

# Case Study - Koala Storage - 30kW



Koala Storage has two sites in the Perth metro area at Osborne Park and O'Connor. The Osborne Park site is a standard self storage facility whereas the facility at O'Connor includes climate controlled storage units.

The company approached Solargain seeking help in reducing their significant electricity bills at the O'Connor facility. Due to the nature of the business there is a steady demand for electricity during the daytime when the peak tariff rates are in effect.

As a result the most viable option was the installation of a 30kW solar photovoltaic (PV) system to offset the vast majority of their daytime electricity load. The system comprises 120 x 250W Renesola polycrystalline solar panels (Virtus II) and 3 x SMA Sunny Tripower 1000TL inverters.

Due to the roof being completely flat and there being plenty of roof space, tilt frames were used to maximise the efficiency and output from the system.

The continuous electricity load at the cold storage facility made it an ideal candidate for the benefits of solar PV. The solar system supplies electricity throughout the day, reducing the amount of electricity consumed from the grid, leading to a reduction in the electricity bill.

As the solar system only works during the daytime often there is a mismatch between the times the electricity is produced and when it is needed. A cold storage facility overcomes this constraint by having a steady demand throughout the daytime.

## Project Overview

**Location:** O'Connor, WA

**System size:** 30kW

**Roof Fixing Method:** Tilt mounted 30 degree pitch

**Products:** - 120 x 250W Renesola panels  
- 3 x 10kW SMA Sunny Tri Power inverters

**Annual Energy Production:** 48.2MWh approximately

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

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Financially, given their current tariff and the projected future rises in the cost of electricity, Koala Storage anticipate the system will have paid for itself in 4-5 years giving them a most satisfactory tax free financial return.

Also as the freehold owners of the premises the system adds significant value to their asset, as disclosure of energy efficiency for commercial premises becomes mandatory in future years.

Koala Storage has been so impressed with the quality of product and workmanship with their first system that they are now in talks with Solargain about a smaller system for the site at Osborne Park.

The 132kWh (units) per day that the system is designed to produce as an average across the year will provide approximately 40% of the sites total electricity costs, dramatically reducing their reliance upon the power billed at the higher rate.

*"The system has had no problems in operation since installation and I estimate has reduced our power costs during summer by approx. 50% and during winter by approx. 35%.*

*We conservatively estimate that we will achieve a payback of approx. 4 - 5 years."*

Rod West, Director  
Absolon Street Pty Ltd

