

## Electrical Maintenance & Safety Issues

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### Are You Aware of the New Smoke Detector Regulations? Avoid Legal Actions and Insurance Wrangles.

In an effort to save lives and reduce property losses, owners of properties are taking quick action to install the latest technology in smoke detectors since the enactment of new legislation by the NSW State Government.

Strata Managers have advised that due to the increased Duty of Care responsibilities, consequences of not doing so, could lead to expensive legal actions in the event of fire or smoke damage or even a death, especially in high rise buildings.

Take action to save lives & protect your property and assets by installing only the best available equipment, most of which is very economical.

The NSW Fire Brigades has issued some minimal guidelines on the best way to go about new installations

and you can look them up at their web site:

[www.nswfb.nsw.gov.au/community/athome/smokealarms/](http://www.nswfb.nsw.gov.au/community/athome/smokealarms/)

This web site written in plain English will give property owners and managers all the information they need to implement and maintain this new initiative by the government and it would be a wise move to check it out.

Numerous types and brands of smoke detectors and fire indicator panels are available but it is most important to install equipment that has the relevant Australian compliance approvals. Be sure to include this information in your records.

In a nutshell, the following guidelines need to be observed:

- Use only approved equipment

- Select the correct type of equipment for the location.

Industrial property owners already have installation guidelines under the Building and OH&S codes of practice but all of this equipment needs regular testing, maintenance, repairs and reports.

Avoid personal and property loss by installing smoke detection equipment.



### The Authorities Will Act On Reports From Fire Officers

The authorities may not investigate individual residences for smoke detectors but if a fire occurs, questions are sure to be asked. If they are not installed, this may affect insurance claims and lead to big legal actions.

**“A big leap forward with duty of care responsibilities, has propelled property owners into action.”**



*Typical photoelectric type detector recommended for use near kitchens. Detectors with a permanent 240 volt power supply with battery back up are the preferred product.*



*Typical fire panel for use in residential apartment blocks & small buildings. The indicator lights on the panel will show you where an activated smoke detector is located.*



*Typical ionization type detector recommended for use in or near bedrooms and hallways. All detectors should be kept away from the direct path of fumes, steam & dust particles.*

## Halogen lights create ambience but they have limitations...

No one would use an industrial high bay light fixture in their home, (well, there's always one) but the point is, we need to **carefully select** the most appropriate light fixtures for the intended purpose.

One light fixture and lamp that has gained a lot of favour over the years in residential and even major commercial applications, is the ever present Halogen down light.

They may look exciting and produce a great effect but they do have their **limitations**.

One of those limitations is the **excessive heat** that they produce, not only in the room that they are illuminating but also in the ceiling space where they are partially installed.

They become so hot that **they will burn you** if you touch them and if there is debris or electrical cables nearby, a fire could start.

**The additional heat also adds to air conditioning loads and increased electricity costs.**

For these reasons, they are largely unsuitable for general lighting, albeit that they

provide **a beautiful even coloured light**.

Highlight Paintings and Sculptures. Halogen lights are beautiful in places where they do not present a fire risk and maybe where a special feature is required to be lit such as a painting, sculpture or garden lighting for instance.

Take care when installing these lights. We'll show you how.

**Talk to the team at Caslec.**



*Halogen lamps produce a considerable amount of heat and are suitable mainly for spot lighting, as opposed to general lighting.*

## There are Alternatives to Halogen Lights - Take Care!

**Halogen Lights must always be installed with care.**

They simply cannot be installed, on a ceiling the way most other down light fittings are installed.

**We recommend that fire resistant protective caps** should always be installed over the top of halogen lights, as some fires do start in ceiling spaces.

**Alternatively**, use a different type of light fitting such as compact fluoro down lights of which one in particular which is shown opposite can directly replace Halogen

down lights and fit into the same ceiling recess.

These lights generate much less heat, are long lasting, use less electricity and are economical to buy. They will replace Halogens in a lot of places.

The technology of LED lights is also making rapid advancements. Look at the new LED traffic lights as an example.



*Leaves and debris brought in to ceiling space by birds or wind create fire hazard. Picture below shows fire protective cover installed over light*



*These new 240 Volt compact fluoro down lights, (above left) look just like a halogen down light (right) and fit in the same diameter recess. They offer a lot of advantages in suitable applications.*

## Electricity can be Wasted with Fluorescent Lights

**Fluorescent lighting systems are very efficient** and are installed in most buildings for that reason.

**But they need maintenance. The tubes deteriorate over time & they dim but this drop in illumination may not be noticed.**

The diffusers & tubes also collect dust & lower the light

levels even further, even though they will continue to operate for a long time in that state.

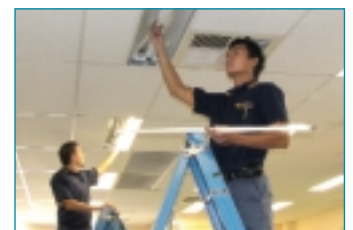
**Fluorescent lights need cleaning** at least once per year and with a **systematic replacement of all tubes** at intervals of approximately every 4 years (13000 hours) which is their **average** life expectancy.

**This is the lowest cost way of keeping a lighting system in good order** and at its

brightest. Some spot replacement of a few tubes will still be needed during the 4 year period, but overall the lighting system will provide much improved service and quality illumination.

As usually occurs, the occasional ad hoc replacement of one or two tubes here and there, will result in deteriorating illumination levels to about 50% of the lighting system potential and it will always remain at that low level.

However, the full price for electricity will still have to be paid, for a continually underperforming and dull lighting system.



*Lighting update carried out by caslec maintenance staff*

## Maintain your Emergency & Exit Lighting System

**The building codes and OH&S Act** requires all commercial and industrial buildings to be installed with emergency and exit lighting.

When for instance, smoke is billowing through the building and power has been lost, that is when the emergency systems kick in to assist people to evacuate safely.

This is the moment of truth for an emergency lighting system and good management practices on which peoples lives may depend.

When planning an emergency lighting system, quantities and specific locations of the emergency lighting equipment, need to be carefully considered.

On completion of the installation, a scheduled maintenance plan and manual has to be created which will include an inspection, testing and repair program that must be carried out every 6 months, in accordance with Australian Standard AS 2293.2:1995

Repairs to emergency lighting systems include replacing of fluoro tubes, batteries, control equipment or entire fittings.

Caslec can keep your system up to date in a professional, scheduled and coordinated way.

**Give us a call.**

**In the near future, exit signs with long lasting LED lamps instead of fluoro tubes, will be a sure winner and will result in increased reliability and reduced maintenance costs.**



*Exit signs and emergency lights need regular maintenance. When simulated emergency testing is carried out, the internal batteries must maintain illumination for 90 minutes or they fail the test and must be repaired or replaced.*

## Defective & Dated Electrical Switchboards

**Main Switchboards/Meter Boards and Sub Distribution Switchboards are the heart** of the electrical system in your property. Like a black box they usually sit in the corner and are given minimum attention. ("If it ain't broke – Don't touch it") but it is important to maintain this equipment in good condition and updated and or replaced to keep pace with the latest regulations and improved control equipment.

**Disastrous results occur when a switchboard fault happens.** A whole plant or multi storey building can go off line, people get caught in

lifts, computer information can be lost, not to forget the consequences of lost production.

**Overloading and bad connections (hot joints) are major issues with older switchboards and are the cause of major electrical breakdowns.**

**We recommend to property owners** to carefully consider how they are currently maintaining their switchboard equipment. Switchboards and wiring need to be carefully inspected on a regular basis and defective equipment replaced.

**Here are some things to do:**

- **Replace** fuses and main switches with circuit breakers and safety switches,
- **Check** for burnt connections and loose wires,
- **Perform** infrared inspections.
- **Replace** asbestos panels on which old equipment is installed

**Contact Caslec for assistance.**



**BEFORE**



**AFTER**

*Switchboard above was way past its use by date and needed to be replaced. New replacement switchboard is safe and functional.*

## Industrial & Commercial Maintenance

**Duty of Care, OH&S, Liabilities, Compliance;** These are all familiar terms to people who manage electrical installations.

**Scheduled maintenance plans for your electrical equipment are needed more than ever.**

For instance, managers must consider reporting procedures, test tagging, defective installations,

overloading, non compliant equipment use, overload devices and up to date controls on electric motors, guarding, alarms, the effects of a poor quality power supply & provisions for back up power on computers and so on.

**The current spate of power failures is likely to continue** so provision for stand by generators may also be an option in your property.

Most factory and property managers know that if one phase of a 3 phase system is lost due to a fault, say in the overhead lines in the street, all 3 phase equipment and machines must be immediately turned off and not operated until all power is restored.

**Infrared scanning** to detect faults in electrical systems is very effective and can assist in any maintenance program. It's a virtual minefield out there but the **team at Caslec can put all this into**

**perspective** for you and prepare site specific maintenance schedules and follow up electrical maintenance programs



### And another thing - Test Tagging - Some common sense has prevailed at last

Wonders will never cease so it was a pleasant surprise that we learned that authorities have relaxed the requirements for testing and tagging the leads of computers and office equipment.

Well, its going to limit some of the maintenance work we do but more importantly, the inconvenience to business will be minimized with these revised regulations.

We at Caslec and most other electrical contractors were always well aware that the goal posts had to be shifted as it were, so that largely non existent hazards were not continually costing businesses money, for no apparent reason or overall benefit.

However, it may be a wise move to carry out your own risk assessments and if in some situations there is a risk present, please ask our staff to check out the equipment for you.



These pictures show a small part of the detail that is required to carry out the testing process to satisfy Australian Standards — AS/NZS 3760

With specialised computers, printers, labelling and various software programs required in the process of testing, it follows that a fair amount of input is required to produce the final reports, that we provide to our customers.



Our fleet of 15 yellow service vans are a familiar sight around the streets and highways of Sydney and with all the specialized equipment and stock that goes with them, it represents a fair investment.



All the vans are fitted out in a standard way with a select group of electrical products, all of which has been developed and refined over the years to create efficiency and a superior level of customer service.

All the vehicles are regularly stocked and serviced.

The vans are an essential component of our branding & advertising strategy and a lot of new work, large and small, comes from them being seen on a regular basis.

### Electrical Maintenance & Safety Issues For Business & Home

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#### Next Issue:

**How to reduce electricity costs:** They are on the rise

**Electrical Regulations**  
-Ever changing - how do they affect you?

**OHS:** Will common sense ever prevail?

**Duty of Care:** A serious legal term that has very significant potential impact for anyone involved in managing electrical installations and repairs.

**Important: This is not advice.** Items herein are general comments only and do not constitute or convey advice per se. It may be a helpful guide to customers for their private information. Every effort is made to ensure that the information is accurate but we take no responsibility for any subsequent action that may arise from the use of the newsletter. If advice is required from Caslec on any matter, customers are required to contact the office and arrange for a site visit from our supervisors or managers.