

energy

Bulletin

ISSN 1323-8957

• In this issue...

Significant changes to electricity and gas legislation	1
Energy Coordination Act 1994	2
Energy Coordination (General) Regulations 1995	3
Gas Standards Act 1972	3
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	4
Gas Standards (Gas Supply and System Standards) Regulations 2000	4
Electricity Act 1945	4
Terminology changes	4
Electricity (Licensing) Regulations 1991	4
General	4
Electrical Licensing Board	5
Electrical contractors and in-house installers (as appropriate)	5
Electrical Workers	7
Apprentices	8
Electrical work not requiring a licence	9
Electrical installation designers	9
Network operators	9
New edition of "Wiring Rules" (AS/NZS 3000:2007)	9
New "rules" for electrical installation designers	10
Wiring Rules seminars	11
New edition of WA Electrical Requirements (WAER)	11
Electrical Industry Seminars	12
Program	12
How to register	12

Significant changes to electricity and gas legislation

This 'special edition' Energy Bulletin has been issued to inform industry of significant recent amendments to electricity and gas safety legislation, as well as other related changes to standards. The amendments will impact on the work or business of most in the electrical and gas industries.

Briefly, the amendments and changes apply to the following:

- Energy Coordination Act 1994
- Energy Coordination (General) Regulations 1995
- Electricity Act 1945
- Electricity (Licensing) Regulations 1991
- Gas Standards Act 1972
- Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999
- Gas Standards (Gas Supply and System Safety) Regulations 2000
- AS/NZS 3000 Wiring Rules
- WA Electrical Requirements.

The major changes are:

- Penalties for offences (both electricity and gas) have been substantially increased;
- The *Electricity (Licensing) Regulations 1991* have been amended significantly;
- A certificate of compliance (more commonly referred to as an Electrical Safety Certificate) has been introduced for **all** electrical installing work;
- New types of orders are available to EnergySafety Inspectors to deal with electricity and gas network defects;
- A new process for appeals against orders dealing with network defects

served by inspectors and certain types of decisions of the Director of Energy Safety has been introduced;

- The Director may now issue guidelines for gasfitting work;
- If a gas undertaker or pipeline licensee does not have an approved Inspection Policy Statement and Plan that provides for a sample inspection system, then a gas undertaker or pipeline licensee must inspect all new installations and those with major alterations/additions prior to providing a gas supply;
- Part III of the *Electricity Act 1945* dealing with the powers of inspectors has been repealed and a consolidated set of updated powers now appears in the *Energy Coordination Act 1994*, covering both electricity and gas inspectors; and
- Regulations dealing with the determination of the heating value of gas supplied to consumers from a gas distribution system subject to commingling of different gases have been promulgated.

EnergySafety is conducting a series of free seminars for electrical industry personnel, to explain the changes to the *Electricity (Licensing) Regulations 1991*, the new edition of the Wiring Rules and the new edition of the WA Electrical Requirements. See details on page 11.



ALBERT KOENIG

DIRECTOR OF ENERGY SAFETY

EnergySafety



Energy Coordination Act 1994

The changes made to this legislation, unless otherwise indicated, affect both electricity and gas employees and employers, as applicable.

Penalties

Significant increases have been made to the maximum penalties for offences against the Act:

For an Individual:
increases from \$5 000 to \$50 000

For a Corporation:
increases from \$20 000 to \$250 000

Powers of electricity and gas inspectors

The Act has been amended to clarify the powers of gas and electricity inspectors. The powers now cover “plant, works, installation, component or activity” rather than the previous “plant, works, apparatus or installation”.

Part III of the *Electricity Act 1945* has been transferred to this Act as section 18A and now includes gas. This section provides for an inspector to issue an order concerning a “thing” that the inspector considers is dangerous or may create a danger to persons or property due to its proximity to electricity or gas facilities. The order may also require the person in charge of the “thing” to modify, remove or dismantle it.

Examples where this power may be are construction work or excavation within the easement of

an electricity transmission line or gas pipeline. Such activity presents a danger to the public, the workers involved and the facilities.

A new section (ex Part III) provides for an inspector to issue an order about a work practice, involving gas or electricity, which the inspector considers to be dangerous or failing to comply with any relevant Act. The order may specify how the work practice must be modified and apply conditions, restrictions or limitations on the use of the existing work practice until the modified work practice is implemented. Examples are:

- Where non-electrical personnel have access to enter inside control cubicles with exposed live parts to reset protective and other devices requiring either changes to who has access or changes to the equipment.
- Where work is being undertaken on a transmission line adjacent to an energised parallel line, without precautions to avoid electric shock from induction effects.

A new section provides for an inspector to issue to a network operator an order about a “component” of a gas or electricity distribution system or distribution or transmission works that the inspector considers does not conform to a relevant Act or is unsafe. The order may specify work to be done or other measures to be taken to ensure that the component

complies with the Act or is made safe. The order may extend to include similar components elsewhere on the network, subject to special requirements. The inspector must consult with the network operator before serving such a wider order. Examples are:

- Where personnel may be able to enter transformer compounds where they are unacceptably exposed to direct or inadvertent contact with live parts (i.e. failure to observe safety clearances).
- Where a high voltage circuit breaker of a type with a previously noted high failure rate experiences an explosive failure, at a substation.

Appeals

Appeal provisions have been included for orders served by an inspector and for certain decisions of the Director as described below.

- A network operator disagreeing with an order served by an inspector may request the Director to review the order.
- A network operator disagreeing with a decision made by the Director concerning an order served by an inspector may appeal to the State Administrative Tribunal if a question of law is involved or appeal to an independent technical review panel appointed under the regulations. The Director may publish any submission made

Continued over page

© Department of Consumer and Employment Protection 2008

ISSN 1323-8957

The Energy Bulletin is published by EnergySafety, a Division of the Department of Consumer and Employment Protection. It is distributed free of charge to licensed electrical contractors, in-house electrical installers, electrical inspectors, gas certificate holders, gas authorisation holders, gas permit holders and gas inspectors.

The Energy Bulletin may be downloaded free of charge from EnergySafety's website.

Articles in this publication may be reproduced, provided they are reproduced in full and show acknowledgement to EnergySafety.

Alternative formats of this publication may be available to meet the needs of people with disabilities.

For enquiries:

Editor: Nic Morris

Phone: 08 9422 5208

Fax: 08 9422 5244

Email: nicola.morris@docep.wa.gov.au

Internet: www.energysafety.wa.gov.au

Continued from previous page

to the technical review panel and the panel's decision, but not disclose any information identified by the applicant as commercially confidential. Further details about this review panel appear in the *Energy Coordination (General) Regulations 1995* below.

Use of information

The Act now allows the Director to record, disclose and use information obtained in the course of compliance or safety inspections. In the case of commercial information, the Director must consult with the person providing the information and must be of the opinion that the public benefit from the disclosure outweighs any detriment to the provider. The Director must also be satisfied that there is no other practicable way to achieve the objectives of increasing public safety awareness or compliance with the *Electricity Act 1945* and the *Gas Standards Act 1972*.

Energy Coordination (General) Regulations 1995

These regulations were previously known as the *Energy Coordination (Inspectors and Infringement Notices) Regulations 1995*.

Part 4 – Appeals under section 19B(2)(b) of the Act has been inserted. This Part applies to network operators and consists of regulations dealing with the establishment of the technical review panel mentioned above, the membership of the panel and its procedures. The panel consists of three professional engineers nominated by the President of the WA Division of The Institution of Engineers Australia.

Gas Standards Act 1972

Penalties

Significant increases have been made to the maximum penalties applying to offences against the Act. In most instances, penalties have increased to a maximum of \$250 000 for a corporation and \$50 000 for an individual. For some offences, the penalties have been set at a lesser value but are still significantly more than the previous amount.

Appliances

Definitions of Type A and Type B gas appliances have been included to clearly distinguish between the requirements applicable to the two classifications in the legislation.

Sections 13D, 13E, 13F and 13G about the approval of gas appliances have been amended to clarify the requirements for Type A and Type B gas appliances and the penalties for offences against these requirements. A notice has also been published in the Government Gazette that sets out the technical and compliance requirements for the approval of all Type A gas appliances.

Inspection Plan

The Act has been changed to provide for a gas undertaker or pipeline licensee with an Inspection Policy Statement and Plan approved by the Director to inspect consumer gas installations in accordance with the Plan (meaning a system of sample inspections may be applied) or otherwise to inspect each new installation and every installation that has had a Type B gas appliance added to it, before connecting a gas supply.

The Act specifies the purpose of the Inspection Plan methodology and that such plans are to cover

work on all types of consumer gas installations whether new or modified. A Plan may provide for inspecting only a sample of the work done by a gasfitter or for pre-connection inspections. The Director may issue guidelines as to the scope and content of an Inspection Policy Statement and Plan.

Guidelines

The Act now provides for the Director to publish guidelines for safe work practices and technical standards relating to gasfitting work. The Act gives details about what the guidelines may include and the process to be followed before the guidelines are published.

Appeals

Provisions have been included in the Act for a gas undertaker or pipeline licensee to request the Director to review a decision made relating to the approval or otherwise of the Inspection Plan. A subsequent appeal to the State Administrative Tribunal may be made if a question of law is involved, or there may be a further appeal to a technical review panel appointed under the regulations. Further details about this review panel appear under the paragraph *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999*.

Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999

Part 4A – Appeals under section 13N(1)(b) of the Act, has been inserted. This Part applies to gas undertakers and pipeline licensees. It consists of regulations dealing with the establishment of the technical review panel mentioned above, its membership and its procedures. The panel consists of three professional engineers nominated by the President of the WA Division of The Institution of Engineers Australia.

Gas Standards (Gas Supply and System Standards) Regulations 2000

Part 3A – Entry and commingling of gas of different qualities, has been inserted in the regulations. This Part deals with the procedures and processes to be used by gas undertakers and pipeline licensees to determine for billing purposes the heating value of gas supplied to consumers via a distribution network, where the gas originates from more than one supplier and each gas has a different higher heating value.

Electricity Act 1945

Penalties

Significant increases have been made to the maximum penalties applicable to offences against the Act. Generally, penalties have increased to \$50 000 for an individual and \$250 000 for a corporation.

Part III that dealt with the power of an inspector to issue orders has been repealed. These powers were transferred to the *Energy Coordination Act 1994*.

Terminology changes

The table below lists changes made to some terms used in the *Electricity (Licensing) Regulations 1991*.

Existing term	New term
Minor work	Term no longer used (minor work is now covered by the Electrical Safety Certificate)
–	Notifiable work (ie. all work previously not minor work)
Electrical mechanic	Electrician (includes electrical fitting)
Electrical fitter	Term no longer used (except for those who currently hold an electrical fitter licence – no new licences of this type will be issued)
A grade licence	Electrician's licence
C grade licence	Electrician's training licence
–	Certificate of compliance (common name is Electrical Safety Certificate)
Nominated electrical worker	Nominee
Supply authority	Network operator (definition now includes a supply authority)

Electricity (Licensing) Regulations 1991

Amendments to these regulations were published in the Government Gazette on 31 December 2007 and **come into force on 1 July 2008**. The delay is to allow both EnergySafety and industry to prepare for the changes.

Many new and amended regulations have been included. These are the result of extensive consultation with industry representative groups and public meetings with operatives.

EnergySafety will be holding seminars in major centres across the State during April and May this year to explain the implications of the changes for employees and employers.

General

Directions

If the Director of Energy Safety gives directions to the Electrical Licensing Board, the text of the directions is to be included in the annual report submitted by the Director.

Exemptions

The Director may, in relation to electrical work to be carried out on an electrical installation of a consumer vary, exempt or specify additional requirements to those requirements specified in the Wiring Rules and the WA Electrical Requirements (WAER). This allows for special exemptions or variations on a case by case basis.

Electronic communication

The Director is able to approve electronic communication methods an electrical contractor may use to send preliminary and completion notices to a network operator and how a network operator sends an electrical contractor the corresponding receipt.

Electrical Safety Certificate and electrician's authorisation

The Director is to provide the format of a certificate of compliance (commonly called an Electrical Safety Certificate) to be given by an electrical contractor to the person for whom any electrical installing work is undertaken. These forms will be provided free of charge by EnergySafety, in books of pre-numbered certificates. The original form is to be given to the client. Two copies of the certificate must be retained by the electrical contractor, one as an office copy and one retained captive in the book. A sample form appears later in this Bulletin.

The Director is to provide the format of an authorisation to be given by an electrical contractor to an employed electrician authorised to complete an Electrical Safety Certificate on behalf of the electrical contractor. A sample form appears later in this Bulletin. The form will be available for download from EnergySafety's web site.

See additional information under "Electrical Safety Certificate" on page 8.

Electrical Licensing Board

Removal of member

The grounds on which a member of the Board may be removed have been extended to include:

- Disciplinary action under specified regulations;
- Being a member of a firm or director of a body corporate or otherwise concerned in the management of either when subject to disciplinary action under specified regulations or convicted of an offence against the Act or regulations; and
- The Minister regards the member as not being a fit and proper person to hold office.

Functions

The functions of the Board have been condensed and focus on:

- The qualifications and training of persons affected by the regulations;
- Providing advice to the Minister, the Director or other persons concerned with electrical training or licensing;
- Issuing licences and permits; and
- Disciplinary and other functions under the regulations.

Liability

Provisions have been added that protect the State, the Board, a member of the Board and a person designated or appointed to the Board by the Director from an action in tort (ie. being liable) for anything done in good faith in the performance of a function of the Board.

Electrical contractors and in-house installers (as appropriate)

Insurance

The specified minimum insurance cover that must be held by an electrical contractor has been deleted. The Board may set minimum requirements for civil liability insurance to be held by an electrical contractor. Details of the prescribed policy of insurance are to be provided on the application form when first applying for or renewing an electrical contractor's licence. The electrical contractor's licence is suspended during any period when the prescribed policy of insurance is not in force.

At any time, the Board may request, in writing, an electrical contractor to provide details of the prescribed policy of insurance within a period specified in the request.

Licences

If the Board decides to refuse to issue a licence or to issue a licence subject to any restriction

or condition, it must, in writing, provide the applicant or the holder, as applicable, with the reasons for its decision.

If an application for renewal of an electrical contractor's licence is submitted within 30 days following its expiry, the renewed licence has effect only from the date the application was received by the Board. Its renewal does not make legal any contracting work performed between the licence expiry date and the date the renewal application was received.

If an electrical contractor's licence is suspended, the holder of the licence is not authorised to carry on business as an electrical contractor unless the suspension is expressed to be of a limited nature, in which case business may continue only to the limit so expressed.

The *Energy Operators (Powers) Act 1979* has been included in the list of legislation that may be examined by the Board when considering the issue of an electrical contractor's licence.

The electrical contractor's licence number must be **conspicuously** displayed in **any** advertisement relating to the contracting business. Conspicuous means not less than 50% of the largest lettering used in the advertisement. This "50%" guideline is a compromise to assist industry. This requirement applies to such things as billboards, vehicle signage, letterhead, business card, yellow pages entry, newspaper advertisement, invoice, quotation, business directory and similar methods of services advertising.

Written notification to the Board of a change in business name, trading name or the address of the principal place of business may now be conveyed by letter, facsimile, telephone or electronic communication.

Continued over page

Continued from previous page

The Board may require a person holding or applying for an electrical contractor's licence or in-house electrical installing work licence or a relevant nominee, to undergo a physical fitness examination. The Board may refuse to renew the registration of the licence or suspend or cancel the licence if the person fails to comply with the request within the time specified, fails to produce satisfactory evidence regarding the results of the examination or fails the examination.

Nominee

Replacement or addition of a nominee (previously known as a nominated electrical worker) on an electrical contractor's licence will attract a registration fee of \$340. Replacement or addition of a nominee on an in-house electrical installing work licence will attract a registration fee of \$170. EnergySafety and the Board will in future be examining more closely whether a person is suitable for appointment as a nominee.

Trainees

An electrical contractor (or other person) must not employ, engage or instruct an electrical worker in training to carry out any electrical work unless the trainee holds an electrician's training licence. Before the trainee carries out any electrical work, the contractor (or other person) must be aware of the experience and level of competence of the trainee concerning that work, usually obtained through the induction process.

An electrical contractor is not to employ a trainee holding an electrician's training licence, who purports to have completed the apprenticeship or course of training, unless the contractor has taken all reasonable steps to be satisfied that the trainee has successfully completed the apprenticeship or course and has applied for an electrician's licence.

An electrical contractor must not include an ex-trainee on a Notice of Completion until an electrician's licence has been issued to the ex-trainee.

Notices

An electrical contractor must, for five years, keep a copy of each notice of completion concerning work undertaken.

A notice of completion must include a declaration signed or executed by the electrical contractor who prepared the notice, that the notifiable work has been checked and tested and is safe and complies with the regulations.

A preliminary notice or notice of completion may be delivered to a network operator by normal post, facsimile transmission or by electronic communication.

The notice is to be regarded as signed or executed by the electrical contractor whose name appears in the appropriate place on the notice.

Notices may be delivered to the Director of Energy Safety where applicable (ie. if no network operator exists), by post or facsimile only.

Electrical Safety Certificate

An electrical contractor carrying out, or causing to be carried out, any electrical installing work must,

Continued over page

Electrical contractors are required to deliver an Electrical Safety Certificate to the person for whom the work was carried out

**Authorisation Form
Electrical Safety Certificates**
Pursuant to Regulation 52B(5) of the Electricity (Licensing) Regulations 1991

The undermentioned employee electrician is duly authorised to complete Electrical Safety Certificates on behalf of the electrical contractor described below:

Details of electrician authorised by this form

Full Name: _____

EW Number: _____

Signature: _____

Expiry date: _____
(Expiry date of this authorisation, as determined by the electrical contractor)

The electrician authorised by this form must be able to produce this authority to a person for whom the work is to be carried out, if requested to do so.

Details of electrical contractor

Business Name: _____

Business Address: _____

Phone No: _____

EC Number: _____

Name of Principal of Business (Printed): _____

Signature of Principal of Business: _____

Date Authorisation Granted: _____

DRAFT ONLY
Not to be used or copied

Draft form for electrical contractors to authorise an employee electrician to sign an Electrical Safety Certificate on their behalf

Continued from previous page within 28 days of completing the work, prepare and deliver to the person for whom the work was performed a certificate of compliance (commonly called an Electrical Safety Certificate). EnergySafety will provide free of charge books of pre-numbered Electrical Safety Certificates. The contractor must retain copies of the certificates for five years after completion of the work.

An electrical contractor may authorise, in writing in a format provided by the Director at the EnergySafety web site, an employee electrician to sign an Electrical Safety Certificate on the contractor's behalf.

An electrical contractor carrying out, or causing to be carried out, any electrical installing work must ensure that:

- Any electrician employed or engaged by the contractor to carry out the work has had appropriate training, holds a current licence and is competent to do the work; and
- When the work is completed, it is checked and tested and is safe and has been completed to a trade finish.

Accident reporting

When an electrical contractor becomes aware that an electrical accident has occurred, the contractor must report the accident:

- To the relevant network operator; or, if the relevant network operator is unknown
- To the Director of Energy Safety.

This is a change as previously reporting to both the network operator and the Director was required.

Offences committed by a firm

If an electrical contracting business operates as a partnership and the business commits an offence under the regulations, each member of the partnership is taken to have committed the offence.

Electrical Workers

Licence

On expiry of the licences listed in column "Existing Term" in the table below, licences listed in column "New Term" will be issued. The existing licences have effect up to their expiry date.

An electrician's licence may be subject to restrictions and conditions. It authorises the carrying out of electrical installing and electrical fitting work.

The Board may rely on examinations or other kinds of assessment when determining the suitability of an applicant for a restricted or an electrician's licence.

An application for a licence or permit is to be accompanied by such information, certificate or documentation as the Board requires to determine the suitability of the applicant to hold a licence.

Continued over page

Existing Term	New Term
"A" grade electrical worker's licence	Electrician's licence
"C" grade electrical worker's licence	Electrician's training licence

Continued from previous page

The Board may issue an interstate or overseas applicant for an electrician's licence with a corresponding licence or a permit that is subject to conditions and restrictions, requiring the holder to become an electrician within three years (ie. pass relevant assessments).

Therefore, if an applicant's existing qualifications are equivalent to electrical fitting only, the permit will be for a period of three years, to allow work for a particular employer, allow unsupervised electrical fitting work to be done and allow supervised electrical installing work to be done. **The permit will not be renewed.**

Carrying out electrical installing work without a permit to work under supervision (while holding an 'A' Grade electrical fitter licence that has been grandfathered' or an electrical fitting permit) would be a breach of the regulations. Persons currently undertaking practical work experience without a permit must complete the practical work and apply for a licence by 1 July 2009.

Ongoing safety training

If, at least 12 months prior to the expiry of a licence, the Board gives to the licence holder written notice that the licence holder is to successfully complete a course relating to electrical safety specified in the notice, the Board may refuse to renew the registration if the licence holder fails to comply before the licence expiry date.

It is expected that the Board will mainly apply this globally, so that every three years, an electrician (and restricted electrical licence holder) is required to attend some refresher and updating training. This will be the subject of further consultation with industry bodies.

Addresses

A change of residential address of a licence holder may now be conveyed to the Board by letter, facsimile, telephone or electronic communication.

Nominees

A nominee (previously known as a nominated electrical worker) is not required to comply with a direction concerning electrical work given to the nominee by the employer if the nominee reasonably considers that the work would not be carried out in accordance with the regulations.

Standard of work

To the extent practicable and reasonable, a person is to ensure that electrical work done by him/her is safe to use and has been completed to a trade finish (ie. it complies with the regulations, all relevant Standards and the WAER).

Trainees

An electrician supervising a trainee must ensure that before the trainee carries out any electrical work under his supervision, the electrician is aware of the experience and level of competence of the trainee.

Electrical Safety Certificate

An electrician authorised by an electrical contractor to complete an Electrical Safety Certificate must, if requested by the person for whom the work is being done, produce the instrument of authorisation.

Reporting defects and accidents

If it appears to an electrical worker carrying out work on an electrical installation or item of equipment that there is a defect in the installation or equipment making it unsafe, the electrical worker must inform the owner or occupier of the premises that the matter must be reported to the relevant network operator, or the Director if the network operator is unknown, and must then so report the matter.

Immediately after an electrical worker becomes aware that an electrical accident has occurred at the workplace the event must be reported to the employer.

Apprentices

Licence

Persons undergoing trade training in electrical installing and fitting work must, before they commence training, apply for and be issued with an electrician's training licence. On completion of training, the licence expires when the person is issued an electrician's licence or three months after completion of the training course, whichever occurs first. The ex-trainee cannot be included on a Notice of Completion until an Electrician's licence has been issued.

Safety

A person authorised by an electrician's training licence to undertake electrical work may refuse to carry out any electrical work that, having regard to the level of supervision being provided, the trainee reasonably considers to be electrical work that he or she is not competent to carry out or that would or would likely endanger him or her or another person.

(Note: Guidelines have been issued in respect of the type of work apprentices can be expected to carry out as they progress through their training).

¹ The licence remains valid until the holder relinquishes the licence or the licence is cancelled.

Electrical work not requiring a licence

Work carried out by professional engineers

A professionally qualified electrical engineer with experience relating to electrical installing work is not required to hold a licence to undertake:

- Detailed inspection of an electrical installation, including switchboards and equipment;
- Measurement of electrical parameters (such as voltage, current or energy) at any part of an installation; or
- Commissioning of, or finding faults in, an electrical installation (including any required disconnection or reconnection of electrical components and equipment).

This merely formalises longstanding arrangements.

Modular wiring systems

Modular wiring systems approved by the Director, or a person recognised by the Director as being competent to give such approval, may be attached to, or included in, and assembled as part of office furniture or partitioning by an unlicensed person. However, the modular wiring system must be checked and tested for safety by an electrician before being energised for the first time after its installation.

Cord, plug and appliance work

Cord and plug electrical work no longer requires a licence. Electrical cords and cables for use in single and three phase installations designed to operate at voltages up to 1 000 volts ac and up to 1 500 volts dc may have plugs and sockets attached and be tested, tagged and repaired by an appropriately trained and competent (unlicensed) person.

Such persons will also be able to undertake like-for-like replacement of components in electrical equipment connected to a supply of electricity by a cord and plug.

This puts WA on the same basis as most other States including NSW and Victoria.

Electrical installation designers

A person designing an electrical installation is now required to ensure that:

- It is designed to be safe and to comply with any relevant requirement referred to in regulation 49(1) of the *Electricity (Licensing) Regulations 1991* [which lists documents and standards with which installations must comply]; and
- If the person gives the design to another person to construct it, the design is accompanied by information about the way the electrical installation is to be installed to ensure it is safe.

Network operators

Immediately after a network operator becomes aware (by any means) that an electrical accident has occurred, the network operator is to report the accident to the Director unless the accident is a notifiable incident under regulation 35(1)(a) of the *Electricity (Supply Standards and System Safety) Regulations 2001* and the network operator has so notified the Director.

New edition of "Wiring Rules" (AS/NZS 3000:2007)

Standards Australia, via SAI Global, released the new 2007 edition of the "Wiring Rules", AS/NZS 3000:2007 in November 2007.

The new Wiring Rules will come into effect in WA on 1 June 2008.

Electrical installing work that started before 1 June 2008 will be inspected for compliance with the 2000 or 2007 editions of the Wiring Rules, regardless of the completion date of the work.

The commencement date will be taken to be the date on the Preliminary Notice received by the network operator, or the Director, as appropriate.

Electrical installing work that commences after 1 June 2008 will be inspected for compliance with the new 2007 edition of the Wiring Rules.

This means that designs in progress should be reviewed and amended to ensure compliance with the 2007 edition of the Wiring Rules. Completed designs subject to tender and contract finalisation should also be reviewed and amended if it is likely that a Preliminary Notice will not be submitted before 1 June 2008.



AS/NZS 3000:2007 "Wiring Rules"

New “rules” for electrical installation designers

The AS/NZS 3000:2007 “Wiring Rules” coming into effect on 1 June 2008 and the amendments to the *Electricity (Licensing) Regulations 1991* coming into effect on 1 July 2008 will, in combination, allow greater flexibility for electrical installation designers, but also require them to comply with additional obligations.

For simplicity, this article will refer to these new measures coming into effect from 1 July 2008.

Firstly, all electrical installation designers will have to ensure their designs are safe and comply with the regulatory requirements of Regulation 49, particularly Section 12 of the WA Electrical Requirements (WAER) and the technical standards [listed in Regulation 49].

The designer is also required to provide information to the installer “about the way the electrical installation is to be installed to ensure the installation is safe”.

Secondly, the designer has two options for the design of an installation:

- (1) Base the design entirely on the Wiring Rules “Part 2: Installation Practices”; or
- (2) Base the design of the installation (or a portion of it) on the Wiring Rules “Part 1: Scope, application and fundamental principles”. Part 1 may not be used, however, for the types of installations listed in Section 12 of the WAER.

Most designs can be expected to use option (1), since this enables the designer to make use of the wide range of practical and well-established rules set out as “deemed to comply” design parameters. The 2007 edition of

the Wiring Rules was specifically drafted to provide useful information in this regard, to make it easier for the designer.

On the other hand, a designer may, on rare occasions, face some unusual constraints or issues that the design has to embrace. In such instances, the designer may choose to not use the deemed-to-comply design parameters of Part 2, and instead opt to carry out a design to Part 1, based only on satisfying fundamental electrical safety principles.

While this allows for greater innovation, it requires a corresponding degree of design compliance assurance as is set out in AS/NZS 3000:2007 Clause 1.9. This means that independent verification of design compliance is required, as follows.

Electrical installation designers choosing to apply Part 1 of the Wiring Rules must be competent to do so and must verify that all parts of an electrical installation not complying with Part 2 are safe and comply with Part 1 and the specific design, before the installation is placed in service.

The WAER is being amended to set out the specific requirements that need to be satisfied in relation to this kind of work.

In brief, the following kinds of persons are considered as competent for carrying out “Part 1” designs:

- Currently licensed electricians (previously known as electrical installers) with at least 10 years experience in the design and construction of consumer’s electrical installations (other than domestic installations) since qualifying, including not less than 5 years design experience in total.
- Electrical designers who are holders of a TAFE Advanced Diploma in Electrical

Engineering (or equivalent) and have at least 5 years experience in the design of consumer’s electrical installations (other than domestic installations).

- Electrical designers who are professional power electrical engineers (persons who are eligible for corporate membership of the Institution of Engineers Australia) with at least 5 years experience in the design of consumer’s electrical installations (other than domestic installations).

Similarly, these same types of persons may be used by the designer to separately (and independently) verify the compliance of the design i.e. to provide assurance that the design is sound. Verification assessment work may only be carried out by persons who:

- were not involved in the design of the installation;
- who do not report to the designer (i.e. they may be part of the same organisation, subject to these constraints).

Part of the process of carrying out a design based on “Part 1” of the Wiring Rules, as set out in the WAER, also requires the designer and the verifier to sign a certificate of compliance and to retain that with a design folder for a period of at least 10 years, and to make the folder available to an inspector if requested.

Electrical contractors must declare, on the Notice of Completion, if the electrical installing work has been installed to meet a Part 1 or Part 2 solution.

Lastly it should be noted that designers must not adopt a Part 1 solution for the following types of electrical installations, which must comply with Part 2 of AS/NZS 3000:2007 and the applicable standard or standards listed in Section 12 of the WAER:

- domestic installations;
- construction and demolition sites;
- medical treatment areas;
- relocatable installations and the site installations to supply them;
- marinas and pleasure craft; and
- shows and carnivals.

Wiring Rules seminars

Standards Australia will hold seminar presentations in major centres of WA, to provide an understanding of updates to the Wiring Rules and how those changes might affect the electrical industry. The presentations will focus on major changes and technical issues.

The Wiring Rules presentations will be held as follows:

Kalgoorlie	20 May 2008
Fremantle	21 May 2008
Perth	22 May 2008
Bunbury	26 May 2008
Karratha	28 May 2008

All Wiring Rules presentations will commence at 1:30 pm and conclude at 6:00 pm. Registration is subject to a fee and will be from 1:00 pm.

For further details and registration, please telephone SAI Global on 1300 727 444.

Note that a summary of the Wiring Rules changes will also be included in the free EnergySafety seminars that are being held during April and May in Perth and regional centres of WA.

New edition of WA Electrical Requirements (WAER)

A new edition of the WAER (WA Electrical Requirements) is expected to be released around 1 June 2008 and to come into effect on 1 July 2008.

The new edition will address the following:

- Increasingly frequent requests for multiple points of supply to a single property title. These tend to occur with commercial developments but also arise with battle-axe and strata plan domestic projects. The proponent's argument could be [if justified] that it may be too costly to run low voltage sub-mains to distant outbuildings on properties with frontages to two or more streets. The new rules require, if the proposal is approved, the establishment of discrete zones from each supply point, with no wiring to cross the zone boundaries. Drawings showing zones must be placed in all switchboards and copies sent to FESA and the relevant local authority. A caveat also must be placed on the property title.
- Western Power's preference to establish a web-based Connections Manual, to cover the type of information previously appearing in Section 13 of the WAER, plus a lot more detailed guidance for those seeking a new or upgraded electricity supply. The revised WAER Section 13 will summarise the main points and show a link to the Western Power web site for those needing full details. The particular requirements of Horizon Power and the other network operators will continue to be included in Section 13.

- Adoption of additional mandatory standards, beyond those listed in Regulation 49 of the *Electricity (Licensing) Regulations 1991*.
- Definitions appearing in the 2007 edition of the Wiring Rules. Some minor changes also will be made throughout the document to accord with practices written into this edition of the Rules.
- The new edition on the WAER will also incorporate the new "rules" for electrical installation designs carried out to "Part 1" of the Wiring Rules, which in the interim are covered by Amendment 5 to the WAER (copies of which are included in this special edition of the Energy Bulletin, as an insert).

The two-column format will be changed to a standard A4, whole-of-page layout. The WAER will include more helpful illustrations, including some appearing in previous editions but excluded from the current edition. EnergySafety hopes this will assist industry.

Complimentary printed copies of the new WAER will be distributed to all licensed electrical contractors and all network operators that pay the industry levy assisting the funding of EnergySafety.

Other interested parties will be able to purchase a printed copy from EnergySafety through an over-the-counter cash or credit card sale (\$100 per copy) at the EnergySafety Licensing Office, or simply download or access the document from EnergySafety's web site at no charge.

Electrical Industry Seminars

EnergySafety is conducting a series of free seminars for electrical industry personnel, to explain the changes to the *Electricity (Licensing) Regulations 1991*, the new edition of the Wiring Rules and the new edition of the WA Electrical Requirements.

Location	Date	Venue
Bunbury	8 April 2008	Lord Forrest Hotel 20 Symmons Street, Bunbury
Albany	10 April 2008	Dog Rock Motel 303 Middleton Road, Albany
Kalgoorlie	28 April 2008	WA School of Mining Auditorium 44 MacDonald Street, Kalgoorlie
Geraldton	7 May 2008	Wintersun Hotel Motel 441 Chapman Road, Bluff Point, Geraldton
Perth (North)	12 May 2008	Arena Joondalup Kennedya Drive, Joondalup
Perth (South)	14 May 2008	Fremantle Sailing Club 151 Marine Terrace, South Fremantle
Perth (City)	19 May 2008	City West Function Centre 45 Plaistowe Mews, City West Centre, West Perth
Karratha	21 May 2008	Welcome Lotteries House 7 Morse Court, Karratha
Broome	27 May 2008	Commencing 3:00 pm Mangrove Hotel, 47 Carnarvon Street, Broome
Northam	4 June 2008	Muresk Institute Muresk Road, via Northam

Program

- 2:00 pm Registration (3:00 pm at Broome)
- 2:30 pm Seminar Commences (3:30 pm at Broome)
- 5:30 pm Seminar Concludes (6:30 pm at Broome) with light refreshments

The following subjects will be addressed, with time for questions from the floor after each speaker:

- Overview of regulatory framework and recent improvements (with focus on electrical contractor/consultant related matters)
- Overview of changes to *Electricity (Licensing) Regulations 1991*, licensing issues, Technical Standards and notification issues (impact on designers), Transitional issues and likely impacts

Coffee break

- New edition of Wiring Rules AS/NZS 3000:2007:
 - Overview
 - Key changes
 - WA Electrical Requirements related changes
 - Future AS 2067
- Overview of guidelines for safe work practices for electricians
- Overview of WA's electrical safety outcomes

How to register

It is important that registrations are received to attend one of these EnergySafety seminars.

Registrations will be managed by a call centre.

To register, please telephone 08 6454 4653, advising your name, contact details and the venue you will be attending.

Registrations will close three days before the relevant seminar. Refreshments will be provided so RSVPs are required.