

Electricity (Safety) Regulations 2010

On the 1st of April 2010 The Electricity Regulations 1997 will be replaced by the Electricity (Safety) Regulations 2010 (the Regulations).

These “new” Regulations introduce changes across the spectrum of electrical safety, affecting appliances, installations, works (distribution systems) and apply particularly to electrical workers, appliance importers and retailers, and electricity generators and distributors.

Focus of Changes

The changes to the regulations implemented by the Electricity (Safety) Regulations 2010 are focussed on:

- Updating of referenced Standards,
- A greater application of risk management,
- A greater adoption of international Standards,
- Improving clarity of compliance versus non compliance,
- Increasing technical information, and,
- Facilitating increased enforcement.

Transition

While the Regulations make changes to almost all aspects of the safety provisions, the changes are introduced using a soft transition, whereby work or equipment (including appliances) covered by the existing regime remains covered by the existing regime for a period of up to two years.

For electrical construction work this means that work begun under the existing rules can be completed under the existing “old” rules and for appliances imported under the existing rules it means they can still be sold under the existing rules.

It also means that existing inspection certificates, CoCs, SDoCs, approvals etc also remain valid.

The changes apply, however, to work begun after 1 April and to appliances and equipment manufactured in NZ, or ordered for importation, after that date.

Overview

The Regulations, while amending the Electricity Regulations 1997, have been completely rewritten and regrouped for improved clarity and comprehension.

Separate sections have been created for installations, appliances and works, and a separate section established for fundamental safety requirements.

Provisions relating to occupational safety and worker licensing are also separated into their own sections, and an extensive schedule of equipment Standards applicable to electrical fittings and appliances has been added as a reference for the equipment safety provisions.

For installations and appliances, the new Regulations implement a regulatory model where there is an alternative to apply a prescriptive or a performance based compliance system, replacing the existing essential safety regime which applied recognised means of compliance.

New provisions have been introduced for electric cars, thermal insulation installation, and the provisions expanded regarding certification, specialised installations and harmonics and flicker. Some existing flexibilities to apply alternative techniques have been reduced or made subject to additional verification.

The Regulations also introduce stronger offence provisions and “Instant Fines” for many transgressions.

Key Technical and Administrative changes – Installations

The 2010 Regulations introduce the formal recognition of AS/NZS 3000:2007

The greatest impact of the changes that occur as a result of the new Regulations and the formal application of AS/NZS 3000: 2007 (The Wiring Rules) are:

- A greater number of “companion” Standards are introduced to support the Wiring Rules. These include the Standards for PV systems and refrigeration systems.
- Restrictions are applied to departures from Part 2 of the wiring rules for the high risk installations including domestic installations, hazardous areas and medical installations.

Inspections

Installations not complying with the relevant Standards will require inspection.

Certification

There are increased requirements for the certification of all work on an electrical installation, including;

- A declaration of conformity at the start of each job from the designer which identifies the designer; the design and whether Part 1 or Part 2 of the Wiring Rules is being applied,
- Certification or a declaration of compliance for metering,
- Certification of the safety of all fittings used, (some equipment Supplier Declarations are recognised).

Connection

The 2010 Regulations make connection the centre point of the safety regime by requiring those making a connection responsible for verifying the safety or

certification of the work being connected. All aspects of certification are included as well as checks of polarity, etc.

Applications of RCDS

The mandatory use of RCDs to protect socket outlet circuits has not been extended to all socket outlets up to 20 Amps (this was amended out of AS/NZS 3000 by amendment 1). However if two or more final subcircuits are provided for lighting in domestic installations, two or more RCDs are required.

All RCDs that are required under the Regulations or the relevant Standards must interrupt the neutral as well as any actives.

Early Childhood centres

In primary schools, kindergartens and child-care centres all socket outlets installed in areas frequented by small children must be protected by 10 mA RCD's. It is recommended that socket outlets with built-in RCDs be used to overcome high installation wiring earth leakage. The Regulations reflect these requirements.

Hazardous Area ELV work

The scope of PEW has been extended to include work in hazardous areas at ELV.

Warrants of Electrical fitness

Warrants will be able to be issued at the same time as a CoC by the electrical worker wiring a connectable installation.

Caravans

Changes to the companion Standard AS/NZS 3001, now permit the removal of the neutral–earth link in older caravans without the need to install an RCD. This change has been made to ensure that older caravans can be connected to socket outlets in new caravan parks and also in domestic installations where RCD protection is present. This change is also reflected in the WoEF requirements.

When the link is removed a full safety check is however required to be performed.

High Voltage Installations

Rules have now been introduced for high voltage installations. These rules apply the requirements that apply to works.

Private works (Shopping centres etc)

The Regulations now clarify that the installation wiring rules can be applied to the LV wiring of a shopping centre that would otherwise be classed as a “works”.

Key Technical and Administrative changes - Appliances

The three level appliance safety regime has been retained but the upper two levels renamed as “declared high risk” and “declared medium risk” articles. The existing product lists have been retained.

Medium Risk Products

The major change is the requirement for medium risk items (the old supplier declaration list) to have a test report (or certification) available as part of the SDoC requirements. This test report however does not need to be one issued by an accreditation test lab but must show how the product complies with either AS/NZS 3820 or one of the recognised Standards.

The supplier declaration form has been aligned with the international format in ISO/IEC 17050.

These SDoCs are formally recognised for application as part of the certification of an installation.

Recognised Standards

A Schedule to the Regulations (Schedule 4) has been introduced to list all of the recognised Standards including any alternatives. Many of these Standards are now IEC Standards with variations to reflect any specific NZ requirements such as language and voltage.

This provides for a wider range of recognised and accredited testing facilities.