

energy

Bulletin

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Retrofitting of RCDs

Since 1991, it has been mandatory to install RCDs (safety switches) into consumers' electrical installations to protect power point circuits. In 2000, RCD protection was extended to also protect lighting circuits, in recognition of the number of serious accidents to householders and tradespersons, particularly in ceiling/roof spaces of installations.

However, it is estimated that less than 20 percent of pre-1991 installations are currently fitted with RCD protection.

There are specific safety concerns with these older installations:

- Most pre-1960 dwellings are still wired in VIR (Vulcanised India Rubber) insulated cables. The insulation becomes brittle and on contact, often falls off, exposing live conductors, such as in ceiling spaces; and
- Poor wiring installation practices (which were allowed prior to the mid 1980s) resulted in joints in insulated cables not being properly enclosed, with the risk of serious potential shock to persons entering ceiling/roof spaces.

To address these serious safety concerns, EnergySafety has for some years promoted the retrofitting of RCDs into pre-1991 dwellings.

The Government recently provided funding for a program to retrofit RCDs into all HomesWest metropolitan and regional dwellings. The program is expected to be completed by 30 June 2007. This is a positive move.

The desire to improve community/employee electrical safety has also been signalled by companies such as Hamersley Iron (now part of Pilbara Iron P/L) which has recently announced a program to retrofit RCDs to all its company housing. This involves some 2,300 dwellings in Dampier, Karratha, Tom Price and Paraburdoo and is expected to be completed in 2006.

EnergySafety believes that the time has come to require the mandatory fitting of at least two RCDs to pre-1991 dwellings. We are therefore considering a proposal that it be made mandatory for residences that are:

- offered for sale (ie RCDs to be installed before sale is completed); or
- being rented or offered for rental (within two years of the requirement being introduced).

I believe this kind of program would be a practical way of implementing the retrofitting. If you have a view on this, please write to us at EnergySafety – we would welcome your feedback.



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Restricted plumbing permits for electricians and gas fitters

On 28 June 2004, the Plumbers Licensing Board agreed to introduce a restricted plumbing permit to allow licensed electrical and gas operatives who had been carrying out limited plumbing work associated with “like-for-like” water heater changeovers, to continue to do so.

The Board resolved that this would be a one-off opportunity available only to those licensed electricians and gasfitting permit holders who had been carrying out such work prior to 1 July 2004.

The permit authorises the disconnection, removal, installation and connection of compression unions, expansion control valves and temperature/pressure relief valves with respect to water heaters. Changes to the water supply pipe work or the use of flexible hose connections are not permitted.

To become eligible for a restricted plumbing permit, electricians and gas fitters were required to register with the Plumbers Licensing Board,

through the Electrical & Communications Association (ECA) or the Gas Industry Association (GIA), by 21 July 2004.

More than 260 electricians and gas fitters who were registered with the Board by that date were then required to pass a theoretical and practical skills assessment to be granted a restricted plumbing permit. The assessment was developed by MPA Skills in consultation with the ECA and GIA and was approved by the Plumbers Licensing Board at its January 2005 meeting.

There will be a cut off date for applicants to have completed the assessment. The date is expected to be later in 2005 and will be determined and announced by the Plumbers Licensing Board.

Restricted permit holders are subject to the same installation and certification requirements as



licensed plumbing contractors. All plumbing work performed must comply with the plumbing standards as defined by Regulation 47 of the *Water Services Licensing (Plumbers Licensing and Plumbing Standards) Regulations 2000*.

It is expected that in the longer term, the Board will develop and introduce a formal training and licensing regime for restricted plumbing work, as exists for restricted electrical work.

Further information about the restricted plumbing permit can be obtained by contacting the Plumbers Licensing Board's Licensing Officer, Ms Samantha Coddington, by telephoning 9282 0478.

Alternative installation methods, materials or equipment

EnergySafety recently became aware of a large greenfield industrial installation in the State where a large quantity of non-standard electrical cables was installed.

EnergySafety was then approached by the owner seeking approval under Clause 1.6 “Alternative Arrangements” of AS/NZS 3000:2000 “Wiring Rules” for the non-standard cable installation.

Although the request was ultimately approved by the Director of Energy Safety, the approval was subject to a number of stringent conditions designed to ensure that the safety

of the installation will not be less than normally required.

One of the key conditions is that all cables with non-standard core insulation colours must be replaced within 10 years. In the meantime, all cores with non-standard colours must be sleeved at terminations with heat-shrink sleeving of the correct colour.

The Director of Energy Safety also insisted on the application of safety management systems as detailed in the owner's Safety Case submission, plus a cable reporting regime and other technical requirements.

This was obviously the wrong approach for an installation to be

designed/constructed. The correct approach for non-standard equipment to be considered for installation is for an application to be made to EnergySafety at the design stage, that is, before construction commences. A regulatory compliance assessment can then be made and, where required, design changes can be carried out before equipment is purchased or contracts are agreed.

It should be noted that companies which procure and/or install non-compliant electrical or gas equipment run the risk of having it fully rejected by the inspecting authority.

New WorkSafe laws passed through Parliament

Legislation to bring about major changes in Western Australian occupational safety and health laws has passed through Parliament.

The legislation took effect in two stages:

1. New penalties and expansion of duty of care obligations came into effect on 1 January 2005
2. Changes to the powers of safety and health representatives and the establishment of a safety and health tribunal came into effect on 4 April 2005.

The changes result from the 2002 review by former Australian Industrial Relations Commissioner Robert Laing. They reflect the view that:

- penalties for offences have been too lenient (described by Robert Laing as 'manifestly inadequate'); and

- those in the workplace are best placed to deal with safety and health matters.

Under the new legislation, maximum penalties for OSH offences have more than doubled, reflecting the community's view of the seriousness of such failure of duty of care.

The previous maximum penalty was \$200,000 for a general duty of care breach by a non-employee, whether a corporation or an individual. The highest penalty awarded to date was \$150,000 in 2004.

A corporation convicted of the most serious offence can now be fined up to \$500,000 for a first offence. A subsequent offence attracts a maximum penalty of \$625,000.

For the first time, courts will be able to send an offender to prison for 'gross negligence' – that is, where there has been a disregard for the

likelihood of death or serious harm occurring and where death or serious injury resulted from the contravention.

In other changes, elected and qualified safety and health representatives are now able to issue provisional improvement notices (PINs) where they believe there is a breach of the *Occupational Safety and Health Act 1984* or Regulations.

A PIN is similar to an improvement notice issued by a WorkSafe inspector, except for its 'provisional' nature. Before issuing a PIN, the safety and health representative will have to consult with the person to whom the notice is to be issued, about the matter that needs remedying.

Further information on this matter is available from WorkSafe's website at www.safetyline.wa.gov.au.

EnergySafety 'electricity and gas safety awareness' TV campaign

Readers may have recently seen EnergySafety's 'electrical and gas safety awareness' advertisements on TV.

For some time now, EnergySafety has been concerned that the number of electrical and gas accidents and fatalities is still unacceptably high. The advertising campaign was developed to alert the community to the need to use electricity and gas safely.

The TV campaign consisted of six advertisements:

- Three advertisements promoting the benefits of safety switches and the need to always use a licensed electrical contractor (as opposed to 'doing it yourself') for electrical installing work; and

- Three advertisements promoting the need to maintain gas appliances (in particular, barbecues and space heaters) and the importance of being in attendance when gas hotplates are operating.

The advertisements were aired on TV during June and July 2005.

On completion of the advertising period, a market research company will conduct a customer survey to gauge the effectiveness of the electricity and gas safety messages.



Rural power programs to target unreliable electricity supplies

In June 2005, Energy Minister Alan Carpenter announced details of nearly \$20million in funding to boost the reliability of electricity supplies in country Western Australia.

Mr Carpenter said the funds would be used for several upgrade projects and would target country areas on the South-West power grid which were the worst affected by unreliable power supplies.

Seven projects will commence in 2005-06 with the remainder to begin in 2006-07.

The projects are very intensive and will involve strengthening specific unreliable lines in rural parts of the network so that fewer faults occur in the first place.

More than 18,000 customers, families and businesses are expected to benefit from these projects.

These projects are in addition to Western Power's \$2.3billion four-year capital works program to improve capacity, reliability and safety across the electricity network.

Western Power recently also announced the commissioning of a wind turbine at Bremer Bay which ultimately will supply an average 40 per cent of the town's electricity. The remainder of the town's electricity is provided from a new low-load diesel power station. Sophisticated electronic control equipment synchronises the power station and the wind turbine so that local electricity customers receive continual and reliable power without the fluctuations inherent in a wind-generated supply.

Further wind-diesel systems will soon be operating on Rottnest Island and later at Coral Bay.

Director of Energy Safety Albert Koenig said he was pleased to be advised of the power supply improvements at Bremer Bay and other country locations, as his office had made major recommendations on these matters during 2003.

Electrical contractor's licence No 1

An EnergySafety Licensing Officer recently had cause to access the file of an electrical contractor, the status of which is noteworthy.

The electrical contractor, well known to many in the electrical contracting industry, is Brear and Doonan Pty Ltd.

The then proprietor of Brear and Doonan Ltd, Harold Doonan, applied to the State Electricity Commission of Western Australia on 3 July 1947 for an electrical contractor's licence.

The application was supported by an Application Fee of £1.0.0 (one pound which equates to \$2.00) and a Licence Issue Fee of £7.5.0 (seven pounds five shillings which equates to \$14.50).

At its inaugural meeting on 16 July 1947, the Electrical Contractors Licensing Board approved the application and Electrical Contractor's Licence No. 1 was issued to Brear and Doonan.

At the time of application, Brear and Doonan had two "A" grade electricians (Archie Brear and Harold Doonan) and five "B" grade electricians. [The "B" grade licence category was later converted to an "A" grade licence category, when armature winding was dropped as a skill requirement for an "A" grade licence]

Today, Brear & Doonan (1992) Pty Ltd employs five "A" grade electricians and has two apprentices and carries out industrial, commercial and domestic maintenance and installation work. One electrician, Peter Doonan, is the grandson of Harold Doonan. Peter's father Ron also worked for Brear & Doonan until he retired in 1991.



The original electrical contractor's licence issued to Brear and Doonan

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