

Engineers registration reform - submission template

This submission template is designed to be read in conjunction with the consultation regulatory impact statement *Reforms to the approval process for commercial buildings in Western Australia*.

COVER SHEET FOR SUBMISSIONS	
Please complete and submit your submission by 5pm WST on Thursday 3 December 2020	
Email submissions to: engineers@dmirs.wa.gov.au	
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Length of submission (number of pages, including this cover sheet):	
Are you making this submission as: (please select one of the following categories)	
<input type="checkbox"/> Industry participant	<input type="checkbox"/> Business
<input type="checkbox"/> Community organisation	<input checked="" type="checkbox"/> Industry organisation
<input type="checkbox"/> Other (please specify):	<input type="checkbox"/> Permit Authority
<input type="checkbox"/> Other (please specify):	<input type="checkbox"/> Individual
Which of the following industry sectors is relevant to you: (pick one or more)	
<input checked="" type="checkbox"/> Building design	<input type="checkbox"/> Building owner
<input checked="" type="checkbox"/> Building certification	<input type="checkbox"/> Permit authority
<input checked="" type="checkbox"/> Building construction	<input type="checkbox"/> Other (please specify):
What specifically do you or your business do?	
<p>AIRAH has operated since 1920, and is Australia's peak membership body for professionals and practitioners working in the heating, ventilation, air conditioning and refrigeration (HVAC&R) – building services industry, a hidden, yet innovative industry that 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.</p> <p>AIRAH's 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 a wide range of technical publications.</p> <p>Our submission represents the perspectives of our members, who are predominantly mechanical engineers working in the HVAC&R – building services sector and who will be seeking professional registration when the scheme begins.</p>	
Approximately how many people work for the business or organisation in WA?	
<input checked="" type="checkbox"/> Fewer than five employees	<input type="checkbox"/> Five to 20 employees
<input type="checkbox"/> 21 to 100 employees	<input type="checkbox"/> 100+ employees
<input type="checkbox"/> n.a.	
Do you operate across two or more states or territories?	<input checked="" type="checkbox"/> Yes
Approximately how many people work for the business or organisation interstate?	

Fewer than five employees Five to 20 employees X 21 to 100 employees 100+ employees n.a.

Are you making this submission as an individual?

No

What personal experience do you have in, or with, the building industry?

Please note:

- When reading and commenting on the CRIS, please feel free to focus only on the areas that are relevant to you. A number of questions are included throughout the CRIS. These questions aim to make it easier for stakeholders to make comments. It is not expected that all respondents will respond to all questions and proposals.
- Submissions can be emailed to engineers@dmirs.wa.gov.au or posted in hard copy to the following address:

Engineers Registration Reform
Policy and Legislation Branch
Building and Energy
Department of Mines, Industry Regulation and Safety
Locked Bag 100
EAST PERTH WA 6892

- All submissions will be placed on the Department of Mines, Industry Regulation and Safety website and may be quoted in future publications, unless clearly marked as CONFIDENTIAL.
- As submissions will be subject to freedom of information rules, please do not include any personal or confidential information that you do not wish to become available to the public.
- Neither the State of Western Australia nor the Department of Mines, Industry Regulation and Safety takes responsibility or shall be liable for any breach of copyright or libellous or defamatory comments in submissions published by the Department of Mines, Industry Regulation and Safety.

Proposal 1 – Register structural and fire safety engineers

Proposal 1: Amend the Building Services (Registration) Regulations 2012 to register engineers in accordance with the Building Confidence Report.

1. Do you support registration of the proposed categories of building-related engineers? Why, or why not?

AIRAH believes that there should be a category for engineers working in heating, ventilation, air conditioning and refrigeration (HVAC&R) – building services.

HVAC&R – building services is a unique branch of engineering that combines skills from 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 – building services engineers cover all these areas, and we believe that it would be wise to have one sub-discipline for HVAC&R – building services 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 – building services engineers rather than HVAC engineers.

2. Do you think people doing civil engineering work for buildings should be required to be registered? Why, or why not?
3. Are there any other categories of building engineering work that you think should be added, or deleted? If so, please specify.
4. Do you support the proposed definition of ‘building engineering work’ for the purposes of registration?

The proposed definition of “building engineering work” excludes work “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 “building engineering work”, 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 – building services could be considered prescriptive and which work should be considered "building engineering work" as the legislation is developed.

5. Do you support the definitions for the engineering categories proposed in Appendix C? Please specify.

As noted under question 1, AIRAH believes there should be a sub-category within mechanical engineering for engineers working in HVAC&R – building services.

6. Do you support the pathways proposed in Table 3 to register building engineers?

AIRAH has launched a professional accreditation scheme specifically designed for engineers operating in HVAC&R – building services. 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 schemes in other states. We are seeking recognition as an assessment entity in Queensland now and will be applying for recognition in other states as the schemes are rolled out.

We recommend that a pathway be added – Set 5 – as follows:

Registered by the Australian Institute of Refrigeration, Air Conditioning and Heating as an AIRAH Registered Professional Engineer (ARPEng) in the relevant area of practice.

In terms of qualifications, AIRAH supports the proposal to accept "A minimum four-year full-time Bachelor or Master of Engineering from an accredited Australian institution, or an equivalent qualification as determined by the Board."

Because of a lack of engineering degrees that specifically deal with HVAC&R – building services, 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 an engineering degree. AIRAH recommends that alternative pathways to registration are provided for these people

As Australia's peak body for HVAC&R – building services engineers, AIRAH would be happy to provide input on what qualifications could be considered equivalent. AIRAH also 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”.

7. Do you support using industry accreditation schemes – e.g. professional NER, CPEng, RPEng and CEng – to assess qualifications and experience, and manage CPD requirements of registered engineers?

AIRAH supports this proposal, and as indicated in Question 6, recommends that the ARPEng accreditation scheme be included in the list of accepted schemes.

8. Are there any other industry accreditations that you think should be considered as appropriate pathways to register as an engineer in WA?

See above.

9. Do you support the proposed minimum financial requirements for engineering contractors? Why, or why not?

AIRAH would support a minimum professional engineering fee structure for registered HVAC&R – building services engineers. This would uphold HVAC&R practitioners' professionalism and minimise “haggling” over fees, which could lead to sub-optimal outcomes.

10. Do you think there should be mandatory minimum professional indemnity insurance requirements for engineering contractors? Why, or why not? And, if so, what do you think the minimum insured amount should be?

11. Do you support the proposed minimum CPD requirements for registered engineering practitioners? Why, or why not?

AIRAH strongly supports the proposed minimum CPD requirements for registered engineering practitioners.

CPD is vital for expanding practitioners' knowledge, maintaining up-to-date technical skills and progressing their careers.

Note that the ARPEng accreditation is aligned with the proposed requirements: a minimum of 150 hours over three years.

12. Do you support Proposal 1, to register building engineers, in whole or in part? Please specify.

AIRAH supports the proposal to give engineers lead-in time for registration and to stage registration by category.

13. Proposal 1 hinges on three main elements, being the:
 - (a) definition of ‘building engineering work’ that only registered engineers may undertake;
 - (b) categories of engineer required to be registered; and

- (c) registration pathways that set out the qualifications and experience required to be registered.

Do you think these three elements, as proposed, are likely to adequately regulate all engineers working in the building and construction industry in WA?

Is there anything that you would amend or add? Please specify.

As noted in questions 1 and 4, AIRAH recommends a specific category of HVAC&R – building services under mechanical engineering. We also believe that more work will be required to properly define “building engineering work”. Again, AIRAH would be very pleased to provide more detailed technical input on which standards related to HVAC&R – building services could be considered prescriptive and which work should be considered “building engineering work” as the legislation is developed.

14. Do you think Proposal 1 will facilitate mutual recognition of registered engineers in other States and Territories? Please specify.

AIRAH believes Proposal 1 aligns with proposals in other jurisdictions and will therefore facilitate mutual recognition.

15. Do you foresee any other costs or benefits to implementing this proposal?

Proposal 2 – Code of Conduct for registered engineers

Proposal 2: Introduce a Code of Conduct for registered engineers, based on the code of conduct in place in Queensland.

16. Do you support the adoption of a code of conduct for registered engineers? Why, or why not?

AIRAH supports the adoption of a code of conduct for registered engineers. In line with this, AIRAH requires its members to comply with a [code of professional and ethical conduct](#). This provides guidance to members to assist them in carrying out their duties and responsibilities, and defines professional standards of conduct that AIRAH expects of its members.

17. Do you agree with the code of conduct proposed in Appendix A? What would you add or delete?

AIRAH agrees with the code of conduct proposed. It aligns with AIRAH’s code of professional and ethical conduct.

18. Do you foresee any other costs or benefits to implementing this proposal?

Proposal 3 – Registered persons to work within their area of competence

Proposal 3: Amend the BSR Act to require that ALL registered building service providers must work within their area of competence.

19. Do you support Proposal 3? Why, or why not?

AIRAH supports amending the BSR Act to require that all registered building service providers must work within their area of competence. Once again, we would underline the importance of defining a separate sub-category for HVAC&R – building services under mechanical engineering. Although a practitioner may have an engineering degree, there is currently no dedicated HVAC&R – building services undergraduate engineering degree course currently on offer by any Australian university. This need is largely met by AIRAH’s accredited [Professional Diploma in Building Services – HVAC&R](#). Nor does industry experience as a mechanical engineer guarantee experience with HVAC&R – building services systems. It is vital that those working on these systems have the appropriate skills and experience.

20. Do you foresee any other costs or benefits to implementing this proposal?

Implementation and review options

21. Do you think an estimated average annual cost of \$388 per engineer is a reasonable administrative cost for registered engineers? Why, or why not?

AIRAH believes this is a reasonable cost. However, 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.

22. Do you think 24 months’ transition period is sufficient to allow industry participants to meet the proposed registration requirements?

AIRAH believes 24 months is sufficient as a transition period.

23. Do you think online surveys are an appropriate way to obtain industry feedback on the operation of these reforms? If not, how do you think the reforms’ effectiveness should be evaluated?

Online surveys are an appropriate way to obtain industry feedback on the operation of these reforms. We would also recommend regular external stakeholder meetings with groups such as AIRAH, Engineers Australia etc. to identify any issues affecting the members of these organisations. These networks can likewise help with disseminating communications materials.