

BUSINESS CASE STUDY

March 2010

Alice Springs Helicopters



Company profile

Alice Springs Helicopters is an award winning aviation business located at the Alice Springs airport, catering to the tourist market and general industry. The office building is a transportable, consisting of colourbond cladding and gyprock lining, and the site also includes a hangar to store aircraft. The business is the first helicopter organisation in Australia to achieve Advanced Ecotourism accreditation, so the owners have already made a significant investment in being environmentally efficient. They approached Alice Solar City with a view to install a solar photovoltaic system and to find out how else they could save on energy consumption.

Energy survey results

The building was found to be quite energy efficient, so a limited number of potential energy efficiency actions were recommended by Alice Solar City. A solar power system was an obvious next step for the business. The office building uses around 11,000 kWh per annum, which is purchased from the Alice Springs Airport, resulting in 7.6 tonnes of CO₂ emissions per annum. Around 50% of this energy use is for air conditioning, with the remainder split mainly among office equipment, lighting and refrigeration.

ALICE SOLAR CITY RECOMMENDATIONS

Based on the energy audit, a number of recommendations were identified. These involve capital investments as well as 'no-cost' energy behaviour changes.

Install solar power system

A 5kW solar power system, installed

in early 2010, covers the bulk of the northern roof of the building, and is expected to produce 70% of their energy needs per annum, saving \$1500 per annum and reducing greenhouse gas emissions by 5.5 tonnes per annum.

Upgrade T8 fluorescent lighting

Upgrading fluorescent lighting would improve the efficiency and effectiveness of the existing fittings. These measures include replacing the ballasts with a more efficient electronic ballast to reduce energy wastage, installing reflectors, and removing unnecessary lamps.

Increase air conditioning set points and use of fans

With 50% of the building's energy consumption being a result of air conditioning, savings could be achieved by increasing the air conditioning set point during summer. Each degree increase can represent a 5% to 10% saving of air conditioning costs. When employing this method, staff comfort can be maintained through the careful use of fans.

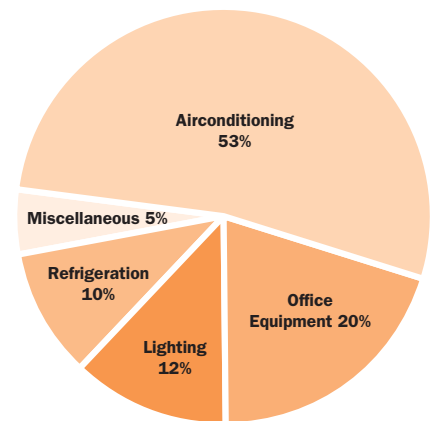
Shade east and west walls

Installing shade to the east and west walls would reduce summer heat load on the building, thus reducing air conditioning costs.

Initiate a staff energy awareness program

Encourage staff to assist in meeting consumption reduction targets by taking simple actions such as turning off lights and equipment when not in use, and closing doors to air conditioned spaces. Communicate energy performance regularly and reward improvements.

Electricity Consumption Breakdown



Estimated savings

Implementation of the major recommendations would save the business approximately 20% of their current consumption. Combined with the energy produced by the solar power system, this would mean a 90% reduction in power purchased from the grid.

Alice Solar City incentive value

The total incentive for the installation of the solar power system is just over \$20,000.

"The work undertaken with Alice Solar City reinforces our commitment to the environment and sustainable business practices as an Advanced Eco-Tourism Accredited operator."

Mechelle Collins, Director,
Alice Springs Helicopters