

8 things you
MUST know before
your workplace
upgrades to LED





Contents

- Introduction
- 1 Think about what you use your workspace for
- 2 Let there be light. But how much do you really need?
- 3 Choose the right light to improve employee productivity
- 4 Colour matters
- 5 Looking for a light that resembles daylight – think again!
- 6 Return on investment
- 7 Not all lights are created equal
- 8 Beware of big name brands
- Summary

Introduction

Energy costs are rising.

It seems like there's a news report every week telling us how much prices are skyrocketing. Lighting a home can be over 10% of the average home's bills (according to Sustainability Victoria).



Now imagine the costs to a business where hundreds of lights can be left on possibly for 24 hours – you're looking at hundreds of thousands of dollars over years.

If your business still uses old halogen downlights, outdated fluorescent tubes, or energy hungry incandescent lights you probably know you'd benefit from an upgrade to LED. However, with a lot of information out there, it's hard to know where to start. Like any major purchase, it's worth doing the research and getting it right the first time.



Here we give you the **8 most important factors** to consider when it comes to upgrading your workplace to LED.



LED Fast Facts:

1

Reliability

LED lights don't die, they gradually dim over time

2

Efficiency

Highest efficiency of all lamps with very flexible design. 95% of energy used produces light, 5% produces heat.

3

Long life / low maintenance

12 times the life of a halogen light

1

Think about what you use your workspace for

Do you have a manufacturing business that requires a high level of light where employees are working? Or is your facility mostly used for storage? Maybe you work in an office, where employees need to be alert and productive all day? It's probably a mix of both.

What you do in your workspace determines what kind of lights you need. If detailed work is being carried out, you will need to ensure the output of lumens is right to deliver a bright lighting level. Conversely, if you're storing pallets and have daylight filtering, a lower wattage lamp will do the job and save even more money in running costs.



Have you changed the way you use your commercial space?

If you moved into a building that was originally designed for manufacturing and now you use it for storage, it might be wise to change the lighting plan. An Energy Makeovers Lighting Consultant can put together a new lighting design that best suits the current operation of the business.

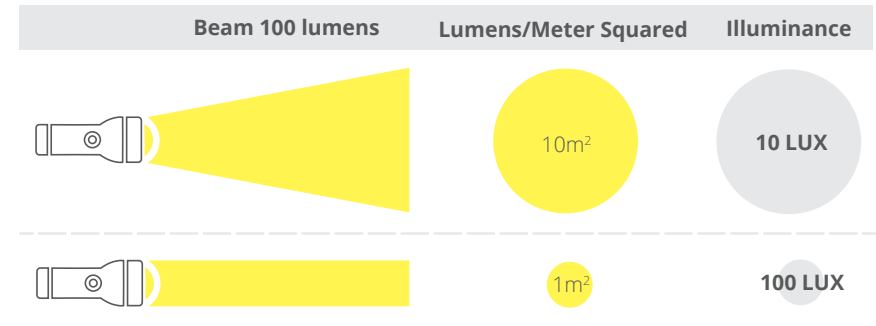


Call us to find out how **1300 788 766**

2

Let there be light. But how much do you really need?

One of the most important factors to consider in lighting is lux. If you work at a desk, or in a warehouse with a high ceiling this measurement indicates how much light you'll see in the work area. For example, if you have a high ceiling, your lights need enough lux to reach the area you work in and light that area.



You will also need to consider the beam angle of the light, which will tell you how far the light pools on the surface below. The beam angle will be important to consider when looking at how far spaced out your lights are. The closer your lights are to each other, the lower the beam angle required. Don't worry too much about this – all of these factors will be considered in the original lighting design of the building. If you're upgrading to LED, all you need to do is let a Lighting Consultant recommend the right replacement.

Tech Talk:

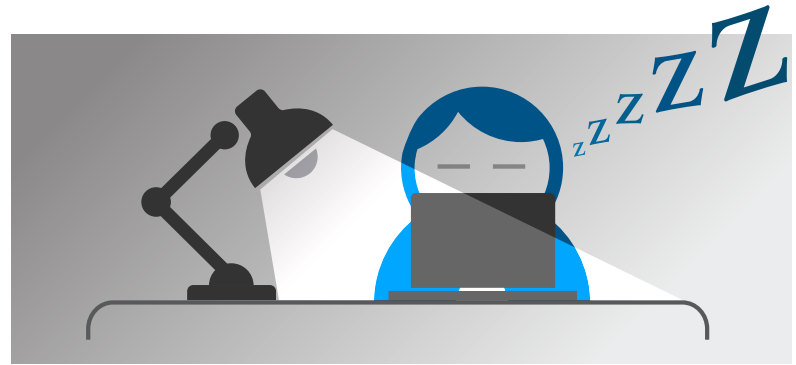
Lumens: The total amount of light from a light source in any direction.

Lux: Lumens per m² – aka the 'lighting level'. Simply put, the Lux Level is the amount of light hitting a surface a given distance away from the light source.

3

Choose the right light to improve employee productivity

Ever wondered why it's hard to doze off at the office? Apart from the threat of sudden unemployment, the lighting has a lot to do with it.



Think about this: the lighting colour in our homes is usually around 3,000k. It's what we're used to. It's a warm and comfortable light that helps us feel relaxed and sleepy. Incandescent lights (what we started using first) have consistently been 3000k so over time it's a lighting colour we have become used to. Unfortunately, your boss doesn't want you to feel sleepy and comfortable at work, so office lighting and most work places (especially if they use fluorescent tubes) is almost double that at 5,000 – 6,000k.



Speak to us about how to **improve alertness** in the workplace with a **better quality lighting** outcome.

4

Colour matters

The colour of light produced can vary with different lamps.

Colours are used to affect the mood in spaces

- e.g. dimmed downlights in restaurants
- Warm (yellow) lights can be perceived to be 100 lumens 'less' than cool lights but in reality the light output is the same!
- The standard home colours are warm white (3000K)

At Energy Makeovers, we have helped thousands of businesses including **restaurants, retail shops, recreation facilities** and **warehouses** upgrade to LED. Our Lighting Consultants are experts at knowing what sort of light best suits your workplace.



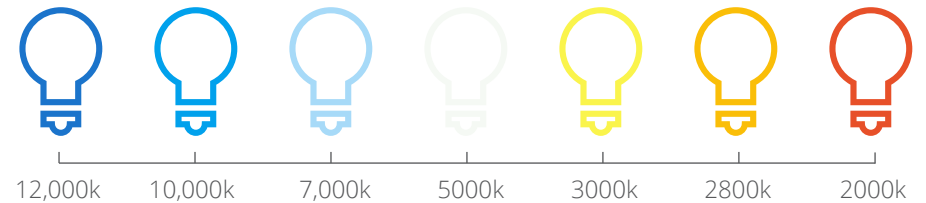
5

Looking for a light that resembles daylight - think again!

We've had customers ask for 4,000k lights as they believed them to be 'closer to daylight' and a 'more natural light' and after installation changed their mind as it made them uncomfortable.

Outdoor Blue Sky

Household



Not sure what kind of light you need?

Speak to an Energy Makeovers Lighting Consultant. **Phone: 1300 788 776**

There's a common misconception about cooler white lights being brighter because white lights appear to be brighter to the human eye. Natural daylight is subjective. A cloudy sky is about 7,000k and a clear blue sky is 12,000k so bear that in mind when you want 'natural daylight' LEDs in your home!

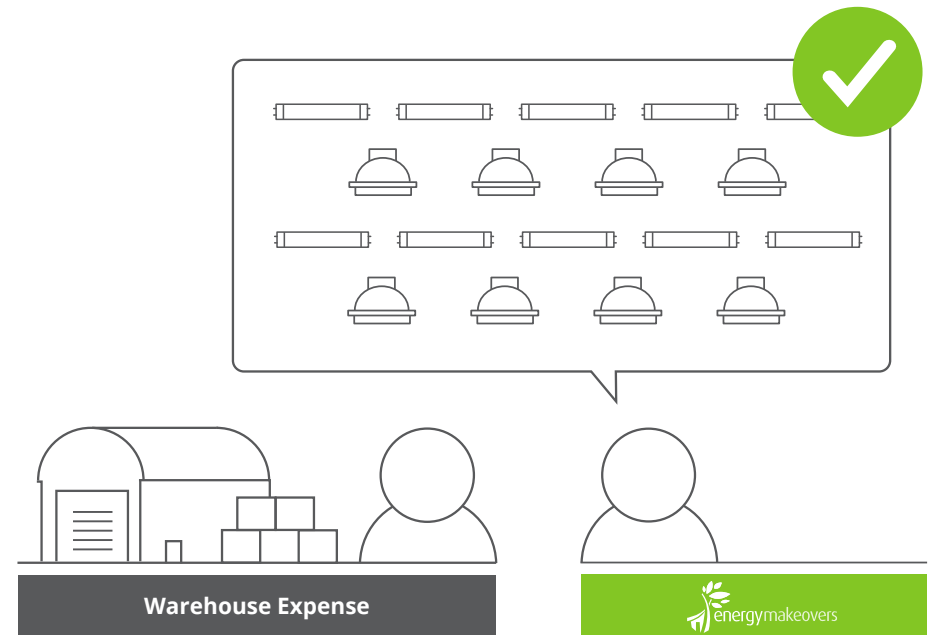
6

Savings from LED

We often hear: "I don't own the place, so there's no point in forking out to change the lights". While we don't want you to go 'forking over good money' only to line your landlord's pockets, consider this: **most LED upgrades pay for themselves after 3 to 6 months.** So, if you're a tenant in a building with a lease 12 months or longer, the savings you'll see on your energy bill will stack up faster than if you'd held out with the energy-sucking lights that were there when you moved in.

Here's an example of a return on investment period for a warehouse.

Energy Makeovers' customer. 'James H' is the Facilities Manager at a Warehouse in the Western suburbs of Melbourne. His warehouse has 50 highbays + 200 fluorescent tubes to upgrade.





6

Savings from LED

The warehouse lighting costs per year are currently \$27,980 with their energy-hungry lights.

Also factored in are the costs of maintenance on the outdated lights including replacing them every 4 years with 400w Mercury Vapour bulbs at \$30 per bulb, scissor lift hire at \$400 for 4 lamps, or \$100/lamp and electrician costs of \$50.

Estimated Savings & Benefits

Current annual lighting cost per annum	\$27,980	Total savings over 5 years	\$133,503
Led Annual Running Cost	\$6,113	Annual energy savings [kWh]	51,470
Total annual savings with LED	\$21,867	Annual Carbon Abatement [kg]	58,161

Calculations are based on a electricity rate of 25c/kwh and 10 hours operation a day, 260 days a year.
Annual cost includes avoided lamp replacement costs

With a change to new LEDs lighting costs will plummet to \$6,113 a year!

This is a **huge saving of \$21,867** a year

7

Not all lights are created equal.

LED technology is developing at a rapid pace as sales of LEDs increase around the globe. The increase in popularity also means incremental drops in LED prices from manufacturers.

As manufacturers compete for market share we do see the inevitable 'snake-oil' claims from some manufacturers promoting products that offer LED specs that are not only incorrect, but not actually possible yet with current LED technology.

The claimed efficacy of 175lm/w is technically impossible at the current state of LED development and is beyond the current reach of science. However LED technology does continually improve and we expect that higher efficacy LEDs will emerge in the coming months and years.

LED TUBE

Energymakeovers 30W = Compact Fluorescent Light 80W





Why we won't put our name to our lights

At Energy Makeovers we remain brand and model agnostic with LED lights. **This means that we supply the highest quality lights available as dictated by LED technology developments.** We prefer not to commit to a specific light because sometimes by the time you're ready to upgrade your lights the market has changed and a better light has become available because technology has improved.

Unlike some of our competitors, who put their brand on lights they buy, we opt for the flexibility of selecting the best lights for our customers. LED suppliers that choose to brand their lights may place orders for thousands of globes that may end up laying around for months in a warehouse. This means they're stuck with this stock until they sell it and could mean a customer is receiving outdated technology by the time they're installed. Every recommendation we provide a customer is based on their specific needs and the very best product available on the market. It's why we avoid putting our brand on products and why we choose flexibility instead, enabling us to change brands and models quickly and often, based on the market technology.

8

Beware of big name brands

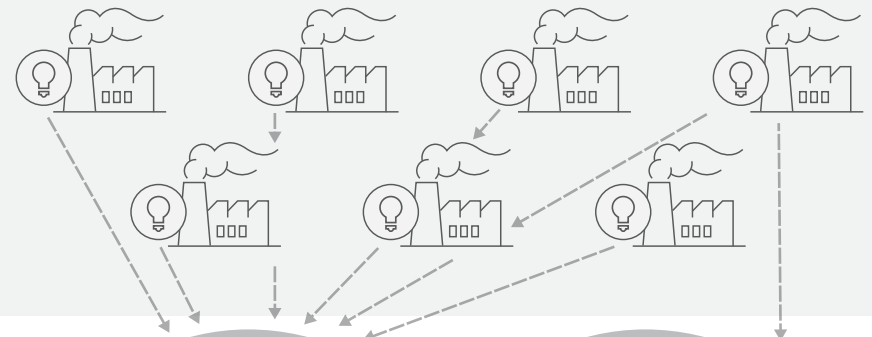
The innovation of LED lighting is happening at a lightening pace. This means that big companies with big names are often slow to respond to new technology, which means their lights aren't the most cutting-edge products available.

Likewise, some competitors have personalised branding for their lights, which means they are often using imitation products that have had a delayed manufacturing process.

Without branding our stock it means we have flexibility of products. We hold the manufacturers accountable and test every range of stock that we see, remaining brand and model agnostic. Every recommendation we give is based on a customers specific needs and the very best product available on the market, of the thousands available.

In the future you won't ask for a '60w' bulb, you'll ask for a 800 lumen bulb because that is the outcome you want.

SUPPLIERS



energymakeovers

BIG BRAND





The solution for businesses:

Here's the real money-maker. You could save your business a fortune and actually improve the lighting quality for your workers and customers by upgrading to LED. You may even be able to reduce the number of lights you have by making sure they're working efficiently (they have the highest level of output and the lowest level of energy input)

Channel 7 News upgraded their studio, storage and car park lights to LED. In total they upgraded 753 lights. Here's the incredible benefits:

- Much cooler temperatures will save on air conditioning costs over time
- The new LEDs can last up to 10 years so much less maintenance is required
- \$21,257 in lighting costs saved a year
- They're now working in the future, not stuck in the past!
- 92,374 tonnes of carbon abated

What are the benefits to you?

Aside from the huge decrease in bills, dramatic reduction in your carbon footprint, the drop in maintenance of lights, often improved lighting quality that an upgrade offers and bringing your home or business into the 21st century, the best part of upgrading your lights could be the subsidies you get towards it.

Under various state government incentive programs residential properties and some businesses are eligible for huge subsidies to upgrade to LED. In some cases it might even be free!

How Energy Makeovers can help?

Give us a call 1300 788 776, or complete our online form and we can tell you if you could save a fortune on your lighting bill every year. We can tell you how much it will cost you, if it's free and if it's not, what the payback period would be.

You're so close to upgrading to the future of lighting.

