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Office of Industrial Relations
Queensland Government

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ACCC submission to the consultation on the Discussion Paper for the Review of Queensland's Electrical Safety Act 2002

The Australian Competition and Consumer Commission (ACCC) welcomes the opportunity to make a submission to the Office of Industrial Relations Discussion Paper, *A response to the Review of Queensland's Electrical Safety Act 2002 – key definitions and emerging technologies*.

The ACCC considers the review an important opportunity to ensure the Electrical Safety Act (the ES Act) remains fit-for purpose to address the risks posed by new and emerging technologies in electrical consumer products, particularly those operating at extra low voltage.[1]

Overview

The ACCC is an independent Commonwealth statutory agency that promotes competition, fair trading and product safety for the benefit of consumers, businesses and the Australian community. The primary responsibilities of the ACCC are to enforce compliance with the competition, consumer protection, fair trading and product safety provisions of the Competition and Consumer Act 2010 (CCA), regulate national infrastructure and undertake market studies.

The electrical safety of consumer products is primarily regulated under state and territory legislation and overseen by electrical safety regulators in each state and territory. The Electrical Regulatory Authorities Council (ERAC) supports electrical safety regulation by coordinating activities between Australian and New Zealand governments and is focused on strategy, policy, and reform.

As noted in the Discussion Paper, across Australia, the regulation of electrical safety has many similarities, however, it is not a harmonised framework. The existence of different laws in each state and territory results in regulatory gaps and creates an inconsistent approach to the regulation of electrical products. The ACCC considers a fragmented and incomplete electrical safety framework to be unsustainable in Australia's modern economy.

The need for a harmonised electrical safety regulatory framework is a longstanding issue that was identified by the Productivity Commission in its 2017 report on Australia's consumer law and by the House of Representatives Standing Committee on Economics

[1] Extra low voltage means voltage of 50V or less AC RMS, or 120V or less ripple-free DC.

2019 report on impediments to business investment. The increasing electrification of household items and the growing uptake of new technologies to support the transition to net zero reinforces the need for effective and efficient regulation of consumer electrical products.

The ACCC considers that a modern, fit-for-purpose harmonised framework should:

- include compulsory recall powers for each state and territory
- facilitate consistent adoption and application of comparable international standards
- include comprehensive regulatory coverage for extra low voltage products (e.g., lithium-ion batteries)
- contain consistent state and territory pre-market and post-market controls for electrical products
- have a single point of contact for consumers and industry to report issues and seek safety information about electrical products.

The ACCC encourages the Queensland Government to harness opportunities presented by the review of the ES Act to take meaningful steps toward harmonisation, including participation in any future work on broader national reform. As a large jurisdiction with a prominent role in the development and governance of the Electrical Equipment Safety System, Queensland is well positioned to help address key issues and inconsistencies within the existing framework, particularly the lack of comprehensive regulatory coverage for extra low voltage equipment.

Extra low voltage equipment

Under the existing electrical safety regulatory framework, there is a lack of uniform comprehensive regulatory coverage of extra low voltage equipment across the states and territories. Extra low voltage equipment is also currently out of scope of the Electrical Equipment Safety System. This is of particular concern to the ACCC given the growing number of safety incidents and near misses associated with extra low voltage equipment, particularly those with rechargeable lithium-ion batteries.

Prominent examples of safety incidents in Australia involving extra low voltage equipment include the series of house fires caused by self-balancing scooters powered by rechargeable lithium-ion batteries and the high-profile recall of Samsung Galaxy Note 7 smartphones associated with fires and explosions of the batteries. The ACCC and state and territory electrical safety regulators are also currently overseeing recalls of LG batteries in home energy storage systems which may overheat and catch fire. Since October 2019 there have been 12 reported incidents associated with recalled batteries in Australia. Of these, 9 have occurred in the initial voluntary recall batteries and the latest 3 have occurred in batteries that had a software fix applied to address safety issues. In October 2021, one incident involving a software fix of a recalled battery resulted in the complete destruction of a property in Victoria.

A catastrophic lithium-ion battery failure can result in a fire event, as has occurred in several jurisdictions. In response to the ACCC's Lithium-ion Batteries Issues Paper (Issues Paper), a submission from Queensland Fire and Emergency Services (QFES) indicated there were 157 recorded fires between 1 July 2021 and 17 January 2023 caused by lithium-ion batteries. QFES also noted there is a strong possibility that this figure is underreported due to the difficulties involved in determining the exact cause of fires. While extra low voltage

equipment may have a different risk profile to other equipment, they raise serious safety concerns.

As noted in the Discussion Paper, extra low voltage equipment has proliferated over recent years in the marketplace for consumer products and regulatory regimes need to evolve to keep pace with technological change. Extra low voltage equipment is not currently captured as part of the definition of 'electrical equipment' under the ES Act, creating a significant regulatory gap. The ES Act provides for only two exceptions: where the equipment is part of a *cathodic protection system* or where the equipment is part of an electrical installation located in an area in which the *atmosphere* presents a risk to health and safety from fire or explosion (s 14(2)).

To address the growing risk to life and property by extra low voltage equipment, the Discussion Paper recommends creating a general category of exception to the 'extra low voltage' threshold for the definition of 'electrical equipment' under the ES Act. This would retain the existing threshold but create a needs-based mechanism to regulate extra low voltage equipment that poses a risk to life and property. We understand that this approach aims to target equipment that poses a higher safety risk while avoiding regulation of equipment that poses a very low safety risk (e.g., AA batteries) which may place an unnecessary burden on industry.

A needs-based regulatory approach is best suited to managing safety issues that are considered low risk and for product types that are less likely to be impacted by rapid technological change. This approach to regulating extra low voltage equipment may be unsuitable considering the growing number of safety incidents, the strong prevalence of these products in Australian households, and the speed of technological innovation. Thus, the design of this needs-based approach may hinder regulators rapidly responding to the risks posed by new and emerging technologies that operate at extra low voltage such as solar PV panels, Battery Energy Storage Systems and rechargeable battery packs including lithium-ion.

The contemporary risk landscape of extra low voltage equipment is strongly influenced by the rapid pace of technological innovation. The technical limitations of product design, functionality and manufacturing continue to be tested and disrupted by household extra low voltage equipment. For example, there are ongoing attempts by manufacturers to simultaneously reduce the size of batteries while increasing power output. The ACCC believes there will continue to be a growing number of safety incidents involving extra low voltage equipment as pressure builds on industry to bring new energy technologies to market that support Australia's transition to net zero.

Consumers expect the electrical products they purchase to be safe and approved by the regulator. The Discussion Paper notes the increasing availability of cheaper products on the market, sometimes of poor quality, are also contributing to the contemporary extra low voltage equipment risk landscape. The ACCC agrees that purchasing these products online rather than in stores can make it difficult for consumers to be as informed about the safety of these products. We also note that the strong prevalence of these products in Australian households may influence the perceptions of consumers around the level of regulation. Indeed, several submissions to the ACCC's Lithium-ion Batteries Issues Paper indicated that consumers believe that extra low voltage lithium-ion battery products are already regulated, and subject to testing and certification.

Businesses need clarity about their obligations and operate most efficiently within a fit-for purpose regulatory framework. The existing state and territory framework is fragmented and inconsistent, particularly in relation to regulatory coverage of extra low voltage equipment.

The recommended approach to create a general category of exception for this equipment under the ES Act may add further complexity and fragmentation to the existing framework, leading to increased compliance costs for businesses which may be passed on to consumers through higher prices for electrical goods. Complex parameters around scope in legislation is also a well-recognised barrier to technological innovation.

Industry concern over the potential safety risks in some extra low voltage equipment is evident. There are strong calls for action in several submissions to the ACCC's Lithium-ion Batteries Issues Paper. The Consumer Electronics Suppliers Association called for ERAC to upgrade lithium-ion batteries to level 2 on the Electrical Equipment Safety System, and the Ai Group, the National Retail Association, and the Australian Retailers Association sought improved coverage and consistent regulation of extra low voltage equipment.

The ACCC therefore suggests that Queensland consider an alternative approach. Acknowledging Queensland's rationale for targeting extra low voltage equipment based on risk, we recommend providing comprehensive regulatory coverage for all extra low voltage equipment under the ES Act. To reduce regulatory burden for business, consideration could be given to creating a general category of exception for equipment with longstanding evidence of posing a very low safety risk (e.g., AA batteries). This would shift the burden away from regulators to prove a new extra low voltage product poses a high risk (which often takes time and, in the interim, could expose consumers to risk) to industry who are well placed to demonstrate established product types that are safe.

This approach aligns with the risk profile of the equipment and the need to prioritise consumer safety for equipment that sits at the forefront of technological innovation. It also considers the need to minimise the regulatory burden on manufacturers and suppliers of extra low voltage equipment.

Electric vehicles

The ACCC is aware of the increasing uptake electric vehicles (EV) by Australia consumers. Figures from the Electric Vehicle Council show the number of EVs purchased in Australia increased by 86 per cent in 2022, with more than 83,000 EVs currently estimated to be on our roads.[2] The Discussion Paper considers the safety risks posed by EVs to persons as well as damage to property. The ACCC is responsible for regulating the safety of general consumer products, but this does not extend to road vehicles. However, we are interested in the consumer product safety aspects of EVs and encourage the road vehicle regulators to implement best practice in regulatory design and seek to complement existing regimes.

Lithium-ion batteries can be the primary source of propulsion that powers the motor of EVs as well as the supply source of power for non-motor components. As highlighted in the ACCC's Lithium-ion Batteries Issues Paper, the chemistry of lithium-ion batteries makes them more volatile than traditional batteries and can present safety risks such as overheating (which can cause injuries such as contact burns) and/or fire. Most consumer concern about EV fires relates to the size and intensity of the fire and the challenge to effectively extinguish them. The chemical reactions that fuel these fires are self-sustaining and can burn intensely.

Safety incidents arising from EVs powered by lithium-ion batteries can be caused by collision damage, incorrect charging, modifications to batteries or cells, and faulty products. The location of the incident (e.g., on road, home garage, underground car park) can be a

[2] Electric Vehicle Council, Australian Electric Vehicle Industry Recap 2022, *Electric Vehicle Council website,* Accessed 22 June 2023.

significant determinant of the scale of harm to people and/or property. According to EV FireSafe, 375 EV battery fires have occurred globally since 2010, another 62 incidents are under investigation.[3] While forecasting the number of future incidents is difficult, it is reasonable to expect these numbers will increase based on the growing uptake of EVs and risks arising from technological advancements such as bidirectional charging.

As mentioned in the Discussion Paper, the number of EVs on Australian roads is increasing substantially and the trend is expected to continue with state, territory and Commonwealth governments introducing various initiatives to support greater access to EVs. The Australian Government's National Electric Vehicle Strategy has introduced a framework to increase the uptake of EVs to help facilitate the transition to net zero emissions by 2050. The ACCC supports the objectives of the strategy and is committed to ensuring consumer safety is maintained as the prevalence of EVs in Australia continues to grow.

The Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) is the primary regulator for road vehicles under the Road Vehicles Standards Act 2018 which includes the Australian Design Rules. As mentioned in the Discussion Paper, DITRDC recently consulted on proposed requirements for electric powertrain safety and hydrogen fuelled vehicle safety related performance. The ACCC supports DITRDC remaining the primary regulator for high-voltage EV batteries under the Australian Design Rules.

The increasing uptake of EVs by Australian consumers is also likely to expand the availability and installation of after-market parts for these vehicles, introducing potential safety risks. We understand that the Queensland Road Vehicle Modification Handbook sets out the parameters for vehicle modification, including compliance with the Australian Design Rules. The ACCC encourages Queensland to consider whether after-market parts are subject to full regulatory coverage for safety risks and if necessary, take steps to address any regulatory gaps or duplication.

The ACCC also notes under the CCA, the Motor Vehicle Information Scheme (MVIS) requires data providers (generally vehicle manufacturers) to supply scheme information to repairers and registered training organisations at a price that does not exceed the fair market value. The ACCC is responsible for broad oversight and enforcement of the Motor Vehicle Information Scheme. While not a licencing regime, the Scheme requires individuals to meet training and competency criteria to receive access and use information relating to a high voltage or electric propulsion system in a vehicle covered by the Scheme. This ensures repairers are suitably trained to safely depower, isolate and re-initialise a high voltage battery installed in an EV.

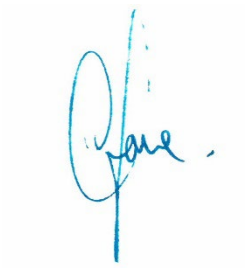
The Motor Vehicle Information Scheme only applies to passenger vehicles and light goods vehicles other than omnibuses, manufactured on or after 1 January 2002. It does not apply to 2 or 3 wheeled vehicles, farm, construction or heavy vehicles, motor homes or buses. The ACCC encourages Queensland to consider how any future licencing framework related to EVs may compliment the Scheme. We recommend taking all reasonable steps to avoid regulatory gaps or duplication in relation to licensing and training arrangements for EVs.

Next steps

[3] EV FireSafe, EV fires – overview, *EV FireSafe website*, Accessed 6 June 2023.

If you would like to discuss the ACCC's submission, please contact Neville Matthew, General Manager, Risk Management and Policy Branch, on [redacted] or at [redacted].

Yours sincerely



Catriona Lowe
Deputy Chair