



## **AUSTRALIAN MANUFACTURING WORKERS' UNION**

### **Submission to the Queensland Government's Review of Queensland's *Electrical Safety Act 2002***

27 June 2023

To whom it may concern,

The Australian Manufacturing Workers' Union (AMWU) welcomes the opportunity to respond to the Review of the Queensland *Electrical Safety Act 2002*.

The AMWU has organised and represented workers in the Australian manufacturing sector for 170 years. Today, the AMWU represents over 60,000 members in every Australian city and region.

Our representation includes thousands of workers around the country building, maintaining and repairing Australian vehicles like buses, trucks and trailers. Our members are the skilled tradespeople that repair and maintain the vehicles Australians take to work and leisure, the buses that take our children to school, and the trucks that move our goods around the country.

The AMWU has been building, maintaining, and repairing all types of vehicles for 159 years, since the formation of The Vehicle Builders Employees' Federation of Australia, which merged with the AMWU in 1993. The AMWU's long and proud tradition as the force behind vehicle building is an integral part of Australian vehicle manufacturing industries.

Australian workers and AMWU members in skilled trades already make high-quality heavy vehicles. Our domestic bus, truck and trailer industries are responsible for approximately 15,000 direct jobs and as many as 34,000 indirect jobs. The AMWU believes that we must leave no one behind in the transition to low and zero emissions vehicles, and that means making heavy vehicles in Australia that are built by Australian manufacturing workers. Maintaining sovereign industrial capabilities to manufacture vehicles in Australia is an issue of great importance to our nation as we decarbonise the economy.

At the highest level, of the three Options proposed in the review, the AMWU supports Option 1: maintaining the status quo in terms of the exclusion of electric vehicles, other than mining vehicles, from the ES Act. Subsequently, the AMWU supports the Queensland Government pursuing Option 1 in conjunction with the development of risk management, Work Health and Safety and skills and training for manufacturing

work with electric vehicles (EVs) in vocational education units of competency and training packages.

The AMWU does not support the Queensland Government pursuing Option 2: legislative change, which would include electric motors being defined as 'electrical equipment' and the work of manufacturing workers being defined as 'electrical work'. This legislative change would require limited licencing and have detrimental implications and potentially lead to unintended consequences.

The implication of a possible legislative change if Option 2 is pursued is that manufacturing workers in vehicle industries would be required to undertake training to obtain a restricted electrical licence to hold occupations in which individuals work with specific types of electrical equipment. As this would see manufacturing workers deemed to be performing 'electrical work' on 'electrical equipment', major labour and workforce development challenges in heavy vehicle manufacturing in Queensland would likely follow.

As detailed above, Australia has a thriving heavy vehicle manufacturing industry which is undergoing considerable change and adaptation in response to global market and policy demands for a shift to low and zero emissions. As an industry that has long sought to remain competitive in the face of international competition, Australian heavy vehicle manufacturers were among the first outside of Europe to adopt Euro 6 emissions standards for diesel-fuelled vehicles – the world-leading emission reduction standard for heavy vehicles – when it came into effect in 2014.

Despite such efforts of bus and truck industries to incorporate Euro 6 technologies for its locally built fleets, the Queensland Government risks sending signals to its local industry that the only viable pathway to reducing emissions in Australia's locally made transport fleets via the incorporation of battery technologies into existing platforms. Not only would this see businesses incur significant capital costs to retool manufacturing and assembly platforms, it also neglects the simple fact that electric batteries are not the only technological solution for reaching low and zero emissions targets; nor are they the most suitable technological outcome for the manufacture of heavy vehicles. Australia's heavy vehicles are required to cover vast distances to connect expansive supply chains and current battery technologies lack the capacity to provide energy solutions to ensure logistics networks are not disrupted. Currently, only Euro 6 standard diesel can achieve these requirements, and hydrogen power currently represents the most feasible transition fuel to pursue further emissions reduction targets.

Hence, regulatory considerations must be accounted for. For example, a major design challenge that faces heavy vehicle manufacturers in bus, truck and trailer industries is the weight of lithium-ion batteries and its impact on overall weight restrictions to heavy vehicles under Australian Design Rules policed by the National Heavy Vehicle Regulator. Such considerations are a major reason why heavy vehicle manufacturers are pursuing the development of alternative low and zero emission energy sources for new models, including hydrogen and cleaner forms of diesel and other biofuels that are posited as a transition to future breakthrough technologies that will remove fossil fuels from energy generation entirely.

In summary, Option 2 risks the future growth potential of jobs and innovation in Queensland's heavy vehicle industries. This is evident where it would create a limited licencing regime that mandates electrical qualifications for heavy vehicle manufacturing workers where the industry would instead be served most effectively by skills development, training provision and job creation in areas ranging from hydrogen

processors to boilermakers, diesel fitters and diesel mechanics. This is, again, without considering the consequence of legislative changes proposed under Option 2 that would require thousands of manufacturing workers in heavy vehicle industries to undertake additional training to obtain a restricted electric licence, most likely at their own expense, and in many cases without their ever working on the construction or maintenance of battery electric heavy vehicles.

On the matter of light passenger vehicles, which Australia is likely to import at scale until Australian governments develop strategy and coordinate this with an industrial business case, Option 2 still implies significant impacts that should be thoroughly considered. The possible legislative change concerns roadside vehicle maintenance mechanics, automotive technicians, diesel mechanics and other servicing and repair tradespeople and technicians. It is of course likely that these skilled workers will increasingly deal with EVs in their day-to-day work as Australian vehicle fleets gradually move to low and zero emission models made up of vehicles with typically either battery electric or hydrogen fuel sources. In relation to the repair, service and retail (RS&R) side of the industry, there are serious concerns amongst businesses that it would become necessary to employ or contract licensed electricians, bringing with it significant cost burdens. Such costs are likely to be passed onto customers, who would find servicing or repairing an electric vehicle even more expensive. The flow-on effect is a negative view of EVs amongst consumers, with would-be EV purchasers hesitating due to known additional costs for repair and servicing.

Even before these impacts are taken into consideration, there is the outstanding issue of Queensland currently not having enough licensed electricians in the RS&R industry to meet demand without significant delays. Domestic residential customers are currently waiting up to two weeks to have an electrical fault in their vehicle repaired. An EV owner could face long wait times for service and repair if a licensed electrician is required to complete repair and maintenance. It is worth noting that, in contrast, the forklift industry does not currently require forklift and battery technicians working on electric-powered forklifts to be qualified electricians; as a result, the industry faces no shortage of skills relating to tasks that must be completed by licensed technicians only. Furthermore, the model developed for Victoria's electric bus RS&R industry provides an example of worker upskilling and accreditation by building on existing training and qualifications, rather than requiring a whole new licensing process to continue employment in the same job as technology changes. This example is discussed further towards the end of this submission.

One clear benefit of Option 1, outlined in the ES Act Consultation Paper, is that maintaining the status quo would lead to 'maintained accessibility to workers to operate as needed on EVs', does not limit opportunities for 'unlicensed workers currently completing this work', and 'maximises the workforce able to work on EVs' which would encourage uptake and industry in Queensland.

The AMWU considers that the 'costs' outlined in the Discussion Paper associated with Option 1 are somewhat overstated. One of the most publicly well-known facts about EVs is that they are significantly safer than internal combustion engine (ICE) vehicles. EVs are designed so that EV battery packs are entirely self-contained and designed to be completely structurally separate from vehicle powertrain components and other vehicle components that require service, repair and maintenance. This means that there is a very low chance of risk to consumer safety in the case of a vehicle accident, and very low chance of risk to worker safety in the case of everyday work in the construction, repair and maintenance of vehicles containing batteries, as they are otherwise identical in body and component construction to ICEs. It is standard in EV manufacture and assembly that battery packs are supplied to the Original Equipment

Manufacturer as a prefabricated component from a secondary supplier that is lifted into the vehicle at the necessary point of production and connected to the vehicle's central systems by workers that are already qualified and licensed to work with electrical equipment.

The AMWU believes that in the context of skills and demand for skilled labour for EV industries, the ES Act Review has already identified the challenges the industry will face to meet labour market demand for vehicle manufacturing industries. An Accenture report<sup>1</sup> on the skills requirements for renewable industries in Australia to 2030 has estimated a need for more than 100,000 electrical workers for just solar, wind, battery, hydrogen and other renewable energy industries. In Queensland, 40 per cent of demand for jobs in the state will be for solar jobs alone. The implications of transitioning skills in vehicle industries has not even been considered at this stage. Maintaining the status quo is the only viable option if Queensland is to build an EV industry that does not add to this already pressing demand for licensed electrical workers.

To summarise the skills implications, in terms of legislative and regulatory consequences of pursuing Option 2, the AMWU is concerned that changes to the definition of electrical equipment, that would place many manufacturing occupations within the 'electrical work' on 'electrical equipment' category would not only force these workers to pursue restricted licences, but lead to long-term disruption to the national coordination of labour market demand, qualifications frameworks and training regimes. Queensland would be an outlier in terms of its regulatory framework. This disruption would occur at a time when maximising the social and economic benefits of the renewables transition in Australia means moving towards federally accepted standards for manufacturing work and policy frameworks.

The AMWU believes the issues relating to EV safety facing the Queensland Government could be alleviated more effectively than by implementing a restricted licencing regime which will not just narrow opportunities and create unnecessary regulatory burden on firms and workers, but will set in motion a state-by-state approach to EV safety issues that segments and fractures the Australian manufacturing workforce and limits growth potential. The Queensland Government would instead create much larger benefits if it took stock of state-based initiatives to upskill workers and manage potential risks in the process that do not subsequently tie workers to a state-based qualification framework limiting them to only work in one local jurisdiction. An example of upskilling manufacturing workers in the EV space, without additional regulatory burden, is happening in Victoria. The Victorian State Government, in partnership with the AMWU and bus industry, has developed an effective and efficient process of moving workers and the industry towards electrification. Utilising State funding, the AMWU, Victorian TAFE's Bendigo Kangan Institute, and industry partners including public transport fleet Kinetic, have designed a program to upskill and train vehicle maintenance and mechanical workers for work on the State's growing EV bus fleet. By developing, trialling and refining a vocational education training package that prepares workers and enterprises for the future shape of heavy vehicle industries, including by providing foundational units relating to electrical safety, this project has helped to ensure regional and urban bus fleets in Victoria are serviced by highly skilled workers with cutting-edge skills.

The project has led to an accreditation process that does not require restricted licencing for workers to participate in advanced EV maintenance and mechanical work, but rather maintains high attention to emergent work health and safety issues and

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<sup>1</sup> Accenture (2023). *Skilling Australian industry for the energy transition*. Australian Industry Energy Transitions Initiative.

broader worker awareness of the electrical safety issues that prepare workers to support the EV transition of bus fleets. The subsequent development of training package based on this approach enables manufacturing and maintenance workers to operate in safe work environments with the utmost attention to electrical safety concerns.

It is important to note that this project has been delivered as a coordinated and cooperative initiative involving industry, unions and vocational education. Its success demonstrates the efficacy of a whole-of-industry approach to manufacturing skills and training for a future of work in advanced renewable industries. A key lesson for governments is the essential role it must play to deliver on the identified needs of industry, rather than implement bureaucratically developed regulatory processes.

The AMWU welcomes further discussion and collaboration on this important issue, and we thank you for the opportunity to make a submission. If you require any further information, please contact [REDACTED] at [REDACTED] in the first instance.

Yours faithfully

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