



# CHARLES STURT CITY COUNCIL

Solutions in lighting management

## CASE STUDY



## CHARLES STURT CITY COUNCIL

SOUTH AUSTRALIA

The City of Charles Sturt places a high priority on its commitment to reduce greenhouse gas emissions as a member of the world-wide Cities for Climate Protection Program (CCP).

Council adopted a Corporate Management Plan which measures to reduce Council's emissions of greenhouse gases from its own activities by the Year 2010. The City of Charles Sturt has achieved milestone 4 of the CCP Program. In July 2001, council called for Tenders for the Beverly Depot Lighting Upgrade, Energy Conservation Systems Pty Ltd (ECS) won the Tender.

The ECS energy management solution was to remove all existing monophosphor fluorescent tubes and replace with triphosphor fluorescent tubes. This increased the light output of the light fittings by 15%. ECS LightSaves were installed on all fluorescent lighting sub-circuits. The ECS LightSaves reduce light output by a fixed 15% and reduce kW and kWhrs consumed by 30% continuously whilst improving power factor.

ECS Ultrasonic Presence Detectors control lighting in offices and meeting rooms by switching on lighting when there is someone present in the room and off when the area is vacant. The existing air conditioning system utilises multiple split heat pumps, the control of these units was manual ON/OFF.

A central ECS 8000 switching system was used to control the air conditioning to operational hours with 365 day clock and holiday schedules initiated.

During the tender ECS predicted savings of 30% of the controlled loads. Pre and Post monitoring of the ECS system was undertaken and savings on the controlled load were 37%. ECS also tracked the Electricity Supply Authority Billing Data for the complete site, again Pre and Post the ECS system.

The savings from the billing data showed a reduction in consumption for total electricity of 33%.

### KEY OUTCOMES

#### ENERGY SAVINGS

59,000 KWh per annum

#### GREENHOUSE GAS SAVINGS

59 TONNES CO<sub>2</sub> PER ANNUM

#### PAYBACK

4.3 YEARS



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