national electrical and communications association

8th Oct 2019

RIS submissions
Risk, Regulatory Planning and Policy
Energy Safe Victoria
PO Box 262
Collins St West, Victoria 8007

CC: Paul Fearon
Executive Director
Energy Save Victoria

Dear Paul,

The National Electrical and Communication Association (Victoria) (NECA), has reviewed the proposed Electricity Safety (General) Regulations and regulatory impact statement (RIS) and provide the following statements and comments.

Firstly, we would like to express our concerns at the lack of consultation with the industry. Through discussions with several NECA members, it is believed that Energy Safe Victoria provided only one consultation meeting for the electrical industry. This meeting was held late last year and was attended by only one person from NECA. We are not aware of any further consultation taking place, whilst significant changes have been made to the regulations.

Through the review of the regulations, we believe there are significant changes that will affect the industry and will need some further consideration, including:

- Inconsistencies within definitions;
- Requirements for changes to current work practices, which have been accepted as safe and compliant;
- Inconsistencies in some cases with the Wiring Rules;
- Confusing requirements in regard to private electric lines;
- Additional testing requirements that may not be required in all circumstances;
- Contradictions in the requirements for electrical inspection;
- The additional requirements for the supervision of apprentices; and
- The processes to allow persons to work on “live” electrical equipment and installations.

While we have not had the sufficient time to consult with our members to the extent that is required, the discussion we have had has provided us with the feedback that has been provided in the attached table.

Of concern is the effect the apprentice supervision requirement that you intend to place on employees of electrical contractors, we believe that very few electrician will be willing to take a legal responsibility to supervise an apprentice. We see this as a backward step and will result in less apprentices being trained. We fully support the training and supervision of apprentices and believe that the responsibility is covered in the Electricity Safety Act and OH&S requirements.

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We strongly oppose the regulation in regard to “work carried out on energised electrical equipment”. These requirements only encourage “Live” work. Again, these requirement have been covered within the Act and OH&S requirements.

The addition testing requirements may not be required in all circumstance when work is done in association with some of the work described.

We request that further consultation is conducted with the industry before the regulations are progressed. We will continue to disseminate the documents and encourage feedback. We plan to forward this and further comments to all relevant parties, including yourself.

I look forward to engaging in further dialog with ESV regarding this matter, my staff and I are available to meet with you in the coming week.

Yours sincerely,

[redacted]
NECA Victoria

Attachment:

Review Summary

Review Summary

PC Draft Electricity Safety (General) Regulations 2019	
Responders	[redacted], [redacted], [redacted] on behalf of NECA

No.	Page No.	Regulation No.	Para/Fig / Table No.	Regulation	Comment	Recommendation
1.		105				These definitions are to be used within these Regulations only and do not vary or amend the definitions used within AS/NZS 3000
2.		105				Add additional definitions: • Single component • Equivalent value • Generating system
3.	7	105		**break-away device** means a mechanical device designed to disconnect an overhead electric line from its supporting structure and the electricity supply when the electric line is subjected to an external stress that exceeds the tensile or design strength of the electric line;	Break away devices are also used in underground installations, particularly for electrical structures installed in the vicinity of vehicles e.g. road reserves. The definition may result in confusion.	**break-away device (overhead)** means a mechanical device designed to disconnect an overhead electric line from its supporting structure and the electricity supply when the electric line is subjected to an external stress that exceeds the tensile or design strength of the electric line;
4.	9	105		**emergency lift** means a lift intended to operate in an emergency;	To maintain the intent of the Wiring Rules I would recommend that the definition is either replicated from the NCC or better still, deleted from these regulations. There is only two references to the term in the Regulations being the definition and on page 66 in Regulation 247(1) (iii). These references do not alter the Wiring Rules requirements so appear to be irrelevant.	Delete this definition
5.	10	105		**fire pump** means a fire hydrant booster pump, a pump for an automatic sprinkler, water spray, deluge or similar fire extinguishing system and— (a) includes a pump for fire hose reels if those fire hose reels are the only means of fire protection for a premises; (b) does not include a pump used to establish and maintain pressure in a fire hydrant or fire extinguishing system provided that any fire hydrant or fire extinguishing system does not rely on that pump for its water supply;	There is no reference to the fire pumps energy source e.g. electric or diesel. The regulation should only apply to electric driven fire pumps.	**fire pump** means an electrically driven fire hydrant booster pump, a pump for an automatic sprinkler, water spray, deluge or similar fire extinguishing system and— (a) includes a pump for fire hose reels if those fire hose reels are the only means of fire protection for a premises; (b) does not include a pump used to establish and maintain pressure in a fire hydrant or fire extinguishing system provided that any fire hydrant or fire extinguishing system does not rely on

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						that pump for its water supply;
6.	20	108			Rationale: -This is to highlight the additional requirements in addition to AS/NZS 3000.	Application of AS/NZS 3000 is applied, adopted or incorporated with the following additional general wiring requirements as detailed in Divisions 3,4,5 and 6 of these regulations.
7.	28	207 (4)(b)		is only capable of being operated by an authorised person (within the meaning of the Australian/New Zealand Wiring Rules) and is labelled for operation by authorised persons only; and	This is too open for individual interpretation. “is only capable” implies that no one that was not authorised could operate the switch regardless of the arrangement used to secure the switch. My concern would be a padlock that was installed by the REC could be removed by a grinder or bolt cutters and this would mean the REC has breached these regulations.	Change the wording to indicate a suitable arrangement, or at least reword to show intent.
8.	28	207(4)(d)			Rationale: -The isolating device being a circuit breaker can and is required to trip reg 207 (4) (f) allows for tripping under certain condition.	Change the word “tripped” to “operated”
9.	30	209			Add in an extra note.	Note (2) - In (b) and (c) above the main earthing conductor is also a protective earth (PE) conductor and is to be sized as the requirements of the Australian/new Zealand Wiring Rules.
10.	32	213 (3)		Any underground consumer’s mains that enter into a switchboard or metering enclosure installed on a construction or demolition site must, from the point it exits the ground up to the point it enters the enclosure, be of a construction that meets the mechanical protection classification of WSX3 specified in Appendix F of AS/NZS 3013.	This will have significant impact on the arrangement of BTS in Perms and for no significant justification. Historically OCEI / ESV allowed 300mm exposed HD conduit between the top of the water pipe upstand to the underside of the metering enclosure. The conduit was “cradled” in the enclosure upright steel support which provided additional impact protection. In recent years ESV reduced this distance to 100mm. This is still an achievable figure. Reducing this to zero has the potential of the unintended consequence of unearthed metal behind meter panels. It will also be difficult to achieve as the whole point of these brackets was to allow some limited movement	Reword to suit current arrangements.

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					allowing the box to be located on complete brickwork.	
11.	33	214				Add the words “for new installation/s” at the end of the heading
12.	33	215				Add the words “for alterations or repairs to existing installation/s” at end of the heading
13.	37	217(6)			This regulation requires to be rewritten to clarify the intent:	Suggestion: Subregulation (5) does not apply if each main switchboard can remotely control the other main switchboards installed or connected to the property they are installed in.
14.	46	225		**Construction of consumer's mains within a structure** If an electricity supplier's underground service lines are protected by protective equipment installed at an electrical installation's metering point or main switchboard, any consumers mains that enters into a building or structure must, from the point it enters the building or structure up to the housing or mounting containing the protective equipment, be of a construction that meets the mechanical protection classification of WSX3 specified in Appendix F of AS/NZS 3013.	This is an unreasonable expectation. WSX3 is too much as a mandatory requirement. The obligation needs only be in accordance with the Wiring Rules. The installation of a WSX3 wiring system will add a significant increase in cost for a very small benefit. I have never seen a cost benefit analysis to justify the costs. There are practical aspects to consider as well. This issue cross-relates to the proposed regulation 213 and these are both asking too much.	Delete regulation. The Wiring Rules provide enough obligation on the construction of unprotected consumer mains.
15.	46	227(2)		**Insulation resistance of underground consumer’s mains** When existing underground consumers mains are reconnected to electricity supply, the insulation resistance— (a) between the conductors of underground consumers mains; and (b) between the conductors of underground consumer’s mains and earth; and (c) if the consumer’s mains conductors are surrounded by a metallic sheath, between the conductors of underground consumer’s mains and the metallic sheath— must not be less than the 5 megohms when tested with a 500V d.c. insulation resistance tester.	I accept that new consumer mains should have an insulation resistance greater than the current requirements but this is an unreasonable expectation to place on existing installations. By mandating a retrospective obligation you will cause the replacement of existing consumer mains that were installed and verified to the Wiring Rules at the time of initial connection. While I note that the proposed values are in accordance with the SIR’s, it is not reasonable to use the SIR’s as a justification for the new values. The MECS apply judgements on a case by case basis in situations where the value of existing mains is less than 5M ohms but more than 1 M ohm	Delete this regulation Delete Table 227 Delete 239

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					and you will now remove that option. There is no safety outcome to justify the new values either. 1M ohm is only 23 micro amps of leakage current.	
16.	54	233			The heading to Division 8 is Private electric lines and the regulation 232 is for low voltage electric lines with reg 233 referring to private service lines and private electric lines and private aerial lines needs to be divided up into sections for each type of electric line.	
17.	54	233(2)			This regulation requires it own heading as it is different to 233 which has the heading Private electric line, part (2) has nothing to do with the Private electric line and only applies to Private service line.	Suggested heading: - **233 (2) Private service lines in hazardous bushfire risk area.**
18.					The term an "electric line construction area" is used but no definition or explanation of such an area is provided within the Act or Regulations.	
19.	55	234			This requirement is part of 233 and should be relocated to be part of 233 and not stand alone, also heading of 233 to reflect both electric lines and Private aerial lines.	
20.	61	241		**Testing of supply network neutral conductors** If electrical installation work includes the connection or reconnection of a low voltage consumer billing meter or a supply network neutral conductor, the electrical installation work must be tested in accordance with AS 4741 to ensure that any voltage measured on the supply network neutral conductor is no greater than 6 volts after certification and before the work is first used.	The confirmation of a network neutral's integrity can only be performed by the network personnel. It can only be done with supply available and connected. This is not necessarily the situation when a meter is installed or altered. Power of Choice may be restricted by this regulation.	Amend the regulation to say:- If electrical installation work includes the connection or reconnection of a low voltage consumer billing meter or a supply network neutral conductor, the electrical installation work must, at the time of connection or reconnection, be tested in accordance with AS 4741 to ensure that any voltage measured on the supply network neutral conductor is no greater than 6 volts after certification and before the work is first used. Or similar
21.	61	242		**Testing of photovoltaic arrays** If electrical installation work includes electrical work on a photovoltaic array or any protective	This regulation is far too restrictive. If an REC determines that they will not be performing PV work in their business, for	Delete.

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				devices, switchgear, controlgear, circuit breakers, wiring systems, earthing systems or battery storage devices associated with the photovoltaic array, the electrical installation work must be tested in accordance with AS/NZS 5033 to verify that the installation work complies with AS/NZS 5033 after the work is completed and before the work is placed into service.	whatever reason, they should not be forced to become competent with the standards related to that PV work. Doing switchboard replacements does not require competency knowledge of AS/NZS 5033.	
22.	64	247(1)(a)			The words "**or protection of electrical installations**": have been incorporated and does not appear in the RIS and will have a huge impact on the industry and customers in the form of additional electrical inspections required e.g. the addition of a protective device in the main switchboard for a final sub-circuit.	Suggestion: Remove words and reinstate the clause from the 1999 regulations.
23.	65	247(1)(h)		**Electrical installation work that must be inspected** For the purposes of section 45 of the Act, prescribed electrical installation work means work on all or part of any of the following electrical installations if they are ordinarily operated at low voltage or a voltage exceeding low voltage— electrical equipment installed in a hazardous area and electrical equipment associated with the protection of a hazardous area but not installed within the hazardous area;	As is the case with the existing regulations, this specifically excludes intrinsically safe systems (IS) from the need to be inspected. This is an ongoing issue as the risks of explosion are as real as other low voltage techniques of protection but there is no checking being done.	Include a sub-regulation modelled on 247(2) such as :- For the purposes of section 45 of the Act, prescribed electrical installation work means work on all or part of any fixed electrical equipment operated at any voltage installed in a hazardous area and electrical equipment associated with the protection of a hazardous area but not installed within the hazardous area. Then delete 247(h)
24.	65	247(4)(c)			`Rationale: -The ability to cause and incorrect polarity of the electrical installation is extremely high at this part of an electrical installation. The consumer mains either side of the consumer billing meter are prescribed work there logic dictate that the installation a consumer billing meter should be prescribed work.	Remove this sub-regulation from non-prescribed electrical work and include is as prescribed electrical work.
25.	66	247(2)			Clarify this requirement – "at any voltage"	Enforce this requirement in the industry. This states that this work must be carried out by a

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						licensed person, but ESV do not enforce this requirement.
26.	67	248(2)(b)		**Inspection of prescribed electrical installation work** A licensed electrical inspector must not inspect prescribed electrical installation work unless— the certificate contains a description of all of the prescribed electrical installation work to be inspected	This creates a "Catch 22" scenario. The LEI cannot confirm the details or extent of the inspection until they have either started or, in some cases, completed the inspection but if they then identify the description on the CES was incomplete the LEI is now in breach of this proposed regulation.	Delete (b)
27.	80	401(1)(i)			This requires all electrical workers to report any incident they are aware of	Delete this regulation and 401(5)
28.	82	402 (1)(a)		Has made accidental contact with any electrical installation	Do you mean any live parts of any electrical installation	Reword
29.	82	402 (1)(i)			This requires all electrical workers to report any incident they are aware of	Delete this regulation and 402(5)
30.	95	507(1)		A person who employs an apprentice	This is already covered in the ES Act 1998	Delete this regulation – it is duplicitous If required it should be included in the Licensing Regulations
31.	95	507(2)		A licensed electrician who is supervising an apprentice	This is covered under the requirements of the OH&S Act. This will have a detrimental effect within the industry. Very few licensed electricians will be willing to take the legal responsibility of the supervision of an apprentice. This will see a major reduction in the apprentice numbers, further leading to the skills shortage	Delete this regulation – it is duplicitous and will have a serious effect on apprentice numbers. If required it should be included in the Licensing Regulations
32.	96	508-511	Division 4	Work carried out on energised electrical equipment	What is the intent of this Division? These requirements are within the OH&S Act and only encourage work on live electrical installations. R.509 gives the option to work on any electrical installation R.511 permits an unlicensed person to carry out electrical installation work	Removed this crap from the regulations. It is duplicitous and contradictory with Section 43 of the ES Act. Section 43 of the Act already permits Live Work where required.
33.	125		Schedule 2	Infringement Offences and Infringement Penalties	The infringement penalties have increase from one tenth of the penalty amount in the 2009 regulation to up to 2.5 times	Why has this increased.