

# Qld Electrical Safety Act Review 2023.

Submission on Discussion Paper and Final  
Recommendations.

Chris Lehmann 23<sup>rd</sup> June 2023

## Introduction

Master Electricians Australia (MEA) is the trade association representing electrical contractors recognised by industry, government and the community as the electrical industry's leading business partner, knowledge source and advocate. Our website is [www.masterelectricians.com.au](http://www.masterelectricians.com.au)

## DISCUSSION PAPER QUESTIONS

### 3.1 Electrical safety considerations of new and emerging technologies.

How are you, your organisation or your stakeholders affected by the problems identified and to what extent?

Our members are directly affected by the problems identified and agree that there is increased risk to workers and the community with the increased use of inverters to transform ELV to LV in residential, commercial, mobile structures (caravans, food vans, demountable buildings etc) and EV's. MEA accept that there is also an increased risk posed from the widespread use of high current LV devices such as batteries used in BESS whether they be in a home or in a commercial application.

Do you agree with the assessment of the problem identified, and are there any other elements to the issue that you think have not been captured? If yes, what are they and can you provide examples of these issues?

Agree with the problems identified raised by the introduction of emerging technologies, especially high current LV equipment.

What practical impact in the form of *benefits* would the options proposed in the Discussion Paper have on you, your organisation, the workforce or the community? Please provide examples where possible, including for new and emerging technologies and ELV equipment.

Our members and Electrical Workers generally would benefit from increased worker and community safety, increased opportunity for work/economic activity.

What practical impact in the form of *costs*, would the options proposed in the Discussion Paper have on you, your organisation, the workforce or the community?

Overly onerous restrictions on non-licensed electrical workers being able to complete fabrication and installation tasks that are peripheral and incidental to the electrical installation work would exacerbate skills shortages and markedly increase costs of installation. A RIS should be conducted to quantify the impacts to the community at a time of increased living costs.

What is your preferred option for the various ELV discussed and why will it be best for you, your organisation and your stakeholders?

Option 2, with some caveats. MEA believes that the risks posed by high current ELV is real and that direct supervision by licensed EW's is warranted, as long as the supervision ratios are at a commercially viable level and reflect the risk level of the tasks being undertaken.

i.e.

- mounting, fixing, and locating of panels 10:1?
- Installation of mechanical protection of cables (conduit, tray, racking etc) 10:1?
- Installation of cabling 5:1?

Are you aware of evidence of the dangers of particular forms/categories of ELV equipment? If so, what evidence is available?

As identified in the fact sheet. there have been multiple incidences of ELV battery packs failing and creating a fire risk. This has generally been associated with overcharging, and damage caused by water or physical impacts.

Should certain ELV equipment be included in the scope of the Act's regulatory reach that are not currently covered?

BESS systems for the supply and conversion of electricity from ELV to LV in any installation environment.

What approach to including ELV equipment within the scope of the ES framework should be adopted in Queensland?

A cautious and practical approach that recognises the risks associated by increased use of high power ELV but does not overly regulate or increase community costs beyond what is necessary.

There should also be sufficient flexibility in the scope of the legislation that if improvement in design of ELV equipment enhances installation and maintenance safety, that current restrictive work practices can be modified.

### **3.2 Changing landscape of electricity and the workforce.**

How are you, your organisation, the workforce and the community affected by the issues posed by the changing landscape of electrical work? To what extent?

MEA's members and the electrical contracting industry in general are directly affected by the identified issues. Mandating a change for increased supervision by electrical workers (EW's) to perform these tasks and/or only allowing licensed EW's to perform these tasks, will increase costs and exacerbate existing labour shortages.

How many workers have been impacted by the identified hazards or are exposed to such hazards and might be exposed in the future? Which workers/ businesses/ households are impacted by the problem?

All businesses, workers and households are potentially exposed in some way to these identified risks.

MEA believe that any changes to the level of supervision, should ensure that the supervision ratios are at a commercially viable level and reflect the risk level of the tasks being undertaken.

Which are the key industries in which these tasks take place and how large are they?

Domestic, Public and Commercial sectors will all be affected by legislative changes to these work practices.

Do you agree with the assessment of the issues identified with the changing nature of electrical work, are there any other elements to the issue that you think have not been captured? If possible, please share examples of your experience with these issues.

MEA agree broadly with the identified risks, however, think that the *initial* fixing, installing, and mounting of individual PV components is a low risk and can be performed by Trades Assistants (TA's) under a level of supervision. We agree that removal, repair, and replacement of PV components is high risk work and should only be performed by a licensed EW.

What practical impacts – including costs and benefits – would each option have on you, your organisation, the workforce, and the community? Please share examples of impacts and experiences of impacts, where possible.

Options 1 and 4 are not adequate to address the changed circumstances confronting the industry.

Option 3 requiring an EW to perform work is unnecessary, would exacerbate current skills shortages and dramatically increase the costs associated with the de-carbonisation of the economy.

MEA support Option 2 requiring increased supervision, on the proviso that supervision ratios and practices reflect the risk level and don't unduly threaten the commercial viability of the sector.

In relation to the following three risks considered, which of the four options do you think is best and why?

a. Fixing, mounting and locating of renewable energy generation and storage technology (such as solar PV panels)

b. Mechanical cable protection work,

c. Laying, cutting or sealing underground cables that are part of the works of an electricity entity before the initial connection of the cables to an electricity source.

MEA is broadly supportive of Option 2 (Requiring supervision by a licensed electrical worker for the locating, mounting, and fixing renewable energy generation and storage technology), in requiring enhanced levels of supervision for the identified tasks. We have concerns that any changes to the level of supervision, should ensure that the supervision ratios are at a commercially viable level and reflect the risk level of the tasks being undertaken.

MEA support some greater level of supervision for installing of mechanical cable protection and laying of underground conduits, especially where it is conductive, but stress again our concerns about viable supervision ratios and practices.

MEA does not believe the inclusion of plastic/non-conductive conduit or cable support and protection systems, as recommendation 7 proposes. We believe that this is unwarranted as there is no earthing/bonding requirement for these types of systems and could be installed under general or broad supervision.

Do you have suggestions for other options to address the issues identified? Please provide examples (including costs) on the impacts of your suggested options, including how it would ensure the workforce is electrically safe and conduct electrically safe work.

The introduction of an industry recognised safety/competency induction course for aspects of Trades Assistant duties, similar to Mine Safety Induction courses as an adjunct to changes in legislation.

The Review identified risks with the locating mounting and fixing of energy generation and storage electrical equipment. Do you agree that the risks identified are limited to this equipment? If not, what do you consider the scope of these risks to be?

MEA agree that there is a risk associated with working with this equipment and that increased levels of supervision would aid in an improvement in overall safety within the industry. We believe however that supervision ratios and practices need to be at a level that appropriately mitigates the risk and does not put an undue burden on the cost of installation and exacerbates existing skills shortages.

The Review identified risks from the laying, cutting or sealing of underground cables that are part of the works of an electricity entity before the initial connection of the cables to an electricity source (section 18(2)(j) of the Act). Other exclusions for electricity entities also exist in section 18(2) of the Act. Has the decentralisation of energy generation had a similar impact on the risk profile of these exclusions? Please provide examples where possible.

MEA agree that there is a risk associated with working with this equipment and that increased levels of supervision would aid in an improvement in overall safety within the industry. We believe however that supervision ratios need to be at a level that appropriately mitigates the risk and does not put an undue burden on the cost of installation and exacerbates existing skills shortages.

### **3.3 Electrical safety and electric vehicles.**

How are you, your organisation, the workforce or community affected by the problems identified and to what extent?

MEA members and the broader electrical industry is already feeling the effects of the introduction of EV's and are actively involved in installing the infrastructure to support them, in the form of EVC's and increased levels of Rooftop Solar PV.

Do you agree with the assessment of the problem identified, and are there additional risks presented by electric vehicles that have not been identified? If yes, what are they and can you provide examples of these issues?

MEA agrees with the broad thrust of the identified issues.

On a accuracy point, MEA believes that it is incorrect to refer to only *Lithium-Ion* battery technology in the discussion paper, we believe that the Act should be technology neutral as to the type of batteries referenced, as it the high fault current potential and voltage levels that present the risks and this will be the same no matter the chemical makeup of the BESS.

What practical impact, including the costs and benefits, would the options proposed in the Discussion paper have on you, your organisation, the workforce or the community? Please provide examples where possible.

MEA believes that legislative change may be needed, but that possibly the Electrical Safety Act is not the instrument to achieve it.

Option 1 would have the least impact on skills challenges in the electrical contracting industry.

Option 2 would involve a great deal of change and upheaval in the industry, to move vehicles under the purview of the Electrical Safety Act.

Option 3 would support greater awareness within the industry and the community.

What is your preferred option and why would it be best for you, your organisation and your stakeholders?

In terms of this paper, a version of Option 1 and 3 – *Status Quo & Awareness and Education* would appear to have the least impact on the electrical industry and build on the work that is already being undertaken by the motoring industry as pointed out on Pg 67 of the Discussion Paper.

Options for a licensing framework.

MEA believe that the responsibility of the Electrical Safety Act and Licensing should stop at the Electric Vehicle Charger (EVC), and that no electrical licensing regime be introduced for working on EVs.

The existing motor vehicle industry in partnership with the OEM's should be given the opportunity to formalise the processes currently being developed, to define a competent person and the formal qualifications and licences needed to maintain and repair motor vehicles including EVs.

If any licensing is to be considered under the Electrical Safety Act, it should be limited to a Restricted Electrical License and designed specifically for the needs of the EV industry.

Do you have suggestions for other options to address the problems identified? Please provide examples (including costs where appropriate) of your suggested options, including how it would ensure the workforce are electrically safe and conduct electrically safe work for community safety.

The work that is being done by the MTAQ and TAFE with the introduction of micro credentialing to upskill existing mechanics and the introduction of the Cert3 in Automotive Electric Vehicle Technology, will have the best chance of a “just transition” for the existing ICE vehicle workforce, put the least strain on the electrical industry workforce, and cause the least amount of legislative overlap.

EV’s have many fewer moving parts than ICE vehicles, have sealed components, and are designed to be “plug and play” for maintenance and repair, with OEM’s providing diagnostic software and excellent product training and manuals, just as they currently do for ICE vehicles.

The current regulatory and licensing environment for motor vehicle safety and repair is the best place to deal with this change.

### **SPECIFIC COMMENT ON RECOMMENDATIONS IN THE FINAL REPORT.**

Recommendation 7 – As covered in the answer to 3.2 above, MEA believe that the installation of non-conductive mechanical protection of cables, does not require direct supervision and should only require broad or general supervision by a licensed EW based on an assessment of the risk level.

Recommendation 8 – As covered in our answer to discussion paper questions, MEA believes that determining competency for servicing and repair of EVs should not be covered by another instrument other than this Act, and not require an electrical license.

Recommendation 33 – MEA believes that this proposal would duplicate the role that ASQA plays, and that if there are questions over the quality of an RTO, the ESO should refer it to ASQA and use all the available influence necessary to ensure that training quality is improved, or the RTO is deregistered.

Recommendation 42 – MEA believe that the discretion should still be given for the recognition of prior learning for a QBP, based on previous business experience and good conduct or the equivalency of another course of study in business practices.

Recommendation 48 – MEA believes that any inspection of a recreational vehicle using solar PV and/or generators for provision of LV electricity, should be undertaken by a licensed electrical Contractor.

Recommendation 54 – Considering recommendations 25 & 43, MEA believe it is not appropriate that the QBP be called in front of the ELC when a worker is referred for a s106 breach. Furthermore, that the QTP/PCBU not have a reverse onus of proof applied to them for a s106 breach by an EW.

Recommendation 57 – MEA object to the inclusion of any category 1 offence being based on “simple negligence” but support the status quo that “gross negligence” (the reckless or

purposeful indifference to the reasonable safety of others) remain as a test for a category 1 offence.

Recommendation 59 – MEA strongly object to any appointment of ETU officials/employees as electrical license inspectors and entering worksites of private businesses, it is a clear and apparent conflict of interest.

Recommendation 60 – In line with our concerns expressed in 59, MEA strongly object to any business being mandated to employ ETU members selected by a ballot of employees/members , to fulfill any role of HSRs in private businesses, those decisions should be at the discretion of the business owner. It is a clear and apparent conflict of interest.

Recommendation 61 – MEA object to any expansion of industry contributions outside of the current levy arrangements, MEA does however support recommendation 62 on a review of licensing fees.

CPD recommendations 34 & 35 – MEA strongly supports the move towards CPD in Queensland and the different requirements for CPD depending on license type.

Licensing recommendations 36, 37, 38, 39, 40, 41 & 43 – MEA supports the enhanced measures in the licensing recommendations, with the exception of our comments around #42 and discretion for recognition of business skills.

## **Conclusion**

MEA is supportive of the overwhelming majority of the recommendations of the final report and the aims of the new electrical Safety Act and looks forward to working with the government and other stakeholders in a constructive manner to bring these necessary reforms to fruition.