

energy

Bulletin

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EnergySafety releases Parkerville report

EnergySafety's report into the pole failure that caused the Parkerville bushfire on 12 January 2014, shows the private power pole failed because of rot and termites.

The report follows the January 15 finding that the bushfire originated from the failure of a privately owned point of attachment pole (PA pole) at 180 Granite Road, Parkerville.

When the pole toppled, it caused the customer's submains cable to pull through the hole at the bottom of the main switchboard enclosure, causing a short-circuit. Hot metal globules then fell and ignited vegetation at the base of the PA pole.

EnergySafety has completed a thorough investigation into the cause of the private pole failure. Closely linked with that investigation is the issue of ownership of, and responsibility for, power poles and service apparatus on private land. This has been the subject of detailed consideration by EnergySafety and the State Government.

Our investigation found the pole failed due to extensive damage from fungal decay, or rot, and termites. The *Electricity Act 1945* makes no provision for the maintenance of private electrical installations. Under common law, property owners have a duty of care to maintain their power assets in a safe condition, but there is no legislative requirement for an owner to inspect their installation to ensure it is safe.

The Act also deals with the responsibilities of a network operator in relation to the maintenance and safety of service apparatus.

Based on the available evidence and existing legislation, EnergySafety will not be taking any legal action.

The clear finding of the report is that the pole failed because it was rotten and had been infested by termites. In hardwood poles such as jarrah, this is very hard to assess because the rot is usually internal and below ground level. Therefore, the age of the pole is the best guide. Poles older than 25 years are at the end of their service life and could be unsafe.



Owners of private power poles and lines have a duty of care to maintain their electrical assets, and are urged to have them inspected by a licensed electrical contractor.

Volume 1 of the report can be downloaded from EnergySafety's website at www.energysafety.wa.gov.au.

KEN BOWRON
DIRECTOR OF ENERGY SAFETY

EnergySafety



Electrician's Training Licence

Under the provisions of the Electricity (Licensing) Regulations 1991, an apprentice electrician must hold an Electrician's Training Licence before they can carry out electrical work.

Employers are reminded it is their responsibility to ensure an apprentice has been issued an Electrician's Training Licence by EnergySafety's Licensing Office.

The regulations also require that an apprentice's knowledge in relation to safety must be assessed, prior to the issue of an Electrician's Training Licence. The application including a copy of the Apprentice Safety Assessment Guidelines, the Apprentice Safety Assessment Report and Test can be downloaded from EnergySafety's website at www.energysafety.wa.gov.au.

Hard copies of the Apprentice Safety Assessment Guidelines can also be obtained from the Licensing Office.

The supervisor, who must be an electrician with a valid licence, is required to conduct the interview and complete the Apprentice Safety Assessment Report when the apprentice has completed and passed the test.

The report, together with the application form, application fee and proof of identification, must be returned to the Licensing Office.

Where an apprentice previously held an Electrician's Training Licence with another employer, they will need to re-apply so the licence can be re-issued under the new employer.

When the Electrician's Training Licence has been issued, a copy of the licence is sent to the employer. The licence details are to be entered in the employer's register of electrical workers.

SMS/email renewal notices

To support the new online licensing services, EnergySafety has introduced an SMS/email alert. The alert is sent to licence holders 8 weeks prior to the expiry of a licence. The alert includes a link to renew their licence/permit via the online payment gateway. Licence holders who have not already renewed their licence/permit will then be mailed a renewal notice 4 weeks prior to expiry of their licence.

Licence holders should note that renewal notices are sent as a courtesy only. It is their responsibility to ensure that a licence is renewed prior to its expiry.

Licensing services available online

EnergySafety has introduced the following online licensing services:

- **Renewals** of current licences/permits;
- **Restorations** of expired licences/permits; and
- **Reprints** of lost/stolen/damaged licences/permits.

How does it work?

To use the online gateway, licence holders must enter their licence/permit number, request a unique *one-time* security code via SMS and/or email address (whichever is registered in EnergySafety's database) and then use that code to access the secure gateway.

Once you enter the online gateway, you are then able to confirm or update your registered contact details, make payment via the BPOINT payment gateway and if required, attach/upload the relevant documents needed to complete your application (such as Proof of Identification).

Having completed a transaction, the licence holder is automatically sent an electronic copy of their receipt and the application is processed by the Licensing Office the following morning.

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electrical focus

Q & As – RCDs

The following is a compilation of some of the most common queries that EnergySafety receives from electrical contractors regarding RCD installations:

	Question	Answer from EnergySafety
1.	<i>In which Regulations can I find the mandatory requirements relating to the installation of RCDs?</i>	Part IV of the Electricity Regulations 1947 details the requirements of RCDs in residential premises occupied by the owner and also not occupied by the owner (ie rental properties).
2.	<i>Why are two RCDs required in a domestic installation?</i>	Household circuits are required to be split evenly between a minimum of two RCDs. This is because in the event that one circuit fails, there will still be some power and lighting remaining for the homeowner.
3.	<i>What do I do if I come across a main switchboard where there is no room to install RCDs?</i>	Given insufficient room in a switchboard, the recommended option is for the property owner to upgrade their main switchboard. Combined RCD/circuit breakers (single pole) should also be considered.
4.	<i>What do you recommend when RCDs need to be installed in an old flat or living units with obsolete rewirable fuses?</i>	In these instances, it is recommended that the switchboard be removed and replaced with a modern circuit breaker switchboard with a minimum of two RCDs.
5.	<i>What do I need to be mindful of when installing additional RCDs?</i>	If you are installing an additional RCD, always test that it functions correctly and that there are no circuit interconnections that will cause the device to inadvertently trip when there are no faults. Also, make sure all general power and lighting circuits are connected to one or the other RCD.
6.	<i>What standard applies to the installation of RCDs?</i>	The installation of RCDs must comply with AS/NZS 3000: 2007 "Wiring Rules".
7.	<i>To what standard does the testing of RCDs need to comply with?</i>	RCDs are prescribed articles and as such, must comply with AS/NZS 3190: 2011 "Approval and test specification – Residual current devices (current – operated earth-leakage devices)". The only required test to be carried out on an RCD is by pressing the test button. If you wish to test the time it takes for an RCD to operate at various currents, then special test equipment is required as detailed in Clause 3.7.2 of AS/NZS 3017: 2007 "Electrical installations – Verifications guidelines".
8.	<i>If I install RCDs, do I need to submit Preliminary Notices and Notices of Completion?</i>	Yes. Preliminary Notices and Notices of Completion are required to be submitted to the relevant network operator if the RCD protects more than one final sub-circuit.
9.	<i>Do I need to provide an Electrical Safety Certificate to the property owner if I install RCDs?</i>	Yes. An Electrical Safety Certificate will need to be provided to the person for whom the work was carried out.
10.	<i>What advice should I be giving property owners and tenants after I have installed the RCDs?</i>	It is recommended that home owners and tenants check the functioning of their RCDs, by pressing the test button every three months.

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	Question	Answer from EnergySafety
11.	Are sheds required to have RCDs fitted?	If a shed is part of a domestic residence, then it should be protected by the two RCDs that are required to be installed for the lighting and power circuits.
12.	What are the RCD requirements for common services?	Common services power and light circuits need only be protected by one RCD.
13.	Do RCDs need to be fitted in caravan parks?	Onsite permanently wired caravans require two RCDs if they are to be sold, rented or leased. If a caravan is supplied by one socket outlet, then only one RCD is required.
14.	What are the legislative requirements for RCDs to be installed?	<p>The owner of a residential premise occupied by an owner must ensure two RCDs are installed:</p> <ul style="list-style-type: none"> • before the title to the premises is transferred; • before the owner enters into a residential tenancy agreement in respect of some or all of the premises; or • before the owner makes some or all of the premises available for hire. <p>For residential properties occupied by a tenant, the owner must ensure two RCDs are installed:</p> <ul style="list-style-type: none"> • before the title to the premises is transferred; • before the owner enters into a residential tenancy agreement in respect of the premises with someone other than a person who was a tenant; • unless the premises were made available for hire immediately before the commencement day – before the owner makes the premises available for hire; or • before the second anniversary of the commencement date of the legislation.
15.	What are the penalties for property owners who do not comply with the mandatory requirements and fail to install RCDs?	A penalty of up to \$15,000 can be incurred by individuals with \$100,000 for a body corporate (ie business, corporation) for failing to install the required number of RCDs.
16.	What are the requirements for the installation of RCDs in commercial properties?	The installation of RCDs in existing commercial properties is not covered in the legislation. However, RCDs are required in work places and new installations.

EnergySafety's RCD survey

EnergySafety is undertaking a further survey of recently sold residential properties in the metropolitan area to check for compliance with the residual current device (RCD) Regulations.

Residents in selected suburbs have been sent a reply-paid survey card, along with information to assist them in determining whether RCDs have been installed at their property.

The Electricity Regulations 1947 stipulates that residential properties are required to have the minimum number of two RCDs installed to protect the lighting and power circuits before the title of the property being offered for sale, hire or rent, is transferred.

If only one or no RCDs were installed, residents were requested to contact EnergySafety to seek advice.

The information received from property owners is used only for statistical purposes with the project envisioned to be completed during 2015.

New Senior Electrical Inspectors

EnergySafety's recruitment campaign for new Senior Electrical Inspectors has yielded two successful applicants, Jamie Hughes-Owen and Andy Williams.

Jamie Hughes-Owen has worked as an electrician in the construction and maintenance sector for the past twenty three years. He has worked on industrial construction projects throughout regional Western Australia and also on commercial, domestic, rail and power transmission projects within the Perth metropolitan area.

His most recent role has been as an electrical supervisor for the principal contractor on a water treatment plant and on hospital and non-process infrastructure projects.

Jamie now looks forward to an exciting and challenging role with EnergySafety.

Andy Williams has wide experience in the electrical industry, having worked as an electrician and electrical contractor in the UK and Western Australia. Andy has been previously employed with EnergySafety as an electrical inspector and as an installations inspector with Western Power. He has also gained significant investigation experience during his time as a serving police officer in the WA police service.

Andy looks forward to his new challenging role as a Senior Electrical Inspector with EnergySafety.

EnergySafety's Electricity Compliance Directorate is still seeking Senior Electrical Inspectors for its Cannington, Bunbury and Kalgoorlie offices. Applicants are placed into a recruitment pool and their applications assessed at the end of each month.

Suitable applicants are offered positions as opportunities become available. The pool recruitment process is running until 15 July 2015.

As a Senior Electrical Inspector with EnergySafety, we can offer you:

- A great remuneration package, including an Attraction and Retention Incentive (ARI) allowance of \$35,600 per year.
- A well-established learning and development program.
- An improved work/life balance through our commitment to flexible working arrangements and attractive leave options.
- The rare opportunity to contribute toward helping to improve safety in the industry.
- A proactive and innovative workplace where your ideas and experience are valued.
- Variety in your day-to-day work.
- The opportunity to set standards of practice and develop strategic direction to guide the energy and safety industries in Western Australia.

For more information on the vacant positions, please contact our Chief Electrical Inspector Utilisation Peter Johnston on (08) 6251 1936 for a confidential discussion. Applications are to be submitted through the www.jobs.wa.gov.au website.

Correction – Robert Allan Hoyles – recipient of the 2014 EnergySafety Apprentice of the Year award

In the previous issue of the Energy Bulletin (68), EnergySafety incorrectly quoted the recipient as Robert Allan Foyles; the recipient's name is Robert Allan Hoyles. EnergySafety apologises to Robert for this error and again congratulates Robert on winning this award.

Remember to dial before you dig

Electrical contractors are urged to remind their employees to contact the Dial Before You Dig hotline (Freecall 1100) or visit the website www.1100.com.au before they dig in the vicinity of the verge of properties.

Dial Before You Dig is a free national referral service which assists workers in preventing damage or causing disruptions to the pipes and cables constituting our utility services (ie power, water and gas).

When you contact the service and supply them with the location where you will be digging, your details are forwarded to the relevant utility owners who will in turn provide you with accurate information about their infrastructure in your vicinity.

A number of incidents have been recently reported to EnergySafety including:

- A worker using a drill machine drilled into a Western Power underground cable.
- A worker using an underground boring machine made contact with an underground 415 V cable.
- A repairman contacted a low voltage underground cable with an excavator.

On these occasions, the workers fortunately did not receive an electric shock or sustain any injuries.

This simple step of contacting Dial Before You Dig can reduce the possibility of injuries, the number of interruptions to the supply of a service and save on increased costs due to repairs and time delays on projects.

Compliance inspection of electrical appliances on sale at the 2014 IGA Perth Royal Show

EnergySafety's compliance inspection of the 2014 Perth Royal Show identified several stall holders selling unapproved prescribed items.

Prescribed items are appliances that must be formally approved before they are imported, sold or hired and should also comply with the relevant AS/NZS electrical safety standard.

An annual inspection of electrical retailer stalls is essential, given that past inspections too often have revealed unsafe appliances being sold to the public.

The prescribed appliances that were identified for sale this year included:

- LED Magic Ball lights
- The power supply (switching adaptor) for mini laser stage lights
- The power supply (switching adaptor) for remote controlled helicopters



Power supply for mini laser stage lights

A visual inspection of these appliances revealed they did not have the relevant approval numbers or marking.

The stall holders found selling these prescribed appliances were unaware of the requirements for selling electrical appliances and were provided with an information pack relating to the appliance approval process. They were also informed that, as there were no visible approval markings on the appliances, the items must not be displayed or sold to the public.

It is the responsibility of sellers of electrical appliances to ensure their products have obtained the required approval and are safe to connect to the electricity supply before being displayed or sold to the public.

Further information on prescribed items and the appliance approval process can be found on EnergySafety's website www.energysafety.wa.gov.au. Also, appliance approvals can be checked using the Electrical Regulatory Authorities Council (ERAC) website www.erac.gov.au for all States other than NSW and the NSW Department of Fairtrading website eapr.fairtrading.nsw.gov.au.

Refrigeration and air-conditioning licence holders cannot carry out electrical installing work

An air-conditioner installer has been prosecuted in Perth Magistrate's Court for multiple breaches of the Regulations. The breaches included carrying out electrical work without the required licence or permit, carrying out electrical contracting work without an electrical contractor's licence and causing or permitting unsafe equipment to be connected to an electrical installation.

The air-conditioning installer, who holds a restricted electrical licence (Refrigeration and Air-conditioning (R&AC)), had been engaged to install two split-system air-conditioners into two bedrooms of a residence in Shelley. The work involved the following electrical installing work including the installation of:

- Wiring from a power circuit junction in the ceiling space to an external wall mounted socket outlet adjacent to the split-system air-conditioner outside unit.
- A socket outlet (and its connection) associated with the above outside unit and the installation of wiring between the outside unit and inside air outlet unit of the split-system air-conditioner.
- Wiring from a power circuit wiring junction in the ceiling space directly to the split-system air-conditioner outside unit.
- The installation of wiring between the outside unit and inside air outlet unit of the split-system air-conditioner.

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A Western Power inspection of the property revealed the following defects associated with the installation of the air-conditioners:

- A socket outlet used to supply a split air-conditioning unit installed on an external wall outside the living room was not IP rated and not suitable to be exposed to the weather.
- The interconnecting Thermal Plastic Sheathed (TPS) wiring between the external condenser (outside unit) and internal fan unit (inside air-outlet unit) for the bedroom, was not provided with the required mechanical protection.

At the time of the inspection, the electricity supply was connected to the installation. To make it safe, the inspector carried out electrical isolations at the main switchboard which ensure both split-system air-conditioners and the external socket outlet were not connected to the electricity supply.

A restricted electrical licence is issued to an individual other than an electrician. It authorises a 'restricted' range of electrical tasks.

A restricted electrical licence (Refrigeration and Air-conditioning) is issued to an individual who has successfully completed the Certificate III in Engineering Mechanical Trade (Refrigeration/Air-conditioning) at a Registered Training Organisation (RTO) and has been issued with a Trade Certificate for Engineering Tradesperson Mechanical (Refrigeration and Air-conditioning).

The scope of work authorised includes:

1. Disconnect/reconnect R&AC equipment.
2. Locate and rectify electrical faults associated with R&AC package.
3. Locate and rectify electrical faults in control and power circuits associated with R&AC package.

4. Modify R&AC control circuits in switchboards/panels.
5. Assemble factory supplied cable between R&AC split system components (up to 4kW).

In this instance, the scope of work the air-conditioner installer could carry out encompassed the first three points.

A restricted electrical worker's licence holder cannot carry out the installation or alterations to fixed wiring or repair or replace items such as socket outlets and lighting fittings. They do not have the relevant knowledge and skills to ensure the electrical work is left in a safe condition and complies with AS/NZS 3000: 2007 "Wiring Rules".

In this instance, the air-conditioner installer pleaded guilty and was convicted and fined \$3,000 with court costs of \$649.70.

Product recalls

PRODUCT	IDENTIFICATION	SAFETY RISK	CONTACT DETAILS
Woolworths Limited – Woolworths Essentials Double Adaptor	The affected models are: <ul style="list-style-type: none"> • Brand: Chevron Model Number: CDALS, CDARS Reference Number: 7389146 Approval Number: V090112 • Brand: Woolworths Essentials Model Number: DAL.S.DARS Reference Number: 309931 Approval Number: SGSEA/080773 	A recall was issued on 21 October 2014 as, due to poor workmanship, there may be internal contact between "live" parts and earth and there may be a risk of an electric shock	Telephone: 1300 638 434 Website: www.woolworths.com.au

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PRODUCT	IDENTIFICATION	SAFETY RISK	CONTACT DETAILS
Home Timber & Hardware Group – Assorted Olsent Powerboards	<p>The affected models are:</p> <ul style="list-style-type: none"> • 4 Outlet Wide w/SP Model: D06-4F marked with Approval Identifier on unit Q050594 • 6 Outlet Wide w/SP Model: D06-6F marked with Approval Identifier on Unit: Q050594 • 2 Pack Model: PG4PB marked with Approval Identifier on unit RCM5251 • 4 outlet Model PG-4PBS marked with Approval Identifier on unit: RCM5251 <p>and were sold in Home Timber & Hardware, Plants Plus and Thrifty Link stores across Australia between July 2011 and September 2014</p>	A recall was issued on 14 October 2014 as the electrical contacts of the socket are misaligned and the plastic enclosures do not adhere to the fire resistant requirements of the applicable standard	Telephone: 1300 889 449 Website: www.homehardware.com.au
Advanced Lighting Technologies Australia Pty Ltd (ADLTA) – Cree CXB High Bay LED Fitting	<p>The affected models have the codes: CXB-23L-40K-U-1-HC, CXBHBA16, CXBAR22 and were available for sale between 18 April and 7 July 2014</p>	A recall was issued on 13 October 2014 as the tempered glass lenses over the LED chips can break during operation. Hot glass particles could fall from the lighting fitting and pose a laceration or burn hazard to consumers	Telephone: (03) 9800 5600 Website: www.adlt.com.au
Masters Home Improvement – Olsent Powerboards 6 Outlets	<p>The affected models are: Model LA-06A marked with approval number SAA111929EA Model PG-6PB marked with the regulatory compliance mark and supplier identification 5251 and were sold in Masters Home Improvement stores nationally between September 2011 and September 2014</p>	A recall was issued on 13 October 2014 as there is a risk that the powerboards can overheat and catch fire	Telephone: 1800 638 434 Website: www.masters.com.au
Corevision Limited – Powerboards 4 Outlets	<p>The affected model Avisen – UCA406C marked with approval number SAA11902EA</p>	A recall was issued on 3 October 2014 as there may be some non-compliances relating to ignitability, lateral strain and withdrawal force	Telephone: (02) 8073 0728

How to deal with customer complaints

EnergySafety recommends that electrical contractors provide their customers with written quotes before taking on any jobs.

This advice has been prompted by a number of disputes between electrical contractors and customers over the final cost of completed electrical work. They are in the process of being resolved by the Department of Commerce's Consumer Protection Division.

Verbal quotes have proved problematic due to differing recollections over what was discussed and what costs were decided upon between the customer and the electrical contractor.

A written quote is an agreement between yourself and the customer and should always include the cost of:

- the materials to be used for the electrical work;
- the labour involved; and
- any additional expenses,

as well as a detailed description of the electrical work to be carried out.

It is recommended that a signature is obtained on the written quote from you and your customer as proof of acceptance of the cost of the work and to ensure there has been no miscommunication about the final terms of the agreement.

If additional work or materials are required *after* the quote has been provided to the customer, you must notify the customer who will authorise the extra expense again, this should be in writing.

On occasions where you are not in a position to provide a quote until further investigation is carried out into the work required, an estimate

should be provided to the customer with the final cost to be either more or less than the estimate provided.

If you are charging a call out fee for providing a quote, you must ensure your customer is aware of this beforehand. Failure to do so results in the customer not having to pay the call out fee.

The customer's rights if faults are found with your work

When you take on a job, you are providing a consumer guarantee that:

- You will be responsible for fixing any defects if your work does not meet a customer's expectations.
- Your work will be undertaken with care (ie to avoid loss or damage) and with the relevant skills or technical knowledge.
- The work will be carried out within a reasonable time if a time frame has not been specified.

If a customer has a minor issue with your work, they are not entitled to call off the job and demand a refund. The customer must give you the opportunity to make good any necessary repairs, which must be undertaken at no additional cost and within a reasonable time frame (this is dependent on the particular situation).

If the customer believes the time taken to repair the defective work is unreasonable, they have the right to engage the services of another electrical contractor to take on the repair work at a reasonable cost to yourself (reasonable being, within the typical range of costs charged by electrical contractors, including the costs of the repairs and any additional expenses).

If your customer has a major issue with your electrical work, they are entitled to cancel the job and

obtain a refund, or alternatively, see the job to its completion and obtain compensation for the difference in the standard of work delivered to what they paid for.

A customer can call off a job at any time if they inform you either verbally, in writing or via any other method. However, a job cannot be immediately cancelled if there is a minor problem that can be easily rectified.

Calling off a job gives the customer the right to obtain a refund, with the amount depending on whether some, or all, of the work was carried out not to the customer's satisfaction.

What a customer cannot do

A customer cannot ask you for a refund if they change their mind about the work carried out, unless it is specified in your company's policy that you will offer a refund, replacement or credit note if the customer is dissatisfied with your work.

A customer also cannot claim under consumer guarantees and demand that you correct any defect/s with your electrical work if:

- Events beyond human control occurred *after* the electrical work had been completed.
- The defect/s arose due to actions taken by a person or persons not employed by your company.

The Consumer Protection complaints process

When Consumer Protection receives a complaint from a customer or electrical contractor, they evaluate it to determine:

- The details of the dispute and options available for resolving it.
- If the law has been broken.
- If the matter is best handled by another organisation.

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Consumer Protection will then contact each party to find an amicable solution to the complaints within thirty days (depending on the level of co-operation provided by both parties).

If an agreement cannot be reached, the matter may be referred to tribunals (eg State Administrative Tribunal) or other government departments or alternatively, seeking legal advice may be recommended.

It is not within the authority of Consumer Protection to order any of the parties to resolve the complaint, as only a court or tribunal has the power to do this.

For further information on your rights and obligations under the Australian Consumer Law, please contact Consumer Protection's Advice Line on 1300 30 40 54 or email consumer@commerce.wa.gov.au.

Standards update

The following standards have been updated:

STANDARD	PUBLISHED DATE
AS/NZS 5033: 2014 'Installation and safety requirements for photovoltaic (PV) arrays'	6 November 2014
AS/NZS 3133: 2013 Amdt 1: 2014 'Approval and test specification – Air-break switches'	26 November 2014
AS/NZS 60335.2.21: 2013 (IEC TEXT) Amdt 1: 2014: Household and similar electrical appliances – Safety – Particular requirements for storage water heaters' (IEC 60335-2-21 Ed 6, MOD)	28 November 2014
AS/NZS 60335.1: 2011 (IEC TEXT) Amdt 2: 2014: 'Household and similar electrical appliances – Safety – General requirements' (IEC 60335-1 ED 5.1, MOD)	28 November 2014

Drafts for public comment

STANDARD	CLOSING DATE FOR COMMENTS
DR AS 2067: 2014: 'Substations and high voltage installations exceeding 1 kV a.c.'	12 February 2015

Installing hazardous equipment

EnergySafety has received several enquiries about licensing requirements for a person to install electrical equipment in hazardous areas in Western Australia.

In Western Australia, a person is required to hold an electrician's licence to carry out work in these areas. They must also be competent in such work, as defined by AS/NZS 4761.1: 2008 'Competencies for working with electrical equipment for hazardous areas (EEHA) – Competency Standards'.

AS/NZS 4761.1: 2008 defines a hazardous area as an area in which an explosive atmosphere is present or may be expected to be present in quantities such as to require special precautions for the construction, installation and use of electrical equipment.

AS/NZS 4761.1: 2008 defines a competent person as a person who can demonstrate a combination of knowledge and skills to effectively, efficiently and safely carry out activities in hazardous areas covered by the Standard.

Competency is also based on how well they perform to the standards for the scope of work in more than one of the Competency Standard Units.

Reporting electric shocks and accidents

EnergySafety regularly receives enquiries from electrical contractors about the reporting requirements for accidents including electric shocks.

An **electrical accident** is defined as an incident 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 which requires medical or first aid treatment. This also includes fatalities.

Immediately after a person becomes aware that an electrical accident has taken place, the person is to report the accident –

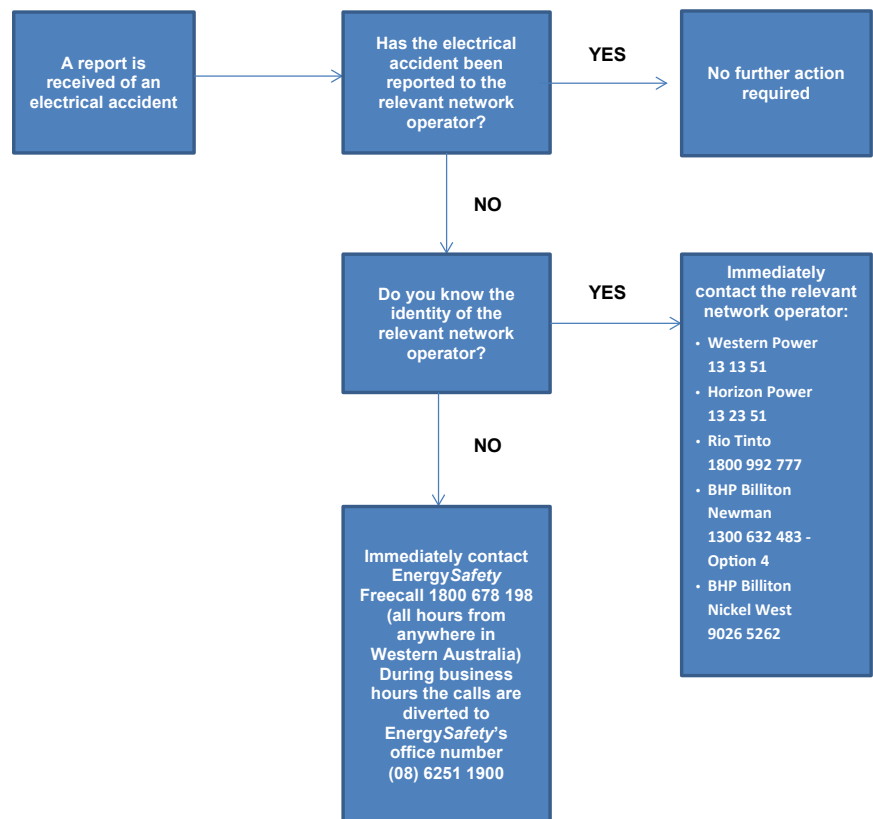
- a) to the relevant network operator; or
- b) to the Director of Energy Safety, if the person is unable to identify the relevant network operator.

After the network operator becomes aware of an electrical accident, they notify EnergySafety, investigate the incident and complete an Electric Shock/Accident Report Form. These report forms are not available to electricians or members of the public.

The Regulations also include the reporting requirements for employers, employees, electricians and electrical contractors. Under subregulation 63(4), immediately after an employee becomes aware that an electrical accident has taken place at the employee’s workplace, they are to report it to the employer and the employer must then report it to the relevant network operator.

The following flowchart details the steps you are required to follow when reporting electric shocks and accidents.

As a majority of electrical accidents are potentially fatal, each accident must be treated seriously and be reported so that reoccurrences can be prevented. Prosecution action has resulted where electricians and electrical contractors have failed to report an electrical accident.



Prosecutions for breaches of electricity legislation

Between 1 October and 31 December 2014

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
Joe Murphy (Bunbury)	NLH	Regulation 19(1) E(L)R 1991 (7 breaches)	Carrying out electrical work without the required licence or permit	Between 28/11/12 and 17/12/12	2,800.00 *	669.30
Xiao Guo (Maylands)	NLH	Regulation 19(1) E(L)R 1991	Carrying out electrical work without the required licence or permit	15/09/12	3,000.00	649.70
		Regulation 33(1) E(L)R 1991	Carrying out electrical contracting work while not holding an electrical contractor's licence			
		Regulation 50A E(L)R 1991	Causing or permitting unsafe equipment to be connected to the electrical installation			
Ahmad Atbein (Southern River)	EW151948	Regulation 49(1) E(L)R 1991	Carried out unsafe and substandard electrical work	26/09/12	5,000.00	719.30
Weltech Electrical Services Pty Ltd T/As Cable 24/7 Electrical (Southern River)	EC009904	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	26/09/12	10,000.00	719.30

Legend NLH No Licence Held
 EA Electricity Act 1945
 E(L)R Electricity (Licensing) Regulations 1991
 * Global Fine or Costs issued

Summary of infringements for breaches of electricity legislation

Between 1 October and 31 December 2014

Legislation and breach	Offence	Number of Infringements	Penalties (\$)
Regulation 33B(2) EA 1945	Selling or hiring, or exposing or advertising for sale or hire, prescribed appliance without approval	4	8,750.00

g a s focus

Fire training system

EnergySafety Type B Inspectors are requested to approve some unusual appliances. Recently, a Hoseline Training System was approved. This appliance will be used outdoors, mainly at mine sites, to simulate full scale fires, with the aim of training fire teams to effectively use a fire hose. The unit is able to simulate car, truck, pressure vessel, helicopter, aeroplane wing and electric motor fires.

The unit uses four main burners and a pilot burner to burn liquid propane to simulate the fires. The main burners are rated at 3.6 GJ/hr. The gas rate when all burners are operating is 15 GJ/hr.

The appliance is made up of four sub units:

- Liquid Propane Supply;
- Emergency Stop Module;
- Pilot Box; and
- Burner Tray.

Liquid Propane Supply

Liquid Propane is supplied from two liquid withdrawal 45kg cylinders via a manual isolation valve and a regulator.

Emergency Stop Module

This provides the safety shut-off for the appliance. The module consists of a manual isolation valve, a pressure relief valve, a filter, a safety shut-off valve, a control solenoid valve, and a second pressure relief valve.

Pilot Box

The Box conditions and controls the gas supply to the burners.

It regulates and filters the liquid gas supply before passing it through a safety shut-off valve. After the safety shut-off valve the gas supply is separated into the four main burner gas trains and the pilot burner gas train.

The pilot burner gas train pipes the liquid propane through a pressure relief valve, a regulator and a safety shut-off valve which is activated by a flame safeguard which uses a flame rod to monitor the pilot burner. The Liquid Propane is then vapourised (electric vapouriser) and passed to the atmospheric pilot burner. Air supply to the burner is from a blower also installed in the Pilot Box. The pilot burner is ignited by a spark ignition system supervised by the burner management system.

The main burner gas train is simpler, piping the Liquid Propane through a control solenoid valve before passing it via a hose connection to the main burners in the Burner Tray.

Burner Tray

The Burner Tray is a metal water bath with the four main drilled pipe burners under the water. The main burners incorporate an orifice which limits the flow and vapourise the Propane before it exits the burners bubbling to the surface and being ignited by the pilot burner.

The pilot burner is protected from the simulated firefighting activity. The prop for the fire simulation is placed over the burner tray.

During operation the emergency dead man shut-off switch is continually supervised by a trained operator. The operator can individually switch the four main burners in any combination to simulate different fire situations.

The appliance required an exemption to the requirements of AS 3814 and a variation to the requirements of AS/NZS 5601.1.



Fire training prop

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- AS 3814 requires that each individual burner has a flame safeguard system fitted. Fitting these on the main burners defeats the purpose of the training exercise. The Director granted this exemption based on the appliance being used outdoors and continually being monitored by the trained operator at the emergency shut-off.
- The four components of the appliance are connected by hose assemblies. AS/NZS 5601.1 limits hose assemblies to a maximum length of three meters. Clearly for safe operation the Propane Supply, the Emergency Stop Module and the Pilot Box need to be a safe distance from the Burner Tray. To ensure this was achievable the Director granted a variation to this requirement to enable hose assemblies up to ten meters to be used.

Class G gas fitter training

Historically, Class G gas fitter training in Western Australia was based on attending "TAFE" or a private training provider for classroom based training. The decision on ability was judged on passing an exam based on a percentage pass mark. One of the issues of this style of training is that a student could pass the exam (assessment) without achieving the required practical skills to carry out gasfitting work.

EnergySafety has over the past four years moved away from this style of training to competency based training.

This requires students to successfully complete all knowledge (no percentage pass mark) and practical tasks before they are assessed as being competent.

Class G gas fitter training is now primarily based on national training courses (known as training packages) with some additional EnergySafety requirements.

One of the challenges that the training providers faced with moving to the new style of training was how to make the training realistic and have assessments based on tasks that are encountered in the workplace.

Durack Institute of Technology, an EnergySafety recognised training provider based in Geraldton, has designed and constructed a dedicated assessment facility to replicate the workplace.

The building measures approximately 64 m² and is split into four separate assessment areas to cover required tasks.



Students are required to complete a series of practical tasks for both natural and liquid petroleum gas installations which includes fitting and commissioning commercial and domestic appliances.



The projects are based on real workplace environments and the student is required to successfully complete the various installation tasks including demonstrating the appliance operation to the customer and completing the Compliance Badge and Notice of Completion.

One of the key features of the assessment is that a student has to demonstrate that they can perform consistently at the required level which means doing a task more than once.

Durack Institute spokesperson, Rob Verryt, Program Coordinator Construction Trades, stated:

"The practical assessments coupled with exposure to gasfitting work in the workplace means that successful students are effectively work ready. This ensures that students are able to work safely and competently in the workplace".

Should the student not be deemed competent during the assessment, they will have the opportunity for further specific training prior to being assessed again.

Can a student cheat the system? Rob Verryt from Durack Institute went on to say:

"The student has to demonstrate that they can perform in a range of contexts (different situations) on a number of separate occasions within set timeframes.

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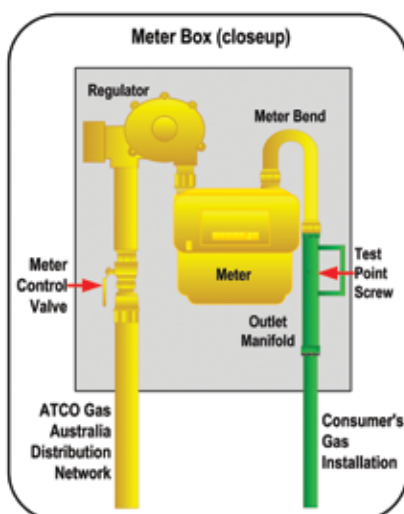
We have already noticed an improvement in the quality and performance in our recently trained gas fitters by using this system and we are looking to offer gas servicing together with a non-apprentice pathway utilising the same process and facility for gasfitting in the future.”

For further details on training at Durack Institute contact Rob Verryt on 1800 672 700 or Email: info@durack.edu.au

Q & As – ATCO Gas – Working around the typical domestic gas meter

Q1 – In a typical domestic gas meter box, what equipment belongs to ATCO Gas Australia as part of the distribution network and what equipment belongs to the consumer’s gas installation?

A1 – In the diagram below, items shown in yellow belong to ATCO Gas Australia as part of the distribution network and items shown in green are part of the consumer’s gas installation (including the gas meter box).



Q2 – What should gas fitters do if they suspect a gas leak on equipment belonging to ATCO Gas Australia?

A2 –

- Turn off the Meter Control Valve.
- Immediately stop the work you are carrying out and phone ATCO Gas Australia Faults and Emergencies on 13 13 52.
- ATCO Gas will send personnel to investigate.
- Advise the customer that gas has been turned off for safety reasons and ATCO Gas has been notified and will attend.

Q3 – Can a gas fitter work on the meter bend?

A3 – Yes. A gas fitter may work on the meter bend. This enables a gas fitter to complete a number of tasks including:

- Isolating gas to the consumer’s installation.
- Removing the security disc.
- Conducting independent tightness testing of a consumer’s gas installation in accordance with Regulation 26 (1)(a) of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 and AS/NZS 5601.1:2013 Appendix E.

Q4 – Does a gas fitter need to ensure that the gas meter is correctly isolated when undertaking welding on the consumer’s gas installation?

A4 – Yes. As described in Energy Bulletin issue 53 (January 2011), “Gas fitters should understand the meaning of Regulation 18.1 of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 which states “A gas fitter who does gasfitting work on a gas installation must ensure that the work is done in a safe manner”.

This means making every effort to avoid the possibility of causing a gas ignition event by isolating the gas meter & carrying out appropriate purging of the consumer’s gas installation.

Q5 – When does ATCO Gas install security discs?

A5 – ATCO Gas installs security discs:

1. During the initial new gas meter installation
2. In some instances when a defect or non-compliance has been identified on the consumer’s gas installation
3. During routine maintenance work

Q6 – Can a gas fitter remove the security discs?

A6 – The following outlines the activities that a gas fitter is required to complete in relation to security discs:

1. *Initial new gas meter installations*
Providing the gas fitter has submitted their Notice of Completion, gas fitters may introduce gas via the removal of the security disc.

When an “*Installation Selected for Inspection*” label is attached to the meter, this indicates that the gas installation has been selected for inspection by ATCO Gas.

In this case, the security disc can be temporarily removed for commissioning purposes but must be reinstalled upon completion of the commissioning. An inspection by ATCO Gas must then be arranged by the gas fitter, builder or consumer by contacting the ATCO Gas Australia scheduling centre on 13 13 56.

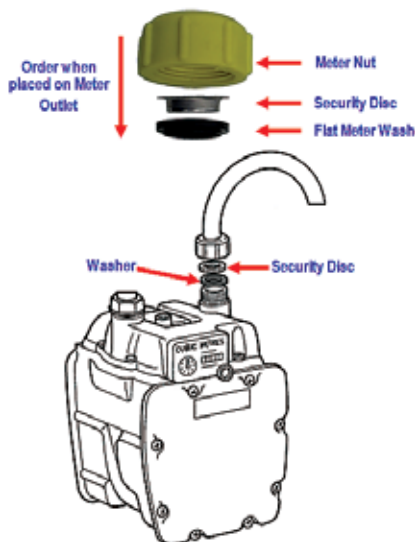
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2. When a defect or non-compliance has been identified on the consumer's gas installation

Gas fitters can remove the security disc provided that they comply with the requirements of the Inspector's Order (IO) or Notice of Defect (NOD) as detailed in one or more of the following four examples:

- you are in possession of the IO or NOD form that outlines the reasons for the safety disc being inserted. If you do not have a copy, please request one by contacting the ATCO Gas Australia scheduling centre;
- the defect or non-compliance has been rectified on the consumer's installation;
- the IO has been signed off by the gas fitter and will be returned to ATCO Gas; or
- the Notice of Rectification for the NOD has been signed off by the gas fitter and will be returned to ATCO Gas Australia in accordance with Regulation 30 (b) of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.



Security disc and associated components used on domestic gas meter installations

3. During routine maintenance work by ATCO Gas

Any security discs inserted by ATCO Gas as a result of routine maintenance work will be accompanied by an ATCO Gas Australia Card or Label identifying the nature of the maintenance work being undertaken.

Security discs must NOT be removed in instances of routine maintenance work.

Q7 – What does a gas fitter do if they find a ‘tripped’ Over Pressure Device (OPSO) on an ATCO Gas Australia meter regulator?

A7 – Immediately stop the work you are carrying out and phone ATCO Gas Australia Faults and Emergencies on 13 13 52. ATCO Gas will send personnel to investigate.

Q8 – Are gas fitters allowed to alter the pressure on an ATCO Gas Australia meter regulator?

A8 – No. Only ATCO Gas Australia personnel are permitted to alter the pressure on an ATCO Gas meter regulator.

Q9 – Can a gas fitter commence supply to a new consumer's installation from an AL12 or AL18 gas meter?

A9 – Yes. Provided they comply with the requirements related to Notice of Intent (NOI). The majority of consumer installations supplied by AL12 and AL18 gas meters are likely to meet the newly introduced Notice of Intent requirements as outlined in Energy Bulletin issue 61 (January 2013).

It is required that the gas fitter contact the ATCO Gas Australia scheduling centre on 13 13 56 to discuss the consumer's gas installation requirements with an ATCO Gas Designated Gas Utilisation Inspector.

Notice of Intent submission requirements (NOI):

- Multi-residential (16 or more residential units)
- Multi-storey (3 or more storeys) buildings
- Consumer piping system containing piping greater than a 32mm nominal diameter
- Class I (large commercial or industrial) installation
- A gas installation with a maximum gas supply rate greater than 1,000 MJ/h
- The NOI can be downloaded from the EnergySafety website at <http://www.commerce.wa.gov.au/energysafety/notice-intent-noi>

Q10 – What should a gas fitter do if a consumer's gas installation is leaking?

A10 – A gas fitter must:

- When authorised to do so by the consumer, repair the gas leak on the consumer's gas installation; or
- When the consumer does not authorise the leak to be repaired, the gas fitter is required to:
 - advise the consumer that the gas installation is required to be repaired by a registered gas fitter; and
 - turn the gas off at the meter control valve to isolate the consumer's gas supply and report the situation to ATCO Gas Australia on 13 13 56 as per Regulation 42A (1) (b) of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999. Please request to speak to an ATCO Gas Australia Designated Gas Utilisation Inspector.

Proposed amendments to the Regulations (GSR 1999)

Gasfitting on consumer gas installations in Western Australia is regulated by the *Gas Standards Act 1972*. The requirements of this Act are implemented by the Gas Standards (Gasfitting and consumer gas installations) Regulations 1999 [GSR 1999]. It is now over fourteen years since the GSR 1999 commenced. Over that time advances in technology and work practices have changed in the industry. To ensure that the regulations are relevant to the needs and practices of the industry, the GSR 1999 are regularly amended. EnergySafety is again proposing to amend the GSR 1999.

Definition of address

EnergySafety needs to make gas fitters aware of information relevant to gasfitting. Currently gas fitters are required to advise EnergySafety of changes to their residential address. However, they are not required to notify changes to other contact details such as telephone numbers or email addresses. It is proposed to insert a definition of address that includes in addition to residential address, all other relevant contact details.

Change of address notification requirements

Currently a gas fitter must notify changes in address details "in writing". It is proposed to remove "in writing" from the requirement so that in future other means of updating contact details may be implemented.

Renewal of expired gasfitting permit

Currently if a gasfitting permit is not renewed before its expiry date, then a new application for a permit must be made before it can be reinstated.

This involves increased administration over a simple renewal. It is proposed to implement a 30 day grace period, after the expiry date of a permit, when it can be reinstated as a renewal.

Mandatory retraining

If a gas fitter's knowledge does not satisfy the minimum requirements, the only option the Director has is to cancel that gas fitter's licence. To regain their licence, the gas fitter needs to complete a Certificate III in gasfitting. Investigations have shown that in many cases, gas fitters only require gas training in specific areas. It is proposed to allow the Director to require gas fitters to undergo mandatory specified re-training and the option to suspend a licence until that re-training has been successfully completed.

Adequate supervision

Many gas fitters are supervised by registered gas fitters whilst in training or under an authorisation. It is assumed that an adequate level of supervision will be provided to ensure that the work is completed safely, is compliant and is safe to use. This is not always the case. It is proposed to insert a requirement that a supervising gas fitter must provide adequate supervision for a gas fitter they are supervising.

Notice of Intent

The Notice of Intent (NOI) trial aimed at giving gas suppliers sufficient notification of significant future load increase is now completed. During the trial, submission of the NOI was voluntary. It is now proposed to make submission of the NOI mandatory for gas fitters.

Small gas engines

Currently appliances that incorporate small stationary gas engines are classed as Type B appliances and are subjected to the Type B approval and installation processes. The industry has indicated that it plans to develop a type approval and certification scheme for these mass produced appliances. It is proposed to add small (less than 1000 MJ/h) gas engines to the list of Type A appliances in preparation for when this scheme is introduced.

Directing a person to do unauthorised or non-compliant gas fitting work

It is proposed to insert a requirement that prohibits a person from directing a person to do unauthorised, or a gas fitter to do non-compliant, gasfitting work.

Public comment

Before changing legislation that may have significant implications for stakeholders, EnergySafety is required to seek public comment on the proposed changes. To fulfil this requirement EnergySafety has published a discussion paper on the proposed amendments to the GSR 1999. The discussion paper "Amendments 2015-01 Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999" is available at <http://www.commerce.wa.gov.au/EnergySafety/discussion-papers>.

Please return comments by 16 March 2015, marked as GSR 1999 Amendments 2015 to: email: energysafety@commerce.wa.gov.au fax: (08) 6251 1901 post: Attn: David Robertson EnergySafety Locked Bag 14 Cloisters Square WA 6850

Re-examination of gas fuel system for forklifts and industrial engines

As a general rule auto LP Gas systems fitted to forklifts are certified to either Australian Standard AS/NZS 1425 or AS/NZS 4983 and are not required to be recertified.

In 2010 AS/NZS 4983 was developed to specifically deal with gas fuel systems for forklifts and industrial engines. Up until this time these installations were certified to AS/NZS 1425.

However, according to these standards these installations do require periodic inspections depending on what standard the installation has been certified to, as each have their own requirements. Please see the following extracts from each of the standards:

AS/NZS 1425

Section 6.9.1 General

An installation shall be re-examined from time to time during its life to ensure that it has not deteriorated to an unacceptable degree.

AS/NZS 4983

Section 7.9.1 General

An installation shall be re-examined annually to ensure that it has not deteriorated to an unacceptable degree.

Note: The gas installation is to be inspected in accordance with the relevant version of the standard at the time the gas installation was originally installed and certified.

Over the years, each of the above standards has changed and extra safety requirements have been added, so when these installations are re-examined by a gas fitter they may identify non compliances.

If the gas fitter was to modify the gas installation from its original certification then the installation would require to be recertified to AS/NZS 4983 – 2010.

In summary, if the Gas installation fitted to these types of installations is inspected and meets the relevant version of the standard at the time of installation when it was originally installed and certified then the existing compliance/certification plate complies with EnergySafety requirements.

Transportable homes

A recent compliance inspection on completed transportable homes has revealed that the gas fitters undertaking the installation of the LP Gas piping, regulator and appliances are failing to take responsibility for the commissioning of appliances.

This has resulted in the homes being delivered to site and the new owner connecting LP Gas cylinders to the installation without the appliances having been checked and commissioned for safe use.

The Regulations are quite clear in that a gas fitter who installs an appliance must ensure that the appliance is safe to use. This can only be achieved by commissioning the appliances.

Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999

Regulation 18. Gas fitters, duties of as to gasfitting work

(1) A gas fitter who does gasfitting work on a gas installation must ensure that the work is done in a safe manner.

- (2) The gas fitter must ensure that —
- (a) every part of the gas installation on which the work was done or that is affected by the work —
 - (i) complies with the requirements referred to in regulation 32; and
 - (ii) is safe to use; and
 - (b) the work is completed to a trade finish.

The gas fitter responsible stated that, taking into account the transportable homes were production built in Perth then moved intrastate, someone else would commission the appliances. However, several of the inspections found that this is not the case.

To alleviate this problem, transportable home builders and gas fitters need to review their processes in order to ensure the gas installation cannot be connected to gas until it meets all the requirements of the Regulations.

This may be achieved by commissioning the appliances using a 9kg LP Gas cylinder at the workshop prior to the house leaving for its final destination.

Alternatively, the gas fitter should not connect the LP Gas regulator set to the gas installation until the house is at its final destination and then do the final connection(s) and appliance commissioning on-site.

Whatever method is used to complete the installation in the workshop, there is still an obligation and a duty of care to ensure the installation has not suffered any damage during transportation.

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This may require the builder or purchaser to employ the services of a gas fitter on-site to check and ensure:

- the installation is still gas tight;
- correct clearances from LP Gas cylinders to drains, ignition sources opening into buildings etc;
- cylinders are secured on a firm level base; and
- the appliances are operating correctly.

The Compliance Badge and Notice of Completion submitted for this installation was for new connection, pipework, and appliance connection without the commission section ticked off. Subsequently the LP Gas cylinders were connected without the appliances being commissioned, resulting in the appliances being used at the incorrect operating pressures.

NOTE: EnergySafety reminds all gas fitters, whether an LP Gas installation is a transportable or fixed installation, that once they connect the LP Gas regulator set to the installation, they must ensure that the appliances are tested and commissioned as they have left the installation in a state where gas could be connected and the appliances used.



Summary of infringements for breaches of gas legislation

Between 1 October and 31 December 2014

Legislation and Breach	Offence	Number of Infringements	Fine (\$)
GSA S13A(2)	<i>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 or certificate of competency</i>	3	3,000
GSA S13D(1)	<i>Selling, hiring, advertising for sale or installing a Type A gas appliance that is not approved or marked, stamped or labelled in approved manner</i>	1	1,000
GSR R26(1)(A)	<i>Failing to ensure gas installation meets requirements as to pressure testing and is gas tight</i>	3	1,800
GSR R18(2)	<i>Failing to ensure gas installation complies with prescribed requirements</i>	5	3,000
GSR R20(1)(B)	<i>Installing appliance, apparatus or part contrary to instructions or recommendations of manufacturer or designer</i>	3	1,800
GSR R22	<i>Leaving Type B appliance permanently connected without certificate of compliance</i>	1	600
GSR R28(2)	<i>Failing to attach approved badge or label to gas installation upon completion of gasfitting work</i>	2	800
GSR R28(3)	<i>Failing to give notice of completion of gasfitting work within required time</i>	3	1,200
	Total:	21	13,200

Legend NLH No Licence Held

GSA Gas Standards Act 1972

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