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Tēnā koe Tonja

AS/NZS 3000 next edition: opposition to any New Zealand-specific provision permitting switching of the PEN or PE conductor

Engineering New Zealand is the professional body for engineers in New Zealand. Our Electrical Engineering Group (EEG) is a technical group of Engineering New Zealand, and its nominee represents us on Joint Technical Committee EL-001. We write ahead of the Committee's November 2026 meeting to set out our position on switching of the protective earth and neutral (PEN) conductor and of protective earthing (PE) conductors.

Our position

The next edition of AS/NZS 3000 should contain no provision, nor any New Zealand-specific exception, that would permit the switching of the PEN conductor or of a PE conductor. The provisions of clause 2.3.2.1.2(b) and (c) of AS/NZS 3000:2018 should be retained.

Technical grounds

Opening a PEN conductor in an MEN installation interrupts the neutral and the protective earth path at the same time. Exposed conductive parts downstream can then rise to a dangerous touch voltage, up to phase voltage, and protective devices cannot be relied on to operate.

For this reason, IEC 60364-5-53:2001+AMD1:2002+AMD2:2015, clause 536.1.2 (formerly 461.2), requires that in TN-C systems the PEN conductor is not isolated or switched. AS/NZS 3000:2018 clause 2.3.2.1.2(b) and (c) applies the same prohibition, as AS/NZS 3000 has long done.

A New Zealand-only exception would reduce safety for New Zealand installations below the joint standard and the IEC baseline. It would undermine the purpose of a joint standard, and create inconsistency for equipment, designers and inspectors working across both jurisdictions.

A green/yellow conductor is today unambiguously a protective earthing conductor that is never switched, and every electrical worker relies on that. While we support effective protection against open-PEN faults, any future provision for open-PEN detection devices (OPDD) forming part of EVSE should rest on performance requirements defined in a product standard.

If a dedicated O-PEN device is installed ahead of an EVSE, i.e. upstream of an EVSE without internal OPDD functionality, a new dedicated switched protective earthing conductor would need to be defined in the wiring rules. The definition should include a unique name, such as Switched Protective Earth (S-PE), and require every switched protective earthing conductor to be clearly and distinctly identifiable, so that it can never be mistaken

for a conventional protective earthing conductor or for another switched protective earthing conductor. We would be open to switching of an S-PE conductor once EL-001, with input from industry, has defined it and developed the necessary safeguards. Until then, the wiring rules should not permit switching of any PE conductor.

The New Zealand regulatory position

The removal of the prohibition for New Zealand under the Electricity (Safety) Amendment Regulations 2025 has since been reversed, and the prohibition restored in the Electricity (Safety) Amendment Regulations 2026. WorkSafe New Zealand has advised the New Zealand Electrical Inspectors Association that the draft of AS/NZS 3000 reflected the 2025 amendments and will be updated to reflect the restored prohibition in clause 2.3.2.1.2(b) and (c). There is therefore no New Zealand regulatory requirement that a New Zealand-specific provision would need to accommodate.

Our requests

We ask the EL-001 secretariat to provide this letter to EL-001 members before the November 2026 meeting, so that our position can be considered in any decision on New Zealand-specific provisions on this matter.

We ask Standards New Zealand to keep our Electrical Engineering Group informed of any proposal on this matter considered by EL-001 or its working groups.

Please direct any questions to me at **richard.templer@engineeringnz.org**.

Ngā mihi



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Chief Executive