

ELECTRICITY ACT 1945
ELECTRICITY (NETWORK SAFETY) REGULATIONS 2015
PROPOSED AMENDMENTS
CONSULTATION - EXPLANATORY MEMORANDUM

The Electricity (Network Safety) Regulations 2015 (E(NS)R) were published on 5 August 2015.

A review of the regulations has been carried by Building and Energy to identify regulations that are not working as intended and to incorporate additional regulations for new technology and methods used by network operators to supply electricity to consumers.

The amendments that are proposed for the regulations are set out below.

R 3(1)

In the definition of **network**, after (b)(iii) insert “energy storage equipment permanently connected to the distribution works of a network operator and that is owned, hired, leased or otherwise under the control of that network operator”.

Reason: This relates to large batteries, fly-wheels and other energy storage equipment installed on networks or in micro-grids that form part of a network and are intended to support the local network voltage and energy demand.

Insert two new definitions -

monitor, in relation to a network, includes continuously applying and using supervisory control and data acquisition equipment at a central location to control, when necessary, the flow of electricity and adjust voltage levels within the network, respond to alarms and equipment status changes, dispatch maintenance personnel and review switching schedules to ensure the safety of persons carrying out planned and unplanned activities on a network;

Reason: The word ‘monitor’ will be inserted in the definition of prescribed activity to cover the dynamic nature of an electricity network and the activities of personnel involved in the stability of such networks.

operate, in relation to a network, includes, but is not limited to, opening and closing electrical equipment in accordance with switching schedules, either manually or remotely, applying and removing earthing conductors and applying test voltages to electrical equipment;

Reason: the word ‘operate’ will be inserted in the definition of prescribed activity to cover the activity of personnel engaged in field activities involved in the reconfiguration of network equipment and isolation/de-energisation of a part of a network to allow maintenance personnel to safely access a part of a network and includes control room

personnel using supervisory control and data acquisition equipment to remotely reconfigure a network.

Amend the definition of prescribed activity –

prescribed activity means the, or any thing related to the, conveyance, control, supply or use of electricity done by, for or with the authority of a network operator control, supply or use of electricity done by, for or with the authority of a network operator referred to in regulation 4(1)(a), (b), (c), (d), (e), (f) or (g) carried out in the course of designing, constructing, commissioning, monitoring, operating, maintaining or decommissioning of a network and includes an SMS activity;

Reason: This definition has been amended to revert to the 2012 version and the addition of ‘monitoring’ and ‘operating’ to provide for the dynamic nature of an electricity network and the personnel involved in maintaining the stability of the network and the remote supervision of the activities of personnel involved in maintenance or repair of a part of a network by control room staff.

Insert new definition -

safety management system activity (SMS activity) means the, or any thing related to the, conveyance, control, supply or use of electricity done by, for or with the authority of a network operator referred to in regulation 4(1)(a), (b), (c), (d), (e), (f) or (g) carried out in the course of designing, constructing, commissioning, monitoring, operating, maintaining or decommissioning of a network;

Reason: This definition is referenced in the definition of prescribed activity and makes any activity or work practice required by the network operator’s safety management system a prescribed activity.

The phrase “carried out in, on or in connection with” is to be replaced by the words “carried out in, on, in connection with or in relation to” in each of the following regulations;

rr. 3(3), 3(4), 6(1), 6(2)(d), 6(2)(e), 6(2)(f), 7(2)(b), 7(2)(c), 8(1), 9(1)(a), 9(5)(b), 15(1), 15(3), 19(1), 19(2), 21(1), 21(2), 22(a)(vii).

Reason: This amendment relates mainly to things that are within the boundary of a switchyard or substation but not “physically or electrically connected” to network electrical equipment. Typically, the control room building, lighting or mobile plant.

The phrase “so far as is reasonably practicable” is to be deleted in each of the following regulations;

rr. 6(1), 8(1), 9(5), 15(1), 15(2), 15(3).

Reason: New subregulation 6(5) requires the network operator to ensure that its work practices are practicable and reasonable, therefore it is not necessary to repeat this requirement in these subregulations.

R. 3(4); Delete the words “unless it is carried out within” and replace them with the words “unless any person involved, plant or thing used to carry out the prescribed activity is within”.

Reason: This amendment clarifies that if a person or item of plant (e.g. crane) or other thing is outside the 6 meter distance but any thing the person is holding or touching or any part of the plant or thing protrudes into the 6 meter space then a prescribed activity is being performed.

R. 6(5); Insert new subregulation “A network operator must, when developing or adopting work practices, ensure that the work practices are practicable, reasonable and minimise the risks involved when being implemented.”

Reason: This subregulation states the obvious that a network operator would not develop and implement a work practice that exposes workers to a hazard.

R. 9(1)(a) and (b): insert after “network that” the words “causes, or is likely to cause, a notifiable incident”.

Reason: It is not clear in the existing regulation what a risk to safety is. This amendment clarifies that any prescribed activity that causes or is likely to cause a notifiable incident is a risk to safety.

R.13(1): after clause (b) insert “(c) complies with Division 1 of Part 2”.

Reason: Restates the obvious and might not be necessary. Parliamentary Counsel to determine.

R. 16. Delete this regulation.

Reason: In its present form this regulation allows a network operator to put unsafe work practices in its safety management system. This was not the intent of AS 5577 or the regulations and has therefore been deleted.

Part 6

Delete the heading and replace with “Transitional provisions”.

Delete Divisions 1 and 2.

Reason: These Divisions have achieved their purpose and therefore can be deleted. Division 3 remains active and is retained.

Schedules 1 and 2

Schedule 1 — Standards and codes containing evidentiary provisions

[r. 17]

Division 1 — General

AS/NZS 3100:2017 Approval and test specification — General requirements for electrical equipment.

Division 2 — Overhead lines

AS 3891.2-2008 Air navigation — Cables and their supporting structures — Marking and safety requirements — **Low level aviation**.

Division 3 — Switchyards, substations and power stations

AS 60076.1-2014 Power transformers — General.

Division 4 — Underground cables

AS 2832.1-2015 Cathodic protection of metals — Pipes and cables.

Schedule 2 — Standards and codes containing obligatory provisions

[r. 17]

Division 1 — General

AS 2067-2016 Substations and high voltage installations exceeding 1 kV a.c.

IEC 61914 Ed. 2.0 2015-11 Cable cleats for electrical installations.

Division 2 — Overhead lines

AS 3600-2018 Concrete structures.

AS/NZS 7000:2016 Overhead line design — Detailed procedures.

Division 3 — Underground cables

AS/NZS 3008.1.1:2017 Electrical installations — Selection of cables — Cables for alternating voltages up to and including 0.6/1 kV — Typical Australian installation conditions.

Division 4 — Switchgear and protection

AS/NZS 3439.1:2002 Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999 MOD).

AS/NZS 3439.2:2002 Low-voltage switchgear and controlgear assemblies — Part 2: Particular requirements for busbar trunking systems (busways) (IEC 60439-2 MOD).

AS/NZS 3439.3:2002 Low-voltage switchgear and controlgear assemblies — Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use — Distribution boards (IEC 60439-3:1990, MOD).

AS/NZS 3439.4:2009 Low-voltage switchgear and controlgear assemblies — Particular requirements for assemblies for construction site (ACS) (IEC 60439-4, Ed 2.0 (2004)).

AS/NZS 3439.5:2009 Low-voltage switchgear and controlgear assemblies — Particular requirements for assemblies for power distribution in public networks (IEC 60439-5, Ed 2.0 (2006)).

AS 60947.1-2015 Low voltage switchgear and controlgear — General rules.

AS 62271.203-2012 High-voltage switchgear and controlgear — Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV.