



**Office of Hon Harry Duynhoven
MP for New Plymouth**

Minister for Transport Safety
Associate Minister of Energy

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Invercargill 9872

Dear WD

Electricity Safety Regulations

As you know, over the last two years the Electricity Regulations 1997 have been under review.

The review commenced in 2006 in anticipation of the passage of the Electricity Amendment Act 2006 (passed in December 2006). The review has focused on implementing the new requirements consequential to the Act's amendments. In particular, these include developing new regulations for safety management systems for large scale electricity generators and distributors; removing regulations concerning worker licensing (as this function is being transferred to the Electrical Workers Registration Board); and removing regulations concerning worker safety (as this function will be covered by regulations under the Health and Safety in Employment Act 1992).

Given the significant changes to the regulations, it was also decided to use the opportunity to undertake a complete review of the regulations, as they had not had a thorough review since 1997 amendments, including updating of the many out-of-date references to standards and codes of practice.

The underlying purpose of the regulations is to minimise the risks of electricity to consumers when they go about their daily activities and to help industry by providing guidance as to what is expected of their sector, as a minimum, from the government regarding electricity safety. The regulations both set absolute requirements that must be met and, where possible, provide for flexibility (while still requiring safe outcomes) so that innovation is not constrained.

In December 2007, a discussion document was released outlining proposed changes to the regulations and you were invited to comment on the proposals. The response to the discussion document was encouraging, indicating, as I expected, that the sector is actively engaged and interested in addressing safety risks. Submitters provided comments and views that have significantly informed the finalising of the policy and the decisions that have been taken by the Government recently to have new regulations. I have suggested that these be named the Electricity Safety Regulations.

A summary of the submissions will be available shortly on the Energy Safety web site www.enemysafety.govt.nz

The drafting of the new regulations is now underway. Below is an outline of the key new or amended regulatory requirements.

General Safety Requirement

It has been agreed that the regulations give greater prominence to the general safety requirement that all works, electrical installations, fittings and appliances and associated equipment are electrically safe. This is a similar regulation to the existing regulation 69.

Prescribed Electrical Work

This key regulation will continue substantially unchanged. An additional exclusion from the definition of prescribed electrical work will be added — the removal and re-insertion of fuses.

The amendments to the Electricity Act in 2006 allowed for additions to the definition of prescribed electrical work. The review gave particular attention to whether changes should be made in this area. As a result, the addition of testing, certification, supervision and inspection (other than on generation and distribution operations subject to safety management systems) will be added to the coverage of prescribed electrical work.

Design in Prescribed Electrical Work

The Electricity Amendment Act 2006 allowed for consideration of adding 'design' of electrical installations and works to the categories of work defined as prescribed electrical work. Design of complex installations is usually carried out by qualified and experienced people, such as electrical engineers, but who are not licensed under the Electrical Workers Registration Board. Unlicensed electrical workers cannot undertake prescribed electrical work. The possibility of expanding the definition of prescribed electrical work to include design was outlined in the December 2007 discussion paper and received considerable feedback, mostly negative.

While including design in prescribed electrical work would clarify the obligations of the designer and the installer, any control of design as prescribed electrical work would

exclude competent people who currently undertake such design work or would force them to become licensed. There is no problem with the design work of such people that suggests that they also need to be licensed by the Electrical Workers Registration Board and to meet additional competencies.

Therefore, it has been decided not to include design in the definition of prescribed electrical work. There appears to be other mechanisms that control design in the various sectors, such as application elsewhere in the regulations of the recently updated AS/NZS 3000:2007 (Wiring Rules) and the fact that electrical engineers and other specialists have qualifications and competencies established in other legislation.

However, the regulations will include a new requirement that the designer must declare the design was in conformance with the electricity safety regulations. The electrical worker installing the installation would then be responsible for ensuring that just his or her installation work complied with the design. The certificate of compliance would be signed by the electrical worker, with the signed design declaration forming part of the supporting documentation for the certificate of compliance.

AS/NZS 3000:2007 Wiring Rules Standard

AS/NZS 3000:2000 Wiring Rules (the industry standard of detailed wiring rules for electrical installations, principally the wiring of buildings and domestic residences) is referenced in the Electricity Regulations 1997 as the recognised safe method of wiring an electrical installation. This standard has recently been revised and the decision has been taken to reference the new AS/NZS 3000:2007 in the regulations, with one exception discussed below. To reference the new AS/NZS 3000:2007 will require a different regulatory citation methodology than that presently used, which is more consistent with the desired risk and performance-based regulatory philosophy.

The decision has been taken not to adopt the requirement in AS/NZS 3000:2007 for residual current devices (RCDs) on all sockets up to and including 20 A. This decision has been taken as there are cost implications to its application and there are alternative, flexible, lower cost solutions that provide adequate earth protection.

As has occurred in the past when compliance with new standards is required, a transition period will be provided where either AS/NZS 3000:2007 or AS/NZS 3000:2000 will be generally acceptable.

Safety Management Systems

When regulations for safety management systems (SMS) are in place, the provisions of the Electricity Amendment Act 2006 for large scale electricity generators and distributors to have in place SMS can come into force. SMS provide for public safety and the minimisation of property damage.

The SMS regulations will be performance-based, rather than prescriptive, to enable compliance to be met by the most appropriate means for the particular circumstance. They will require a full description of the electricity supply system, include the methodology used to systematically identify and address existing and new hazards, include the policies, processes and procedures to mitigate hazards and evidence that these are being applied and are achieving their intent, include policies and procedures for accident and incident investigation, and provide for the regular review and enhancement of the SMS. The regulations will also require an independent auditor from a conformity assessment body (CAB), as approved by JAS-ANZ (Joint Accreditation System of Australia and New Zealand) or through another international agreement, must assess every 5 years, that the requirements of the SMS are being met. This will be over and above any in house auditing. The CAB must produce an audit certificate stating that the operations comply with the SMS if the operations do comply. The owner or operator of an electricity supply system would then declare, every five years, to the Chief Executive of the Ministry of Economic Development that an adequate SMS is in place and that it is being maintained. CABs would be obliged to report any significant deficiencies in the SMS to the owner or operator and submit an action plan for rectification. The process for accrediting CABs in relation to public safety electricity SMS is currently under development.

A transition phase of three years from promulgation of these regulations will be provided before a SMS needs to be in place. This allows time for both companies and auditors to come up to speed with the requirements.

A standard (NZS 7901) is being developed to provide more detail on how to meet the requirements. If finalised over the next 6 months, this standard will be referenced as a means of compliance with the regulations.

Electrical Appliance Regime

The electrical appliance safety regime in the Electricity Regulations 1997 is out of pace with the changed environment whereby most of New Zealand's appliances are now imported. The new regulations will require greater evidence of compliance with the regulations or the recent China Conformity Co-operation Agreement, particularly for medium risk products (with which most of the problems with electrical appliances has occurred).

The regulations will require either compliance with a standard where one exists for an appliance, or alternatively require evidence of compliance with the regulations. This allows for innovation but also addresses risk.

In summary, for low risk products, a manufacturer or importer will have three options for proving compliance with the regulations. They can follow either the relevant standard for the appliance (set out in a schedule to the regulations but currently found in AS/NZS 4414), or the China Conformity Co-operation Agreement, or AS/NZS 3820 Essential Safety Requirements for Low Voltage Electrical Equipment. If the low risk product complies with AS/NZS 3820, it must be tested and verified by a testing laboratory as complying with AS/NZS 3820 (similar to existing regulation 76(2)).

For medium risk products, a Supplier Declaration of Compliance (SDoC) will be required and must include a statement that the product complies with either a recognized standard (set out in a schedule to the regulations but currently found in AS/NZS 4414), or the China Conformity Co-operation Agreement, or AS/NZS 3820. Test reports from a test laboratory will be required to verify compliance with the declared standard.

The regulations will provide that testing laboratories for low and medium risk products can be accredited or non-accredited. This decision balances the cost of testing and the level of safety required for high risk products, the declared article process will continue unchanged.

Registration and Licensing

The new regulations will not include matters related to the registration and licensing of electrical workers. This matter will become the full responsibility the Electrical Workers Registration Board when the 2006 amendments to the Electricity Act come fully into effect. The aim is to have these provisions come into effect at the same time as the new regulations. Transitional provisions will be made if this is not possible.

Worker Safety

Similarly, the new regulations will not include matters related to worker safety, as these will be addressed under the Health and Safety in Employment Act 1992 framework, administered by the Department of Labour. If there are delays in the development of worker safety provisions under the Health and Safety in Employment Act 1992 framework, transitional provisions will be made.

To clarify the regulatory responsibilities of the safety of electricity and gas, a Memorandum of Understanding is being developed between the Department of Labour, Energy Safety, the Electrical Workers Registration Board and the Plumbers, Gasfitters and Drainlayers Board.

Infringement Offences

Infringement offences and notices will be provided for. These will be for clear, minor breaches of the regulations, such as failure to provide a certificate within the required timeframe. The infringement scheme would follow a standard framework, consisting of the Electricity Act, the regulations and the Summary Proceedings Act 1957.

Table of Proposals


The attached table provides a comprehensive outline of all the matters the new regulations will cover and has been provided to Parliamentary Council Office which is drafting the final wording for the regulations. The table is a guide only and does not provide the actual wording of the regulations and the ordering of the regulations may not take this form.

Next Steps

The next step in the process is the drafting of the new regulations. I have obtained permission for an exposure draft of the proposed regulations to be made available for consultation, This is likely late October or November. Consultation on exposure drafts and reaction to the feedback is usually done under quite tight time constraints so there may only be a 2 to 3 week consultation period.

Final decisions on the new regulations are expected to be taken in late February or March 2009. It is expected that the regulations will then come into effect on 1 July 2009, with appropriate transitional provisions. It is also expected that the Electricity Amendment Act 2006 provisions that have not yet come into force will be promulgated at the same time as the regulations. The new electricity safety regulations will provide for a modern, risk-based approach to Electrical safety that provides clarity for workers and consumers over electrical safety obligations, enables proportionate enforcement, and yet still allows flexibility to find safe solutions to electrical issues and challenges

Yours sincerely



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Associate Minister of Energy

Encl.