



Electricity Engineers'  
Association

**HEALTH &  
SAFETY**

# 2023 Health and Safety Workshop

HEALTH AND SAFETY WORKSHOP—2023  
TUESDAY 10TH AND WEDNESDAY 11TH OCTOBER



**RESILIENCE**

TOGETHER WE OVERCOME

**EEA.CO.NZ**



# 2023 / 2024 Work Programme

## *Contents*

*Knowledge Network Programme*

*Industry Engagement*

*Work Programme*

*Other Activities*

*NCLW*



Electricity Engineers'  
Association

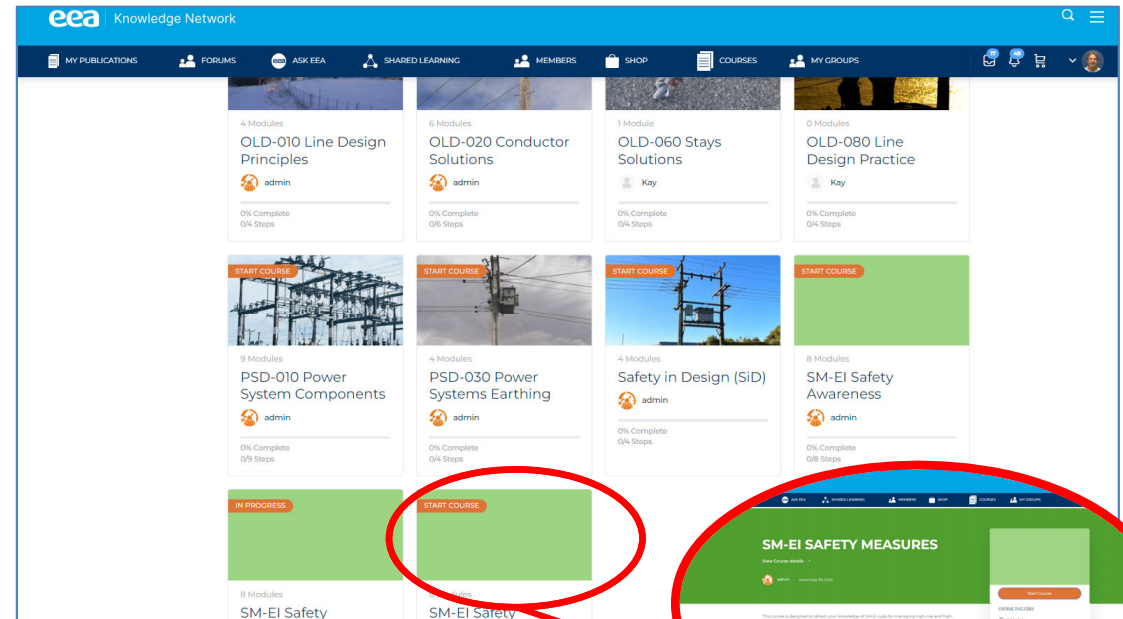


# 2023 / 2024 Work Programme

## Knowledge Network Programme – SM-EI Assessment / Training modules

Where are we at:

- *Developed (3 of 6)*
- *UAT testing completed*
- *Feedback from UAT, being collated*
- *Own company LMS or online via EEA KN*
- *Rollout TBC*



Electricity Engineers' Association

# 2023 / 2024 Work Programme

## Knowledge Network Programme – Guide Digitisation

Where are we at:

- 10 per year
- Working on structure for digitisation
- Review cycle will fall in to standard guide review
- Benefits

The screenshot shows the 'SHOP FOR MORE' website interface. At the top, there are navigation links for 'Setting Automatic Voltage Regulation equipment - Technical Note' and 'Use, Inspection and Testing of Low Voltage Portable Equipment (Guide)'. Below this is the 'SHOP FOR MORE' logo. The main content area is divided into two sections: 'HEALTH & SAFETY - (Safety Standards and Procedures Group)' and 'LINE MECHANICS AND CABLE JOINTERS - (Special Interest Group)'. The 'HEALTH & SAFETY' section contains a grid of 18 guide tiles. One tile, 'Testing of Service Connected to Premises', is highlighted with a red circle. Below the grid, there is a preview of the 'Safe Work with Cables (Guide)' digital edition, showing a technical diagram of a power line with various components labeled.

The screenshot shows a 'WORKSAFE' News and media article. The title is 'Serious incidents resulting from the use of live polarity testing'. The article text is partially visible, mentioning 'Two serious incidents occurred within a month of each other when the electrical systems involved required a live polarity testing method.' The article is part of a 'News and media' section on the WORKSAFE website.

# 2023 / 2024 Work Programme

## Knowledge Network Programme – LMCJ Handbook

Where are we at:

- *SiG worked through most chapters*
- *Technical writers drafting material*
- *Conversion to digital*
- *To industry for consultation (review)*
- *Rollout TBC*

**Chapter 5 - Overhead Line Construction and Maintenance**

**1.4.13 Conductor tables**

Conductor tables detail important specification data for common conductor types. The first conductors used in New Zealand were specified by the British Standard Wire Gauge (SWG) using imperial inches, which you may still see references to in some conductor tables. Given the numerous combinations of materials, plus variations in stranding and diameter, naming themes are often used to specify particular conductor versions. Some are specified by current local Australian/New Zealand standards, others by Canadian, British or historic standards.

Conductor description	Stranding number	Wire diameter (mm)	Actual area (mm <sup>2</sup> )	Nominal equivalent metric size (mm <sup>2</sup> )	Overall diameter (mm)
7/18	7/0.044	7	1.118	6.87	6.00
10SWG	10/128	1	3.251	8.35	-
7/17	7/0.052	7	1.321	9.62	10.00
8SWG	10/160	1	4.064	12.95	-
7/16	7/0.064	7	1.626	14.52	16.00
3/12	3/0.104	3	2.642	16.62	-
7/14	7/0.083	7	2.108	24.63	25.00
7/12	7/0.104	7	2.642	38.70	-
19/16	19/0.064	19	1.626	39.82	35.00
19/15	19/0.072	19	1.829	49.27	50.00
7/10	7/0.128	7	3.251	57.82	-
19/14	19/0.083	19	2.032	66.48	70.00
37/16	37/0.064	37	1.626	76.98	-
37/15	37/0.072	37	1.829	95.38	-
37/14	37/0.083	37	2.032	-	-
37/13	37/0.104	37	3.251	-	-

**Conductor tables**

**Dlex Aerial Catalogue (Nexans)**

### Low Voltage Aerial Bundled Cables

AS/NZS 3500 specifies the requirements of Aerial Bundled Cables with XLPE insulation for use up to 10 kV as a result of considerable deliberation by the standards committees and manufacturers.

**Conductor**  
All four conductors are manufactured from high conductivity high purity aluminium alloy (705) and an overall copper composite. Based on extensive development testing and production research, the value of the conductor is specially treated to improve adhesion of the insulation to the conductor. This is important because the insulator also resin is compliant provided by the 'self-cure' or 'hot-cure' processes the conductor and the insulation.

**Insulation**  
The insulation consists of a XLPE cross linked polyethylene with a minimum carbon black to provide additional protection from ultraviolet radiation. This material is for exposure to PVC, in the ability to withstand high operating temperatures. It is more robust during high temperature processing.

**The cores**  
Each phase core is insulated with nominal 1.2 to 3 and with 0.5 to 1.5 mm dielectric thickness. The cores are equally spaced (dielectric stress) and the identification of the phase and the metallic cores is provided by the identification means, using colored markings to facilitate identification of the phase and the metallic cores by the installer. To facilitate identification of the phase and the metallic cores, the identification means, using colored markings, is applied according to the requirements of the relevant standards.



Electricity Engineers' Association

# 2023 / 2024 Work Programme

## Industry Engagement

### Where are we at:

- *Masterclasses*
- *Annual Connection*
- *Member company visits*
  - *SM-EI, Guides*
  - *WIFM*

### What do you need from us?



**HEALTH & SAFETY**

**Join us! H&S Masterclass: Thursday 16 February**

The second in our series of four Masterclasses will be held on Thursday 16 February 2023 (online) from 1pm-3pm.

This Masterclass has been designed to support the release and implementation of the EEA guide on the *Control of Work in Workshops, Depots, and the Field (2021)*. An excellent lineup of presenters from within the industry and from WorkSafe will be leading the discussion, including:

- Graeme Johnson - Chair of the SSPG, and HSEQ Technical Manager at Electric Ltd.
- Garry Dykes - Technical Specialist at Unison.
- Robbie Skerten - Technical, Safety, and Quality Coach at Mainpower.
- Rick Kristal - Asset Manager at Contact Energy Hydro.
- Carl Llewellyn - Team Leader (Acting) at WorkSafe (Energy Safety).

[Register now](#) via the News and Events page on the EEA website.

**Note:**

- If you have previously registered for the Masterclass series, you do not need to do anything other than saving the date! A meeting invitation will be sent to you shortly.
- The next Masterclass will be on the [EEA Auditing Guide - Permit and Minor Works Management Systems](#), being held on 20 April 2023.
- Sessions will not be recorded, to ensure a safe environment for open and honest discussion.



# 2023 / 2024 Work Programme

## Work Programme

### Where are we at:

- *LV Bonding*
- *Specialist working groups*
- *Update to Connections guide*
- *LOTO*
- *Other guide reviews*
  - *Guide to Supervision*
  - *Principles for Permit Areas, Marking of equipment*



Electricity Engineers' Association



<p><b>Traffic Management Practice Notes</b></p> <p>This project is dependent on Waka Kotahi publishing (even in draft) its new guide for Temporary Traffic Management.</p> <p>The intent is to scope the need for practice notes, develop a plan to deliver these and publish as many as is feasible this year. The ones we anticipate will be required as a priority are:</p> <ul style="list-style-type: none"> <li>➤ Fault response (non-emergency)</li> <li>➤ Emergency Response</li> <li>➤ Condition assessment surveyors</li> </ul> <p><small>Note: Industry working group being established</small></p>	P1	Q4
<p><b>Lock Out / Tag Out – Establishing Good Practice in Industry</b></p> <p>It has been long noted that industry practices are mixed on the subject, with some companies seeing private locks as a minimum requirement and others seeing it as a step too far. This project aims to establish what is required to ensure safety as far as is reasonably practicable, and then publish the findings in a suitable form.</p> <p>A high engagement approach will be used to support the process including any implementation.</p>	P1	Q4
<p><b>Fatigue (02/05/23)</b></p> <p>Working with Matt Sadgrove, Delta on industry guidance around fatigue based on his Masters paper research</p>	P*	Q4
<ul style="list-style-type: none"> <li>➤ SM-EI review (ongoing) – monthly review meeting of SM-EI rules</li> </ul>	P1	
<ul style="list-style-type: none"> <li>➤ <del>Use of helicopters in power line work, including a section on drones</del> Engagement of 3<sup>rd</sup> party required (on hold at request of EEA)</li> </ul>	P1	Q1
<ul style="list-style-type: none"> <li>➤ <del>Guide for HV SWER Systems</del> Engagement of 3<sup>rd</sup> party required (on hold at request of EEA)</li> </ul>	P1	Q2
<ul style="list-style-type: none"> <li>➤ Guide to Supervision for Health and Safety</li> </ul>	P1	Q3
<ul style="list-style-type: none"> <li>➤ Marking of equipment for Access for work</li> <li>➤ Principles for Permit Areas</li> </ul>	P1	Q2
<ul style="list-style-type: none"> <li>➤ LV bonds review of SM-EI rules and guides to update language to LV bonds (02/05/23)</li> </ul>		Complete
<ul style="list-style-type: none"> <li>➤ Testing of Service Connections to Premises Guide (27/06/23) Update due to WS safety alert</li> </ul>		Complete

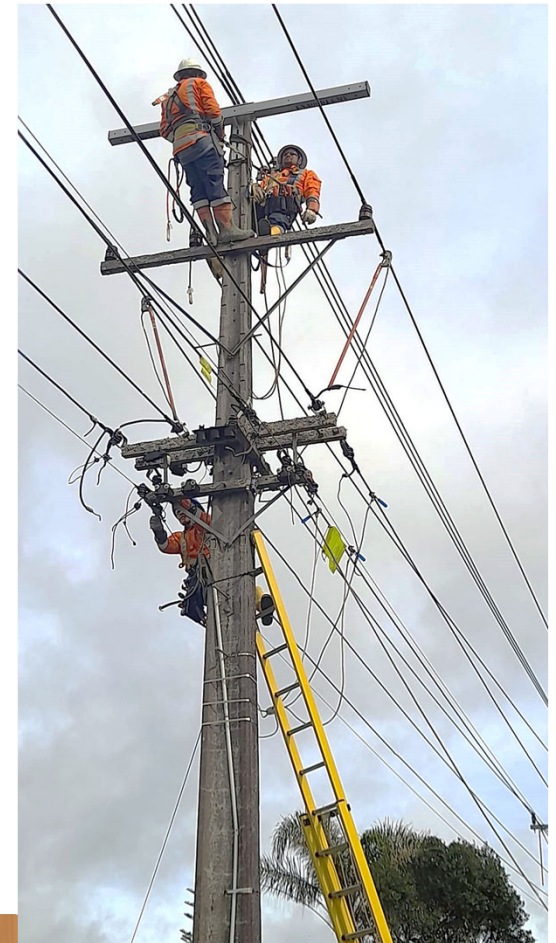
# 2023 / 2024 Work Programme

## *Other activities*

### *Where are we at:*

- *SF-015 (AS/NZS 1891.4)*
- *SM-EI streamlining*
- *SM-EI investigating an APP solution*

### ***What do you need from us?***





# NCLW update

## *NCLW*

### *Where are we at:*

- *Succession plan being developed*
- *AU live line forum (May / November)*
- *Feedback from conference*
  - *NCLW need to be better at communicating*
- *Training pathways*



Electricity Engineers'  
Association





Electricity Engineers'  
Association

**HEALTH &  
SAFETY**

# Questions?

HEALTH AND SAFETY WORKSHOP—2023  
TUESDAY 10TH AND WEDNESDAY 11TH OCTOBER



**RESILIENCE**

TOGETHER WE OVERCOME

**EEA.CO.NZ**

