21 April 2021

Mr Dick Williams
Reviewer
Queensland Electrical Safety Office
Via email: esreviewer@oir.qld.gov.au

Dear Mr Williams,

Response to Queensland's *Electrical Safety Act 2002* issues paper

Thank you for the opportunity to respond to the Queensland *Electrical Safety Act 2002* issues paper (**Issues Paper**).

The Clean Energy Council (**CEC**) is the peak body for the clean energy industry in Australia. We represent and work with over 900 of the leading businesses operating in renewable energy, energy storage and renewable hydrogen. We are committed to accelerating Australia's clean energy transformation.

The CEC welcomes this review of the *Electrical Safety Act 2002* (Qld) (**the Act**), almost two decades since it was passed. We recognise that safety is critical to the success of the renewable energy industry and we are pleased to work in collaboration with the ESO and other industry stakeholders to ensure that the Act remains fit for purpose.

Careful consideration must be given to any potential changes to the Act to ensure that any refinements made to cater to future technology changes do not unnecessarily date the legislation, but rather provide a principled framework for the evolution of the sector. With this in mind, we have reviewed the Act In collaboration with our membership and have concluded that it remains largely fit for purpose.

One area however where we do believe modification is warranted is in relation to the definition of 'electrical equipment' (Question 1 in the Issues Paper). Solar PV modules are not currently considered to be 'electrical equipment' under the Act because they are extra low voltage, often in the range of 40-60v, and are therefore excluded under the definition set out in Section 14 of the Act. The CEC suggests that whether a piece of equipment is considered 'electrical equipment' or not should be determined by the intended purpose of the equipment, rather than the voltage level. We suggest that the definition be changed to an intent or purpose-based definition, without the reference to voltage, in line with the definition of 'electrical equipment' under AS3000. However, we submit that it is essential that the definition be drafted so as to exclude items such as single batteries, automotive car batteries, electrical stock fences or camping solar panels from being considered 'electrical equipment', otherwise actions such as replacing a smoke detector battery could be considered 'electrical work'.

We note that if the definition of 'electrical equipment' were changed so as to include solar modules, work such as heavy lifting, locating, mounting or fixing of solar modules would still be considered **non-electrical work** due to the exemptions under the definition of 'electrical work' in sections 18(f), (g), (m) and (n) of the Act. These exemptions remain appropriate noting that these tasks are mechanical in nature. The exemption for locating, mounting or fixing of solar modules is also supported by both the *Queensland Building and Construction Commission Act 1991* and the Queensland Building and Construction Commission Regulation 2018, which state that the installation of solar PV panels

constitutes 'building work' requiring a QBCC licence (which in turn is not required if the system is ground-mounted).

In relation to earthing practices, we acknowledge that the continuity of the earthing system is essential and we are satisfied that the existing procedures and regulatory framework, which requires licensed electrical workers to install, visually inspect and test earthing connections prior to the connection of the PV panels, provides the necessary charter to ensure that this task is performed satisfactorily. This requirement is also consistent with the Building Code of Australia, clause 3.4.2.2 (b) which requires a steel frame to be permanently electrically earthed. Construction practices in these instances do not require electrical workers to install and mount such frames but rather to connect and test the permanently connected earth.

In relation to the remaining questions posed in the Issues Paper, we have a number of other minor comments which are outlined in the table below:

No	Question	Recommendation(s)
2.	If any, what changes should be made to the scope of 'serious electrical incident' and 'dangerous electrical event' considering threshold issues of near misses and voltages involved, particularly considering technological changes over time?	Section 11(2)(b) should be amended as the current wording may deter people from receiving medical assistance to avoid a reportable incident. We suggest that the *words 'is treated for the shock or injury by or under the supervision of a doctor'* be removed completely, or alternatively that the section is amended to include *'whether or not the person is treated for the shock or injury by or under the supervision of a doctor.'* This change would also align this definition with section 35 and 37 of the *Work Health and Safety Act 2011* (Cth), which requires that an electrical shock, with no mention of medical assistance, be a 'reportable incident' (question 7).
3.	Is there benefit in adding examples of various terms that draw on technological changes over time and are therefore clearer to interpret and apply to the contemporary environment? If so, what examples should be included?	We submit that these could be addressed in codes of practice, rather than within the Act itself. One example that could be included within the codes of practice could be for earthing applications, e.g. a non-earth requirement for glass-glass panels, as opposed to glass panels with a metal frame.
4.	If any, what changes should be made to the objects and regulation-making powers of the Act to ensure they are broad enough to encompass duties to ensure electrical safety in the contemporary environment?	We don't consider that any changes are required to the objects or regulation making powers of the Act.
5.	If any, what changes should be made to ensure existing duties, such as those of suppliers and importers, are of sufficient	We don't consider that any changes are required. The CEC submits that the extensive coverage of existing international standards (for example IEC, ISO, BS etc) and Australian/New

No	Question	Recommendation(s)
	scope to ensure safety in the contemporary environment?	Zealand standards (AS/NZ) adequately ensure safety.
6.	Is it necessary to make changes to ensure the clarity of the status and application of codes of practice? If so, how could this be achieved?	We submit that the existing status and application of codes of practice is appropriate, and no changes are required.
7.	If any, what changes should be made to align the Act with the *Work Health and Safety Act*?	Please see the response to Question 2 above.
8.	More broadly, if relevant, how should the Act be changed to ensure new technologies for generating, distributing and supplying electricity are captured within key definitions, reflected in the scope of 'electrical work', and also reflected in key duties to ensure electrical safety?	The CEC considers that the term 'battery' may be too narrow in the long-term and we suggest that the use of a term such as 'energy storage device' may be more appropriate.
9.	What, if any, changes are required to improve electrical safety in relation to electrical worker and contractor licenses?	The development and application of recognised competencies would provide industry with the opportunity to improve safety performance. We submit that various industries and functions should require holders of electrical worker and contractor licences to attain additional competencies (i.e. high voltage operations and working or testing of hazardous area equipment). Such courses could be developed today by RTOs in accordance with the requirements of the *Electrical Safety Act (2002)*, and other relevant occupational health and safety legislation, regulations and guidance. Such courses could provide a useful foundation for those wishing to both (i) enter the sector and (ii) for licence holders to be deemed competent when assessing and managing risk.

Thank you again for the opportunity to provide a response to the review of the Act. Please do not hesitate to contact me on 0417 033 752 or at afreeman@cleanenergycouncil.org.au if you wish to discuss these matters further.

Yours sincerely,

Anna Freeman
Policy Director, Energy Generation