

energy

Bulletin

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Installation of RCDs in residential premises

EnergySafety proposes to amend the *Electricity Regulations 1947* to require the installation of at least two RCDs in residential premises.

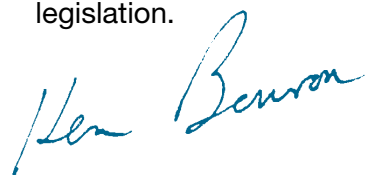
Since 1992, the Wiring Rules required at least one RCD to be installed in the power circuits of residential premises. The 2000 edition of the WAER required a second RCD to be installed. From November 2007, the Wiring Rules requires at least two RCDs to be installed. These requirements do not apply to dwellings constructed before 1992.

The proposed amendment will require the installation of at least two RCDs in a residential dwelling prior to the transfer of the title certificate relevant to the property. In the case of rented property, this condition also applies prior to entering into a tenancy agreement

with a new tenant, or making a property available for rent, lease or hire for the first time and ultimately within 24 months after the legislation is published in the Gazette.

EnergySafety invites your comments on this proposal, which should be sent before 28 November 2008.

The Position Paper and draft regulations are available on EnergySafety's website www.docep.wa.gov.au/EnergySafety/Content/Regulation/Standards_and_legislation/Standards_and_legislation.htm at the end of the section headed Installation legislation.



KEN BOWRON
**ACTING DIRECTOR OF
ENERGY SAFETY**



National reform issues

A number of national reform issues currently under review could have significant impact on the energy (electricity and gas) industry in Western Australia.

At its 3 July meeting, the Committee of Australian Governments (COAG) agreed to develop a **national trade licensing system**.

The national trade licensing system will initially be applied to the following trades and businesses:

- Air conditioning and refrigeration mechanics occupations;
- Building occupations;
- Electrical occupations;
- Land transport occupations (non-passenger vehicle drivers, dangerous goods);
- Maritime occupations;
- Plumbing and gas occupations; and
- Property agent occupations.

A number of public information sessions have been held across Australia and EnergySafety is providing input to the process as the energy technical and safety regulator.

The national trade licensing system will involve:

- Cooperative national legislation;
- National governance arrangements to handle standard setting and policy issues and to ensure consistent administration and compliance practices;
- All current holders of state and territory licences being deemed

across to the new licence system at its commencement;

- The establishment of a publicly available national register of licensees; and
- The Commonwealth having no legislative role in the establishment of the new system.

Initially the arrangements will be described in an Intergovernmental Agreement (IGA).

The purpose of the IGA is to identify the objectives, scope and governance, legislative, administrative and financial arrangements for the national trade licensing system. It will also outline how the system will accommodate jurisdiction specific issues within a national framework

In developing the IGA, consideration will be given, among other things, to:

- Ensuring ongoing consumer protection;
- Financing and revenue issues associated with the new national trade licensing system;
- Processes for smooth transition to the new system;
- Processes for dealing with jurisdiction specific issues within a national framework; and
- Those situations where current trade licensing arrangements are integrated with business licensing for those trades, and how and where such situations should be addressed.

COAG will consider the IGA in November 2008 and will also consider the lead time necessary before the commencement of the national trade licensing system, given the broad range of issues to be addressed by the IGA.

In a similar process, COAG has agreed to the development of a **National Construction Code (NCC)** covering building, plumbing, electrical and telecommunications standards. Work on options to develop an implementation plan is being carried out and a report will be provided to COAG at its December meeting.

Initially the NCC will involve the consolidation of plumbing and building regulations into a Building Code of Australia style format. Electrical and telecommunications will be considered in a second phase in around 2010.

EnergySafety believes that the idea of including electrical standards (and gas, if that is seen as part of plumbing) in the proposed NCC is a seriously flawed strategy, albeit perhaps well intended.

This is because the Wiring Rules and a related suite of quite sophisticated electrical standards cover an area that is much wider than just the construction sector and it would be counterproductive to bring them under the oversight of a building industry regulatory regime, since the subject area is in many cases outside the relevance

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For enquiries:

Editor: Nic Morris

Phone: 08 9422 5208

Fax: 08 9422 5244

Email: nicola.morris@docep.wa.gov.au

Internet: www.energysafety.wa.gov.au

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and knowledge and skills of the building industry (eg. marina electrical installations, industrial plants, mine site installations, public spaces installations).

Additionally, the Wiring Rules is only part of the set of “rules” for electrical installations of all types, including those in buildings. The other being the many different “service rules” across the country which have to be used alongside the Wiring Rules and related Standards. These service rules set the interface requirements between a consumer’s installation and an electricity supply network. They are outside the territory of “standards”, are usually administered by the electricity

utilities and often have rules that depend upon the way the local electricity network has been developed. Gas service rules also vary widely.

The third area under review concerns the harmonisation of the **technical and safety regimes** for the **energy supply industry** (ESI). The Ministerial Council of Energy has established an Energy Technical and Safety Leaders Group to look to improving the standardisation of technical and safety supply regulation across Australia in order to improve the portability of workers across jurisdictions, reduce the costs of compliance and improve safety outcomes. The Leaders Group

is developing a harmonisation framework and proposing the development of a comprehensive suite of technical standards for the ESI. The Director of Energy Safety is a member of the Leaders Group as a representative of the Electricity Regulatory Authorities Council (ERAC).

EnergySafety would encourage all people involved in the electricity and gas sectors to follow the progress of these developing national reform projects as they could have a significant impact on our industry.

Electrical connections for gas appliances

Most domestic-type gas appliances require a supply of electricity for their operation. These appliances are generally supplied with a power cord and 10 amp three pin plug. A socket outlet is therefore required, adjacent to the appliance.

As well as providing the electricity supply, this method of connection serves as a point of isolation, allowing the appliance to be disconnected or serviced in a safe manner.

EnergySafety is aware of reports of electricians cutting off the plug and wiring the appliance direct to electricity supply, with the only point of isolation being at a switchboard remote from the appliance.

This does not comply with the requirements of the *Gas Standards (Gasfitting and Consumer Gas Installations)*

Regulations 1999 or Australian Standards AS 5601 “Gas installations” and AS/NZS 3000 “Wiring rules”.

Clause 508 of the regulations requires, among other things, a gas appliance connected to a supply of electricity to have a readily accessible means of isolation from the electricity supply.

Also, these Standards require electrical equipment forming part of an electrical installation to be selected and installed, among other things, in accordance with the manufacturer’s instructions.

Therefore, removing the plug top from the flexible cord and hard wiring the appliance is in contravention of the regulations and AS/NZS 3000:2007 Clause 1.7.

Some dual-fuel cookers have ratings that require them to be direct wired. An acceptable means of isolation must therefore be provided adjacent to the appliance, as required by *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*, AS 5601, AS/NZS 3000 and/or the manufacturer’s installation instructions.

Switching to energy efficient lighting

Lighting plays a very important part in the design of Australian homes and offices. Demand for both effective and energy efficient lighting systems by home owners can at times leave electrical contractors and electricians wondering just what lighting products will create the best lighting outcome in the most cost-effective manner.

While there are a number of lighting options for today's consumer, not all of them are cost-effective or the best choice in terms of efficient energy use. One of the biggest energy offenders is the incandescent or General Lamp Service (GLS) (pear shaped) bulb, which is a form of incandescent lamp.

The GLS light bulb has been available for more than 125 years, and while inexpensive to buy, typically fails after only 1000 hours of use and consumes excessive amounts of electricity, leading to high running costs. In fact almost all of the electrical energy going into these bulbs is converted to heat rather than light.

In February 2007, the Australian Government announced plans to phase-out these bulbs and other inefficient incandescent light bulbs from 2008. The initiative is expected to reduce Australia's

greenhouse gas emissions by several million tonnes over the next few years and cut household lighting costs by up to 66 per cent.

GLS bulbs will be phased-out first with other incandescent lights (including the least efficient of halogen down lights) following in a planned approach of phasing-out inefficient lighting where effective and efficient alternatives are available.

Lighting alternatives include compact fluorescent lamps (CFLs) that use around 20 per cent of the electricity to produce the same light and last 4 to 10 times longer than the GLS bulb. Compatibility of CFLs with installed dimmers should be checked carefully. Halogen lights that meet the new efficiency standards will also become available.

The Australian Government will use minimum energy performance standards (MEPS) based on Australian and New Zealand standards, to ensure that only those lighting products that meet the specified energy efficiency levels will be sold in Australia.

Standards for CFLs will also apply to ensure that only good quality products will be sold in Australia. Aspects covered will include: run-up time, colour appearance, mercury content and lamp lifetime.

It's also worth noting that, despite popular myths, low voltage halogen down lights are NOT an efficient choice for lighting of medium to large spaces. For example, installing ten x 50 watt down lights will lead to energy consumption of more than 500 watts. In many cases, the same job could be done with CFLs which would use less than 100 watts in total.

It's clear that using more energy efficient lighting is beneficial on a number of levels: both in cutting energy bills and reducing impacts to the environment – less electricity means less greenhouse gas emissions.

Please remember these considerations when next advising your clients on their lighting needs, ensuring that what you advise and install meets the upcoming Australian Government requirements.

For more information about the initiative, please visit www.environment.gov.au/settlements/energyefficiency/lighting.html

This article is reproduced courtesy of the Department of the Environment, Water, Heritage and the Arts.

electrical focus

Changes to preliminary notices/notices of completion

An article in Energy Bulletin No. 43 (August 2008) foreshadowed some changes to Preliminary Notices / Notices of Completion, to take effect from 01 October 2008.

The changes to the Notices have not yet been finalised so electrical contractors will continue to use the existing Notices until further advised.

Additional details will be advised in the next Energy Bulletin.

Electrical safety certificates

Changes to the *Electricity (Licensing) Regulations 1991* that came into effect on 1 July 2008 saw the introduction of Electrical Safety Certificates.

This form of notification of electrical installing work was intended to be very simple, but EnergySafety still receives many enquiries about the certificates.

Most importantly, Electrical Safety Certificates must be issued to the person who required the electrical installing work to be carried out.

The certificates MUST NOT be sent to a network operator (eg. Western Power, Horizon Power), nor to EnergySafety, nor to an electricity retailer (eg. Synergy).

Certificates sent to the above organisations are not considered as having been 'served' and penalties may apply.

A small effort from the electrical contractor and/or employees of the electrical contracting business to issue the certificates to the person who required the work to be carried out, will eliminate a lot of pain and effort on behalf of others.

Frequently asked questions

The following answers are provided to some of the more common enquiries being received.

Q When do I have to issue an Electrical Safety Certificate?

A An Electrical Safety Certificate must be issued for **ALL** electrical installing work, both notifiable and non notifiable, that is carried out. The certificate warrants that the electrical installing work is safe and complies with the *Electricity (Licensing) Regulations 1991*.

Q Do I have to give a Notice of Completion for electrical installing work if I have already issued an Electrical Safety Certificate?

A If the work is 'notifiable', then YES. For 'notifiable' work, both Preliminary Notices / Notices of Completion **AND** an Electrical Safety Certificate must be issued. 'Non notifiable' work only requires an Electrical Safety Certificate to be issued.

Q What is notifiable work?

A Notifiable work is defined as electrical installing work **other than:**

- (a) maintenance work, unless that work requires the disconnection and reconnection of the supply of electricity to the electrical installation concerned or the replacement of service apparatus; or
- (b) the alteration of a final sub-circuit; or
- (c) the addition of a single final sub-circuit.

Q Who can sign an Electrical Safety Certificate?

A Electrical Safety Certificates must be completed and signed by the licensed electrical contractor. An electrical contractor may, however, authorise an employee electrician (including nominees) to complete and sign certificates. The 'authorised electrician' must be authorised in writing by the electrical contractor.

Q Can a nominee complete and sign Electrical Safety Certificates?

A Yes, **providing** the nominee has been authorised in writing by the licensed electrical contractor to sign on his or her behalf.

Q How can I authorise an employee electrician or nominee to sign Electrical Safety Certificates on my behalf?

A An electrical contractor may authorise an employee electrician by completing an authorisation form that may be downloaded from

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EnergySafety’s website. The employee electrician must be able to produce this authorisation on demand from a consumer.

Q To whom do I issue the Electrical Safety Certificate?

A The Electrical Safety Certificate must be issued to the person for whom the work was carried out. This may be the owner of the installation, the builder, the landlord of a rental property etc.

Q What do I do with the two copies of an Electrical Safety Certificate?

A Both copies are retained by the electrical contractor. The Contractor Copy (yellow form) may be retained with the ‘job pack’ for the particular installation. The Office Copy must be retained in the book and kept for a minimum of five years from the completion of the work.

Q Do I have to give a copy of an Electrical Safety Certificate to the network operator (Western Power, Horizon Power) or Synergy?

A No.

Department of Consumer and Employment Protection
EnergySafety
Approved Form - Issued July 2008

ELECTRICAL SAFETY CERTIFICATE
Electricity (Licensing) Regulations 1991, Regulation 52B
This certificate warrants that the electrical installing work described below is safe and complies with the Electricity (Licensing) Regulations 1991. This regulation requires that the electrical contractor/authorised electrician completing electrical installing work must, within 28 days of completing the work, provide a certificate of compliance in respect of the work for the person for whom the work was carried out.

Installation details

Owner/Occupier Name: H Bryant Meter No.: N/A
 Address: 159 Stansley Street, South Perth
 New Installation (Y/N): Y Alteration/Addition (Y/N): N
 Other: _____

Details of work completed (indicate a number/rating where relevant)
 General description of the work: Whole of installation except for air-conditioners and pool installation.

The following detailed information **MUST ALSO** be provided - indicate the number or rating in each category

Lights	<u>23</u>	Water Heaters	<u>2</u>
Socket Outlets	<u>12</u>	Motors	<u>0</u>
Cooking Appliances	<u>2</u>	Air Conditioners	<u>0</u>

Details of any defects observed (alterations and additions only)
N/A

Certification by authorised electrician who completed the work

I certify that the electrical installing work that is subject of this certificate has been completed, checked and tested and, at the time of testing, met the requirements of the Electricity (Licensing) Regulations 1991 and is safe.

Name (please print): HARRY JAMESON
 Signature: [Signature]
 Licence No.: EW 203412

Details of electrical contractor

Licence No.: EC 009897
 Business Name: XYZ ELECTRICAL
 Business Address: 206 BROADWATER GARDENS
 Phone No.: 0417 942 919
 Facsimile No.: 9287 3090

Date: 01/07/08

Authorised pursuant to Regulation 52B(5) of the Electricity (Licensing) Regulations 1991
CUSTOMER COPY

Infringement notices

EnergySafety introduced a system of infringement notices during 2007 (refer to Energy Bulletin Special Edition April 2007).

Infringement notices were introduced as a means for more efficient and lower cost compliance enforcement. Less serious breaches of relevant electricity legislation are able to be dealt with expeditiously, thus avoiding long delays associated with prosecution action and legal costs.

Also, details of people who are issued with an infringement notice for a breach of legislation cannot be published.

Since the first infringement notice was issued in October 2007, EnergySafety, together with assistance from network operators, has issued 67 infringement notices.

Infringement notices were issued for the following breaches of legislation:

Summary of Infringement Notices issued

Offence	Number of Infringement Notices Issued	Penalty for Infringement	
		Individual/Sole Trader	Corporation/ Company
<i>Selling or hiring a prescribed appliance without approval [EA 33B(2)]</i>	4	\$1000	\$4000
<i>Selling or hiring apparatus or installation that does not comply with energy efficiency labelling regulations [EA 33F]</i>	4	\$500	\$2000
<i>Performing vegetation control work in danger zone of overhead power lines</i>	2	\$500	\$4000
<i>Carrying out electrical work without a licence or permit [E(L)R 19(1)]</i>	8	\$500	\$2000
<i>Carrying on business as an electrical contractor without a licence [E(L)R 33(1)]</i>	4	\$1000	\$4000
<i>Failing to include electrical contractor's licence number in an advertisement [E(L)R 45(1)]</i>	25	\$500	\$1000
<i>Electrical contractor's licence number not conspicuous on vehicle signage [E(L)R 45(1)]</i>	11	\$500	\$1000
<i>Carrying out, or causing or permitting to be carried out, electrical work contrary to the Wiring Rules or WA Electrical Requirements [E(L)R 49(1)]</i>	1	\$500	\$2000
<i>Causing or permitting unsafe wiring or equipment to be, or to remain, connected</i>	1	\$500	\$2000
<i>Failing to deliver Preliminary Notice within required time [E(L)R 51(1)]</i>	1	\$500	\$2000
<i>Failing to submit a Notice of Completion within the required time [E(L)R 52(1)]</i>	6	\$500	\$2000
<i>Submitting a Notice of Completion for uncompleted work [E(L)R 52(3)]</i>	6	\$500	\$2000
<i>Employing, engaging or instructing an unlicensed person to carry out electrical work [E(L)R 53(2)]</i>	3	\$500	\$2000

Legend:

EA Electricity Act 1945

E(L)R Electricity (Licensing) Regulations 1991

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Readers can deduce from the above table that the following *Electricity (Licensing) Regulations 1991* breaches of the Regulations come to EnergySafety's notice on a regular basis:

Regulation 45(1)

The electrical contractor's licence number must be conspicuously displayed in any advertisement advertising his or her electrical contracting business – refer to Energy Bulletin Special Edition March 2008.

Infringements have been issued because:

- in newspaper advertisements, including paid entries in the Yellow Pages, the electrical contractor's licence number has not been included; or
- on vehicle or premises signage, the electrical contractor's licence number is not conspicuous, ie. at least 50% of the largest lettering used in the advertisement.

Regulation 52(3)

Electrical contractors must ensure that notifiable work is complete, that is, has been checked and tested and IS SAFE before submitting the Notice of Completion to the relevant network operator.

Infringements have been issued where installations have been found to include defects (ie. the work is sub standard) and the electrical contractor has submitted a Notice of Completion. Examples of these defects are:

- Cooking appliance with open cooking surface not provided with a switch mounted near the appliance.
- RCDs not provided for final sub circuits supplying socket outlets or lighting points.
- Underground cables not installed at correct depth.

- Main earth conductor not installed between earth electrode and main earth bar.
- Metallic pipes emanating from within a building and which are in contact with the ground are not bonded to the earthing system.

Beware!

The decision to issue an infringement notice, or prosecution for that matter, is not taken lightly. EnergySafety recognises that most individuals and organisations will attempt to comply with the law but in some instances, compliance needs to be enforced. This can be achieved through a balance of informing, educating, warning and imposition of penalties, and, in the case of licensed operatives, disciplinary action.

More serious breaches of relevant electricity legislation will still be subject to prosecution action, especially matters where lives or property are put at risk because of dangerous practices and substandard electrical installing work.

Penalties for breaches of relevant electricity legislation were increased in July 2008 to a maximum of \$50,000 for an individual and \$250,000 for companies and corporations.

Penalties for infringements, however, range from \$250 to \$4,000. Note that these are fixed amounts and cannot be reduced or varied in any way.

It is expected that infringement notice penalties will be increased in the near future.

Reporting electrical accidents

Regulation 63 of the *Electricity (Licensing) Regulations 1991* requires that, **immediately** after a person becomes aware of an electrical accident (including 'electric shocks'), the person must report the matter to the relevant network operator.

Note that this is a change to the requirements that existed before 1 July 2008 when the person had to report to the network operator and to the Director of Energy Safety.

Where the report is to be made to Western Power or Horizon Power, the incident should be directed to the relevant call centre by telephoning:

Ph 13 13 51	Western Power
Ph 13 23 51	Horizon Power

The call centre, upon receiving notification, will direct the information to the appropriate area of the network operator for appropriate investigation. The network operator will also advise the Director of Energy Safety of the occurrence.

An employee who becomes aware of an electrical accident must also report the incident to his or her employer. Employers will then report the incident to the network operator and other relevant agencies, such as WorkSafe, Resources Safety etc.

Where the network operator cannot be identified, the incident must **immediately** be reported to the Director of Energy Safety [EnergySafety] by telephoning 1800 678 198.

Appropriate personal protective equipment (PPE)

In April 2008, a licensed electrician was carrying out checking and testing of a “live” distribution board at a commercial installation.

The electrician was in the process of testing the incoming supply voltage at the line side of the main switch. He was using a Cat II multimeter which was selected to the AC volts range. The test leads, however, were plugged into the “common” and “10A unfused” sockets of the multimeter. When the probes of the test leads were connected across red and blue phases of the incoming supply, a direct short circuit occurred across the phases, resulting in a flashover.

The flashover caused by the incorrect test lead and selector switch configuration was the result of an unfortunate and accidental error by the electrician. However, his choice of personal protective equipment (PPE) was no accident – it was a conscious decision on his part.

At the time of the accident, the electrician was wearing shorts,

short sleeved shirt and safety boots. He was not wearing safety glasses, gloves or other appropriate PPE. Also the multimeter should have been Cat III rated and therefore was not suitable for this environment.

EnergySafety recommends that flame resistant and non-synthetic overalls should be worn. Also, when there is a risk of high fault currents, leather gloves and full face shields should be worn and appropriately rated equipment used.

The electrician received burns to his hands, lower arms and face when the flashover occurred. If the electrician had used appropriate PPE, the outcome for him would have been much less severe.

This is a pertinent reminder that all electrical contractors and electricians:

- should carry out electrical work in accordance with EnergySafety’s Code of Practice “Safe Low Voltage Work Practices by Electricians”; and
- must at all times wear appropriate PPE.



The incorrect meter used by the electrician



Use of the incorrectly connected meter destroyed this switchboard

Electrical installation inspectors’ conference

EnergySafety conducted its 10th Electrical Installation Inspectors’ Conference on 22 July 2008 at Ascot, Perth.

Ken Bowron, EnergySafety’s recently appointed Director of Electricity, gave the opening address of the one-day conference. Some 70 delegates, being Electrical Inspectors from Western Power, Horizon Power, Resources Safety, Public Transport Authority, Indian Ocean Power Authority, Nickel West, BHP Billiton and Pilbara Iron, were in attendance.

The conference covered the following topics and issues:

- Code of Practice - Safe Low Voltage Work Practices by Electricians;
- AS/NZS 3000:2007 Wiring Rules and companion standards;
- personal protective clothing and arc hazards;
- arc fault protection and switchboard design;
- WA Electrical Requirements; and
- regulatory issues.

At the conference, James Johnson, National Section Manager – Mining, Schneider Electric (Australia) Pty Ltd, gave an interesting

presentation on arc fault hazards and Mark Garden, Practices and Standards Senior Technician, Western Power, spoke on personal protective equipment, with a focus on arc fault hazards.

The Electrical Installation Inspectors’ Conferences are always well received. They provide an opportunity for electrical inspectors to discuss and resolve matters of mutual interest, with a view to harmonising regulatory issues.

Prosecutions for breaches of electricity legislation 1 May 2008 to 31 August 2008

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence (\$)	Fine (\$)	Court Costs
Shaun Griffiths (Bullcreek)	NLH	E(L)R Regulation 19(1) (2 breaches)	Carried out electrical work whilst not authorised by licence or permit	\$5000.00	\$569.20
Garry Hayes (Port Kennedy)	NLH	E(L)R Regulation 19(1)	Carried out electrical work whilst not authorised by licence or permit	\$800.00	\$569.20
Matthew Frederick Neal (Margaret River)	NLH	E(L)R Regulation 19(1)	Carried out unlicensed electrical work	\$1000.00	\$719.20
Garry Hayes (Port Kennedy)	NLH	E(L)R Regulation 33(1)	Carried on business as an electrical contractor whilst not authorised by an electrical contractor's licence	\$500.00	*
Stephen Barker (Clarkson)	EW122698	E(L)R Regulation 33(1)	Carried on business as an electrical contractor without holding a licence	\$300.00	\$269.20
Good Prosperity Pty Ltd T/As The Hong Kong Furniture Company (Baulkham Hills, NSW)	NLH	ER Regulation 33B (2) (9 breaches)	Selling and offering for sale electrical appliances of a prescribed type that were not approved	\$2000.00	\$569.20
Glenn Bailey (Safety Bay)	EW132866	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$1000.00	\$569.20
John Betti (Wanneroo)	EW137214	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	\$2000.00	\$569.20
Joseph Boone (Ellenbrook)	EW145781	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	\$3000.00	\$569.20
Daniel Brennan (Heathridge)	EW141532	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$500.00	\$569.20
Peter Richards (Padbury)	EW131289	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$2500.00 *	\$569.20 *
Russell Green (St James)	EW134088	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$2500.00	\$569.20
Peter Nioa (Hamersley)	EW125785	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	\$1000.00	\$569.20
Robert Wicks (Wilson)	EW105402	E(L)R Regulation 49(1) (2 breaches)	Carried out substandard electrical work	\$1250.00 *	\$569.20 *
Perrie Hintz (Roleystone)	EW147640	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$1000.00	\$569.20

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Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence (\$)	Fine (\$)	Court Costs
Mathew Houlihan (Bunbury)	EW134943	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$2500.00 *	\$569.20 *
Michael Templeton (East Fremantle)	EW116530	E(L)R Regulation 49(1)	Carried out substandard electrical work	\$3500.00	\$569.20
Robert Stewart (Alexander Heights)	EW122302	E(L)R Regulation 50(A)	Caused or permitted wiring that was in an unsafe condition to be connected to the electricity supply	\$350.00	\$569.20
Price Trandos Engineering Pty Ltd (Malaga)	EC004505	E(L)R Regulation 51(1)	Failed to submit a Preliminary Notice to the network operator	\$2000.00 *	\$569.20 *
Price Trandos Engineering Pty Ltd (Malaga)	EC004505	E(L)R Regulation 52(1)	Failed to submit a Notice of Completion for electrical work	*	*
Paul Kinsella (Mt Hawthorn)	EC005362	E(L)R Regulation 52(1) (8 breaches)	Failed to submit a Notice of Completion to the network operator on completion of electrical installing work	\$4000.00	\$569.20
R & C Green Pty Ltd T/As Avant Electrical Services (St James)	EC007394	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the network operator when the electrical installing work was not complete	\$7500.00	\$569.20
M & K Houlihan T/As Island Tyme Electrical (Bunbury)	EC007569	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the network operator for electrical installing work when the work was defective and therefore not complete	*	*
R E D Electrical (Wilson)	EC006492	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the network operator for electrical installing work when the work was defective and therefore not complete	*	*
Peter Richards Electrical (Padbury)	EC007120	E(L)R Regulation 52(3)	Submitted a Notice of Completion to the network operator for electrical installing work when the work was defective and therefore not complete	*	*

Legend

NLH No Licence Held

E(L)R Electricity (Licensing) Regulations 1991

ER Electricity Regulations 1947



* Global Fine or costs Issued

g | a | s

focus

Changes to the gasfitting compliance badge

EnergySafety has become aware of several enhancements desirable in relation to the current gasfitting compliance badge and propose introducing a revised compliance badge (ESWA G013 - 1008) for use on fixed installations and mobiles for non-propulsive purposes (such as motor-homes, caravans and marine craft).

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

Revised compliance badge (ESWA G013 - 1008) - 85mm width x 62mm height

The current badge (ESWA G013 0503) of 75mm width X 58mm height only defines the types of work in terms of either 'new' or 'additional', so it has been difficult to distinguish easily between who has done the different types of gasfitting work on particular installations which have involved several different gas fitters. Some installations for example, have had gasfitting work, such as the pipework, new connections and commissioning, carried out separately by three different gas fitters. Where a defect is found on inspection, it is difficult to identify easily which of the three parties has done the defective work. As a result, Notices of Defect have been issued to the wrong gas fitter resulting in wasted time by the gas fitter, the gas supplier

and EnergySafety in rectifying the mistake.

There have also been complaints about the surface hardness of the badge in regard to the inscribing of the required details with a pen, and the imprinted details on the badge becoming indecipherable after 10 years of direct exposure to the elements.

A new compliance badge has been considered in light of these deficiencies. The new compliance badge shown above:

- Has boxes for entering each of the gasfitting work items that apply on an installation and uses the same descriptor as those used in Notices of Completion. This will facilitate identification of the gas fitters who have done particular work

on an installation.

- Is designed to be able to be used for any installation or mobile for non-propulsive purposes that has to conform to the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999* with fitting considered meeting the regulation 28(2) requirements for an 'approved' badge or label.
- Contains spaces for entering the Notice of Completion number, Variation/Exemption number (where applicable) and work date (rather than 'installation' date as there can be different items of work in an installation).
- Is the same metal, colour and be of similar specification to that of the existing badge as alternative badge materials examined, ranging from softer metal through to foil and plastic coated laminates, were found to have disadvantages, such as non-proven performance and cost, outweighing their merits.

A pen with a Tungsten Carbide ball of 0.7mm diameter producing a line width of 0.3mm was found to be the most effective type of inscribing pen for the purpose. Battery powered inscribing tools are now also readily available at low cost from retailers and their use by gas fitters is encouraged.

WA gas industry representatives were consulted and advised of the proposed changes to the badge and the slight increase in cost when purchased from EnergySafety WA's Licensing Office (\$3.40 each versus the old cost of \$3.15).

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The revised compliance badge is proposed to replace the current badge which will be phased out after 31 December 2008. A phased out approach will apply to the remaining stocks of badges held by the Licensing Office, gas fitters and retail outlets (such as Galvins, Reece and Tradelink).

Notice of Completion books will also need amendments to the instruction sheet to reflect the proposed compliance plate image. This will be implemented when new Notice of Completion books are published.

Infringement notices

Since the introduction of the *Gas Standards (Infringement Notices) Regulations 2007* in October last year, 286 matters have been dealt with by inspectors from the Gas Inspection Branch. In the last edition of the Energy Bulletin, we gave an explanation as to why this legislation was introduced.

The six most common non-compliances which have been identified are:

- failure to submit notices within 48 hours of completing the gasfitting work;
- failure to fix a compliance plate after completing the gasfitting work;
- failure to ensure gas installation is gas tight (leak free);
- failure to ensure fixed high and low level ventilation is provided in an enclosed space where a bayonet point is installed;
- failing to install a gas appliance in accordance with the manufacturer's installation instructions;
- failure to install a gas appliance flue with the appropriate clearances.

In the first two instances, gas fitters/plumbers either forgot to submit notices and fix the

compliance plate or did not feel there was a need to submit notices.

Regulation 28 of the *Gas Standards (Gasfitting and Consumers Gas Installations) Regulations 1999* is quite clear on this matter. The only time a Notice of Completion is not required to be given is for rectifying a non-compliance identified on a notice of defect or when servicing a gas appliance.

To undertake gasfitting work in Western Australia as a gas fitter/plumber, you must hold a certificate of competency, permit or an authorisation. A person may be prosecuted for unauthorised gasfitting work, incurring a penalty of up to \$50 000.

You may be aware of someone who has moved to Western Australia from either overseas or interstate. They may be unaware that to undertake gasfitting work, the person needs to be registered. If you know anyone who fits into this category, do them a favour and ask them to contact EnergySafety's Licensing Office on 9422 5200 to arrange a permit.

As an employer of gas fitters/plumbers undertaking gasfitting work, you are required under Regulation 34 to keep records in relation to each gas fitter employed. Investigations of non-compliances may lead to a gas inspector calling on your office where the register of gas fitters will be examined. Failure to maintain this register may attract an Infringement Notice.

Plastic pipes under buildings

Schedule 7 of the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*, requires that Australian Standard AS 5601 – 2004 "Gas Installations" be complied with.

There have been instances over the past 12 to 18 months where non-

complying gas installations have been noted, in that plastic pipe, both UPVC or polyethylene, has been laid underneath a building. Where a bituminised car park forms part of a building (ie. building constructed over the carpark), the installation of plastic gas pipework under the carpark surface is prohibited.

It is important that you understand AS 5601 Table 3.1 "Consumer Piping Materials and Duty Limits". This table provides a list of materials (steel, copper, UPVC, polyethylene, composite pipe), all fittings and where they can and cannot be used.

If there is any doubt as to the suitability of material to be used in a location, please call EnergySafety's Gas Inspection Branch on (08) 9422 5297 for a ruling. Failure to do so may render the gas installation non-complying and require the pipe to be replaced and/or relocated.

Diesel driven generators

EnergySafety is receiving calls relating to the possible inclusion of LP Gas into the fuel system of the larger stationary diesel driven generators to supplement the diesel fuel. The vendors of this type of equipment have developed systems that are compatible with the diesel engines and are able to reduce the overall running costs of the engine. The high cost of diesel fuel has prompted operators of these generating sets (gensets) to look at alternative fuel mixes.

A genset is considered a Type B gas appliance as defined in AS 3814. This states that industrial and commercial gas-fired appliances, designed and/or installed in such a manner that a combustible mixture igniting within them shall not directly cause injury to personnel or damage

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to other equipment. There are many of these installations, usually in remote locations away from the electricity grid.

The gas supply to engines operating on LP Gas in the liquid phase must be installed in accordance with AS/NZS 1596 "Storage and handling of LP Gas" and where applicable AS 1425 "LP Gas fuel systems for vehicle engines".

As a gas fitter, if you are asked to install the gasfitting lines, you are obliged to provide a Notice of Completion to the gas supplier and the owner of the equipment and fix a compliance plate. For information relating to the bulk tank, you are advised to contact the gas supplier. The company providing the hardware is required to engage a Type B appliance gas inspector and seek approval to proceed with the gas installation after providing the necessary submission.



A typical diesel generator which may be suitable

Pre 1980 gas appliances

In order to promote greater competition in the supply of natural gas and to allow more gas producers access to the market in Western Australia, consideration is being given to widening the gas quality specification for natural gas. This will align Western Australia with the other States by adopting the Australian Standard AS 4564 "Specification for general purpose natural gas" or a similar specification. Adopting the Australian Standard will allow the Higher Heating Value (HHV) of the gas to fall below the current limit set out in the Regulations. The performance of the pre-1980 (town gas converted and early natural gas) domestic appliances operating with this lower HHV gas is of concern, together with the fact that they are not fitted with the safety devices common to the modern gas appliances.

The concerns are as a result of testing of old gas appliances (pre-1980) on gas of low HHV. Operating on low HHV gas has an impact on the safety performance of the appliances and carbon monoxide (a poisonous gas) may be produced and the appliance could suffer from flame instability leading to the uncontrolled release of gas.

These concerns are seen as an impediment which needs to be resolved before the gas specification is changed and low HHV gas becomes available. EnergySafety was requested to quantify the number of old natural gas appliances that remain in metro residential installations.

Between April and July 2008, EnergySafety conducted 750 inspections of gas installations (residential

customers) to identify and estimate the number of converted town gas and early natural gas appliances that remain in service.

The survey found that there are still thousands of converted town gas appliances and tens of thousands of early natural gas appliances still in use. The longevity of some cookers and space heaters is a testament to the rugged design of these appliances.

The results of the survey have been forwarded for consideration in formulating alternate options to allow new gas supplies to enter the Western Australian gas market.



A pre 1980 gas cooker

Interpretations of regulations and standards

EnergySafety is regularly asked to give interpretations on the requirements of the Regulations and Australian Standards. A system for formulating and publishing interpretations of the clauses in AS 5601 "Gas Installations" has been in operation for a number of years. The system allows gas fitters and the general public

to submit a request for an interpretation of the requirements of a clause in the standard. The request is considered by a panel consisting of gas fitters, gas suppliers, and EnergySafety, to determine the interpretation that will apply in Western Australia. The interpretation is then published on the EnergySafety web site www.docep.wa.gov.au/EnergySafety/Content/Regulation/Gas_installations/Interpretations_of_AS_5601_Gas.html.

We are now extending this service to cover Australian Standard AS 3814 "Industrial and commercial gas-fired appliances". If you are interested in taking part on the review panel, please contact David Robertson (Principal Engineer Gas Utilisation) by telephone on (08) 9422 5254 or email at drobertson@docep.wa.gov.au.

Prosecutions for breaches of gas legislation 1 May 2008 to 30 August 2008

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence (\$)	Fine (\$)	Court Costs (\$)
Godfrey Mervin Davids (South Perth)	NLH	GSA 13A(2)	Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so	\$2500.00	\$569.20
Michaelangelo Frisina (Karrinyup)	NLH	GSA 13A(2)	Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so	\$800.00	\$1055.70
Brian David Peisley (Maddington)	NLH	GSA 13A(2)	Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so	\$3000.00	\$569.20
Julian Simpson (Rockingham)	NLH	GSA 13A(2)	Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so	\$1000.00	\$569.20
John Richard Bristow (Beechboro)	GF 002857	GSR Regulations 28(2), 28(3), 28(3a)(b), 28(3a) (c),	Failed to fit a compliance badge to the gas installation Failed to submit a Notice of Completion to the gas supplier Failed to give a copy of the Notice of Completion to the customer	\$1000.00	\$569.20

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence (\$)	Fine (\$)	Court Costs (\$)
<i>Paul John Dalwood (Leeming)</i>	GF 002566	GSR Regulations 28(2), 28(3), 28(3a)(b), 28(3a) (c),	<i>Failed to fit a compliance badge to the gas installation</i> <i>Failed to submit a Notice of Completion to the gas supplier</i> <i>Failed to give a copy of the Notice of Completion to the customer</i>	\$2500.00	\$569.20
<i>Christopher McConnell (Ocean Reef)</i>	GF 011456	GSR Regulations 28(2), 28(3), 28(3a)(b), 28(3a) (c), 18, 32	<i>Failed to fit a compliance badge to the gas installation</i> <i>Failed to submit a Notice of Completion to the gas supplier</i> <i>Failed to give a copy of the Notice of Completion to the customer</i> <i>Failed to ensure the gas fitting work complied with Regulation 32 by using a sealing method of crimping</i>	\$750.00	\$1069.20
<i>Iain Paterson (Jane Brook)</i>	GF 004829	GSR Regulations 28(2), 28(3), 28(3a)(b), 28(3a) (c),	<i>Failed to fit a compliance badge to the gas installation</i> <i>Failed to submit a Notice of Completion to the gas supplier</i>	\$2500.00	\$569.20
<i>George Herbert Sutton (Coodanup)</i>	GF 003595	GSR Regulations 20(1)(b), 26(1) (a), 28(2), 28(3), 28(3a)(b), 28(3a) (c), 30	<i>Failed to ensure the appliance was installed in accordance with the manufacturer's installation instructions</i> <i>Failed to ensure a consumer's gas installation was gas-tight</i> <i>Failed to fit a compliance badge to the gas installation</i> <i>Failed to submit a Notice of Completion to the gas supplier</i> <i>Failed to give a copy of the Notice of Completion to the customer</i> <i>Failed to provide a Notice of Rectification within required time</i>	\$3000.00	\$1060.20
<i>Nathan James Valli (Geraldton)</i>	GF 008242	GSR Regulations 26(1)(a), 28(2), 28(3), 28(3a)(b), 28(3a)(c),	<i>Failed to ensure a consumer's gas installation was gas-tight</i> <i>Failed to fit a compliance badge to the gas installation</i> <i>Failed to submit a Notice of Completion to the gas supplier</i> <i>Failed to give a copy of the Notice of Completion to the customer</i>	\$1000.00	\$569.20

Legend:

GSA Gas Standards Act 1972

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

NLH No licence held