

# eNERGY bulletin



Government of Western Australia  
Department of Mines, Industry Regulation and Safety

## In this issue

# Let's work together to make it a safe 2018!

As part of the Machinery of Government (MoG) changes announced by the State Government, the Department of Commerce and Department of Mines and Petroleum amalgamated to form the new Department of Mines, Industry Regulation and Safety (DMIRS) on 1 July 2017. The Government's objective is to create collaborative departments focused on whole-of-Government goals and delivering services in the most effective and efficient way.

DMIRS has completed an internal review of its structure to ensure it is well equipped to reach this objective and deliver other reform initiatives. The new structure came into effect on 22 January 2018.

The new DMIRS structure will see EnergySafety and the Building Commission come together to form a new Building and Energy Division. Building and Energy, with the Consumer Protection Division, will form part of the Industry Regulation Group within the Department.

EnergySafety and the Building Commission have many common functions, including setting building, plumbing, gas and electrical standards, licensing builders, building

surveyors, painters, plumbers, gas fitters, electrical contractors and electricians and investigating breaches of standards or laws.

Industry funds the Building Commission, through fees and the Building Services Levy and EnergySafety through fees and the EnergySafety Levy. These funds will remain separate and will be allocated under applicable laws to support the combined Division in a transparent and accountable way.

I will continue to hold the statutory position of Director of Energy Safety. I now also exercise the powers of the Building Commissioner.

Building and Energy will consist of five directorates: Building Compliance, Gas and Plumbing Compliance, Electricity Compliance, Regulatory Services and Policy, Standards and Engineering. The former directorates of EnergySafety and Building Commission will be deployed across these directorates, utilising management capabilities from the combined divisions.

- Let's work together to make it a safe 2018!..... 1
- Western Power launches service request forms and starts to shut down ETIC..... 3
- 2018 Industry updates..... 3
- ETIC and eNotice FAQs..... 4
- The new Wiring Rules – preview the main changes..... 5
- WA's first recreational facility operating independently from the grid..... 6
- UWA seeking FIFO workers for mental health and wellbeing survey..... 7
- RCD legislation made simple..... 7
- Major Pilbara towns now supplied by underground electricity supplies..... 7
- Electrical inspectors undertake bushfire investigation training..... 8
- Changes to smoke alarm requirements..... 8
- Defects identified in roof spaces..... 9
- Unsafe electrical appliance on sale at the 2017 Perth Royal Show..... 9
- Failure to visually inspect..... 10
- Rottnest Island now powered by 45% renewable energy..... 10
- Help find the last of Samsung's unsafe washing machines..... 11
- Electricity licensing statistics..... 11
- New Regulations and Code of Practice to limit "live" electrical work..... 12
- Your technical questions answered..... 12
- Product recalls..... 16
- Unsafe power adaptors distributed at Diggers & Dealers Mining Forum..... 16
- 2016-17 Electrical Incident Safety Report..... 17
- What's wrong with these installations?..... 19
- Standards update..... 20
- Serious defects - 1 October to 31 December 2017..... 20
- Prosecutions for breaches of electricity legislation..... 23
- Summary of infringements for breaches of electricity legislation..... 24
- Installation of electrical switches and power points near gas cooking appliances..... 25
- Toolbox information sessions..... 26
- Changes to issuing of Class G gasfitting permits..... 26
- Changes to the Regulations..... 26
- Opportunity for referral..... 27
- Mobile catering vehicles..... 27
- Summary of infringements for breaches of gas legislation..... 29

## Building and Energy

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For the electricity and gas industries, your interactions with the Department will not change. In the longer term, we will look at ways to offer the same level of service but more efficiently.

I am committed to making this new structure work smoothly and ensuring services continue to be delivered well during this period of change and safety is not compromised.

I will keep you informed about developments and any future changes.

As you would be aware, amendments to the Electricity (Licensing) Regulations 1991 were published on 14 November 2017. The new requirements, prohibiting work on energised electrical equipment, will come in force on 14 May 2018. We are also anticipating the new Wiring Rules will be published during the first quarter of 2018.

The new year promises many changes! Let's work together to make it a safe year for the electricity, gas and building industries.

A handwritten signature in black ink, which appears to read 'Ken Bowron', is positioned above the printed name.

Ken Bowron  
**DIRECTOR OF ENERGY SAFETY**

## Western Power launches service request forms and starts to shut down ETIC

The introduction of eNotice in 2016 provided all electrical contractors with a user friendly way to submit notices electronically. Western Power has been busy developing a new IT system that integrates with eNotice. This system is now operational and a new suite of online service request forms are available on Western Power's website.

With the implementation of eNotice and the new service request forms, Western Power commenced its ETIC 'shut-down' period on 5 February 2018. After this date, electrical contractors will no longer be able to submit a new preliminary notice through ETIC. After 16 March 2018, ETIC will be shut down for both preliminary notices and notices of completion submissions. Therefore any new electronic notices must be lodged through eNotice.

If you are a Contractor Connect or SACS accredited electrical contractor, please migrate over to eNotice. The relevant accredited terms and conditions documentation has been updated to support this change.

Please note, preliminary notices from ETIC will not be moved across to eNotice. If you submitted a preliminary notice using ETIC and need to submit a notice of completion after 16 March, please use eNotice. You simply quote your ETIC preliminary notice number in the comments section on your notice of completion in eNotice.

Once ETIC is shut down, you will not have the ability to review any previously submitted notices. Please print or save copies of any notices you may want to refer to prior to ETIC being shut down.

The new service request forms cover the following services:

- Western Power to fit meter;
- conversion of phase;
- temporary disconnect and reconnect;
- temporary overhead supply;
- isolate existing supply to add meter; and
- overhead to underground.

Two new forms have been introduced, so if you currently submit a notice requesting an overhead to underground conversion, or you wish to isolate an existing supply to add an additional direct meter, you must complete a new service request form for the works to be carried out.

The new service request forms replace the online network service request. Western Power no longer accepts online network service requests in relation to paper notices or eNotices.

If you would like any further information about the shut-down of ETIC, or the introduction of the new service request forms, please contact Western Power on 13 10 87, or email [enquiry@westernpower.com.au](mailto:enquiry@westernpower.com.au).

## 2018 Industry updates

Building and Energy is hosting free information sessions for Western Australian electrical workers and contractors.

These sessions will update you on:

- the new Wiring Rules;
- regulations for live electrical work; and
- supervision of apprentices.

Five sessions are available:

- 3 April – Bentley;
- 5 April – Joondalup;
- 9 April – Bentley;
- 10 April – Henderson; and
- 12 April – Bunbury.

Sessions will be held from 9am to 12pm (registrations from 8.30am).

For full venue details and to book your place, please visit [energysafety.eventbrite.com](http://energysafety.eventbrite.com).

For those unable to attend a session, information will be made available on our website at [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety).

## ETIC and eNotice FAQs

### Frequently asked questions

#### What is eNotice?

Building and Energy's eNotice is a web based facility used for the electronic lodgement of preliminary notices, notices of completion and electrical safety certificates for electrical work. It is free to register and use.

#### What does this change mean for current ETIC users?

Western Power commenced its ETIC 'shut-down' phase on 5 February 2018. As a first step, the ability to submit a new preliminary notice was removed. After 16 March 2018, ETIC will be completely shut down. Please note: once ETIC is completely shut down, any new electronic notices must be lodged through eNotice.

#### What does this change mean for Contractor Connect or SACS accredited electrical contractors?

If you are a Contractor Connect or SACS accredited electrical contractor, please keep an eye out for a separate email which will advise you of your transition dates.

eNotice will be the only way for Contractor Connect and SACS to submit notices to Western Power once ETIC is shutdown.

Western Power has updated the relevant scheme documentation to reflect this change. You can read more about the changes to the scheme documentation at [westernpower.com.au/technical-information/connection-schemes](http://westernpower.com.au/technical-information/connection-schemes).

#### What does this change mean for electrical contractors that previously submitted paper notices for installation of inverters and alternate supplies?

We encourage you to use eNotice to submit your notices to Western Power. This will save you time, as you will no longer be required to submit an additional notification of inverter energy system connection details form. eNotice will collect the information required by Western Power.

#### When is the cut off point for preliminary notices to be submitted in ETIC?

As of 5 February 2018, Western Power no longer accepts preliminary notices in ETIC.

#### What about my current open notices in ETIC?

Preliminary notices that have been submitted in ETIC will not be moved across to eNotice. If you submitted a preliminary notice using ETIC and need to submit a notice of completion after 16 March 2018, you will need to do so using eNotice. Please quote your ETIC preliminary notice number in the comments section of your notice of completion in eNotice.

Once ETIC is shut down, you will not have the ability to review any previously submitted notices. We recommend electrical contractors print or save copies of any notices you may want to refer to, prior to ETIC being shut down.

#### What are the changes to the way you request network services from Western Power?

Western Power has developed new service request forms, which will provide electrical contractors with a single location to submit a service request via Western Power's website. Visit [westernpower.com.au/connections](http://westernpower.com.au/connections) to view the forms.

The new forms cover the below services:

- Western Power to fit meter;
- conversion of phase;
- temporary disconnect and reconnect;
- temporary overhead supply;
- isolate existing supply to add meter; and
- overhead to underground.

The new service request forms will be an easier way to request services and some will require upfront payment via credit card.

Two new forms have been introduced, so if you currently submit a notice requesting an overhead to underground conversion, or you wish to isolate an existing supply to add an additional direct meter, you must complete a new service request in order for the works to be carried out.

The new service request forms were launched on 1 February 2018. From this date, the method of requesting services will depend on which method was used to submit the related notice:

- If you use eNotice, use the new service request form.
- If you use are completing your notice in ETIC, use the 'old' online network service request.
- If you submit paper notices, use the new service request form.

As the new service request forms have been launched, Western Power is unable to accept online network service requests in relation to paper or eNotices.

## What services will require upfront payment?

Western Power will require upfront payment, via credit card, for the following services:

- Western Power to fit meter (install of one to two meters);
- isolate existing supply to add meter (install of one to two meters);
- conversion of phase;
- temporary disconnect and reconnect; and
- temporary overhead supply.

## How do I now access Western Power service requests?

Western Power will launch a new page on its website dedicated to service requests. You can find the new page at [westernpower.com.au/connections](http://westernpower.com.au/connections).

## How do I find further information?

If you would like any further information about the shut-down of ETIC, or the introduction of our new forms, please contact Western Power on 13 10 87, or email [service.request.projects@westernpower.com.au](mailto:service.request.projects@westernpower.com.au).

For further information about eNotice, please visit [www.commerce.wa.gov.au/energysafety/electrical-enotice](http://www.commerce.wa.gov.au/energysafety/electrical-enotice).

## The new Wiring Rules – preview the main changes

SAI Global has released a summary of the major changes in the new Wiring Rules prepared by the Chairman of Committee EL-001. The Committee ballot to approve the new draft is expected in February 2018. A publication date for the new Wiring Rules has not yet been announced but will follow the ballot later in 2018. Some significant changes are listed below.

### Definitions

- Section 1 includes many new definitions to provide clarity for the wording of clauses in Sections 2-8. Examples include 'arc fault detection device', 'electric vehicle', 'protective earth neutral', 'adjacent', 'outbuildings', 'alteration', 'repairs' and several others.
- New 'accessible' and revised 'readily accessible' definitions provide clarity for installers, especially in medical installations and when mounting electrical equipment.

### RCDs

- Previously in residences, only the final sub-circuits supplying socket outlets and lights had to be protected with 30mA RCDs. In the future, all final sub-circuits in residential dwellings must be RCD protected.
- For non-residential premises, final sub-circuits up to 32A capacity supplying socket outlets must be 30mA RCD protected. Hard-wired equipment circuits of this capacity should also be protected.
- All lighting final sub-circuits must be RCD protected.
- Alterations requiring a change to a circuit configuration trigger the requirement for 30mA RCD protection for that circuit. Like-for-like repairs do not.
- Where all protection devices are replaced in a switchboard, all final sub-circuits must be RCD protected.

### Switch rooms

- Emergency egress requirements have been clarified.
- Clearances of 1 m from accessible faces of closed switchboards and 600mm from open doors or racked-out equipment are required.
- Switch room door heights and widths have been increased to 2.2m and 0.9m respectively.
- Two emergency exit paths are required if a switchboard exceeds 800A or is more than 3m in length.

### Main switches

- Main switches must be manually operated and not controlled by electronic devices.

### IP Rating

- A zone has been created to clarify the IP rating required for electrical equipment mounted on external walls. The zone extends downward at a 30 degree angle from the edge of a veranda or eave to the wall.
- Equipment mounted in this zone does not require an IP rating. Equipment outside the zone needs IP33 as a minimum, except for switchboards which historically have been IP23 rated.

### Kitchens, downlights, outbuildings and generators

- A 150mm zone either side of cooktops and extending upward to the range hood, ceiling or 2.4m will apply, where switches and socket outlets must not be installed; this removes the need to reach across hot surfaces.
- Classifications of downlights must be marked on the light and the packaging to indicate where they may be installed. No classification means they must not be installed. 'IC' or 'IC-4' lights may be installed anywhere in an installation.
- Outbuildings separated by a land area are renamed 'individual outbuilding' and 'combined building' will

refer to more than one structure on a common slab (e.g. several residential units on a single slab).

- Generators and network operators' equipment must not be installed within the zones around swimming pools, spas and water features.
- Generator systems must comply with the new version of AS/NZS 3010.

## Lifts

- Lifts used for routine movements of people and goods are considered electrical equipment and are covered in Section 4.
- Requirements for designated emergency lifts are set out in Section 7 – Safety services.
- This section also deals with supply systems, main switchboard, main switches, fire pumps, fire and smoke detectors and alarms and air handling equipment.

## Lighting equipment and accessories

- The section on recessed luminaires has been reworded and features new classifications which are explained in diagrams and tables. Ancilliary equipment (i.e. drivers and transformers) are also included.
- Luminaires are required to have markings to advise electricians how close they can be installed to thermal insulation.

## Swimming pools, paddling pools and spa pools or tubs

- Changes affect bonding arrangements and the location of electrical equipment in pool area installations. A diagram has been included showing bonding arrangements for pools and spas.
- All conductive pool structures will be required to be bonded to the earthing system of the installation.
- Clause 6.3.4.6 prohibits switchboards to be installed within any classified zone has been extended to include electrical generating systems.

## Arc fault

- Requirements for installing arc fault detection devices added. These two-pole devices detect and isolate circuits experiencing small arcing caused by broken conductor strands in damaged flexible cords and fixed wiring or poor terminations. While the currents are generally small they can lead to fires.
- These devices are not mandatory at this time but provide protection additional to circuit breakers and RCD. They are fitted after MCBs and RCDs on final sub-circuits.
- Appendix O provides details about how to install them.

## Appendices

- Appendix E provides details of building classifications taken from the National Construction Code.
- Appendix K covers the extended range of switchboard standards adopted in Australia. It includes several guidelines for switchboard manufacture and verification.
- Appendix M concerns supply reliability, especially as it affects aged and infirm accommodation.
- Appendix N has information about conduit marking standards internationally and in Australia.
- Appendix Q deals with control and protection of DC circuits. DC operates much of the equipment in data centres and is becoming very prevalent in domestic installations with solar panels and storage batteries.

## Electric vehicles

- Electric vehicle charging stations increasingly are being included in electrical installations. They are high-current equipment and merit special attention.
- Appendix P provides guidance on vehicle types and charging stations.

## WA's first recreational facility operating independently from the grid

As part of a large scale plan to implement more renewable energy solutions across its network, Horizon Power has extended its use of stand-alone power systems from rural properties and national parks to include a recreational facility in a north-west town.

Exmouth Golf Club will benefit from solar generated electricity from a 20kW photovoltaic array and a 52kW storage battery with a backup diesel generator when the system is running below optimum.

Horizon Power is using more stand-alone power systems to replace existing power lines and poles. They are a more cost-effective solution compared with the continued upkeep and maintenance required on its ageing rural power lines and poles.

## UWA seeking FIFO workers for mental health and wellbeing survey

Electricians working on mine sites on a fly-in fly-out (FIFO) basis are invited to participate in a mental health and wellbeing survey conducted by the University of Western Australia.

The survey, commissioned by the Western Australian Mental Health Commission, has been designed to provide insights on how the demands of FIFO work affect individual workers, their families and social relationships effects not well understood by health researchers.

Armed with such insights, health professionals can provide more effective strategies and initiatives to protect the mental health and wellbeing of FIFO workers.

Researchers anticipate the survey results will identify positive and negative workplace experiences and also strategies employed by workers, their families and employers to deal with the challenges of these working arrangements.

Participants can also nominate their spouses/partners to complete a separate survey about their experiences with the FIFO lifestyle, which researchers hope will provide understanding on joint experiences.

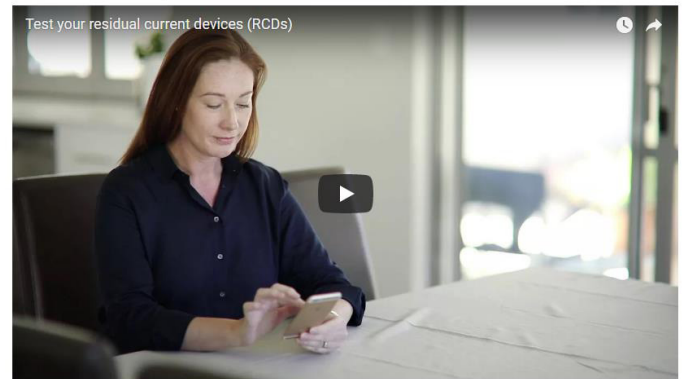
Each participant will receive a personalised feedback report for completing the thirty minute survey and will also the chance to win one of five \$150 dinner vouchers.

For further information or to access the survey visit [crowdresearch.uwa.edu.au/project/wellbeing-fifoworkers](http://crowdresearch.uwa.edu.au/project/wellbeing-fifoworkers).

## RCD legislation made simple

Building and Energy recently produced two short videos summarising residual current device (RCD) requirements for domestic installations. This should help make it easier for home owners, tenants, property managers, real estate/settlement agents and landlords to understand how RCD legislation is applicable to their situation.

'Install two residual current devices' and 'Test your residual current devices', both narrated by Building and Energy's Chief Electrical Inspector Compliance, Todd Bell, are available on our website at [www.dmir.wa.gov.au/energysafety](http://www.dmir.wa.gov.au/energysafety). Both videos run for less than two minutes, and can be found on the pages 'Residual current devices (RCDs) – Testing RCDs' and 'RCD rules'. Electricians are encouraged to direct customers with questions on RCDs to the videos.



Building and Energy video 'Test your residual current devices'

## Major Pilbara towns now supplied by underground electricity supplies

All residents in Pilbara towns, including South Hedland, Wedgefield, Roebourne, Karratha and Onslow connected to the Horizon Power grid are now benefiting from an underground electricity supply.

Earlier than anticipated, the network operator's contractor Electech WA connected the last of Horizon Power's 7,807 consumers in the region to its Pilbara Underground Power Project (PUPP) ahead of the cyclone season.

An underground electricity supply is advantageous in turbulent weather conditions as less time is required for restoration of power during outages.

The final stage of the project including the removal of overhead power lines and poles is expected to be completed early in 2018.

## Electrical inspectors undertake bushfire investigation training

In late October 2017, Building and Energy's Senior Electrical Inspectors Patrick Roberts (Bunbury) and Matthew Abbott (Geraldton) attended a joint agency bushfire investigation course in Mundaring. The course participants were drawn from Western Australian Police, Department of Biodiversity, Conservation and Attractions, Department of Fire and Emergency Services and DMIRS (Building and Energy).

The course consisted of theoretical and practical components over four days with a theory and practical field exam held on the fifth. The aim of the course was to provide bushfire investigators with a detailed understanding of their professional and safety requirements in conducting bushfire investigations, combined with a comprehensive understanding of the science behind fire and the behaviour of a bushfire.

In addition, the course covered burn patterns and indicators, bushfire investigation methodology, scene examination, cause and ignition sources/factors, recognition of signs of arson and legal processes.

Daily field exercises included the study of fire progression from the point of ignition, recognition of fire behaviour indicators, effects of fuel loads, effect of wind and humidity, intentional ignition sources (arson) and determination of fire travel and direction.



*Building and Energy's Senior Electrical Inspector Patrick Roberts (far right) inspecting the scene of a fire*

## Changes to smoke alarm requirements

The Building Amendment Regulations (No.3) 2017 gazetted on 22 December 2017 includes a number of changes related to the installation of smoke alarms which may interest electricians. These include:

- an exemption now available for property owners transferring a title to a new owner who intends on demolishing the dwelling;
- new definitions apply for declaration of intended demolition transfer day and post-transfer period;
- a defence is created for a previous owner against a charge of failing to install smoke alarms prior to the transfer of the ownership of a dwelling if he or she can prove the new owner provided them with a declaration of intended demolition for the dwelling prior to the day of transfer;
- a defence is created for a new owner against a charge of failing to install smoke alarms during the post-transfer period if the new owner can prove the dwelling was demolished within the post-transfer period; and
- the new owner may recover the costs of installing smoke alarms from the previous owner if the new owner didn't provide a declaration of intended demolition.

Further information is available in Building Commission Industry Bulletin 95 at [www.dmirs.wa.gov.au/buildingcommission](http://www.dmirs.wa.gov.au/buildingcommission). The complete amendments can be downloaded from the State Law Publisher website at [www.slp.wa.gov.au](http://www.slp.wa.gov.au).



## Defects identified in roof spaces

If you identify a defect on an electrical installation or electrical equipment while carrying out electrical work which renders the installation or equipment unsafe, you are required to report it to:

- the owner or occupier of the premises; and
- the relevant network operator (Building and Energy if the installation is not connected to a network or the relevant network operator cannot be identified).

If you are carrying out electrical work on the unsafe electrical installation or electrical equipment on behalf your employer and your employer holds an electrical contractor's licence or in-house electrical installing work licence, you are required to report the defect to your employer, who is then required to report the matter to the relevant network operator or Building and Energy.

Some of the Wiring Rules (AS/NZS 3000: 2007) serious defects commonly identified by network operator inspectors include:

- **Clause 3.9.4.1** – joints in roof spaces not enclosed in junction boxes;
- **Clause 4.5.2.3.1** – downlights installed without protective barriers and covered by, or in close proximity to ceiling insulation;
- **Clause 3.9.4.3.1** – wiring systems installed in a space between roofing or wall-lining material and its immediate supporting member;
- **Clauses 3.9.4.1 and 3.9.4.4** – wiring systems not protected against mechanical damage;
- **Clause 3.9.3.1** – wiring systems not provided with adequate support.

Vulcanised Indian rubber (VIR) and tough rubber sheathed (TRS) wiring in an installation should also be reported to the owner or occupier and the relevant network operator.

Failure to report any defect in an installation or equipment that renders the installation or equipment unsafe is a breach of the Electricity (Licensing) Regulations 1991.

Director of Energy Safety Ken Bowron recently issued a reminder of the importance of understanding hazards in roof spaces and how to avoid them.

“There may be wiring up there with damaged insulation or exposed ‘live’ parts, posing a clear risk of electric shock and possible electrocution. People need to move with care in roof spaces to avoid stepping on electrical cables or inadvertently kicking plastic junction boxes that enclose cable terminations.”

## Unsafe electrical appliance on sale at the 2017 Perth Royal Show

Building and Energy's annual compliance safety inspection of electrical appliances offered for sale at the 2017 IGA Perth Royal Show resulted in an infringement notice being issued to a stall holder for displaying for sale an unapproved power supply.

A Euro Slim massage cushion (Model ES-002) was displayed for sale with an unapproved AC/DC adaptor (prescribed article). The adaptor (below) had been manufactured overseas but was sold to the stall holder by an Australian retailer.



*The unapproved AC/DC adaptor*

An imported appliance requires approval from the Director of Energy Safety before being sold, hired, or displayed or advertised for sale or hire. Unapproved appliances pose a risk to consumers, as they have not been properly assessed to determine if they pose a shock or fire risk.

Items approved for sale in Australia are listed under the Electrical Regulatory Authorities Council's (ERAC) National Certification Database at [www.erac.gov.au](http://www.erac.gov.au).

New South Wales Fair Trading also offers a Public Register of Certificate Approvals for Electrical Items in New South Wales, available at [eapr.fairtrading.nsw.gov.au](http://eapr.fairtrading.nsw.gov.au).

The Register allows users to search for a certificate of approval or certificate suitability for an electrical product in New South Wales.

## Failure to visually inspect

An electrical contractor (sole trader) has been convicted and fined in Perth Magistrates Court for submitting a notice of completion for incomplete electrical work that was unsafe and substandard.

The electrical contractor, also the nominee of the company, attended a property in Doubleview with a line crew from Western Power to change over the overhead electricity supply to an underground connection. The scope of work included the replacement of the network operator's kWh meter from the switchboard enclosure with a new meter at a remote enclosure at the front of the property, fitting a blank switchboard panel inside the new remote enclosure next to the meter and terminating the new underground submain cable into the switch at the new distribution board.

On the day the work was carried out, the electrician failed to bring an earth conductor of the correct size to site with him and later stated he had intended to return to site to install the correct sized conductor.

When informed by the Western Power line crew that work on the installation was completed, the electrician turned the main switch on in the house switchboard and energised the installation.

Two weeks later, a Western Power inspector identified the metallic remote meter enclosure was not earthed, rendering the installation unsafe and dangerous.

To make the installation safe, the inspector disconnected the electricity supply to the installation and made a temporary earth connection to the remote meter enclosure before reconnecting the electricity supply.

While the electrician stated he had carried out checking and testing, including meggering the mains and testing the main earth at the house, he failed to make a record of this. Had he carried out a simple visual inspection of the installation, this would have reminded the electrician to replace the incorrect earth conductor.

The electrical contractor was fined \$6,000 with court costs of \$744.35 for breaching Regulations 49(1) and 52(3) of the Electricity (Licensing) Regulations 1991.

## Rottnest Island now powered by 45% renewable energy

In what is a boost to both sustainable energy and tourism in Western Australia, Rottnest Island, one of the State's premier tourist attractions, is generating almost half its own electricity from renewable resources.

Tasmanian utility and renewable energy developer Hydro Tasmania recently integrated a 600kW photovoltaic array into the island's wind and diesel power system, which is managed via a hybrid control system.

The hybrid system also manages the electricity demand of the island's desalination plant with surplus renewable energy used to manufacture drinkable water.

To encourage visitors to learn more about sustainable developments on the island, the WREN (Rottnest Island Water and Renewable Energy Nexus) app has been created. It allows users to view real-time electricity usage, as well as providing information and educational material on the project.

## Help find the last of Samsung's unsafe washing machines

In 2013, Samsung Electronics Australia (Samsung) issued a recall of six models of its top loader washing machines. If not repaired or replaced, these machines could cause house fires, endangering property and life.

Samsung has attempted to contact customers using details gathered by retailers at the time of the sale but some of these records are now out of date. This means many customers in Western Australia have not yet contacted Samsung for a remedy and are likely still to be using their unsafe machines.

Licensed electrical contractors and their employed electricians play a vital role in ensuring the safety of our community. If any electricians notice a Samsung top loader machine in a home or business while performing work at a customer's premises we ask you please, as a voluntary courtesy, to alert the customer to the potential danger.

Customers should call Samsung on **1800 239 655** (8am to 8pm AEST every day) or email [wm.samsung@samsung.com](mailto:wm.samsung@samsung.com) to verify whether or not their machine is subject to the recall and, if so, to arrange for a refund or replacement with a like-for-like safe model.

Those who have already had their machine repaired may wish to consider Samsung's offer of a free, independent audit of the work to ensure it has been carried out correctly. At least one fire has occurred in Western Australia involving a 'reworked' machine.

Owners should not offer recalled machines for sale or leave them on the verge for bulk rubbish collection as they could endanger someone else if retrieved.

The Samsung top loader washing machines being recalled are:

- SW75V9WIP/XSA;
- SW65V9WIP/XSA;
- SW70SPWIP/XSA;
- SW80SPWIP/XSA;
- WA85GWGIP/XSA; and
- WA85GWWIP/XSA.

For more information owners can visit [www.commerce.wa.gov.au/announcements/samsung-washing-machine-recall-faq](http://www.commerce.wa.gov.au/announcements/samsung-washing-machine-recall-faq). Those with difficulties obtaining a remedy can contact Consumer Protection on 1300 304 054 or [consumer@dmirs.wa.gov.au](mailto:consumer@dmirs.wa.gov.au).

## Electricity licensing statistics

Licence category	Number of licences as of 5 November 2016	Number of licences as of 7 December 2017
Electricians	39,614	38,553
Electrical contractor's licence	5,291	5,814
Electrician's training licence	4,704	3,979
Restricted electrical licence – RE	3,542	3,762
Restricted electrical licence – NR	590	544
Electrical worker's permit	342	267
In-house licence holders	258	270
Provisional electrician's licence	207	143
Restricted training approval	114	99
Designated inspectors (electricity) (including network operators)	81	79
Total number of licences	54,743	53,510

## New Regulations and Code of Practice to Limit “live” electrical work

Too many electrical shocks and arc flash incidents are occurring because electricians are working on energised parts of installations and switchboards.

The number of reported electric shocks in the workplace remains alarmingly high at approximately 500 each year – almost two every working day.

Many of these incidents could have potentially caused more serious injury or been fatal had individual circumstances been slightly different. Industry must strive to reduce the number of these serious incidents in future.

To help achieve this:

- the Western Australian government has enacted new regulations to effectively ban energised electrical equipment, with some exceptions; and
- Building and Energy has published a new Code of Practice for Persons working on or near energised electrical installations (the Code).

### Regulations

New Regulation 55 of the Electricity (Licensing) Regulations 1991 prohibits electrical work on or near an energised part of an electrical installation except under certain specific situations, where there is no reasonable alternative and prescribes the necessary approach to ensure that the work is carried out safely.

There is “no reasonable alternative” if the part of the electrical installation needs to remain energised:

- for the work to be carried out effectively;
- because carrying out the work by alternative means would put the health or safety of a person in significant danger; or
- in order to test or fault-find.

### Code of Practice

The Code prescribes additional detailed requirements for those persons who will be authorising or carrying out electrical work on or near energised electrical installations.

Compliance with the Code may be achieved by following another method using sound risk management practices, if it provides an equivalent or higher standard of electrical safety than the Code.

Fundamentally, the Regulations and Code prescribe a risk management approach, requiring a person to authorise or carry out energised electrical work only when there is no reasonable alternative and first:

- perform a thorough risk assessment;
- prepare and formally document a safe work method statement; and
- implement the identified controls and follow the safe work method to ensure the safety of workers.

This is a similar approach to the performance of high risk work as required by the Occupational Safety and Health Regulations.

Compliance with the new Regulations and Code governing live electrical work will be mandatory from 14 May 2018, when the Electricity (Licensing) Amendment Regulations (No. 2) 2017 come into effect. (The Code was published in the Government Gazette on 14 November 2017.)

Electrical contractors and workers are encouraged to familiarise themselves with the new safe working requirements, and start using them, prior to the implementation date.

A copy of the Code is available from the Building and Energy website at [www.commerce.wa.gov.au/publications/code-practice-persons-working-or-near-energised-electrical-installations](http://www.commerce.wa.gov.au/publications/code-practice-persons-working-or-near-energised-electrical-installations). A copy of the Regulations is available from the State Law Publisher website at [www.slp.wa.gov.au](http://www.slp.wa.gov.au).

## Your technical questions answered

**Q: I have recently registered with eNotice and am trying to lodge a notice of completion, however, I cannot get past the draft stage.**

**Why is this happening?**

**A:** If you are a nominee trying to lodge an electrical safety certificate or notice of completion via eNotice but cannot get past the draft stage, it could be because you are logged in with your electrical contractor’s user ID instead of your electrical worker’s ID.

While you are logged in with your electrical contractor’s user ID, you can only lodge preliminary notices or perform administrative tasks.

**Q: Where can I find information on infringement notices and the fine amounts?**

**A:** The infringement penalties for electricians who breach the *Electricity Act 1945* and associated Regulations can be found in the *Electricity Regulations 1947* under Schedule 1 – Prescribed offences and modified penalties. A copy of the Regulations can be downloaded for free from the State Law Publisher website at [www.slp.wa.gov.au](http://www.slp.wa.gov.au).

**Q: I am an A Grade electrician and the only electrician on site. I have a first year apprentice working with me who will be undertaking his second year of training next year and I would like to know what are the responsibilities I have for the apprentice in terms of supervision? Tasks we do on site include repairs on 240 volt power leads and Bosch angle grinders and workshop tasks such as replacing socket outlet or repairing cranes. Can the apprentice do these tasks without my direct supervision?**

**My manager wants me to leave him unsupervised while undertaking these tasks on some days while I am working on another site.**

**A:** Regulation 50(4) requires the supervising electrical worker for a person under training (apprentice) to consider the kind of electrical work being undertaken especially whether or not live wires or live electrical equipment may be involved or in the area in which the electrical work is being carried out. If the apprentice is tasked with repairing tools and leads and there is to be no connection to, or work within the vicinity of, an electricity supply as part of the repair process or part of the testing of the item then the apprentice (if considered competent to carry out the task) would not need direct supervision.

However, if the apprentice is working on any equipment, and live wires or live electrical equipment are, or are likely to be involved in the area in which the electrical work is to be, or is being carried out, the supervising electrical worker must remain in close proximity to the apprentice and the electrical work being carried out so they are in sight of, and, are able to communicate directly with each other.

**Q: I will be carrying out work on a main switchboard which involves the removal of an overhead supply and connection of a new underground consumer mains for an installation connected to the Western Power network. When completing an eNotice for this job, would this be classed as an alteration or new installation?**

**A:** Given you would be requesting a service from Western Power who will carry out the pillar connection, this would be classed as a new installation.

**Q: I know of someone who is carrying out electrical work without a licence. To whom should I be reporting this to?**

**A:** Unlicensed electrical work poses a great danger to electricians and the community and therefore must be reported immediately to the relevant network operator. In instances where the relevant network operator cannot be identified, please contact Building and Energy by phone 6251 1905 or email [energysafety@dmirs.wa.gov.au](mailto:energysafety@dmirs.wa.gov.au).

**Q: I will be setting up a generator to supply power at a show. On completion of the work for this temporary installation, what should I be looking for to ensure the installation is left safe and compliant?**

**A:** Apart from compliance with the Wiring Rules (AS/NZS 3000: 2007), if generators are “hard wired” or have “plug in” connections from the generator to switchboards / sub boards / temporary power boards or large equipment around the site, the following shall apply:

- a) The generator and sub-boards etc are considered an electrical installation where electrical installing work has been performed.
- b) All power points (switched socket outlets) in the sub-boards/temporary power boards shall be protected by RCDs and multiple earthed neutral (MEN) systems complying with AS/NZS3010:2017.
- c) The electrical contractor employing the electrical worker, must provide the client with an electrical safety certificate (ESC) within 28 days of completing the work. A preliminary notice and a notice of completion is to be submitted to the network operator.
- d) If a small generator(s) is/are being used that have their own internal switchboard and socket outlets and there are no external sub boards to be supplied, the generator hire company should ensure the generator is safe to use and provide documentation to prove this.
- e) Generators should be installed in a suitable area, away from public thoroughfare.
- f) Someone working at the event should be deemed competent in the basic working of the generator.
- g) All switched socket outlets shall be RCD protected.
- h) Notices are required to be submitted to the relevant network operator.


Extension leads should only be installed in a temporary manner and should be visually checked before use to ensure they are fit for purpose (i.e. heavy duty) and have been tagged and tested.

For the full requirements, please refer to AS/NZS 3002:2008 ‘Electrical installations – Shows and carnivals’.

**Q: I have just started using eNotice and have noticed there is a check box if a preliminary notice is not required to be lodged. For what work would I need to tick this box?**

**A:** Under Regulation 51(1) of the Electricity (Licensing) Regulations 1991, a preliminary notice is not required to be submitted for notifiable work:

- a) carried out, or caused to be carried out, because of emergency circumstances involving danger to any person or property or the risk of supply being disrupted;
- b) carried out, or caused to be carried out, by an electrical contractor exempted in writing by the Director of Energy Safety from the requirement to deliver a preliminary notice, subject to any conditions that are imposed in respect of the exemption;
- c) carried out or caused to be carried out on a main switchboard or on consumers minas if the work does not require:
  - i. an alteration to service apparatus or transmission or distribution works;
  - ii. disconnection from, or connection to, transmission or distribution works; or
  - iii. isolation from transmission or distribution works (by means of switching or the removal of fuses or links) to allow the work to be carried out safely;
- d) that consist of the addition or removal of control or protective gear; or
- e) that consists of the disconnection of final sub-circuit from, or the removal of, a private generating plant with a capacity not exceeding 25kW.

 Lodge Notice of Completion  
Preliminary Notice

Preliminary Notice Number

Preliminary Notice not required

Next

Cancel

*Check box for 'preliminary notice not required' on eNotice*

## Q: How do I find out if my electrical licence is current?

A: To find out if your electrical licence is current, you can contact the DMIRS Licensing Services branch on 1300 304 064 or alternatively use the licence and registration search facility available on the Building and Energy website at [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety), using the following steps:

a) Click on **Licensing** – How to apply for a licence or search for a licensed person.

### EnergySafety

#### Overview

Learn about who we are and what we do, information on legislation, reports and useful links.

#### Consumer safety

Find out how to use gas and electricity safely.

#### Licensing

How to apply for a licence or search for a licensed person.

#### Industry safety

Information on appliance approvals and network operators.

#### Report an accident

How to report an accident or incident to EnergySafety.

#### Stay informed

Subscribe to the Energy Bulletin, safety alerts and update your contact details.

b) Click on **Licence search** – make sure your tradesperson is licensed.

### Licensing

#### Licence search

Make sure your tradesperson is licensed.

#### Electrical licence

Applying for or renewing an electrical licence.

#### Gasfitting permit

Applying for or renewing a gasfitting permit.

c) Input your details (i.e. licence type or number, first name, surname, suburb or postcode) and click on the **Search** button.

### EnergySafety licence and registration search

This page is for: [Business / company](#) [Consumer](#) [Electrical contractor / worker](#) [Gas worker](#) [Tradesperson](#)

[Login](#)

Licence Type	-- Any Licence Type --	?
Licence Number	<input type="text"/>	?
Surname / Company or Business Name	<input type="text"/>	?
First Name	<input type="text"/>	?
Suburb	<input type="text"/>	?
Postcode	<input type="text"/>	?
<input type="button" value="Search"/>		<input type="button" value="Clear"/>

## Product recalls

### Salzer solar DC isolator

Salzer solar DC isolators are being recalled by IPD Group Limited and AGL Services Pty Limited. IPD has sold approximately 600 of these units in Western Australia. Building and Energy is issuing 'Prohibition of sale' notices to the Western Australia distributors involved.

#### What should electrical contractors do?

- Do not install the isolators listed above and pictured below on any new installations.
- If you have installed the isolators, contact the solar company involved and advise them to contact their customers, recommending they shut down their solar installations immediately using only the 'AC Isolator' switch at the inverter. They should not operate the 'DC Isolator' switch.
- Make arrangements with the solar company to replace the DC isolators.
- Contact your supplier(s) about refunds or product replacements.

#### Further information

Further information on these recalls is available on the ACCC Product Safety Australia website at [www.productsafety.gov.au](http://www.productsafety.gov.au).



Salzer solar DC isolator

## Unsafe power adaptors distributed at Diggers & Dealers Mining Forum

DMIRS has issued an alert warning consumers of power (travel) adaptors supplied with electrical appliances purchased online or purchased overseas that do not meet stringent Australian product safety standards.

The Department was prompted to issue the alert after two consumers received electric shocks from power adaptors supplied with electrical appliances purchased online.

The unsafe power adaptors (see example below) have two exposed pins designed for use in the United Kingdom. When the power adaptor is plugged into a socket outlet, a consumer can receive a potentially fatal 240V electric shock or serious injuries if they make contact with the pins which remain "live". Even when locked in the recessed position, the pins remain unsafe as it is still possible to make contact with them.



The unsafe power adaptor

Building and Energy identified that approximately two hundred of their unsafe power adaptors were distributed at the Diggers & Dealers Mining Forum held in Kalgoorlie between 7 and 9 August 2017. Further investigation revealed approximately 1,400 units had been also distributed at similar mining events throughout Australia.

Forum attendees who received the power adaptors and have not yet been contacted by the supplier, are urged to return the product to the company immediately or destroy and dispose of them responsibly.



Electrical contractors may encounter them or receive queries from customers worried about their travel adaptors. They should be advised:

- Always buy power adaptors from local, reputable retailers.
- Power adaptors meeting Australian standards and are safe to use will be marked with an Australian approval number and the Regulatory compliance mark to show they comply with AS/NZS 3122: 2015 'Approval and test specification – Socket-outlet adaptors'.
- Check the plug pins are configured for use in Australia and are insulated for at least 50 per cent of the pin length.

Consumers already in possession of a power adaptor purchased overseas or via the internet are urged to have it checked by a licensed electrician to ensure it is safe to use. If found unsafe, return the adaptor to the supplier or

alternatively, destroy and dispose of it responsibly. If you have purchased an unsafe adaptor in Australia or have identified any sold by a local retailer, please contact Building and Energy on 6251 1900 or Consumer Protection on 1300 304 054.



Regulatory compliance mark

## 2016-17 Electrical Incident Safety Report

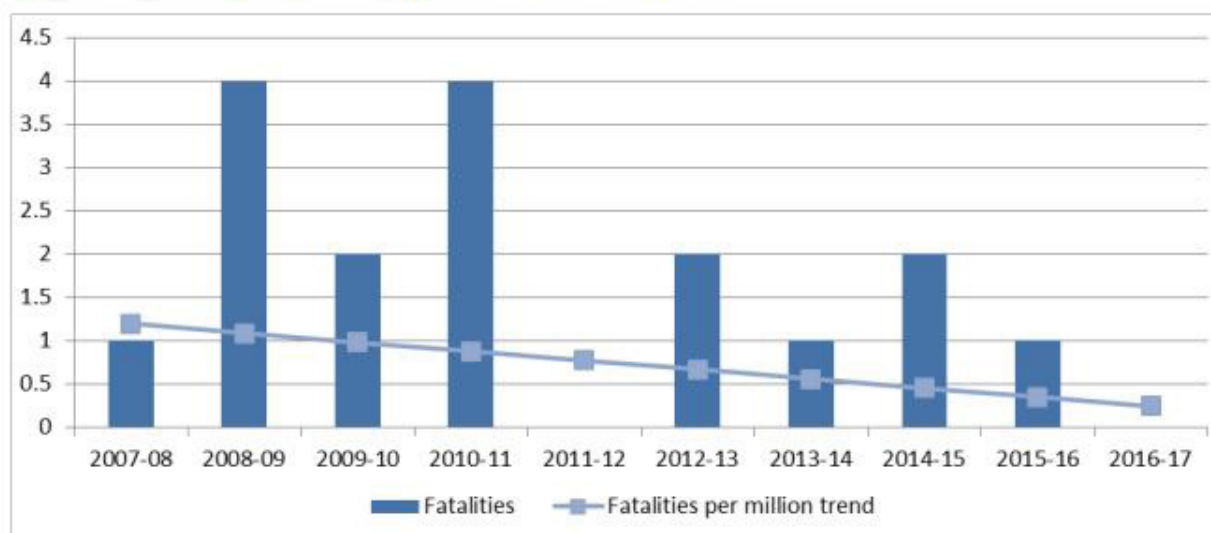
Building and Energy has released a safety report detailing the statistical analysis of reported electrical incidents for the 2016-2017 financial year.

Electrical fatalities, accidents and shocks have been examined for trends, with recommendations made to reduce risks for electrical workers and consumers. The main findings are listed below.

### Fatalities

- There were **no** electrical fatalities attributed to electricity in the 2016-2017 reporting year.
- There has been a downward trend (Chart 2 below) in the number of electrical fatalities in the past 10 years (a total of 17). During this period, 41 per cent of fatalities occurred in the workplace with the highest proportion affecting the 21 to 50 year old age group.
- The highest number of fatalities in the past 10 years was attributed to flexible cords, plugs and sockets as the primary cause at 29 per cent with fixed installations following second at 23 per cent.

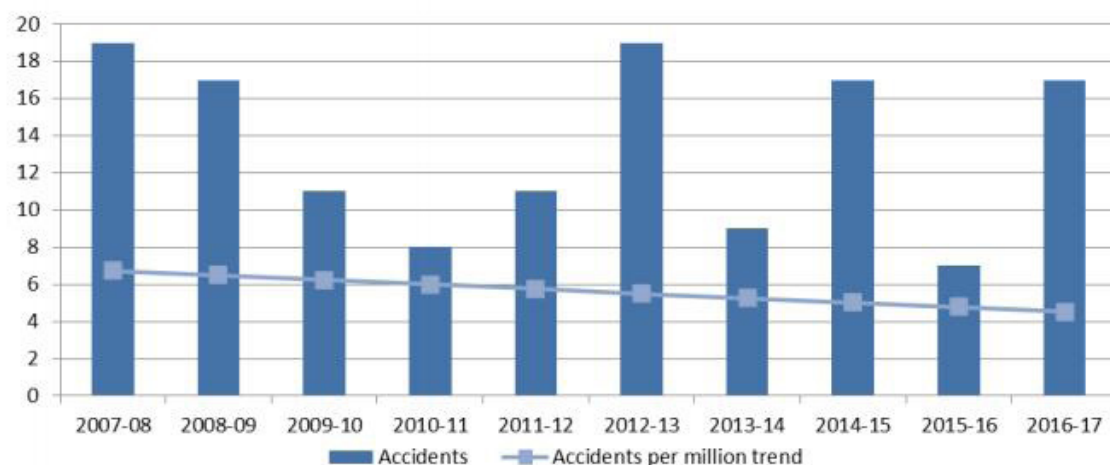
Chart 2: Electrical fatalities in WA – 2007-08 to 2016-17



## Accidents

- Electrical accidents reported in the last 10 years show a downward trend (Chart 6 below), however, the number of electrical accidents (a total of 17) in 2016-17, exceeded the number for 2015-16 (a total of seven).
- Seventy-seven per cent of these accidents occurred in the workplace, with the highest proportion affecting the 21 to 60 year age group.
- The highest proportion of accidents in the past 10 years had fixed installations as the primary cause at 36 per cent, with power lines/poles second at 18 per cent.

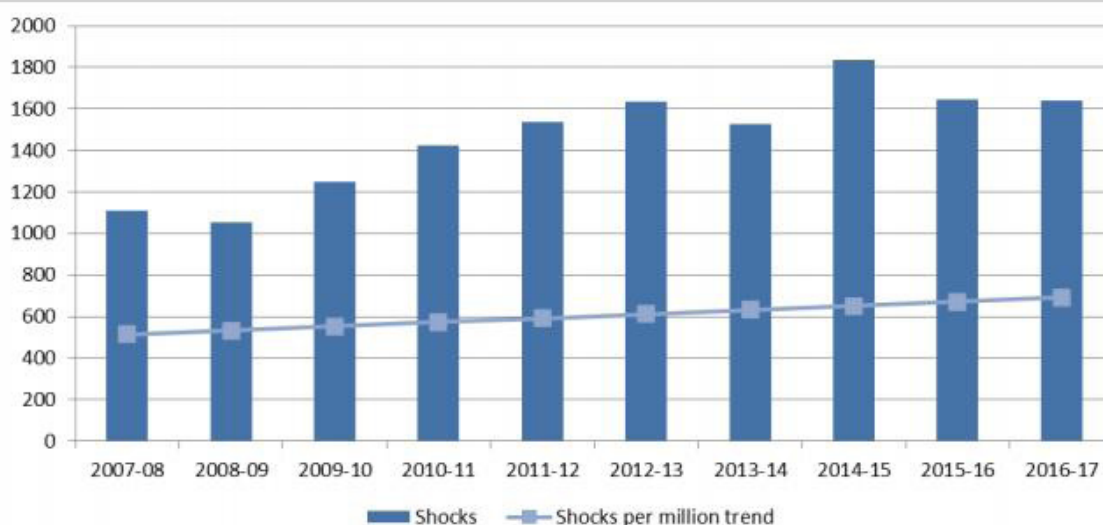
**Chart 6: Electrical accidents**



## Shocks

- There has been an upward trend (Chart 10 below) in the number of electric shocks reported (a total of 1,639 in the 2016-2017 period).
- Between 2007 and 2017, 36 per cent of electric shocks occurred in the workplace.

**Chart 10: Electric Shocks in WA – 2007-08 to 2016-17**



The report is available to download from the Building and Energy website at [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety).

## What's wrong with these installations?

Inspector's orders have been issued by inspectors for the defects shown in the photographs below. From these examples, see if you can correctly identify the defect and also find the relevant clause from AS/NZS 3000: 2007 "Wiring Rules". The answers are provided on page 24 (test yourself).

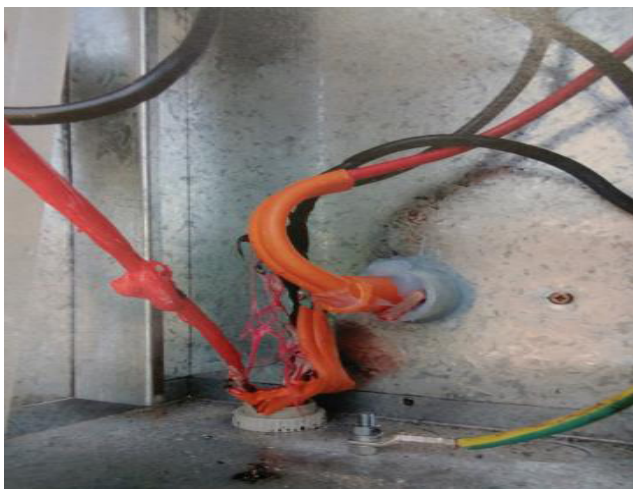
**Image A:**



**Image B:**



**Image C:**



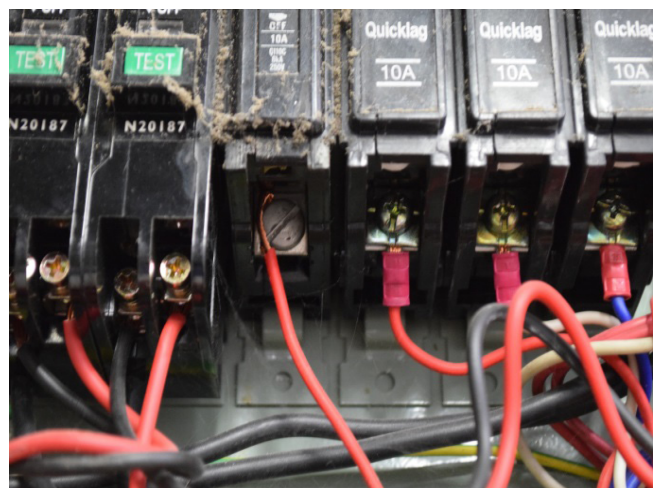
**Image D:**



**Image E:**



**Image F:**



## Standards update

Standard	Supersedes	Published date
AS/NZS 60079.14: 2017 'Explosive atmospheres – Design selection, erection and initial inspection'	AS/NZS 60079.14: 2009 'Explosive atmospheres – Electrical installations design, selection and erection'	12 December 2017
AS/NZS 60079.17:2017 'Explosive atmospheres – Electrical installations inspection and maintenance'	AS/NZS 60079.17:2009 'Explosive atmospheres – Electrical installations inspection and maintenance'	12 December 2017
Amendment	Published date	
AS/NZS 3100: 2017AMDT 1: 2017 'Approval and test specification – General requirements for electrical equipment'	30 November 2017	
AS/NZS 60598.2.2: 2016/Amdt 1: 2017 'Luminaires – Particular requirements – Recessed luminaires'	4 December 2017	
Draft	Published date	Closing date for comments
DR 17921 'Regulatory compliance mark for electrical and electronic equipment – Specific requirements for particular regulatory applications'	10 November 2017	2 February 2017

## Serious defects – 1 October to 31 December 2017

The number of serious defects taken from inspector's orders issued by Building and Energy and network operator inspectors between 1 October and 31 December 2017 are shown in the following chart and table.

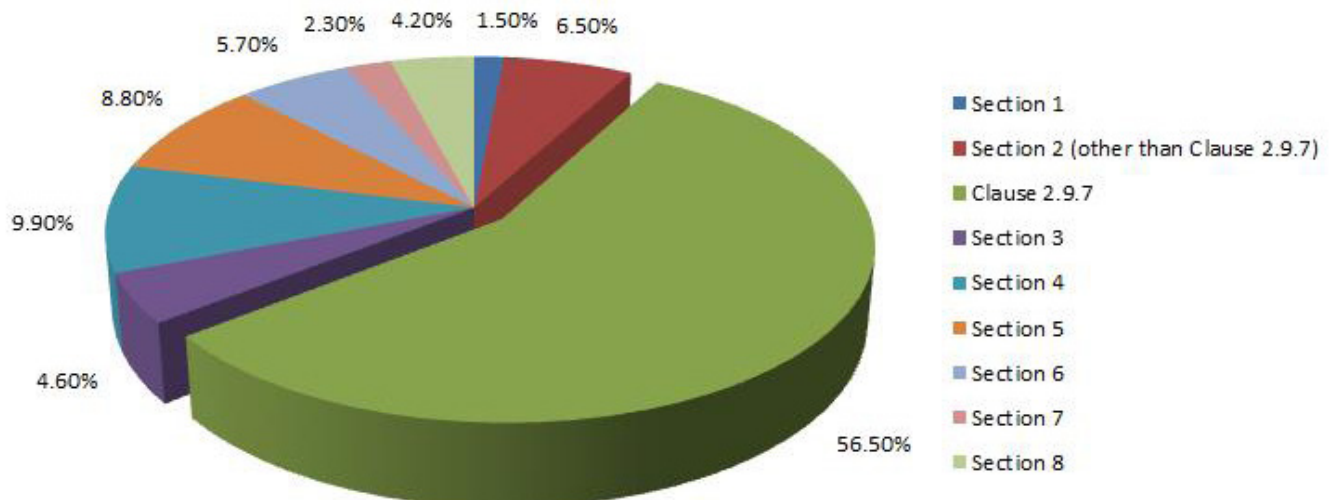
A summary of the defects this period is as follows:

Number of non-serious defects = 1,010

Number of serious defects = 262

TOTAL = 1,272

### Proportion of serious defects identified 1 October to 31 December 2017



Pie chart showing the proportion of serious defects from Sections 1 to 8 of AS/NZS 3000: 2007, Wiring Rules

The dominance of Clause 2.9.7 breaches indicates that electrical contractors must pay greater attention to switchboard sealing requirements. Building and Energy will take appropriate enforcement action if such breaches continue at the present rate.

Section	Clause	Serious defects identified
<b>Section 1 - Scope, Application and Fundamental Principles</b>  Scope, application, referenced documents, definitions, fundamental principles, design of an electrical installation, selection and installation of electrical equipment, verification (inspection and testing) and means of compliance	1.5.4.1	No protection provided against dangers that may arise from contact with parts of the electrical installation that are live in normal service
	1.8	Verification of electrical installation to AS/NZS 3000 (including alterations, additions and repairs to) not carried out prior to it being placed in service or use
<b>Section 2 - General arrangement, control and protection</b>  General, arrangement of electrical installation, control of electrical installation, fault protection, protection against overcurrent, additional protection by residual current devices, protection against overvoltage, protection against undervoltage and switchboards	2.3.3.1	Supply to electrical installation not controlled by main switch on the main switchboard or switches that control the whole installation
	2.3.3.3(b)	Ready access to isolating switch / switches not provided for individual occupier's portion of the electrical installation
	2.3.3.4	Main switches not identified as required
	2.5	Circuit protection/switches not correct for cable size/MD/equipment (overload/short circuit/RCD) or not fitted
	2.5.1.2	Submains and final subcircuits not protected by an overload device
	2.6.2.4	RCD protected final subcircuits not arranged as required
	2.6.3.1	Additional protection by RCDs with a maximum rated residual current of 30 mA has not been provided for final subcircuits of lighting points, socket outlets or directly connected hand held appliances
	2.6.3.1(a)	Final subcircuits for socket outlets not provided with 30mA RCD protection
	2.9.2.1	Switchboard not installed in a suitable location, protected against moisture or arranged to provide sufficient space for the later replacement of items
	2.9.3.1	Where contact can be made with live terminal/conductors without the use of a tool i.e. exposed live parts/conductors (including fittings left off) and wiring joints (including taped joints)
	2.9.7	Switchboard spread of fire protective measures do not meet requirements
	<b>Section 3 - Selection and installation of wiring systems</b>  General, types of wiring systems, external influences, current-carrying capacity, conductor size, voltage drop, electrical connections, identification, installation requirements, enclosure of cables, underground wiring systems, aerial wiring systems and cables supported by a catenary	3.1.2
3.7.1		Electrical equipment is unsafe or defective
3.7.3		Where contact can be made with live terminal/conductors without the use of a tool i.e. exposed live parts/conductors (including fittings left off) and wiring joints (including taped joints)
3.9.3.3		Failure to adequately secure cables/junction boxes (in accessible locations where they can be subject to mechanical damage)
3.9.4.4		Electrical equipment is unsafe or defective
3.10.1.1		No/inadequate protection of sub mains
3.10.2.3		The wiring enclosure is not installed to prevent water or rain entering
3.10.3.7		Conduit installed in direct sunlight not protected against effects of solar radiation
<b>Section 4 - Selection and installation of appliances and accessories</b>  General, protection against thermal effects, connection of electrical equipment, socket-outlets, lighting equipment and accessories, smoke and fire detectors, cooking appliances, appliances producing hot water or steam, room heaters, electric heating cables for floors and ceiling and trace heating applications electric duct heaters, electricity converters, motors, transformers, capacitors, electrical equipment containing liquid dielectrics and batteries.	4.1.2	Selection and installation of appliances does not meet requirements
	4.1.2(a)	Selected and installed electrical equipment not functioning properly under expected external influences
	4.1.2(c)	Selected and installed electrical equipment not operating safely when properly assembled, installed and connected to supply
	4.1.2(d)	Selected and installed electrical equipment fails to ensure there is no danger from electric shock, fire, high temperature or physical injury in the event of reasonable expected conditions (i.e. overload, abnormal operation, fault or external influences)
	4.1.3	Electrical equipment not suitable for exposure to external influences
	4.4.2.2(e)	Socket-outlets located and used in restricted situation
	4.5.1.1	Location of lampholders does not protect against damage
	4.5.2.3.1	Recessed ceiling light fittings that do not have adequate clearance from combustible material or adequate ventilation

Section	Clause	Serious defects identified
<b>Section 5 - Earthing arrangements and earthing conductors</b>  General, earthing functions, earthing system parts, earthing of equipment, earthing arrangements, equipotential bonding, earth fault-loop impedance, and other earthing arrangements	5.3.1	Incorrect wiring or incorrect sizing of DC isolating device on solar PV system installation
	5.3.4	Equipment not earthed correctly or earthing not installed correctly (including MEN connections)
	5.3.5.2	MEN size does not meet requirements
	5.3.6.2	Earth electrode type not specified in Table 5.2 and unprotected against corrosion or mechanical damage
	5.3.6.4	Location of earth electrodes does not meet requirements
	5.4.1.1	Exposed conductive part/s of electrical equipment not effectively earthed as required
	5.5.1.2	Equipment not earthed correctly or earthing not installed correctly (including MEN connections)
	5.5.1.2(a)	Connection of main earthing conductor to earth electrode not accessible for visual inspection and testing
	5.5.3.1	No or inadequate labelling on solar PV system installation
	5.5.3.5	Unprotected consumers mains not earthed in accordance with requirements
	5.6.1	Equipment not earthed correctly or earthing not installed correctly (including MEN connections)
	5.6.2.2	Conductive water piping not bonded to electrical installation's earthing system
	5.7.4	Earth fault loop impedance does not meet requirements
<b>Section 6 - Damp situations</b>  General, baths, showers and other fixed water containers, swimming pools, paddling pools and spa pools or tubs, fountains and water features, saunas, refrigeration rooms, sanitization and general hosing-down operations	6.2.2	The classification of zones in a damp situation do not meet requirements
	6.2.4.2	Socket outlets installed in a damp situation does not meet requirements
	6.2.4.3	Switches and other accessories in damp situations do not meet requirements
	6.3.4.3(b)	Socket-outlets not associated with the connection of pool equipment installed in Zone 1
	6.3.4.6	Switchboard installed within a classified zone
	6.7.4	Selection and installation of electrical equipment does not meet requirements
<b>Section 7 - Special electrical installations</b>  General, safety services, electricity generation systems, electrical separation (isolated supply), extra-low voltage electrical installations, high voltage electrical installations, hazardous areas (explosive gas or combustible ducts) and specific electrical installation standards	7.3.2	Selection and installation of electricity generation systems do not meet specified standards
<b>Section 8 – Verification</b>  General, visual inspection, testing and date of initial energisation of an installation	8.1	Installation not checked, tested and verified to meet AS/NZS 3000 before being placed into service
	8.1.2	Installation not safe and verified to meet the standard before being placed into service
	8.3.5.2	Incorrect earth resistance
	8.3.6.2	The insulation resistance between conductors and live parts does not meet requirements
	8.3.9	The earth fault-loop impedance does not meet requirements
	8.3.10	RCDs not tested to verify correct operation

## Reporting defects

If you come across an unsafe installation or equipment, under Regulation 62(1) of the Electricity (Licensing) Regulations 1991 you are required to undertake the following:

- Report the defective work to the owner/occupier.
- Let them know the defective work is required to be reported to the network operator.
- Report the defective work to your relevant network operator (where the network operator cannot be identified, the relevant network operator is Building and Energy).
- If you are carrying out work on behalf of your employer (electrical contractor or In-house licence holder), your employer must also be made aware of the defective work.

Network operator contact details can be found on our website at [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety).

## Prosecutions for breaches of electricity legislation

Between 1 October and 31 December 2017

Name (and suburb of residence at time of offence)	Licence number	Legislation and breach	Offence	Date of offence	Fine (\$)	Court costs (\$)
Mal Afrasiabi (Salter Point)	NLH	Regulation 19(1) E(L)R 1991	Carrying out electrical work without a licence or permit	Between 29 November and 31 December 2015	3,000.00	744.35
Daniel Carmignani (Padbury)	EW153855	Regulation 49(1) E(L)R 1991	Carrying out, or causing or permitting to be carried out, electrical work contrary to AS/ NZE 3000:2007	14 October 2015	4,500.00	744.35
	EC011385	Regulation 52(3) E(L)R 1991	Sending a notice of completion of notifiable work in relation to uncompleted and unsafe work		1,500.00	
Kimson Packaging Pty Ltd (Malaga)	NLH	Section 33B(2) EA 1945	Selling or hiring, or exposing or advertising for sale or hire, prescribed appliance without approval	6 January 2017	2,000.00	744.35
Electricity Networks Corporation T/As Western Power (Perth)	NLH	Regulation 242(1)(b) ER 1947	A network operator supplied electricity to a premises and the connection of the supply of electricity to the premises caused, or is likely to cause, the consumers' electric installations to become unsafe	25 August 2015	50,000.00	869.35
Electricity Networks Corporation T/As Western Power (Perth)	NLH	Regulation 242(1)(b) ER 1947	A network operator supplied electricity to a premises and the connection of the supply of electricity to the premises caused, or is likely to cause, the consumers' electric installations to become unsafe	13 September 2015	40,000.00	1,062.35

NLH: No Licence Held

## Summary of infringements for breaches of electricity legislation

Legislation and breach	Offence	Number of infringements	Fine (\$)
Regulation 33(1) E(L)R 1991	Carrying on business as an electrical contractor, or advertising, or otherwise holding out or implying, that the person is carrying on business as an electrical contractor without authorisation by an electrical contractor's licence	1	1,250.00
Section 33B(2) EA 1945	Selling or hiring, or exposing or advertising for sale or hire, prescribed appliance without approval	3	11,250.00

### Answers to 'what's wrong with these installations?' from page 19

- A. AS/NZS 3000: 2007 "Wiring Rules", Clause 6.2.4.2 – socket outlet installed in a restricted area
- B. AS/NZS 3000: 2007 "Wiring Rules", Clause 4.4.4.2 – socket outlet for recessed luminaire not secured to prevent mechanical stress
- C. AS/NZS 3000: 2007 "Wiring Rules", Clause 1.7.1 – failure to correctly terminate the consumers mains active conductor at the service protection device (SPD) on the meter panel
- D. AS/NZS 3000: 2007 "Wiring Rules", Clause 1.5.4.4(b) – junction box not secured in the roof space
- E. AS/NZS 3000: 2007 "Wiring Rules", Clause 5.4.1.1 – switchboard not earthed
- F. AS/NZS 3000: 2007 "Wiring Rules", Clause 3.7.2.5 – failing to secure end of conductor by suitable means



## Installation of electrical switches and power points near gas cooking appliances

Building and Energy has become aware that there is some confusion or misunderstanding as to where electrical switches and power points can be installed near gas cooking appliances.

The requirements for a means of electrical isolation to an appliance are stated in AS/NZS 5601.1:2013 Gas Installations – Part 1: General Installations clause 6.2.8 Electrical requirements, and are stated in the Wiring Rules AS/NZS 3000:2007 clause 4.18 Gas appliances. Both require the following:

*A gas appliance connected to the electricity supply shall be provided with a means of electrical isolation that is adjacent to the appliance location and is accessible with the appliance in the installed position.*

*The means of isolation shall be:*

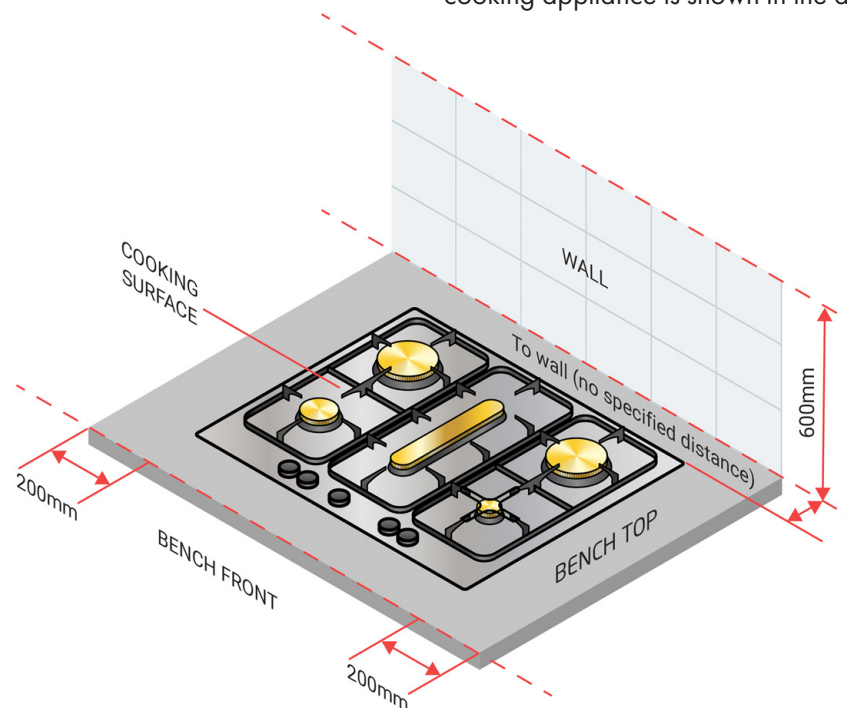
- a) a plug to a switched socket-outlet;
- b) a plug to a socket-outlet that may be located in an inaccessible position but has a separate switch operating in all live (active and neutral) conductors located in an accessible position; or
- c) a switch operating in all live (active and neutral) conductors.

To comply with the above requirements, Building and Energy is issuing guidance to industry operatives. An electrical switch or power point for the isolation of an appliance, or for any other purpose, must be installed where it is in a location that is adjacent to the appliance location and is accessible with the appliance in the installed position. It must also be installed in a location where it is not in the exclusion zone for combustible materials or in a location that could cause a hazard to a person required to operate the switch or power point.

For example, an electrical switch or power point installed on the wall directly behind a cooktop could cause a hazard to a person that may be required to operate the switch or power point while reaching across the cooking surface.

Gas fitters should be aware of the acceptable location for electrical switches and power points near gas cooking appliances. Electricians installing the switches and power points, as well as kitchen designers (e.g. cabinetmakers and builders) should also be aware of the requirements.

The electrical switch or power point exclusion zone around the cooking surface of a gas cooktop or freestanding cooking appliance is shown in the diagram below.



*Exclusion zone for electrical switches and power points near the cooking surface of gas appliances*

## Toolbox information sessions

Building and Energy is delivering Toolbox information sessions to trainees and apprentices to inform them of their responsibilities and obligations. All new Class G Permit applicants are welcome to attend.

The sessions are held at the DMIRS office in Cannington, are free of charge and are approximately one hour in duration, commencing late afternoon.

Building and Energy staff will cover the following topics:

- gas legislation;
- compliance;
- gas fitters responsibilities;
- supervision requirements;
- notice of defects – inspector order; and
- electronic notice of completion.

The sessions are run at least once a month and new applicants can register their place by contacting the Gas Inspection Branch on 6251 1938.

## Changes to issuing of Class G gasfitting permits

To be issued a gasfitting permit in Western Australia, a person must be able to demonstrate various requirements to the Director of Energy Safety. This includes the ability to demonstrate practical skills in carrying out gasfitting work.

As of 1 January 2018, it is a licensing requirement that for a trainee/apprentice to obtain a Class G gasfitting permit, they must demonstrate that they have completed a minimum amount of relevant on-the-job training.

This minimum on-the-job training requirement is to ensure that trainees/apprentices have had the opportunity to learn relevant gasfitting skills in the workplace, rather than relying on a simulated work environment at a training institution.

Details of the various tasks and requirements that need to be completed by the trainee can be found on our website. An

[EnergySafety requirements for on-the-job-training](#) log book is available to download, for recording various tasks that have been completed.

Should the trainee/apprentice be unable to complete the required on-the-job training component prior to completing their training or apprenticeship, the trainee/apprentice may obtain a permit enabling them to continue to work under supervision as a tradesperson, until such time as the on-the-job training component is completed.

For further information on the requirements visit [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety) or contact the Gas Inspection Branch on (08) 6251 1938.

## Changes to the Regulations

On 22 December 2017 the Gas Standards (Gasfitting and Consumer Gas Installations) Amendment Regulations (No. 2) 2017 were gazetted. These amendments in part included changes to gas fitter licensing requirements with the inclusion of sub-clause (4) to Regulation 15, and the inclusion of Regulation 15A Renewal of permits.

The inclusion of sub-clause (4) to Regulation 15 to Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 allows a gas fitter to be issued with or renew a gasfitting permit for up to five years. Previously, permits were only available for a 12 month period.

When a gas fitter renews their permit online, they will be able to renew their permit for a five year period. Where a gas fitter wishes to renew their permit for a period other than five years, they will have to contact the DMIRS Licensing Services Branch on 1300 304 064.

The inclusion of Regulation 15A now allows for a permit to be renewed up to 90 days before and no later than 30 days after the date of expiry of the permit.

Where a permit is renewed in accordance with Regulation 15A within 30 days after expiry, the permit will be deemed to have been renewed on the original expiry date and the gas fitter will be licensed from the original expiry date and for the balance of the renewed licence period.

Regulation 15A also gives the Director of Energy Safety the authority to require a gas fitter to successfully complete a specified course in regard to the safe performance of

gasfitting work. The Director may refuse to renew the permit if the gasfitter fails to comply with this requirement.

Gas fitters are reminded that they should be familiar with, and have access to the current version of Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 which cover the requirements for gasfitting in Western Australia including, licensing, performance of gasfitting work and requirements for consumers gas installations, including reference to the appropriate Standards (Schedule 7).

The current amended version of Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 is available as a free download from the State Law Publisher website at [www.slp.wa.gov.au](http://www.slp.wa.gov.au).

## Opportunity for referral

Consumers frequently contact Building and Energy seeking guidance and recommendations in relation to engaging gas fitters who undertake or specialise in different categories of gasfitting. The most common enquiries relate to caravan and marine craft installations.

Although Building and Energy cannot recommend specific individuals or companies we may provide a list of gas fitters or companies that undertake or specialise in different categories of gasfitting.

Building and Energy is compiling a referral list for the following categories:

- caravan and camper vans;
- marine craft;
- mobile catering vehicles;
- type B industrial gasfitting;
- commercial gasfitting;
- domestic gasfitting;
- gas appliance servicing;
- gas appliance approval; and
- auto gas installation and servicing.

If you would like to have your details included on the referral list, please email your details to:

Virginia Pringle  
Gas Inspection Branch  
Building and Energy  
Department of Mines, Industry Regulation and Safety  
Phone: (08) 6251 1938  
Email: [energysafety@dmirs.wa.gov.au](mailto:energysafety@dmirs.wa.gov.au)

Information to include is provided in the example below:

<b>Name</b>	Jim Jones
<b>GF number</b>	01223
<b>Company name</b>	Jims Caravans
<b>Type of work</b>	Caravan and marine craft – installation and servicing
<b>Contact number</b>	0401 222 111
<b>Email address</b>	jimscaravans@ii.net
<b>Website</b>	<a href="http://www.jimscaravans.com.au">www.jimscaravans.com.au</a>

## Mobile catering vehicles

The increasing popularity of pop-up events and food markets has generated a significant amount of new gasfitting work on mobile catering vehicles. Unfortunately a small number of gas fitters are being defected for non-compliant work, by failing to familiarise themselves with the relevant regulations and applicable standards for this special type of installation.

AS/NZS 5601.2: 2013 is to be referenced when locating and installing the LP Gas cylinders, regulators, piping and permitted piping material, for example composite pipe, Viega, B press fittings etc. (Note: proprietary pipe and fittings are not to be used on caravans, marine craft and mobile catering vehicles installations).



*Baffle plate not required as horizontal distance between appliances is greater than 200mm*

The interior gas installation and appliances must meet the same requirements, regulations and standards used for installing commercial catering equipment in a commercial kitchen. With the limitations of some vehicle heights, special attention should be paid in regards to the location of the exhaust hood grease filters above the appliances. (Note: minimum clearance of 1350mm above a commercial barbecue). Some gas fitters are also failing to comply with requirements for combustion and air quality by failing to install permanent high and low unrestricted ventilation openings.

The Gas Standards (Gasfitting and consumer Gas installations) Regulations 1999 are also to be applied. There are specific Western Australian regulations and clause requirements being missed for some particular appliances. For example:

**Clause 601. Cooking appliances, fryers etc.**

(2) A fryer installed in a consumer's gas installation must not be located—

- a) within 500mm of a barbecue griller, unless a baffle plate extending at least 500mm above the hob (top edge of the section containing the cooking oil) of the fryer is provided between the fryer and the barbecue griller; or
- b) within 200mm of a smooth plate, a griller other than a barbecue griller, or any other appliance that operates so as to expose any open flame or other source of ignition, unless a baffle plate extending to at least 200mm above the hob of the fryer is provided between the fryer and the other appliance.

Building and Energy advises gas fitters who are unfamiliar with this type of work ensure they have access to the applicable regulations and standards, and to seek advice if they are not sure or do not do this type of installation work.



*200mm minimum vertical baffle plate between fryer, wok burner to the left and boiling burners to the right*

## Summary of infringements for breaches of gas legislation

Between 1 October and 31 December 2017

Legislation and breach	Offence	Number of Infringements	Fine (\$)
r. 18(2)	Failing to ensure gas installation complies with prescribed requirements	1	600.00
r. 21(a)	The gas fitter must adjust an appliance for safe and correct operation during the commissioning stage	1	600.00
r. 26(1)(a)	Failing to ensure gas installation meets requirements as to pressure testing and is gas-tight	1	600.00
r. 28(2)	Failing to attach approved badge or label to gas installation upon completion of gasfitting work	1	400.00
r. 28(3)	Failing to give notice of completion of gasfitting work within required time	11	4,400.00
	<b>Total</b>	<b>15</b>	<b>6,600.00</b>