

Technical &amp; Safety Division

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### **1997 - Another Busy Year**

As we look back over this calendar year, it is evident that the Energy Sector is continuing to experience significant change.

We saw further extensions to the third party access regimes, to the extent that large consumers are now able to source their electricity or gas from suppliers other than Western Power or AlintaGas. The Dampier-Bunbury natural gas pipeline is shortly to be sold - the legislation was passed by the WA Parliament in late November.

Minister for Energy, Colin Barnett recently also announced further opening up of the electricity and gas supply market in WA, with the aim of introducing competition to the smaller consumer part of the market.

The Office of Energy is closely involved with these initiatives, as WA's independent energy policy and regulatory agency and adviser to the Government.

The Technical & Safety Division has provided support for these activities, while maintaining its own program during 1997, which included the following:

- further work on the development of technical and safety regulation for electricity and gas supply;
- a review of the electrical inspection regime, which concluded that it is fundamentally sound;
- electricity and gas suppliers' inspection plans were examined and approved;
- a number of private industry gas inspectors were authorised to carry out Type B gas appliance approval work;
- testing of gas appliances was arranged in conjunction with AlintaGas, to test safe operation on gas of varying composition; and
- introduction of the mandatory labelling of certain electrical appliances, to indicate their efficiency.

This is but a small sample of our year's work and all the indications are that 1998 will be just as busy. In other words we do not think there will be any shortage of items to report during the coming year!

ALBERT KOENIG  
DIRECTOR OF ENERGY SAFETY

## **Guidelines for Grid Connection of Energy Systems Via Inverters**

The Electricity Supply Association of Australia (ESAA) recently published a document "Guidelines for Grid Connection of Energy Systems Via Inverters".

This document is endorsed by the Director of Energy Safety under Section 33AA of the *Electricity Act 1945*, as a set of guidelines for electrical installation work in WA. It is based upon the following principles:

- The guidelines are concerned with the safety of workers on the electricity distribution system and the integrity of that system. Performance of the inverters and associated generation equipment connected to the grid is the responsibility of the owners of such equipment.
- The guidelines are written from a functional perspective. They are not technology specific, ie. they do not require specific technologies to be used for connection to the grid. This approach allows for ongoing technology development to continually improve the cost and technical performance of the equipment connected to the grid.

It is envisaged that the document will, in due course, form the basis of an Australian Standard.

*Copies of the guidelines can be obtained (free of charge) by mail by telephoning 08 9422 5255 or in person at our Leederville office.*

## **Modification to Extension Cord Sockets**

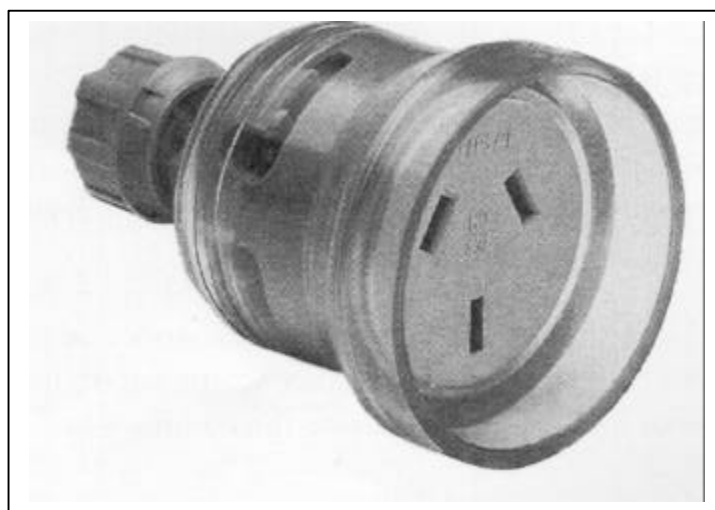
The design of extension cord sockets has been modified to improve the safe use of cord extension sets.

Cord extension sockets must comply with Australian / New Zealand Standard AS/NZS 3120:1993 "Approval and test specification-Cord extension sockets". AS/NZS 3120 was modified on 6 August 1990 by specifying that all 10 Amp rated cord extension sockets must have a protective shroud around the face of the socket. The date of application of this modification was set at 6 August 1997 to enable manufacturers and retailers to prepare for the change.

The purpose of the protective shroud is to prevent accidental contact with the live pins of a plug which may be partially withdrawn from the socket. This modification has been introduced as a result of several fatalities that occurred as a result of accidental contact with live pins of plugs which had been partially withdrawn from cord extension sockets.

Recent fatalities in Queensland in November 1996 and in New South Wales in March 1997 would probably have not occurred if the cord extension sockets involved in the incidents, had been of the shrouded type.

Pursuant to the *Electricity Act Regulations 1947*, it became illegal to sell or hire non-complying cord extension sockets after 6 August 1997.



*The modified cord extension socket incorporating a protective shroud*

## **Electrical Industry Presentations 1997**

The Technical & Safety Division of the Office of Energy has been conducting a series of Electrical Industry Presentations throughout the State.

Electrical Industry Presentations provide a forum every two years for electrical contractors, electrical workers, trainers of apprentices, consultants and electrical wholesalers and manufacturers to meet and discuss issues of mutual interest.

The events are supported by the Electrical Development Association which provides a comprehensive display of products and services for domestic, commercial and industrial applications, plus some hospitality.

Electrical Industry Presentations also provide an opportunity for electrical industry personnel to meet with Office of Energy personnel and electricity supply authority inspectors.

The issues that have been addressed at the recent presentations include:

- The Regulatory Framework - the structure and functions of the Office of Energy and legislation.
- Licensing Matters - the new "A" Grade licensing policy, changes to the licensing regulations, disciplinary action being taken for unsafe electrical work, proposals to introduce an infringement (demerit points) system, exemptions for certain types of electrical work and the proposed introduction of safety awareness seminars before licence renewal.
- Technical Standards - new codes, the future of SAA Wiring Rules and a new code of practice for safe low voltage electrical work, produced by the Office of Energy.
- Electrical Inspections - electrical fatality case studies, strategies to improve standards and safety outcomes, certification of high voltage installations and the proposed introduction of certificates of compliance.

The presentations have created a great deal of interest within the electrical industry. About 600 people attended the two presentations in the metropolitan area. The presentations in the

North West, Geraldton, Bunbury and Kalgoorlie attracted nearly 500 responses.

A presentation was held recently in Albany on 11 December. Future presentations are also planned to be held in Northam, Broome and Kununurra, subject to there being a good response from industry people to attend in those areas.

*Copies of the presentation papers can be obtained (free of charge) by mail by telephoning 08 9422 5255 or in person at our Leederville office.*



*Senior Electrical Inspector Harry Hills presents a paper "Consumer's Installations Technical Issues" to electrical industry personnel at the recent Electrical Industry Presentation in Bunbury*

**For enquiries on articles in this Energy Bulletin, please contact Harry Hills, Office of Energy:**

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## **Gas Standards Regulations 1993 - Proposed Amendments**

The Office of Energy, in response to industry requests, has been working towards the adoption of AG601 "Australian Gas Association (AGA) Gas Installation Code" in Western Australia.

The process has involved considerable legal and standards related complexities. There were a number of issues which needed resolution in the take-up of AG601. These included:

- installations outside the scope of AG601 (natural gas automotive, vehicle refuelling, high pressure installations);
- differences between AG601 and Schedule 5 of the Regulations; and
- the AGA's status as a publisher of standards.

Changes have also been drafted which will significantly improve the administration of gas fitter registrations and deal with the reporting of gas related incidents.

Most of these changes have a "knock-on" effect within the body of the Regulations, making for an extensive and fairly complex redraft. That is why it has taken some time for the legislation changes to be drafted.

Many of the changes were made at the request of industry, and we shall, in the next few weeks, be consulting gas industry representative bodies and major stakeholders for their comments. Individuals will also have an opportunity to make formal comment. Details will be advertised in the press.

We are confident that the proposed changes will:

- raise the understanding of technical issues in the gas industry;
- provide for a higher level of uniformity between WA and other jurisdictions;
- enable standardisation across State boundaries of gas fitter training; and
- provide a more credible basis for the technical and safety regulation of consumers' gas installation in this State.

## **Hydrocarbon Refrigerants**

### **Background**

Increased emphasis on environmental issues over the past few years has impacted significantly upon the gas industry.

One issue which has come to the forefront is the use of flammable (hydrocarbon) refrigerants, generally LPG based.

These safety related issues have been the subject of extensive discussion between industry and regulators at State and national levels. Furthermore, the Government has determined that in this State, the regulatory responsibility for this should rest with the Director of Energy Safety, Office of Energy.

The Office of Energy does not, however, see its role as differentiating between different refrigerants on environmental grounds. Our objective will be to ensure that, when flammable refrigerants are used, appropriate measures are taken to ensure people safety.

### **Proposals**

It is essential that any measures we take are compatible with those of other States/Territories. We have therefore been consulting with other jurisdictions to establish common approaches.

Out of these negotiations, and preliminary discussions at State level, the following broad outline has been developed:

- There will need to be suitable amendment of existing legislation to cover the safety aspects of the use of hydrocarbon refrigerants.
- Safety standards for installations will need to be able to be mandated by the amended legislation.
- Existing standards will need modification to address safety issues associated with flammable substances.
- An audit process will be required to monitor compliance, backed by enforcement measures.

The Office will shortly publish a brief position paper as a prelude to developing the necessary legislative changes. This paper will form the basis of an industry consultative process.