

## Case Study - City of Wanneroo Council Offices - 24kW



Roof installation image

The City of Wanneroo went to tender in early 2009 for the installation of a solar PV system for their council offices. The GHD engineering consultancy firm were used to determine the tender.

Solargain were chosen out of the 35 companies who submitted tender applications. The 24kW system is Solargain's longest installed commercial system and to date there have been no system faults.

In designing the system Solargain engineers created 3D models of the roof space and superimposed to scale 3D models of the Sunpower panels selected for this job. The 3D modelling software allowed detailed shading analysis to be undertaken and also assisted with presenting the design to the council board members.

The 24kW system installed is split into two sections 7.8kW on the rear North facing tile pitched roof and 16.2kW installed on tilt frames on the main tin roof. The 7.8kW section comprises 26 x Sunpower 300W panels and 2 x SMA 3.8kW inverters. While the 16.2kW tilted section comprises 54 x Sunpower 300W panels and 6 x SMA 6kW inverters.

The system is connected to an SMA data monitoring package with an LCD display screen installed in the main foyer. The monitoring system shows the electrical output and cumulative CO<sub>2</sub> abatement.

The cost of the system in 2009 was \$210,000 highlighting the significant drop in the cost of commercial solar PV systems over the past number of years.

### Project Overview

**Location:** Wanneroo, WA

**System size:** 24kW

**Roof Fixing Method:** Tilt mounting and flush mounted

**Products:**

- 80 x 300W Sunpower panels
- 2 x 3.8kW SMA SB3800
- 3 x SMA 6000A inverters

**Annual Energy Production:** 41.7MWh approximately

**Annual Greenhouse Gas Emission Reduction:**  
38.4 tonnes CO<sub>2</sub>e (CO<sub>2</sub> equivalent)

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*"Solargain have been extremely professional during all stages of the project. The City of Wanneroo received very good project management during the design and install phase and communications were very clear and timely. The service that Solargain have provided the City of Wanneroo is highly regarded."*

Spokesperson  
City of Wanneroo

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