

4 May 2026

File Ref: 260317

Mark Harris
Vice President, NCEIA
fyi-request-34328-f0dcaf00@requests.fyi.org.nz

Dear Mark,

Thank you for your Official Information Act (the Act) request received on 1 April 2026. You requested:

- *In a 15 January 2026 letter (WorkSafe reference 260032) WorkSafe stated "our experts carefully considered the relevant scenarios and both the risks being addressed and the risks associated with the change".*
- *Please provide the expert risk assessment scenarios, risk scoring and related analysis regarding the removal of PEN conductor protections from AS/NZS3000:201 sections 2.3.2.1.2 (b) and (c) that are referred to in the 15 January 2026 letter (WorkSafe reference 260032).*

The recommendation to remove the application of clauses 2.3.2.1.2(b) and (c) of AS/NZS 3000:2018 for New Zealand came about while making detailed recommendations for amending the regulation subsequent to public consultation about updating references to cited standards in the Electricity (Safety) Regulations. These recommendations arose from consideration of feedback from MBIE's formal consultation, and how best to implement the citation of AS/NZS 3000, as well as 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 was not 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 justified or 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 overall policy mandate for the project to update 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.

Please note, WorkSafe has not identified any documents in scope of your request which record the discussions or analysis. Accordingly, we have decided to refuse part of your request under section 18(e) of the Act, as the information requested does not exist, or despite reasonable attempts to locate it, cannot be found.

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

Yours sincerely



Rob Pope
Head of Inspectorate