ELECTRON

EMPOWERING TODAY'S ELECTRICAL WORKERS

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Over the last year there have been incidents of wooden pole failures which have resulted in one fatality and serious harm injuries to electricity industry line staff.

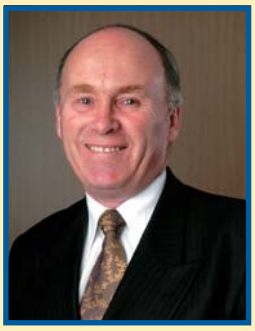
The Electricity Engineers Association intends to review the present requirements for pole safety and will update rules and guidance material as appropriate.

The Association has provided an article for this issue of ELECTRON and the purpose of the article is to remind industry about the need to undertake mechanical strength testing of poles, particularly those that have been in the ground for some years, and to re emphasis to asset owners and contractors the importance of existing safety requirements when working on poles.

Also in this issue of ELECTRON there are details of a new Agreement with Standards New Zealand which enables the holders of Board practising licences and trainees to access Standards.

The new Agreement is for one year while the Board awaits the introduction of any new electricity regulations.

Following the introduction of any new regulations the Board will review the coverage of any future Agreement.



John Sickels
RegistrarManager
EWLG

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ELECTRICAL WORKERS REGISTRATION BOARD

Safety • Competency

ELECTRON is published by the Electrical Workers Licensing Group, the service unit of the Department of Building and Housing for the Electrical Workers Registration Board. If you have any enquiries or comments on this newsletter please contact:

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Availability of documents

To enhance the question of accessibility and transparency of documentation and decisions of the Board, readers are reminded that agendas for Board meetings are posted on the Board's website at www.ewrb.govt.nz one week prior to any meeting. In addition meeting agendas and minutes are available from the Registrar on request. Discussion papers and complaint hearing decisions that are not subject to Board Publication Orders are also available from the Registrar on request.

Appointment to the Board

The Minister of Building and Construction has appointed Stephen Albrecht to the Board for a three year term.

Stephen is a Registered Engineering Associate and a registered electrical inspector with over 24 years experience in the electricity supply industry. He has broad knowledge of the electricity supply industry from his roles as compliance manager and operations manager with MainPower Contracting Ltd, and previous roles as project manager and senior test technician. Stephen is a current board member and vice president of the Electrical Safety Organisation.

Safety requirements for work on poles

The following article has been provided by the Electricity Engineers Association (EEA).

Over the last year the EEA is aware of four wood pole failures which have occurred when employees have been working on the pole structure.

Three of the failures have been on ESI assets and the other on a customer service line.

Tragically these events have resulted in one fatality and serious harm to three industry line staff. While the EEA website includes some information on three of these events the full details of these pole failures are not yet available to EEA.

Based on informal feedback (except in one case where it is known), it is understood that in each case the pole failed just below the ground line and soon after the pole loading was changed by conductor removal.

It is understood that testing to determine pole condition was carried out prior to the poles being climbed.

The EEA is attempting to obtain further details of the failures, but obtaining this information takes time due to company and regulator investigation processes.

The purpose of this article is to remind industry about the need to undertake mechanical strength testing of poles (particularly ones that have been in the ground for some years) and to re emphasise to asset owners and contractors the importance of existing safety requirements when working on poles.

Information on existing safety requirements can be found in;

- Safety Manual – Electricity Industry (SM - EI) rule 1.607
- The Line Mechanics Handbook published by the EEA (Section 11.6.2.2)
- EEA Guide to Work on Poles and Pole Structures at www.eea.co.nz

The test and inspection requirements set out in the safety rules are intended to assist line staff in forming a judgement of the adequacy of the mechanical integrity of the wood pole for safely undertaking the proposed work.

The requirements outline the range of pole test methods to be preformed, but advises that the individual tests do have limitations and may not always provide the required information. Multiple tests provide a greater degree of confidence.

Within the industry the recent pole failures have raised questions relating to the sufficiency of site assessments, testing, how the tests are carried out and the range of work methods used.

Where there is any doubt about the safety of a pole or pole structure, or its ability to withstand any change in loading that could be applied during work, additional measures shall be taken to support the pole structure.

Section 9 of the EEA Guide describes methods which can be used, and requires that a pole is not loaded beyond its capability.

One of the options described is to attach the pole to a vehicle mounted truck loader crane.

Alternatively other work methods or procedures may be employed which do not require accessing the pole structure (e.g. work from an Elevated Work Platform).

As a result of these incidents the EEA recommends that companies owning or working on wood pole structures review their pole access procedures, test procedures and application, and ensure their staff take a cautious approach to the results of pole testing, and in the case of any doubt apply additional support to poles in particular where the work will involve changing the load of the pole (e.g. displacing conductors).

The EEA is to review the current requirements for pole safety and will update rules and guidance material as appropriate.

Safety is paramount in our industry.

Your commitment to the safety of people in this industry, and your assistance in responding to these important safety issues to ensure the necessary actions are taken be staff and/or contractors is appreciated.

It's time to get your apprentice 'exam ready'

The following article has been provided by the Electrotechnology Industry Training Organisation (ETITO)

Exam season is here. If you're an apprentice, now's the time you need to be knuckling down and studying. If you employ an apprentice, now, more than ever, you need to be getting behind them.

The ETITO-developed apprentice training system is designed to ensure learning takes place constantly – every day the apprentice goes to work.

However, when exams roll around, it's time for apprentices to really focus.

"Putting in the hard yards for an exam is the perfect way for an apprentice to showcase their talents. Plus, it can make a world of difference to when an apprentice can complete their apprenticeship and get qualified – and get the pay packet to match," says Brett Piskulic, ETITO Training Manager – Central and West Auckland.

According to Moyle Electrical's Benjamin Fitness, who aced his theory exam last year, getting good marks isn't necessarily that difficult, it just requires a bit of hard work. He suggests employers encourage their apprentice/s to try and do a little bit of study each night. "Do some old exam papers, or do verbal tests on exam papers with a mate, it's a great way to remember things and make sure you're not off-track."

Benjamin also recommends apprentices note things they don't fully understand and ask their employer or tutor to explain. "Finally, don't stress or stay up late studying

before the day of the exam. This is more likely to cause confusion."

In most cases the biggest secret to success is employer support. "It's critical that employers really back their apprentices one hundred percent," says Brett. "Make sure you're always available to answer their questions or if you're busy nominate another team member to take on this role."

Employers who want their apprentices to succeed should also give them plenty of time to study. "Don't increase their workload – reduce it if possible – and most importantly, be encouraging."

ETITO is here to help

Recognised by industry and government as the industry's national standards setting body, ETITO develops national qualifications; designs and manages training and assessment programmes; and provides government training subsidies to support the cost of training apprentices.

ETITO has a national training manager network providing invaluable advice and support to apprentices and employers where it's needed most – out in the field. If you'd like to find out more about any aspect of apprenticeship training, then contact your ETITO regional training manager.

Terry Kidd, Training Manager [Northern] – Ph: 09 583 1338 Mob: 027 461 838

Brett Piskulic, Training Manager [Central & West Auckland] – Ph: 09 583 1344 Mob: 027 461 8287

Gavin Denby, Training Manager [Hauraki] – Ph: 07 839 7395 Mob: 027 489 0981

Paul Mitchell, Training Manager [Eastern] – Ph: 07 349 3461 Mob: 027 280 5243

Paul Craven, Training Manager [Central & Southern North Island] – Ph: 04 499 7677 Mob: 027 466 2402

Marty Matheson, Training Manager [South Island] – Ph: 03 365 9252 Mob: 027 461 7018.

New Agreement with Standards New Zealand

In issue 39 of ELECTRON the Board sought industry opinion on whether or not the Agreement with Standards New Zealand for the electronic access to Standards should be retained.

The Board has fully considered the question of access to Standards and on behalf of the Board I am pleased to announce that the Agreement has been extended for a further year while the Board awaits the introduction of any new electricity regulations.

Following the introduction of any new regulations the Board will review the coverage of any future Agreement.

The new Agreement enables the holders of valid Board practising licences to have access to documents referenced in the Electricity Regulations 1997 over which Standards New Zealand have jurisdiction.

There will be no extra cost to practising licence holders in relation to the agreement.

The Agreement also applies to people deemed to be trainees as defined by the Electricity Act 1992 and who hold trainee identification cards issued by the Board. The cards are issued free of charge to people who can show they have a training agreement with either the Electrotechnology Industry Training Organisation (ETITO) or the Electricity Supply Industry Training Organisation (ESITO) and who have completed safety training. The safety training is the same as that required for the issuing of practising licences.

The new Agreement provides for the abovementioned holders of practising licences and trainees to have access through the Internet to Standards New Zealand's database to;

- view, download and print the electronic files of the documents covered by the Agreement,
- view, download and print the electronic files of any amendments to the documents covered by the JUNE 2005 agreement that may be published during the term of the Agreement,
- view, download and print the electronic files of any revisions (publication with new year) to the documents covered by the Agreement (with the exception of AS/NZS 3000 and AS/NZS 3760).

The documents covered by the agreement are as follows:

AS/NZS 3000:2000 SOFTBOUND	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3000: 2000 SOFTBOUND	A1 Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3000:2000 SOFTBOUND A2	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3000:2000 SOFTBOUND A3	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3000:2000 SOFTBOUND AMD A	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3001:2001	Electrical installations – Relocatable premises (including caravans and tents) and their site installations
AS/NZS 4417.2:2001	Specific requirements for electrical safety regulatory applications
AS/NZS 4417.2:2001	A1 Specific requirements for electrical safety regulatory applications
AS/NZS 3832:1998	Electrical installations – Cold-cathode illumination systems
NZS 3019:2004	Electrical installations – In-service testing
AS/NZS 3016:2002	Electrical installations – Electric security fences
AS/NZS 3008.1.2:1998	Typical New Zealand installation conditions
AS/NZS 3004:2002	Electrical installations – Marinas and pleasure craft at low-voltage
AS/NZS 3002:2002	Electrical installations – Shows and carnivals
AS/NZS 3012:2003	Electrical installations – Construction and demolition sites
AS/NZS 3760:2003	In-service safety inspection and testing of electrical equipment
NZS 3003.1:2003	Electrical installations – Patient areas of hospitals and medical and dental practices – Testing requirements
AS/NZS 2500:2004	Guide to the safe use of electricity in patient care
AS/NZS 3014:2003	Electrical installations – Electric fences
AS/NZS 3014:2003 APPENDIX A	Electrical installations – Electric fences
AS/NZS 3014:2003 APPENDIX B	Electrical installations – Electric fences
AS/NZS 3112:2004	Approval and test specification – Plugs and socket-outlets
AS/NZS 3350.2.98:1998	Safety of household and similar electrical appliances – Particular requirements – Humidifiers

AS/NZS 3350.2.98:1998 A1	Safety of household and similar electrical appliances – Particular requirements – Humidifiers
AS/NZS 3551:2004	Technical management programs for medical devices
AS/NZS 4249:1994	Electrical safety practices – Film, video and television sites
AS/NZS 4701:2000	Requirements for domestic electrical appliances and equipment for reconditioning or parts recycling
AS/NZS 60950:2000	Safety of information technology equipment
AS/NZS 60950:2000 A1	Safety of information technology equipment
AS/NZS 60479.1:2002	Effects of current on human beings and livestock – General aspects
AS/NZS 2381:1999	Electrical Equipment for explosive atmospheres – Selection, installation and maintenance - General requirements

Access to the Standards New Zealand database will be available via a PIN issued by the Board. As the documents covered by the Agreement are subject to copyright, PIN numbers will only be issued to the practising licence holders and trainees who agree to certain conditions.

How can the Standards be accessed

If you hold a valid Board practising licence or a trainee identification card issued by the Board and you have your file key go to the Board's website at www.ewrb.govt.nz

If you are unsure of your file key please telephone 0800 66 1000.

If you are a trainee you will only be issued with a file key if you have a trainee identification card. To obtain a trainee identification card you will need to apply to the Board for one.

When you reach www.ewrb.govt.nz go to "Public Register and Standards".

Select Electrical Register/EW Services/NZ Standards. A search screen will be displayed.

Carry out a quick or a standard search to retrieve the file that you require and display that file on the File Key page.

Enter your file key and select "Continue". A declaration screen will be displayed. This screen details the rules for access and use of the Standards New Zealand website.

Access the Standards covered by the Agreement.

To return to the Board's website select the appropriate option from the menu on the left of the screen.

Please note that while you are on the Standards New Zealand website you can also use other facilities on that site, however those facilities may be subject to restrictions.

Please contact Standards New Zealand if you require further information about that organisation's website facilities.

Please also remember that the Agreement with Standards New Zealand is a much valued one and as such all file keys issued by the Board should be treated in the same manner as PIN numbers for bank cards.

Proposed categories of registration

Issue 42 of ELECTRON contained details of the Board's proposals in relation to future categories of registration and, in summary, the Board proposes to;

- retain the categories of electrical inspector and electrician;
- amend the electrical service technician category
- retain the existing categories for line mechanic
- introduce line mechanic category for cable joining
- introduce a category of electrical engineer
- introduce a category of electrical mechanic
- introduce a category of tradesperson.

The full second discussion paper on proposed categories of registration can be viewed on the Board's website at www.ewrb.govt.nz

The Board would appreciate any comments about the implications and impact of the proposals in the discussion paper by 14 July 2008. Comments should be sent to;

The Registrar
Electrical Workers Registration Board
P O Box 10156
WELLINGTON
Or fax (04) 473 2395

Or by e-mail to trish.tchernegovski@dbh.govt.nz

Details on how to make a submission on the second discussion paper are contained in the paper.

Search is on for the best line mechanic team

The following article has been provided by the Electricity Supply Industry Training Organisation (ESITO)

A prize pack valued at around $500 will be won by the team with the highest score for the Testing to Ensure Safety event at this year's ESITO Line Mechanic Competition. This event, sponsored by the Board, is just one of nine events teams of line mechanics will have to complete during the three-day competition, which runs from October 14-16 at Mystery Creek Events Centre in Hamilton.

Each of the nine events showcases and tests a skill line mechanics rely on everyday to keep the power flowing into New Zealand homes and businesses. Although racing against the clock, teams must use safe work methods.

The winning team will take back to their company the National Cup. And they will share between them a prize pack valued at around $6000.

While there are some great prizes up for grabs, the real benefit of this competition is the learning that comes from observing different work practices.

In an industry where a mistake can mean critical injury or death, continually raising skill levels is important.

The ESITO Line Mechanic Competition is part of the Annual Connection.

Other Annual Connection events include a one-day competition for cable jointers, the ESITO Excellence Awards and a forum for assessors, moderators, training providers and people working in the electricity supply industry who have a responsibility or passion for staff training.

For more information about the ESITO Line Mechanic Competition and other Annual Connection events, visit www.esito.org.nz.

Summary of Reported Electrical and Gas Accidents 2007

The following article has been provided by the Ministry of Economic Development

The 2007 Summary of Reported Electrical and Gas Accidents (1 January 2007 to 31 December 2007) was published in April.

Since 2001, Energy Safety, which is part of the Ministry of Economic Development, has produced the Summary of Reported Electrical and Gas Accident on an annual basis.

The Summary aims to:

- provide a historic picture of electrical and gas accidents in New Zealand
- assist government and industry to identify the critical energy safety issues
- provide industry workers with information which will help to inform best safety practice
- monitor safety in New Zealand and compare it with internationally-aligned standards.

The Summary is one of the tools Energy Safety uses to encourage employers and workers to embrace safety guidelines, seek appropriate training and assess work practices regularly.

Achieving effective energy safety practices requires all of us – government, industry and the public, to work together, while also taking a share of responsibility for safe energy, safe people and safe property.

Accidents involving electrical workers

Below is a summary of the accidents that involved electrical workers.

During 2007:

- There were three fatal accidents, one involving an electrician and two involving line mechanics. The average annual fatality rate for electrical workers is 1.7 over the last 15 years.
- There were 30 notifiable injury-causing accidents harming 30 electrical workers. The average accident and injury level for the last 15 years is about 30 and 33 per year respectively.
- Over 50% (16) of electrical-worker accidents involved 400 volts, and 20% involved 230 volts (single phase). The average accident and injury level for the last 15 years is about 13 per year involving 400 volts and about eight involving 230 volts (single phase).
- Over 43% of electrical workers involved in accidents received a shock and a corresponding proportion received a burn injury, similar to last year.

General trends

- There has been a small decline in the number of notifiable accidents involving electrical workers over the last 15 years.
- During the last five years (2003-2007) there has been some reduction in accidents involving electricians compared with the initial five years (1993-1997), from about 15 to about 10 annually.
- In the last five years, there has been a significant reduction in electrical accidents involving line mechanics, from an average of about 16 per year from 1993-1997 to about nine per year from 2003-2007. However, there has been an increase in the number of fatalities involving line mechanics. There have been 12 line-mechanic fatalities in the last 15 years, six in the last five years and three each in the previous five-year period (1993-1997 and 1998-2002).
- During the last five years there has been a significant rise (from about two to about six annually) in accidents involving trainees (trainee electricians and trainee line mechanics), compared with the initial five years (1993-1997).

The full 2007 Summary of Reported Electrical and Gas Accidents is available as a PDF on the Energy Safety website – www.energysafety.govt.nz.

A limited number of printed copies are available, to request a copy please email info@energysafety.govt.nz or phone 0508 377 463.