

Case Study 9

Port Adelaide Enfield Council

This case study is an excellent demonstration that even relatively small projects can achieve significant and meaningful energy and cost savings. Further reinforcing the importance of a strong and expert service provider to deliver a complete energy and lighting solution.

The Project

Enfield Community Centre centrally located within the Port Adelaide Enfield municipality, is a multi-purpose community centre consisting of an auditorium, indoor sports stadium, meeting rooms, storage areas and kitchen and hosts all types of activities and programs for the benefit of the residents and ratepayers.

Built in the 1970's, the facility featured luminaires from that era, which were both energy inefficient and approaching the end of their useful life. In fact, some fittings were found to be inoperable and in need of replacement and upgrading.

The Challenge

The Enfield Community Centre was identified as a significant energy user by the council, and the council's sustainability consultant invited Efficient Energy Systems to design and deliver an energy efficient lighting solution within budget constraints and time frame.

The Solution

The luminaires in meeting rooms, offices, auditorium and kitchen consisted of various wattage linear fluorescent lamps operating with magnetic ballasts. These included 2 x 18W, 2 x 36W and 2 x 56W with an energy consumption of 46W, 92W and 136W respectively. The indoor sports stadium featured 400W highbays as the main lighting and 1 x 150W PAR38 as secondary lighting, which were not operating at the time of the energy audit.

The 2 x 18W, 2 x 36W and 2 x 58W luminaires were replaced with 1 x 18W, 1 x 36W and 1 x 58W luminaires with KW/2 full specular optically engineered reflectors and professional electronic ballasts

with constant lamp power. The resultant energy consumption was 18W, 35W and 55W respectively. Standalone timers were fitted to three of the storage rooms and programmed with a preset time to switch lights off automatically and prevent lights being left on for long periods.

The PAR38 lamps located in the sports stadium were replaced with 2 x 36W fluorescent luminaires, fitted with a steel wire guard to protect the lamps. Further opportunities for energy savings were identified as the sports stadium featured a saw tooth roof design with skylights providing natural light into the building; there was an opportunity to add a light level sensor to automatically control the switching of the main lighting.

With the addition of the light level sensor, it was found that during daylight hours, the secondary lighting alone was sufficient and the primary lighting is now seldom used, creating substantial energy savings. Further more, to ensure that lights were only used when the building was occupied, an occupancy sensor was fitted to switch lights off when the area was vacated.

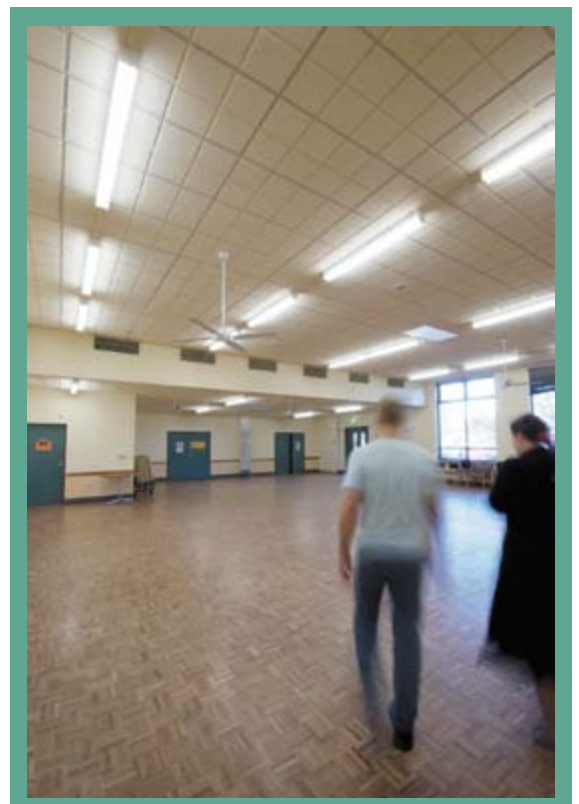
The Cost Savings

Prior the lighting upgrade, and for the financial period 2007/08, the total energy use for the centre was reported as 60,640 kWh and with the lighting upgrade designed to deliver 16,900 kWh of energy savings. The result was a total energy saving of 28% for this project.

The energy, cost and greenhouse gas savings are impressive for such a small project. In addition, maintenance costs were reduced with the fitment of new equipment, and lighting quality was improved throughout the building. This project demonstrates the expertise and equal consideration that Efficient Energy Systems applies to both small and large projects, to achieve real energy and cost savings for its customers.

The Facts

Annual energy savings	16,900 kWh
Annual greenhouse gas savings	16,560 kg



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