

Response to EA _ Act- Review and Final Report

Re Recommendation 2: Review the electrical safety risks presented in electric vehicles and consider their inclusion in the scope of regulation by the Act. It is further recommended that the Electrical Safety Office engage with other relevant Queensland and Australian regulators as needed to ensure appropriate scope and to avoid both regulatory gaps and duplication

Re Recommendation 8: For electric vehicles (or parts thereof) falling within the definition of “electrical equipment” (see Recommendations 2 and 4), consider requiring:

(a) appropriately licensed electrical workers to carry out the electrical work on the electrical components when the vehicle is serviced and or repaired, to ensure the safety of owners/operators and community; and

(b) appropriately licensed electrical workers carry out the electrical work on the electrical components of the vehicle when an electric vehicle requires on-road break-down work to ensure safety of owners/operators, the community and first responders

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

I am a retired electrician and will be only affected as a member of the community and possibly as an owner of an electric sometime in the future.

2. 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?

I agree that high voltage DC (generic term, not AS/NZS 3000 term) is a considerable risk to people working in that environment and consequently requires some legislation to protect workers and the owners of such vehicles. Currently vehicles available in Australia have electrical systems with voltages of up to 800 volts with the potential to be higher with newer battery technologies and the desire for greater range in these vehicles. We are told that the Tesla Semi and Tesla Cybertruck will have 900kWh, 1000 volt batteries and that Tesla has developed a 1MW DC charger called the Megacharger which has liquid cooled cables. As well as the vehicle motor supply, there are already vehicles in production in Europe with 48 volt supplies for the general electrical supply (ie lights, horn, entertainment etc) both in ICE cars and proposed for electric vehicles (EV's). So even though this does not exceed **extra low voltage** (ie 120 V dc) it also is worth noting as a future change in electrical circumstances in vehicles.

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

My preferred option for treatment of electric vehicles under the Act is that electric vehicles be classed as a special class of “electrical equipment” and a new restricted licence for electric vehicles be created with the base qualification of motor mechanic. The integration of the electrical and mechanical components of EV's is such that a knowledge of both areas is essential for reliable and safe work on these vehicles. The level of technology included in these vehicles is far beyond anything normally seen in general transport and only seen in aviation, the military and space industries, so workers maintaining these vehicles need to be qualified in more areas than just the base trade. I note that there has been a shortage of Electrical Fitters and Electrical Mechanics in Queensland for a number of years, so requiring

a full electrical licence for EV servicing would create delays in servicing EV's and more shortages of electricians in the general industry.

5. If a licensing framework was introduced: a. Should any specific type of vehicle be excluded for the requirement (e.g., motorcycles, cars, buses, trucks)? If so, what are they and why?

I do not consider that there is a need to exclude any type of vehicle. However a base licence for a mechanic for the specific type of vehicle be a prerequisite for the restricted licence for the electric vehicle. Therefore, there needs to be specific courses developed for the restricted licence and Registered Training Organisations (RTO's) should have to be specifically approved to deliver this particular training.

6. 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.

To address the issue of training quality, the Commissioner for Electrical Safety should regularly assess and review the performance of RTO's delivering the training for the restricted licence annually in addition to the oversight provided by the Australian Skills Quality Authority (ASQA) which is staffed by training experts not technical experts. This has cost implications.

Re Recommendation 22: Consider strengthening requirements for importers and suppliers of electrical equipment to confirm they conform with the appropriate standard or Regulations, whichever is greater, and are electrically safe prior to sale. (i) noting that the applicable standard or Regulations is that at the time of import or manufacture in Australia

Re Recommendation 23: Consider enhancing the Regulator's powers to cancel responsible supplier registrations; for example, where the person is ineligible, overseas or interstate (Regulations ss 139-142).

Re Recommendation 27: Clarify the meaning of "importer" for the purpose of ensuring the appropriate scope of duties to ensure products imported are electrically safe (s 8)

Given the number of fires caused by battery chargers for phones, electric bikes and electric scooters, there is certainly a need for more safety regulation on such devices. I propose that all electrical equipment such as appliances, tools, personal equipment and battery chargers for sale in Queensland be included in the scope of Electrical Safety Regulation 2013 (ESR) and all importers (and possibly sellers) be licenced as per the ESR for the class of equipment that they can import or sell. This has cost implications.

Re Recommendation 40: Ensure photographic electrical licences, based on the current Workplace Health and Safety Queensland licensing approach, are incorporated within the ESO's electronic licensing database, to prevent and deter fraudulent use of licences by unlicensed or suspended licence holders.

I support this recommendation.