



# e n e r g y

## Bulletin

ISSN 1323-8957

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Office of **Energy**

## Gas Standards (Gas Supply and System Safety) Regulations 2000

It is pleasing that another milestone has been reached in the Western Australian Government's energy regulatory reform process with the promulgation of the *Gas Standards (Gas Supply and System Safety) Regulations 2000* on 4 July 2000.

The regulations came into effect on 2 August 2000.

Increasing competition in the gas industry has the potential to impact on the technical and safety standards of gas suppliers as they come under pressure to reduce costs to remain competitive. To safeguard the public and consumers in such a changing environment, these new regulations have been developed and promulgated to ensure:

- the safety of the public, gas consumers and gas workers in the vicinity of gas distribution assets; and that
- gas supplies conform to acceptable standards of quality and metering accuracy to protect ordinary gas consumers.

The Western Australian Government recognised the need for an adequate technical and safety regime to be in place prior to the completion of the AlintaGas sale. These regulations fill what was seen as a gap in the existing regulatory framework.

An Industry Working Group comprising representatives of the major stakeholders

AlintaGas, Origin Energy, Kleenheat Gas and the Office of Energy developed the regulations. A public consultation phase through mail-outs and the placing of a notice in The West Australian newspaper requesting interested parties to provide written comments on the draft regulations was also a major component of the development phase of the regulations. We believe the regulations reflect a best practice approach to light handed regulation.

In regard to safety matters, gas distribution network operators will have two choices for demonstrating compliance with required outcomes:

1. They will be able to comply with prescribed industry standards; or
2. They can submit a "safety case" which is based on the requirements of the AGA 606 code. This provides a more flexible way of demonstrating compliance.

The Office of Energy appreciated the significant effort made by the Working Group members and also thanks industry and public stakeholders who took the time to provide comments on the content of the regulations.

ALBERT KOENIG  
DIRECTOR OF ENERGY SAFETY

**Office of  
Energy WA**

## New-Look Energy Bulletins

We are pleased to introduce readers to this “new-look” for our Energy Bulletins.

The changes have been made in response to feedback from readers of this publication. This new format will also make it easier to access and download Bulletins from our website.

## New Staff Appointments

A number of readers will be aware that Bob Briggs, Principal Engineer Electrical Installations & Appliances and Mel Stokes, Principal Engineer Gas Installations & Appliances retired some months ago. Both worked in the Technical & Safety Division since the inception of the Office of Energy.

We are pleased to announce new appointments to these two key positions within the Technical Services Branch.



*Kevin Rosher, Principal Engineer Electrical Installations & Appliances and Jillian Reynolds, Principal Engineer Gas Installations & Appliances*

Kevin Rosher commenced with the Office in June 2000 in the position of Principal Engineer Electrical Installations & Appliances. Kevin joined our team from Midland Brick Company and has extensive experience in industrial electrical and gas work, particularly in large-scale manufacturing.

Jillian Reynolds has come to the Office of Energy as the Principal Engineer, Gas Installations & Appliances from the Australian integrated energy company, Origin Energy. With her fresh outlook, Jillian brings to the Office substantial years of gas supply and utilisation experience in Western Australia and the eastern states. More recently, Jillian managed Origin’s LPG Distribution business in WA.

## New Edition of WA Electrical Requirements

The fundamental purpose of the manual *WA Electrical Requirements* (WAER) is to provide an authoritative set of service connection requirements so that electrical installations may be designed and constructed for connection to distribution networks throughout WA. A new edition has been released and all network operators, as well as other industry stakeholders, were extensively involved in its preparation.

The content of the WAER has changed considerably since it was first issued as the “SECWA Electrical Requirements”, reflecting the changing industry

landscape with electricity distributors now clearly separated from the electricity regulator (the Office of Energy). There have also been changes in technology, materials, work practices and electrical standards. These issues have been embraced in the content and style of the new edition.

The new edition of the WAER is effective from 1 August 2000. However, the requirements of either the new or the superseded edition may be applied until 1 December 2000. After 1 December 2000, all new installations must comply with the new edition.

It is important that that the WAER remains relevant and current. It will therefore be updated as and when required through regular reviews by an industry committee. All amendments and the current version of the entire document are available for viewing or downloading, free of charge, on the Office of Energy website at [www.energy.wa.gov.au/assets/images/WAER2000.pdf](http://www.energy.wa.gov.au/assets/images/WAER2000.pdf).

Printed copies of the manual will still be available from the Office of Energy’s West Leederville Licensing Office at a cost of \$110 each (price includes GST).

Readers who purchased a copy of the previous edition of WAER on or after 1 August 1999 will be given a replacement copy (of the new edition) free of charge from the Licensing Office. This offer is only available over the counter until 1 October 2000 and is subject to the person providing a receipt indicating the date of purchase being on or after 1 August 1999.

## Review of the Essential Learning Outcomes Required for an “A” Grade Electrical Licence

Since 1996, the attainment of an “A” grade electrical licence by an individual has been, in part, dependent upon an individual demonstrating competence in the seven mandatory competencies covering fundamental electrical knowledge and skill as well as a knowledge of safe working practices.

The seven mandatory competencies are:

- Install electric equipment
- Install electric wiring systems
- Test and connect electrical installations
- Diagnose and repair faults in electrical equipment
- Respond to breakdown in electrical equipment
- Maintain electrical equipment
- Decommission electrical equipment.

The seven mandatory competencies encompassed 70 essential learning outcomes which detail the essential elements of each competence required for licensing. In a practical sense, the demonstration of an individual’s competency was usually achieved by ensuring the 70 learning outcomes were embedded in the apprentice training modules and subsequent testing by the training organisation (typically a TAFE campus).

With the demand for new training content and changing industry standards and work practices, it has become evident that the original 70 essential learning outcomes require updating. This

project is being undertaken at the national level by ERAC (the national Electrical Regulatory Authorities Council) in liaison with the National Uniform Electrical Licensing Advisory Council (NUELAC). The Office of Energy (as a member of ERAC and NUELAC) has been assisting with this project.

The Office has researched industry needs and compiled a proposed new package of 61 essential learning outcomes. The total number is less because they are presented in a different way, not because less learning is required, we hasten to add. This information is available for industry comment. Interested parties may obtain a copy by contacting Kevin Rosher, Principal Engineer Electrical Installations & Appliances by telephoning 9422 5212 or emailing to [krosher@energy.wa.gov.au](mailto:krosher@energy.wa.gov.au).

It must be remembered that the competencies acquired for licensing purposes are not intended to provide all the skills necessary for every conceivable electrical task. The competencies are primarily designed to ensure high levels of electrical safety in the way the work is done and in the end result of the work.

### Electrical Appliance “Approvals” Proposed to Cease in WA

The Office of Energy has carried out the function of approvals of electrical appliances in WA since the Office was formed in 1995. However, some time ago, Western Power closed the test laboratory for electrical equipment and appliances.

As a result, the demand for this service in WA has reduced to the point that very few applications for “approval” are now processed in this State. Therefore, the Office of Energy intends to cease offering this service after 31 October 2000. This will apply to both new applications and renewals of existing Certificates of Approval. The function will continue to be carried out by other State regulatory authorities.

Comments are sought from industry in regard to this proposed change. Persons who are active in manufacturing or distribution of prescribed electrical appliances (eg. domestic whitegoods) are invited to provide comments on this issue, to Kevin Rosher (telephone 9422 5212 or email [krosher@energy.wa.gov.au](mailto:krosher@energy.wa.gov.au)). Any comments provided should be supported with clear arguments.

### Consulting Services – Electrical Appliances

The Office of Energy is seeking to compile a list of technical consultants that can assist industry in preparing prescribed electrical appliances for type testing and submission of the necessary paperwork to achieve “approval”.

Persons interested in performing such consulting work are invited to register their interest with Kevin Rosher (telephone 9422 5212 or email [krosher@energy.wa.gov.au](mailto:krosher@energy.wa.gov.au)).

**For enquiries on articles in the Energy Bulletin, please contact Harry Hills – Office of Energy**  
 20 Southport Street  
 West Leederville WA 6007  
 Telephone: (08) 9422 5208  
 Fax: (08) 9422 5244  
 Email: [safety@energy.wa.gov.au](mailto:safety@energy.wa.gov.au)

## Underground Power Project

The retrospective pilot underground power project commenced in 1996 when 8,000 customers of Western Power in the Perth Metropolitan area and Middleton Beach in Albany saw the overhead power lines replaced by an underground cable network.

### Round 1 of the Programme

In late 1998, Round 1 of the State Underground Power Programme (SUPP) superseded the pilot project. SUPP uses similar criteria to the pilot scheme but with local government contributing fifty percent of the funds and the State Government and Western Power providing the remainder. Round 1 consists of two tranches: Major Residential Projects (MRPs) and Localised Enhancement Projects (LEPs). The MRPs selected include the suburbs of East Cottesloe, Swanbourne, Peppermint Grove, Dalkeith, Woodlands, Como, East Fremantle and Rossmoyne. LEPs generally relate to areas of tourism or heritage value and can be gateways in either metropolitan suburbs or country towns. All schemes are selected from submissions made by local government. When Round 1 is completed in mid – 2000, approximately 15,000 properties will have received the conversion service.

### Round 2 of the Programme

The Hon. Minister for Energy recently announced that a further 13,000 properties would be converted in Round 2 of the

Programme. The suburbs included in the scope of works are East Victoria Park, Rivervale, North Wembley/West Leederville, Mt Lawley, Booragoon/Mt Pleasant, East Fremantle/Bicton, Subiaco, Millpoint, Nedlands/Claremont and north Mosman Park.

The above scope of works will require the installation of substantial amounts of equipment. For example, approximately 360 kilometres of mains power cable, 250 kilometres of service cable, 70 power transformers, 100 high voltage-switching points and 2,500 street lights. On completion approximately 3,500 poles and 200 aerial transformers will be removed.

### Installation of Services

As with previous projects, the main cables will be installed by means of trenchless technology (directional drilling). Service installations will be by thrust bore or similar methods. This ensures that disturbance to the local residents is kept to a minimum and there is less disruption to traffic. Trenchless technology also offers a much faster rate of installation than more conventional methods with less potential damage to other buried services.

Street lighting is upgraded and converted to dusk/dawn switching. It is installed as near as possible to the Australian Standard AS 1158, in consultation with the local council. Exact replication of the Standard may cause conflict with tree overhang and existing driveways, and these have to be allowed for.

In retrospective or “in fill” work of this nature, the existing

infrastructure in the suburb is usually at least 40 or 50 years old (some cases much older). Water, telephone and gas, the traditionally buried services, are often not on any defined alignment. Therefore the “new” alignment for power cables has been chosen as 2.7 metres. It is now doubly important that contractors and project managers obtain information from the utility One-Call system and locate all the buried assets before excavations commence. Power cables are generally more abundant in verges and footpaths than other services. Not only do they supply local residential and commercial properties which are set back from the street boundary, but also other structures located in the verges such as street lights, bus shelters, pay phones, traffic lights and billboards. They therefore regularly and randomly criss-cross the verge. Fortunately they have standing 50 Hz signal and can be easily detected with the appropriate equipment.

### Benefits of Underground Power

Replacing overhead power lines with buried cables is still an expensive business. In the short term it offers an improved streetscape with better amenities for the local residents and in many cases improved property values. In the long term the power supply is more stable with a fewer number of outages and surges. It also offers a safer environment with less possibility of traffic accidents occurring and a reduced risk of electrocution from fallen wires.