

Proposed Amendments to AS/NZS 3000 Electrical Installations

(known as the Australian/New Zealand Wiring Rules)

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AS/NZS 3000 is revised every 7-10 years to take account of new equipment, practices and improved installation techniques. It is the primary reference standard for electricians who must certify compliance with the mandatory requirements for design, construction and testing of electrical installations.

The revised edition of the standard is due to be published later this year or early next year and is expected to come into effect in Victoria as the regulatory standard around the middle of 2018. (The date could vary in other states and in New Zealand.) Revisions to the standard will be extensive and the proposed revisions include updated cross-references to many other standards which have been published or revised over previous years.

It should be stated that the revised standard will apply to new installations or parts of installations. As a general principle, existing installations are not affected provided they comply with minimum safety requirements and the original standards that applied at the time of installation. (A new definition, 'Repair' will be added to tighten up on the practice of referring to installation work as a repair to avoid complying with the latest standards.)

Situations could arise however, where electrical work is carried out in premises which could impact on the performance of existing equipment and appliances, such as a switchboard replacement in the example below:

Additional Protection by Residual Current Devices (RCDs, commonly known as Safety Switches in Victoria)

In domestic/residential electrical installations RCDs will be required on all final sub-circuits. This will include sub-circuits dedicated to fixed appliances such as stoves and hot water services. Similar rules will apply to non-domestic/non-residential installations but with a number of exceptions. RCD's will be 'recommended' (rather than 'required') on circuits supplying fixed wired electrical equipment, but required on circuits where there is increased risk of electric shock such as in wet areas.

Circuit breakers with RCD protection may not latch on or be subject to 'nuisance tripping' when installed on circuits supplying appliances with degraded insulation or where there is ingress of conductive materials or moisture. In the circumstance of say a wiring upgrade or switchboard replacement in an existing installation, there is the likelihood that some older appliances may need to be taken out of service (presumably replaced) because of the more onerous circuit protection.

Proposed Amendments to AS/NZS 3003 Electrical installations – Patient Areas

AS/NZS 3003 is being revised in conjunction with AS/NZS 3000. The purpose of AS/NZS 3003 is to specify the special electrical safety requirements for patient areas where the organization/entity responsible for the installation has determined that mains powered electrical equipment will be used on a patient. The special electrical requirements in 'body protected' areas normally include low threshold RCDs dedicated for the power outlets in the room or area being protected

Since this standard was first introduced it has not been clear whether it should apply to facilities such as nursing homes and in particular, rooms where patients sleep. The current standard is not clear on who should determine whether or not rooms are for the treatment of patients. It is

now the responsibility of the owner/operator of the facility and for new installations, the designer or body responsible for the electrical medical facility.

[The decision by the responsible organization/entity to determine whether or not an area is to be body protected shall take into account two important factors:

- The requirement to have a patient within the room. (The definition of a patient is outside the scope of AS/NZS 3003 and must be determined by the responsible organization/entity.)*
- The requirement to have medical electrical equipment located within the room and to be used on the patient. (An electric bed is considered to be medical electrical equipment.)]*

It is likely that the AS/NZS 3003 requirements will apply to alterations and repairs in existing installations. I suspect many owners/operators of aged care facilities may not be aware of the proposed changes and their responsibilities.

The notes above are based on briefing information provided by the National Electrical and Communications Association (NECA) and EnergySafe Victoria. There are many other amendments which have not been listed and I should further qualify my comments by saying there could be further amendments before the revised standards are published.