

# IS YOUR HOME SAFE?

ELECTRICAL SAFETY TIPS EVERYONE SHOULD KNOW



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national  
electrical and  
communications  
association

## WHO IS NECA WA?

The National Electrical and Communications Association (NECA WA) is the peak industry association representing the interests of over 700 electrical contractors throughout Western Australia.

It provides its members with electrical industry specific advice on legal, industrial relations, technical, safety, advocacy and business development issues.

NECA WA also consists of:

- **Electrical Group Training (EGT)** which is the largest employer of electrical apprentices in Australia and;
- **The College of Electrical Training (CET)** which is the largest provider of training to both apprentice and qualified electricians in the state.

NECA is a passionate advocate of electrical safety within the home. Whilst electricity brings great benefits to all our lives, it also presents some real dangers.

In conjunction with Western Power, NECA is proud to present this booklet, which is designed to provide your family with some easy to implement safety tips – encouraging the safe use of electricity and minimising the potential risks it can pose.



## Home Electrical Safety Checklist

- ☐ You have had RCDs (safety switches) installed and you test them every three months.
- ☐ You have working smoke alarms which you test monthly and replace the batteries yearly.
- ☐ You always use a licensed electrician for electrical work.
- ☐ You never use a power tool, appliance or lead that you know is faulty or has a frayed cord.
- ☐ There are no electrical appliances used in wet areas or near pools.
- ☐ There are no damaged powerpoints or switches in your home.
- ☐ You always turn the power off before you go into the ceiling space.
- ☐ You always switch off a power outlet before you plug in or unplug any power tool or appliance.
- ☐ Ceiling insulation does not cover your downlights.
- ☐ You are aware of overhead powerlines and service lines – especially when using ladders.
- ☐ When not in use, accessible powerpoints have plastic plugs in them to protect young children.
- ☐ You teach your kids about being safe with electricity.
- ☐ Your outside party lights are suitable for outdoor use.
- ☐ You arrange a check of your solar power system every year.
- ☐ An electrician has checked the safety of private power poles on your property in the last five years.
- ☐ The manufacturer's instructions for use of electrical equipment are to hand.
- ☐ Your home's earth stake is in good condition.

## INTRODUCTION

This booklet explains some of the simple things you can do to make using electricity in your home as safe as possible, such as installing RCDs (safety switches), maintaining your electrical equipment and making sure everyone in your home understands how to be safe with electricity.

Never attempt to do your own electrical work. There are standards and rules for installing electrical cabling and equipment in any home, which is why only licensed electrical contractors (electricians) are legally able to do it.

You should however know where to turn the power off at the main switch (or switches, if there are several tariffs being used on the property) on the electrical switchboard, and how to shut down a solar power system, should it be required.



# ELECTRICITY IN YOUR HOME



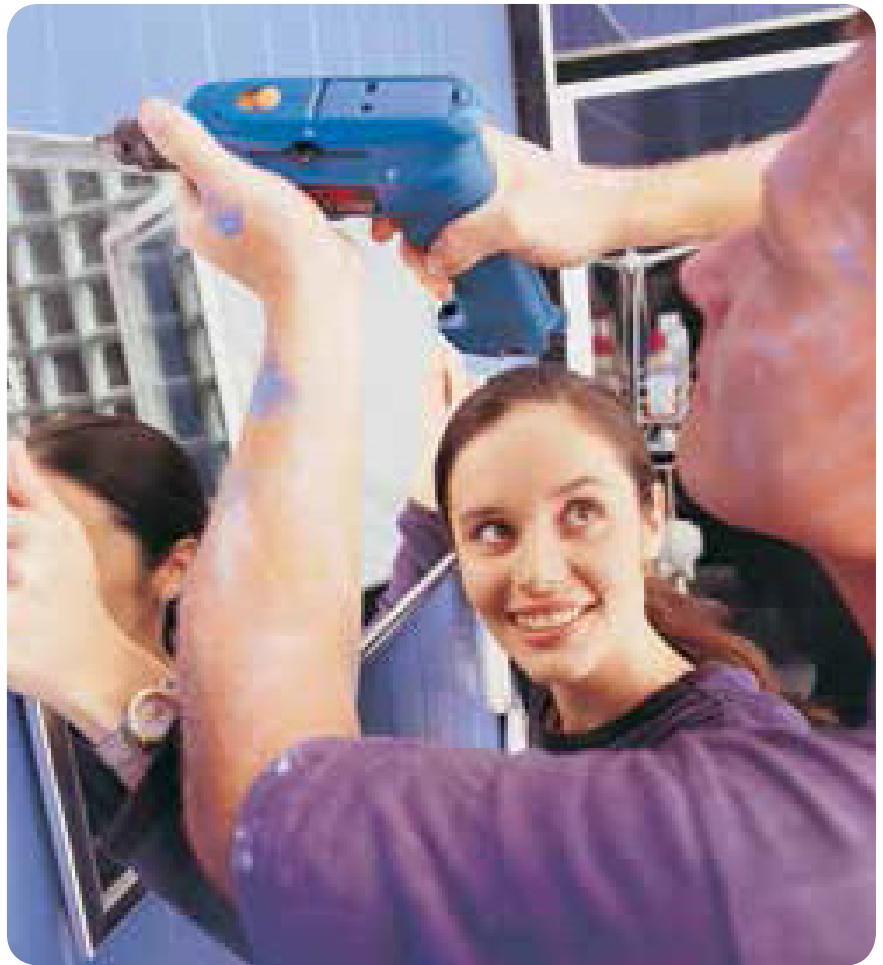
Electricity comes into your home via overhead service lines or underground electrical cables. Your electricity usage is measured by meters, before the main feed goes to a switchboard of circuit breakers that control the various electrical circuits in your home.

Your electricity supplier is responsible for the power connections to the electrical point of supply on your premise. Excluding your metering equipment, you are responsible for any infrastructure, cabling, switchboard or private power poles beyond the point of supply.

At your switchboard, the switch labelled 'main switch' will turn off all power and lighting circuits in your home.

Sometimes a separate tariff will power pool pumps or hot water systems, and this will have a separate switch. Any installed RCDs will be on your switchboard and, if your house has a solar power system, there will be a nearby inverter.

Your home will also have an 'earth stake' in the ground outside, with an earth wire attached. The stake can dissipate a static



discharge, such as a lightning strike, directly to earth. You should not remove or tamper with this stake and you should have it checked periodically, especially for corrosion.

## Electrical surges

As the demand for electricity fluctuates, it can upset the steady flow of electricity and cause surges. Apart from the changes in consumer demand for power, electrical surges can also be caused by lightning strikes, damage to power poles and electricity generation. Electrical surges can damage your electrical equipment, especially computers, TVs and DVD players.

Devices such as surge protectors can help extend the life of your electrical equipment. A surge protector should not be confused with an RCD switch, which has a different purpose.

Power surges to electrical equipment from lightning strikes could cause an electric shock if you are using that equipment at the time. During a storm, it is best to avoid using sensitive electrical equipment and telephones.



Dull or flickering lights may indicate a power surge and you should call your electricity supplier if it continues.

## Concealed cables

One of the greatest risks to home renovators is failing to identify live electrical cables in wall cavities. In some cases, cutting holes or driving screws or nails into walls can damage the insulation on a cable within the wall, which could result in an electric shock or fire.

Prior to drilling check to see whether there is a light switch or socket outlet in the vicinity. Electrical cables supplying this equipment usually run vertically from the floor or ceiling and in most cases are directly embedded in the wall.

Turn off any circuits near where you are working at the switchboard. Do not turn the circuits back on until you have finished.

## Is my electrician licensed?

Anyone who does electrical work in Western Australia must have an electrical work licence or an electrical contractor licence (one of the contractor's licensed electricians can do the electrical work). It is a legislative requirement for electrical contractors to display their EC licence number on their advertisements and invoices. To find a licensed electrician in your area, go to NECA WA's website and click on the 'Find an Electrician' link [www.neca.asn.au/wa](http://www.neca.asn.au/wa).

Legislative requirements and technical standards outline how electrical work must be done. Always ensure that you receive a safety certificate with each job. The electrical contractor must provide this to the customer within 28 days of the work being undertaken and the certificate must provide:

- Details about the electrician
- Details about the electrical equipment or electrical installation
- A statement certifying the electrical equipment or electrical installation is electrically safe.

You can check your electrician's licence to confirm it is valid and current before they do any work, using the licence search at [www.commerce.wa.gov.au](http://www.commerce.wa.gov.au).

If you think the work completed by an electrical contractor or

electrician has not been completed correctly, please contact EnergySafety on 6251 1900. EnergySafety is a division of the Department of Commerce.

## Home renovations

Always take care when doing any home renovations, even if they do not directly involve electricity, as there may be electrical risks present.

Never do your own electrical work. Even if you think you know what you are doing, if you are unlicensed, it is dangerous and illegal. Besides risking an electric shock, you could cause an electrical fire that could invalidate your home insurance.

Always have a licensed electrician do your electrical work, including installing a new powerpoint or light fitting, making an extension lead, repairing an electrical appliance or installing electrical cabling.

Homeowners are restricted to doing things such as changing a light bulb, fluorescent tube, fluorescent starter or fuse and resetting a circuit breaker.

It is not against the law for a homeowner to purchase electrical accessories or appliances that need to be hard wired, but a licensed electrician must connect them. It is advisable that the licensed electrician provides the electrical accessories as they are likely to purchase from approved wholesalers, who supply Australian compliant accessories.



# RESIDUAL CURRENT DEVICES



RCDs (also known as safety switches) save lives. They monitor the flow of electricity from the main switchboard and help avoid a serious shock by cutting the electricity supply if an imbalance in the current is detected. Talk to your licensed electrician about having one installed if they are not present. Ideally you should have RCDs installed on all circuits. To find a licensed electrician in your area, go to NECA WA's website and click on the 'Find an Electrician' link [www.neca.asn.au/wa](http://www.neca.asn.au/wa).

RCDs can prevent many serious electric shocks, but remember that they are not a substitute for proper electrical maintenance and safe practices.

## Does my home have an RCD?

Look for a 'test' button on your switchboard or a button marked with a 'T', which will let you know you have an RCD installed. New homes built after 2000, renovated homes, rented or leased homes and homes recently purchased must have a residual current device installed. RCDs are sometimes confused with circuit breakers and surge protectors, but they are not the same thing. Generally, it will be labelled 'RCD', 'ELCB' or 'safety switch'.



Image: Example of a switchboard with recommended safety devices

Understanding your electrical switchboard can be confusing for many householders. For information about understanding your switchboard, as well as helpful product advice about RCDs, smoke alarms, safety and security, please download a free Clipsal Safety and Security Brochure from <http://www.cleverhome.com.au/automation/Clipsal-Home-Basic-Safety-Security.pdf>.

To find a licensed electrician in your area, visit [www.neca.asn.au/wa](http://www.neca.asn.au/wa) and click on the 'Find an Electrician' link.

## Portable RCDs

A portable RCD/safety switch unit is ideal where permanent safety switch protection is not available. Simply plug in your tool or appliance, set the safety switch, and you're protected.



Image: Clipsal Switched Power Outlet (485 series)

## Test your RCD every three months

Test your RCD at least every three months to make sure it works properly. Before testing, turn off any appliances on that circuit, but leave one appliance on, such as a portable lamp or a radio. Check with everyone in the house before you conduct the test to avoid interrupting their power supply.

All you need to do is press the test button and if it flicks the switch off and cuts the power it is working correctly (check the appliance you left on has stopped working). If the test button does not turn the power off, call your licensed electrician as soon as possible to have it checked.

After testing, simply turn the switch back on. If you have a refrigerator or air conditioner on the circuit ensure that you wait at least three minutes before turning it back on to prevent possible damage to it.

If your RCD 'trips' during normal household electricity use there may be a fault. Reset the RCD and, if it trips again, try unplugging the appliances. If it continues, seek further advice from your electrician.



## Buying, selling, renting a house, flat or unit

### Homes for sale

Laws introduced in 2009 require all home sellers (before sale) and landlords to arrange the installation of at least two RCDs, protecting all power points and lighting circuits.

RCDs must be fitted to protect all power points and lighting circuits before the land title is transferred. If you are planning to sell your home and it does not already have at least two RCDs protecting all power points and lighting circuits, you will need to engage a licensed electrical contractor to fit them to the main switchboard or distribution board.

### Renting a home

Landlords must arrange for at least two RCDs to be installed on the switchboard at their rental premises. If RCDs are not fitted then tenants should contact the managing agent or landlord and request that two RCDs be installed.

### Number of RCDs required

The regulations require RCDs to be installed on the main switchboard. In some cases, to reduce the number of circuits affected by the operation of any one RCD, homeowners may consider having more than two RCDs fitted.

### Compliance

Penalties of up to \$15,000 for individuals and up to \$100,000 for a body corporate may apply if the regulations are breached.

For more information visit [www.energysafety.wa.gov.au/RCD](http://www.energysafety.wa.gov.au/RCD) or call 6251 1900.



Tragically each year in Australia there are over 10,000 house fires resulting in more than 70 deaths, 1,500 injuries and millions of dollars worth of property damage. Many of these homes did not have a working smoke alarm.

Only working smoke alarms can provide the critical early warning needed to save lives and minimise property damage. When you are asleep you lose your sense of smell. A smoke alarm is your electronic nose and will alert you if there is smoke from a fire.

A small fire can grow to involve an entire room in just four minutes. A smoke alarm provides early warning and time to escape.

All smoke alarms:

- Need to be tested and cleaned regularly
- Need to be replaced after 10 years.
- DFES recommends photoelectric smoke alarms.

Smoke alarm regulations require owners to have mains powered smoke alarms fitted to all residential properties in Western Australia that are subject to sale, rent or hire. It is the responsibility of the owner to ensure that the smoke alarms fitted are:

- No more than 10 years old
- In working order
- Permanently connected to mains power.

## Have you checked your smoke alarm?

Good quality smoke alarms typically operate from the mains voltage supply, but they generally also contain a backup battery which allows the alarm to remain operational even when the power is cut during a blackout. Like all battery operated appliances, your smoke alarm battery must be checked regularly to make sure that it will still function if there is a fire.



It is important that you check your battery condition regularly to ensure the best protection for you, your family and your home.

### Test Battery - Monthly

It is recommended that you test your batteries once a month to ensure that they are always in working order. To test the battery, press and hold the Test Button. This should be done with the power switched off. (Smoke detectors are usually wired to the lighting circuit, so turn this off at the switchboard). The alarm should sound indicating the battery condition is acceptable. If the unit fails to respond, the battery should be replaced without delay.

### Replace Battery – Yearly

From time to time the smoke alarm battery must be replaced with a new one. It is recommended that you replace your batteries once a year to ensure that they will work whenever the need may arise.

Clipsal recommend choosing a common date that occurs every year and is easy to remember (such as 1 April – April Fool's Day). The battery should also be replaced if the alarm fails to sound when you press and hold the Test button.

### Replace Smoke Alarm Unit – Every 10 years

All smoke alarms (regardless of manufacturer) have a limited service life, normally ten years. After that period, correct operation of the alarm cannot be guaranteed. The entire smoke alarm unit should be replaced with a new one. If your smoke alarm was installed over 10 years ago, please contact a licensed electrician to replace your smoke alarm unit. To find a licensed electrician in your area, go to NECA WA's website and click on the 'Find an Electrician' link [www.neca.asn.au/wa](http://www.neca.asn.au/wa)



## Smoke Alarm Checklist

- ☐ **Choose** high-quality alarms from a reputable supplier (Clipsal FireTek® recommended).
- ☐ **Install** multiple alarms and have them interconnected for the best protection.
- ☐ **Ensure** your alarms are installed by a professional installer.
- ☐ **Choose** the correct alarm type for the location. Smoke alarms work either by optical detection (photoelectric) or by physical process (ionisation). Photoelectric type smoke alarms are best suited to bedrooms and lounge and living areas. Ionisation type smoke alarms are typically installed in hallways, corridors and home offices.
- ☐ **Test** alarm operation and clean the unit regularly (minimum once per month).
- ☐ **Check** battery condition regularly (minimum once per month) and replace battery yearly.

## CEILING SPACES

There are serious electrical safety risks in your ceiling space with many electrical cables often located up there.

There is one simple thing you can do to make it safer before you go up into the ceiling space — turn off all the main power switches at the switchboard first.

Some electrical equipment, such as hot water systems or stoves, may have a separate control switch for that tariff, so it is safest to turn off all the switches at the switchboard.

Once you have turned the power off, secure the main switches in the 'off' position or label them so no one turns them back on while you are working up there. You should also let someone know you are going up into the ceiling space.

When you are up in the ceiling space, even with the power off, avoid contact with electrical cables as some may still be live, such as the service line or a solar power system cable that are not controlled by the main switch on the switchboard. Take care not to damage any

cables or other electrical equipment in the ceiling space or cause ceiling insulation or debris to move near to downlights, which may later cause a fire.

Using torches and cordless power tools will avoid the need for the power when you are in the ceiling space. However, if power is required to complete the task, turn off all circuits except the circuit supplying the powerpoint outlet you plan to use and make sure it is protected by a safety switch (RCD). Test the safety switch before you enter the ceiling.

# SOLAR POWER SYSTEMS



Solar power systems (also known as solar photovoltaic or PV systems) have two main parts — the solar panels on the roof, which convert the sun's energy to direct current (dc) electricity, and an inverter that alters dc current into 240-volt alternating current (ac) supply for use in your home.

Have your solar power system regularly cleaned and maintained to ensure safe and efficient operation. Annual inspections will identify safety issues and will help ensure your system is performing at its best. Solar panels cannot be turned off and produce electricity whenever there is light on them. Care must be taken whenever you are near the panels and it is best to leave work on these parts to experts who understand the dangers involved.

Have an annual inspection by your electrician who can repair any damage, fix any loose fittings or replace any exposed cables. Never attempt electrical repairs yourself.

The inspection should check for:

- panels that may have cracked or chipped glass, discolouration or other obvious defects
- panels and supporting frames that are not secure
- any faults reported on an inverter's display panel (refer to the manufacturer's manual for advice)
- any debris blocking cooling vents to the inverter
- any switch showing discolouration, obvious defects or being hot to touch
- signage in place that clearly displays the shut down and isolation procedures
- deteriorating parts of the system, especially cables or isolators.



## In an emergency

A solar power system will continue to generate power during the day, even after the main power has been disconnected or the system has been turned off at the switchboard. As a result, it can pose a risk if damaged during a storm, flood or fire.

If you need to shut the system down in an emergency, follow the shutdown procedures which should be located at the inverter and/or on the main switchboard. Do not attempt to turn off a solar PV system if any of the components of the system are wet.

# WET AREAS AND SWIMMING POOLS



Regardless of whether it's a pool, kitchen or bathroom; water and electricity do not mix. Bare feet and wet skin can make you more susceptible to electric shock. If you are in a pool, even a small shock could lead to drowning due to loss of muscle control.

Using electrical appliances near a pool that are powered through an electric lead is not a good idea. Move them away from the pool, use battery powered devices and have appliances such as lights hard-wired into a circuit.

Using electrical appliances in the bathroom can be dangerous if the appliance falls into water or it is affected by moisture in the air.

## Follow these simple tips to ensure the safe use of electrical appliances near water and the safety of your family:

- Never use any electrical appliance near water or touch anything electrical with wet hands.
- In the bathroom, switch off and unplug all portable electric appliances after use and store them away from powerpoints.
- Do not use portable heaters in bathroom wet areas — it is best to have a strip heater or a ceiling unit installed by your electrician.
- Immediately dispose of any electrical appliance that has been immersed in water or damaged by it.
- Do not use extension leads or power leads near outdoor wet areas, unless they are specifically designed for external use.
- Wear rubber or plastic-soled shoes when using electrical appliances in laundries, on concrete floors or outdoors.
- Only use a licensed electrician to install and maintain your pool's wiring and electrical equipment. Talk to them about the safest locations for powerpoints and electrical equipment in a weatherproof structure and always keep the protective and waterproof covers in place, except during maintenance.





## Powerpoints, double adaptors and power boards

Powerpoints are usually at a low level, placing them in easy reach for young children. Where young children are present, use plastic outlet plugs to stop them inserting objects into the powerpoint pin sockets.

Where powerpoints are likely to be exposed to the elements, have weatherproof powerpoints and switches installed.

Never overload a powerpoint by 'piggy-backing' with multiple double adaptors. If you need more powerpoints, use a power board or ask your electrician to install extra powerpoints.

Only use power boards with low power items like televisions, videos and stereos and not with high power items such as room heaters, clothes dryers and washing machines.



## Buying electrical appliances

Importers and manufacturers have duties to ensure the equipment they supply is electrically safe and suppliers of electrical equipment have a legal obligation to ensure that electrical equipment is accompanied by information about its safe electrical use.

Ask the supplier to confirm the equipment meets electrical safety requirements and check for compliance marks.

Do not buy equipment that that does not have partial insulated pins. Do not buy appliances that need a travel adaptor to plug into a power point or that have holes in the end of the plug pin.

Take special care when buying equipment over the internet to ensure it complies with Australian safety standards. It can be dangerous to buy from overseas sellers who do not comply with Australian safety requirements.

## Extension leads

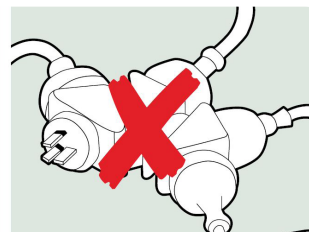
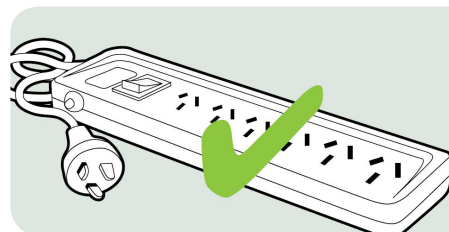
Different types of leads are available depending on the required use. Always use heavy duty leads outdoors. If you are using power tools or high-pressure water hoses, then the leads to these items should be suitable for outdoor use.

Be aware of where extension leads are lying when using electric mowers, brush cutters, line trimmers or hedging tools, or placing power tools on the ground such as circular saws or angle grinders, so you do not accidentally cut the lead. Always use a circuit with an RCD.

Never make an extension lead yourself. It is illegal and an incorrectly wired extension lead can cause a serious shock.

### Simple safety tips include:

- Purchasing extension leads and powerboards that comply with Australian safety standards (the [www.doesitcomply.com.au](http://www.doesitcomply.com.au) website may be of assistance)
- Not running leads through doorways or windows
- Protecting leads from weather and water when using them
- Fully unwinding leads before using them to avoid overheating
- Checking your leads for signs of damage or fraying and discarding any damaged ones
- Installing additional powerpoints rather than using leads.



## Buying a home

When buying a home, check the fixed electrical equipment (such as dishwashers, circuit breakers, ovens, air conditioners, bathroom fan light heaters, swimming pool equipment) is not subject to a recall.





## Buying second-hand appliances

Before buying second hand equipment you should check there are instructions on how to use it in an electrically safe way. This may include instructions downloaded from the manufacturer's website, but at a minimum should include:

- Safe operating instructions
- Care and maintenance instructions required for electrical safety
- Any specific instructions of the appliance related to electrical safety.

Second hand sellers are not required to test the appliance to prove it is electrically safe before selling it to you, however they must tell you they have not tested it. If they have had the appliance tested by a qualified person they may instead tell you the results of the test. If you buy a second hand appliance that has not been tested, have it tested by a licensed electrical contractor before use.

## Cleaning appliances and power tools

Cleaning appliances can be a simple, yet effective, form of maintenance. Removing the build up of grease or dirt can affect the electrical functioning of your appliance.

Before cleaning it, turn it off at the powerpoint and unplug. Only use a damp cloth for cleaning and never immerse an appliance in water unless advised in the manufacturer's instructions.

Simple cleaning tips include:

- Keeping hot plates and ovens free of food spillages or grease
- Removing breadcrumbs and residue from toasters
- Wiping down jugs and kettles
- Removing dust from power tools.

## Electric blankets and heaters

Inspect electric blankets and heaters that have been stored over summer before re-using them. You should:

- Never crease electric blankets
- Never use sharp objects, like safety pins, to secure them in place
- Discard damaged electric blankets or heaters
- Keep heaters well away from flammable materials, such as curtains
- Never leave heaters operating unattended, or operating throughout the night while you are sleeping
- Never use heaters to dry clothing
- Avoid using a plug-in heater in the bathroom or other wet areas.

## Clothes dryers

When used correctly, clothes dryers are convenient and safe but in some instances they have caused fires from overheating. To avoid your dryer overheating you should:

- Install, maintain and use your dryer according to the manufacturer's instructions
- Keep the exhaust duct clear of obstacles to allow hot air to escape
- Clean the lint filter before each use
- Keep area well ventilated during operation
- Never overload your dryer
- Avoid using it if it is making unusual noises e.g. rubbing or grinding sounds, or if the drying cycle timer is not properly functioning.





## Overhead power lines and service lines

Before you begin any work outside your home, be aware of overhead service powerlines, especially if you are walking with long objects or ladders that reach above your head. If you are cleaning out gutters or painting the fascia or bargeboards, you should keep well away from your service line. While these lines are usually insulated, the insulation may become brittle with age and a simple knock may cause it to break away and expose live wires.

Powerlines can also sag in extreme heat or may sway in a strong breeze.

Pools are often placed in prohibited areas, such as below service lines, or the main switchboard is placed inside the pool area. Check with your electrician about prohibited locations or to relocate powerlines and switchboards.

If an overhead service line is damaged or falls to the ground, stay away from it, warn others, call triple zero (000) and contact your electricity supply authority.

## Check before you dig

If you have underground electric lines, before digging, always check where buried cables are located. A guide is to look for electrical equipment that has conduits running down external walls into the ground. There may be a diagram on the switchboard or in the meter box indicating where any incoming electrical supply lines are located.

If you think there may be buried cables but you still need to dig, carefully dig down to the cable depth (typically 500 mm) until you have confirmed its location.

Be especially careful digging on footpaths as many different services may be located there, including high voltage underground cables. Ring the free 'Dial Before You Dig' service on 1100 or visit [www.1100.com.au](http://www.1100.com.au) for more information.

## Inspections of private overhead power lines and poles

It is important that you inspect your private power lines and poles (including stay-wires, fittings and all other components) at least once a year to check for any visible signs of deterioration. Never climb a pole, approach the wires, attempt any electrical repairs yourself or cut any vegetation near an energised power line. Contact with live wires can kill!

### It is recommended that you:

- Safely remove any vegetation on the ground close to the base of all power poles and under the power lines;
- Check that trees and branches are at least two metres away from power lines. If they are not, arrange for tree pruning by a competent vegetation control contractor. Check the Yellow Pages or contact the Tree Guild of WA for a list of trained contractors;
- Check wood poles for obvious defects such as poles which are cracked, damaged, rotting, attacked by white ants/termites and ask your white ant/termite inspector to treat (if required) the area around the poles;

- Inspect steel poles regularly (eg. every year). Steel poles, even if galvanised, are subject to rust and should be checked above and below ground for defects; and
- Check all poles for leaning, brackets pulling away from poles/buildings, damaged stay-wires, split cross-arms, broken strands in wires, damaged insulators or wires hanging much lower than others in the same section.

If you come across any of these defects during a visual inspection, immediately arrange for further inspection or repairs by a licensed electrical contractor.

If you are a tenant or leasing a property, notify the property owner, property manager or landlord immediately if a power pole, powerline or equipment requires maintenance or repair.

If you are unsure about the ownership of power pole, powerline or equipment on your property, please contact:

<b>Western Power</b>	13 10 87
<b>Horizon Power</b>	1800 267 926

## Powerlines and tree safety

Avoid planting trees or shrubs under power lines unless they are 'power-line friendly'. Check with your local nursery or energy supply authority for a list of trees suitable to be near or under powerlines.

Avoid trimming trees or branches near powerlines. Always use a professional arborist or tree pruning specialist who is trained to do this work.

## Private power poles

Some homes in Western Australia have power poles on their property that connects to the electricity network. The property owner is responsible for keeping these private power poles and equipment in a safe condition to avoid an electrical fire or incident.

# ELECTRICAL RISKS OUTSIDE THE HOME



## Christmas lights or party lighting

When you connect festive or decorative lighting in or outside the home:

- Ensure that the lights are suited to external use and are weatherproof. Lights suited for internal use must not be used outside.
  - Inspect any temporary lighting for damage before re-using them.
  - Only use power boards fitted with overload protection for your lighting, not double adapters.
  - Do not pass electrical leads through doors or windows where cables may be damaged.
  - Always turn temporary lighting off when going out, going to bed or replacing light bulbs.
  - Use extra-low voltage equipment wherever possible and especially when attaching lights to fences, metalwork, roofs and downpipes.
- Avoid placing temporary lighting above or around your pool.
  - Keep your lights well clear of overhead powerlines – at least three metres away.
  - Take care with lights on Christmas trees (keep lights away from parts of living trees that need to be watered or decorative trees that children may think need to be watered).
  - Do not overload Christmas trees with lights, bend the cords too sharply or place lights near metal decorations or tinsel.

## Generators

When using a generator:

- Follow the manufacturer's instructions carefully
- Take care when refuelling the generator (it is best to turn it off when refuelling)

- Never connect the generator to your home's fixed wiring, unless you have a change-over switch installed by a licensed electrical contractor – it can be extremely dangerous
- Only use the generator to run portable appliances
- Never use generators inside enclosed spaces, such as garages or enclosed carports, as you risk carbon monoxide poisoning.

## Vehicle accidents and power lines

Vehicle accidents can bring down overhead powerlines. If there is an accident near you, it is important to remember that the vehicle and nearby fences and trees in contact with the fallen powerlines could be live. Advise vehicle occupants to remain in the vehicle and other bystanders to remain well away from fallen powerlines. Call triple zero (000) for emergency help.

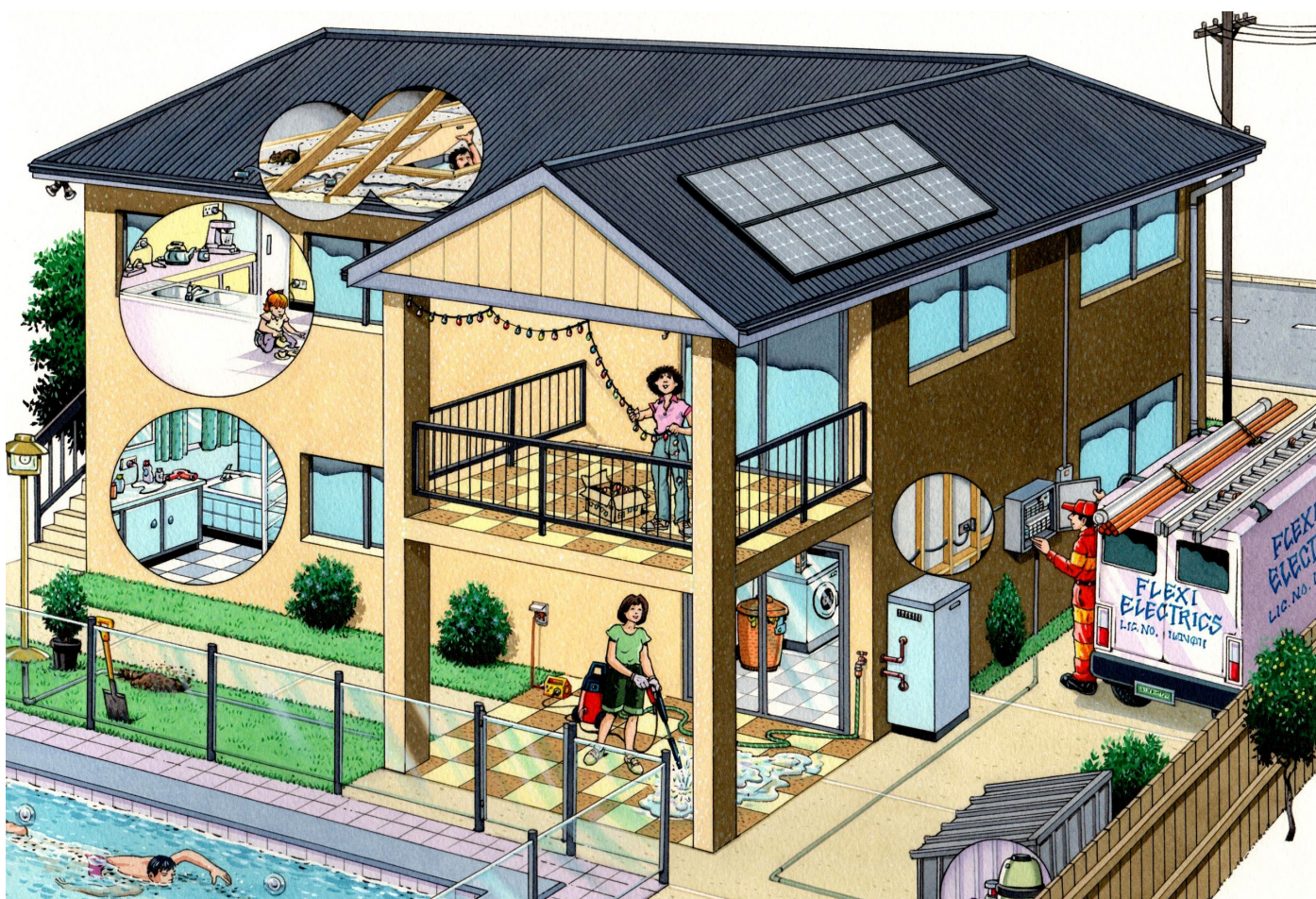


## USEFUL CONTACTS

For more information about electrical risks in your neighbourhood, contact:

Western Power	13 10 87
	13 13 51 - Western Power emergencies
Horizon Power	1800 267 926
Other useful contacts:	
Dial Before You Dig 1100	Call 1100 or visit <a href="http://www.1100.com.au">www.1100.com.au</a>
EnergySafety	1800 678 198
Synergy	13 13 53
National Electrical and Communications Association (NECA)	(08) 6241 6100

**Disclaimer:** The information contained in this brochure is provided as a general guide only and should not be relied upon as constituting legal advice. All reasonable attempts were made to ensure the information was accurate at the time of publication, but it may be subject to change due to changes in legislation and regulations. You should seek independent legal advice in relation to your particular circumstances.



1	Turn off the power before going into the ceiling space.
2	Check ceiling insulation does not cover down lights.
3	Check that Christmas and party lighting is suitable for outdoor use.
4	Keep your solar power systems functioning safely, and have the system maintained regularly.
5	Look up and live. Be aware of overhead power lines, especially when using ladders.
6	At the switchboard: <ul style="list-style-type: none"> <li>Know how to turn the power off, including equipment such as hot water systems which may be on a separate tariff, and will have a separate switch.</li> <li>RCDs save lives; test yours every three months.</li> </ul>
7	Before drilling into walls, be aware of concealed cables.
8	Always use a licensed electrician to do your electrical work.
9	A licensed electrician must install and maintain your pool wiring and electrical equipment.
10	Clean the lint filters in your clothes dryer every time you use it.
11	A portable RCD/safety switch can protect you when a permanent RCD is not available.
12	Check underwater lights for glass cracks or defective seals.
13	Take care when digging near underground wiring.
14	Take extra care when using electrical appliances in wet areas such as kitchen, bathroom and laundry.
15	Have permanent lighting installed for your pool area, rather than using temporary lighting with leads.
16	Only use electrical appliances for their intended purpose. Follow the manufacturer's safety instructions.

Kid's Quiz - can you find the mouse in the house?





national  
electrical and  
communications  
association