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Energy Bulletin going digital

This issue marks the end of an era with this being the final printed version of the Energy Bulletin. All future editions will be electronic and a link to the Bulletin will be emailed directly to all licence holders as well as available to download from the EnergySafety website. The Bulletin will also have a new look when it is launched online.

The major benefit from publishing the Energy Bulletin online is that it will be emailed to all electrical and gas license holders, rather than just electrical contractors and gas fitters. The distribution of the Bulletin will increase from around 16,000 subscribers to approximately 63,000. The Bulletin will have a much wider reach, allowing all Licensees immediate access to the relevant information and updates published.

The Bulletin will be emailed directly to the email address registered with EnergySafety. To check if your contact details are correct please visit www.energysafety.wa.gov.au and click the 'Stay informed' link on the home page, then 'update your contact details'.

You will need your licence number, which can be found on the front of your licence or permit. To ensure your personal information remains secure, you will receive a security-access code via email or SMS. Enter the access code, then check or update your contact details.



If you do not hold an electrical or gas licence but would like to receive the Bulletin, please subscribe online.

Visit the EnergySafety website and click the 'Stay informed' link on the home page then 'Subscribe to the Energy Bulletin'.

You will receive an email to confirm your email address. Ensure your spam filters are set to allow messages from esnewsletters@commerce.wa.gov.au.

If you do not want to receive the Energy Bulletin there will be an option to unsubscribe in the email you receive in October.

KEN BOWRON

Hen Berron

DIRECTOR OF ENERGY SAFETY

EnergySafety

Energy Bulletin No. 71 July 2015

Fire risk for homes and businesses with inferior electric cabling

Some WA homes and business premises may be facing a serious fire risk if they have had substandard electrical cabling installed which is not replaced soon.

In August last year, the cabling imported by Infinity Cable Co Pty Ltd (in liquidation) was the subject of a national recall, with about 40,000 homes and businesses believed to be affected throughout Australia.

The cabling does not meet Australian electrical safety standards due to poor quality plastic insulation which will start to deteriorate from next year, exposing homes and businesses to a high risk of electrical fire or exposing occupants to electric shock.

All sizes and configurations of Infinity brand flat white cable and orange round mains power cables, as well as Olsent brand power cables sourced from Infinity, are affected. In WA, the cables were sold between March 2012 and October 2013 by Masters Home Improvement and John Danks & Sons trading as Home Timber & Hardware, Plants Plus and Thrifty-Link Hardware.

There are dozens of homes and business premises which may have the dangerous cabling installed which have yet to be inspected.

Licensed electrical contractors who know or suspect they have

purchased and installed these cables should confirm this with their cable supplier. If confirmed, they should contact the clients involved and offer to inspect the cables used. If sub-standard cabling is found to have been used, the contractor should offer to replace the cables with a complying brand.

The cables will age at different rates subject to ambient temperature and may become brittle from 2016 onwards, so there is urgency that they be replaced as soon as possible.

Don't work live electrical safety video

Working on or near energised electrical equipment (live work) is the leading cause of burns, shocks, serious accidents and fatalities for electricians. EnergySafety's Code of Practice Safe Low Voltage Work Practices by Electricians sets out guidelines issued under the authority of Section 33AA of the Electricity Act 1945.

WorkCover NSW has recently released an electrical safety video outlining some simple steps to follow when working with electricity to ensure you and your workers remain safe.

If you work with electricity, do not work live.

Visit www.workcover.nsw.gov.au for further information and to view the video.

Occupational Licensing – exploring online options

The Department of Commerce has commenced work to explore the feasibility of launching an online system for occupational licensing. It is hoped that a new system can be designed that will allow applicants across all 50 occupations administered by the Department to submit a complete application online, rather than submitting a hard-copy form with attached documents such as qualifications and/or police checks. The online system may also allow licensees to manage their licence details. This could include storing and reprinting tax invoices and correspondence without having to contact the Department, and viewing and updating details, such as addresses or the names and expiry dates of licensed employees.

If successful, this initiative may be available to licensees and applicants in the second half of 2016.

Consultation will be undertaken with a range of stakeholders, such as peak industry bodies and training providers, to ensure that any system that is developed meets the needs of current and future licensees.

If you are not a member of a peak industry body and would like to be kept informed about this initiative as more information becomes available, please register your interest by emailing occupationallicensing@commerce.wa.gov.au

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The Energy Bulletin is published by EnergySafety, a Division of the Department of Commerce. It is distributed free of charge to licensed electrical contractors, in-house electrical installers, electrical inspectors, gas certificate holders, gas authorisation holders, gas permit holders and gas inspectors.

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Alternative formats of this publication may be available to meet the needs of people with disabilities.

For enquiries:

Editor: Candace Beilby Phone: 08 6251 1930 Fax: 08 6251 1901

Email: candace.beilby@commerce.wa.gov.au Internet: www.energysafety.wa.gov.au

Tragic death of young trades-assistant should serve as a stern reminder to the electrical industry

On 8 February 2013, a teenager was electrocuted while working in the ceiling space of a property in East Bunbury. He was employed as a Trades Assistant (TA) by an electrical contracting company. He was assisting an electrician to do electrical work at the dwelling when he received a fatal electric shock.

The accident was tragic and avoidable. EnergySafety's and WorkSafe's investigations found that the main contributing factor was the failure to isolate the electricity supply to the lighting circuit cables being installed. This is a clear failure of work practice.

On the day of the accident, the electrician and the TA, both employed by the electrical contractor, attended the property to install a chandelier light fitting. At the request of the home-owner, they agreed to perform some additional work, including the replacement of a wall-mounted light fitting and the installation of two-way switching for the chandelier.

During the investigation the electrician stated that before commencing work, he removed two fuses from the switchboard for the lighting circuits. However, the lighting circuit he was about to work on was supplied from a third fuse which had not been removed.

He then proceeded to connect a new cable (for the two-way lighting circuit) to the existing switch wire and covered the cable-joint with a piece of PVC tape. Once the joint was ready, he fed the jointed cable, used as a draw-wire, through the wall box of an existing light switch into the PVC conduit in the wall cavity.

The young TA was helping him by pulling the other extremity of the cable into the roof space when his hand contacted the joint in the cable. In doing so, he received a fatal electric shock of approximately 230 Vac. The cable was 'live' and he was in contact with an earthed copper gas pipe. This accident could have been avoided if isolation and testing procedures were correctly followed.

Under WorkSafe's Occupational Safety and Health Act 1984, Section 19(1), the electrical contractor pleaded guilty for failing to provide and maintain a safe working environment and was fined \$38,000 under penalty 19(A)(3).

The electrician supervising the trades assistant at the time of the incident pleaded guilty to two charges of the *Occupational Safety* and *Health Act 1984*, Section 20(1) (A); for failing to take reasonable care to ensure his own safety and health at work, and that of the deceased. He received a penalty of \$6,800 under penalties 20(A)(2) and 20(A)(3).

Importance of isolation and tagging procedures

Isolation and testing procedures are paramount to electrical safety. Working on or near energised electrical equipment (live work) is the leading cause of burns, shocks, serious accidents and fatalities for electricians. EnergySafety constantly reminds the electrical industry about the importance of isolating circuits and testing them to ensure they are not live prior to work being commenced. EnergySafety has published the following documents which can be downloaded from EnergySafety's website:

- Code of Practice Safe Low Voltage Work Practices by Electricians sets out guidelines issued under the authority of Section 33AA of the Electricity Act 1945; and
- Safety Guidelines for Electrical Workers.

Additionally, AS/NZS 4836: 2011, Safe working on or near low-voltage electrical installations and equipment, provides guidance on the principles and recommended procedures for safe working. This can be purchased from www.saiglobal.com.au.

Use of trades-assistants

This accident should also prompt electrical contractors to revisit their procedures. Those companies using trades-assistants (TAs) must ensure that they are not breaking the law by asking these unskilled and unlicensed workers to perform electrical work.

Continued from previous page

TAs are not permitted to carry out any electrical work. They are not licensed. They must not be sent up into roof spaces to pull cables into or within buildings, affix switchboards, switches or socket outlets or install conduits in buildings. The role of TAs is to provide unskilled labour. They may dig and backfill trenches, lay sand padding, conduits and cables in trenches, carry tools, equipment, conduits and cables on and off work sites and similar jobs. Deploying TAs to perform activities that are part of electrical work will leave licensed electrical contractors and any supervising electricians open to prosecution.

Working in ceiling spaces

Electrical contractors and workers are often required to work in ceiling spaces. Even in domestic installations, ceiling spaces present significant risks. While it is not mandatory for electricity to be turned off before entering the ceiling space, it is a strongly recommended practice. EnergySafety urges all electrical contractors to implement procedures to ensure their workers turn off the main switch and tag it, before entering the roof space to carry out any work.

Failure to test an installation is not an administrative error

EnergySafety has become aware of claims circulating around the electrical industry that the \$68,000 fine recently received by an electrical contractor was for an 'administration error'.

The electrical contracting company was sentenced in the Narrogin Magistrates Court, on 5 February

2015, for an offence under Regulation 52 of the Electricity (Licensing) Regulations 1991.

In her sentencing statement, the Magistrate stated that she considered the breach of legislation to be serious in nature and therefore warranted a severe penalty. She remarked that "the notice of completion is analogous to a guarantee made by the electrical contractor that the work was done to the required standard, that testing has taken place and the installation was safe".

In this case, the Notice was signed by the nominee who stated that the notifiable work had been checked, tested, was safe and complied with the regulations. However, the testing and checking conducted by Western Power's inspector subsequently found the work to be defective and the failure to earth a relocated meter enclosure made the installation unsafe.

The Magistrate went on to comment that "had this installation not been selected for an inspection, there was a very real possibility of injury and even fatality through electrocution, particularly given that the building was to be used for a commercial purpose, exposing more people to the hazard and that the work was not fenced, exposing the general public, including children, to the hazard".

The fact that the electrical work was accessible to the public and the real danger posed by the unsafe work, coupled with a delay in submitting the notice of completion, influenced the Court on the size of the fine. Any allusion that the fine was for an 'administrative error' is unfounded and misleading.

The electrical contractor appealed against that sentence. The main grounds for the appeal was that the "fine was manifestly excessive".

The appeal was heard in the Supreme Court on 2 April 2015. On Friday, 24 April 2015, the Court delivered its decision. Having regard to the facts and circumstances of the case, the Court ultimately found that "the sentence was not manifestly excessive and dismissed the appeal".

Electrical contractors are urged to develop adequate management systems and work practices to ensure the work of their employees is safe, meets the required Standards and has been adequately verified and tested before the Notice of Completion is completed. The Notice is a legal document stating that an installation has been verified and tested. When it has not this is a serious breach of the law.

Contrary to recent claims,
EnergySafety's compliance regime
is not driven by a 'prosecution
at all costs mentality'. The main
objective of enforcement is to
improve electrical safety by
preventing repeated breaches of
legislation. Gathering evidence and
compiling investigation reports is
a painstaking exercise and there
is no incentive for EnergySafety
to favour this course of action.
The fundamental aim is to change
behaviour to ensure safety.

Very few electrical contractors are prosecuted for breaches of the legislation each year. Most people in the industry do the right thing. In fact, less than 1% of contractors have ever been prosecuted. Of these, most do not re-offend.

In 2014, of the 331 serious breaches of the legislation referred by network operators to EnergySafety, only 48 led to prosecution actions. The majority of offenders either received a warning or no action was undertaken.

Continued from previous page

Only those cases which pass the State Solicitor's Office 'public interest test' are pursued by EnergySafety. Any subsequent prosecutions and penalties are determined by a court.

Latest versions of Acts and Regulations

Are you using the latest versions of the *Electricity Act 1945* and associated Regulations?

The latest versions are available to download for free from the State Law Publisher website www.slp.wa.gov.au

To download an Act, please follow these simple steps:

- On the home page, double click on the box 'Click Here for Western Australian Legislation Databases', located in the middle of the page
- On the left hand side of the page, find 'Acts'. Underneath that, double click on the link for 'In force'.
- Select the relevant first letter of the Regulation you require (e.g. select 'E' for the *Electricity Act* 1945.) A list of all subsidiary titles beginning with the letter 'E' will appear.
- 4. Double click on the required legislation (i.e. *Electricity Act* 1945)
- View the current version of the legislation in your desired format by double clicking on the relevant icon (i.e. PDF, WORD or HTML)

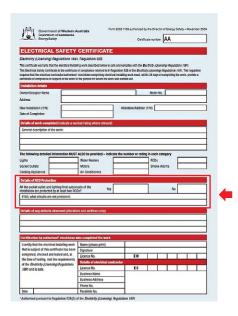
To download the relevant subsidiary Regulations:

- On the home page, double click on the box for 'Click Here for Western Australian Legislation Databases', located in the middle of the page
- On the left side of the page, find 'Subsidiary Legislation'. Underneath it, double click on the link for 'In force'
- Select the relevant first letter
 of the Regulation you require
 (e.g. select 'E' for the Electricity
 (Licensing) Regulations 1991.)
 A list of all subsidiary titles
 beginning with the letter 'E' will
 appear.
- Double click on the required legislation (i.e. Electricity (Licensing) Regulations 1991)
- View the current version of the legislation in your desired format by double clicking on the relevant icon (i.e. PDF, WORD or HTML)

RCD requirements for Electrical Safety Certificates

EnergySafety has received several enquiries on what information should be provided under the 'Details of RCD Protection' section for Electrical Safety Certificates and whether it is required to be completed for all Certificates issued.

This section on RCDs is required to be completed where an electrical contractor installs all the RCDs for the installation or adds an RCD so that all socket outlets and lighting circuits are protected. However, where an electrical contractor does not install the RCDs, completion of this section is not mandatory.



If an electrical contractor has not installed the RCDs and has not checked to determine if the existing RCDs protect all the socket outlets and lighting circuits, then this section should be left blank or insert the words 'not checked'.

This may occur for example where an electrical contractor installs an air-conditioner with one final circuit and it is not part of his work to check if the existing RCDs protect all the socket outlet and lighting circuits.

Where it is found that RCDs do no protect all socket outlets and lighting circuits, it is recommended that the electrical contractor brings this to the attention of the owner, explains the benefits of putting in RCDs and provides a quote for this work.

Why you cannot overlook defects

Turning a blind eye and failing to report defective work immediately to the relevant network operator, could lead to a serious injury, loss of life or damage to property.

The reporting of defects which render the installation unsafe is also required under the legislation.

Many electricians find this practice undesirable as it can be perceived as 'dobbing in' a person. By reporting defects, you are helping to keep the community safe by putting a stop to unsafe electrical work while possibly assisting the network operators and EnergySafety detect and investigate persons working as electricians without holding the requisite licence. Also, by not reporting such work, it assists these persons to undermine electricians doing the right thing by working to the Regulations.

Recently an irrigation installer pleaded guilty in Perth Magistrate's Court for carrying out electrical installing work without the required licence or permit and for carrying out electrical contracting work while not holding an electrical contractor's licence.

He had installed a new irrigation system at a property in Jane Brook which included the installation and connection of wiring to a 240 volt double socket outlet mounted on the front of the escutcheon plate of the main switchboard.



The 240 volt double socket outlet mounted on the front of the escutcheon plate of the main switchboard

Prompted by this report of defective work, a Western Power Inspector carried out an inspection of the property and also identified further serious defects, including a lighting circuit cable termination joint incorporating a top floor smoke detector was not enclosed in a junction box and an exhaust fan socket outlet was not adequately installed and terminations were 'live' and accessible.

Some months after the irrigation installer had completed the work, the property owner engaged an electrical contractor to investigate why the residual current device (RCD) protecting one of the power circuits, had tripped.

While inspecting the main switchboard, the electrical contractor noted several serious defects which he immediately reported to the network operator, Western Power. These defects included no RCD protection for the 240 volt double socket outlet installed on the escutcheon plate, no overload and short-circuit current protection provided for the wiring of the double socket outlet and the failure to earth the earthing contact for the double socket outlet.

To leave the installation in a safe condition, the electrical contractor disconnected the wiring to the double socket outlet. A Western Power Inspector later attended the property and issued an Inspectors' Order for the defects to be rectified.

Regulation 62 of the Electricity (Licensing) Regulations 1991 stipulates:

Subject to subregulation (2), if it appears to an electrical worker carrying out electrical work on any electrical installation or electrical equipment that there is a defect in the installation or equipment that renders the installation or equipment unsafe, the electrical worker is as soon as is practicable –

- a) to report the matter to the owner or occupier of the premises where the installation or equipment is located and inform the owner or occupier that the matter is required to be reported as provided in paragraph (b); and
- b) to report the matter
 - i. to the relevant network operator; or
 - ii. if the electrical worker is unable to identify the relevant network operator – to the Director.

Subregulation 2 states if:

- a) the electrical worker is carrying out electrical work on the unsafe electrical installation or electrical equipment on behalf of his or her employer; and
- b) the employer holds an electrical contractor's licence or in-house electrical installing work licence, the electrical worker shall report the matter to the employer who shall then comply with subregulation (1) as if that subregulation referred to the employer and not to the electrical worker.

Continued from previous page

It is important that all identified defective work is left in a safe condition before the electrician who identified the defect/s leaves the installation. However, the electrician must first obtain the permission of the property owner to carry out the corrective work.

An electrician must not interfere with any defective work at the scene of an accident. Regulation 63A states that a person should not do anything at the site of an electrical accident that hinders or obstructs an investigation by inspectors or police officers.

When your electricians encounter any defective work, it is imperative they undertake the following steps:

Time to update your trading name

Electrical contractors are urged to update or register their trading name on the Australian Business Register (ABR). From 31 October 2018, the ABN Lookup site will only provide the registered business name.

The ABN Lookup site allows members of the public to access the details provided by a business at the time they registered with the ABR to obtain an Australian Business Number (ABN).

If your company registered a trading name before 28 May 2012, the Australian Taxation Office (ATO) would have collected it to be displayed on the ABR.

In order to continue using a trading name, you are required to register it as a business name online through ASIC Connect on the Australian Securities & Investments Commission website www.asic.gov.au. A trading name is used by a legal entity or person to trade under and is *not* a registered business name.

Before registering on ASIC Connect, conduct a search on ASIC's 'Search Business Names Register' to check whether the trading name you wish to use is not already a registered business name.

Continued over page

STEP 1

Defective work has been identified within an installation or electrical equipment

STEP 2

Notify the owner or operator of the installation or equipment that defective work has been identified and that the matter is required to be reported

STEP 3

Immediately report the defective work to your relevant network operator:

Western Power - 13 13 51

Horizon Power - 13 23 51

Rio Tinto – 1800 992 777

BHP Nickelwest - 9026 5262

BHP Billiton Iron Ore (Newman) – 1300 632 483

STEP 7

Call a network operator inspector if the owner or operator refuses to authorise immediate corrective work. It may be necessary to disconnect the electricity supply which requires an inspection

STEP 6

Report the defect to your employer, who reports the defect to the relevant network operator

STEP 5

Request the permission of the owner or operator of the installation or equipment where the defect/s have been identified to make the installation safe by isolating it

STEP 4

If the relevant network operator cannot be identified, contact EnergySafety on 6251 1900

Continued from previous page

ASIC Connect should also be used to update contact details, including email, business and postal addresses and phone numbers.

For taxation purposes, you will still be able to update your trading name details with the ATO. However, the ABR and ABN Lookup will not update these details for public viewing.

If the trading name for your company has changed and there are no other changes to your legal entity, you are required to complete and submit an *Application to*Change the Trading Name for an Electrical Contractor's Licence to EnergySafety's Licensing Office.

This form is available to download from EnergySafety's website www.energysafety.wa.gov.au

Are your employees working safely?

Too often EnergySafety carries out investigations where serious shocks, accidents and fatalities could have been prevented if the equipment worked on had been isolated. Examples include:

• An electrician was working on a 'live' switchboard while his trade assistant was packing up tools in front of the switchboard which had the escutcheon plate removed. The electrician had placed a LV mat over the busbar as the trade assistant had expressed concerns about working around 'live' busbars. A flashover occurred and the trade assistant received flash burns to his legs, arms and stomach.



Switchboard showing the arc marks where the flashover occurred



Scorched LV mat that had been placed over the busbars

 An electrician received an electric shock and severe flashover burns to his face and body when the 'live' red-phase lug of the incoming mains cable snapped out of the fault current limiter base and made contact with the metallic frame of the switchboard.



Arc marks and holes within the metallic structure of the switchboard attributed to the flashover

An electrician was in the process of terminating a three phase service protective device while it was still 'live' and connected to the network point of supply pillar on a multiple master meter installation. The victim shorted out two incoming 35mm² phases (red and white) with the metal part of his insulated pliers and received burns to his arm and face.



Arc marks on the pliers held by the victim



The melted metallic part of the line side of the installation's main switch

An electrician received burns
to his right hand and arm when
a flashover occurred between
phase-to-earth and phaseto-phase in the 'live' side of
the fuses while he was fitting
new tariff meters and current
transformers into a distribution
board. The electrician had
been in the process of placing
insulation barriers to the 'live'
parts of the distribution board.



Phase to earth and phase to phase side of the distribution board with arc marks

 An electrician was completing an upgrade to a 'live' switchboard. The electrician had disconnected and removed the original subcircuit fuses and installed a new load centre with a new 80A three phase main switch.

Continued from previous page

He had installed a set of new load tails between the existing meter and new main switch. As the electrician attempted to terminate the new load neutral conductor at the 'live' meter terminals without having performed any isolations, a short circuit occurred between the blue phase active terminal and the neutral load terminal. This resulted in a flashover and the electrician received serious burns to his hand and arm.



Main switchboard showing the Clipsal load centre with arc marks from the flashover

 An electrician received flash burns to both his arms and his upper torso when he removed the cover of a switchboard he had installed on a concrete plinth. The electrician was not wearing any personal protecting equipment (PPE) at the time of the incident.



Arc marks surrounding the unprotected incoming main entering the main switch

In February 2015, EnergySafety released a discussion paper Work on Live Electrical Equipment for comment. Although the deadline for comments has passed, this paper is still available to view on our website www.energysafety.wa.gov.au

Safety Guidelines for Electrical Workers

EnergySafety's Safety Guidelines for Electrical Workers (available to download from our website) provides guidance to electrical contractors and their electricians and apprentices on how to keep their fellow workers and themselves safe by adopting safe working practices and by using the correct tools and clothing.

A self-assessment based around these Guidelines has been provided below for you to monitor whether your company meets these Guidelines.

	SAFETY EXAMPLE (please tick relevant box)	Comply
1.	Before commencing any job, a plan is devised which considers isolation requirements and incorporates a risk assessment	
2.	For each job, the competence, experience, skill and knowledge of the apprentice/s and/or electrician/s is given due consideration	
3.	Apprentices and permit holders are provided with the appropriate level of supervision, be it direct, or general	
4.	Approved safety equipment such as insulated gloves, mats, covers and barriers are always readily available for all employees	
5.	Employees have been provided with approved safety gear including helmets, footwear and glasses	
6.	Before purchasing, protective clothing and equipment is checked for compliance with the relevant standards	
7.	Tools (e.g. safety belts, insulated ladders and non- conducting tape measures) are regularly checked, tested and maintained	
8.	A first aid kit is readily accessible and is maintained regularly	
9.	All employees are familiar with the electric shock and resuscitation procedures	
10.	All electric shocks are immediately reported to the relevant network operator	
11.	Fire extinguishers have been positioned in convenient locations with several employees trained on their operation	
12.	Isolation and tagging procedures are carried out before any repairs or alterations to an installation	
13.	Employees are supplied with 'Danger' and 'Out of Service' tags and know what situations to apply them	
14.	Testing of an installation is always carried out before the commencement of any work	
15.	All employees are aware that they are not to undertake any 'live' work	
16.	Safety blankets are used to cover 'live' apparatus in the area where work is being carried out	
17.	Safety observers are used when required	

Continued from previous page

	SAFETY EXAMPLE (please tick relevant box)	Comply
18.	Safety barriers are used when deemed necessary	
19.	When working on installations, our employees know to always connect the earth and neutral conductors first	
20.	After taking a break, our employees know to check the isolation points and re-test before recommencing work	
21.	Before leaving a job, employees check to see if they've left their tools on, or in the job	
22.	Before being energised, completed work is checked and tested to ensure compliance with the relevant Acts, Regulations and standards (e.g. AS/NZS 3000: 2007, Wiring Rules)	
23.	When energised, the system is checked to see if it is operating correctly	
24.	All employees involved on the job are always notified before the installation is energised	
25.	'Danger' and 'Out of Service' tags, earthing equipment, safety barriers and other equipment are always removed before leaving a site	

How many Yes's did you score?

Private power lines and poles consultation paper

Submissions have now closed for comments on EnergySafety's Private power lines and poles in Western Australia public consultation paper.

Late 2014 saw the launch of EnergySafety's month-long campaign to publicise the legal responsibilities of property owners with private power lines and poles on their land. This included the distribution of a brochure to all electricity consumers in Western Australia.

The brochure *Private power*poles and Lines – Owner's

safety and responsibility detailed

EnergySafety's policy at the time
which recommended the following:

 If private power poles or lines are at the stage where they need to be replaced, underground cables should be considered. If private power poles or lines are to be kept but serious repairs need to be undertaken, then new steel poles and insulated wires should be used.

Before mandating these requirements, EnergySafety undertook further research to evaluate the new policy's effects on consumers and electrical contractors.

The resultant consultation paper outlines the safest practical options and critical factors for the use of steel and wood poles for private power lines and poles in Western Australia.

Received comments are being reviewed, with the final guidelines expected to be published towards the end of 2015.

New Senior Electrical Inspector

EnergySafety is pleased to welcome newly designated Senior Electrical Inspector, Steven McCluskey.

Steven has worked in many areas of the electrical industry, including domestic, commercial, marine, manufacturing and industrial projects in Europe and Western Australia.

In his most recent role, he operated his own electrical contracting business in the Perth metropolitan area. He also has extensive investigation experience having been a Police Officer with the Western Australia Police for seven years.

Steve looks forward to an exciting and challenging role with EnergySafety.

Q & A's - Electrical Nominees

	Question	Answer from EnergySafety
1.	Why do electrical contractors and In-House Electrical Licence holders require a nominee and what is the function of a nominee?	The nominee has an important role within the company which is to certify the electrical installing work the company or individuals carry out. To enable this, the nominee must be in a position to monitor the standard of electrical installing work and have control of all the work being carried out which he/she is to certify
2.	What requirements must a nominee for an electrical contractor satisfy?	To obtain an electrical contractor's licence, the individual applying for the licence must nominate a person (nominee) who satisfies the following requirements if the applicant themself, does not: a) Hold an electrical worker's licence endorsed as an electrician's licence. b) To the Electrical Licensing Board's satisfaction, has carried out electrical installing work in Western Australia, another Australian state or an overseas country, that complies with requirements of the Act and associated regulations in Western Australia, or, with the equivalent requirements for the other state or country where they carried out electrical installing work c) Has completed training as specified by the Electrical Licensing Board Holds a current Certificate of Currency issued by a reputable insurance provider in respect to the work that is carried out by an electrical contractor
3.	What requirements must a nominee for an In-House electrical licence holder satisfy?	As per the requirements listed above in 1 a, b and c, the applicant for the In-House Electrical Licence or the nominee must also demonstrate that they understand the duties and obligations for electrical contractors and electrical installers under the Act, associated regulations under the Act, the Energy Operators (Powers) Act 1979 and the Energy Coordination Act 1994 and their associated regulations.
4.	What training am I required to undertake to become an electrical nominee?	The following modules from the Electrical Contractor Training Program must be undertaken: Operation (Electrical) Legislative Requirements (EA103A). Electrical Requirements (WAE100).
5.	Can I apply to be a nominee on my own request, or, must I be nominated?	No. Only the person who holds the electrical contractor's licence or the In-House Licence holder can nominate an individual to be their nominee.
6.	I have a restricted electrical licence. Can I apply to be a nominee for a company?	No. Only persons who hold an electrical worker's licence endorsed as an electrician's licence (unrestricted) and have completed the required training modules can be a nominee.

Continued from previous page

	Question	Answer from EnergySafety			
7.	At what training institutions can I undertake these modules?	The Western Australian registered training organisations offering these modules are: • College of Electrical Training 5 Avior Avenue, JANDAKOT WA 6164 ph: (08) 9417 8166 email: Jandakot@cet.asn.au or College of Electrical Training 20 Injune Way, JOONDALUP WA 6027 ph: (08) 9301 1560 email: Joondalup@cet.asn.au			
		 Combined Skills Training Association 1st Floor, Unit 24/257 Balcatta Road BALCATTA WA 6021 ph: (08) 9440 3600 email: info@combinedskills.com.au Polytechnic West Thornlie Campus Burslem Drive, THORNLIE WA 6108 ph: (08) 9267 7504 			
8.	How do I become a nominee for an electrical contractor or In-House Installing Work Licence holder?	The person holding the licence must nominate you by providing the Electrical Licensing Board with an Application to Register as a Nominee for an Electrical Contractor's or In-House Installing Work Licence available to download from EnergySafety's website www.energysafety.wa.gov.au Once completed, the form is to be submitted to EnergySafety's Licensing Office along with the required application fee			
9.	What are the application fees for replacing or adding nominees?	The application fee for a nominee of an electrical contractor is \$406 and the application fee for the nominee of an In-House Electrical Licence holder is \$203			
10.	What is the maximum number of nominees I can have for my business?	There is no restriction on the number of nominees.			
11.	I am employed as a nominee for a company and I believe that the work my employer is instructing me to carry out will breach the Regulations. Given these circumstances, am I obliged to follow the instructions I've been given?	No. Under Regulation 38A, if you have a reasonable belief that the electrical installing work you have been instructed to do would not be carried out according to the Electricity (Licensing) Regulations 1991, in this instance you are not required to comply with the instructions.			

Continued from previous page

	Question	Answer from EnergySafety
12.	How is a nominee removed from a company?	 The nomination of a person can be cancelled at any time by: providing written notice by that person to the holder of the licence and the Board; or providing written notice by the holder of the licence to the Board and the person nominated.
13.	Why is a nominee required to sign off on a Notice of Completion?	By signing a Notice of Completion, a nominee is acting on behalf of the electrical contractor by certifying that: The Notice has been duly completed. The electrical installing work subject of the Notice has been completed and complies with the Electricity (Licensing) Regulations 1991.
14.	As a nominee, before I sign a Notice of Completion, what do I need to do?	The company and nominee must have a system in place ensuring that the company and nominee can form a reasonable and honest belief that the electrical installing work subject of the Notice is completed and complies with the Electricity (Licensing) Regulations 1991. The nominee must also check that the Notice is duly completed

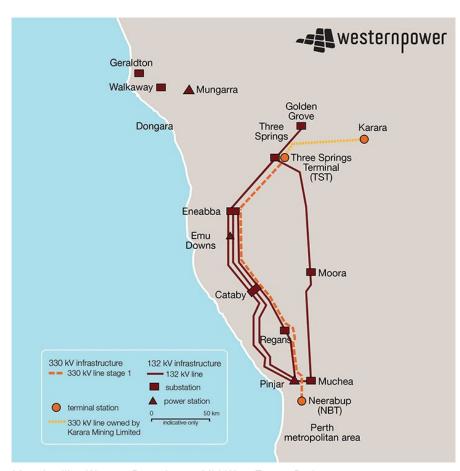
Power upgrades in the mid-west

Hon Dr Mike Nahan, Treasurer and Minister for Energy, Citizenship and Multicultural Interests recently announced the energisation of Western Power's highly anticipated Mid-West Energy Project (MWEP), which provides an additional 500 megawatts to the Network Operator's grid.

The \$400 million project which took four years to complete included several upgrades to substations and the installation of a 330 kV transmission line, which supplies electricity from the town of Pinjar to Eneabba.

MWEP not only facilitates the connection of power generators between Neerabup and Three Springs, it also allows for renewable energy sources such as wind power to be connected to the network at a later stage.

In another development, Minister Nahan also announced that six new diesel power stations (including a temporary power station which will be replaced with a gas-fired power



Map detailing Western Power's new Mid-West Energy Project

station) were now operating in the mid-west region in the towns of Cue, Meekatharra, Yalgoo, Wiluna, Sandstone and Mount Magnet.

The new power stations provide Horizon Power's network with an additional 7,600 kW of electricity.

Both projects are vital for the growth of communities and industry in the mid-west region.

Are you aggrieved by an Inspector's Order

If you are aggrieved by an Inspector's Order it is recommended that you follow these three steps:

- Contact the Inspector who issued the Order and confirm what remedial action is required before relaying your concerns about the Order. If discussions with the Inspector cannot resolve your issue/s, request the details of the Inspector's supervisor.
- 2. Contact the Inspector's supervisor and provide him or her with the Order details, your concerns about it and the measures you have taken to resolve this issue with the Inspector. Seek his/her response.

 If the above is not successful and you believe the Order requires a formal appeal, complete and submit the Notice of Appeal against an Inspector's Order (Electricity) form to EnergySafety.

Upon receiving the completed form, EnergySafety will provide confirmation that an investigation into the appeal has commenced.

When the investigation has been completed, EnergySafety will confirm, vary or cancel the Inspector's Order and will notify you of the final outcome.

The Notice of Appeal form is available to download from EnergySafety's website www.energysafety.wa.gov.au

Technical assistance

Whether you have concerns about an installation you are working on, are seeking clarification on a clause from AS/NZS 3000: 2007, Wiring Rules or another Standard, or require interpretation on electricity related legislation, Codes of Practice or Guidelines, advice can be sought from:

 National Electrical and Communications Association (NECA) Western Australia
 Ph: (08) 6241 6100
 Fax: (08) 9240 4866

Email: necawa@necawa.asn.au

NECA also gives its member's access to its Technical Knowledge Base (TKB) which features up-to-date advice and information.

 Master Electricians (Western Australia)
 Ph: 1300 889 198

> Fax: 1800 622 914 Email:

info@masterelectricians.com.au

Master Electricians also has a member's only section that offers reference materials and fact sheets.

Prosecutions for breaches of electricity legislation1 April to 30 June 2015

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
Roy Pinto (West Swan)	NLH	Regulation 19(1) E(L)R 1991	Carried out electrical work without the required licence or permit	Between 12 and 16 March 2013	3,000.00	719.30
		Regulation 33(1) E(L)R 1991	Carried out electrical contracting work without holding an electrical contractor's licence			
Delroyal Holdings Pty Ltd (Karratha)	EC002412	Regulation 52(3) E(L)R 1991	Submitting a Notice of Completion to the relevant network operator for notifiable electrical installing work that had not been completed and was unsafe	8 September 2012	20,000.00	2,900.00
Glenn Ronald Finnigan (Karrinyup)	EW105184	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	Between 26 May and 11 June 2013	3,000.00	719.30

Legend NLH No Licence Held

Electricity Act 1945 EΑ

E(L)R Electricity (Licensing) Regulations 1991

Global Fine or Costs issued

Duly completed notices of completion

Gas suppliers have made EnergySafety aware of a problem they are experiencing with submitted Notices of Completion (NOCs). Many submitted NOCs are incomplete, in error, or do not contain enough information to allow the gas supplier to comply with their statutory requirements.

Over the twelve months from April 2014 to end of March 2015 gas suppliers have reported that a total of 1,236 NOCs were returned to gas fitters for correction and re-submission. The LP Gas suppliers also reported that 332 NOCs were sent to the wrong gas supplier and required redirection to the correct gas supplier or EnergySafety for processing. These problems can be avoided by the gas fitter taking the time to correctly complete their NOCs before they are submitted. This avoids delays in processing the NOCs and the resultant inconvenience to the customer. the gas supplier and the gas fitter. Gas fitters and/or gas suppliers may be infringed or prosecuted for non-compliance with statutory requirements as a result of submission of incomplete NOCs.

Duly completed

Regulation 28 requires gas fitters to submit NOCs for gas fitting work. To be considered 'submitted' the NOC must be accepted by the gas supplier or EnergySafety. To be accepted, the NOC must be valid and to be valid it must be 'duly completed'. That is every field on the NOC that is relevant to the work undertaken must be completed.

An example is the meter number field in Section 1 of the NOC. When the gas installation is or will be connected to a distribution system and the gas meter has been installed this field must be filled in. However where the gas installation is supplied from cylinders (where there is no gas meter) then this field is not relevant and can be left blank.

Guide to correctly completing a NOC

Section 1: Location of installation

Enough information to uniquely identify and locate the gas installation is mandatory. Additional information, e.g. occupier telephone number, meter number etc., where relevant must also be provided. If the owner of the gas installation, vehicle, caravan, campervan or marine craft is unknown the builder or dealer's name and telephone number must be provided. Where a gas installation is difficult to locate, directions allowing easy location of the gas installation must be included.

Section 2: Mobile installations

The vehicle identification number, the vehicle type and gas type must be indicated. The contact details entered in Section 1 must allow the vehicle to be located and inspected.

Section 3: Fixed installation details

Every effort must be made to identify the correct gas supplier.

The gas supplier is as follows:

 for supply from a reticulated system, the operator of the system; or for supply from LP Gas cylinders or tanks, the owner of the cylinders or tank.

Installations to be supplied from a reticulated system must indicate if the meter box is fitted or not. Gas suppliers generally cannot install a service unless the meter box has been fitted.

Note the gas retailer is not always the gas supplier, Alinta Energy or Kleenheat may be the gas retailer but ATCO Gas Australia is the gas supplier.

Section 4: Installation details

At least one option must be selected on each line. With the second line (type of installation) two options must be selected, the type of installation (domestic, commercial, or industrial) and if the installation is new or existing.

Section 5: Type of work

At least two options need to be selected from this section, the connection status (new or additional) and the type of work.

- New connection means before or at commencement of gas supply.
- Additional connection means gas supply has already been commenced and the installation is being modified or added too.

More than one type of work can be selected, for example the installation of a new water heater in an existing home would have the following options selected:

- additional connection;
- pipe work;

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- appliance installation; and
- commissioning (both pipe work and the appliance).

Section 6: Type A (domestic/commercial) appliance(s)

This section lists the number, rated maximum gas input, and makes of all Type A gas appliances by the appliance type installed.

The gas input rate is the total for all appliances of the type.

Section 7: Type B (industrial) appliance(s)

Type B appliance details are only to be entered by class I gas fitters.

Section 8: Comments and additional details

This is where the gas fitter can provide additional information. In particular, a gas fitter must report any non-compliant gas fitting work observed on the gas installation. The gas supplier will act on this report and investigate the noncompliance.

An unsafe installation can be reported in this section; however any unsafe installation must also be reported immediately to the gas supplier or EnergySafety.

Any variation/exemption that is applicable to an installation must also be recorded in this section, for example, GPDR 15/027 where the aluminium meter bends have been used on sub-meter installations.

Section 9: Administration details

Entry of all gas fitter details in a clearly legible manner is mandatory. No NOC will be accepted where the declaration is not signed and dated.

Mobile installations

The NOC for mobile installations to be considered duly completed requires sections 1, 2, 8 and 9 to be completed and additionally sections 5 and 6 for caravans, campervans and marine craft.

Fixed installations

The NOC for a fixed installation to be considered duly completed requires sections 1, 3, 4, 5, 6, 7 (if applicable), 8, and 9 to be completed.

Submission

The completed NOC must be submitted within 48 hours of completion of the work to the following:

- for mobile (vehicles), caravan, campervan and marine craft installations, to EnergySafety; or
- for stationary installations to the gas supplier. If the gas supplier cannot be identified the NOC must be submitted to EnergySafety.

A list of contact details for EnergySafety and gas suppliers are provided in the NOC book.

A duly completed NOC makes everyone's life easier; an incorrectly completed NOC causes problems for the gas suppliers, customers and particularly gas fitters. Incorrect or incomplete NOCs will be returned to the gas fitter for rectification and resubmission. They will not be considered submitted until accepted by the gas supplier or EnergySafety. If you are in doubt as to what is required in completing a NOC contact EnergySafety or the gas supplier.

Young mother and baby have close call

The gas inspection branch was recently notified by the Department of Fire and Emergency Services (DFES) of a gas cylinder fire at a unit in Perth. The incident happened at around 7:30am after a young mother lit a portable gas space heater that had an integral 9 kg LP Gas cylinder (cabinet style).

The heater had been purchased by the grandmother of a 4 month old baby at a swapmart a year ago. The grandmother had lent the heater to the baby's mother believing it would be a cheaper form of heating than the electric heating system at the unit. The heater was trialled at the unit for an hour the evening before the incident without any problems.

On the morning of the incident, the baby's mother reported that she placed the heater in the living room near the front door and lit it.



Damage to gas space heater



Damage to unit

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After a couple of minutes there was a noise and she saw flames from the top and rear of the heater. Unable to turn off the cylinder valve due to the flames and fearing for the safety of her baby she opened the front door and manoeuvred the heater onto the porch. A neighbour had called DFES who arrived quickly to put out the fire but not before it had significantly damaged the property. During the incident the new mum suffered burns to one of her arms and the baby was treated for smoke inhalation.

Gas space heaters with integral LP Gas cylinders have been prohibited for sale for over 30 years throughout Australia because of the numerous indoor fires they have caused. Unfortunately they are still allowed in other countries. In this instance, the one involved in the fire was manufactured for use in New Zealand and found its way to Australia where it has been modified to accept an Australian approved regulator and POL connector.

If you see one of these heaters, you have a duty to inform the owner that they are prohibited from use and sale in Western Australian and report its location to EnergySafety who will follow up to ensure it is made inoperable and disposed of.

Use of meter bends on gas sub-meters

AS/NZS 5601.1 Section 2 allows gas installations to be designed to essential requirements rather than by using the prescribed means of compliance in Sections 3 to 6 of the Standard. Designs that comply with the requirements of Section 2 comply with the minimum safety requirements but can allow the use of innovative design, materials or processes that Sections 3 to 6 will not permit.

Network operators in WA have, for a number of years utilised a proprietary meter bend component (meter bend) on its residential master meter installations. The meter bends are generally used in meter boxes to connect the outlet of the meter to the manifold and the consumer's gas installation. As these form part of the network distribution system they are not required to be compliant with the requirements of AS/NZS 5601.1 and fall under the network operator's Safety Case.

However, if multiple residences are supplied by a single master meter and individual sub-meters at each residence, then the sub-meters are considered part of the consumer gas installation and must comply with AS/NZS 5601.1.

The meter bends fail to comply with the requirements of section 4 of AS/NZS 5601.1 in:

- Clause 4.2 which requires the materials used to comply with the materials listed in Table 4.1.
 The meter bends are made from aluminum tubing which is not included in Table 4.1; and
- Clause 4.4 which prohibits the use of compression fittings with non-metallic olives.

Many of the older multistorey residences originally had individual master meters for each residence and commonly had meter boxes and meter bends fitted. However at some point, a single master meter was installed and the original meters became sub-meters on consumer gas installations. As a consequence these installations now contain non-compliant meter bends on the sub-meters.



Typical old sub-meter

Currently, when working on these installations gasfitters use alternative methods to comply with the requirements (see below) or commonly re-use the meter bends.







Fabricated meter bend examples

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Whilst the alternative methods comply, they are time consuming to install, not uniform and require more joints which increases the potential for gas leaks and decreases the safety of the installation.

EnergySafety has recently issued approval under AS/NZS 5601.1, Section 2; Performance based design and other essential requirements (GPDR 15/027) for the use of the Proprietary Meter Bend Component.

The approval allows gasfitters to use or re-use the meter bend in the configuration similar to a standard domestic meter installation (see below) on multiple residence sub-meters.



Standard domestic meter



Acceptable sub-meter



Proprietary meter bend component

The use of this meter bend installed on consumer installations in accordance with GPDR 15/027 is approved, providing the following conditions are met:

- the component is a proprietary gas meter bend using Philmac fittings and comprising the following:
 - gas meter bend to suit gas meter;
 - complete with 20 mm
 "Kingo" rubber ring; and
 - · complete with meter washer.
- the piping components are suitable for use with this component and must be gastight;
- the component, meter and fittings are to be installed inside a meter box or an enclosed recess:
- where installed in a cavity wall the meter box or enclosure shall be completely sealed from any adjoining recess or cavity; and
- the meter is adequately supported within the meter box or enclosure.

The performance based design requirement permits the use of the meter bends on consumer gas installations. If you use these on a consumer gas installation you must note GPDR 15/027 in section 8 of the Notice of Completion.

If you require further information on this please contact EnergySafety.

Gas Fitters – Are you aware of your obligations before turning the gas on?

A gas fitter, having completed a new gas installation has 'turned the gas on'. The gas supplier has made gas available by fitting a gas meter and 'discing off' the outlet side of the gas meter. To enable the gas fitter to test and commission the gas installation the disc has to be removed. Gas is deemed to be permanently connected when the Notice of Completion (NOC) has been given to the gas supplier and the person requesting the gas supply. The NOC has to be given to the gas supplier within 48 hours of the completion of the gas installation.

There have been several reports recently where gas fitters had failed to submit the NOC and affix the Compliance badge to the gas installation. Failing to complete these requirements has the following implications:

- Without the NOC the gas supplier is unaware gas is permanently connected.
- Not supplying an NOC is seen as a deliberate act to avoid the audit/inspection processes required of the gas supplier by legislation.
- When identified, the gas installation can be disconnected by the gas supplier.
- The gas fitter is open to disciplinary action by EnergySafety that may result in an Infringement Notice being issued and possible prosecution action.

For expediency the gas fitter may wish to fax or email a scanned copy of the NOC but this **must** be followed by posting the originals. If the gas supplier is unknown the NOC can be passed to Energy*Safety*.

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Tool Box meetings

Are your employees suffering from 'blank spaces' when it comes to gas regulations?

Receiving 'pinkies' (NODs) for poor gas fitting practices?

This is your opportunity to meet face to face with the regulator by having an EnergySafety gas inspector visit your workplace. An early morning Tool Box meeting enables your employees a chance to discuss any topical issues or provide an explanation as to the many grey areas of concern.

EnergySafety together with the gas suppliers' inspectors have regularly visited plumbing and gasfitting companies both large and small, in the metro and regional areas of Western Australia. These meetings have been well received with not only gas fitters joining in but also the administration staff. The inspectors are able to give an insight into the reasons for ensuring the appropriate Notices of Completion are given both to the consumer and the gas supplier/network operator and other contentious issues.

Taking on new staff, that may be from overseas, interstate or apprentices? A Tool Box meeting can provide a conduit for communication where an interpretation is required of the local regulations. There may be a need to request advice on a difficult gas installation. Although inspectors are unable to design installations they may be able to suggest alternatives to ensure the gas installation remains safe and compliant.

Should you wish to have your staff participate in a Tool Box meeting at your premises you are encouraged to contact EnergySafety's Gas Inspectorate on (08) 6251 1917 or email:

energysafety@commerce.wa.gov.au

Safety Alert – Cannon Fitzroy and Canterbury inbuilt gas heaters

Laboratory testing suggests that it may be possible that Cannon Fitzroy or Canterbury inbuilt gas heaters built between 20 March 2001 and 8 October 2009 under AGA Approval 6118 could produce potentially hazardous levels of carbon monoxide if the heater is subjected to certain conditions, including the operation of range hoods and other exhaust fans. The risk may be increased if the inbuilt heater has not been installed properly, or if it has not been serviced regularly, or if the house is tightly sealed.

The build date and AGA Approval number of the heater appear on the heater's ratings label, which is located within the lower fan chamber, and which a suitably qualified person can access by removing the lower fascia panel of the heater.

What should you do

If a customer has one of these inbuilt gas heaters, instruct them not to use it until they have had it checked by an authorised Cannon service technician to ensure that the operation of exhaust fans or the installation of the heater does not affect the safety of your heater.

Further information

Contact Cannon

Telephone: 1800 035 410

Website: www.cannonappliances.

com.au/safety-message

Summary of infringements for breaches of gas legislation

1 April to 30 June 2015

Legislation and Breach	Offence	Number of Infringements	Fine (\$)
GSR R18(2)	Failing to ensure gas installation complies with prescribed requirements	2	1, 200
GSR R26(1)(a)	Failing to ensure gas installation meets requirements as to pressure testing and is gas tight.	3	1,800
GSR R28(3)	Failing to give notice of completion of gasfitting work within required time	3	1,200
GSA S13A(2)	Engaging in an operation or carrying out work or process, of a kind prescribed to be nature of gasfitting work otherwise than in a prescribed capacity without a permit of certificate of competency	2	\$2,000

Legend NLH No License Held GSA Gas Standards Act 1972

GSR Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999