



Thursday, February 23, 2023

NSW Productivity Commission

The Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) thanks the NSW Productivity Commission for the opportunity to provide feedback on the *New thinking on continuing professional development* discussion paper.

AIRAH is Australia's peak membership body for professionals and practitioners working in the heating, ventilation, air conditioning and refrigeration (HVAC&R) industry.

Our primary aim is to develop the competence and skills of industry practitioners so that they can better meet society's evolving health, safety and environmental demands, and the challenges of a rapidly changing world. AIRAH encourages world's best practice within the industry through continuing professional development, accreditation programs and technical publications.

Our members include both mechanical engineers, who are required to complete continuing professional development (CPD) under the NSW Design and Building Practitioners Act (and in many cases also under the CPD requirements of Engineers Australia), and HVAC&R technicians, who are licensed through NSW Fair Trading and currently are not required to complete continuing professional development.

AIRAH's position is that CPD is necessary to create an Australian building industry that is highly skilled and professional, safe, sustainable and environmentally effective.

Our responses to the discussion questions can be found below.

AIRAH would welcome the chance to be involved in ongoing consultations on this topic.

Regards,

A handwritten signature in black ink, which appears to read "Anthony Gleeson". The signature is written in a cursive style.

Tony Gleeson, M.AIRAH  
Chief Executive  
AIRAH

## 1. What is the role of CPD: skill maintenance or upskilling?

AIRAH sees CPD as fulfilling both of these roles.

Our sector is experiencing rapid change as we seek to reduce the emissions generated in the built environment. In Australia, HVAC&R uses more than 24 per cent of the country's electricity, and accounts for around 11.5 per cent of our carbon dioxide emissions, meaning that professionals in our industry will play a leading role in helping us fulfill our net zero commitments. They must adapt to new technology, new methods and new legislation.

University and VET education, however, is slow to reflect these changes. In the VET space, for example, it can take many years for updates to the national training package. In universities, mechanical engineering degrees do not generally cover HVAC&R in great detail. There is a strong and unfulfilled need for postgraduate specialisations in refrigeration and also air conditioning – these are separate (though related) disciplines, and should not be lumped together under the HVAC&R acronym. There is also room for an undergraduate engineering degree in refrigeration. These courses are offered widely in Europe at both undergraduate and postgraduate level, but little or nothing in Australia. In the absence of this, professionals in our sector require ongoing skills development.

HVAC&R systems are vital for the comfort, productivity and wellbeing of building occupants. Offices, schools, homes, shopping centres, restaurants, data centres and hospitals all rely on effective HVAC&R systems to function properly. Also, if these systems are to help us achieve our environmental objectives, they must be designed, installed, commissioned and maintained by engineers and technicians with the right skills.

For building occupants and the professionals themselves, health and safety are also factors. For example, as the industry seeks to reduce its carbon footprint, flammable refrigerants have become more common. However, many technicians completed their training before this was the case. It is important that all people working with these gases are trained in their proper handling.

## 2. What is the right balance between initial education requirements and CPD? How could CPD be used to facilitate progression through graduated occupational licencing?

For engineers, AIRAH supports the CPD provisions in the *NSW Design and Building Practitioners Act*, though noting the need for additional specialist courses at university level, as above. CPD is not a substitute for thorough basic training.

For HVAC&R technicians, AIRAH supports a nationally consistent licensing scheme. Because HVAC&R technicians work across many different types of systems with different working fluids, this should be focused on the trade covering the applications of all refrigerants in all sectors. It should establish refrigeration and air conditioning as a trade of its own, separate to electrical and plumbing. It should also be based on minimum standards of competency and sector of operation. CPD could play a role in such a licence.

Licensing should include the possibility of add-ons specific to particular skills. For example, technicians who are quite capable of working on general air conditioning systems require separate specialised training and accreditation before being able to work with ammonia industrial refrigeration systems. CPD could provide the basis for such licence add-ons or endorsements, just as a driver licence may include additional endorsements for motorcycles or heavy vehicles after appropriate training.

## 3. How could CPD be used to enable upskilling and improved labour market flexibility? What barriers must be overcome?

For HVAC&R technicians, AIRAH supports the introduction of micro-credentials or micro-skills as a fast and practical way for workers to upskill.

One of the barriers will be determining which institutions are able to deliver these credentials. As noted above, the VET system is slow to adapt to new technologies. AIRAH believes that industry bodies and product manufacturers can play an important role in providing more flexible, just-in-time training.

Another major barrier is the proliferation of separate state-based licencing schemes, both at trade and professional levels, with limited co-ordination or standardisation between states. A uniform national licencing system is required,

with a licence-holder in one state or territory being able to work in any other state or territory without additional bureaucratic hurdles, registration or fees, just as a NSW driver licence is valid for driving in any other state.

#### **4. How can digital technology be better used to facilitate and deliver CPD?**

AIRAH strongly supports the use of digital technology, such as virtual classes, online training and tools such as VR, to facilitate and delivery CPD. In our experience, it helps overcome barriers to professional development for those who cannot set aside large blocks of time for training, and for those who live in remote locations.

There is merit in proposals to store CPD information on the Service NSW digital system, and also to review CPD at the time of licence renewal. Completion of a certain amount of CPD should be a condition of licence renewal. Accreditation of CPD schemes would be necessary in order to ensure the CPD content is relevant, and not just a box-ticking exercise.

#### **5. Does the framework appropriately guide regulators as to whether mandatory CPD is the right policy?**

The framework makes sense; however, incorporating risks and benefits into a cost-benefit analysis is always problematic, particularly when they relate to safety and environmental impact. We believe a common-sense approach to CPD with support from industry experts is more effective than investing in an expensive CBA process.

#### **6. What design features should be included in the framework to ensure CPD is well designed and maximises net benefits?**

The benefits of CPD can be maximised by ensuring that it addresses gaps in the knowledge and skills of HVAC&R practitioners. CPD offerings would ideally be informed by:

- Industry stakeholders
- New regulations
- Reference to state and federal policy
- Information from government bodies about common issues found during audits
- Accreditation of CPD providers and courses to ensure quality and value. Industry bodies such as AIRAH, Engineers Australia etc., could be suitable accreditors of independent CPD providers, in addition to RTOs and other higher education providers.

#### **About AIRAH**

The Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH) is an independent, specialist, not-for-profit technical organisation providing leadership in the air conditioning, refrigeration and heating sector through collaboration, communication, engagement and professional development.

Formed in 1920, AIRAH has earned renown from government and other industry bodies for its expertise across a broad expanse of issues in the realm of engineering services for the built environment.

AIRAH represents the entire breadth of the Heating, Ventilation, Air conditioning and Refrigeration (HVAC&R) industry, from “the man in the van” to research-focused academics; from plumbers and fridgies to designers of the nation’s most high-performing buildings; from sole operators to the chief executives of large corporations. Indeed, as Australia’s leading refrigeration and air conditioning organisation AIRAH represents a membership – and an industry – that is crucial to our community’s comfort, health and safety.