



“Have your say on model work health and safety regulations.”

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Individual OR Organisation's name: National Electrical and Communications Association (NECA)

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Individual/Organisational name: National Electrical and Communications Association

The National Electrical and Communications Association (NECA) is the only peak national industry association representing contractors responsible for the delivery of electrical, voice and data communications systems in Australia. It has approximately 5,000 businesses as its members, which employ approximately 50,000 tradespeople.

NECA is most supportive of the program to develop consistent WHS legislation across Australia with the primary objective of creating a strong health and safety commitment and culture that supports productive work processes and outcomes and welcomes the opportunity to comment on the draft national model WHS Regulations. Whilst there are issues in the drafting, we believe the framework is set and we look forward to a uniform commencement at the earliest possible time in 2012.

NECA's comments have focused on issues that are particularly relevant to the electrical, communications and data industries.

Section A: Model Work Health and Safety Regulations Exposure Draft

General Comments (e.g. regulatory impact, level of prescription, notification, record-keeping requirements)

- **Absolute duty – must ensure**

Whilst there is a general commitment to the principle in law that a person is innocent until proven guilty we are concerned with the number of areas throughout the draft Regulations where the person has an absolute duty to ensure a position or outcome without consideration of possible circumstances where this might not be reasonably practicable. We have identified eight (8) circumstances in Part 4.7 alone where “must ensure” should be conditions by “so far as is reasonably practicable”. We trust that this issue is addressed.

- **Hierarchy of risk controls**

We appreciate the revision made from the previous drafts of Regulation 4.7.7 Control of Risk, where the general requirement to eliminate risk and if not reasonably practical to minimise risk so far as is reasonably practicable. We are aware that this invokes the Hierarchy of Risk Controls which is described in the draft Code of Practice for Risk. The hierarchy is described in 4.1 and depicted in Figure 2 of the Code. Whilst this identifies the traditional 6 levels from eliminate through to use of PPE, we are concerned that those levels are grouped into three “Levels” implying a need to conduct a sequential three stage process in establishing Risk Control Measures.

Whilst this is nice as a theory the staged process as described is totally impractical as a pragmatic tool in the workplace. In particular, the allocation of level (in particular Eliminate) is dependent on the description of the Hazard. Persons can spend a lot of unnecessary time debating and documenting the finer points of Hazard Identification and Risk Assessment and lose the simple intent.

We prefer to see the Hierarchy of Control as but one assessment tool applied through the Hazard Identification and Risk Assessment process where typically several controls are identified and used. In relation to the application of the Hierarchy of Controls, the simple objective is to push the Risk Controls as high as possible in the Hierarchy.

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We note that certain Regulations have four “levels” (eg Construction 6.3.1) and the Falls Regulation 4.4.3 appears to reverse the order. A person working within our industry might well be exposed to hazards that involve electricity, construction, falls and falling objects, trenching, asbestos, confined space, chemicals, manual handling, etc, all in a day’s work. The inconsistency in treatment of risk management across the Regulations and Codes introduces a new layer of administration for our industry. NECA will no longer be able to provide a simple structured Hierarchy of Controls within the Hazard Identification and Risk Assessment proforma, for example. NECA questions the necessity for these inconsistencies and believe they will be unnecessarily confusing at the workface and creates an unnecessary administrative diversion that removes the focus from risk management and has little or no positive impact on health and safety.

In all, we believe that the concept of Hierarchy of Controls has been elevated beyond its usefulness and we trust that the Regulations and Codes of Practice will revert to a two-step process where the relevant person/s endeavour to eliminate the hazard and where that is not reasonably practicable minimises in line with the six levels identified in the traditional hierarchy of risk control.

Chapter 1: Preliminary (e.g. definitions)

1.1.5 Meaning of fall

Fall is defined in regulation 1.1.5 as a fall from one level to another and has no height threshold. This means that the application of the requirements in Part 4.4 of the model regulations depends on an assessment of the likelihood of injury to the worker or other person from a fall, including as a result of a fall from a low height.

Current regulations tend to nominate a height threshold of 1.8, 2 or 3 metres to invoke many of the risk control measures nominated in the regulation and code of practice. Nomination of a threshold of fall from a height of 2 metres will provide clarity regarding the application of Part 4.4 of the Regulations.

Chapter 4 Hazardous Work

Part 4.7 Electrical Work

Issues with the electrical definitions in Part 4.7 of the draft are discussed in detail below. This Part is largely addressing the activities of the electrical industry and should facilitate integration with the work practices of that sector. The technical or quality aspects of the electrical installation are substantially governed by AS/NZS3000 “*Wiring Rules*” and for this reason the meaning of electrical equipment and electrical installation should align with this peak industry document. The divergence is without a strong rationale and will cause confusion in both the electrical industry and broader community.

The requirements regarding qualifications for undertaking electrical work are governed by electrical licensing legislation in each state. The meaning of electrical work in the draft regulations 4.7.4 will weaken the close control that is required to assure human safety and protection of property. In this case AS/NZS4836 “*Safe working on or near low-voltage electrical installations and equipment*” provides importance guidance.

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A fundamental objective of the model national WHS legislation is national harmonisation. Whilst technical (or quality standards for an electrical installation) are governed by very different legislation in each state there is one very important factor that is crucial to the effective delivery of services across Australia and well beyond (eg New Zealand). That is achieved through the use of a set of Australian Standards starting with AS/NZS3000. Electrical installations are amazingly consistent across Australia and the introduction of definitions that challenge that framework will cause much confusion for the industry and other trades.

It is recommended that the definitions align with relevant industry standards and draft electrical definitions in Part 4.7 be replaced as detailed below.

Division 1 Preliminary

4.7.1 Application

4.7.1(1) is a total exclusion of supply industry from these regulations including many general electrical requirements that are placed on the PCBU and is too broad. The exclusion should specifically relate to the live work prohibition and practices detailed in Division 4. It could reside at the commencement of Division 4 and immediately before 4.7.12.

NSW has a contestable works regime that allows accredited companies to undertake a range of works on the electricity networks. Companies are accredited by the NSW Department of Industry and Investment, and their employees are required to be individually authorised by the electricity network operators. These Accredited Service Providers and the employees, as a condition of their accreditation and authorisation, are required to comply with the same work practices and procedures as the staff of network operators.

Consequently, the exclusion that applies to electricity supply authorities should also apply to workers authorised to undertake work on the works of an electricity supply authority.

Further, the exclusion or exemption should be limited to allow authorised workers to undertake electrical work on an electricity supply authority's transmission or distribution network assets while they are energised utilising specific and unique work practices which manage the risk to the workers.

The reasons for the exclusion should be reviewed and should be limited to relevant activities and not the industry as a whole.

General Comments

Electrical definitions:

The proposed definitions contained in the exposure draft are complex and contradict established industry norms. Any attempt to repair the definitions with minor alterations is likely to create more problems.

It is strongly recommended that the industry recognised definitions provided below be adopted fully. This will make the subsequent wording of Part 4.7 far simpler and give far greater clarity and meaning.

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4.7.2 Meaning of electrical equipment

A number of issues in the draft “Meaning of Electrical Equipment” are of concern:

1. 4.7.2(1) does not include “wiring systems”. 4.7.2(1) should include "wiring systems".
2. The specific inclusion (singling out) of cathodic protection [4.7.2(1)(d)]:
Cathodic protection is the use of a small negative voltage (typically -4 volts dc) to an underground asset (such as a very expensive natural gas pipeline) to stop it from corroding. A rectifier is typically mounted on a street pole and fed from the network power. We cannot see that such an installation would not be covered by the definition anyway, but the implication is that it is not covered. Our concern is that if it is not covered by the definition then there would seem to be many other items and installations that would also need to be listed. Some examples might be street lighting, the lighting of a bus stop shed, a remote level sensor on a river bank.
3. The exclusion of electric vehicles [4.7.2(2)]:
The rationale for exclusion of electric vehicles is not understood. This matter was not discussed or foreshadowed by the Electrical TAG and we fail to understand why a lower level of safety would be acceptable for electric vehicles than for other electrical equipment covered by the WHS Regulations. To the extent that the regulations would be applicable these workers would be exposed to the same risks and there is no guarantee that these activities would be otherwise regulated.
4. Use of the term “operated by” in 4.7.2(b) - does not make sense, better to use “utilise”.

These matters are covered by the recommended definition below.

4.7.2 Meaning of electrical equipment (recommendation)

"Wiring systems, switchgear, controlgear, accessories, appliances, luminaires and fittings used for such purposes as generation, conversion, storage, transmission, distribution or utilisation of electrical energy greater than extra low voltage."

This definition aligns with AS/NZS3000 “Wiring Rules”, AS/NZS3012 and the draft for AS/NZS4836 “Safe working on or near low-voltage electrical installations and equipment”

4.7.3 Meaning of electrical installation

The proposed definition for electrical installation is confusing for the electrical industry and will lead to unintended consequences with unqualified persons doing work that is beyond their capabilities.

1. 4.7.3(1)(a) “are permanently electrically connected together” might have unintended consequences such as it might exclude “temporary construction wiring” as an electrical installation. This would contradict AS/NZS3000.

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2. 4.7.3(3)(a) is a direct contradiction of the industry position. Under the AS/NZS3000 wiring rules, an electrical installation may include equipment that is connected by a plug and socket outlet, where it is permanently connected. An example would be fluorescent lighting mounted in the false ceiling of an office space. It may typically be connected by plug and socket, yet needs to comply with the requirements of AS/NZS3000 as part of the electrical installation.

These “exclusions” seem to be arbitrary and without purpose other than to limit the scope of what is “electrical work”.

4.7.3 Meaning of electrical installation (recommendation)

"Electrical equipment installed for the purpose of conveyance, control, measurement of use of electricity, where electricity is or is to be supplied for consumption. It includes electricity supplied from a distributor's system or a private generating system. An electrical installation usually commences at the point of supply and finishes at a point (in wiring) but does not include portable and stationary electrical equipment connected by plug and socket-outlet (other than where a socket-outlet is used to connect sections of the fixed installation)."

This definition aligns with AS/NZS3000 “Wiring Rules” and the draft for AS/NZS4836 “Safe working on or near low-voltage electrical installations and equipment”

This legislation places obligations on the PCBU to ensure, so far as is reasonably practicable, the electrical installation in the workplace is safe (refer clause 4.7.5 below) - this obligation already exists through other legislation and in the case of electrical installations is achieved by calling up AS/NZS 3000 and reflects state of industry knowledge. This is the case in every state and territory and the industry and community at large benefit from the consistency.

4.7.4 Meaning of electrical work

The exclusions in 4.7.4(2) are far too extensive and include much of what is deemed under licensing and technical rules (regulations and Australian Standards) to be electrical work. The WHS Regulation has an implied authority for unqualified persons to do “licensed electrical work”.

1. 4.7.4(2)(a) - Some plug connections would be deemed to be electrical work when the connection is for permanent electrical equipment. Eg luminaires that are plug connected in the ceiling space are part of the electrical installation.
2. 4.7.4(2)(b) “work” cannot be deemed to not be “electrical work” simply because “the person carrying out the work is not exposed to an electrical hazard”. The problem is that the electrical installation must meet stringent electrical quality standards otherwise the occupiers and property will be at risk of electrical hazards, fire and/or explosion. This is why every state and territory has strict electrical standards and licensing requirements for electrical work. The WHS Regulations should not be perceived to be undermining these strict standards.

Conversely, it is not true that a person exposed to electrical hazards is necessarily undertaking electrical work. Eg using a hand held grinder to cut a water pipe is not electrical work but it could expose the worker to electrical hazards.

3. 4.7.4(2)(c) - Whilst the intent may appear to be sound, the prospect of non-qualified persons replacing “permanent” parts of an electrical installation exists and this could lead to an unsafe electrical installation. When work is undertaken on an electrical installation (eg

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replacing a light switch) it is incumbent on the electrical worker to undertake appropriate inspection and testing to verify that the installation is safe and the work is certified as such.

There are many situations where an installation might appear to be de-energised and safe. Only a qualified person can determine that and there may be an ongoing need to prove that the installation continues to be safe.

4. 4.7.4(2)(d) Seems to be satisfactory, but covered by the proposed definition below.
5. 4.7.4(2)(e) Again, where ducts, conduits and troughs form part of the electrical installation it is critical that this work is undertaken or supervised by qualified electrical workers. The work may appear to be safe but the outcome could be unsafe and that may well impact on the health and safety of workers and other occupiers.
6. 4.7.4(2)(f) This challenges industry practice established through years of bitter experience. The worker doing the work might appear to be safe but the installation would contravene other legislation. Such clauses only act to undermine well established protocol that is often enshrined in other legislation and expose the occupier to potential safety hazards including electric shock, fire or explosion.
7. 4.7.4(2)(g) Normal licensing tends to permit assistance from non-qualified persons (under strict [direct] supervision of a qualified licensed electrical person). The work they are undertaking is deemed to be “electrical work” and to that extent the unqualified person is also described as an electrical worker.

As to whether the installation is energised is irrelevant in this regard. The rules around the exceptions to the prohibition on live work would ensure that such persons are not involved in working on or near exposed energised conductors.

Simply put, electrical work is just that - it is not a function of the qualifications of the person doing the work. If the person is not appropriately qualified or supervised and they are doing electrical work then it might be being undertaken illegally.

8. 4.7.4(2)(h) This is an exception for apprentices and trainees. This should not be a WHS issue as it is covered under licensing legislation.

4.7.4 Meaning of electrical work (recommendation)

“The actual physical work of installing, testing, maintaining, repairing, altering, removing or adding to an electrical installation or the supervising of that work.”

AS/NZS3000 “Wiring Rules” does not have a definition for electrical work but the above recommendation is from the companion draft standard: AS/NZS4836 “Safe working on or near low-voltage electrical installations and equipment”.

Note, the alternative would be to use the proposed words in 4.7.4(1)(a) and (b) but the exclusion in 4.7.4(2) must be deleted, because, so far as these regulations would apply, the work on electric vehicles exposes these persons to the same risks.

The regulation needs a new clause that simply says:

NEW regulation: Authority to undertake electrical work (recommendation)

All electrical work must be undertaken by or under the supervision of a competent person.

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Note jurisdictional legislation specifies the strict licensing requirements and qualifications for undertaking electrical work.

Division 2 Electrical installations

4.7.5 Person conducting business or undertaking must ensure safety of electrical installations
The PCBU has limits as to extent of control: ... PCBU "must ensure" needs to be qualified by "so far as is reasonably practicable".

Division 3 Electrical Equipment

4.7.6 Hazard identification

4.7.7 Control of risk

4.7.8 Review of risk controls

In 4.7.8 (b) it is assumed that "a control measure" might be a combination of control measures. Clearly one such control measure is not adequate. Perhaps "a control measure" could be replaced with "the control measure/s".
When a health and safety representative at the workplace requests a review, it must be "on reasonable grounds".

4.7.9 Testing of electrical equipment used in a hostile operating environment

It should be very clear that Testing of electrical equipment is an audit function.

It confirms the status only at the time of audit. Ten minutes after the equipment is placed back into service it might have been damaged and could be unsafe.

Critical to this circumstance is that any damaged equipment should be taken out of service immediately and not rely on the next testing.

In the vast majority of situations the person using the equipment will be aware of the issue and if not, there is a more underlying issue and the systems should be reviewed and action taken to rectify.

Another important aspect relating to vulnerable electrical equipment is that the RCD reduces the likelihood of serious incident.

The RCD is in place all the time so is a good "risk control measure".

4.7.9(1)

This "competent person" is not necessarily a licensed electrician - as possibly implied by jurisdictional note, but might be person trained to use a PAT (Portable Appliance Tester) tester.

4.7.9(1)(a)

This subregulation would capture those "permanently" installed light fittings that are in the ceiling and connected by socket outlet, for example. It might be appropriate to re-introduce the term "general purpose outlet" in place of "electrical socket outlet". This would exclude socket outlets that act to connect parts of the electrical installation.

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4.7.9(1) (b) (i) should be removed. Not all electrical equipment used in construction work is in a hostile operating environment, e.g., a printer used in a site office is not normally in a more hostile environment than if it was in a non-construction office. If any construction equipment is used in a hostile environment it will be adequately captured by subsection 4.7.9(1)(b)(ii).

4.7.9(2) "so far as" add: "must ensure, so far as is reasonably practicable, that a record of any testing"

Penalty should be level 3 – only record keeping.

4.7.9(3) iii

Prescriptive and too detailed.

The nature of the testing is described in the relevant Australian Standard and should not be repeatedly stated as a record.

It would be better to have in a Code or Guideline.

4.7.10 Untested electrical equipment not to be used

New electrical equipment should not require a test before first use in recognition that the article should be sold in a 'fit for purpose' state and therefore 'safe' to use.

4.7.11 Unsafe electrical equipment

4.7.11(1) "A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that any unsafe electrical equipment at a workplace:"

4.7.11 (2) is open ended and unclear - the definition for "unsafe" needs careful consideration:

Recommend replace with:

"For the purposes of this regulation, electrical equipment or a component of electrical equipment is unsafe if there are reasonable grounds for the equipment to have a potential to cause harm when used for the intended purpose."

Division 4 Electrical work on energised electrical equipment

At this point it is appropriate to insert a modification of the existing clause 4.7.1(1).

Eg *"This Division does not apply to the works of an electricity supply authority used for the, transmission or distribution of electricity for the public subject to the workers being authorised to undertake electrical work on an electricity supply authority's transmission or distribution network assets while they are energised utilising specific and unique work practices which manage the risk to the workers."*

4.7.12 Duty to determine whether equipment is energised

4.7.12 (1) It is necessary to insert the qualification: must ensure", so far as is reasonably practicable," that, before ...

4.7.12 (2)Add the qualification: must ensure", so far as is reasonably practicable," that electrical equipment ...

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4.7.13 Electrical work on energised electrical work-prohibited

4.7.14 Electrical work on energised equipment-when permitted

The remainder of this Division details the limited exceptions for working live and the precautions that must be observed. "Exception" would be a better word than "when permitted".

A person conducting a business or undertaking must ensure that electrical work on energised electrical equipment is not carried out unless:
Start this sentence with "Notwithstanding regulation 4.7.13, a person conducting a business"

4.7.14 (a) Provide examples: "eg persons potentially on life support in a hospital."

4.7.14 (b) Provide examples: "eg undertaking electrical testing or faultfinding."

4.7.14 (c) Provide example: "eg shutting down a major facility where safe work practices are established and proven."

4.7.15 Preliminary steps

The heading should read as: "**Preliminary steps for live work**".

These steps are too prescriptive for testing and faultfinding and there should be a separate clause for testing and faultfinding.

A major cause of electric shock is inadvertent contact with live conductors whilst working, basically because it can be assumed (and logical) from previous actions that the conductor is dead.

Making assumptions can be costly in terms of safety.

The industry mantra is "**test before you touch**" or another way of putting it is "never assume it is other than live until you test". This is captured in regulation 4.7.12.

Depending on the work being undertaken the worker (qualified electrician) may be doing a lot of testing as s/he goes about their work. The testing assures safety and many of the steps in 4.7.15 are unnecessary for testing and faultfinding, and will work against securing a safe workplace.

4.7.15 (1)(c) Revise wording:

the point at which the electrical equipment can be disconnected (or isolated) from its electricity supply is identified and:

4.7.15 (1) (d) This would appear to be over and above normal obligations to consult.

It is not clear as to why this person must be consulted – there needs to be a reason or purpose.

Most important to make these persons jointly responsible and reword as:

"the person with management or control of the workplace authorises the proposed electrical work in accordance with 4.7.4(a) and (c)."

ie Specifically excluding testing and faultfinding as this work is a requirement and expectation rather than an exception.

4.7.15 2 (c) This could potentially be an impediment to testing to prove de-energised and reduce safety. Testing should be excluded from this requirement.

4.7.16 Unauthorised access to equipment being worked on

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The penalty is more appropriately a level 3 (Administrative control)

4.7.17 Contact with equipment being worked on

Add the qualification after must ensure", so far as is reasonably practicable," that, whilst electrical work is ...

4.7.18 How the work is to be carried out

4.7.18 (3) (a) iii This requirement appears to come from Guidance Material published by WorkSafe Victoria (refer Page 17 of the *Handbook / Working safely in the general construction industry*). It is expressed as a part of the description of a SWMS and is not prescriptive.

If "the safe work method statement must describe in writing how the proposed electrical work is to be carried out and include details of how the risk control measures will be implemented" then the SWMS will become verbose and cumbersome and lose its effectiveness at the workplace.

The greatest strength of a SWMS is its ability to communicate the appropriate risk control measures to the worker in a succinct manner.

Just one word might be required to communicate the requirement to "isolate the electrical circuit", for example. If the worker does not know or understand what to do and needs a description on how to safely implement each control measure then that worker is not competent to do the work. They need the training and kind of instruction required by this subregulation well before being assigned the task.

Refer also to our comment under 6.3.3.

4.7.18 (3) (b) The "persons who use it" should be the "persons doing the work"

4.7.18 (4) (b) Replace (b) with "(iii) the safety observer must be competent to apply CPR."

We are not convinced that a 12 months refresher is the critical component in resuscitation. The important thing is that the safety observer is competent. Specifying a time period should not be in the WHS Regulation.

Any issue of competency assessment should be covered by the Code or Guidelines.

4.7.18 (5) (a) Replace "testing" with "testing or faultfinding".

4.7.18 (5) (b) Delete the reference to "under regulation 4.7.15(1)(a)" in this sub-clause.

Testing of the electrical installation is a routine part of the work of a qualified electrical worker. Part of that is to test to confirm that the installation is de-energised. Good practice is to assume live until proven de-energised.

It is not reasonably practicable to expect the qualified worker (or more specifically the PCBU) to stop work and undertake a written risk assessment as required in regulation 4.7.15(2) and consult with the worker who is carrying out the electrical work [refer 4.7.15(2)(b)].

This requirement is onerous and will discourage frequent testing and create a less safe work environment.

4.7.19 Record keeping

This requirement is not linked to a safety outcome. This obligation should reside with the regulator to obtain the SWMS during the incident investigation.

Division 5 Electrical equipment at construction sites –additional duties

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4.7.20 Electrical installations at construction sites

This obligation is a restatement of clause 4.7.5 specifically for construction work and should be removed. The requirements for construction wiring are adequately covered in AS/NZS 3000 which calls up AS/NZS 3012 at clause 7.8.2.1 for "Construction and Demolition Sites" (as does AS/NZS 3012 at 1.2 Application).

If there is a need for specific requirements they should be in a Code of Practice or Guidance material and not in an Australian Standard which is outside the control of SWA.

Division 6 Residual current devices

This Regulation contradicts the requirements for RCDs in AS/NZS 3000 Wiring Rules, which is called up in technical legislation.

Eg Exception 6 in clause 2.6.3.2.1 of the amended AS/NZS 3000:2007 Wiring Rules specifically excludes dedicated computer circuits from this requirement (for RCD protection). This and the detail contained in subregulation (3) would be better addressed in a code or guideline.

4.7.21 Residual current devices –general requirement

4.7.21(1) Replace the words "the circuit is protected" with "risk is minimised" as the clause as written might prohibit the use of portable RCDs. The requirement for RCDs will not extend to residential premises and when a PCBU is undertaking work in a home that may not be fitted with RCDs, it will generally not be practical to fit anything other than a temporary plug connected portable RCD or isolating transformer.

4.7.21 (2) It would be appropriate to have transitional arrangements of five (5) years to allow businesses time to plan the work.

Also, 30mA RCDs can be the cause of nuisance trips in certain configurations such as circuits with a large number of computers. Section 2.6 of the AS/NZS 3000 Wiring Rules provides for certain exceptions. Such specific information would be better placed in a Code or Guide.

4.7.21 (3) It would be appropriate to have transitional arrangements of one (1) year, in those areas where this requirement is not already in place.

Also, in the first line add the qualification "must ensure, so far as is reasonably practicable, that electrical equipment"

4.7.22 Testing of residual current devices

Noted that at point 19 of the Scoping Paper for the Model Code of Practice for Electricity, Guidance material for testing of RCDs is to be prepared.

- **Residual current devices and the RIS**

The implementation of the 4.7.21 and 4.7.22 is discussed in the Regulatory Impact Statement.

The justification for RCDs is that lives will be saved and that is clearly why the requirements are now well entrenched in the Wiring Rules and there are already requirements for retrospective fitting of RCDs in WA, Qld, SA, NT and most recently in NSW.

NSW WorkCover recently undertook a review of workplace electrocutions over the last 10 years and of a total of 37 work related

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electrical fatalities, 14 could have been avoided had the installation been protected by an RCD (to the requirements of AS/NZS3000:2007).

Three of these fatalities were related to lighting circuits that will not be protected under the new legislation.

Also there were no cases of fatality where a RCD was fitted – although we know they do not protect every situation.

Regarding installations that are more than 50 years old there is a high likelihood that the materials used for the electrical installation could have deteriorated and could be unsafe.

We have several reports from Victoria regarding split metal conduits and the old vulcanised indiarubber (VIR) insulation. A report on a recent fatality is at:

<http://www.heraldsun.com.au/ipad/coroner-warning-on-wiring-danger/story-fn6bfmgc-1226026320061>

Some years ago Energy Safe Victoria reported on the electrocution of a worker restumping a building. The worker had touched a split metal conduit under the building and it was electrically energised largely due to the age and condition of the installation.

The Victorian Chief Electrical Inspector had recommended that electrical contractors should recommend rewiring which would involve provision of RCDs or as a minimum install RCDs.

The costs of implementation to business will vary, depending on the age of electrical installation and amount of upgrade that may have occurred over the last 20 years:

- Those with installations that are new or up to three years old should require no installation work. These will already have RCDs fitted because of the requirements of AS/NZS3000:2007.
- Certain sub-circuits prior to that date will also be fitted with RCDs (to meet clause 2.5.3.3 of AS/NZS3000:2000). These are more around hazardous and exposed equipment and tend to align with the 1 year period.
- It is expected that most business installations are upgraded from time to time and most switchboards will be of a standard that will not need replacing.
For these installations it is generally possible to purchase single module wide combination RCD/CB replacement units, so the wiring requirements and modifications are minimised.
- It is anticipated that about 10% of switchboards will require replacement and that will involve considerably more work and downtime.
Generally, such installations will have a four or five year transition period so the work could be programmed with other renovations – which in themselves would require the fitting of RCDs under AS/NZS3000:2007.

Division 7 Overhead electric lines

4.7.23 Overhead electric lines

This issue of fatality and serious injury is a critical safety area.

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Safe approach distances should be uniform across Australia. Any detail and exceptions should be in guidance material.

4.7.23 (1) Add to the end of this clause "or underground cable."

Chapter 6 Construction Work

Part 6.3 Duties of Person Conducting Business or Undertaking

Division 1 General

6.3.1 Control of risk in construction work

- The hierarchy of control of risk in construction work is at odds with the hierarchies for specific hazards, in particular in relation to falls. It is unclear to duty holders which hierarchy has primacy.

6.3.2 Review of risk control measure

It would be difficult to comply with the requirement in regulation 6.3.2(1)(a) to review risk control measures before any change is made to the way construction work is carried out. A literal interpretation of such a requirement would tie the industry in red tape and paperwork. The regulation should be redrafted so that a review is required before a significant or major change is made to the way in which construction work is carried out.

Division 2 High risk construction work-safe work method statements

We support the use of Safe Work Method Statements (SWMSs) in Chapter 6 and Part 4.7 as a powerful safety tool for identifying and communicating the appropriate "risk control measures" associated with the particular "work process steps" where the person undertaking the work might expose themselves or others to risk. As an industry we have been able to develop a powerful set of SWMSs that are the subject of learning and ongoing improvement. They are the subject of expert input and open to broad industry input and reviewed by our industry safety committees as a routine. If an incident was to occur we are able to review the relevant SWMSs and further improve health and safety through a suite of measures without apportioning blame. We believe the Regulations in Chapter 6 and Part 4.7 support this objective.

6.3.3 Safe work method statement required for high risk construction work

The key to effectiveness of the SWMS is in their ability to communicate to the person doing the work by way of succinct statements. The SWMS communicates requirements that lose effectiveness when cluttered with extraneous information.

With this regard we question the desirability for the Regulations [under 4.7.18 (3) (a) (iii) and 6.3.3 (2) (d)] to prescribe that the SWMS must "describe how the risk control measures are to be implemented, monitored and reviewed".

A typical SWMS for a workplace activity might list twenty or thirty risk control measures on a page. Provision of information regarding implementation, monitoring and review is irrelevant to and does not help the process of communicating appropriate risk control measures to the worker. They are neither a training document nor the source of all information and it will be most unfortunate if their unique and powerful safety

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capabilities are lost.

Refer also to our comment under 4.7.18.

Division 3 Excavation work

6.3.8 Excavation work-underground essential services information

There are issues with the quality of information provided by dial before you dig services and this needs to be recognised.

Whilst the intent is recognised, the requirement extends well beyond issues of health and safety.

With more and more underground services being placed by directional boring the accuracy of plans detailing their location is increasingly questionable. This is particularly the case in the developing western suburbs of Melbourne, for example, where there is a considerable amount of buried rock that causes deviations from the proposed location of the services.

6.3.9 Notification of regulator of certain excavation work

Whilst this clause is under Chapter 6 Construction, the exclusion contained in 6.3.9 (3) imply that the scope is broad and could therefore include NBN rollout and routine provision of utility services and underground mains.

Whilst not planned to be at a depth of 1.5 metres or below, worksite conditions (including variations in terrain and hidden voids, rocks or other services) could result in unplanned depths of greater than 1.5 metres. Under such circumstances the PCBU would be obliged to stop work, notify, make safe and lay off the people and plant for five days.

We fail to see the merit in the requirement to notify or to build such costs into projects due to unjustifiable regulation that result in inefficient workplace processes. Those costs will not just be with the PCBU but with the regulator that must administer this process for what is perceived to be a negligible health or safety improvement.

Part 6.5 General induction training

Regulation 6.5.1 and 6.5.2 requires that a worker who is to carry out construction work has completed general induction training.

Currently Victoria has a provision in their regulations that permits someone who has enrolled and paid for the Construction Induction Course to work under direct supervision for 28 days until they have completed their Construction Induction training. This is a useful provision to allow new starters get on site rather than wait days or weeks for an available course.

It would be helpful to have such a provision in the WHS legislation at 6.5.2 (c), for example.

Part 7.3 Asbestos

7.3.1 Prohibitions and authorised conduct

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- **Minor asbestos work v's maintenance**

Many residences built across Australia prior to the mid 1980s' have asbestos containing material (ACM), particularly in relation to switchboard and meter panels as well as walls and ceilings in wet areas and eaves. Electrical work in such buildings can frequently require minor drilling or cutting of this material. Examples are the planned rollout of smart metering by some supply authorities and the requirement or desirability of fitting an RCD (residual current device) to existing installations.

Whilst the health and safety concerns are acknowledged, there are acceptable means of drilling and cutting this material in a manner that minimises the release of airborne fibres. In many instances it is not practical to remove such material because the health risks associated with removal and rectification of ACM can be greater and the costs can be substantial.

It is important that such minor asbestos work is not prohibited or unnecessarily restricted in this legislation.

Subregulation 7.3.1 (3) (c) allows for "maintenance of non-friable asbestos or ACM". We seek confirmation that the term maintenance would permit this minor asbestos work and if not should be changed to assure clarity.