



Office of **Energy**

Office of **ENERGY WA**

Electrical FOCUS

Substation and HV Plant Enclosures

It has become evident to this Office, which has responsibility for technical/safety policy in the State's energy industry, that some persons are unclear about their obligations in respect of ensuring people and property safety, in the proximity of HV plant.

This lack of clarity is a concern at a time when a number of new players are entering an increasingly competitive supply industry, and there are many new industry projects.

In order to provide some clear guidance on this issue (which is not very well dealt with in the technical standards), this Office has prepared the following draft policy. It is intended at some time in the future to further enhance this guidance by developing, in concert with industry participants, a more detailed Code of Practice which would be based on the policy and provide more specific design information for consultants/engineers.

In the meantime, you are invited to provide written comments on the draft to Terry Corfield, Principal Engineer Electricity Supply, Office of Energy, by 30 June 1997.

Substation and HV Plant Enclosures Policy - Draft

In the interests of public, personnel and property safety, all items of HV plant are to be secured by means of a physical enclosure to prevent access by other than appropriately authorised persons, and to prevent physical damage or disturbance to the plant. Such enclosures shall comply generally with AS 3000, AS 2067, the Building Code of Australia and as a minimum:

- In areas accessible by the public or of low security, are to fully guard from access and contact all HV switchgear, HV cable terminations, HV cables, transformers and other HV apparatus by means of either

chainmesh enclosures (as per AS 2067), or robust, earthed sheet metal or insulated (fibreglass or equivalent) enclosures. The arrangement may expose non-electrical parts (such as radiator banks) where they have been constructed to withstand wilful damage; and

- Within a consumer's secure premises, are to fully guard from access and contact all HV switchgear, HV cable terminations, HV cables, transformers and other HV apparatus by means of either chainmesh enclosures (as per AS 2067), or robust, earthed sheet metal or insulated (fibreglass or equivalent) enclosures. In this case the arrangement may expose non-electrical parts (such as radiator banks) where they have been constructed to withstand, or are guarded, to prevent accidental damage.

In all instances the use of chainmesh enclosures within urban streetscapes is strongly discouraged for environmental and maintenance reasons. Brick or other masonry materials, or metal kiosks, should be considered for such locations.

In assessing the requirements for any particular HV equipment enclosure, Supply Authorities, Engineers and Contractors should give due consideration to the additional requirements of AS 3000, AS 2067, the Building Code of Australia as relevant, plus any special requirements of the Local Government, including issues such as:

- type and earthing of the enclosure;
- authorised personnel entry/exit (and escape in the event of an emergency); and
- fire protection to protect adjacent property and persons.

Where persons consider that arrangements alternative to the above may be satisfactory for a certain project, they should obtain the prior written approval of the Director of Energy Safety.

New Australian/New Zealand Standard for Domestic Installations

Standards Australia has announced the introduction of a new Australian/New Zealand Standard AS/NZS 3018:1997, Electrical installations - Domestic installations.

The Standard provides simplified requirements and outlines approved methods for installing electrical equipment, including alterations and additions, in single domestic installations. An installation carried out in accordance with AS/NZS 3018 will be considered as complying with the requirements of AS 3000.

Standards Australia is conducting a series of workshops throughout Australia to release the new Standard and at the same time explain the future direction of AS 3000.

The Perth workshop will be held on 25 June 1997 at the Freeway Hotel, South Perth. An invitation to attend the workshop is included with this issue of the Energy Bulletin.

We urge all those who are involved with electrical installations in domestic premises to attend this informative workshop.

For further enquiries on the Perth workshop, please contact Jacqui Tan, Standards Australia, telephone 08 9321 8797, facsimile 08 9321 2929.

AS 3000 SAA Wiring Rules

Standards Australia recently issued the following publications relevant to AS 3000 SAA Wiring Rules:

- Doc. 3000R Rulings to AS 3000-1991, SAA Wiring Rules, Rulings No. 6 (1997)
- Amendment No. 6 to AS 3000-1991

Electrical contractors are reminded that they should obtain copies of amendments issued by Standards Australia, so that their copies of AS 3000 are maintained up to date.

Hazardous Locations Workshops Presentations Now Available on Video

During March 1996, Standards Australia, in conjunction with the Australian Electrical and Electronic Manufacturers' Association Limited, conducted hazardous locations workshops at Brisbane, Sydney, Melbourne, Adelaide and Perth.

A panel of talented speakers presented papers on:

- Australian Standards and the law;
- Area classification and selecting the right equipment;
- Overview of the installation of flameproof Ex d electrical equipment;
- Installations in the presence of combustible dusts;
- Explosion protection techniques
pressurisation - Ex p;
- Hazardous areas, spray booths and other Ex explosion-protection techniques for electrical equipment;
- The installation of intrinsically safe equipment in hazardous areas;
- Ex e - Increased safety;
- Ex n - Non-sparking explosion protection; and
- Certification/Approval.

The sessions were recorded by the Office of Energy, WA to promote a better understanding of these important subjects to industry. A copy of each of the sessions is available from the Office of Energy, on VHS video tapes. The tapes are intended to be viewed in conjunction with the presentation papers prepared by Standards Australia for the Workshops. This material was designed to fill an information gap and should be useful for trainers, contractors and engineers.

To purchase these recordings and presentation papers, please contact our Licensing Office, telephone 08 9422 5252.

Amendments to Electricity (Licensing) Regulations 1991

Readers may recall that in Energy Bulletin No. 5 we notified of impending changes to the Electricity (Licensing) Regulations 1991.

On 6 September 1996, the changes were published in the Government Gazette and became mandatory from that date.

Key changes that have been made include the addition of two new regulations and substantial changes to other regulations as follows:

Regulation 19(2a) is a new subregulation in relation to underground and overhead installations, stating that a person who:

- is not the holder of an electrical contractor's licence or an in-house electrical installing work licence; and
- carries out any electrical work referred to in subregulation (2) (f) or (g) (being overhead line or underground cable work) on the electrical installation of a consumer,

shall ensure that, when the electrical work is completed, the electrical installation is checked, tested, and certified as complying with these regulations by a person who is the holder of such a licence.

Regulation 50A is a new regulation stating that a person who holds a licence, who causes or permits any wiring or equipment that is in an unsafe condition to be connected, or to remain connected to, an electrical installation or a supply of electricity commits an offence.

Regulation 22 is changed to:

- recognise the Department of Training as being responsible for trade training; and
- accommodate the trade of Engineering Tradesperson Electrical.

Regulation 36 is changed to align eligibility requirements for electrical contractor licences more closely with those in other States.

A three year experience requirement has been removed and there is now a requirement to have a public liability insurance of at least \$1,000,000. The public liability insurance is not required for an In-house Electrical Installing Work licence.

Regulation 51 has been changed to ensure that Preliminary Notices are submitted for electrical installation work to the relevant supply authorities, at the required time.

Preliminary Notices are not required for electrical installing work carried out because of emergency circumstances, or for minor or maintenance work, or where exempted by the Director of Energy Safety.

Also in relation to giving preliminary notice of proposed electrical installation work, "required time" means:

- at least three working days before the proposed electrical installing work is begun, if the electrical contractor requires advice from the relevant supply authority in relation to the proposed electrical installing work; or
- at any time before the proposed electrical installing work is begun, if the electrical contractor does not require such advice.

A number of other regulations have also been updated and clarified. Readers such as electrical contractors, consulting engineers, trainers, company officials and others whose work is affected by the regulations should obtain a copy of the revised regulations to inform themselves of the full extent of the changes.

Copies of the revised Electricity (Licensing) Regulations 1991 can be purchased from our Licensing Office or from the State Law Publisher.

Warning - Use of Old Style Notices.

In Energy Bulletin No. 3 (December 1995), electrical contractors were notified that modified Preliminary Notices and Notices of Completion had been introduced and were available for use. The Bulletin also advised that these new Notices were now the only form of notice approved by the Director of Energy Safety pursuant to Regulations 51 and 52 of the Electricity (Licensing) Regulations 1991.

A cut off date of 1 March 1997 was given for the total changeover to the new Notices.

It is illegal for an electrical contractor to submit a Notice which is not approved. It is also illegal for an electricity supply authority (ESA) to connect an installation without receiving the correct Notice.

Electrical contractors are advised that Notices bearing the old SECWA logo will no longer be accepted by ESAs and will be returned if submitted.

Books of Notices are available from our Licensing Office or your local ESA office.

PROSECUTIONS FOR BREACHES OF THE ELECTRICITY (LICENSING) REGULATIONS 1991 1 November 1996 to 31 March 1997

<i>Breach</i>	<i>Name (Suburb of residence at time of offence)</i>	<i>Licence No.</i>	<i>Fine & Court Costs (\$)</i>
<i>Unlicensed electrical work Regulation 19(1)</i>	<i>R W Meighan (Willetton)</i>	<i>NLH</i>	<i>1276.50</i>
	<i>J Cinquina (Menora)</i>	<i>NLH</i>	<i>493.00</i>
	<i>P J Brown (Balga)</i>	<i>NLH</i>	<i>1090.00</i>
	<i>C Saliba (Bassendean)</i>	<i>NLH</i>	<i>3030.00</i>
<i>Carried on business as an electrical contractor without a licence Regulation 33(1)</i>	<i>D Hathaway (Badgingarra)</i>	<i>EW124698</i>	<i>689.00</i>
<i>Substandard electrical work Regulation 49(1)</i>	<i>J D Hermann (Ocean Reef)</i>	<i>EW127758</i>	<i>543.00</i>
	<i>G C Barrett (Port Hedland)</i>	<i>EW120394</i>	<i>295.00</i>
<i>Caused or permitted an employee to carry out substandard electrical work Regulation 49(3)</i>	<i>D F Brown T/A Stay Kool Airconditioning & Electrical Services (Port Hedland)</i>	<i>EC003091</i>	<i>295.00</i>
<i>Failed to submit a Notice of Completion Regulation 52</i>	<i>D F Brown T/A Stay Kool Airconditioning & Electrical Services (Port Hedland)</i>	<i>EC003091</i>	<i>295.00</i>
	<i>Ice Blue Holdings Pty Ltd T/A Global Electric Service</i>	<i>EC003345</i>	<i>100.00</i>
	<i>Ice Blue Holdings Pty Ltd T/A Global Electric Service</i>	<i>EC003345</i>	<i>143.00</i>
	<i>Ice Blue Holdings Pty Ltd T/A Global Electric Service</i>	<i>EC003345</i>	<i>595.00</i>
<i>Instructed an unlicensed person to carry out electrical work Regulation 53(2)</i>	<i>B Graham (Fremantle)</i>	<i>NLH</i>	<i>410.00</i>
<i>Signed a Notice of Completion for work that the electrical contractor was not concerned with Regulation 54(1)</i>	<i>J Rak T/A Rak Electrics(Northam)</i>	<i>EC001390</i>	<i>545.00</i>

NLH - No Licence Held