



Smart changes for a more energy efficient and profitable business

An energy efficiency plan helped Kai Sun supermarket in Parramatta to fight rising energy costs

Background

Kai Sun supermarket has been open for four years in the heart of Parramatta, selling Asian food and groceries. The business operates all year round employing four people. The owner, Mr Yong Zhao, spends most days of the week managing the supermarket.

Mr Zhao was concerned about the rising cost of his electricity bill, "It goes up too often and it is hard for us as business owners."

In the last few years he has had sales people from energy companies coming to the shop to promote their plans and he has been able to negotiate a better price and changed energy companies. He had already replaced some of the conventional lights of the shop to more energy efficient ones.

Mr Zhao thought that he could do more to reduce his electricity bill, so when the Business Energy Smart Tips' (BEST) program approached him offering a free energy assessment, he was very keen to learn more about how to become an energy efficient business.

The energy assessment showed that the electricity cost of refrigeration was higher than average and was the largest single user of electricity in the shop. The supermarket has a large number of fridges and freezers, as well as cool rooms.

The lighting used around 23% of the business energy costs.

Mr Zhao had already made some changes in the lighting of the main shop area. He replaced most of the 168 fluorescent lights to Light Emitting Diodes (LED) that consume 50% less electricity. These changes allowed him to reduce electricity costs, although he was interested in learning how to implement other measures that could help him to further reduce energy consumption.

The assessment report recommended LED lighting installation in the doors of the drink fridges, in the toilets, entrance, street sign and shop area.



Measures Implemented

The BEST energy assessment report recommended no cost, low cost and higher cost actions for Kai Sun supermarket.

Mr Zhao chose to implement the no cost and low cost actions which were easy to do and cost effective, and would help him to further reduce the cost of his electricity bill.

Several no cost actions were undertaken to increase the energy efficiency of the supermarket's refrigeration.

The refrigeration seals needed to be checked regularly as seals in poor condition allow cool air to escape, resulting in higher energy consumption and costs. The seals needed to be visually inspected for cracks and signs of wear, particularly at the bottom of the door.

Soft drink fridges were turned off after trading hours. After consolidating perishables in the fridges and freezers two more refrigeration units were turned off. Chest freezers were defrosted to increase energy efficiency.

At a cost of \$310, fridges and freezers were insulated at night with an insulation material (bubble wrap) potentially saving around \$700 in electricity costs per year.

Mr Zhao had already made changes to lighting in the business. After the report he educated his staff in energy saving measures such switching off lights when not needed (e.g. turning off lights in storerooms, toilets, meeting rooms etc. when not in use). He also ensured that the lights and light coverings were kept clean as dirt and dust reduce light output and the life expectancy of lighting.



Outcomes



Mr Zhao was able to make many no cost and low cost changes to Kai Sun supermarket. Defrosting the freezers, consolidating stock, educating staff, maintaining and managing refrigeration and using insulation materials overnight were all actions that cost very little, but will mean that less electricity is used and the business will save some money.

The most significant change made in the supermarket was to change to LED tube lights in the shop area for which Mr Zhao invested around \$3500. Now he wants to do some minor changes for the lights in order to rearrange the locations to make the lights more efficient and even brighter at the entrance of the shop.

He has observed that customers feel better with a brighter shopping environment and he is happy that staff have been very supportive of the changes.

He has received some complaints about the reduction in the variety of the frozen products. However, compared to the price of operating the two extra fridges he thinks it is better to consolidate stock in order to save more money.

Mr Zhao feels very pleased about the outcome of the measures implemented, "I feel good because the shop has become brighter. By defrosting the freezers I saw a difference in the bill. It all has a long term benefit to help me fight the rising cost of electricity."

