



## SUMMARY OF KEY TOPICS

The following is a selection of key topics covered in this Newsletter and a brief description of the topic. Further detail is provided in the Newsletter.

### EEA COMMITTEES PROVIDING SAFETY LEADERSHIP

Updates on the SSPG, NCLW and AMG are provided. [\(SEE SECTION 2\)](#)

### SSPG BUSINESS PLAN

The SSPG has approved a Business Plan for 2017/18. [\(SEE SECTION 3\)](#)

### PRIORITY RISK AREAS

The priority risks identified are to be compared with SM-EI and Guides coverage to ensure all are adequately addressed. [\(SEE SECTION 3.2\)](#)

### NEW AND REVISED GUIDES

The EEA has published two revised Guides together with an ESI Practice Note for ECP 46. [\(SEE SECTION 4.3\)](#)

- Guide to Live LV Electrical Work
- Guide for the Assessment of Work Methods to Undertake High Voltage Overhead Line Work
- ECP 46 High Voltage Live Line Work Industry Practice Note

### DRAFT GUIDES

The EEA has prepared drafts of revised and new Guides, which are yet to go to industry consultation. [\(SEE SECTION 4.2\)](#)

- Safe Work on Cables
- Supervision for Health and Safety
- Overlapping Duties Under the HSW Act
- Arc Flash
- Use of Helicopters

### TEMPLATE FOR SAFETY ALERTS

The EEA has published a new template for advising Safety Alerts [\(SEE SECTION 4.4\)](#)

### WORKSHOPS

Annual Health and Safety Workshop dates. [\(SEE SECTION 5.1\)](#)

Live Work Workshops to be held. [\(SEE SECTION 5.2\)](#)

Regional workshops were held in March to cover a range of SM-EI related topics. [\(SEE SECTION 5.3\)](#)

### CLASSES OF REGISTRATION

The EWRB has *Gazetted* revisions to the classes of registration for electrical workers [\(SEE SECTION 6.3\)](#)

### INTERPRETATIONS AND CLARIFICATIONS

A number of requests for interpretation or clarification of SM-EI requirements have been received. A summary of responses is contained in [SECTION 8.2](#).

### SWITCHING INCIDENTS FEEDBACK

The SSPG is seeking feedback on switching incidents. [\(SEE SECTION 9\)](#)

### WORK MANAGEMENT SYSTEM FOR LV WORK

The SSPG is considering the introduction of a work management system for LV work. Asset owners are encouraged to ensure drawings and field marking of equipment are current. [\(SEE SECTION 10\)](#)

### VOLTAGE REGULATORS

The SSPG has been requested to consider inclusion of a rule on voltage regulators in SM-EI. A proposed draft rule is provided. [\(SEE SECTION 11\)](#)

### WORKING ON CROSS-ARMS

A network company has provided a work method they use for working on cross-arms. [\(SEE SECTION 12\)](#)

### ASBESTOS REMOVAL TRAINING

WorkSafe has provided advice on the training of asbestos removal workers. [\(SEE SECTION 13\)](#)

**ALWAYS CARRY OUT THE FOLLOWING WHEN THEY APPLY TO THE WORK TO BE PREFORMED:**

- ① TEST for Safety
- ② ISOLATE, Prove De-Energised & Earth HV equipment prior to work
- ③ IMPLEMENT or apply safe work practices to live LV work
- ④ ENSURE protection from Voltage Difference
- ⑤ DETERMINE poles or pole structures are safe to climb
- ⑥ ENSURE fall arrest or restraint

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## ALWAYS CARRY OUT THE FOLLOWING WHEN THEY APPLY TO THE WORK TO BE PREFORMED:

- |  |  |
|--|--|
| ① TEST for Safety  | ② ISOLATE, Prove De-Energised & Earth HV equipment prior to work |
| ③ IMPLEMENT or apply safe work practices to live LV work | ④ ENSURE protection from Voltage Difference                      |
| ⑤ DETERMINE poles or pole structures are safe to climb   | ⑥ ENSURE fall arrest or restraint                                |

### 1. INTRODUCTION

This Safety Rules Newsletter provides an update on safety topics and safety rules requirements, issues and interpretations. This and previous Newsletters are available on the EEA at [Safety Rules Newsletter](#).

The Newsletter is a communication channel between the EEA and the industry practitioners who use the safety rules (SM-EI). All users of SM-EI should be provided with access to or a copy of this Newsletter.

Any questions, suggestions and points for consideration are always welcome and should be sent to [admin@eea.co.nz](mailto:admin@eea.co.nz).

A [keyword index](#) for this and previous Newsletters is available on the EEA website.

### 2. EEA COMMITTEES PROVIDING SAFETY LEADERSHIP

#### 2.1 INDUSTRY SAFETY LEADERS

The EEA President and the Executive Director have continued their programme to meet with industry senior executives to discuss safety leadership. The meetings are to implement a decision of the EEA Executive Committee to facilitate and support the recognition of industry Safety Leaders, which will enable a collective focus on significantly improving safety performance across the industry (better than the WorkSafe targets) and provide a pan-industry framework to support the six Health and Safety at Work Act requirements of industry duty holders.

#### 2.2 SAFETY STANDARDS AND PROCEDURES GROUP (SSPG)

Key elements of the SSPG Terms of Reference and a list of members is on the EEA website at [SSPG](#).

The SSPG has prepared a Business Plan for 2017-2018 as set out in section 3.1 below.

All enquiries regarding safety and safety rules issues should be made to the EEA at [admin@eea.co.nz](mailto:admin@eea.co.nz).

#### 2.3 NATIONAL COMMITTEE ON LIVE WORK (NCLW)

The role of the National Committee on Live Work (NCLW) is to be the authoritative industry body for discussion and resolution of national issues affecting live line work and live work on networks in the electricity supply industry.

The EEA Guide for the Selection of Work Methods to Undertake High Voltage Overhead Line Work has been recently issued (available via the EEA website at [Publications](#)) and the committee will work closely with the SSPG to develop a similar document for Low Voltage work. In light of this, the committee is to be reconstituted to ensure that it has the right expertise.

The EEA has undertaken a review of ECP46 and 'ECP46 High Voltage Live Line Work-Industry Practice Note 2017' is a result of the review and sets out proposed improvements and amendments to ECP46. This 'Industry Practice Note 2017' has recently been issued and is available via the EEA website.

The Terms of Reference and membership of the NCLW are to be reviewed to increase its LV expertise.

#### 2.4 ASSET MANAGEMENT GROUP (AMG)

The role of the Asset Management Group (AMG) is to work with the electricity supply industry to facilitate, coordinate and lead the enhancement of asset management planning, practices, knowledge and performance through self-regulation, recognised systems and sound engineering practice principles. A key objective of the AMG is to provide a working level forum delivering practical advice and guidance to improve industry understanding, support decision making, planning and the management of issues around asset management.

The second Asset Management Training Course was held on the 4<sup>th</sup> and 5<sup>th</sup> April. The next Asset Management Training Course is booked for 7<sup>th</sup> and 8<sup>th</sup> August.

A two day Safety in Design Course based on the EEA guide is in development.

For further information on EEA Asset Management Group activities contact Juliet Clendon at [juliet@eea.co.nz](mailto:juliet@eea.co.nz).

### 3. EEA SAFETY INITIATIVES

#### 3.1 SSPG BUSINESS PLAN

The key outputs for the SSPG, as per its Business Plan, over the next 12 months are:

1. Develop, consult and publish ESI framework for the selection of LV work method, including live work, and produce supporting guidance and documentation.
2. Research and identify the potential work-related health issues in the ESI and develop strategies to effectively manage the risks.
3. Evaluate the potential risks arising from switching errors in the ESI and develop effective strategies to manage them.
4. ESI Priority H&S Risks: oversee work to determine that the identified priority risks are adequately covered in the SM-EI and existing guides and to develop further guidance and advice where shortfalls are identified.
5. Develop meaningful leading indicators to more effectively measure ESI H&S performance.
6. Develop standard templates to encourage consistent sharing of learning from incidents and near misses.
7. Manage the production of supporting Guidance; including:
  - Supervision for Health & Safety
  - Safe work with cables
  - Guide on Overlapping Duties under the Health and Safety at Work Act

#### 3.2 INDUSTRY PRIORITY RISK AREAS

In line with the EEA’s role in supporting Directors, CEOs and other senior officers in the ESI to discharge their due diligence duties under the Health & Safety at Work Act, the EEA is developing a database of the priority H&S risks faced by the ESI. The purpose is to demonstrate that the industry has identified and understands its common safety critical “raw” risks (i.e. before controls are in place). It will also help to ensure that those risks are being adequately addressed at an industry level in key industry documents - the Safety Manual - Electricity Industry (SM-EI) and supporting EEA Guides; such that the residual risks are significantly reduced. The information will also assist in ensuring that the EEA guidance issued to date and in the future provides a common understanding of these risks and what may be considered as appropriate levels of control.

Based on responses to the survey, the “top ten” are:

- |                    |                       |                        |                    |                         |
|--------------------|-----------------------|------------------------|--------------------|-------------------------|
| 1. “Electricity”   | 2. Working at Height  | 3. Driving             | 4. Asset Failure   | 5. Mobile Powered Plant |
| 6. Falling objects | 7. Traffic management | 8. Hazardous materials | 9. Confined spaces | 10. Asbestos            |

*Note: the above terms are short hand only – it is noted that some are listed as “hazards”.*

#### Other risk areas identified

- |                        |                     |           |                         |
|------------------------|---------------------|-----------|-------------------------|
| — Manual Handling      | — Lone working      | — Fatigue | — Contractor management |
| — Operator complacency | — Overlapping PCBUs | — Stress  | — Ergonomics            |

The next steps are to break down the “electricity” risk area into a manageable list of more specific risks (e.g. arc flash) and then, along with the other identified 9 risk areas -

- Research current control measures as detailed in SM-EI and EEA Guides.
- Where gaps in the industry guides are identified, send out a survey requesting details of control measures employed by companies to address those specific risks

#### 3.3 BACK TO BASICS CAMPAIGN UPDATE

The ‘non-negotiable safety requirements’ adopted by the EEA are listed on the inside cover of the SM-EI books, being;

- Test for safety
- Isolate, prove de-energised and earth HV equipment prior to work
- Implement or apply safe work practices to live LV work
- Ensure protection from voltage difference
- Determine poles or pole structures are safe to climb
- Ensure fall arrest or restraint

① TEST for Safety

② ISOLATE, Prove De-Energised & Earth HV equipment prior to work

③ IMPLEMENT or apply safe work practices to live LV work

④ ENSURE protection from Voltage Difference

⑤ DETERMINE poles or pole structures are safe to climb

⑥ ENSURE fall arrest or restraint

There are now dedicated pages on the EEA website and it is intended to provide links to EEA member company activities that support the initiative. Available at [‘Back to Basics’](#).

## 4. EEA TECHNICAL GUIDES AND ADVISORY BULLETINS

### 4.1 PUBLISHED GUIDES AND ADVISORY BULLETINS

EEA Guides convey principles and minimum accepted practices as a means of conformance to regulatory and SM-EI requirements. Employers are responsible for providing a comprehensive work management system that identifies and controls hazards and risks, details safe work procedures, and that ensures employees are competent, equipped and adequately supervised to carry these out with safe outcomes. EEA Guides are suitable for information, as a training resource, and for the review or development of employer work procedures specific to the work management system. EEA Guides are not intended as specific work procedures in their own right, although in certain circumstances they may state that they may be used as a procedure. Published Guides are on the EEA website at [Publications](#).

### 4.2 DRAFT AND PROPOSED GUIDES—INCLUDING REVISIONS

#### Draft Guides

##### Guide for Safe Work on Cables

A draft of the Guide for Safe Work on Cables is currently being reviewed by the SSPG and is near completion. It will be released for industry consultation in July.

##### Guide for Supervision for Safety

The Guide for Supervision for Safety is currently being considered by the SSPG. Publication for consultation is expected later in 2017.

##### Guide on Overlapping Duties under the Health and Safety at Work Act

A Guide on Overlapping Duties Under the Health and Safety at Work Act is being drafted by the EEA in association with the SSPG. A first draft has been prepared and reviewed and drafting will continue.

##### Arc Flash Guide

The Asset Management Group has commenced work on drafting of the revised Arc Flash Guide.

##### Use of Helicopters in Power Company Work

Feedback on Use of Helicopters in Power Company Work has been summarized by the AMG and is awaiting specialist review.

#### Proposed Guides

The EEA, SSPG and AMG identify in their Strategic Plan and current work-plan the Guides and publications which are a priority for review or preparation (See 3.1 above).

##### Low Voltage Work

A workstream to prepare guidance on decision making when considering live or de-energised LV work plus a work management system for LV work has been established.

##### Overhead Line Conductor Condition Assessment

The AMG has created an industry working group to discuss the issue of overhead line condition assessment and scope a possible work programme for the EEA to carry out to provide support and guidance to the industry on overhead line conductor condition assessment.

In the initial phase of the group will meet to:

- Analyse the results of the 2015 Overhead Line Conductor Survey
- Share their own knowledge on conductor condition assessment
- Investigate developments overseas in the assessment of conductor condition
- Produce a report outlining the state of conductor asset management in New Zealand

Should the need be identified the group may move onto a second phase and develop an EEA Guide on the topic.

### 4.3 RECENTLY RELEASED OR UPDATED GUIDES OR ADVISORY BULLETINS

The EEA has published a revised Guide associated with live HV work, a Practice Note for ECP 46, and a revised Guide for live LV work since the previous Newsletter.

#### Guide for the Assessment of Work Methods to Undertake High Voltage Overhead Line Work (May 2017)

The EEA has published the Guide for the Assessment of Work Methods to Undertake High Voltage Overhead Line Work (May 2017). The new Guide amends and replaces the existing 'Guide for the Selection of Work Methods to Undertake High Voltage Overhead Line Work' (September 2016).

Since the release of the Guide in September 2016 further work was done to better align the new Guide with the requirements of the Health and Safety at Work Act 2015 (the Act); and to consider comments from Worksafe, network and contracting companies and industry workshops held in March 2017. The title of the Guide has also been amended to reflect the strong focus upon risk assessment.

The key changes have been to align wording with the Act; update the list of legislative and overseas reference documents; and to amend the example of a risk assessment flowchart.

The Guide has been prepared to assist the electricity supply industry apply a structured approach to determine whether a de-energised work method is reasonably practicable or a live line work method is consistent with the requirements of the Act. The Guide will be regularly monitored and reviewed to look at areas for further improvement in the management of High Voltage Line Work in the industry. Feedback from all interested parties is encouraged and should be sent to [admin@eea.co.nz](mailto:admin@eea.co.nz).

#### ECP 46 High Voltage Live Line Work Industry Practice Note

The EEA has published a Practice Note for ECP 46 Code of Practice for High Voltage Live Line Work, which is available at [EEA Publications](#).

Since its approval in 2003 the EEA has been monitoring the application of ECP 46 within the industry. NZECP46 sets out the minimum standards for HV live line techniques for Glove and Barrier; Barehand; or Stick. ECP46 is mandated by Regulation 102 of the Electricity (Safety) Regulations 2010.

Given that the ECP has not been updated for over a decade and the importance of industry keeping up to date on key health and safety matters, the EEA National Committee on Live Work (NCLW) in consultation with industry began a review process in 2014/2015 and identified a number of areas of possible change to improve practices and alignment with updated standards. These are included in the Practice Note. Worksafe were part of the NCLW review group that considered industry comment.

The purpose of the Practice Note is to inform industry of good practice above the standard of ECP 46. It recommends supplements, clarifies and provides updated information on good practice to enhance safety and covers changes in safety practices on HV live work and changes in the Standards that relate to live work processes, tools and equipment.

An overview of the Practice Note was provided at the EEA Safety Workshops in March 2017 and a summary of the areas of changes was included in the presentation, available on the EEA website.

The EEA is to facilitate two meetings to support the Practice Note implementation. (See section 5.2)

EEA would appreciate any feedback on the Practice Note which should be sent to [admin@eea.co.nz](mailto:admin@eea.co.nz).

#### Guide to Live LV Electrical Work

The Guide to Live LV Electrical Work was first published in March 2005, was reviewed in 2013, and again in 2016/2017. The principle amendments to the Guide have arisen from new or amended provisions in SM-EI 2015, particularly to rule 3.717. Rule 3.717, for example, now includes a requirement for a minor works management system whenever live LV work is performed. Other specific amendments include:

- Inclusion of WorkSafe advice that AS/NZS 4836 does not apply to works via Electricity (Safety) Regulation 100
- Revised definition for 'secondary point of contact'
- Work planning and control section revised to be consistent with SM-EI and new workplace legislation
- Section 6 now requires that when joining cables the neutral/earth must be the first cable connected.

The Guide will again be reviewed as part of a review of all work on LV, both live and de-energised, and the preparation of additional guidance on such work.

#### 4.4 ACCIDENT AND INCIDENT NOTICES

##### Reported Events

Reports of accidents and incidents are [posted](#) on the EEA website. Readers are reminded to check the EEA web site periodically for new notices (access through an EEA member is now required); 39 notices from NZ have been posted to date for 2017, plus 20 from the UK. Readers need to ensure they review the posted reports to identify any hazards that affect their assets or methods of working.

##### Reporting New Events

To be able to publish accident and incident notices the EEA needs to be notified of their occurrence. Employers are encouraged to ensure that they are providing summary information to the EEA so that relevant information can be disseminated to industry. Employer identification is not published unless by agreement, and the EEA website limits access to the reports to members only.

The EEA has prepared a [Safety Alert Reporting Template](#), which - after review by the SSPG and industry consultation - is now available for industry use. To date Members have shared their safety alerts by filling in an online Incident Reporting form, or by forwarding their electronic alerts to [admin@eea.co.nz](mailto:admin@eea.co.nz). With the development of the new Word template document, and through the use of dropdown lists and check box options, it is intended to standardise and facilitate high-level information sharing and analysis of serious injury and fatality exposure, significant near misses and other important safety observations in the industry. Information sought in the template includes event type, harm exposure, event mechanism, contributing factors, actions and recommendations.

The use of the new template is optional and does not prevent Members from sharing their safety information by email or through the [online form](#) as they have been doing in the past. However, everyone is encouraged to [refer to the template](#) definitions to identify the level of details the EEA would ideally seek for consistent industry analysis.

## 5. WORKSHOPS & COURSES

### 5.1 EEA SAFETY WORKSHOP

The EEA Safety Workshop for 2017 will be held at Mac's Function Centre in Wellington on 4<sup>th</sup> and 5<sup>th</sup> October. More information will shortly be available on the EEA website at [Upcoming Events](#).

### 5.2 LIVE WORK WORKSHOPS

A number of workshops are planned in support of the ECP 46 Practice Note. Dates and venues are currently being organised. Full details will be available on the EEA website by the end of June.

### 5.3 SM-EI WORKSHOPS

The EEA facilitated [five workshops](#) in March (Mosgiel, Rangiora, Huntly, New Plymouth and Palmerston North) to discuss and consult on key safety topics associated with SM-EI, as well as topics on live work. The workshops were well attended and produced valuable feedback on a range of topics.

As well as feedback on managing live work (HV and LV), feedback included;

#### Work at Height

- Work above verandas remains an issue. One company is using their truck loader cranes with attachment to the skyhook.
- For work on crossarms, solutions being used include;
  - pole step ladders
  - anchor points/eyes fixed to top of pole
- For work on transformers, solutions being used or considered included;
  - Fitting of maypoles
  - Step platforms

#### Lone Working

- A company has prepared a list of tasks prepared that should not be performed alone
- Need to link lone working to fatigue management
- Industry guidance needed
- Driving is a significant issue for lone working
- A company has mapped areas with no cell phone coverage and these require minimum of 2 persons
- One employer does not send lone workers to a security breach.



## 5.4 ICAM TRAINING

The next ICAM Lead Investigators course will be held on 27<sup>th</sup> and 28<sup>th</sup> July in Hamilton. [Booking details](#) are available on the EEA website.

## 6. LEGISLATION AND REGULATORY UPDATE

### 6.1 HEALTH & SAFETY AT WORK ACT

Since the commencement of the Health and Safety at Work Act on April 4<sup>th</sup> last year there has been no amendment. WorkSafe has periodically introduced guidance material, which is available on the WorkSafe website.

### 6.2 HSW REGULATIONS

The proposed Health and Safety at Work (Hazardous Substances) Regulations which were consulted on early in 2016 are still expected to come into force in late 2017.

Further draft regulations have been expected for consultation but none have been released.

### 6.3 CLASSES OF REGISTRATION FOR ELECTRICAL WORKERS

The EWRB has Gazetted revised classes of registration for electrical workers, with accompanying requirements for registration and the type of PEW each class of registration may perform. The requirements come into effect on the 27<sup>th</sup> October 2017 and the full notice is available at [Gazette No.45](#).

Of note is that the single current Line Mechanic class is divided into five classes, being;

- Transmission Line Mechanic
- Traction Line Mechanic
- Distribution Line Mechanic
- Distribution Line Mechanic (Endorsed)
- Substation Maintainer

The Executive Summary of the EWRB Third Discussion Paper (August 2014) titled Classes of Registration, Requirements/Standards for Registration and Associated Limits of Work advises that the EWRB intends to withdraw the existing registration class of line mechanic and replace it with three new registration classes being:

- transmission line mechanic
- rail line mechanic
- distribution line mechanic; and
  - define the limits of work for the line mechanic registration classes;
  - extend the limits of work for the registration class of distribution line mechanic;
  - introduce an endorsement to the registration class of distribution line mechanic which will permit the replacement of specific fittings and;
  - introduce a registration class of substation maintainer.

The EWRB discussion paper also advised that the transitional provisions would include that all persons at present registered in the registration class of Line Mechanic will be re-registered in one (or more) of the new registration classes of Line Mechanic based on either previously held transmission, distribution or traction Line Mechanic limitations or evidence of experience held by the Board.

The implications of the changes will need to be evaluated by all licensed persons, particularly Line Mechanics, and their employers as the changes come into effect in October. Line Mechanics will need to determine which speciality (or specialities) they will pursue.

## 7. GUIDES ISSUED BY REGULATORS AND OTHER PARTIES

### 7.1 GOOD PRACTICE GUIDELINES (GPG) FOR SCAFFOLDING

WorkSafe has published the Good Practice Guidelines for Scaffolding in NZ which provide advice on the safe design, use, and maintenance of scaffolding. The guidelines set out WorkSafe's expectations about how to comply with health and safety law, including the Health and Safety at Work Act 2015 and the Health and Safety in Employment Regulations 1995.



**ALWAYS CARRY OUT THE FOLLOWING WHEN THEY APPLY TO THE WORK TO BE PREFORMED:**

- |  |  |
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**7.2 ENVIRONMENTAL PROTECTION AUTHORITY (EPA) CODE OF PRACTICE FOR PCBs**

The EPA has published a [Code of Practice](#) for the Safe Management of PCBs. The Code was first published in December 1988 by the Department of Health, and was revised by the EPA in February 2017.

**8. SM-EI****8.1 SM-EI GENERAL**

An electronic version of SM-EI is available. Details can be found on the EEA website at [SM-EI Electronic Version](#).

**8.2 INTERPRETATIONS AND CLARIFICATIONS**

One formal interpretation relating to SM-EI matters has been issued since the previous Newsletter (Formal interpretations are posted on the EEA website at [SM-EI Interpretations](#)). In addition, a number of requests for comment or guidance have been received and responded to. A summary of the interpretations, and the advice provided, is as follows;

**INTERPRETATIONS****MADs for Scaffolding Erection and Use****Background**

Clarification was requested of the applicable minimum approach distance (MAD) requirements for the erection and use of scaffolding in the vicinity of 220kV bare overhead switchyard conductors.

The origin of the request was the scaffolding company engaged by an ESI company, who is making reference to the WorkSafe Good Practice Guidelines for Scaffolding in NZ, particularly clause 5.3. Clause 5.3 of the Guidelines states that the MAD for 220kV is 6 metres and cannot be reduced. The source of the MAD information in the Guideline is given as ECP 34.

**SSPG Response**

The SSPG considers that with respect to MADs for work erecting and working from scaffolding within ESI property and under ESI instruction;

- The default MAD for all persons in all circumstances is ECP 34 clause 9.2.1, i.e. 4m for 110 kV and below and 6m for >110kV.
- Where the asset owner has given consent to the scaffolding company to work in the vicinity of its conductors the MAD for persons in Table 9 of ECP 34 may apply (identical MADs to Table 5 in the Guidelines)
- Where the scaffolding erection is for the ESI asset owner and on the asset owner's site, SM-EI applies. Workers such as scaffolders carrying out work on an ESI site are expected to be working to SM-EI Parts 1&2, and should be trained in SM-EI and have their competence assessed accordingly. Where this is the case the MAD's in SM-EI rule 2.1201 may apply, i.e. the MAD for 220 kV could be reduced to 4m. This provision modifies the requirements of the WorkSafe Guideline provided the training, competence and assessment criteria are met.
- Section 3 of ECP 34 specifies the distance that the erected scaffold, as a structure, must be from live conductors. This requirement is not addressed in the WorkSafe Guideline, but is a requirement that must be complied with in accordance with ECP 34. Distances are based on circumstances where engineering advice is not obtained and circumstances where it is.

**CLARIFICATIONS****Test Permits**

With respect to a Test Permit, can one be issued with the only safety measure being that a permit area has been established? The practice of issuing Test Permits with only this safety measure is being used to control testing type work around plant which is subject to commissioning type tests such as governor testing, drop load testing etc.

The SSPG confirmed that the use of a Test Permit as described above is acceptable under SM-EI.

### Locking and Tagging Pole Mounted Equipment

Some modern pole mounted equipment does not include an operating handle and is operated with an operating stick. Clarification was sought on the means of securing such equipment when used as a safety measure for a permit as a lock cannot be applied and the operating handle is not dedicated to that equipment.

The SSPG confirmed that a flag attached to the pole at eye height is an acceptable marker and constitutes a tag for permit purposes.

### 8.3 SM-EI REFERENCES UPDATE

The following documents referred to in SM-EI have been updated, re-issued or revoked since the previous Newsletter was published.

Publisher	Publ Code	Doc No	Title	SM-EI Rule Ref
EPA	Code of Practice		Safe Management of PCBs	2.710
EEA			Guide to Live LV Electrical Work	3.717
WorkSafe	GPG		Best Practice Guidelines for Scaffolding in NZ	2.1406
Legislation			Health and Safety at Work (Asbestos) Regulations 2016	2.702
NZTA			Truck Loading Code 2012	2.901
NZTA	Land Transport Rule		Dangerous Goods	2.1102
NZTA	Factsheet	67	Dangerous goods carried by transport service operators or for direct reward	2.1102
NZTA	Factsheet	68	Dangerous goods transported as tools-of-trade	2.1102
NZTA	Factsheet	2	Work time and logbooks	2.901
NZTA & ACC			Your Safe Driving Policy	2.901

## 9. SWITCHING INCIDENTS AND NEAR MISSES

The SSPG has become aware of a concerning increase in the number of switching incidents and near misses, but it is not able to substantiate actual incident numbers from safety alerts submitted to the EEA or from other reported information. As one of its focus areas for 2017 the SSPG is seeking to determine what evidence exists to support or clarify its concerns. This topic was canvassed at the SM-EI workshops in March this year, with the consensus being that there is a basis for the concern and the issue requires further research.

The SSPG recognises that switching is a routine function within the ESI, and while much of it is carried out remotely there is a significant amount of manual switching needing to occur, much of it following a prepared and approved switching sequence. The SSPG is also aware of a significant reduction in the proportion of work carried out as live work, with a consequence being an increase in the number of switching operations, often on equipment which is not new.

Switching is a fundamental task for workers in the ESI, and is frequently a pre-requisite for the issue of an access or test permit on HV equipment. The SSPG wishes to ensure that it has a clear understanding of the risks that are arising from switching activity in order to ensure it is providing sufficient and appropriate controls to assist employers and asset owners to deliver safe outcomes.

The SSPG is therefore seeking advice from the industry which will clarify this issue, or at a minimum give specific information on which to base future research and assessment. The SSPG is concerned that a significant switching incident may result in serious harm and it wishes to be proactive in its involvement with this topic to avoid such an outcome.

Responses which would assist include;

- Evidential feedback based on an employer’s incident or near miss database
- Audit results
- Investigation results
- Training assessment results
- Verbal feedback
- Is there support for guidance on switching sequences or the adoption of operating orders.

Please provide any response or feedback to Peter Coyle at the EEA at [peterc@eea.co.nz](mailto:peterc@eea.co.nz).

**10. WORK MANAGEMENT SYSTEM FOR LV WORK**

The SSPG has an active workstream to determine the controls applicable to LV work, both live and de-energised. The controls will be modelled on those applicable to work on HV equipment, with the appropriate matching of the controls to the risks.

One of the controls being considered is a work management system which will manage work on de-energised LV equipment, and this may include the provision of a permit system. For a permit system to be effective it is essential the LV field equipment is accurately represented on drawings and is accurately marked in the field, i.e. points of isolation must be known and drawings must identify where they are and use the same description as exists on the equipment in the field.

The SSPG is aware that some LV network equipment is not accurately recorded and marked, and this would make the introduction of a permit system difficult. The SSPG is notifying its intent that a work management system for de-energised LV should be expected to be introduced and all network owners, and other owners of LV systems, need to ensure that they have, or have plans in place to prepare, accurate and detailed drawings of their system and that the system is fully and correctly labelled.

**11. VOLTAGE REGULATORS**

A Network company has proposed that SM-EI should include a rule on voltage regulators, which the SSPG has considered and determined that the topic will be considered in the next SM-EI review. In the meantime the proposed text from the network is provided for consideration. The network company explains that SM-EI does not include a cautionary note about the bypass of voltage regulators and the possibility of high circulating current. One company, for example, now installs light jumpers in the bypass circuit after the links so they fuse, and another uses a 200 A fuse. Both are designed to protect for operator error.

**VOLTAGE REGULATORS**

*When bypassing a Voltage Regulator, the Voltage Regulator must be set to Neutral tap before the bypass operation. The Neutral tap is often denoted “N”.*

*If the Voltage Regulators are not set to Neutral tap before a bypass, very high circulating currents can pass around the bypass loop and cause significant damage to the connecting conductors and possibly cause thermal damage to the Voltage Regulator itself.*

*Because the circulating current takes very little load from the source, the feeder protection may not detect the circulating current. The protection may only operate when a burnt off conductor contacts earth or the Voltage Regulator winding ruptures and contacts earth.*

*A Voltage Regulator is normally bypassed via a suitable switch and then load side links/fuses and source side links/fuses are removed to provide isolation.*

*Some regulating relay testing activities may require the source side links/fuses to be replaced; ensure the load side links/fuses are removed for any testing.*

**12 WORKING OFF CROSS ARMS – NETCON APPROACH**

Netcon has provided the following article on their use of hanging ladders. This article is provided for information and its provision does not mean that the SSPG has reviewed and endorsed the use of such ladders.

Netcon has developed a solution to assist in working on poles and pole structures combined with the requirement to be attached at all times.

**ALWAYS CARRY OUT THE FOLLOWING WHEN THEY APPLY TO THE WORK TO BE PREFORMED:**

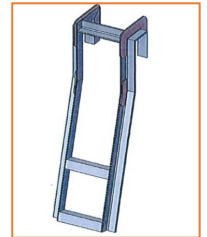
- |  |  |
|--|--|
| ① TEST for Safety  | ② ISOLATE, Prove De-Energised & Earth HV equipment prior to work |
| ③ IMPLEMENT or apply safe work practices to live LV work | ④ ENSURE protection from Voltage Difference                      |
| ⑤ DETERMINE poles or pole structures are safe to climb   | ⑥ ENSURE fall arrest or restraint                                |

Hanging ladders started use in their most primitive design at Netcon over twenty years ago made from galvanised steel. These were a 'backyard' affair and did not have any certification etc. and as a result Netcon stopped using them some years ago.

The current design ladders (see picture) are now manufactured from aluminium and are certified to all relevant ladder and height safety standards.

Netcon have completed a trial of the Hanging Ladders, combined with the use of 2 pole straps to good effect and this has been generally well received by staff.

For more details please contact Dan Batchelor, General Manager Operations at Netcon email [dan.batchelor@netcon.co.nz](mailto:dan.batchelor@netcon.co.nz).



**13. ASBESTOS REMOVAL TRAINING**

WorkSafe has published advice on new Unit Standards which are recognised for the training of workers, supervisors and assessors undertaking work with asbestos. WorkSafe advises that the training relates to asbestos regulation changes that take effect 4<sup>th</sup> April 2018.

The advice identifies four Unit Standards, being;

- 29766 for workers and supervisors dealing with friable asbestos
- 29765 for workers and supervisors dealing with non-friable asbestos
- 29767 for supervisors (in addition to 29766 and/or 29765) who are supervising asbestos workers
- 29768 for assessors

To find a course or for more information contact Skills.Org on 0508 SKILLS (0508 754 557) or visit their [website](#).

Note that from 4<sup>th</sup> April 2018 all asbestos removal work must be carried out by a licensed removal company, which differs from the current requirement to use workers with a Certificate of Competence. Licensed removal companies are also required for removal of 'asbestos containing materials' as well as friable asbestos.

**EEA SAFETY STANDARDS AND PROCEDURES GROUP (SSPG) | JUNE 2017**



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**DISCLAIMER**

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