

Wednesday, October 7, 2020



The Department of Justice and Community Safety

The Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) appreciates the opportunity to provide input on the Professional Engineers Registration Scheme.

AIRAH has operated since 1920 and is the leading specialist membership association for professionals in the heating, ventilation, air conditioning and refrigeration (HVAC&R) industry. This hidden, yet innovative industry employs over 298,000 people in Australia, is worth \$38 billion, uses more than 24 per cent of the country's electricity and accounts for 13 per cent of our carbon dioxide emissions.

Our submission represents the perspectives of our members, who are predominantly mechanical engineers working in the HVAC&R sector and who will be seeking professional registration when the scheme begins.

Please find our detailed feedback below.

1. Areas of engineering

HVAC&R is a unique branch of engineering that combines skills from different areas. We note that the guidelines on areas of engineering provided in this consultation mention HVAC under both mechanical and electrical engineering. Equally, HVAC systems incorporate passive smoke and fire control measures that fall into the area of fire safety engineering.

HVAC&R engineers cover all these areas, and we believe that it would be wise to have one sub-discipline for HVAC&R engineers in the area of mechanical engineering, rather than requiring practitioners to obtain professional registration in three different areas.

Additionally, we believe specific mention should be made of refrigeration engineers in the area guidelines. Refrigeration systems are often incorporated into buildings – for example, cold stores and supermarkets within mixed use commercial/residential premises. These systems often include elements such as chillers and cooling towers, just like HVAC systems. We would recommend using the term HVAC&R engineers rather than HVAC engineers.

It is worth noting also that based on the current definitions of the areas and the timetable for starting registration of each area, HVAC&R engineers would start registration with the first group, fire safety engineers, on October 1, 2021



2. Alternative qualification pathways

Although the consultation documents do not go into detail about the qualifications that will be accepted for professional registration, the Q&A document says:

It is expected that the qualification requirement for eligibility for registration will be a four-year Washington Accord level degree or equivalent qualification

Because of a lack of engineering degrees that specifically deal with HVAC&R, mechanical engineers working in this sector have over the years obtained widely differing tertiary qualifications. Many well-respected professionals – including some who provide input for the NCC and chair Australian Standards committees – do not have a degree accredited to the Washington Accord. AIRAH recommends that alternative pathways to registration are provided for these people

AIRAH believes “grandfathering” will be an important issue for many of our senior members and that it will be necessary to provide guidelines on acceptability of “grandfathering”.

3. Mutual recognition

AIRAH is a staunch supporter of the Building Minister’s Forum’s (BMF) call for a nationally harmonised registration scheme for building practitioners, including engineers. We applaud Victoria’s efforts to put such a scheme in place, and to ensure that it aligns with the scheme already operating in Queensland – as well as the scheme being developed in NSW.

We support the move to offer mutual recognition under existing mutual recognition legislation for professional engineers registered in Queensland, New South Wales and New Zealand.

We also recommend a system of automatic mutual recognition between states as proposed recently by the federal government. This would allow engineers to have their skills officially recognised across borders without the financial burden of registering in each jurisdiction.

4. Prescriptive standards

Under the Act an engineering service is not a professional engineering service if it is “provided only in accordance with a prescriptive standard”.

We interpret this to mean that performance-based design as permitted by the NCC/BCA is considered a “professional engineering service”, whereas works that are Deemed to Satisfy (DTS), such as applying some Australian Standards and relevant sections of the BCA, would be considered to fall under a prescriptive standard.



The above description/definition should allow individuals who are not registered professional engineers to undertake most of their day-to-day work such as designing and certifying to parts of Australian Standards AS1668.1, AS1668.2, AS3666 etc. and some prescriptive BCA requirements. However, it would not permit them to undertake performance design including relatively common applications (such as the use of horizontal kitchen exhaust discharges or reduced carpark exhaust rates based on known vehicle movements etc.)

It may also cause some difficulty in applying BCA Specification E2.2b because there are some performance requirements within that specification that are not backed up with DTS solutions (e.g. Clause 5(a), which says "... with the maximum exhaust rate at any one point limited to avoid extracting air from below the smoke layer." – but does not provide the necessary solution for meeting this performance criteria, which is provided in the 2015 edition of AS1668.1, but not yet referenced in the BCA).

AIRAH suggests that amenity-based performance solutions (such as horizontal kitchen exhaust discharges) could be acceptable whereas fire/life-safety solutions (such as alternate methods of smoke control) would not.

Furthermore, AIRAH would be very pleased to provide more detailed technical input on which standards related to HVAC&R could be considered prescriptive and which work should be considered a "professional engineering service" as the Act is developed.

5. Cost recovery options

This consultation outlines the fees for registering assessment programs, and also different options for recovering the cost of the professional engineers registration scheme through registration fees.

AIRAH is not in favour of charging fees for approval of assessment programs. Professional engineering membership organisations such as AIRAH will provide assessment programs to support industry and the government. Charging for registration of such schemes places an additional and unnecessary burden on the programs.

As part of our commitment to the HVAC&R industry and the engineering profession AIRAH has launched a professional accreditation scheme specifically designed for engineers operating in the HVAC&R building services industry. The AIRAH Registered Professional Engineer (ARPEng) accredits professional engineers in the Mechanical Engineer HVAC&R – Building Services discipline.

The ARPEng accreditation program has been designed to meet the requirements in Queensland and will also support the Professional Engineers Registration Act in Victoria. We will be seeking recognition as an assessment entity.

In terms of registration fees, AIRAH believes that fees should be on par with other state and territory registration schemes, regardless of the cost recovery option chosen.

LEADING HVAC&R FOR 100 YEARS



If you have any questions about our submission, please do not hesitate to contact me. We look forward to being involved in the next steps of defining the regulations to support the Act.

Regards,

Tony Gleeson, M.AIRAH
AIRAH Chief Executive