Electricity Engineers' Association

HEALTH & SAFETY
ASSET MANAGEMENT
PROFESSIONAL
DEVELOPMENT

EEA Live Line Forum

5TH SEPTEMBER 2018

EEA.CO.NZ

Welcome, Agenda and Outcomes

- Welcome and Housekeeping
- Electricity Engineers' Association (EEA) and the National Committee Live Work
- Australian HV Work Practices Forum
- Regulatory Environment, NZ and Australia
- HV Work Method Selection Panel Session
- Standard HV Work Procedures

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Welcome, Agenda and Outcomes

- LV Work Method Selection
- Learnings
- Open Discussion Q&A
- Professionalism, Selection, Training and Competencies of HV Live Workers
- ECP46 and AS5804

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EEA

EEA is a not-for-profit organisation ….represents its Members on ***engineering, safety, asset management, standards and professional development*** *matters…a* ***trusted adviser*** *to members, industry, government, regulators and other stakeholders… …provide* ***collaboration, knowledge and leadership to deliver and support continual improvement*** *within the electricity supply industry.*

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NCLW

THE ROLE

- To act as the authoritative industry body for discussion and resolution of national issues affecting HV and LV live work in the electricity supply industry.

SCOPE

- Issues relating to and affecting the planning, development of work methods and carrying out of live work at all voltages on electrical equipment including stick, barehand, glove and barrier or any other live work method including testing.

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NCLW- Membership

Bob Taylor	Consultant (Chair)	Frank Skinner	Horizon
Graeme Johnson	Electrix	Derek Kooman	Electrix
Phil Johnson	Powernet	Phil Johnson	Powernet
Mike Burke	BETAA	Peter Berry	EEA
John Dixon	Northpower		
Charles Kaka	Unison		
Filipe Vulaono	WEL		
Geoff Thorburn	Wellington Electricity		
Dave Smith	Scanpower		
Shane Watson	Orion		
Haki Rameka	Unison		

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NCLW- Work programme

High Voltage

- **Implementation**
  - Guide for HV Work Selection
  - EEA Practice Note on ECP 46
- Monitor and liaise with international Live Line Forums to ensure NZ aligned with industry best practice for live work
- Standardised procedures

Low Voltage

- Guide for Work Method Selection
- LV Work Control Methods
- Live LV 'Practice' Guide

Quality Management - QMS and standards for training

Testing Standards and requirements – LV and HV equipment

Audit – Guidance on audit frameworks for live LV, HV and test

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Regulatory Environment

- Health and Safety at Work Act and Regulations
- Elimination/Minimise
- All Reasonably Practicable Steps
- Balance of Risk
- Live Work in the Australian Environment
- Robert Oldfield (Work Practice Advisor – Energy Safe, Victoria)

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HV Work Method Selection

- Background to the Guide.
- Network Justification, Competence and Procedures, Limitations.
- Application Progress and Experience.
- Panel Introductions.
- Discussion.

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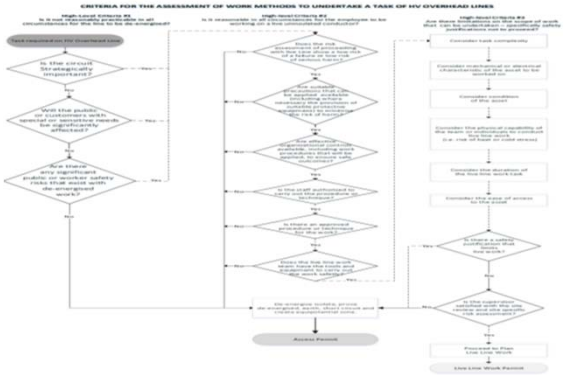
HV Work Selection



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HV Work Selection – Justification

Examples

- Is the circuit of strategic importance in terms of overall system security or public safety?
- Are there any limitations on undertaking the work de-energised?
- Will the public, domestic, commercial or industrial customers having special or sensitive safety, social or economic needs be affected?
- Would de-energised work require a major outage based on the number/complexity of switching operations, the time to carry out switching and the associated risk of driving, walking, working alone, working at height and operating the switchgear to undertake the work?

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HV Work Selection – Justification

Examples (Cont'd)

- Are there inherent hazards and risk of serious harm from electric charges on the line that occur despite the line being isolated?
- Would programmed work require repeated interruption of supply extending over several days?
- Time of the day/week/year
- Significant economic impact to a single or group of commercial or industrial customers
- Planned remedial work on circuits that have historically been subject to a large number of faults and interruptions to supply

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HV Live Work – Limitations

- Complexity of the task
- Mechanical and/or electrical characteristics of the asset
- Asset condition
- Physical demands on work team
- Duration
- Ease of access to the asset
- Location
- What are your current HV Live Work exclusions?

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Standard HV Work Procedures

- Background and Objectives.
- International Practice.
- Training, Competency and Work Practice Benefits.
- PowerCo Led Project.
- Introduction, Gavan Paget Presentation.
- Discussion and Next Steps.

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Australian High Voltage Work Procedures Forum

- Background.
- Introduction, Garry Shearing (Chair of the HVWPG and Live Line Worker (Technical and Cultural Lead Tasmania Network)) Presentation.
- Discussion.

Training and Maintenance of Live Work Competencies

- Background and Objectives.
- International Practice, Professionalism.
- Selection of HV Live Line Workers.
- Training.
- Maintenance of Competence.
- Panel Introductions.
- Discussion.

ECP46 and AS 5804

- Background.
- Alignment.
- Guide to the Application of ECP46.
- Australian Review of AS5804
- Introduce, Mick McGreevy (Senior Transmission Support Officer – Energex, Queensland). Presentation.
- Discussion

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Auditing

- EEA Guide to Field Auditing of Live Line Work (April 2014)
  - To support auditing of safety practices to show they are reliably carried out in worksites.
- What are companies doing?

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LV Work Method Selection

- Live LV work is governed by Rule 3.717 (added in 2015)
- Work procedures are set out in the EEA Guide to Live LV Electrical Work (2017)
- As for HV live work - LV work should only be undertaken if a risk assessment shows that there is justification
- Note - live work on 'Installations' is no longer permitted
- EEA Guide (Work Planning – Hazard Identification and Controls. Equipment for Safety, General Requirements, Live Work on Overhead Conductors, Work on Live Cables, Work on other Live Equipment and Testing and Fault Finding)

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L.V. Work

- Background.
- Draft Guide L.V. Work Selection Methodology. SSPG.
- Structure and Alignment to the H.V. Work Selection Methodology.
- Live L.V. Work Guide (Work Practices).
- L.V. Work Control Methods (Permit System).
- Discussion, Current Industry Practice.

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Draft Guide

- Work Method Risk Assessment.
- Elimination.
- Risk Assessment, Reasonably Practicable to De-Energise.
- Considerations: Back-feed, Customer Impact, Asset Condition, Testing, Security of Supply, Balance of Risk.
- Reasonable for an employee to work live.
- Availability and effectiveness of controls.
- Unacceptable risk: Task complexity, conditions on the day.

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Learnings

- Accident, Incident and Near Miss Share.
- Reporting Industry Performance.
- Discussion.

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Open Session Q&A

- Discussion.

Closing Remarks

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Thank you

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