



Thursday, August 18, 2023

Better Regulation Division  
Department of Customer Service

AIRAH thanks the NSW Department of Customer Service for the opportunity to provide feedback on the Practice Standard for Professional Engineers.

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

Our members are those engineering professionals who plan, design, install, commission operate, tune and maintain mechanical machines and systems in the built environment. This includes air conditioning and refrigeration plants, ventilation systems, chillers, cooling towers, fire and smoke systems, fans, pumps and control systems.

We are a strong supporter of registration schemes for building practitioners, including engineers. This is in line with the Shergold-Weir Building Confidence report, which identified the need for such schemes to restore community confidence in Australia's building and construction industry.

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 Professional Engineer Register \(APER\)](#) accredits professional engineers in the mechanical engineer HVAC&R building services discipline.

The APER accreditation has been designed to meet the requirements in Queensland, Victoria and New South Wales. We are also working with governments in Western Australia, South Australia and the ACT to ensure the APER accreditation supports their schemes.

AIRAH's responses to the consultation questions can be found below. We would welcome the chance to be involved in ongoing consultations on this topic.

Best regards,

Mark Vender  
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AIRAH

### **Do you propose any changes to the definition of ‘professional engineering work’?**

AIRAH would like to highlight an area of confusion around the definition of “professional engineering work”: refrigeration.

Refrigeration systems include supermarket refrigeration and cold rooms that may be part of a building covered by the *Design and Building Practitioners Act*.

After reviewing the Act, it is our belief that refrigeration is not considered a "building element" as it is not essential for the building to function. If this assumption is correct, and refrigeration is not defined as a building element, the design and build of refrigeration systems/components does not need to be registered.

AIRAH believes, however, that the design of certain safety critical elements (refrigeration piping, rack design, switchboard design and possibly equipment selection) does need to be done by a registered professional engineer, with the refrigeration contractor to supply a signed self-certifying document to be kept with the as-built documents.

If this interpretation of the Act is correct, AIRAH would flag that a significant number of practitioners working in the refrigeration space in NSW would not be able to obtain professional registration.

Due to a lack of tertiary qualifications that deal specifically with HVAC&R building services, many professionals working in this sector – including some who sit on committees developing Australian Standards and the National Construction Code – do not have a Washington Accord accredited qualification in mechanical engineering. Far from strengthening the industry, the current system is locking expert practitioners out.

For these professionals, we believe an alternative transitional pathway to professional registration is vital. The alternative pathway offered in the legislation does not take into account the nature of the HVAC&R building services industry. It rigidly prescribes study required based on a desk mapping of university courses, without relying on practical assessments conducted by experts in the field.

In the first instance, we seek from the NSW government a clarification on whether refrigeration is considered “professional engineering work”, and we would be very happy to organise a meeting to discuss this in more detail.

We are also keen to support the establishment of a genuine alternative pathway for HVAC&R building services professionals. This could, for example, take the form of an assessment process conducted by registered engineers in the area of HVAC&R building services, which AIRAH would be very happy to provide.

### **Do you support the introduction of the ‘fit for purpose’ obligation for Professional Engineers carrying out design work? Why or why not?**

AIRAH would like to work through the concept and criteria of ‘fit for purpose’ in more detail, particularly “That the Professional Engineer must take reasonable steps to coordinate with other designers working on a project to deliver the intended outcome as per their contractual arrangement”. We foresee some complications in meeting this criterion.

### **Do you support the proposed obligations for Professional Engineers when undertaking independent third-party review, as set out in the draft Practice Standard?**

As highlighted above, the current requirements and lack of feasible alternative pathways for professional registration exclude many highly experienced practitioners in the HVAC&R building services industry. These practitioners should be allowed to conduct independent third-party review of designs. For this reason, AIRAH believes that the choice of third-party reviewer should be at the discretion of the building certifier.

### **Do you support the introduction of a positive obligation on Professional Engineers to carry out onsite inspections? Why or why not?**

AIRAH supports the proposal to involve the design engineer in all stages of the building process. There are certainly cases where the construction company will deviate from the design, and establishing better communication between the design and construction teams will help ensure that the design intentions are understood and achieved in the finished building. In some cases, the construction team consciously chooses not to involve the design engineer, so introducing this requirement should in theory enhance the collaboration.

We do note that it will increase the costs and time required in projects (not just insurance costs) – although we also believe that this will be justified by savings in building rectification works, and will result in better outcomes for consumers.

It is also worth noting that the design and construct model has become very common in recent years. This doesn't always mean that there is a closer link between design and construction, however, and this should be taken into account when designing the details of the system.

It may also be worth looking at phasing in onsite inspections to different branches of engineering, starting with areas where the most issues occur.