SUPPLY CHAIN & LOGISTICS ASSOCIATION OF AUSTRALIA

Case study no.1
Keysborough Spec 1

This warehouse case study forms part of a suite of resources developed by the Supply Chain and Logistics Association of Australia (SCLAA) and project partners to help SMEs in the supply chain and logistics sector with energy efficiency improvements and energy cost reductions.

The full suite of resources is available from http://energy-efficiency.sclaa.com.au

➤ Background

Keysborough Spec 1 is a 27,195m² office and warehouse facility located at the Key Industrial Park, Keysborough, about 27 km south-east of Melbourne's central business district.

"The facility is fantastic for our needs," says Jeremy Lane, Sales Manager of Tyres 4 U, an Australian owned and operated organisation specialising in the distribution of tyres and tubes. With 30 staff, Tyres 4 U is a major co-tenant of the facility.

Tyres 4 U is the sort of satisfied customer that Australand, the developer of the facility, has in its sights. The project was a speculative development for the company, one that signals its commitment to providing environmentally sustainable outcomes.

"By future-proofing the facility, we can help tenants offset the costs of rising energy prices," explains Paulo Bevilacqua, Australand's Sustainability Manager. "Our work in this area offers a real point of difference. This type of development is an investment that allows us to test new ideas that will improve energy efficiency and sustainability more broadly."

The facility was designed to be a market leader in sustainable development of industrial facilities and has achieved a *5 star Green Star – Industrial Design v1* rating.

➤ Opportunities

Passive design strategies were the basis of the design to minimise the need for artificial lighting and mechanical systems, resulting in a more energy efficient construction.

With this base, a number of other sustainable design features were incorporated, including rain water harvesting, efficient use of materials and selection of reduced environmental impact materials, transport alternatives, and indoor environment quality and occupant comfort.

➤ Implementation

Some of the innovative technologies that have made the facility more energy efficient include:

- Extremely efficient lighting design that incorporates high efficiency T5 lighting with dimmable ballasts coupled with daylight and motion sensors to minimise need for artificial lighting.
- Translucent roof sheeting to allow in more natural daylight.
- Solar hot water panels to provide a renewable source of energy to heat water.
- Sub-metering of energy to allow for improved monitoring and management.
- Energy efficient air-conditioning system in the office space.

For Australand, these improvements, along with its other sustainability initiatives in the facility, represented an estimated $700,000 additional cost on a $12 million facility (around 6% cost increase).

"The additional costs have come down by about two thirds since we built the Keysborough facility, simply by learning by doing and getting a better understanding of the green star certification process," explains Paulo.

➤ Outcomes

For Tyres 4 U, the benefits of being in such a facility have been substantial.

"The lighting set-up is amazing," says Jeremy Lane. "After re-locating from our old facility, we have seen our power bill reduce by 40-60%. This is despite the fact our facility is now two and a half times bigger. "

In addition to greater energy efficiency and a smaller electricity bill, there have been other improvements.

"The extra bonus for us is that our stocktake has become much more efficient," explains Jeremy. "We had overcrowding and bad light in our previous premises, resulting in lots of frustration for our staff, injuries and plenty of errors when trying to read labels. Now, in a space with better and more controllable lighting and more area to operate in, our accuracy has improved. For a business that has millions of dollars of stock on hand and does a stocktake every two months, this is pretty significant. We've also noticed improvements in the morale of our staff and overall productivity, simply by being in a better facility."

Australand also sees plenty of upside.

"There's nothing in these types of facilities that's too technically difficult from a construction point of view," outlines Paolo. "The challenge is on the financial side and making people aware of the potential savings of being in a more energy efficient, more sustainable, facility. But the costs are coming right down."

Australand expects the energy efficiency and solar hot water generation will reduce total greenhouse gas emissions by 90% compared to a standard practice development which simply complies with Building Code of Australia requirements.

This represents a saving of 1,760 tonnes of CO_2 per annum, equivalent to the annual emissions of 220 average Melbourne homes.

Learn more on how to make your business more energy efficient at **sclaa.com.au**

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