

### LIGHTING UPGRADES REDUCE ENERGY COSTS

## IKEA DISTRIBUTION CENTRE



### Key Outcomes

Energy Conservation supported the LED lighting upgrade solution at IKEA's state-of-the-art warehouse, reducing project costs by 35%.

- 💰 \$1.1 million in electricity savings over 10 years
- 💰 \$141,000 in government funding contributions
- 💰 1.6-year payback
- 💰 Improved lighting performance, workplace productivity and safety

### Overview

Located in Moorebank Sydney, this state-of-the-art distribution centre stores and delivers flat-packed furniture and household goods for its large company owned retail outlets. Speed, accuracy and safety are essential to daily trade, and warehouse 'B' occupies over 20,000 SQM of floor space, 55 storage isles and ceiling heights of up to 16 metres. Both the business tenant and property owner hold a long-term commitment to a safe working environment and sustainability through a lower carbon footprint, reduced greenhouse emissions and energy efficiency.

### The Challenge

- High energy costs associated with 400W metal halide experiencing diminishing light output
- Low light levels did not support a productive work environment, instead creating a dull yellow hue and poorly lit sections
- Increasing maintenance costs for ongoing bulb replacement
- Facility and sustainability manager required the installation of a robust fixture that would emit a greater lumen output than the current metal halide lighting while saving on electrical utility bills, maintenance costs and enhancing the lighting quality

### The Solution

*THE PROJECT WAS SUPPORTED THROUGH THE NSW ENERGY SAVINGS SCHEME BY ACCREDITED CERTIFICATE PROVIDER ENERGY CONSERVATION. THIS SUPPORT REDUCED PROJECT COSTS BY 35%, ENSURED BCA COMPLIANCE AND PROVIDED THIRD PARTY VERIFICATION OF PROJECT SAVINGS.*

After a site audit and detailed measurement of where light was needed, the LED High Bay was chosen by the property owner and the client for its proven operating capability of 50,000 hours, equivalent to 10 years of lighting with no maintenance. This solution provides uniform brightness in the isles and loading dock, exceeding building code requirements by over 70%. Employees find the light performance to be exceptional with vastly improved productivity and safety when operating forklifts and other warehouse equipment.

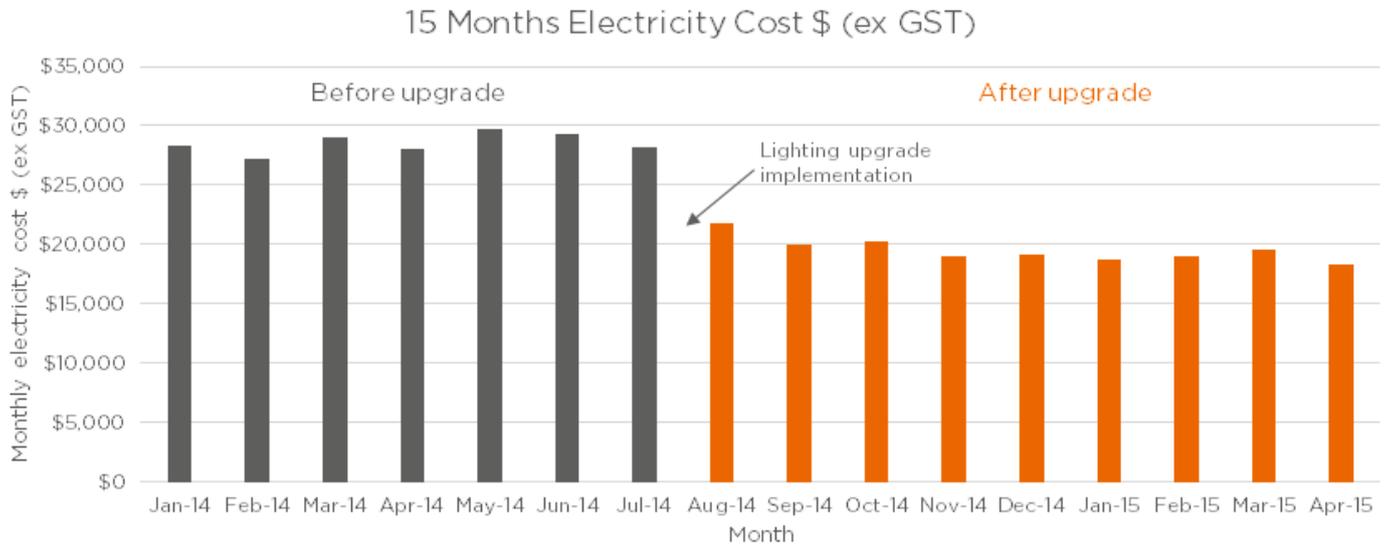
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## Results

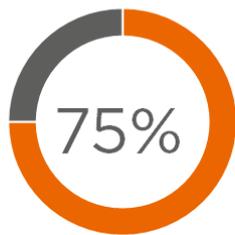
In addition to the targeted workplace health & safety and productivity benefits, implementation of the lighting upgrade immediately yielded a significant impact on electricity use.



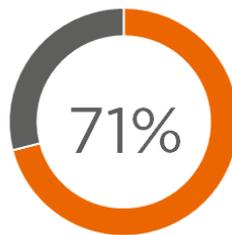
## Conclusion

Supported by Energy Conservation, the LED lighting project delivered the following outcomes:

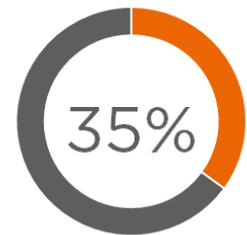
- \$111,000 in annual electricity savings and \$15,000 in annual maintenance savings
- 335,832 kWh in annual energy savings and 356 tonnes of annual greenhouse gas emissions reduction



Increase in lighting performance



Return On Investment



Government funding towards project costs

*WITH THE TECHNOLOGY-AGNOSTIC SUPPORT OF ENERGY CONSERVATION, IKEA'S DISTRIBUTION CENTRE ACHIEVED ONGOING ELECTRICITY SAVINGS OF \$1.1 MILLION OVER 10 YEARS.*

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