

BUSINESS CASE STUDY

November 2011

Milner Meat and Seafood



STEAK AND SEAFOOD GO SOLAR

Company profile

Milner Meat & Seafood is a busy gourmet butcher shop with an extensive range of products including game meats, seafood, free range products, homemade products and imported cheeses and smallgoods. The business caters for bush and wholesale orders, large parties and events and locals. The shop building is part of a strata title where Milner Meat & Seafood occupies Units 3 and 4.

Like many small businesses, Milner Meat & Seafood was facing rising energy costs, particularly due to their high refrigeration needs.

Energy survey results

Alice Solar City identified a number of opportunities to reduce energy consumption at the property. The owners were also keen to consider generating their own solar power.

A baseline energy consumption was calculated to be 211,495 kWh per annum, comparable to the energy use of 25 average Alice Springs households. Refrigeration was identified as contributing approximately 60% of energy consumption, air conditioning 20%, and lighting, IT, hot water and other appliances contributed the remaining 20%.

ALICE SOLAR CITY RECOMMENDATIONS

Install photovoltaic (PV) power system

A 10kW PV system was installed, producing over 16,000 kWh per annum providing 8% of the current electricity consumption. The system will result in a reduction of CO₂ emissions by 12 tonnes per annum and a saving of almost \$3,500 off the annual electricity bill.

Installation of an in-house display unit

An in-house display unit was installed to allow management and staff to closely monitor their power generation from the PV system and consumption of grid supplied electricity. The interactive touch screen has become a focal point for the entire team having raised the awareness of daily electricity consumption patterns.

Paint roof white

Two coats of white exterior acrylic gloss paint were applied to all roof areas to reflect the sun's heat and reduce internal building temperatures by up to 4 degrees. This measure has improved internal comfort for staff and customers, reduced air conditioning costs and for a relatively small cost, will save a considerable 5% off the annual electricity consumption and almost \$2,000 off the power bill.

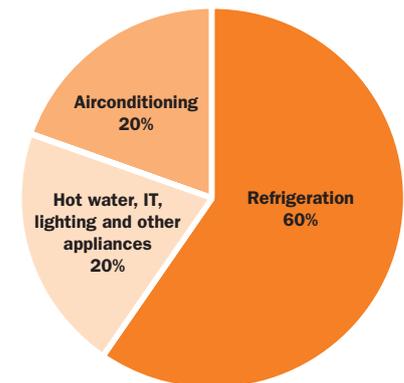
Install heat pump hot water system

A heat pump hot water system was installed to replace an existing electric hot water system. Heat pumps extract heat from the air and transfer this to the hot water tank. This measure has resulted in water heating savings of over 60%, 3 tonnes of CO₂ and approximately \$850 off the annual power bill.

Upgrade high-use T8 fluorescent lighting

While fluorescent tube lighting is relatively efficient, there are a number of actions that can improve this. Voltage reducers or 'power savers' can be installed to reduce the energy consumption once traditional fluorescent lights have warmed up; alternatively lower energy light bulb options can be installed such as T5 fluorescent tubes or LED tubes.

Electricity Consumption Breakdown



Replace refrigeration door seals

Milner Meat & Seafood uses a lot of refrigeration. To reduce energy consumption, Alice Solar City recommends that door seals on all refrigeration equipment are checked regularly and deteriorated seals replaced with quality seals when required.

Estimated savings

The combined energy efficient measures are expected to save around 15% of baseline electricity consumption, saving 29,900 kWh per annum of electricity. Milner Meat & Seafood will save 20.6 tonnes of CO₂ emissions and approximately \$6,080 off their annual power bill.

Alice Solar City incentive value

The total incentive from Alice Solar City was \$3,414 for energy efficiency measures and \$27,340 for the PV system.

"Alice Solar City's recommendations were great! We have reduced our energy consumption and substantial dollars off our power bill. The in-house display has made us all very conscious of our energy consumption."

Jenny Nelson, Owner,
Milner Meat & Seafood.