

energy

Bulletin

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RCD Campaign Launch

In the past 17 years 29 people, including eight children have been electrocuted in homes in Western Australia. Of these, 23 deaths (79%) could have been prevented if RCDs had been fitted.

In an effort to reduce the number of deaths from electrocution, the State Government of Western Australia has implemented new RCD regulations that came into effect on 9 August 2009.

The campaign was announced by the Minister for Commerce Troy Buswell, who said he was confident lives would be saved by these new regulations requiring the installation of electrical safety devices in homes.

Mrs Denise Jammal, whose 12-year-old son Jay died after receiving an electric shock at his home in January, attended the campaign launch. Jay had been tinkering with an old juicer machine when the accident occurred. In that tragic incident, an RCD would have prevented his electrocution.

The campaign introduced the new regulations, prepared under the Electricity Act 1945, that will apply to people selling their home and landlords. Each home and rental property must be fitted with a

minimum of two RCDs to protect all the power points and lighting circuits.

Home sellers will be required to install the RCDs before the sale of their house, while landlords will need to install the devices before a new tenant takes up residency or in any case by 8 August 2011.

Since 2000, it has been compulsory for all new homes to have at least two RCDs fitted as part of the initial electrical installation. Under the new legislation it is estimated that within 15 years, 90 per cent of all homes and rental properties will be retrofitted with RCDs.

Two RCDs must be installed to avoid total darkness and loss of all power if one RCD operates. It also reduces the possibility of spurious operation caused by low level leakage current in some appliances.

Electrical contractors attending properties constructed prior to 2001 may take the opportunity to draw their client's attention to the regulations and to suggest they install the RCDs, even if they have no immediate intention to sell or lease. RCDs save lives and prevent fires and are a must in any home.

Further details can be found at www.energysafety.wa.gov.au/rcd

KEN BOWRON



DIRECTOR OF ENERGY SAFETY



Minister for Commerce Troy Buswell and Mrs Jammal at the campaign launch

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A National Licensing System for Specified Occupations

On 30 April 2009 the Council of Australian Governments (COAG) endorsed an Intergovernmental Agreement (IGA) and released a Decision Regulation Impact Statement (RIS) for a national licensing system for specified occupations. Through the signing of the IGA, states and territories have agreed to begin the implementation process for the national licensing system (NLS) which is scheduled to commence on 1 July 2012.

At an earlier meeting on 3 July 2008, COAG acknowledged that Australia's overlapping and inconsistent regulations impede productivity growth and agreed to the development of a national licensing system for specified occupations, in the context of its broader agenda for regulatory reform.

The NLS will include relevant occupational and business licensing in the following initial occupational areas:

- air conditioning and refrigeration mechanics
- building and building related occupations
- electrical
- land transport (passenger vehicle drivers and dangerous goods only)
- maritime
- plumbing and gasfitting
- property agents

Consultation with stakeholders

A series of public information and consultation sessions was held in July and October 2008 outlining COAG's decision and seeking stakeholder comment on the proposed system. Both sessions had strong representation from national and state industry and regulatory bodies.

Feedback from the October session and the subsequent stakeholder submissions were invaluable in the development of the Decision RIS and the IGA as agreed by COAG.

Several regulator workshops and a national industry workshop were also conducted in February, April, May and June 2009. The purpose of these workshops was to assist with identifying the elements which should be included in the new NLS legislation. The national industry workshop was followed by a series of sessions in each capital city in April 2009 that enabled input from state and territory industry bodies.

Need for a national licensing system

Licensing of occupational areas is predominantly a state and territory function and is conducted by a range of regulatory bodies in each state and territory. Due to divergent policies and practices, licences issued for the same occupational area often have different eligibility requirements and scopes of work. There are also divergent practices in regard to licence nomenclature, duration, licence structures and fees. Some jurisdictions licence both domestic and commercial builders while others only licence domestic builders. A plumbing contractor in South Australia may require up to eight different licences/registrations if they wish to undertake the same scope of work in New South Wales. One of the many benefits of the NLS will be rationalisation and streamlining of licences.

There are many other problems with the current licensing system, such as the cost to business and consumers associated with red tape. While impediments to labour mobility were addressed to some degree through mutual recognition, the differences between jurisdictions in licensing cried out for a regulatory reform process. There are also indirect costs which include the management of multiple regulatory regimes. Both direct and indirect costs are particularly high for small to medium sized businesses.

What the NLS will look like

Consultation with stakeholders indicated an overwhelming support for a National Delegated Agency model, which is outlined on pages 13-15 of the Decision RIS. Under this model a national licensing body (NLB) will be established, with responsibility for the NLS legislation. The NLB will delegate to states and territories the operation of licensing services. The advantages of this approach are that it minimises the risk of disruption in the transition and initial implementation phases for all stakeholders while providing opportunities for the identification of further reform once the NLS has been established.

In practice for licensees the licence they receive will allow them to work anywhere in the country and will be granted based on nationally agreed eligibility requirements.

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The NLB will develop this licence policy and administer the system. The NLB will be governed by a national licensing board. Occupational Licence Advisory Committees (OLACs) will provide advice on licence policy for the specified occupations and will have both employer and employee representatives. The Ministerial Council for Financial Federal Relations has responsibility for the NLS. The NLS governance arrangements are outlined in Figure 1.

Initially, the NLS will apply to the specified occupational areas but it will have the capacity to extend to other licensed occupations over time. The specified occupational areas will commence in the NLS in two waves. The first wave will cover electrical occupations, plumbing occupations (including gas fitting), property agents (excluding conveyancers and valuers) and air conditioning and refrigeration mechanics. These occupations will commence in the NLS on 1 July 2012. The second wave will cover building and building related occupations, conveyancers, valuers, maritime occupations and land transport occupations (dangerous goods and passenger vehicles) and these will commence in the NLS as soon as possible after 1 July 2013.

To ensure the system operates in a transparent, accountable, effective and fair manner a set of reform principles specific to national licensing will be reflected in the NLS legislation. Any licensing arrangements made under the NLS will also need to comply with COAG's *Principles of Best Practice Regulation*.

National register

COAG has directed that a national register of licensees be established for the new system. The register will be managed by the NLB. The NLS legislation will provide for the manner and form of information to be held in

the register including information that is to be made available to the general public.

Where are we up to?

Interim Advisory Committees

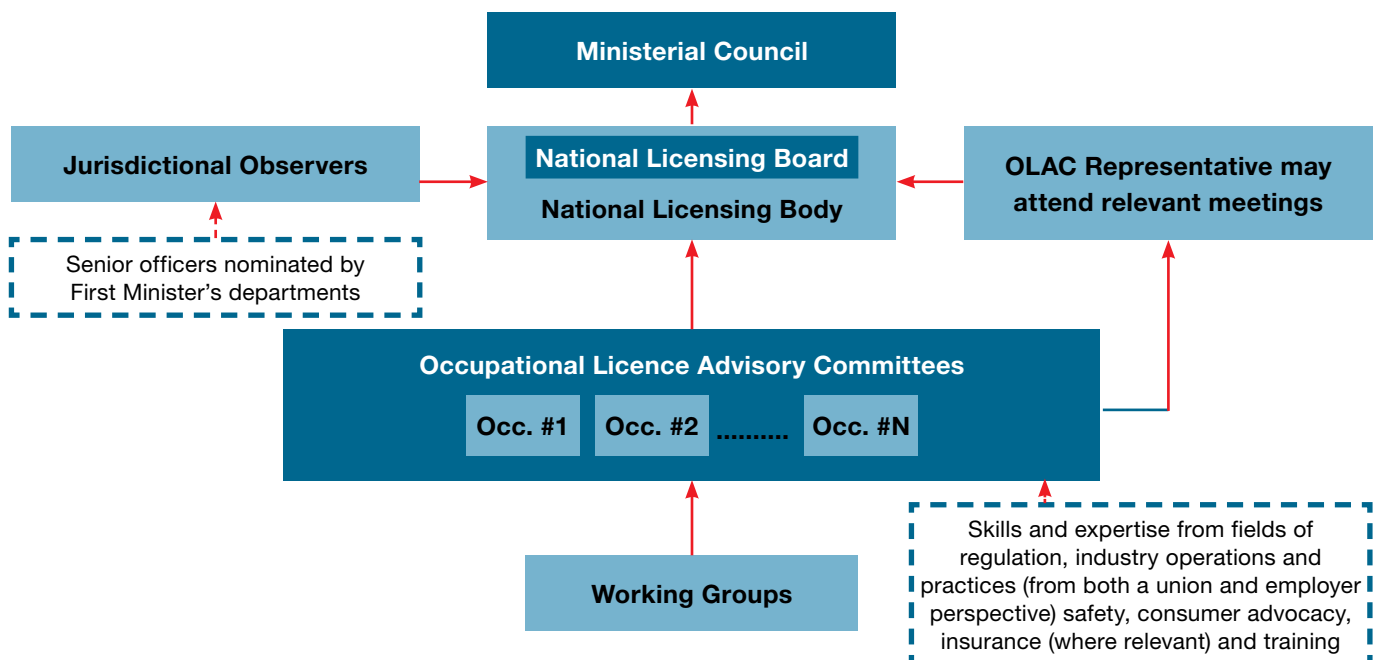
Under transitional arrangements, before the OLACs are established, Interim Advisory Committees (IACs) are being formed. The IACs and, in due course, the OLACs will provide advice on national licensing policy issues and will comprise expertise relevant to an occupational area across the fields of regulation, industry operations and practices (from both a union and employee perspective), safety, consumer advocacy, insurance (where relevant) and training. The COAG National Licensing Steering Committee, which is progressing the NLS in the lead up to the establishment of the NLB, has invited national peak bodies to nominate for representation on the four first wave IACs. The Committee will make recommendations on membership to the Ministerial Council for Federal Financial Relations for consideration at its meeting on 23 October 2009.

Draft legislation

As mentioned earlier, the industry and regulator workshops have assisted with the identification of the elements which should be included in the NLS legislation. The Parliamentary Counsel's Committee (PCC) will be responsible for the drafting of the NLS legislation. It is anticipated that the draft bill will be released for public consultation in October 2009. An indicative implementation timetable can be found on page 71 of the RIS.

More information on the NLS and access to the IGA and RIS can be found on the National Licensing website – www.govdex.gov.au/confluence/display/COAGNL/Home

Figure 1 – NLS governance arrangements



electrical focus

Retrofitting of RCDs

Electrical contractors and electricians will be aware of recent legislation requiring RCDs to be installed in residences that are being sold and in residential properties before the change of tenancy.

In the case of residential rental premises, the legislation also requires that where a change of tenancy does not occur, the requirement for fitting RCDs will apply in any case by 8 August 2011.

The legislation requires at least two RCDs be installed to protect all socket outlet and lighting final sub circuits

The two RCDs must be fitted to comply with the Wiring Rules.

In some cases, this may require more than two RCDs to be installed.

When an electrical contractor installs one or more RCDs, he or she must provide the home owner with an Electrical Safety Certificate to warrant that the RCDs were installed in accordance with the Wiring Rules. The wording will be along the lines of "Fitted (number) of RCDs to protect all socket outlet and lighting final sub circuits in accordance with AS/NZS 3000:2007 Wiring Rules".

The electrical contractor **must also** submit to the relevant network operator a Preliminary Notice and Notice of Completion for installing the RCDs, as this is notifiable work (i.e. where there is an alteration to more than one final sub circuit).

If an electrical contractor is requested to provide confirmation that an installation has at least two RCDs fitted to protect all socket outlet and lighting final sub circuits, this would involve attending the installation, inspecting the main switchboard, testing the RCDs to ensure they operate correctly and

checking that at least two are fitted in accordance with the Wiring Rules.

The electrical contractor should then provide the owner with an Electrical Safety Certificate with the wording along the lines of "Inspected installation. Confirmed (number – must be a minimum of two) RCDs are installed to protect all socket outlets and lighting final sub circuits in accordance with AS/NZS 3000:2007 Wiring Rules".

The electrical contractor may charge for this work.

Examples of completed Electrical Safety Certificates are on EnergySafety's website at www.energysafety.wa.gov.au/RCD.

A number of electrical contractors have contacted EnergySafety about the fitting of RCDs in residential strata units.

Strata residential living units are not exempt from the requirement to fit two RCDs to each individual living unit before the unit is sold, rented or leased. In addition, the socket outlet and lighting circuits in common property must also be protected by at least one RCD. This RCD must be fitted by 8 August 2011.

In older strata developments, each living unit may be fitted with a now obsolete surface mounted rewirable fuse switchboard. If this is the case, the owner should not be advised to seek an exemption from the requirement to fit RCDs as an exemption is not possible. It is recommended that the switchboard be replaced with a new surface mounted switchboard with two or more RCDs.

In situations where each living unit does not have its own switchboard and the switchboard is in common property which typically does not have the space to fit RCDs, it needs to be upgraded. This also provides

the owners with an opportunity to upgrade the installation and install a switchboard in each unit (if this is possible). This upgrade has the benefit of removing the old obsolete and now considered unsafe rewirable fuses and replacing these with the more modern circuit breakers. It may also facilitate the removal of any old switchboards that typically contained small amounts of asbestos and provides for additional electrical capacity to each unit for the future installation of air conditioners etc.

It is appreciated that this upgrade is costly and therefore the owners need to consider which option they prefer.

Electrical contractors should therefore discuss the available options with their clients.

More information about RCDs is on EnergySafety's website at www.energysafety.wa.gov.au/RCD. Much of the information will also be of interest to home owners.



The new compact single pole DIN mounted combined RCD/ACB compared to the 2 pole conventional RCD

New RCD – Laws Frequently Asked Questions

EnergySafety's RCD website lists a number of frequently asked questions. Below are some additional questions and answers recently added to the website. Please visit www.energysafety.wa.gov.au/RCD for further information.

Q: With respect to the recent legislation to retrofit RCDs into tenanted properties and at point of sale for residential properties, if I install RCDs, I will also have to rewire light and power circuits in the installation so the RCDs will not 'nuisance trip'. This will be very expensive for the home owner. Can these types of installations be exempt from the legislation?

A: No. If the circuit wiring is in such a state of deterioration, it should be replaced. Cost is not a valid reason to compromise electrical safety.

Q: If I install RCDs, do I have to submit a Notice of Completion for the work?

A: Yes. Installing more than one RCD is notifiable work and must be certified by submitting a Notice of Completion. The electrical contractor must also prepare an Electrical Safety Certificate for this work. The certificate must be delivered to the person for whom the work was carried out.

Q: With respect to the recent legislation to retrofit RCDs into tenanted properties and at point of sale for residential properties, do I need two RCDs for house services?

A: No. House services power and light circuits need only be protected by one RCD. Similarly, in a residence with a shed, power and light circuits for the shed need only be protected by one RCD. The actual residence requires a minimum of two RCDs to protect the power and light circuits.

Q: If I am asked to verify that an installation has a minimum of two RCDs, do I have to submit a Notice of Completion for this checking work?

A: No. If you are merely confirming that the installation has a minimum of two RCDs, you need only provide an Electrical Safety Certificate for this checking. Sample wording for this checking work is along the lines of "Inspected installation. Confirmed two RCDs are installed to protect all socket outlets and lighting final sub circuits in accordance with AS/NZS 3000:2007 Wiring Rules".

Q: Do RCDs have to be fitted to Park Homes where the owner owns the building but not the land (which is subject to a lease)?

A: The owner only needs to fit 2 RCDs if the building is sold or rented. Most of these cabins are supplied by a flexible cord and inlet socket. In this case one RCD is acceptable in a Cabin which is supplied by one inlet socket. At least 2 would be required if there are two or more inlet sockets

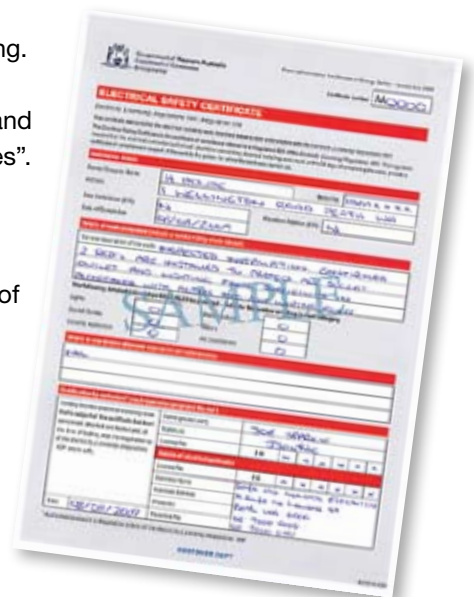
Q: Do RCDs need to be fitted in Caravan Parks?

A: Caravan Parks are classed as residential premises, therefore, they fall under the new RCD laws. The onsite permanently wired cabins require 2 RCDs when they are sold, leased or rented. An exemption can be issued for one RCD where the cabin does not have a switchboard or the switchboard does not have sufficient space to install 2 RCDs.

All the lighting and socket outlet circuits in the caravan park (which is sold, rented or leased) must be protected by RCDs as the Caravan Park is a residential premises. Clearly only one RCD is necessary to protect an individual socket outlet supplying a caravan.

Q: Are RCDs required to be fitted to a Caravan?

A: Caravans require RCDs if sold, rented or leased. One RCD is acceptable in a Caravan which is supplied by one inlet socket. At least 2 would be required if there are two or more inlet sockets.



Electricity (licensing) Regulations 1991: Are you aware of these amended regulations?

Amendments to the *Electricity (Licensing) Regulations 1991* came into effect on 01 July 2008.

EnergySafety conducted a series of free seminars in major centres of WA to address some of the more significant changes and how they might affect people in the electrical contracting industry.

Some of the lesser-known changes, which could also impact in the broader electrical industry, are brought to your attention here.

For designers of electrical installations:

- Designers of electrical installations must ensure the design is safe and has been developed to meet the relevant requirements (of the Regulations) [Regulation 49A].

For electrical contractors, nominees and electricians:

- A nominee is not required to comply with a direction given to him or her by his or her employer in relation to electrical work if the nominee reasonably considers that the work would not be carried out in accordance with the regulations [Regulation 38A].
- Electrical work must be carried out so that the thing on which it was performed is safe to use [Regulation 49B].
- Electrical work must be completed to a trade finish [Regulation 49B].

For employers of electricians and trainee electricians:

- A person employing a trainee electrician must ensure that, before the trainee carries out any electrical work, the trainee and the supervising electrical worker are informed of the experience and level of competence of the trainee [Regulation 50AA].
- An electrical contractor who carries out electrical installing work or causes electrical installing work to be carried out, must ensure that any electrician employed or engaged has had appropriate training, has a current licence and is competent to carry out the work [Regulation 52C].
- An electrical contractor who carries out electrical installing work or causes electrical installing work to be carried out, must ensure that the completed electrical work is safe and has been completed to a trade finish [Regulation 52C].

A person who commits an offence under the regulations is liable to a fine of:

For an individual – \$50,000.00

For a body corporate – \$250,000.00

Electrical equipment near gas cylinders

Electrical installations are required to be adequately protected against damage that might reasonably be expected from environmental and other external influences to which the installation may be exposed during normal operation.

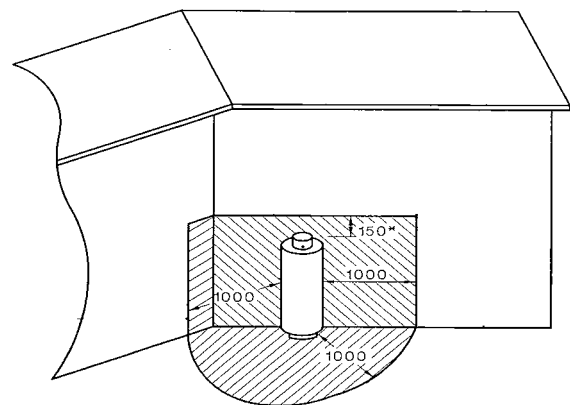
One area of concern is electrical equipment that is being installed within the hazardous area surrounding LP Gas cylinders.

In particular, outdoor condensers of split system air conditioners too often are installed within the hazardous area of exchange gas cylinders. These electrical appliances are not rated for installation in a hazardous zone and therefore create a hazardous situation.

In many cases, it is the air conditioning installer who creates the hazard, as the gas cylinders were in place at the time of air conditioner installation.

Air conditioning installers, including electrical contractors and their employee electricians, must ensure that, unless specifically rated for the area, electrical equipment is installed outside the hazardous areas of gas cylinders and any other hazard that might be present.

Further information about the hazardous areas around gas cylinders is in AS/NZS 1596.



* This distance is measured from the top of any cylinder valve

DIMENSIONS IN MILLIMETRES

Hazardous area dimensions for exchange gas cylinders

Granting an Electrician's Licence to an Overseas Applicant.

The criteria to be met by the Electrical Licensing Board to approve the issue of an Electrician's Licence for an overseas applicant are to provide either of the following with the application:

- Australian Recognised Trade Certificate (ARTC) issued by Trades Recognition Australia, or
- Offshore Technical Skills Record (OTSR) issued by VETASSESS.

To confirm that an applicant is a competent tradesperson they are required to complete successfully the theory and practical examinations of the Electrical Trades Licensing (ETL) course.

Applicants issued an ARTC endorsed Electrical Mechanic or an OTSR and have completed successfully the ETL course will be issued an Electrician's Licence that allows the holder to carry out electrical installing and electrical fitting work.

Where the ARTC is endorsed Electrical Fitter and an applicant has completed successfully the ETL course, a three-year permit will be issued to carry out electrical fitting work without supervision. They will also be entitled to perform electrical installing work under supervision of an electrician to gain 12 months electrical installing experience to qualify for an Electrician's Licence. The permit is limited to three years.

Applicants are encouraged to apply for a permit to work under supervision during the period taken to complete the ETL course. This will enable an applicant to gain practical experience under Australian conditions and be employed until the licensing requirements have been met.

There have been 241 applicants undertake the ETL course during 2009 with further enrolments confirmed until October 2009.

Electrician's Training Licence

Under the provisions of the *Electricity (Licensing) Regulations 1991* an apprentice electrician is required to be issued an Electrician's Training Licence (previously "C" Grade electrical worker's licence) before they can carry out electrical work under supervision of an electrician.

To ensure an apprentice applies for a licence, the Licensing Office downloads a report of apprentice electricians from the Department of Education and Training and sends an application for an Electrician's Training Licence to the employer.

Where an employer has not received an application for a licence by the Licensing Office it is the employer's responsibility to ensure the apprentice submits an application.

The regulations also require that an apprentice's safety knowledge, must be assessed prior to the issue of an Electrician's Training Licence. The application includes a copy of the "Apprentice Safety Assessment Guidelines" plus the Apprentice Safety Assessment Report and Test.

The supervisor is required to complete the Apprentice Safety Assessment Report when the apprentice has completed the test successfully. The report, with the application form, application fee and proof of identification must be returned to the Licensing Office.

Where an apprentice has previously held an Apprentice Training Licence, the application fee and Apprentice Safety Assessment Report is not required where the previous licence has not expired for more than two years.

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.

Amendment No. 1 to Wiring Rules issued

Amendment No. 1 to AS/NZS 3000:2007 Wiring Rules was published on 30 July 2009.

Copies of the Wiring Rules being purchased from SAI Global will now have this amendment incorporated.

The changes detailed in Amendment No. 1 apply six months from publication.

It is important that your copy of the Wiring Rules is updated with this amendment.

The amendment may be purchased online from SAI Global's website at:

<http://infostore.saiglobal.com/store/>



Arc Fault Protection – Low Voltage Switchboards

Recently EnergySafety was asked to clarify the requirements for arc fault protection for heavy current switchboards as specified in Clause 2.5.5 of the AS/NZS 3000:2007 Wiring Rules.

Clause 2.5.5.1 defines a heavy current switchboard as any switchboard with a total rated incoming supply current of 800 amperes or more. For example a switchboard which has two 400 ampere rated incomer circuits or one 800 ampere rated incomer circuit.

For heavy current switchboards, additional protective measures are required. Specifically clause 2.5.5.1 requires that ***‘The supply conductors up to the line side of the protective device(s) within the switchboard shall be provided with means to reduce the probability of initiation of arcing faults’***. This requirement is to be achieved by insulation (completely covering all live parts) or by IP2X separation; as defined by AS/NZS 3439.1 clause 7.7. This is a mandatory requirement that must be used in conjunction with either or both of the following additional conditions:

a) Form separation (Clause 2.5.5.2)

Internal separation in accordance with AS/NZS 3439.1 – i.e. any form separation from Form 3b through to Form 4bih.

b) Limitation of the effects of arcing faults (Clause 2.5.5.3)

The use of a protective device to limit the arc fault energy. This device must pick up at a current less than 30% of the three-phase prospective fault level and the fault interrupting time must not exceed a maximum value determined by calculation as set out in clause 2.5.5.3.

The following three photographs show examples of compliance with these requirements.

Photograph 1 shows protection by insulation on an incomer circuit. The busbars are insulated and terminals for the incoming cable (not yet fitted) are shrouded. (Photograph courtesy of Schneider Electric Pty. Ltd.)

Photograph 2 shows protection by separation on an incomer circuit. Polycarbonate IP2X barriers have been installed which completely enclose the supply conductors up to the line side of the protective device. (Photograph courtesy of Power Proving Services Pty. Ltd.)

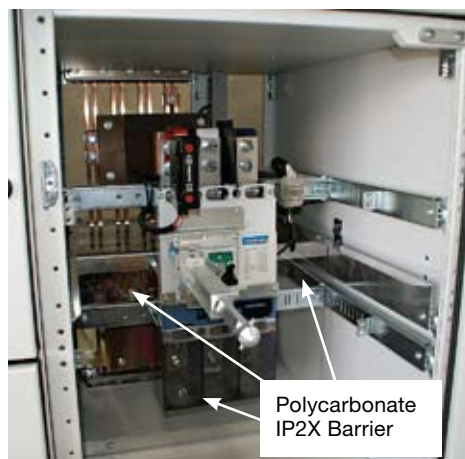
Photograph 3 shows an example of a switchboard with Form 3b separation per table 6B of AS/NZS 3439.1.

The switchboard is Form 3b as opposed to Form 3a, because there is separation of the terminals for external conductors from the busbar, achieved by the separate cable zone. For this switchboard to be Form 4 there would need to be additional separation of the terminals for external conductors of functional units from each other.

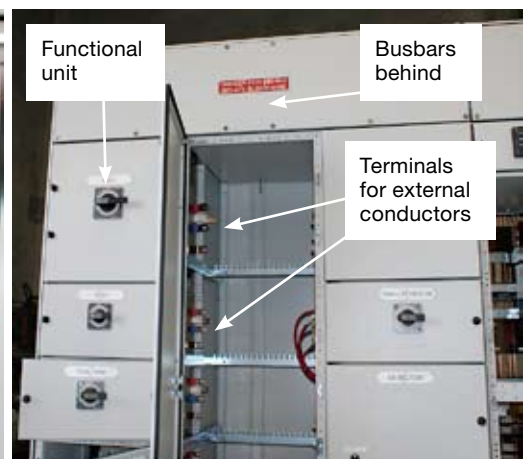
(Photograph courtesy of Power Proving Services Pty. Ltd.)



Photograph 1



Photograph 2



Photograph 3

Prosecutions for Breaches of the Electricity Legislation 1 April to 30 June 2009

<i>Name (and suburb of residence at time of offence)</i>	<i>Licence No.</i>	<i>Legislation and Breach</i>	<i>Offence</i>	<i>Date of Offence</i>	<i>Fine (\$)</i>	<i>Court Costs (\$)</i>
<i>Eric Peter Cosh (Kallaroo)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 19(1)</i>	<i>Carried out electrical work whilst not authorised by licence or permit</i>	<i>Between 01/03/07 and 31/03/07</i>	<i>1,500.00 *</i>	<i>571.70 *</i>
<i>Bryan Thomas Dell (Landsdale)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 19(1)</i>	<i>Carried out electrical work whilst not authorised by licence or permit</i>	<i>10/02/07</i>	<i>800.00 *</i>	<i>371.70 *</i>
<i>Josip Kovac (Mandurah)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 19(1)</i>	<i>Carried out electrical work whilst not authorised by licence or permit</i>	<i>Between 01/04/07 and 30/04/07</i>	<i>1,200.00 *</i>	<i>571.70 *</i>
<i>Peter Abraham (Bridport, Tasmania)</i>	<i>EW150516</i>	<i>E(L)R 1991 Regulation 33(1) (2 breaches)</i>	<i>Carried on business as an electrical contractor whilst not authorised by a WA EC licence</i>	<i>16/07/07</i>	<i>1,200.00</i>	<i>571.70</i>
<i>Eric Peter Cosh (Kallaroo)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 33(1)</i>	<i>Carried on business as an electrical contractor whilst not authorised by a WA EC licence</i>	<i>Between 01/03/07 and 31/03/07</i>	<i>*</i>	<i>*</i>
<i>Bryan Thomas Dell (Landsdale)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 33(1)</i>	<i>Carried on business as an electrical contractor whilst not authorised by a WA EC licence</i>	<i>10/02/07</i>	<i>*</i>	<i>*</i>
<i>Josip Kovac (Mandurah)</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 33(1)</i>	<i>Carried on business as an electrical contractor whilst not authorised by a WA EC licence</i>	<i>Between 01/04/07 and 30/04/07</i>	<i>*</i>	<i>*</i>
<i>Daniel Shanks (Morley)</i>	<i>EW140388</i>	<i>E(L)R 1991 Regulation 33(1)</i>	<i>Carried on business as an electrical contractor whilst not authorised by a WA EC licence</i>	<i>Between 17/04/07 and 20/04/07</i>	<i>1,500.00</i>	<i>571.70</i>
<i>Jamie Kershaw (Bertram)</i>	<i>EW142621</i>	<i>E(L)R 1991 Regulation 49(1)</i>	<i>Carried out substandard electrical work</i>	<i>14/06/07</i>	<i>500.00</i>	<i>571.70</i>
<i>Philip Mumenthaler (Kununurra)</i>	<i>EW110055</i>	<i>E(L)R 1991 Regulation 49(1)</i>	<i>Carried out substandard electrical work</i>	<i>16/04/07</i>	<i>3,000.00</i>	<i>1,727.77</i>

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Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
<i>Domenico Mercuri (Hearn Hill)</i>	<i>EW132662</i>	<i>E(L)R 1991 Regulation 50(1)</i>	<i>Did not provide adequate supervision for an employee</i>	<i>Between 16/05/07 and 20/07/07</i>	<i>500.00</i>	<i>571.70</i>
<i>Mercuri (WA) Pty Ltd T/As Solargain</i>	<i>NLH</i>	<i>E(L)R 1991 Regulation 50(1)</i>	<i>Did not provide adequate supervision for an employee</i>	<i>Between 16/05/07 and 20/07/07</i>	<i>1,000.00</i>	<i>571.70</i>
<i>Riches & Sons Pty Ltd T/As Outback Power (Northam)</i>	<i>EC001581</i>	<i>E(L)R 1991 Regulation 51(1)</i>	<i>Failed to submit Preliminary Notice to the relevant Network Operator within the required timeframe.</i>	<i>18/04/07</i>	<i>1,500.00</i>	<i>571.70</i>
<i>Done-Rite Electric (Two Rocks)</i>	<i>EC004498</i>	<i>E(L)R 1991 Regulation 52(1) (18 breaches)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>Between 06/11/06 and 16/08/07</i>	<i>500.00 *</i>	<i>500.00</i>
<i>Exceptional Electrical Service (Southern River)</i>	<i>EC007298</i>	<i>E(L)R 1991 Regulation 52(1) (28 breaches)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>Between 11/12/06 and 23/05/07</i>	<i>5,400.00</i>	<i>571.70</i>
<i>Goldraid Pty Ltd T/As Leon Best Electrical (Bullcreek)</i>	<i>EC007536</i>	<i>E(L)R 1991 Regulation 52(1)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>21/05/07</i>	<i>1,000.00</i>	<i>571.70</i>
<i>M D N Electrical Contractors (Merredin)</i>	<i>EC002816</i>	<i>E(L)R 1991 Regulation 52(1) (4 breaches)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>Between 01/03/07 and 27/06/07</i>	<i>400.00</i>	<i>621.70</i>
<i>Nathan Panevski T/As Statesman Electrical (Hillarys)</i>	<i>EC007898</i>	<i>E(L)R 1991 Regulation 52(1) (28 breaches)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>Between 05/02/07 and 13/08/07</i>	<i>3,000.00</i>	<i>771.70</i>

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Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
<i>Riches & Sons Pty Ltd T/As Outback Power (Northam)</i>	<i>EC001581</i>	<i>E(L)R 1991 Regulation 52(1)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>18/04/07</i>	<i>*</i>	<i>*</i>
<i>Widdeson Electrics (Morley)</i>	<i>EC001481</i>	<i>E(L)R 1991 Regulation 52(1)</i>	<i>Failed to submit a Notice of Completion to the Network Operator upon completion of electrical installing work</i>	<i>20/06/07</i>	<i>750.00 *</i>	<i>400.00 *</i>
<i>Cable West Electrical Pty Ltd (Bunbury)</i>	<i>EC004946</i>	<i>E(L)R 1991 Regulation 52(3)</i>	<i>Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete</i>	<i>Between 13/03/07 and 30/05/07</i>	<i>2,000.00</i>	<i>671.70</i>
<i>Cockburn Electrical Company (Bertram)</i>	<i>EC000498</i>	<i>E(L)R 1991 Regulation 52(3)</i>	<i>Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete</i>	<i>14/06/07</i>	<i>5,000.00</i>	<i>571.70</i>
<i>Leith Elsegood (Balcatta)</i>	<i>EC005815</i>	<i>E(L)R 1991 Regulation 52(3)</i>	<i>Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete</i>	<i>13/06/07</i>	<i>1,000.00</i>	<i>571.70</i>
<i>Phils Electrical & Mechanical Services (Kununurra)</i>	<i>EC002767</i>	<i>E(L)R 1991 Regulation 52(3)</i>	<i>Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete</i>	<i>16/04/07</i>	<i>*</i>	<i>*</i>
<i>Xanthippe Pty Ltd T/As Keslec Electrical Technologies (Ballajura)</i>	<i>EC007374</i>	<i>E(L)R 1991 Regulation 52(3)</i>	<i>Submitted a Notice of Completion to the relevant Network Operator when the electrical installing work was not complete</i>	<i>Between 30/04/07 and 25/06/07</i>	<i>500.00</i>	<i>371.70</i>

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Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Date of Offence	Fine (\$)	Court Costs (\$)
Electricity Networks Corporation T/As Western Power (Perth)	EC004931	E(SS&SS)R 2001 Regulation 10(1)(c)	Did not carry out a prescribed activity so far as is reasonable and practicable and carried out in such a way as to avoid or minimise any damage to property, inconvenience or other detriment as a result of the activity	05/04/07	12,000.00	571.70
Electricity Networks Corporation T/As Western Power (Perth)	EC004931	EA 1945 Section 25	Did not maintain their service apparatus in a safe and fit condition for supplying electricity or take reasonable precaution to avoid damage to customer premises	22/05/07	5,000.00	571.70

Legend NLH No Licence Held
E(L)R Electricity (Licensing) Regulations 1991
* Global Fine or costs Issued

Notices of Completion

Electrical contractors are reminded that the Notices of Completion were recently updated and reprinted. These new Notices must be used for electrical work where a Preliminary Notice has not been submitted to the network operator by the 30 June 2009.

Network Operators cannot accept obsolete Notices. The new Notices can be identified by the reference number ESWA E001 0109 at the bottom of the Notices. The new Notice books are available free of charge by contacting EnergySafety's Licensing Office on 9422 5282

Addendum – Electrical Safety Certificates (Certificates of Compliance)

Energy Bulletin 47 (page 6) featured a reminder for Electrical Contractors to furnish Electrical Safety Certificates (Certificates of Compliance) when completing electrical installing work. It stated “excluding maintenance”, which is incorrect.

In accordance with Regulation 52 B (1) of the *Electricity (Licensing) Regulations 1991* An Electrical Contractor must provide an Electrical Safety Certificate to the person for whom the work was carried out **for any electrical installing work**, within 28 days of completion.

Electrical Installing work means electrical work consisting of assembling and fixing in place, altering or adding to any electrical installation or maintaining, removing, or, connecting to fixed wiring, any electrical equipment.

This does not apply to in-house electrical installing work carried out under the authority of an in-house electrical installing work licence {Regulation 52 B (3)}.

gas focus

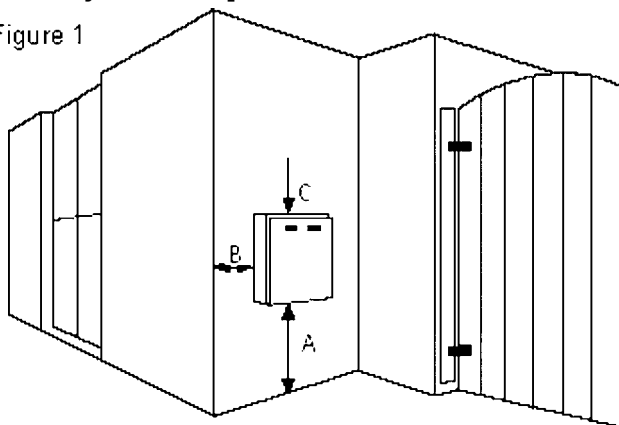
Your guide to gas meter box locations.

EnergySafety receives numerous enquiries in relation to meter box locations and generally refers the gasfitter to the relevant gas supplier or network operator for advice on this matter. We have included below an extract from the WA Gas Networks (WAGN) meter box locations guide.

WAGN is the owner of the majority of the reticulated gas infrastructure in Western Australia which was previously operated by AlintaGas Networks. A useful link to the WAGN web site for gas meter box location guides is located at <http://www.wagn.com.au/>. I encourage you to visit this website.

Figure 1: Standard Residential Gas Only Meter Box [Partially Recessed]

Figure 1



Dimension A should be no less than 200mm and no greater than 1500mm.

Dimension B should not exceed 1000mm.

Dimension C should be no less than 125mm from the face brickwork if the box is recessed from the wall.

Portable Gas Refrigerators

All portable gas refrigerator users (This may include your family and friends).

This article refers to the use of portable gas refrigerators, sometimes referred to as a chest type (lid on top) refrigerator. They are primarily designed for use outdoors in a camping environment and are generally connected via a flexible hose connected to a regulator that is attached to a small LP Gas cylinder.

As they operate on an absorption principal, a small gas flame (1Mj approx.) is present at the base of the burner tube. Heat is transferred in this tube assisted by a twisted strip placed just above the burner. This twisted strip is usually suspended by a length of wire from the top of the burner tube.

Concern was raised by the Technical and Safety Regulator in Queensland where two deaths recently investigated by the State Coroner involved these refrigerators being in operation inside vehicles overnight and the occupants suffered carbon monoxide (CO) poisoning.

When used correctly out of doors these appliances are quite safe, however when used in an enclosed space such as a motor vehicle or caravan, the lack of fresh air for combustion will cause any gas appliance to produce a dangerous concentration of carbon monoxide.

These appliances can however operate safely inside when used on 240 or 12 volts if that option is available rather than gas.

Carbon monoxide gas (CO) is poisonous, colourless, odourless and undetectable by humans and ingestion can result in death.

Queensland is not alone with this problem as one of these chest type refrigerators was responsible for two deaths that occurred in a vehicle on the side of a road just outside of Merredin in 1980.

Gas refrigerators (which are of the conventional type front opening door) installed in caravans and motor homes are generally fixed and sealed in position, have adequate ventilation and are flued externally to the van. They therefore do not pose a health risk.

Recommendations:

- Users of these products should read the warning labels and follow the operational instructions for the product.
- Always ensure that adequate ventilation is provided.
- When using these refrigerators on LP Gas ensure the gas hose, cylinder and regulator is in a serviceable condition. If in doubt have the whole assembly checked by a gas fitter or the service agent.



Safety Regulatory Regime for Industrial Gas-Fired Appliances and Installations in Western Australia

A guideline is now accessible on the EnergySafety WA website that provides an outline of the Western Australian (WA) legislative and procedural requirements for the gas installation aspects of projects that include large commercial/ industrial gas appliances (Type B gas appliances).

The guideline is targeted at overseas proponents who wish to obtain information on the requirements for installation, servicing and safe operation of large commercial/industrial gas appliances in their WA premises.

The guidelines include the following for gas installations:

- Those which commence downstream of a pipeline licensed under the *Petroleum Pipelines Act 1969* or at a demarcation point (meter, pressure reducing station valve, flange or such) where a pipeline enters the gas installation site.
- Major Hazard Facilities and gas installations where there is not a pipeline licensed under the *Petroleum Pipelines Act 1969*, from the consumer's billing master meter or the primary regulator in the case of a pressurised container.
- Topics such as the following:
 - definition of terms used in the gas industry;
 - consumer gas pipelines;
 - industrial gas fired appliances and their certification;
 - performance of gasfitting and licensing requirements;
 - technical requirements; and
 - gas suppliers obligations.

The legislation covering the installation, servicing and safe operation of gas appliances in WA is also covered in the guideline. The EnergySafety WA website address is www.energysafety.wa.gov.au.

Guidelines for the Approval of Type B (Industrial) Gas Appliances in Western Australia (Second Edition)

A second edition of the guidelines was recently published and is now accessible on the EnergySafety WA website. The guidelines provide an outline of the regulatory and technical requirements and the roles and responsibilities of the various industry participants involved in having a Type B (industrial) gas appliance approved for use.

With the aid of flow charts, the guidelines explain each step of the various stages of the approval process, that is, from preparing a technical submission, applying for installation approval through to obtaining final certification and permanent gas supply.

The guidelines apply to new Type B gas appliances, modifications to existing installed Type B gas appliances and existing Type B gas appliances that are relocated.

Modification of existing Type B gas appliances with and without evidence of previous approval is explained. The modification requirements for existing Type B gas appliances without evidence of previous approval have sub-clauses explaining the requirements for modification with and without certification. Modification with certification is strongly encouraged by EnergySafety WA.

The legislation covering the new Type B gas appliances, modifications to existing installed Type B gas appliances and existing Type B gas appliances that are relocated is also covered in the guideline. The EnergySafety WA website address is www.energysafety.wa.gov.au.

What's lurking in the kitchen?

Next time you are in the kitchen, or if you are a gasfitter/plumber you may spend quite a considerable amount of time in other people's kitchens installing the latest in wall ovens, cook tops and cookers.

Spare a thought for some of those pressure packs used in the kitchen, the fly spray, bug and roach sprays and canola oils.

Have you noticed the propellants are mostly hydrocarbons? There is usually a small indicator on the side of the can indicating what type of propellant is used. Hydrocarbons are flammable and should be kept away from extreme heat and ignition sources.

An event reported to EnergySafety occurred where a canister of fly spray was placed over the top of an oven vent on a cooker splashback. The canister exploded when it was overheated by the products of combustion rising from the oven. The force of the explosion threw the occupant in the kitchen to the floor and lifted the ceiling. It was not a large can either.

A more recent incident involved a can of canola oil that had been placed near the duct from an exhaust canopy passing through an overhead cupboard. The canister was overheated and exploded sending oil across the kitchen and onto the lit cook top below.

Continued over page

Amendment

In the last Energy Bulletin 47 on page 8, we ran an article on Changes to Gas Fitter Training. We have been made aware that one of the Training Providers, MPA Skills contact number was listed incorrectly. MPA Skills Maylands can be contacted on 9471 6600

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A small fire resulted, fortunately the consumer was nearby and extinguished this fire, but it could have had more serious consequences.

Good housekeeping and knowledge of the dangers associated with pressurised cans may avoid these incidents occurring in the future. The splash back on a cooker is not a good place to keep the fly spray.

As a gas fitter/plumber, when working in a kitchen and you notice one of these pressurised canisters near the cooker be polite and mention this incident discussed above and suggest it be moved to a safe location.

Prosecution Brief

To assist gas fitters/plumbers EnergySafety continues to provide a brief description of what can go wrong with what could be called a “simple gas installation”.

The offender in this instance was engaged to develop a prototype design for a gas installation on a new range of caravans being developed by a local manufacturer.

A two stage regulator was attached to the gas cylinders via pigtailed and a changeover valve. Copper gasfitting lines were run on the underside of the van to connect a refrigerator and a built in caravan gas cooker.

The installation of this cooker was not as simple as placing the cooker on a plinth. To enable the cooker to function correctly a metal vent the same width as the cooker had to be installed to the underside of the cooker to provide adequate primary air for combustion to the oven burner. This was outlined in the installation instructions provided by the manufacturer. The cooker was of a design that required it to be recessed in and sealed into the surrounding cupboards. The prototype installation was completed, accepted by management, then the caravan design went into production.

EnergySafety gas inspectors conduct random inspections of the notice of completion. In this particular instance, the gas inspector arranged for an appointment to conduct an audit inspection of the van noted on the notice of completion and arrived at the caravan manufacturing site.

The inspector was not familiar with the cooker so he requested a copy of the installation instructions. When comparing the installation instructions to what was installed in the van, there was a difference with the cooker. The installation had been completed and the required vent had not been placed in the plinth under the cooker. It was then discovered that the gas fitter had completed a large number of these installations and caravans had been sent to their selling agents. Notices of completion had also not been received for all of the vans.

It is disappointing that this gas fitter had to be prosecuted. If a notice of completion had been

received for the prototype installation or the gas fitter had telephoned the office to request advice relating to the installation of this unusual gas cooker, the installation could have been made to comply at that stage. Further costs were then incurred by the caravan manufacturer in recalling all the completed caravans and arranging modifications to the plinth to incorporate this manufacturer supplied undervent.

If for any reason, as a gas fitter/plumber you have concerns about the new design of an appliance or its installation, please call the Gas Inspection Branch on 9422 5297 and one of the gas inspectors will be able to assist.

Update on status of Gas Utilisation Standards

There is a number of gas utilisation standards that have been reviewed, put out for public comment, amended and voted upon by their respective Standard committees.

EnergySafety WA has actively contributed to all of these standards and has been a member of most of their respective committees. These standards include the following:

STANDARD	ANTICIPATED RELEASE
AS 3645: Essential requirements for gas equipment	1st quarter of 2010
AS 5092: CNG refuelling stations	4th quarter of 2009
AS/NZ 5601: Gas installations Part 1: General gasfitting Part 2: LP Gas installations in caravans and boats for non-propulsive purposes	1st quarter of 2010

The standards are to be referenced in the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*.

AS 5601 – 2004 that is currently referenced by the Regulations in Schedule 7 will be replaced by AS/ NZS 5601, as soon as it is published. AG 901: Code of practice for NGV refuelling stations, that is currently referenced by the Regulations will be replaced with AS 5092 as soon as it is published. AS 3645 will be called up in a future amendment of the Regulations.

Gas fitters must obtain a copy of the revised edition of a Standard as soon as practicable after it is published. Where there are significant changes to a Standard, compliance may be managed by a transitional period of six months from the date of publication of the revised standard. Any transitional period will be advised in the Energy Bulletin.

Compliance with new edition of AS 3814: Industrial and commercial gas-fired appliances

The Australian Standard, AS 3814: Industrial and commercial gas-fired appliances was published following extensive review, receiving of public comment, amending and voting upon by members of the Standard Committee AG-011.

EnergySafety WA has actively contributed to this Standard as a member of the Committee. The Standard is referenced in Schedule 7 of the *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*.

AS3814 – 2009: Industrial and commercial gas-fired appliances, as the current edition now supersedes the previous edition of AS 3814 – 2005, Gasfitters (Class I or equivalent) must obtain a copy of this edition of the Standard as the Regulations automatically refer to the current edition.

Significant changes were made to AS 3814 – 2005, particularly in the addition of gas/air ratio control and gas turbines.

EnergySafety WA considers compliance may be managed by a transitional period of six months from the date of publication of AS 3814 – 2009, which was 12 August 2009.

Prosecutions for breaches of gas legislation 1 May 2009 to 31 July 2009

Name (and suburb of residence at time of offence)	Licence No.	Legislation and Breach	Offence	Fine (\$)	Court Costs (\$)
<i>Peter Pizzino (Westminster)</i>	<i>NLH</i>	<i>GSA 13A(2)</i>	<i>Carried out gasfitting work while not holding a certificate of competency, permit or authorisation allowing him to do so</i>	<i>10,000</i>	<i>571.70</i>
<i>Ovenclean Pty Ltd (Joondalup)</i>	<i>NLH</i>	<i>GSA 13D</i>	<i>Sale of gas appliances not being approved by the Director or of a class or type approved by the Director</i>	<i>3,000</i>	<i>671.70</i>
<i>Peter John Fogliani (Henderson)</i>	<i>GF 012122</i>	<i>GSR Regulations 20(1b),28(2) 28(3), 28(3a) (b), 28(3a)(c)</i>	<i>Failed to ensure the appliance was installed in accordance with the manufacturer's installation instructions 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</i>	<i>1,200</i>	<i>571.70</i>