



Powerco Standards Agreement

2017 EEA Asset Management Forum

Presented by: Ron Coleman, Technical Services Manager

Powerco's CEO encourages the New Zealand electricity distribution industry to work together and adopt common worker competencies, operational procedures, design and construction methodologies and equipment specifications.

To help facilitate this goal, Powerco is offering to other New Zealand businesses the legal rights to use our comprehensive library of technical and operational standards.

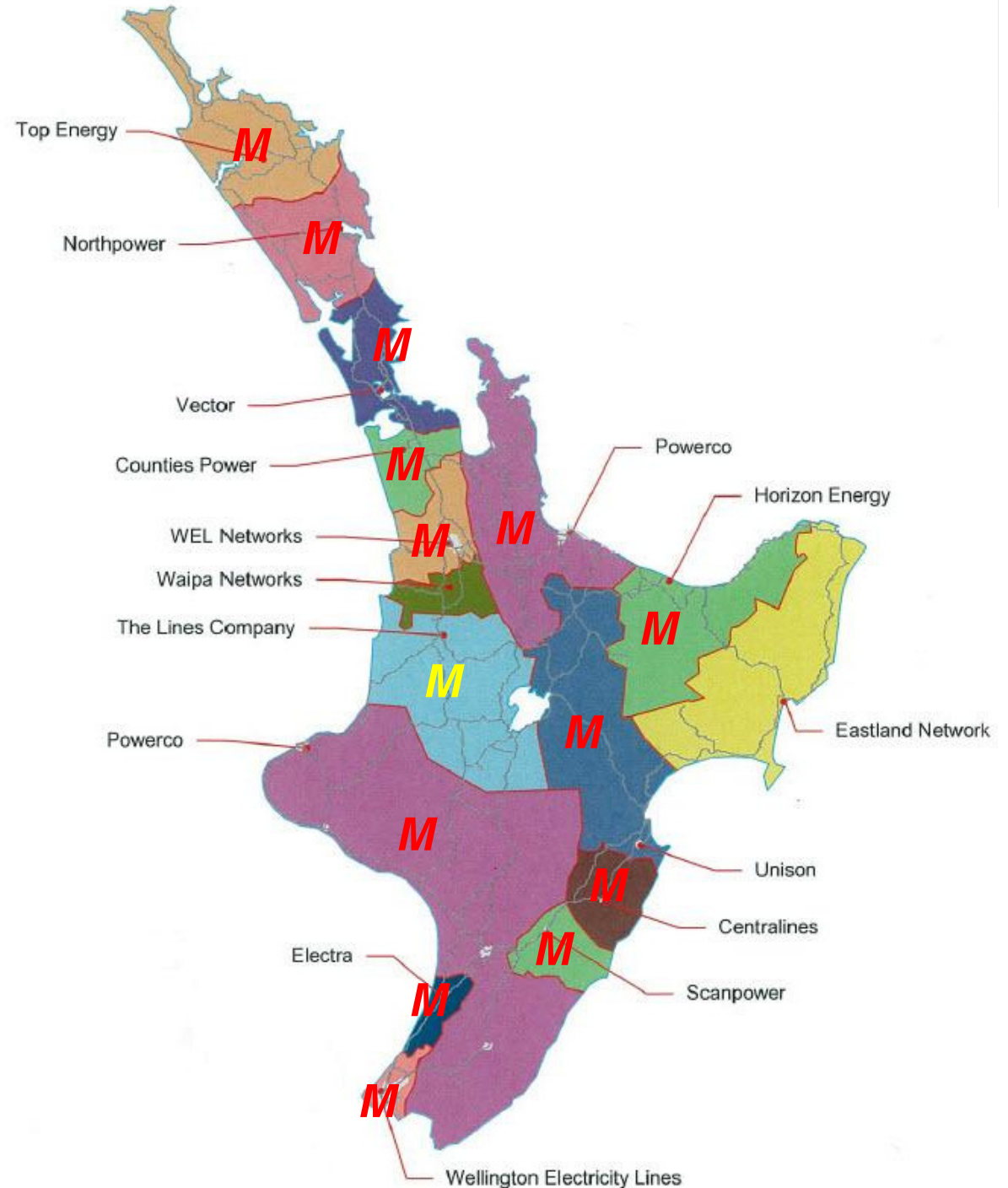
This offer is known as the *Powerco Standards Agreement* (terms apply).

Powerco hopes that the *Agreement* encourages commonality throughout New Zealand with regard to:

- **Design methodologies**
- **Construction methodologies**
- **Network Access and Operations**
- **Specifications** (equipment and materials)
- **Maintenance methodologies**
- **Training** (especially HVIAP competencies).

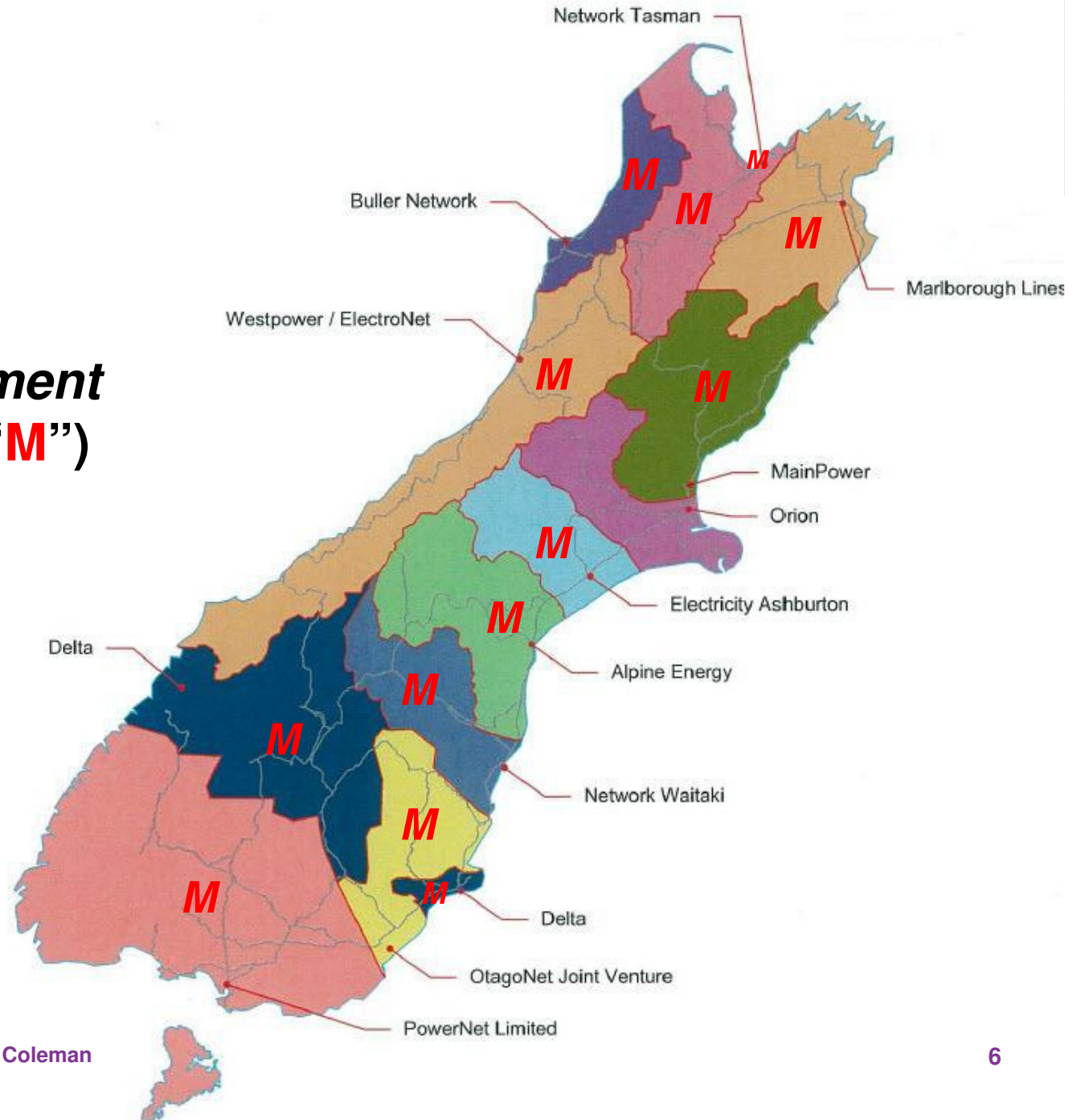
AGREEMENT MEMBERS

North Island Standards Agreement Members (marked "M")



AGREEMENT MEMBERS

South Island Standards Agreement Members (marked “M”)



The *Agreement* allows you to access our library of (~ about) 485 electricity focused documents which include:

- **~50 Maintenance standards**
- **~50 Specifications**
- **~30 Design standards**
- **~55 Construction standards**
- **~30 Operational and SCADA standards**

- **~35 Policy and Guideline standards**
- **~10 Emergency Response standards**
- **~20 Competency, Safety and Training**
- **~10 Environmental standards**
- **~75 Forms (which mostly represent “processes”)**
- **~35 Construction Drawings (PDF only)**
- **~20 Engineering Instructions**
- **~75 Safety Notices**

Powerco does not claim that their standards are better than documents produced by other network operators (but our library is typically much larger than most).

Nor do we make any representations about the accuracy, completeness, currency or suitability of the information contained in them (we do our best to avoid E&O but they can annoyingly exist).

Having copies of our standards is easy!

Utilising them can be difficult – updates require effort to keep up with.

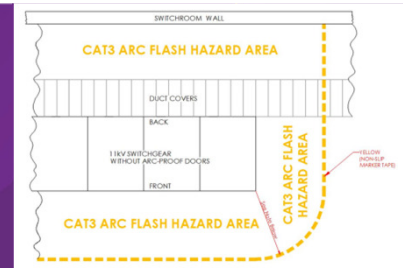
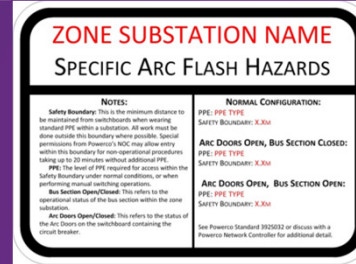
Even Powerco's teams can struggle to implement parts of our standards because processes often need to be changed!

It can typically take a few years before a standard becomes established as BAU.

Over the last few years we have written and revised a number of “key note” standards in these topic areas:

- *Arc Flash policies*
- *Specifications*
- *Design*
- *Labelling*
- *Training*

ARC FLASH POLICIES



Our Arc Flash Policies are based on:

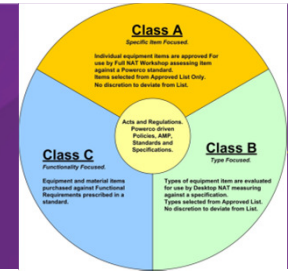
- *NFPA 70E Standard for Electrical Safety in the Workplace*
- *IEEE 1584 Guide for Performing Arc Flash Hazard Calculations*

Standards available include:

- ***392S030 Powerco Network Arc Flash Management Policy*** (v1 dated 15 April 2014)
- ***392S031 Distribution Network Arc Flash Management Standard*** (v1 dated 22 July 2016)
- ***392S032 Zone Substation Arc Flash Management*** (being written to replace *2015-08 Safety Notice 5A & 15B*)



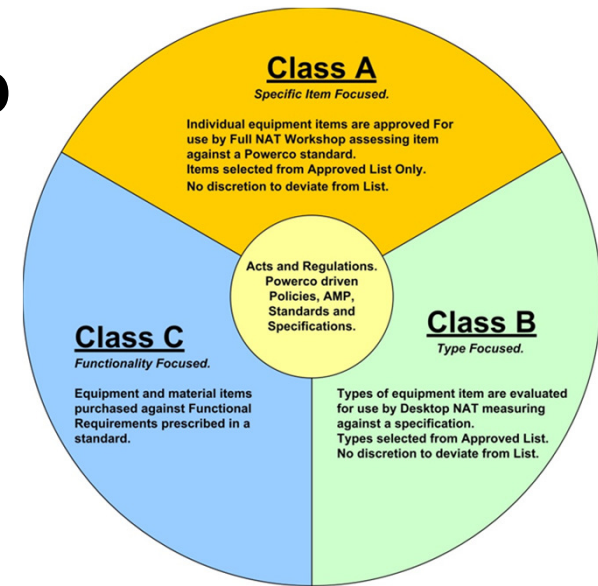
SPECIFICATIONS



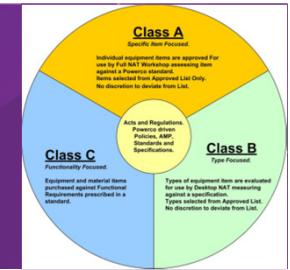
Our “overarching” materials standard is
*393S013B Network Equipment and Materials - Part B -
Classes & Requirements (v9, dated 31st August 2016)*

The majority of our “specification” standards have now been split into two parts, namely:

- **Part A – Specification**
- and
- **Part B – Approved Lists**



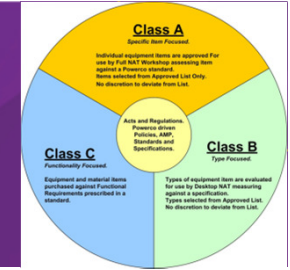
SPECIFICATIONS



Noteworthy revised specifications include:

- ***393S133 Overhead Aerial Conductors***
 - ***Part A – Specification*** (v1 - 6 April 2016)
 - ***Part B – Application Rules*** (v1 -6 April 2016)
- ***393S031B Pole Mounted Switchgear***
 - ***Part A – Specification*** (v6 - 13 July 2016)
 - ***Part B – Approved Switches List*** (v3 - 5 Nov 2015)
- ***393S066B Ground Mounted Switchgear***
 - ***Part A – Specification*** (v7 - 31 August 2016)
 - ***Part B – Approved Switches List*** (v1 - 31 August 2016)

SPECIFICATIONS



Noteworthy revised specifications include:

393S079 Underground Cables

- ***Part A – Specification*** (v5 – 31 August 2016)
- ***Part B – Approved Poles Lists*** (v1 – 31 August 2016)

393S082 Powerco Poles

- ***Part A – Specification*** (v3 - 28 October 2016)
- ***Part B – Approved Poles Lists*** (v3 - 28 October 2016)

393S142 Equipment Controllers

- ***Part B – Approved Controllers and Firmware Lists***
(v5 – 19 October 2016)



Noteworthy new design standards include:

- ***350S006 Zone Substation Design And Construction Requirements*** (v1 – 4 March 2015).
- ***393S093 Powerco Pole Dictionary*** (v3 - 19 April 2016) - note that RM values are obtained through our ***393S146 Powerco Poles Type Test Procedure*** (v3 – 6 March 2015)
- ***393S160 SEL-651R Recloser Controller DNP3 Configuration Standard*** (example only, there are lots of other DNP3 configuration standards now available in the *Online CWM Application*)

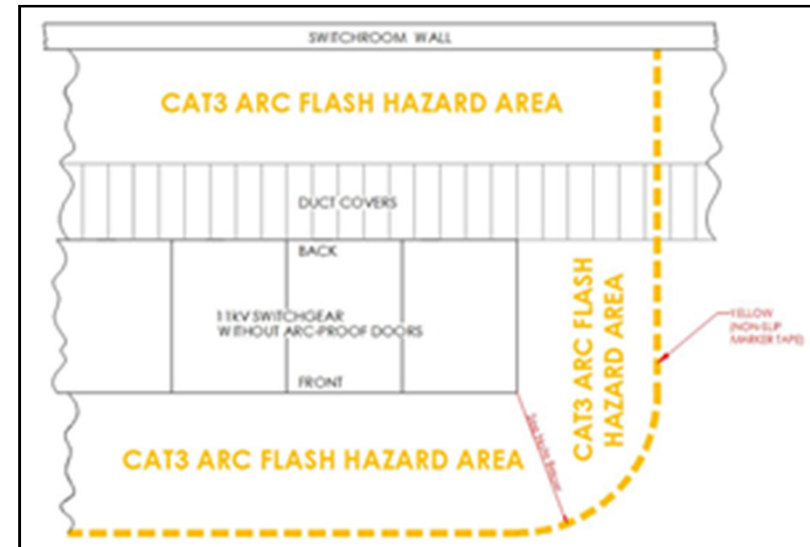
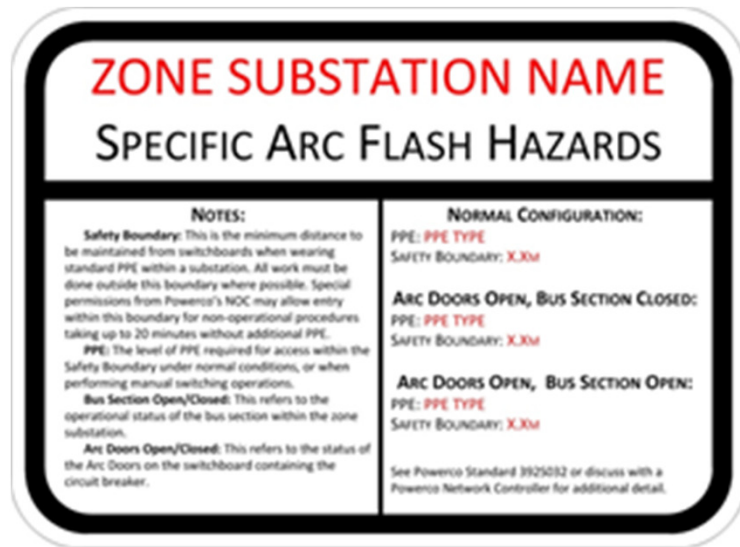
LABELLING



393S004 Labelling and Safety Signage Requirements (v10 - 27 January 2017)

This recently updated standard prescribes a lot of new labelling and signage requirements, which include:

Arc Flash Signage Requirements



LABELLING



393S004 Labelling and Safety Signage Requirements (v10)

- **LV Service Box And Cabinet Labelling** (Network Asset ID)
- **HVIAP Men On Line Do Not Operate Without Authority tag**



LABELLING



393S171 Tagging / Marking of Unsafe Equipment And Overhead Line Structures (v2 - 20 January 2017)

Prescribes the use of our new PHYSICAL HAZARD Tags





Powerco's expectations for the delivery of operational training courses are prescribed in:

210S009 Delivery of Operational Training Courses (v1 - 8 October 2014)

220S030 High Voltage Isolation and Access Procedures (HVIAP) Training Curriculum (v5 – 14 February 2017)



210S010A Training Provider Approval

- **Part A - Approval Policy** (v2 – 5 September 2016)
- **Part B - Approved Providers Lists** (v1 - 5 Sept 2016)

210S006 Electricity Network Safety Induction Training Curriculum (v5 – 17 Feb 2016)

220S040 Operational Communication Training Curriculum (v2 – 8 October 2014)

YET TO BE ISSUED IN *CWM Application*



Not every standard we write gets published into the *CWM Application*, one very notable exception is **393S174 Artwork on Powerco Assets** (2015)

It still holds the record as being the most controversial standard I've ever written!



Questions ?



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