20 March 2026

File Ref: 251174

Aidan Thornton
Via FYI

Dear Aidan

Thank you for your Official Information Act (Act) request received on 6 November 2025. You requested:

- ***Background***
  The Electricity (Safety) Amendment Regulations 2025 (ESAR25) were published 13 October 2025 and the amendments come into effect 13 November 2025.
  Note: being an imminent public safety issue an accelerated processing time is requested.

  Issue: PEN Conductor Protections Removed
  ESAR25 r12 amends Schedule 2 of the Electricity (Safety) Regulations 2010 (ESR).

  ESR Schedule 2 is amended to cite AS/NZS 3000:2018 (…Wiring Rules) subject multiple modifications. The issue raised here is the deletion of clauses 2.3.2.1.2 (b) & (c) from the Wiring Rules.

  AS/NZS 3000:2018 clauses 2.3.2.1.2 (b) & (c) provide the only prohibitions preventing the extremely unsafe action that is the installation of switches, fuses or circuit breakers within an installation's Protective Earth Neutral (PEN) conductor.
  In the Multiple-Earthed Neutral system used by New Zealand, the neutral conductor of consumer mains is a PEN conductor.
  Important note: the presence of fuses or independent switches/breakers in a PEN conductor can render the installation lethal under normal operating conditions (even with no faults present).

- ***Question 1:***
  Please provide details of the management of change (or equivalent) procedure associated with this regulatory change (allowing a fuse, independent circuit breaker or switch within the PEN conductor), including requirements for:
  - *initiation of the process*
  - *requirements analysis (ie justification for the proposed change)*
  - *consultation with industry, the public, and other government entities*
  - *due diligence*
  - *review (internal, peer, and expert)*
  - *detailed technical analysis*
  - *risk/reward and benefit-to-cost-ratio analysis*
  - *required signoffs or gating*
  - *other necessary steps*

- ***Question 2:***
  Please provide all documentation associated with this regulatory change, including but not limited to the above items.

Question 3:
During due diligence prior to the release of ESAR25, what overseas jurisdictions were identified that allow the installation of fuses, switches, disconnects, and/or circuit breakers within Consumer Mains Neutral, Protective Earth Neutral, or Protective Earth conductors of equivalent or similar systems of supply?

On 11 December 2025, we extended the time limit for deciding on your request to 6 February 2025 and on 29 January we communicated that we had decided to grant your request in part. Again, we apologise for the delay in communicating this decision.

WorkSafe response to Question 1:

In 2019, Government agreed to update references to standards cited in the Electricity (Safety) Regulations (ESR). These standards are principally safety standards for electrical equipment and installation practices. Primary drivers for this update were to maintain currency with the evolving international standards and joint Australian/New Zealand standards in line with our international commitments including trans-Tasman recognition and, where possible, to address emerging safety issues. Public consultation on updating those references took place in 2020.

One issue on which consultation sought feedback was which edition or editions of AS/NZS 3000 should be cited in updated regulations. Feedback on this point favoured citation of the 2018 edition and removal of citation of the 2007 edition.

Policy analysis on updating the references to standards took both the feedback from the public consultation and how to ensure the safety of emerging technologies and practices into consideration in order to provide detailed recommendations on the updated citation of standards. As part of this analysis, it is normal practice for advisors, including WorkSafe's technical experts, to consider and advise on the way a standard is cited. This is to ensure each standard meets the purpose for which it is cited in regulations and to reflect any changes within a standard, the way the standard is used, or to accommodate changes in technology or practices.

The recommendations came about during this process subsequent to the public consultation. They arose from consideration of feedback and how best to update the citation of AS/NZS 3000, and ongoing discussions amongst technical experts about better providing for electrical safety to address outstanding issues. Specifically, neither AS/NZS 3000:2007 nor AS/NZS 3000:2018 deal effectively or comprehensively with providing for electrical safety in circumstances where there are acknowledged weaknesses with the New Zealand MEN system, including those associated with:

- supply faults occurring during the charging and discharging of electric vehicles; and
- the resilience of the electricity supply of an installation in the face of a natural disaster.

In the "EV" scenario, interruption of the protective earthing or the neutral (PEN) conductor of an electrical installation is a foreseeable failure mode for MEN systems. It has the potential to cause the metal bodywork of a connected EV to become enlivened. Removal of the restriction stated clause 2.3.2.1.2 (b) and (c) allows for the introduction

of techniques which better provide for the safety of EV charging under foreseeable fault conditions.

In a "resilience" scenario, where an installation has the ability to generate electricity independently from the grid, removal of this restriction enables solutions in which the installation can be configured to operate safely if supply from the grid is lost without putting the grid, including conductors of the grid, and other users, at risk from the grid being re-enlivened inadvertently. The need to better provide for resilience of electrical installations received added emphasis following cyclone Gabrielle in 2023, after which WorkSafe issued guidance on how an electrical installation could be reconfigured for independent operation on a temporary basis.

Noting that there are more general provisions for safety, removing the application of the prescriptive clauses 2.3.2.1.2 (b) and (c) was proposed as an achievable preparatory step to better provide for safety in these scenarios. The recommendation anticipated that rules or guidance, setting out when and how 'switching' of these conductors would be permitted to better provide for safety in specific scenarios, will be promulgated.

It has never been intended to permit 'switching' of these conductors without introducing substitute controls to provide for safety.

In any case, removing the application of clauses 2.3.2.1.2 (b) and (c) did not remove all controls which restrict switching those conductors, nor did it require that switching be installed in any or all circumstances.

In developing the recommendations, WorkSafe technical experts carefully considered the relevant scenarios and both the likelihood and consequence of the proposed changes, given the characteristics of New Zealand's electricity supply system which relies on multiple earthing of the neutral conductor (MEN earthing). The scenario and risk analysis considered and compared realistic failure modes and their likelihood and consequences. This took the history of events which led to significant consequences into account.

Given the recommendation was proposed as a preparatory step, with the intention that the restriction would be replaced by specific guidance relevant to each scenario, a formal documented risk analysis or cost-benefit analysis was not necessary for this specific change which merely removed a partial control. The anticipated guidance included identification of scenarios in which 'switching' of either the main earth or PEN conductor would be allowed and where it would not be allowed.

Each item was also considered for consistency with the policy mandate for the project which was based around updating references to cited standards to be satisfied that it was:

- consistent with overall goal of improving safety, and specifically safety of EV charging and Government goals of improving EV charging infrastructure;
- not inconsistent with the policy mandate;
- necessary to address or prepare to address an identified risk that was not adequately addressed; and
- did not create additional risk.

WorkSafe response to question 2:

WorkSafe interprets this as relating to documents which make substantive reference to or directly discuss making the recommendation related to clause 2.3.2.1.2, which was accepted by Cabinet in October 2024.

Given the nature of the recommended change, there is little detailed documentation of the recommendation and how it was formulated.

This was appropriate given the recommendation was made as a preparatory step, with the intention that the restriction would be replaced by specific guidance relevant to each scenario, and it was not intended to permit 'switching' of these conductors without introducing substitute controls to provide for safety.

In any case, documents related to drafting the amendments are subject to legal privilege. In any case, most of these documents do not make a substantive reference to clause 2.3.2.1.2 or why the recommendation was made.

There are also documents in scope which are publicly available on the MBIE website which need not be released.

There are also documents for release that are in scope for your request. Please refer to the following table:

Requested Information

The following documents are publicly available:

electricity-safety-amendment-regulations-2025-and-gas-safety-and-measurement-amendment-regulations-2025-proactiverelease – dated 25 November 2025	Publicly available on MBIE website
updating-energy-safety-standards-citations-in-regulations-minute-of-decision-proactiverelease – dated 26 March 2025	Publicly available on MBIE website

The following documents are in scope of your request.

Item	Document Title	Decision
1.	Email dated 23 June 2023 - RE_ Updates to citation of standards in ESR and GSMR	Release in part
2.	Extract from attachment - Copy of Copy of Copy of Streamlined standards table for Cabinet paper CB Comments to update to Dec 2022 new	Release in part
3.	Email dated 27 February - Amendments to the regs 2024-02-27	Release in full
4.	Extract from attachment - REgs review	Release in part
5.	Email dated 13 March 2024 - Scotts, Chris and my comments combined - only harmonics to do	Release in part

6.	Extract from attachment - Copy of Copy of Copy of Standards tables from Energy Safety as at 7 March with LA markup	Release in part
7.	Email dated 14 March 2024 - FW_ Hopefully the last lot of questions on the ESR schedules __	Release in part
8.	Extract from attachment - Standards tables from Energy Safety as at 7 March with LA markup	Release in part
9.	Further information about changes to standards included in Energy Safety Standards Update - linked to email 2024-05-25	Release in part

I have decided to release the relevant parts of the documents listed above subject to certain information being withheld under the following section of the Act, with any information not relevant to your request removed and noted as "out of scope":

9(2)(a) – to protect the privacy of natural persons

Information being withheld

The information below is covered by your request.

Item	Document Title	Decision
9.	Email dated 25 September 2025 and attachments	9(2)(h)
10.	Email dated – dated 13 August 2025 and attachments	9(2)(h)
11.	Email dated – dated 16 September 2025 and attachments	9(2)(h)
12.	Email dated 7 August 2025	9(2)(h)
13.	Email dated 22 August 2025 and attachments	9(2)(h)
14.	Email dated 22 September 2025	9(2)(h)
15.	Email dated 4 September 2025	9(2)(h)
16.	Email dated 20 May 2025	9(2)(h)

I have decided to withhold the documents listed above in full under one or more of the following sections of the Act:

9(2)(h) – to maintain legal professional privilege

In making the decision to withhold information under section 9 of the Act it has been considered that the public interest in release does not outweigh the reasons to withhold it.

WorkSafe response to question 3:

The MEN or TN-C-S system is relatively uncommon globally, and different variants which are not completely consistent with other variants are implemented. In each case, there are variations in the balance in how aspects of those systems are assigned between the network and consumer installations. The characteristics of networks and the range of

installation types also influence how safety is achieved. Therefore, while it is useful to consider other jurisdictions, each system should be considered unique.

WorkSafe experts routinely engage in informal technical discussions in standards development fora as well as with local and international contacts. Discussions of this nature are typically informal and involve shared concerns and insights regarding the challenges of, and approaches to, achieving electrical safety as new applications arise and technology evolves to address global challenges.

Guidance on providing for safety which relies on 'switching' the PEN or protective earth conductor at consumer mains in a system which corresponds with the New Zealand MEN system is therefore only relevant to similar systems which also seek to address electrical safety in circumstances where there are acknowledged weaknesses with the implementation of an MEN system.

In this case, at the time the United Kingdom was specifically identified as providing or developing relevant guidance which includes 'switching' the PEN or protective earth conductor to provide for safety.

This reply addresses the information you requested. You may ask the Ombudsman to investigate and review this decision, and further information is available at www.ombudsman.parliament.nz.

If you require further assistance, please contact ministerial.services@worksafe.govt.nz.

Yours sincerely

Rob Pope
Head of Inspectorate