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To whom it may concern:

REVIEW OF THE QLD ELECTRICAL SAFETY ACT

On behalf of the Air Conditioning & Mechanical Contractors Association of Australia (AMCA), thank you for the opportunity to provide a submission regarding the Queensland Electrical Safety Act 2002 review.

AMCA Australia is the national peak body for member companies operating in the commercial and industrial heating, ventilation, and air conditioning (HVAC) industry.

Our members are highly skilled operators with expertise in the design, manufacturing, fabrication, and installation of air conditioning and specialised ventilation systems, as well as the ongoing service and maintenance of plant, equipment, and other building services infrastructure.

Industry profile

Heating, air conditioning and ventilation (HVAC) is a significant industry. It contributes over $8 billion to the Australian economy annually, has over 6,400 businesses, and employs over 18,900 people.

The services provided by these businesses are omnipresent in the homes, workplaces and public buildings occupied by the entire community—providing safe, comfortable, healthy, and productive spaces for people to live, work, and recreate. These services include:

- Heating and cooling for comfort, well-being, and productivity
- Ventilation and indoor air quality
- Fire and smoke control systems
- Air purification for hospitals, laboratories, and other sensitive environments
- Climate control and air quality for commercial and industrial facilities premises

Post-COVID, the importance of our industry has become even more widely recognised due to the role HVAC systems play in supplying the air we breathe. With people spending around 90% of their time indoors, the air supplied by HVAC systems is a critical factor in respiratory health, mental health and well-being, and general quality of life.

The sector's importance is further emphasised by the fact that HVAC systems account for approximately 50% of a building's energy consumption. Indeed, in buildings with older or less efficient systems, HVAC can account for upwards of 75% of total energy usage.

Submission

Work on HVAC systems contains elements of electrical work carried out by air conditioning and refrigeration mechanics. These practitioners hold both a QBCC air-conditioning and refrigeration (RAC) licence and a Restricted Electrical Workers Licence, which permits them to perform electrical work associated with air-conditioning and refrigeration equipment only.

Types of electrical work

- Disconnect and reconnect electrical equipment at equipment terminals
- Testing, fault finding, diagnosis and repair of control and power circuits, electrical equipment, and electric motors.
- Like-for-like replacement of electrical components on the equipment side of isolators
- Repair and adjustment of electrical components.
- Repair, replace or make good cable terminations or defective electrical wiring on the equipment side of isolators or in mechanical services switchboards.
- Minor alterations to electrical wiring in equipment in accordance with AS3000 and manufacture specifications.

HVAC equipment involving electrical work

- Motors, including compressors, vent fans, and exhaust fans
- Control devices, including thermostats, pressure sensors, and overloads
- Contactors and proprietary starters, including Star-Delta starters, VF drives, etc.
- Replace and repair damaged cables

It is within this context that AMCA Australia seeks further information about the scope and intended application of review recommendation 6, which states:

> *Consider including within the definition for "electrical work" that the electrical aspects of air conditioning / mechanical services work is electrical work and the tasks of fixing, installation of brackets/mounting of equipment and mechanical cable protection is ancillary to the complete installation.*

Should electrical aspects of air conditioning and mechanical services be included in the definition of electrical work, it must be clear that aspects of this work can be performed by

air conditioning and refrigeration mechanics during the general service and maintenance of HVAC systems.

Similarly, we seek clarity as to whether the reference to fixings, brackets, mountings and cabling is to be applied to HVAC equipment (e.g., package units), which are typically installed by HVAC contractors.

Core units from Certificate III of Air Conditioning and Refrigeration	
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply.
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.
UEERL0004	Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring.
UEERL0005	Locate and rectify faults in low voltage (LV) electrical equipment using set procedures.
UEECD0042	Solve problems in ELV single-path circuits.
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work.
UEECD0020	Fix and secure electrotechnology equipment.
UEERA0031	Diagnose and rectify faults in air conditioning and refrigeration control systems .
UEERA0035	Establish the basic operating conditions of air conditioning systems.
UEERA0044	Find and rectify faults in single phase motors and associated controls.
UEERA0045	Find and rectify faults in three phase motors and associated controls.
UEERA0051	Install, commission, service and maintain air conditioning systems.
UEERA0092	Solve problems in low voltage refrigeration and air conditioning circuits.

As evidenced by a section of core units from the Certificate III qualification in the table above, air conditioning and refrigeration mechanics receive extensive training in electrotechnology work associated with HVAC systems.

Working in accordance with AS 3000, these practitioners and the HVAC industry more broadly are very clear that installation wiring cannot be performed by the holder of a Restricted Electrical Workers Licence (REWL).

However, repair or replacement of equipment wiring has long been considered within the scope of RAC mechanics and is fundamental to the performance of RAC work and the commercial operation of HVAC service and maintenance contracts.

Without further clarity, AMCA Australia is concerned that—intentionally or unintentionally—the proposed recommendation will result in a significant reduction in the work performed by RAC mechanics and significant disruption to the HVAC industry.

Future consultation

Thank you once again for the opportunity to provide feedback on the review. The AMCA would welcome the opportunity to discuss any opinions raised in this submission further.

Yours sincerely,

Benjamin Hawkins
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