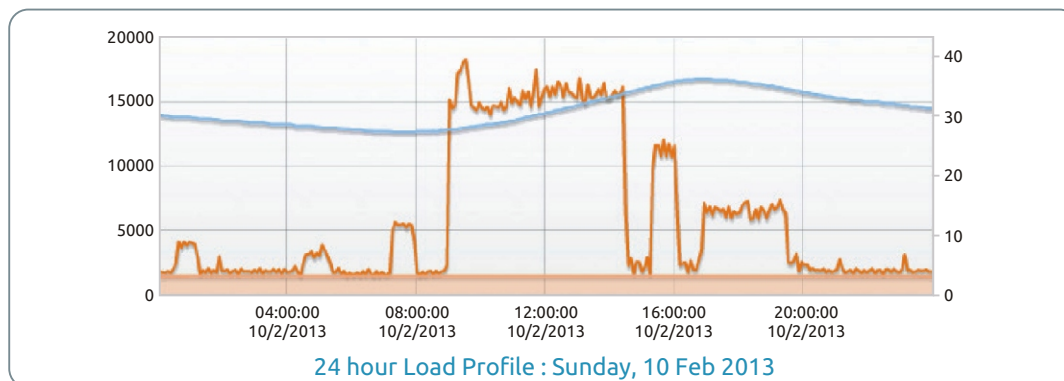
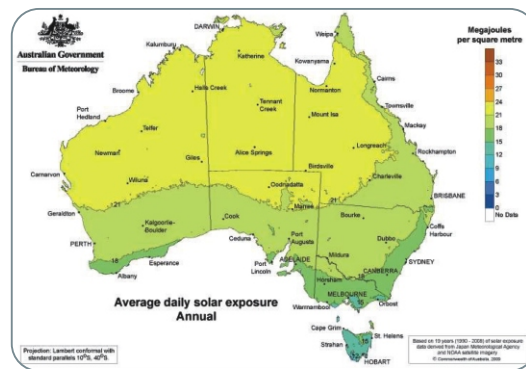




## INTRODUCTION

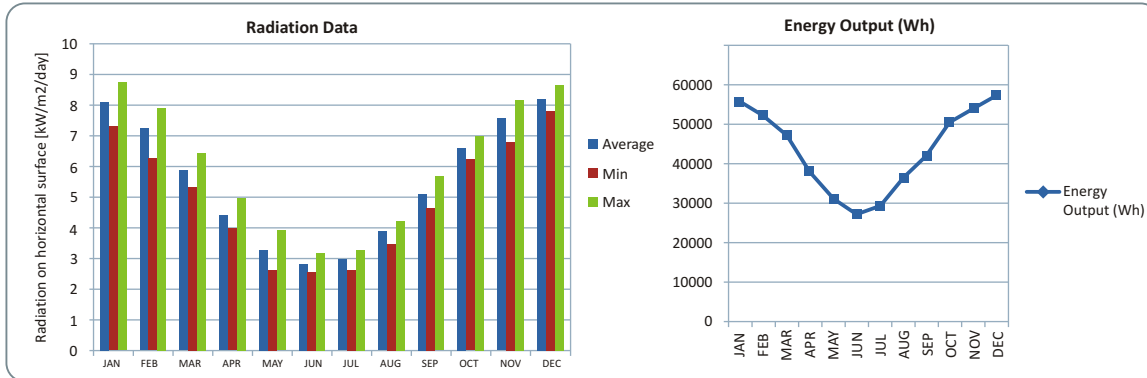
Dun Craig Medical Centre is situated in a northern suburb in the sunny city of Perth, capital of Western Australia. Regen Power was approached by the medical centre to perform an energy reduction review and to highlight the costs and benefits associated with investing on a rooftop solar power electricity generation system.

The medical centre is open for 7 days a week and thus ideally suited for rooftop solar photovoltaic power generation. Prior to the installation of the solar power system, Regen monitored the energy consumption for a couple of weeks. Power consumption during a typical Sunday and Monday in the summer month of February is shown in Fig 2.



## SYSTEM ANALYSIS & DESIGN

The major load in the premises during summer is air-conditioning which coincides with the sunshine hours. After consultation with the management and assessing the roof space available, it was decided to install a **10kW Solar PV system** which has the potential of generating about **45kWh** (or units) per day. It was estimated that the solar power generation would offset approximately **30%** of Duncraig Medical centre's annual electricity consumption with a simple payback period of 3.5 years.



## PROJECT DETAILS

System size	: 10kW
No. of PV Modules	: 40 x 250W HANWHA SolarOne Modules
No. of Inverters	: 10kW SMA Tripower 10000TL Inverters
Annual Energy Yield	: 15860 kWh per annum
Estimated CO2 savings	: 13 Metric Tonnes per annum



## SYSTEM DETAILS

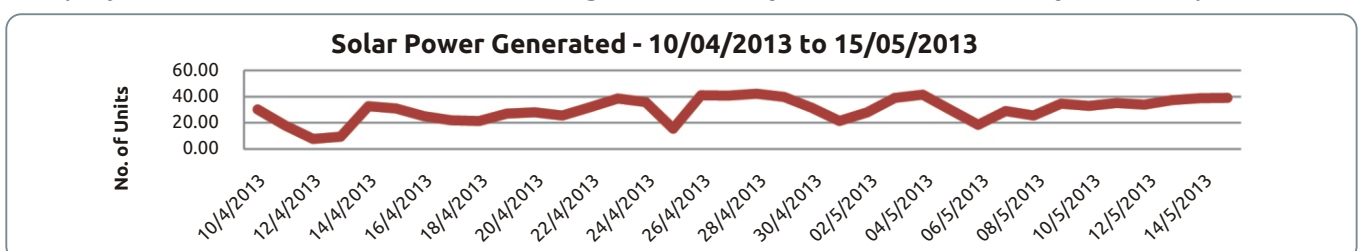
The system consists of 40 HANWHA Solar One Polycrystalline 250W solar modules supported by a 25-year warranty and are certified by TUV, CE, UL and CEC worldwide certifications; along with meeting all Australian and European quality and safety standards. The solar modules are mounted using PV-ezRack universal roof mounting systems supported by 10 year warranty. The SMA Tripower inverter( STP 10000TL) offers exceptionally high yields with an efficiency of 98.5% and are supported by 5 years warranty. Regen Power provides 5 year warranty for the installation. Like all Regen commercial installations, the system also includes a remote monitoring system:



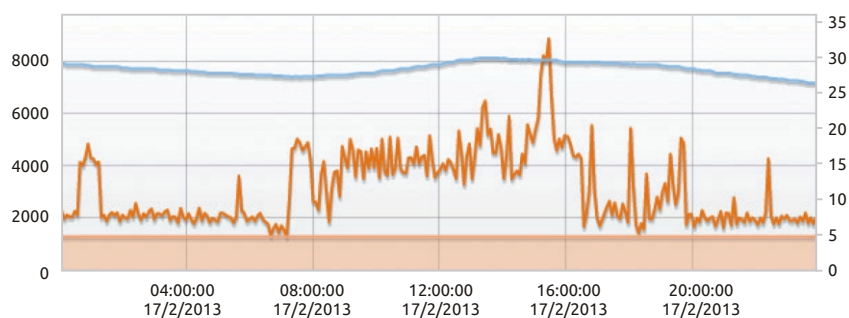
Screen capture of SolarLog Solar Monitoring System

## RESULTS

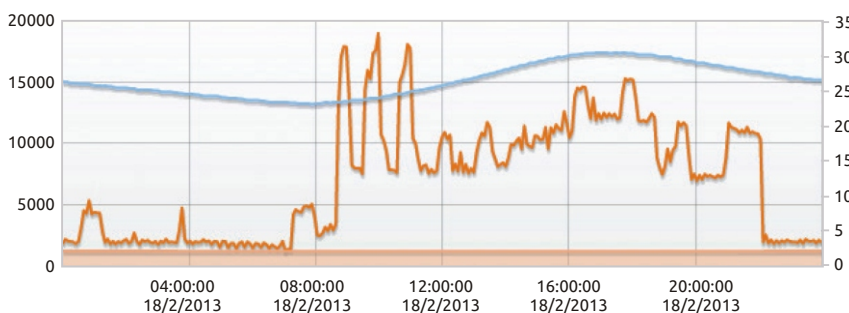
The project demonstrated substantial savings in electricity bill in the first 60 days of the operation.



## RESULTS



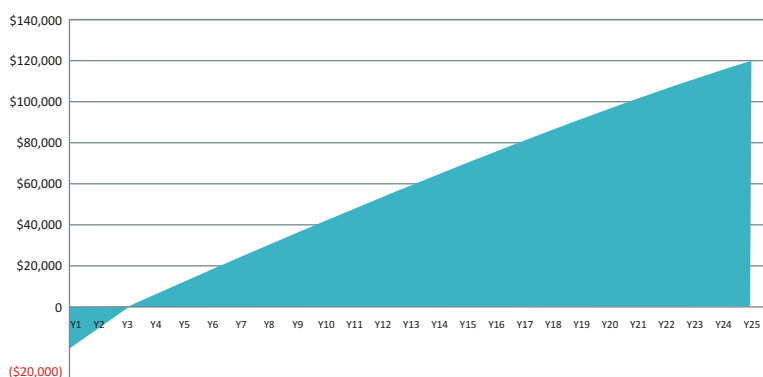
24 hour Load Profile : Sunday, 17 Feb 2013



24 hour Load Profile : Monday, 18 Feb 2013

## PAYBACK ANALYSIS

Based on an average of 45 units of power generated per day for a 10kW system, and factoring in various other parameters the system has a rapid return on investment of 3.6 years.



Discounted Pay-back Graph

Call us now for more information

**1 300 876 354**

## Regen Power Pty Ltd.

### Western Australia

**Sales & Marketing**  
4/90, Catalano Circuit,  
Canning Vale, WA 6155.

Phone: **08 9456 3491**

Fax: **08 9456 3492**

E-mail: [sales@regenpower.com](mailto:sales@regenpower.com)

EC Licence: EC9676

### Queensland

1/18 Holden Street,  
Woolloongabba,  
Queensland 4102.

Phone: **+61 7 3713 3444**

Fax: **+61 7 3712 0618**

Email: [admin.qld@regenpower.com](mailto:admin.qld@regenpower.com)

EC Licence: EC74554

### New South Wales

U12, 62 Newton Road,  
Wetherill Park,  
NSW 2164.

Phone: **1300 876 354**

Fax: **+61 8 9456 3492**

Email: [admin.nsw@regenpower.com](mailto:admin.nsw@regenpower.com)

EC Licence: EC244131C

Visit our website:

**[www.regenpower.com](http://www.regenpower.com)**

