

SOLAR CASE STUDY: URBAN CAMP



MELBOURNE'S URBAN CAMP SOLAR ARRAY IS REDUCING ELECTRICITY BILLS AND SHOWCASING RENEWABLE ENERGY TO THOUSANDS OF STUDENTS EACH YEAR.

Urban Camp installed a 24 panel solar array capable of generating 6.6MWh of electricity annually in 2009. Since then, the system has been reducing Urban Camp's CO₂ emissions and helping efforts to educate students about renewable energy.

Features:

The solar array was installed on the roof of Anzac Hall at Urban Camp, a building constructed in 1941 which underwent a redevelopment in 2002. The panels are oriented 30 degrees west of north to maximise energy generation during daylight hours.

The system has an expected annual output of 6,600kWh which will help avoid around nine tonnes of CO₂ emissions – equivalent to more than 161,000 black balloons per year.

Funding model and business case

The solar array at Urban Camp was made possible by a Federal Government grant awarded by the City of Melbourne.

The system has allowed Urban Camp to further its efforts to reduce its ecological footprint and operating overheads. It complements other environmental initiatives at the camp including installing a solar hot water system, improving energy efficiency, and most recently, replacing hundreds of fluorescent light tubes with cutting edge LED replacements. "Solar has made a significant difference to annual energy costs," says Jonathon Wright, Urban Camp's Events Coordinator.

In addition to this the solar array provides a model for the many schools and community groups which are looking at implementing installing renewables in their local area.

Jonathon says, "Urban Camp hoped to provide a positive example for renewable energy and to motivate visitors to adopt these technologies in their home, school or work places."

Location:

Parkville, Melbourne

System Size:

5.1kW

Estimated Annual Production:

6.6 MWh

CO₂ Avoided Annually:

9 tonnes

Solar inverter:

IG60 inverter

Solar panels:

24 Schott Poly 210W panels

Mounting system:

System installed flat on 30 degree pitched and 30 degree west of north-facing roof

Payback period:

30 years

Funding model:

Federal Grant

Installation date:

December 2009

Installer:

Going Solar

CITY OF MELBOURNE ECO-CITY

With more than 8500 students and visitors annually, Urban Camp is in a unique position to stand as a demonstration and learning site for schools and community groups.

Key challenges:

The main challenge to installing the system at Urban Camp was finding a way to incorporate the system as a learning resource into the camp's education program for visiting school groups.

The installer, Going Solar, helped by designing an interpretive public display unit capable of showing energy created on the day, instantaneous power generated, and energy generated since installation. A display panel was also produced to show students the steps involved in harnessing the sun's rays and turning it into electricity for use in the building.

Jonathon says this approach has been a great success. "The interpretive system is in a central location and provides a great opportunity for students to see first-hand the amount of instantaneous power generated," he says.

Solar is playing a critical role in Urban Camp's long term planning to reduce the ecological impacts of its operations. The 24 panel array is helping reduce costs, CO2 emissions and is a positive example of clean energy at work in the not-for-profit sector.



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