

# eENERGY

## bulletin



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

## In this issue

# Energy Safety wins WAITTA INCITE Award for eNotice

The 26th annual Western Australian Information Technology and Telecommunications Alliance (WAITTA) INCITE Awards were held on the 16th June 2017. The awards recognise local talent, products and technologies that help industry and government operate more efficiently.

Energy Safety won the prestigious INCITE award for most effective Government solution for eNotice, a web-based solution for the gas and electricity industry in WA for lodging work notices. With over 400,000 paper forms completed each year, moving to an electronic system has achieved savings for both industry and government by saving time, supporting faster inspections and facilitating faster electricity and gas connections.

Director of Energy Safety, Ken Bowron said "The award recognises the innovation and business transformation that eNotice brings to government and society. It raises the profile of WA's ICT skills. It also brings a focus to the achievements of the WA Government, the Department of Mines, Industry Regulation and Safety and Energy Safety."

eNotice will go on to compete in the Australian Information Industry Association national iAwards later this year.

eNotice was also a finalist in the IPAA Achievement Awards that recognise individual and organisational excellence in public service.

For more information on eNotice [click here](#).

Ken Bowron  
**DIRECTOR OF ENERGY SAFETY**



Director of Energy Safety, Ken Bowron accepting the INCITE Award

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## Department of Mines, Industry Regulation and Safety

On 1 July, the Departments of Commerce and Mines and Petroleum combined to form the new Department of Mines, Industry Regulation and Safety.

EnergySafety remained a division without any change of role or function.

The new department has three key business groups – Resources, Titles and Compliance; Safety; and Industry Regulation and Consumer Protection, and is working for a safe, fair and responsible future for the Western Australian community, industry and resources sector.

The amalgamation is a result of the state government's public sector reforms, aimed at creating collaborative departments focused on whole-of-Government objectives and delivering services in the most efficient way.

The website has changed to [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety) and emails to [name.surname@dmirs.wa.gov.au](mailto:name.surname@dmirs.wa.gov.au). The general enquiries and licensing email addresses are below:

General enquiries: [energysafety@dmirs.wa.gov.au](mailto:energysafety@dmirs.wa.gov.au).

Licensing enquiries: [energylicensing@dmirs.wa.gov.au](mailto:energylicensing@dmirs.wa.gov.au).

**Please continue to use existing forms, Log books or other publications that are branded Department of Commerce. These will progressively be updated to the Department of Mines, Industry Regulation and Safety as stock levels reduce.**

## Western Power transition from ETIC to eNotice

The introduction of EnergySafety's eNotice last year 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 EnergySafety's eNotice.

### So, what does this mean for current Western Power ETIC users?

Western Power plans to progressively migrate ETIC users to the new systems over the coming months before a complete shutdown of ETIC towards the end of 2017. The transition will be by invitation from Western Power and Electrical Contractors need to continue using ETIC as usual until they hear from Western Power to make the change.

### Lodging notices

After the change, you will need to lodge notices in EnergySafety's eNotice system, not Western Power's ETIC.

You are encouraged to carry out 'housekeeping' and, wherever possible, complete any open Notices in ETIC by September, to ensure a smooth transition to EnergySafety's eNotice in the final months of the year.

### Service requests

Western Power has also been focussing on improving its service to Electrical Contractors. A new set of forms has been developed (in consultation with industry) to make it easier to request a service after submitting an eNotice. The new forms will replace the current Online Network Service Request forms and are simple and straight forward to use. They will also save time by automatically populating information from EnergySafety's eNotice, and you will be able to pay for your service upfront via Western Power's website.

Western Power will also host drop-in sessions to assist you in the use of the new forms if needed. Both Western Power's and EnergySafety's websites will be updated with further information about the change and drop-in session times closer to the date.

If you currently lodge notices with Western Power's ETIC system and would like further information, please contact Western Power on 13 10 87 or [energise.admin@westernpower.com.au](mailto:energise.admin@westernpower.com.au)

## Failure to properly isolate endangers another electrician

An electrician left conductors in an unsafe condition while carrying out electrical installing work at a liquor store in Clarkson.

Upon completion of the work, the electrician terminated the supply end of a power circuit cable to the load side of the RCBO and wrapped the unterminated conductors of the other end in electrical insulation tape. He claimed he then fitted a Danger tag on the RCBO and left the protective device in the off position.

A few days later another electrician (from another company) who was at the store to install communication cables, received an electric shock when his right hand came into contact with the power circuit's live unterminated conductors.

The power circuit cable had been energised during the period in between the electrical work being carried out by both electricians. There was no evidence found that a 'danger tag' had been fitted to the circuit.

After the incident, the electrician who installed the power circuit was called back to site to make the installation safe. He removed the active and neutral conductors from the RCBO load terminals and placed them in insulated connectors within the distribution board.

Leaving an unterminated cable connected to a protective device at a switchboard with either no marking or a 'danger tag' fitted to it to prevent the device from being switched on is a dangerous practice.

Disconnecting the wiring at the RCBO would have ensured the installation was safe and complied with the Electricity (Licensing) Regulations 1991.

The electrician was fined \$2,000.00 with court costs of \$724.50.

## Stand-alone power systems powering our national parks

Network operator Horizon Power is implementing another of its renewable energy solutions to bring power to one of Western Australia's remote national parks.

Twenty one power poles and four kilometres of power lines will be removed to make way for a stand-alone power system (SPS) to be installed at the rangers station at Fitzgerald National Park.

The system will consist of a stand-alone power system (SPS) comprising 10kW of solar panels and 25 kW of lithium battery storage with a 15 kVA diesel generator providing back-up power.

The installation is part of a large scale Horizon Power project to replace power poles and wires in remote regional areas with a more reliable and cost effective energy solution.

This change in the delivery of electricity was prompted by the devastating bushfires around Esperance in 2015 which caused extensive damage to the network's grid. The rangers' station at Cape Le Grand National Park is the first to trial the system.

The next stage of the project will commence in Exmouth with the golf club to receive 52 kW of battery storage and 20 kW of solar panels.

## Electrical Contractor Award

A current summary of the Electrical Contracting Industry Award published by the Department of Mines, Industry Regulation and Safety is now available to Western Australian electrical contractors. The summary, initially published in 2015, has recently been updated to include current wage rates.

The Electrical Contracting Industry Award outlines the set wage rates, working hours and employment arrangements for electricians, electrical trade assistants and apprentices.

The award is only applicable to businesses in the state industrial relation system (i.e. sole traders, partnerships and

trusts). Pty Ltd businesses are not covered as they operate under the national industrial relations system (visit the Fair Work Ombudsman website [www.fairwork.gov.au](http://www.fairwork.gov.au) for details on the *Electrical, Electronic and Communications Contracting Award 2010*).

The summary is available to download at the Department of Mines, Industry Regulation and Safety website [www.dmirs.wa.gov.au](http://www.dmirs.wa.gov.au). The full award is available on the WA Industrial Relations Commission website [www.wairc.wa.gov.au](http://www.wairc.wa.gov.au).

## Electrical work notices “New installation” or “Alteration/Addition”

Network operators are still receiving a large number of Notices for work described as a “New Installation” when the electrical work performed is clearly in an existing installation and should therefore be described as an “Alteration/Addition”.

A **New installation** is where a new meter and consumer mains are being installed for:

- a completely new installation, **not previously connected** to a network or other electricity supply;
- a new building;
- a temporary builders supply; or
- an existing installation that previously did not have its own meter.

An **Existing installation** is one where:

- a meter and consumers mains exist; or
- it is **connected** to a network or other electricity supply.

“**Alteration/Addition**” must be selected on the work Notice where the electrical work performed modifies an existing installation. This includes (but isn't limited to):

- installing solar, battery and other embedded generation systems;
- adding new circuits;
- re-wiring and fit out of existing buildings, dongas, caravans and boats;
- converting from single phase to three phase supply;
- overhead to underground connection change-overs; and
- switchboard modification/replacement which does not involve the connection of a new meter.

## Please ensure your contact details are correct

EnergySafety requests electrical workers to confirm that their email, residential, place of business addresses and contact telephone numbers recorded by our Licensing Office are correct.

A review of operative details has revealed that many electrical workers, particularly those employed as fly in/fly out workers on mine sites, are using an interstate address as their residential address. To ensure you are receiving notifications from our Licensing Office, (including important information on your licence renewal) in a timely manner, a residential address in Western Australia is required.

It is a requirement under Regulation 28(1) of the Electricity (Licensing) Regulations 1991 that:

*Where the contact details of a person who holds a licence or permit, or has made an application to the Board under these regulations, change from that of which the Board last had notice, the person must, not later than 28 days after the change give to the Board notice of the person's new contact details.*

Updating your telephone numbers and addresses can be easily done via one of the following ways:

**Phone:** EnergySafety's Licensing Office 6251 2000.

**Fax:** EnergySafety's Licensing Office 6251 1902

**In person:** Visit EnergySafety's Licensing Office - Level 1, 303 Sevenoaks Street, CANNINGTON WA 6107

**Email:** [energylicensing@dmirs.wa.gov.au](mailto:energylicensing@dmirs.wa.gov.au)

**Online:** [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety)

NB: You can only change your details online if our Licensing Office has your current email address and mobile number.

## Standard Alert - AS/ NZS 5139:2017 - Battery Installations

Standards Australia has released for public comment the long-awaited draft AS/NZS 5139:2017 – 'Electrical Installations – Safety of battery systems for use with power conversion equipment'. The closing date for comments is 15 August 2017.

This will be an important Standard for electrical contractors operating, or planning to enter, the market for supplying and installing renewable systems incorporating battery storage. Now is your chance to view the proposed requirements for such installations, consider what they mean for your business and submit your comments.

You can find the draft Standard at: <https://hub.standards.org.au>, where you will see the procedure for submitting comments.

## Consultation on supervision requirements

In March and April this year, EnergySafety sought comments from industry on a range of proposed changes to:

1. the Electricity (Licensing) Regulations 1991; and
2. two EnergySafety publications
  - Safe Working Guidelines for Electrical Workers; and
  - Safe Working Guidelines for Electrical Apprentices.

A significant number of submissions were received regarding the effective supervision of electrical apprentices. As a result, EnergySafety has developed further related revisions and decided to conduct a second round of consultation on this matter.

Your comments and advice are invited on the new supervision proposals. A discussion paper and previous consultation documents can be found on the Discussion page of the [EnergySafety website](#).

## Inspectors' Conference

The 2017 Inspectors' Conference took place on Tuesday, 25 July at the Technology Park Conference Centre, Bentley.

Installation Inspectors from Western Power, Horizon Power, BHP Billiton, Rio Tinto, Resources Safety and EnergySafety attended. Special guests included representatives from the Department of Fire and Emergency Services and engineering colleagues.

Participants were introduced to the significant proposed changes in the forthcoming new edition of the Wiring Rules, expected to be published later in 2017. EnergySafety presented progress reports on new regulations to prohibit live electrical work and the launch of a review of energy safety legislation. This will lead in due course to a modernised, comprehensive new *Energy Safety Act* and regulations covering all aspects of electricity and gas safety.

Mr Glen Morris of SolarQuip gave two very interesting and topical presentations on the standard for photovoltaic arrays (AS/NZS 5033:2014) and the just-released draft standard for battery storage installations (AS/NZS 5139:2017). Costs are falling fast for photovoltaic panels and battery storage systems. Continued rapid take-up is expected for both.



*Electrical Inspectors' Conference 2017*

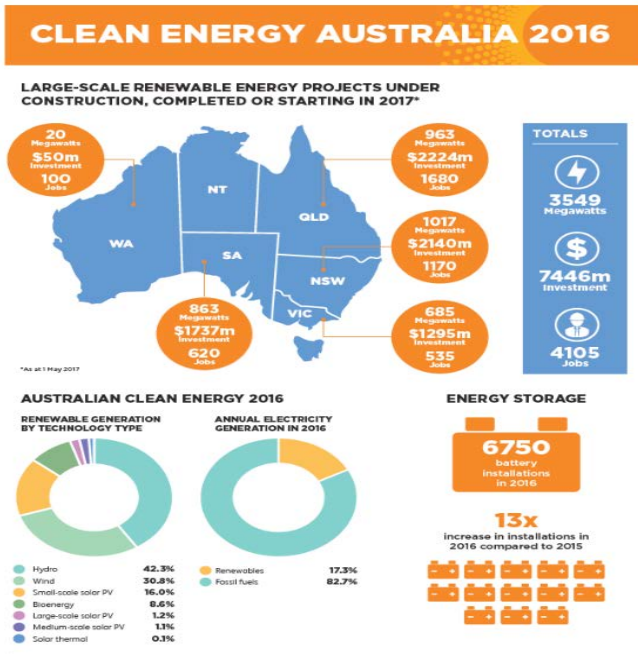
## Merredin paves the way for major solar pipeline project

Western Australian could be the starting point for a \$200 million solar pipeline vision of UK infrastructure investment company Ingenious Infrastructure and Western Australian clean energy company, Stellata Energy.

The solar pipeline is being used to describe a series of solar farms with the Wheatbelt town of Merredin being the first town to house a 120 MW solar farm.

Approval is still being sought for the project and if successful, the farm will become the largest solar installation in the state.

The Clean Energy Australia Report 2016 states "Remarkable cost reductions combined with the relatively fast construction timelines of large-scale solar (over 5 MW) have made it apparent that the technology will play a much greater role in meeting the renewable Energy Target than was expected just a few years ago."



CLEANENERGYCOUNCIL.ORG.AU/CLEANENERGYAUSTRALIA



Breakdown of national large-scale renewable energy projects under construction, commencing or to be completed in 2017. Image courtesy of Clean Energy Council, Clean Energy Australia Report [www.cleanenergycouncil.org.au](http://www.cleanenergycouncil.org.au)

## Download latest version of the Electricity (Licensing) Regulations 1991

The amendments to the Electricity (Licensing) Regulations 1991 came into effect on 3 May 2017. Version 07-d0-00 of the Regulations is available to download for free at the State Law Publisher website by following these six easy steps:

### Step 1

Go to the State Law Publisher website [www.slp.wa.gov.au](http://www.slp.wa.gov.au)

### Step 2



## Step 3

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Electricity (Licensing) Regulations 1991

Published: 14 Oct 1991  
 Principal Act: Electricity Act 1945

Pages: 2 (24 KB)  
 Reprint: Electricity (Licensing) Regulations 1991

Current Version	Currency start [Help]	Currency end	Suffix [Help]	Download [Help]
Electricity (Licensing) Regulations 1991	1 May 2017	Current	07-d0-00	PDF WORD HTML

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This database contains subsidiary legislation that is currently in force. It does not contain any document compare between versions of subsidiary legislation. The document compare program for Electricity does not display actual changes made between versions of legislation specially in relation to equation tables, diagrams, maps and other non-text content which are more prevalent in subsidiary legislation.

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Click once on the letter E

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Western Australia

Electricity Act 1945

**Electricity (Licensing) Regulations 1991**

As at 03 May 2017 Version 07-d0-00  
 Extract from www.slp.wa.gov.au, see that website for further information

## Step 5

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**Subsidiary legislation in force**

**'E' List of Act titles**

- Economic Regulation Authority (Electricity Networks Access Funding) Regulations 2012
- Economic Regulation Authority (Licensing Funding) Regulations 2014
- Economic Regulation Authority (National Gas Access Funding) Regulations 2009
- Education and Care Services National Law (Transitional) Regulations 2012
- Education and Care Services National Regulations 2012
- Education Service Providers (Full Fee Overseas Students) Registration Regulations 1992
- Electoral (Ballot Paper Forms) Regulations 1990
- Electoral (Political Finance) Regulations 1996
- Electoral Regulations 1996
- Electoral Rules 1908
- Electricity (Licensing) Regulations 1991
- Electricity (Network Safety) Regulations 2015
- Electricity Corporations (Electricity Generation and Retail Corporation Area of Operation) Regulations 2015
- Electricity Corporations (Electricity Generation and Retail Corporation) Regulations 2013
- Electricity Corporations (Transitional) Regulations 2006
- Electricity Corporations (Transitional) Regulations 2013
- Electricity Distribution Regulations 1997
- Electricity Industry (Access Code Enforcement) Regulations 2005
- Electricity Industry (Arbitrator and Board Funding) Regulations 2009
- Electricity Industry (Caravan Park Operators) Exemption Order 2005

Click once on Electricity (Licensing) Regulations 1991

## Your technical questions answered

**Q: Is there a minimum voltage level for an electric shock to be reported?**

A: There is no minimum voltage level for the reporting of electric shocks as all electric shocks and accidents must be reported, irrespective of the voltage received by the victim.

Regulation 63(2) of the Electricity (Licensing) Regulations 1991 requires a person to report an accident to the relevant network operator or to EnergySafety if the network operator cannot be identified.

As defined in Regulation 63(1), an electrical accident is one that results from a sudden discharge of electricity or that otherwise has, or is likely to have, an electrical origin and causes, or is likely to cause danger to life, a shock or injury to a person or loss of or damage to property.

**Q: I am carrying out electrical work (installing a 230 volt ac power source) for a horse float. What standard/s should I be working to? Also, am I required to provide an Electrical Safety Certificate to the customer?**

A: As a horse float is considered a transportable structure, any electrical work must comply to AS/NZS 3001: 2008, Electrical installations – Transportable structures and vehicles including their site supplies and AS/NZS 3000: 2007, Wiring Rules.

On completion of the work, a Caravan Installation Test Certificate should be affixed to the float which confirms the work carried out complies with the relevant standards and is safe to connect to the electricity supply.

The customer must be provided with an Electrical Safety Certificate within the required time frame of twenty eight days after the work has been completed.

**Q: What details are required to be recorded in Section 2 of EnergySafety's Log Book? A comment has been entered in this section of our Electrical Log Book on the cleanliness of substation floors?**

A: Instructions on the details required for Sections 1 and 2 of the Electrical Log Book are specified in the book's preface. Each log book entry should include:

- the date the electrical work was completed;
- a detailed description of the electrical work carried out;
- the name and licence number of the electrician/s who carried out the work; and
- certification by the company's nominee that the

electrical installing work has been checked and tested and the work meets the requirements of the Electricity (Licensing) Regulations 1991.

The book should not be used to record other health or safety issues identified at the site.

**Q: Instead of writing a description of the electrical work I have carried out in the 'Details of work completed' section of an Electrical Safety Certificate, can I instead make a comment to refer to the electrical installation diagrams?**

A: An Electrical Safety Certificate must be provided to the person requesting the work to be carried out. Bearing this in mind, the person receiving the Certificate is not likely to have any technical knowledge, hence the requirement for a **general** description of the electrical work carried out is to be provided in the section for 'Details of work completed'.

Referring to electrical diagrams alone would not assist a customer in understanding what electrical work had been carried out.

**Q: I am an electrician and would like to carry out electrical installing work in my own home. Am I required to hold an electrical contractor's licence to undertake this work?**

A. No, being an electrician, you do not require an electrical contractor's licence to carry out electrical work on your own home, however, you are required to apply to EnergySafety for an exemption via the submission of an *Application to Carry out Electrical Installing Work for Self or Immediate Family* (available to download on [EnergySafety's website](#)).

A licensed electrician may be exempted from holding an electrical contractor's licence to carry out electrical installing work on a domestic property provided the property is owned/occupied or leased by the electrician or their immediate family members and the work is carried out by the electrician without any financial gain or reward.

Immediate family members include parents, spouses, children, siblings, grandparents, grandchildren, in-laws and de facto partners (proof is required from the electrician that they are residing at the premise).

Along with the application form, you are also required to provide proof of ownership of the property (e.g. land title deed, building contract or council rates notice).

Once the Electrical Licensing Board has approved the application, you will be provided with a draft Preliminary Notice and Notice of Completion (to be submitted to the relevant network operator after the work has been



completed) under your eNotice login. An Electrical Safety Certificate can then be generated in eNotice. Alternatively, you will be advised that given the nature of the work to be undertaken, Notices will not be required to be submitted.

**Q: Can you advise me of the correct method of securing ELV transformers in roof spaces?**

A: While there isn't a set procedure or standard to follow for securing ELV transformers, as with all electrical equipment installed in roof spaces, the transformers must be secured in a position that will prevent damage to them and property whilst also preventing contact with combustible materials (i.e. insulation) in the event of an excessive rise in temperature.

You should also look to the manufacturer's instructions for guidance on how the transformers should be installed.

**Q: I am currently in a role providing supervision for mature-aged apprentices. What type of supervision is required for a forty year old electrical apprentice?**

A: EnergySafety's *Safe Guidelines for Electrical Workers* provides recommended levels of supervision for apprentices that is not age based, but based on the number of years an electrical apprentice has been in training for their trade qualification.

The Guidelines state "the degree of supervision (direct or general) requires continual assessment of an apprentice's/trainee's experience and competence related to the task being undertaken. It can vary from direct to general supervision, depending upon the type of work and the electrical worker's progress in achieving competencies".

It also recommends a gradual relaxation of supervision as an apprentice/trainee develops the skills, knowledge and experience leading to their trade qualification.

The Guidelines are available to download from EnergySafety's website [www.dmirs.wa.gov.au/energysafety](http://www.dmirs.wa.gov.au/energysafety)

## Federal budget boost for apprentices and trainees

As of 1 July 2017, apprentices and trainees in Western Australia are set to benefit from a billion dollar investment in a newly established national industry fund. The Skilling Australians Fund, will provide approximately \$1.5 billion over the first four years of its operation to increase Australia's skilled workforce with priority spending provided

for up to 300,000 apprenticeships and traineeships. The Skilling Australia Fund replaces the National Partnerships Agreement on Skills Reform which underwent a review in 2015 of its vocational education and training (VET) structure and the progress made with its reforms.

Findings of the review included a 46 per cent reduction in the number of apprentices undertaking training which resulted in stalled industry growth and a loss of thousands of potential job opportunities.

The new fund was established to help combat the decline in the number of Australian apprentices undertaking traineeships by boosting numbers to the levels seen in 2012 by giving priority to specifically targeted projects in high demand industries.

Funding will be received via employer paid levies which will be paid for taking on skilled migrants in situations where there is a legitimate deficit in skilled labour. This comes in wake of the federal government announcement of the replacement of the Temporary Work (Skilled) visa (subclass 457) with a new Temporary Skill Shortage (TSS) visa. Aside from employer levies, contributions to match those from the federal government will also be required from state and territory governments, which will partner to decide on an agreed level of funding.

For more information on the Skilling Australians Fund, please visit the Department of Education and Training website [www.education.gov.au](http://www.education.gov.au)

## Horizon Power's safety campaign targets copper thieves

A spate of incidents involving the theft of copper from power poles around Carnarvon has prompted Horizon Power to launch a safety campaign alerting consumers to the dangers involved with electricity.

In March 2017, police apprehended the offenders who had removed copper earth wires from one hundred power poles in the area.

To educate consumers about the hazards associated with electricity, the network operator launched its 'Be Aware of Electricity' campaign in the same month and ran a series of television adverts encouraging consumers to be safe when using electrical equipment around the home and at work and also, when in the vicinity of external Horizon Power infrastructure.

Horizon Power has since confirmed all affected poles are safe as new earth wires have been installed.

Please contact Horizon Power on 13 23 51 to report any identified damage to apparatus on their network.

- e.g.3: David Willis - is this David Willis (person) or engineering company David Willis & Associates?
- e.g.4: H & M Tracey - is this for a Mr H & Mrs M Tracey (spouses) or for construction company H & M Tracey Construction Pty Ltd?

## Notice the details

For electrical contractors yet to switch over to using EnergySafety's eNotice, please remember it is important your details are accurate for Section 1 – Details of installation, network operator and retailer of Preliminary Notices and Notices of Completion as follows:

### Owner /occupier or builder name

- Please provide the **full** name of a business/company  
Examples:
  - e.g.1 Alfa Laval was inputted as the builder in a Preliminary Notice.  
Providing only part of the company name makes the

*Example of only part of the Company name being provided on the Preliminary Notice*

correct identification of the company difficult given the Alfa Laval name is shared by several companies including:

- Alfa-Laval Pty Ltd**
- Alfa Laval Aalborg Pty Ltd**
- Alfa Laval Aalborg Holding Pty Ltd**
- Alfa Laval Agri Pty Ltd**
- Alfa-Laval Agri Pty. Limited.**
- Alfa Laval Australia Pty Ltd**
- Alfa-Laval Engineering Pty. Limited**
- Alfa Laval Flow Pty Ltd**
- Alfa Laval (V.) Proprietary Limited**
- Alfa Laval (S.A) Pty. Ltd**
- Alfa-Laval Separator Company (V) Proprietary Limited**

Which one is it?

- e.g. 2: Carbone was provided as the builder name. Is the builder a Mr Carbone or is Carbone part of a company name? The correct name was revealed to be Carbone Bros Civil Pty Ltd.

- Abbreviations are not acceptable  
Example:
  - Royal Con used for Royal Construction & Design Pty Ltd.
- If the owner/occupier or builder is a person, please provide **both** their first name and surname (e.g. Edith Wickham).
- If only the person's surname is known, please add the person's title (i.e. Mr, Mrs, Miss, Ms etc) before the surname, otherwise, the person could be easily mistaken for a business/company  
Examples:
  - Collova was provided as the owner/occupier. Without a title in front of the surname (e.g. Mr Collova) , Collova could have been easily mistaken for a company (e.g. Collova Nominees Pty Ltd or Collova Group Pty Ltd).
- In instances where a business/company incorporates two surnames please specify in brackets after the name whether they are a business/company, otherwise they could easily be mistaken for two persons.  
Examples:
  - Cushman & Wakefield - commercial real estate agents
  - Lawrence & Hanson - electrical wholesalers
  - Moray & Agnew - solicitors
- Please ensure the name of the business/company name is still current.
- If the Notice is for a marine vessel, please do not provide the name of the vessel in the owner/occupier field. The vessel name should be entered in 'Street Name'.
- Ensure the correct name is entered in the correct field  
Example:
  - Dentrpo was inputted as the owner/occupier however, Dentrpro was the builder and QVC Dental the owner/occupier.
- For mine sites/power stations, the name of the mine/power station is not the owner/occupier. Add the name of the mine/power station to 'Street Name' or to 'Directions to Location' if there is insufficient room.  
Examples:

- The owner/occupier of St Ives Mine is Gold Fields Limited
  - The owner/occupier of Rubicon Temporary Power Station is Zenith Pacific (Kundana) Pty. Ltd.
- Accuracy with spelling  
Examples:
- Owner/occupier name provided - Convatek.  
Actual company name - Convatech WA Pty Ltd.
  - Owner/occupier name provided - Adrima. Actual company name - Adrina Construction.
  - Builder name provided - Mecure Construction.  
Actual company name was Mecon Construction Pty Ltd.

### Installation address

- For remote areas, assume the Inspector who will inspect the installation does not have any local knowledge and write the address accordingly.
- Locations outside town boundaries and/or in regional or remote areas require both the Lot/Loc and street numbers; or the GPS location to be supplied along with the street name and nearest suburb/town. Most smartphones can assist in identifying your GPS location, alternatively, a search via Google Maps can provide the GPS coordinates.

Please note that you will be contacted if the owner/occupier or builder name cannot be validated with EnergySafety's Compliance Management System (CMS).

## RCD safety inspection program

In December 2015, EnergySafety commenced an on-going safety inspection program of domestic properties for lease and for sale in Western Australia to ensure compliance with residual current device (RCD) legislation.

Since its inception, over six hundred properties have been inspected to identify if the correct number of RCDs have been installed at the main switchboard.

The Electricity Regulations 1947 stipulates the following requirements for the installation of RCDs:

### Owner occupied residential premises

At least two RCDs are to be installed by the owner before they:

- transfer the title of a premises;
- enter into a residential tenancy agreement for a part, or all of the premises; or
- make some, or all of the premises available for hire.

### Residential premises not occupied by the owner

At least two RCDs are to be installed by the owner in a premises they do not occupy:

- before they transfer the title of a premises;
- before they enter into a residential tenancy agreement with a person who was not the tenant of the premises before the legislation came into effect (9 August 2009);
- before the second anniversary of the date the legislation came into effect (9 August 2011); or
- unless the premises was made available for hire immediately before 9 August 2009.

The inspections undertaken by Senior Electrical Inspectors have resulted in several Inspector's Orders issued to property owners, requiring them to engage an electrical contractor to install the correct number of RCDs.

EnergySafety urges electricians to alert property owners where RCDs are not installed in accordance with the legislation.

## Solar/air-conditioning installer fails to deliver

Now deregistered solar/air conditioning company Solar H C Pty Ltd T/As Affordable Home Comfort and its former Director Maxwell Raymond Healy has been taken to court by the Department of Mines, Industry Regulation and Safety's, Consumer Protection division for several breaches of the Australian Consumer Law.

The company was found guilty of accepting advance payments from sixteen customers for the installation of reverse cycle or evaporative/air conditioning units with solar heating fans under the proviso (for most of the customers), the work would be completed within six weeks.

The company installed air-conditioning units for eight customers but, failed to install the solar heating fan. The eight other customers did not receive either of the products. Under Australian Consumer Law, it is an offence to accept payments for goods and services without delivering them within a specified or reasonable time and refusing to provide a refund.

In his deliberations, Magistrate Wheeler found the company and its Director had accepted orders from customers when the solar heating fans had not been ordered, and knowing that the products couldn't be provided.

Magistrate Wheeler found Solar H C Pty Ltd and Mr Healy guilty of 16 breaches of the Australian Consumer

Law and fined the company \$150,000.00 with court costs of \$7,659.00 with compensation of \$11,940.00 to be dispersed to six customers. Healy was also fined \$10,000.00 with costs of \$7,659.40.

Prior to this in February 2016, Mr Healy in his role as sole director of Solar H C Pty Ltd was successfully prosecuted by the Building Commissioner for contractual offences the company committed in contracting for and carrying out home building work at properties in Baldivis, St James, Sawyers Valley and Hamersley.

Mr Healy was found guilty of 12 charges under the *Home Building Contracts Act 1991*. The court ordered him to pay fines of \$3,000.00, compensation of \$6,177.00 to an affected property owner, \$7,560.00 in compensation to another affected property owner and costs of \$5,000.00.

As the company's actions occurred due to Mr Healy's neglect he was taken to have committed offences of the company.

## Forum on Energy Storage in WA

On 31 August 2017, the Clean Energy Council will be hosting a full day session on Energy Storage in WA as part of its Australian Energy Storage Leadership Series.

Guest presenters on the day will address the following topics:

- Storage and the grid - how the integration of battery storage into the electricity grid assists network operators during periods of peak energy demands.
- Creating the right regulatory framework - the expected evolution of the regulatory framework and the resultant challenges and opportunities.
- Engaging and protecting the consumer - insights on engaging consumers and industry and the regulatory approach to consumer protection.
- Markets and opportunities - the current market in Australia and future opportunities across different market segments.

To register online now, visit Clean Energy Council's website [www.cleanenergycouncil.org.au/events](http://www.cleanenergycouncil.org.au/events)

Clean Energy Council members receive a 50% discount off the regular registration fee.

## Newly appointed Senior Electrical Inspector

EnergySafety welcomes Jeff Bertolucci to the team in the role of Senior Electrical Inspector.

Jeff has worked in the electrical industry for twenty five years working on electrical projects nationally and overseas.

His diverse electrical knowledge comes from a background in engineering, infrastructure, power generation, mining and tunnelling projects. His most recent role was as the Services Manager for the new Perth Stadium.

Jeff is looking forward to an exciting and challenging role with EnergySafety.

## Does your company hold a valid exemption?

EnergySafety has recently received a few queries from electrical contractors and In-house licence holders who have been operating on the understanding they are still exempt from submitting Notices.

In July 2013, EnergySafety undertook a review of all exemptions held by licensed operatives from the submission of Notices and all exemption holders were sent a letter advising them of amendments to the Electricity (Licensing) Regulations 1991 that were implemented on 17 May 2011.

One of the amendments meant an exemption for the type of work carried out at particular sites (i.e. mine sites) may no longer be necessary given that certain "minor work" was no longer notifiable.

Regulation 52(2AA) states:

*Subregulation (1) does not apply to notifiable work carried out at mine if –*

- a) *The work does not involve an initial connection to transmission or distribution works or a private generating plant;*
- b) *The work does not –*
  - i) *require an alteration to a main switchboard;*
  - ii) *require an alteration to service apparatus or transmission or distribution works;*
  - iii) *consist of the installation or removal of a private generating plant; or*
  - iv) *alter the capacity of a private generating plant; and*
- c) *The electrical contractor who carries out the work, or*

*causes it to be carried out, makes a record of the work in a form approved by the Director.*

Exemption holders were invited to reapply to retain their exemption and if no response was received by the given cut-off date, the standing exemption was cancelled. Electrical contractors with cancelled exemptions were then required to submit Preliminary Notices and Notices of Completion to the relevant network operator.

EnergySafety advises all company nominees to confirm with their employer or EnergySafety whether any held exemptions are still valid.

### Current exemption holders

Current exemption holders are reminded that the electrical installing work (i.e. new works, alterations and additions) carried out at the exempted site is to be recorded in an Electrical Log Book.

The Electrical Log Book must always be kept at site and regularly updated by the site manager in readiness for a routine inspection by an Electrical Inspector.

Electrical Log Books can be obtained from EnergySafety's Licensing Office.

## Another WA first - battery storage trial for power station

Horizon Power has commenced a twelve month battery storage trial at the Mungullah Power Station located in the Gascoyne region of Western Australia.

Chinese technology giant Tianjin Lishen Battery Joint-Stock Co., Limited won the tender to supply two 2 MW batteries (to be stored in transportable containers) to the Horizon Power owned power station.

Mungullah Power Station, which became operational in 2014, uses gas and diesel generators to supply electricity to the town of Carnarvon and surrounds.

The batteries will provide an efficient back-up option in the event one of the generators fails, or if there is a sudden increase in consumers' demand for electricity.

Come March 2018 when the trial concludes, if proven successful, both batteries will be purchased from Lishen to provide long-term energy for regional Western Australia.

## Integrity of TPS/PVC cables compromised

WorkCover Queensland has issued a safety warning for TPS/PVC cables. The integrity of the cable insulation could be compromised by a chemical reaction that occurs when installed in close contact with certain polymers.

The plasticiser found in the insulation of TPS/PVC cables gives it its durability and flexibility. As the plasticiser is not chemically bonded to the PVC, over time, it will gradually leach out of the insulation. This process is accelerated when the cable is in contact with polystyrene and polyurethane, commonly found in transportable units (e.g. caravans, dongas etc), cold storage rooms and building materials (i.e. wall/roof insulation).

The leached plasticiser causes the insulation to become brittle, resulting in cracks which could expose live conductors, leaving the installation unsafe as it could pose a potential threat of a consumer or worker receiving an electric shock from the exposed conductors.

This also results in an added expense for electrical contractors as the replacement of cables will come sooner than anticipated.

While the rates of deterioration can vary due to environmental conditions, the process is exacerbated by the amount of the surface area on the insulation exposed to the polymers; the greater the surface area, the faster the deterioration.

Electrical contractors are advised of the following when installing cables in areas where these materials may be present:

- choose TPS/PVC cables with a protective sheath which also come with a guarantee from the manufacturer that they can safely be installed alongside both polystyrene and polyurethane;
- leave adequate space between the cables and these polymers; or
- place a protective barrier between the cables and these polymers.

Also, if you identify existing cables in contact with these materials, reposition them to prevent any further damage. Cables that have already lost structural integrity should be replaced immediately.

## AS/NZS 3010:2017 (Generators) published

The new AS/NZS 3010:2017 sets out the minimum safety requirements for the use of generating sets for the supply of electricity at low voltage (exceeding 50 V a.c. or 120 V d.c.). This latest version differs from AS/NZS 3010:2005 as follows:

- (a) Inclusion of several new figures showing a variety of acceptable generator connection methods.
- (b) The modification of existing figures to show clearly the intent of the associated clauses, especially in relation to main switches.
- (c) The inclusion of some updated provisions of AS 2790 (normative Appendix D).
- (d) An exception for the mechanical interlock requirements changeover devices.
- (e) Additional definitions, e.g. safety services and essential services.
- (f) General reinforcement of the MEN connection requirements.
- (g) Clarification of when switching of the neutral conductor is or is not permitted.
- (h) Clauses added for carrying out additions, alterations and repairs in line with AS/NZS 3000.
- (i) Clauses added to clarify the use of three and four pole changeover devices.

Requirements of AS/NZS 3000, where not amended or changed by this Standard, are included in Figures, for example mechanical maintenance isolating devices. Statements expressed in mandatory terms in notes to Figures and Tables are requirements of this Standard.

A 'normative' appendix is an integral part of a Standard. As the term implies, an 'informative' appendix provides information and guidance.

AS/NZS 3010:2017 can be purchased from SAI Global [www.saiglobal.com](http://www.saiglobal.com).

## Product recalls

### Crestwind Pty Ltd – Modn-3 and Modn-4 Ceiling Fans (black or white four blade models and the white three blade model)

A recall was issued on 30 May 2017 for the affected models FP6722AU and FP6730AU with approval number SAA-150352-EA which were sold nationally by Crestwind Pty Ltd between 16 November and 19 May 2017.

Issue no. 79 July 2017

Some fans have conductive parts which may not be effectively earthed as the motor cover was not manufactured to specifications while in others, the earth connection from the motor housing does not continue to the motor shaft. These models may present a risk of a consumer receiving an electric shock if a live wire was to come in contact with exposed unearthed metal parts.

Contact Crestwind  
Telephone: 1300 469 326  
Email: [info@crestwind.com.au](mailto:info@crestwind.com.au)



Crestwind Modn-3 and Modn-4 ceiling fans

### Reposit Power – Reposit Kit (with RP115 meter and Reposit box)

A recall was issued on 30 May 2017 for the affected model with product code RP115 which were sold nationally by Reposit Power and their partners between 1 March 2015 and 2 May 2017.

Some product components may present a risk of a consumer or installer receiving an electric shock

Contact Reposit Power  
Telephone: 1800 773 851  
Email: [recall@repositpower.com](mailto:recall@repositpower.com)



Reposit Power - Reposit kit with RP115 meter and Reposit box

## Standards update

Standard	Published Date	Supersedes
AS/NZS 3010:2017 – Electrical installations - Generating sets	8 May 2017	AS/NZS 3010:2005 – Electrical installations - Generating sets
Draft for Comment		Closing Date for Comments
AS/NZS 5139:2017 - Electrical installations - Safety of battery systems for use with power conversion equipment		15 August 2017

## Serious defects - 1 April to 30 June 2017

The number of serious defects taken from Inspector's Orders issued by EnergySafety and network operator inspectors between 1 April and 30 June 2017 are shown in the following chart and table.

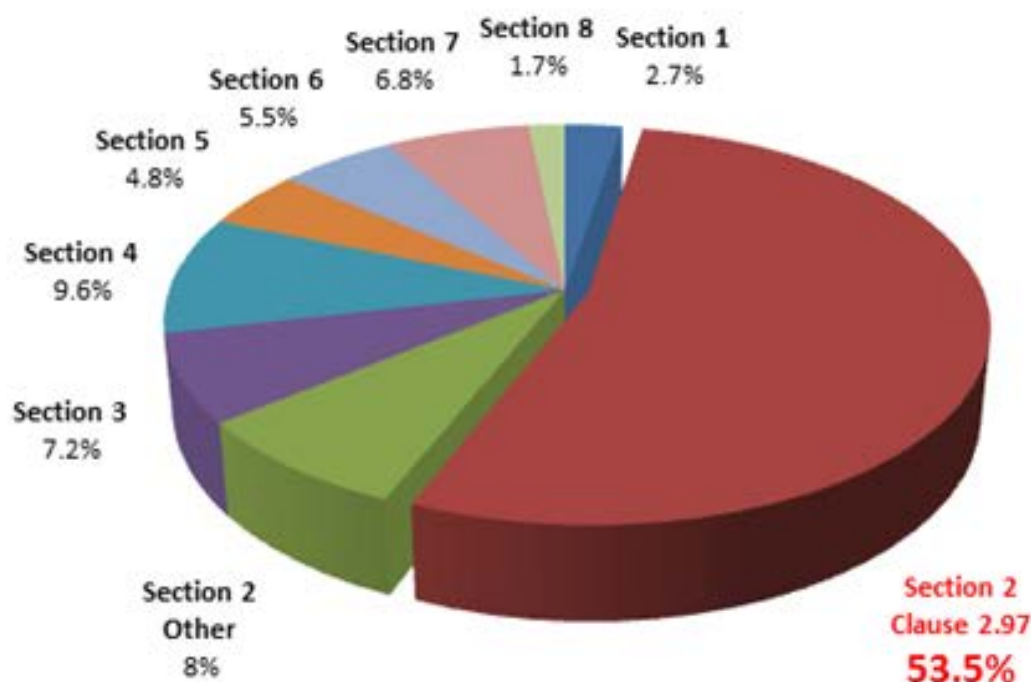
A summary of the defects this period is as follows:

Number of non-serious defects = 1,139

Number of serious defects = 291

TOTAL = 1,430

### Proportion of serious defects identified 1 April to 30 June 2017



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

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.
	1.5.0	No/inadequate protection of sub mains
	1.5.14	Inadequate protection against external influences
	1.6.3	Maximum demand of installation shall be determined considering all the electrical equipment and its intended use and how these might vary in the future.
	1.7.1	Selection and installation of equipment is unsafe or not installed to manufacturer's recommendation
<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	Main switches not installed to meet requirements
	2.3.3.1	The supply to the electrical installation is not controlled on the main switchboard by a main switch or switches that control the whole of the electrical installation.
	2.5.1	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
	2.5.4.5	Circuit protection/switches not correct for cable size/MD/equipment (overload/short circuit/RCD) or not fitted
	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
	2.6.3.1(b)	Circuit protection/switches not correct for cable size/MD/equipment (overload/short circuit/RCD) or not fitted
	2.6.3.2.1	Circuit protection/switches not correct for cable size/MD/equipment (overload/short circuit/RCD) or not fitted
	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
3.3.2.8		Wiring systems are not installed or selected to minimise damage to the cable insulation
3.4.4		Current carrying capacity of conductors is not coordinated against the protective device
3.6.2		Voltage drop between the point of supply and any point on the installation exceeds 5%.
3.7.2.2		Conductor insulation shall not be removed any further than necessary
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		Support and fixing of wiring system does not meet requirements
3.9.3.1		Failure to adequately secure cables/junction boxes (in accessible locations where they can be subject to mechanical damage)
3.9.3.3		Failure to adequately secure cables/junction boxes (in accessible locations where they can be subject to mechanical damage)
3.9.4.1		Failure to adequately secure cables/junction boxes (in accessible locations where they can be subject to mechanical damage)
3.10.1.1		Insulated, unsheathed cables were not enclosed in a wiring enclosure throughout their entire length.
3.10.3.7		Conduit installed in direct sunlight is not protected against the effects of UV radiation



Section	Clause	Serious defects identified
<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
	4.18.2	Electrical equipment that is a source of ignition shall not be installed within hazardous areas
	4.19	Equipment that does not operate correctly (switches, RCDs, ACBs etc. that are provided for protection/safety)
	4.5.2.3.1	Recessed ceiling light fittings that do not have adequate clearance from combustible material or adequate ventilation
	4.7.1	Cooking appliance not fitted with switching device operating in all active conductors and mounted in an accessible position
<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.	5.2	Earthing functions do meet requirements
	5.3.5.3	Equipment not earthed correctly or earthing not installed correctly (including MEN connections)
	5.3.6.3	Earth electrode is not installed at an adequate depth.
	5.4.1.1	Exposed conductive part/s of electrical equipment not effectively earthed as required
	5.5.2.1	Failure to provide adequate earthing arrangements for submain and subcircuit protective earthing conductors
	5.5.3.5	Unprotected consumers mains not earthed in accordance with requirements
	5.5.5.3	Earthing conductors not adequately protected against corrosion in accordance with requirements
	5.6.2.2	The conductive water piping is not bonded to the earthing system of the electrical installation
	5.6.2.6	Equipotential bonding of electrical equipment and conductive parts associated with a swimming or spa pool were not arranged as required
	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	6.2.2.2	The classification of zones in a damp situation for other fixed water containers 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
<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.	8.1.2	The installation was not safe and verified to meet the standard before being placed into service
	8.3.10.1	RCDs have not been tested to verify correct operation
	8.3.5.2	Incorrect earth resistance
	8.3.6.2	The insulation resistance between conductors and live parts does not meet requirements

## 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 EnergySafety).
- 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 are found on the inside cover of books of Preliminary Notices and Notices of Completion and on EnergySafety's website.

## Prosecutions for breaches of electricity legislation

Between 1 April and 30 June 2017

Name (and suburb of residence at time of offence)	Licence Number	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court costs (\$)
Sebastian Pizzale	EW161335	E(L)R 1991 Regulation 49(1)	Carrying out, or causing or permitting to be carried out, electrical work contrary to AS/NZS 3000:2007	9 April 2015	2,000.00	724.50

## Summary of infringements for breaches of electricity legislation

Between 1 April and 30 June 2017

Legislation and breach	Offence	Number of Infringements	Fine (\$)
Regulation 33B(2) EA 1945	Selling or hiring, or exposing or advertising for sale or hire, prescribed appliance without approval	2	6,250.00

## Servicing gas appliances

With winter now here, it is important that consumers are aware of the need to have their gas heaters in good working order. EnergySafety is asking Gasfitters to help spread the message to their customers.

Gas heaters are an effective way to keep warm, however if they are faulty or poorly maintained they can leak carbon monoxide which can be lethal.

Carbon monoxide is a silent killer. It cannot be seen and has no smell or taste. You may not know you have been exposed to potentially fatal levels of carbon monoxide until the symptoms become severe.

Exposure to low levels of carbon monoxide may cause you to experience headaches, weakness, fatigue and nausea but at higher levels symptoms can include severe headaches, dizziness, rapid or irregular heartbeat, vomiting, seizures and collapse. In extreme cases this can lead to coma and death.

Good ventilation and maintenance is vital to prevent the build-up of harmful carbon monoxide levels.

When quoting or completing work for a customer, advise them of the need to service their gas appliances every two years or in accordance with the manufacturer's instructions. Appliances over 10 years old should be serviced annually.

If a gas bayonet is fitted, by law, two ventilation points to the outside of the building should be installed, one at high level and the other at low level. The ventilation points should also be checked for any obstructions and cleaned to ensure adequate ventilation to the outside of the building.

Once a service is completed a badge displaying the date of service and the Gas fitters Licence number must be affixed to the appliance.

For further information or to download a copy of the 'Get it serviced' flyer visit the [EnergySafety website](http://www.energysafety.wa.gov.au).

ATCO Gas Australia is undertaking a community awareness campaign about Carbon Monoxide Safety this winter. Further information is on page 27.

## Keep outdoor gas appliances outside

Portable outdoor appliances such as gas patio heaters and barbecues are ideal for use outdoors but can present a danger of carbon monoxide poisoning if used indoors or in areas with poor ventilation.

Gas barbecues and patio heaters require adequate ventilation to ensure that there is sufficient air for combustion, for gas to burn safely and to dilute the products of combustion to safe levels.

An outdoor area usually provides enough adequate ventilation. However, semi-outdoor areas may not have the required ventilation and use of outdoor gas appliances in these areas is not recommended.

The following situations provide the natural ventilation required for an outdoor gas barbecue or patio heater:

- Four open sides with a roof or overhead cover;
- Four enclosed sides (walls) without a roof or overhead cover;
- Two parallel walls or two walls at right angles to each other with a roof or overhead cover; or
- Three walls, with the one side being at least 25% of the total perimeter and the remaining three walls having an area of 30% or more unrestricted opening, with a roof or overhead cover.

In these situations the outdoor gas appliance can be installed with a flexible hose to a natural gas bayonet point, through fixed connections to gas piping or by connection to an LP Gas cylinder.

When asked to install an outdoor appliance for a customer or if you see an outdoor appliance being used indoors please advise the customer of the requirements for ventilation and the risk of carbon monoxide poisoning.

For further information or to download the 'keep it outside' flyer visit the [EnergySafety website](http://www.energysafety.wa.gov.au).



## Are you aware of amendments?

Australian Standards are constantly under review by their respective committee's which occasionally raise the need for amendments. Since AS/NZS 5601.1: 2013 was adopted it has had two sets of amendments published.

It is in the gas fitter's own interest to be aware of these amendments.

In amendment 2 published May 2016, several new or revised clauses were added, for example:

**6.10.1.14 Domestic gas cooking appliances in combined living/sleeping areas.**

*In a combined living /sleeping area, a domestic cooking appliance shall only be installed under a rangehood or exhaust fan which is ducted to outside.*

Note: This clause applies to buildings approved for construction after adoption of this Standard by the relevant Technical Regulator.

**6.10.1.15 Commercial Catering equipment in residential premises.**

*Commercial catering equipment shall only be installed in residential premises if permitted in the manufacturer's installation instructions. The gas installation shall comply with Clause 6.10.2 and include an exhaust system complying with AS 1668.1 and AS 1668.2 that is interlocked to the appliance gas supply.*

It is highly recommended that persons who refer to this standard obtain the updates.

Copies of the amendments can be downloaded free of charge in PDF form from [infostore.saiglobal.com](http://infostore.saiglobal.com).

Also note a copy of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 can be downloaded from the State Law Publisher free of charge on [www.slp.wa.gov.au](http://www.slp.wa.gov.au)

## Freestanding cooker connections

There appears to be some confusion as to how to determine if a cooker has a high level connection and, when connecting non high level connections with a hose assembly, how to configure such connections.

Firstly, the appliance must be approved for hose assembly connection. Refer to the manufacturer's installation instructions for verification. Where so approved and the inlet connection is deemed to be high level then the requirements of AS/NZS 5601 Clause 6.10.1.9 apply.

### **6.10.1.9 Connecting a freestanding cooking appliance using a hose assembly—High level connection**

*Where a freestanding cooking appliance is to be connected with a hose assembly using a high level connection, the following shall apply:*

- (a) *The cooking appliance shall be designed and certified for that type of connection.*
- (b) *The hose assembly length shall be between 1m and 1.2m.*

(c) The height of the consumer piping connection point above the floor shall be approximately equal to the height of the cooking appliance connection point.

(d) The connection point in Item (c) shall face downward and be approximately 150 mm to the side of the cooking appliance connection point when the appliance is in the installed position.

NOTE: Requirements in Items (b), (c) and (d) are to ensure the hose assembly is kept clear of the floor when the appliance is in the installed position. The distance between the connection points enables the cooking appliance to be 'pushed in' as near as possible to the rear wall.

(e) A restraining chain or wire of adequate strength shall be fixed to the appliance and the wall within 50 mm of each connection point. The length of the chain or wire shall not exceed 80% of the length of the hose assembly.

NOTE: The restraining chain or wire is to prevent stress being imparted onto the hose assembly when the cooker is moved out of its normal operating position.

(f) Where a domestic cooker is connected to consumer piping using a hose assembly, the hose assembly used shall be certified to AS/NZS 1869, Class B or Class D.



High-level connections on freestanding cookers

The previous images show the high-level connections on freestanding cookers. Hose assembly connections to these are required to be in accordance with AS/NZS 5601.1:2013 Clause 6.10.1.9.

Where the inlet connection is not deemed to be high level the gas fitter may choose to:

- apply Clause 6.10.1.9 where appropriate and compliant, or;
- configure the upstream hose connection point and hose positioning in a compliant manner that is not as per 6.10.1.9.

While the configuration of the hose assembly installation may vary from the high level connection requirements there remains some constants. There shall be a restraint (chain/steel cable) installed preventing stress on the hose assembly in accordance with Clause 6.2.14 and the hose should be clear of the floor.



Non-high level connection

The above and below cooker connections are not deemed to be high level and therefore may, but do not have to, comply with AS/NZS 5601.1:2013 Clause 6.10.1.9. These connections are to comply with all other requirements.



*Non-high level connection*

## Importance of commissioning gas installations

It is a requirement of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999, that a gas fitter must ensure appliances are commissioned for safe and correct operation. (Refer to Regulation 21).

Gas fitters are reminded to take time to check the operating pressures of a natural gas meter or LP Gas cylinder regulator.

Recently, EnergySafety has become aware of a number of gas fitters who failed to ensure that appliances had the minimum inlet pressure as required by Table 5.1 of AS/NZS 5601.1:2013. Subsequently, Notices of Defect (NOD) were issued.

EnergySafety inspectors usually discuss NODs with gas fitters to ensure that the relevant lessons are learned and to avoid the repeat of mistakes. Many gas fitters contacted are somewhat perplexed as to why they have been issued a defect for inadequate gas pressure at the inlet of an appliance. Generally, they have ensured adequate pipe sizing in the main run to allow for any unseen pressure drop.

In order to ensure the correct inlet pressure at the appliance, gas fitters need to check that the operating pressure at the outlet point of supply is set correctly (test point at outlet of meter or outlet of LP Gas cylinder regulator). This is normally achieved with all appliances operating on load.

Gas fitters failing to check the outlet pressure at the point of supply have then missed a fundamental step in commissioning. That is, if the pressure is too low they will not be able to achieve the correct appliance operating inlet pressure which could lead to an unsafe appliance. When conducting supply pressures tests, it is extremely important to remember that the gas appliances should be in operation. Clause 6.11 of AS/NZS 5601.1:2013 has further requirements on commissioning.

### FAQs

What do I do if I have checked the supply pressure at load and I have found it to be too low?

- If the installation is supplied via a network operator the gas fitter reports a fault to them. **Note:** only the gas supplier can make adjustments to their supply regulators, billing meter and associated equipment (Refer to Regulation 37).
- If the installation is being supplied from a LP Gas cylinder the gas fitter is required to adjust and set the regulator outlet pressure.

So why can a gas fitter adjust some installation supply regulators, but not others?

- Where Installations are supplied gas from a network or reticulated system, the billing meter and regulator are owned by the gas supplier. Only approved and trained network operatives can make adjustments to the equipment. If a gasfitter was found to have interfered with the supplier apparatus without authorisation from the supplier, the gas fitter is liable and may be subject to disciplinary actions through the supplier and/or through EnergySafety.
- Where LP Gas installations exist and are not supplied by a billing meter, but are supplied via a gas cylinder, the associated regulator is the property of the owner of the installation. In this case the gas fitter can carry out the required checks and make the required adjustments to the regulator. Again, this is normally achieved with all appliances operating on load.

## Like for like water heater installations - flue terminal locations

When conducting installation inspections, gas inspectors continue to come upon non-compliant hot water heater installations that have not been carried out in accordance with the requirements of AS/NZS 5601.1:2013.

The most common excuse given by the gas fitter is that he has carried out a 'like for like' replacement in the same location, even where it was obvious that the original installation was not compliant, and relocating the water heater would have made the installation compliant.

Gas fitters are reminded that a water heater **must** be installed in accordance with the water heater manufacturer's installation instructions and the location of the flue terminal **must** be in accordance with the requirements of AS/NZS 5601.1:2013 in particular section 6.9 Flue Terminals.

AS/NZS 5601.1:2013 section 6.9 was amended in 2016 and clause 6.9.4, Terminating a flue under a covered area or in a recess was added, together with an addition of a supporting sketch as part of Figure 6.2.

Gas fitters must ensure that all installations comply with the requirements of clause 6.9.3 or 6.9.4. Where a location complying with 6.9.3 or 6.9.4 cannot be readily identified, or a gas fitter has doubts as to the compliance of a location, the gas fitter should contact the gas supplier's inspector before carrying out the installation.

In a large number of cases where a 'like for like' water heater replacement cannot be carried out in a compliant location, the installation of an internal or external fan assisted water heater may have to be installed.

Where a fully compliant location cannot be identified by the gas fitter after discussion with the gas supplier's inspector, EnergySafety may issue a variation upon application by the gas fitter which is supported by the gas supplier's inspector and/or the appliance manufacturer. But, this application must be made prior to the installation being carried out.

Where a gas fitter is identified as having installed an appliance with a flue terminal in a location not compliant with the requirements, the gas fitter will receive a Notice of Defect requiring the gas fitter to make the installation compliant within 7 days. The gas fitter could also be subject to an infringement of \$600.00 for failing to ensure

an installation complies with prescribed requirements or installing the appliance contrary to manufacturer's instructions.

The following is an extract from AS/NZS 5601.1:2013 6.9.3 Location of flue terminals of balanced flue, room-sealed, fan-assisted or outdoor appliances

*The location of the flue terminal of a balanced flue appliance, room-sealed appliance, a fan-assisted appliance or an appliance designed for outdoor installation shall comply with Figure 6.2.*

6.9.4 Terminating a flue under a covered area or in a recess  
*Where the flue terminal of a balanced flue appliance, room-sealed appliance, a fan-assisted appliance or the flue terminal of an appliance designed for outdoor installation is to be installed under a covered area, or in a recess, one of the following options shall be applied to achieve ready dispersion of combustion products and avoidance of nuisance—*

*a) the covered area or recess shall be open on at least two sides and the terminal shall be located to ensure a free flow of air across it is achieved; or*

*b) in the case of a fan-assisted appliance only, when one side is open, the flue terminal shall be within 500 mm of the opening, and discharging in the direction of the opening [see Figure 6.2(a)]. There shall be no other flue terminals, gas meter, electricity meter, fuse box or openings into the building along the wall within the 500 mm distance. The flue terminal shall be located to ensure that a free flow of air across it is achieved.*

NOTE: These requirements do not apply to domestic gas barbecues and radiant gas heaters designed for outdoor use.



*Original non-compliant water heater*

Above: Original non-compliant water heater had insufficient clearances to, the building corner, the eave above, the louvre window and opening into the building, and was more than 2.5 metres above ground level.

Below: Replacement water heater with side draft diverter pointing out past the edge of building. Installation complies with AS/NZS 5601.1 Clause 6.9.4.



*Original non-compliant water heater*

Above: Original non-compliant water heater had insufficient clearance to openable door, and was too close to corner. Below: Replacement water heater with side draft diverter pointing out past the edge of building. Installation complies with AS/NZS 5601.1 Clause 6.9.4.



*Replacement compliant water heater*



*Replacement compliant water heater*



## LP Gas in caravans, motorhomes and campers

EnergySafety has prepared the following brief list of issues for manufacturers and dealers to consider prior to delivering and selling their caravans, motorhomes or campers.

To advertise and/or sell Caravans, motorhomes or campers in Western Australia the gas installations must comply with the *Gas Standards Act 1972 (GSA)* and the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (GSR 1999)*. Schedule 7 of the regulations refers to the Australian Standard, AS/NZS 5601: Gas installations, Part 2: LP Gas installations in caravans and boats for non-propulsive purposes (AS/NZS 5601.2), which has specific requirements.

The following list of items, **although not exhaustive**, may help to achieve this:

Checklist	Checkbox
LP Gas cylinders are to be secured and restrained and located in a position that is protected from impact.	
If installed in a front compartment, a safety warning label complying with AS/NZS 5601.2 Figure 3.6 (see Figure 1 over page) is to be installed on the outside and be visible.	
Have a sign complying with AS/NZS 5601.2 Figure 3.5 (see Figure 2 over page) inside indicating that only cylinders and their equipment are permitted inside the compartment.	
Have the regulator inlet installed above the level of the LP Gas cylinder valves so that liquid can drain back into the cylinders.	
If used, flexible pigtailed are to comply with classes C, D or F of the Standard, AS 1869.	
Have an EnergySafety compliance badge (see Figure 3 over page) affixed by a gas fitter in Western Australia or a compliance badge/plate or notice from another State or Territory detailing conformance with the Australian Standard, AS/NZS 5601.2.	
Have warning labels affixed regarding the use of gas appliances and vents.	
Have adequate fixed ventilation openings for gas appliances installed.	
Have copper fitting lines mounted externally under the van and protected from damage.	
Refrigerators using LP Gas are to be effectively sealed from the inside of the caravan, motorhome or camper.	
Isolating valves are to be fitted to all gas appliances.	
Adequate clearance is to be provided from combustible surfaces for hotplates.	
A bayonet point or quick-connect device if fitted must be external and be protected from damage and ingress of water and dust.	

Gas inspectors from EnergySafety are available to assist with any gas compliance issues. Please telephone (08) 6251 1968 or email: [energysafety@dmirs.wa.gov.au](mailto:energysafety@dmirs.wa.gov.au).



Figure 1: AS/NZS 5601.2 Figure 3.6

## New and amended interpretations of specific gas regulation or standard requirements

New and amended interpretations of specific gas regulation or standard requirements have been published on the EnergySafety website.

These have been derived after extensive consultation with gas suppliers and gas inspectors.

New interpretations include those relating to the following:

- 17-01 Permissible locations to install outdoor gas barbecues or radiant gas heaters.
- 17-02 LP Gas cylinders restraint.
- 17-03 LP Gas cylinder and building corners.

Amended interpretations include those relating to the following:

- 05-01 Philmac olive and Milne compression type fitting use.
- 05-04 Maximum height of water heater on single residential premises.
- 09-01 Gas cylinder/appliance clearance from an openable window that is permanently closed.
- 09-02 Ignition source around 45 kg LP Gas cylinder.

Gas operatives and industry representatives may request EnergySafety to provide an interpretation of a specific requirement of regulations or standards that are listed in Schedule 7 of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Request for interpretations should be submitted using a 'Request for interpretation of Regulation or Standard requirements' form available on the [EnergySafety website](#).

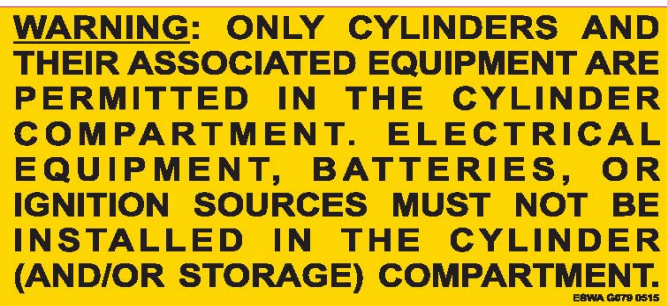


Figure 2: AS/NZS 5601.2 Figure 3.5

EnergySafety WA	
Gas Standards Act 1972 - Compliance Badge	
<b>Gasfitting work:</b> New Connection <input type="checkbox"/> Pipework <input type="checkbox"/> Additional Work <input type="checkbox"/> Appliance Connection <input type="checkbox"/> Repair Work <input type="checkbox"/> Commissioning <input type="checkbox"/>	
NOC No.: <input type="text"/> Variation/ Exemption No.: <input type="text"/>	
Installation address/registration number of mobile for non-propulsive purposes: <input type="text"/>	
I confirm that this gasfitting work complies with the Gas Standards Act 1972 and its regulations.	
Work Completion Date: <input type="text"/>	
Registered Gas Fitter's Name: <input type="text"/>	Gas Fitter's No.: <input type="text"/>
<small>ESWA G013 1008</small>	

Figure 3: EnergySafety Compliance badge

## ATCO Gas Australia - Carbon Monoxide safety campaign

ATCO Gas Australia is undertaking a community awareness campaign to familiarise and educate West Australian gas consumers and the general public about carbon monoxide safety this winter.

Campaign messages will appear on shopping centre billboards, metropolitan and regional community newspapers as well as a range of targeted websites and social media. Content has also been translated into a number of languages to appeal to as broad an audience as possible.

Campaign creative uses 'three wise monkeys' as its central characters, presenting a simple, easily identifiable visual representation that you can't see, hear or smell carbon monoxide.



Fortunately carbon monoxide poisoning from the use of gas appliances is rare in WA. However the campaign is a timely reminder to remain vigilant about the use of gas appliances and to be aware of the symptoms of carbon monoxide poisoning including tiredness, dizziness, vomiting and/or loss of consciousness. Prolonged or regular exposure to carbon monoxide can be fatal.

By following a few simple steps you can reduce your risk of carbon monoxide exposure;

Only use an approved indoor gas heater to warm your house. Use of a gas stovetop or gas oven to heat your home could lead to dangerous levels of carbon monoxide.

- Keep your barbeque and outdoor patio heater outside and only use them in a well-ventilated area. Keep café blinds at a level that allows for air to circulate in and out.
- Always follow manufacturer instructions and ensure your appliances are regularly serviced and properly maintained.

The campaign may result in more calls to gasfitters with enquiries for servicing work, correct appliance use and ventilation issues.

More information can be found at [www.yourgas.com.au](http://www.yourgas.com.au)

## Product Recalls

### Rinnai 'Symmetry' inbuilt gas log effect space heater

The Rinnai "Symmetry" inbuilt gas log effect space heater models RDV3610ETR and RDV3611ETR made from 2010 onwards has been recalled. Other gas heaters are not affected.

The model name and number can be found on the front page of the operating/installation instructions supplied with the heater. If unsure visit [www.symmetryservice.com.au](http://www.symmetryservice.com.au) for further information or call 1800 043 214.

The mesh guard may separate from the front of the heater due to delayed ignition and there is also a very remote possibility of glass breakage and a risk of injury.

Rinnai will arrange for an authorised service technician to provide a free-in-home service. Consumers should not operate the heater until the service is performed.

Visit the website [www.symmetryservice.com.au](http://www.symmetryservice.com.au) or call 1800 043 214 for further information.

## Gas supplier contact details

EnergySafety has been advised that some Notices of Completion have been sent to the incorrect Gas Supplier address.

If you are using paper notices, please take note of the Gas Suppliers contact details in the below table.

If you are using eNotice, it will automatically send the notice to the relevant gas supplier, so there is no need for you to post, fax or email the notice to the supplier. Further information on eNotice can be found on the [EnergySafety website](#).

Supplier	Address	Phone No.	Fax No.	Email
ATCO Gas Australia	PO Box 3006, Success WA 6964	13 13 56		NOC@atcogas.com.au
Elgas (inc. BOC)	PO Box 5006, Beckenham WA 6107	6465 8556	6254 2893	notices.wa@elgas.com.au
Hills Gas Supply	130 Pomeroy Road, Lesmurdie WA 6076	9291 5551	9291 0211	
Wesfarmers Kleenheat Gas	PO Box 4184, Myaree Business Centre WA 6960	13 21 80	9312 9868	wa.gasnotices@kleenheat.com.au
South West Gas Supply	PO Box 357 Dunsborough WA 6281	9756 7655	9756 7688	southwestgas@bipgond.com
Origin Energy	Lot 335 Harries Way, Pinjarra WA 6208	9557 4400	9557 4409	
EnergySafety	Locked Bag 14, Cloisters Square WA 6850	6251 1900	6251 1901	

## Summary of infringements for breaches of gas legislation

Between 1 April and 30 June 2017

Legislation and breach	Offence	Number of Infringements	Fine (\$)
r. 18(2)	Failing to ensure gas installation complies with prescribed requirements.	2	1,200.00
r. 37	Failing to ensure prescribed activity is carried out in accordance with accepted safety case.	1	10,000.00
r. 28(3)	Failing to give notice of completion of gasfitting work within required time	2	800.00
	<b>Total</b>	<b>5</b>	<b>12,000.00</b>