

# Chesterfield Tractors Lighting Upgrade

**Located in Goondiwindi, Queensland Chesterfield Australia is an Agricultural and Construction Equipment company. The Goondiwindi site has both workshop and a retail spaces requiring specific lighting.**

## Background

During the Financial Years 2012/13, the facility consumed **119 984** kWh of electricity, emitting **103** tonnes of carbon. An Energy Audit identified potential energy efficiency cost savings through lighting upgrades worth approximately **\$6,605** per annum with an average payback period of **just 2.2** years. These savings represent approximately 17% of the energy currently used by the audited buildings. Upgrades were also required that do not lead to a trade off between task lighting and energy efficiency.

The main opportunity is in upgrading 18x150 Watt metal halide lights and fittings in the retail space to 47 Watt LED fittings. The LED fittings are required to provide high colour rendering index of 85+ and efficacy of 70-74 lm/W.

Another opportunity was in upgrading 53x36 Watt T8 Fluorescent tubes to 20 Watt LED tubes. While there are lower wattage LED tubes available, QMDC has recommended the higher wattage tubes as they provide a better light intensity for the tasks required.

The facility requested an energy audit to determine existing energy usage to be used to reduce power use. Other options identified, including refrigeration and air conditioning upgrades, can further reduce energy use.

## Outcome

With the cost of electricity rising, Chesterfield Australia in Goondiwindi can look forward to both energy and cost savings in the near future.



*Above: Chesterfield Australia's Goondiwindi Office.*

This activity received funding from the Department of Resources, Energy and Tourism as part of the Energy Efficiency Information Grants Program. The views expressed herein are not necessarily the views of the Commonwealth of Australia, and the Commonwealth does not accept responsibility for any information or advice contained herein.

## Lighting Upgrades

The list of potential lighting upgrades include:

Current Lighting	Proposed Measure
14W Exit Signs	Replace with 4W LED Exit Signs
Metal Halide 150 Watt	Replace with LED 47 Watt
T8 Fluorescent 43 Watt	Replace with LED 20 Watt
Halogen 50 Watt	Replace with LED 10 Watt
T8 Fluorescent 17 Watt	Install movement sensor
Mercury Vapour 300 Watt	Replace with LED 150 Watt
Metal Halide 300 Watt	Replace with 150 LED Watt

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