

# Mechanical Services Regulation

## Consultation Regulatory Impact Statement

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Implementation of new mechanical services licensing for medical gas work, air conditioning and refrigeration and plumbing work

June 2019

## Submissions

### Closing date for submissions: 5 July 2019

This is a consultation Regulatory Impact Statement (RIS) only and subject to revision.

Public involvement is an important element of the decision-making processes of the Queensland Department of Housing and Public Works (the department). Therefore, feedback is invited from interested parties concerning its assessment of the impacts of regulation. The department will take account of all submissions and survey responses received.

The survey is available online at: [www.yoursayhpw.engagementhq.com/mechanical-services-licensing](http://www.yoursayhpw.engagementhq.com/mechanical-services-licensing).

Alternatively, please contact the department if you would like the survey emailed or posted to you.

Survey responses (if not completed online), comments or submissions regarding this paper should be directed to:

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## Confidentiality

In the interests of transparency and to promote informed discussion, the department would prefer submissions and survey responses to be made publicly available wherever this is reasonable. Responses will be published without any information that would identify the respondent. However, if a person completing a survey does not want their de-identified responses to be made public that person should claim confidentiality in respect of their response.

While the department will endeavour to identify and protect material claimed as confidential, as well as exempt information and information disclosure of which would be contrary to the public interest (within the meaning of the *Right to Information Act 2009* (RTI)), it cannot guarantee that submissions will not be made publicly available.

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## Executive Summary

The *Plumbing and Drainage Act 2018* (PDA) received assent on 11 September 2018 and, among other things, amends the *Queensland Building and Construction Commission Act 1991* (QBCC Act) to introduce a mechanical services licensing framework.

While the QBCC Act will establish the licensing framework, the technical aspects of the licensing framework, such as licence classes, scopes of work and technical qualification requirements will be prescribed through the *Queensland Building and Construction Commission Regulation 2018* (QBCC Regulation).

The purpose of this Regulatory Impact Statement (RIS) is to seek feedback about the adequacy and workability of the proposed technical aspects of the mechanical services licensing framework.

A draft Regulation (**Appendix 1**) was tabled in the Parliament in October 2017 (draft Regulation), and proposed the following four occupational and four contractor licence classes:

- mechanical services - medical gas
- mechanical services - air conditioning and refrigeration (unlimited design)
- mechanical services - air conditioning and refrigeration (limited design)
- mechanical services - plumbing.

The draft Regulation forms the basis of this RIS. The RIS discusses the proposed licensing framework, implementation considerations for industry and notes mechanical services licensing arrangements in other Australian jurisdictions.

The Department of Housing and Public Works (HPW) has consulted key stakeholders about the draft Regulation and feedback received during the consultation sessions has been incorporated into this RIS.

Once the new licensing requirements are fully implemented, all individuals or businesses who carry out mechanical services work will be required to hold either a contractor or occupational licence before undertaking this type of work. These licensing requirements will affect existing workers performing mechanical services work, for example individuals working on air conditioning and refrigeration systems (excluding work valued under \$3,300 on single head split systems) and medical gas systems. Individuals currently performing this work may need to undertake additional training or have their skills assessed, through a recognised prior learning (RPL) or similar process, to be eligible to obtain the new licence. The cost benefit analysis assumes there are 4,461 individuals currently working in the industry to become licensed in the mechanical services air conditioning and refrigeration occupational licence class.

To minimise the impact to industry, the department is proposing transitional arrangements that would enable sufficient time for all tradespeople to change into the new licensing regime.

HPW is seeking feedback from industry and the community about the draft Regulation and the proposed mechanical services licensing framework as discussed in the RIS.

You are invited to provide feedback about the matters raised in this RIS. An online survey is also available.

The closing date for submissions and for completing the RIS survey is **5 July 2019**.

## 1.0 Introduction

Mechanical services work involves the mechanical heating or cooling of commercial and residential buildings through the use of motors, machines or the flow of temperature controlled fluids, for example air conditioning, refrigeration and air handling systems or boilers. Mechanical services systems contribute to the overall health and safety of the community and can have fatal consequences if incorrectly installed or maintained. For example, legionella bacteria can grow and spread through air conditioning systems found in buildings such as aged care and health facilities and shopping centres.

The purpose of licensing frameworks is typically to address health and safety risks and improve consumer protection. Historically, Queensland's building industry licensing framework has recognised one aspect of the specialist streams of mechanical services work by establishing a refrigeration, air conditioning (RAC) and mechanical services contractor licence. Currently the contractor's licence is required to be held by individuals or companies who advertise or enter into contracts for building work valued above \$3,300 (including GST). The existing licensing framework does not regulate work associated with medical gas systems.

On 11 September 2018 the *Plumbing and Drainage Act 2018* (PDA) received assent and among other things, amends the *Queensland Building and Construction Commission Act 1991* (QBCC Act) to establish a mechanical services licensing framework which recognises the specialised trades that perform this type of work, such as RAC practitioners, plumbers and gas work technicians. The mechanical services licensing framework proposes to include the following specialist streams:

- Mechanical services – medical gas
- Mechanical services – air conditioning and refrigeration
- Mechanical services – plumbing.

The mechanical services licence aims to protect the health of people who work and live in high-risk buildings, such as high-rise residential apartments and office buildings, commercial retail centers, health care facilities and recreational establishments. These buildings are more likely to have larger, more complex systems which if incorrectly installed and maintained pose higher risks of fire, poor ventilation, exposure to harmful gases, bacteria and inadequate acoustic controls. Consumers also risk paying higher energy costs because of inadequate design specifications for the area being covered.

The licensing framework recognises that mechanical services work involves working with dangerous elements, such as hydrocarbon refrigerants, and directly impacts the comfort, health and safety of the people who use medical gas and mechanical services systems such as air conditioning systems. Further, licensing of practitioners provides consumers comfort that operators hold the relevant technical qualification, contractors are financially sound and that the regulator can swiftly take action against individuals performing substandard work or using non-conforming building products.

Owner-builder permits will be subject to conditions that the permittee must not personally carry out mechanical service work generally valued over \$1,100 (including GST). For all other individuals a licence will be required to perform mechanical services work or contract to perform mechanical services work regardless the value of the work being performed.

Individuals undertaking building work that is not within the scope of work for the mechanical services licence, such as the installation of single head split systems, will continue to operate under the existing licensing requirements.

While the QBCC Act will establish the licensing framework, the licence classes, scopes of work and technical qualification requirements will be prescribed through the *Queensland Building and Construction Commission Regulation 2018* (QBCC Regulation). These provisions are proposed to commence on 1 January 2020.

A draft amendment Regulation (**Appendix 1**) has been developed and was tabled in Parliament in October 2017 (the draft Regulation), proposing occupational and contractor mechanical services licence classes for each of the specialist streams. The draft Regulation includes the proposed scope of work for each of the proposed mechanical services licence classes (specialist streams).

The purpose of this RIS is not to discuss the merits of a licensing framework for mechanical services, as the framework has already been established by legislation. This RIS instead focuses on the technical aspects of the licence classes and the arrangements needed to transition industry to the new framework.

## 1.1 Issue

Work on complex mechanical services systems, such as large air conditioning units located in hospitals and shopping centres, pose serious health and safety risks to the community, including the transmission of legionella and other bacteria. It is also becoming more prevalent that these systems use products such as hydrocarbon refrigerants which could explode or cause flash fires under certain conditions, causing serious safety risks.

Mechanical services work includes the installation, commissioning and maintenance of medical gas systems used in hospitals, medical facilities and dental rooms for patient care. The quality of work on medical gas systems impacts patient care and can potentially have fatal consequences, which was tragically demonstrated in New South Wales.

In 2016, two incidents occurred where babies at the Bankstown-Lidcombe hospital in New South Wales were administered nitrous oxide rather than oxygen due to the incorrect installation of the medical gas system. Tragically one baby died and the other baby suffered permanent brain damage.

Under Queensland's existing licensing framework, mechanical services work can be performed by an unlicensed and unqualified person, so long as they are employed by a contractor who holds a licence for the building work being performed under the QBCC Act. Additionally, there are no licensing requirements for individuals working on medical gas systems.

The mechanical services licensing framework enables the Queensland Building and Construction Commission (QBCC) to regulate the industry and protects consumers.

Industry submissions to the Parliamentary Transport and Public Works Committee's scrutiny of the Plumbing and Drainage Bill 2018, which introduced the mechanical services licence, noted the significant safety issues implicit in this type of work and the importance of regulation in mitigating risks for consumers and industry workers<sup>1</sup>. The introduction of a mechanical services licence in Queensland will help prevent the occurrence of tragedies such as those that occurred in New South Wales.

Upon commencement of the mechanical services licensing framework individuals who perform mechanical services work, as defined in legislation, must hold a licence issued by the QBCC. Individuals who have not been required to hold a licence will need to obtain either:

- an occupational licence – to lawfully perform or supervise the work unless the individual holds another licence authorising the performance of the work (e.g. contractor's licence, nominee supervisor's licence) or are exempt (e.g. apprentices); or
- a contractor licence – to lawfully contract, subcontract or advertise to contract for mechanical services work. The contractor licence will also authorise the holder to perform or supervise the work, meaning contractor licensees will not need to hold or pay for two licences (contractor and occupational).

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<sup>1</sup> Parliamentary Transport and Public Works Committee, 2018, *Plumbing and Drainage Bill 2018*, <https://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2018/5618T467.pdf>, accessed March 2019

It is important that implementation of the new licensing framework provides for a seamless transition for people currently working in the industry. The proposed licence classes, scopes of work and technical qualifications outlined in this document aim to:

- achieve a reasonable balance between the interests of licensees, industry and consumers;
- maintain proper industry standards through benchmarked training requirements for individuals who perform mechanical services work (noting that alternate pathways exist, including recognition of prior learning (RPL)); and
- ensure that transitional arrangements do not create unnecessary impediments or create a skills shortage potentially impacting service delivery across the State.

All feedback regarding the proposed licence classes, scopes of work, technical qualification requirements and transitional arrangements will assist government in deciding how best to implement the mechanical services licensing framework to:

- prevent underqualified individuals from performing mechanical services work, potentially compromising the health and safety of consumers and workers;
- ensure the licensing eligibility requirements are not too onerous to prevent competent people from undertaking the work (i.e. above and beyond what is reasonably required to manage risks); and
- ensure a seamless transition for industry to the mechanical services licensing framework.

## 1.2 Policy objectives

The key objectives of the mechanical services licensing framework are to:

- protect public health and safety through the regulation of mechanical services work, including medical gas work;
- ensure suitably trained and qualified workers perform mechanical services work in high risk buildings;
- establish both an occupational and contractor licences in each specialist stream of mechanical services work, including work on medical gas systems; and
- implement transitional provisions for the new licence classes, which ensure a seamless transition for industry while protecting the health and safety of the community.

## 2.0 Proposed licensing framework

A **contractor licence** permits an individual or company to contract, subcontract, advertise to contract and perform the work within the scope of work for their licence class. A contractor licence is generally required for building work regulated and licensed by the QBCC over the value of \$3,300 (including GST). However, it is proposed that the mechanical services contractor licence classes will be required regardless the value of work being performed.

An **occupational licence** permits an individual to carry out work within the scope of work for their licence class, but does not permit the individual to contract, subcontract or advertise to contract. An occupational licence is required for building work regulated and licensed by the QBCC, regardless of the value of the work.

Consistent with the QBCC Act's licensing framework, mechanical services licence classes will also be offered under a nominee supervisor's licence and a site supervisor's licence:

A **nominee supervisor's licence** permits an individual to supervise work for a licensed company contractor who holds the same QBCC licence, but does not permit the individual to personally contract or subcontract to carry out work.

A **site supervisor's licence** permits an employee or officer of a licensed contractor to supervise work carried out under their employer's contractor's licence.



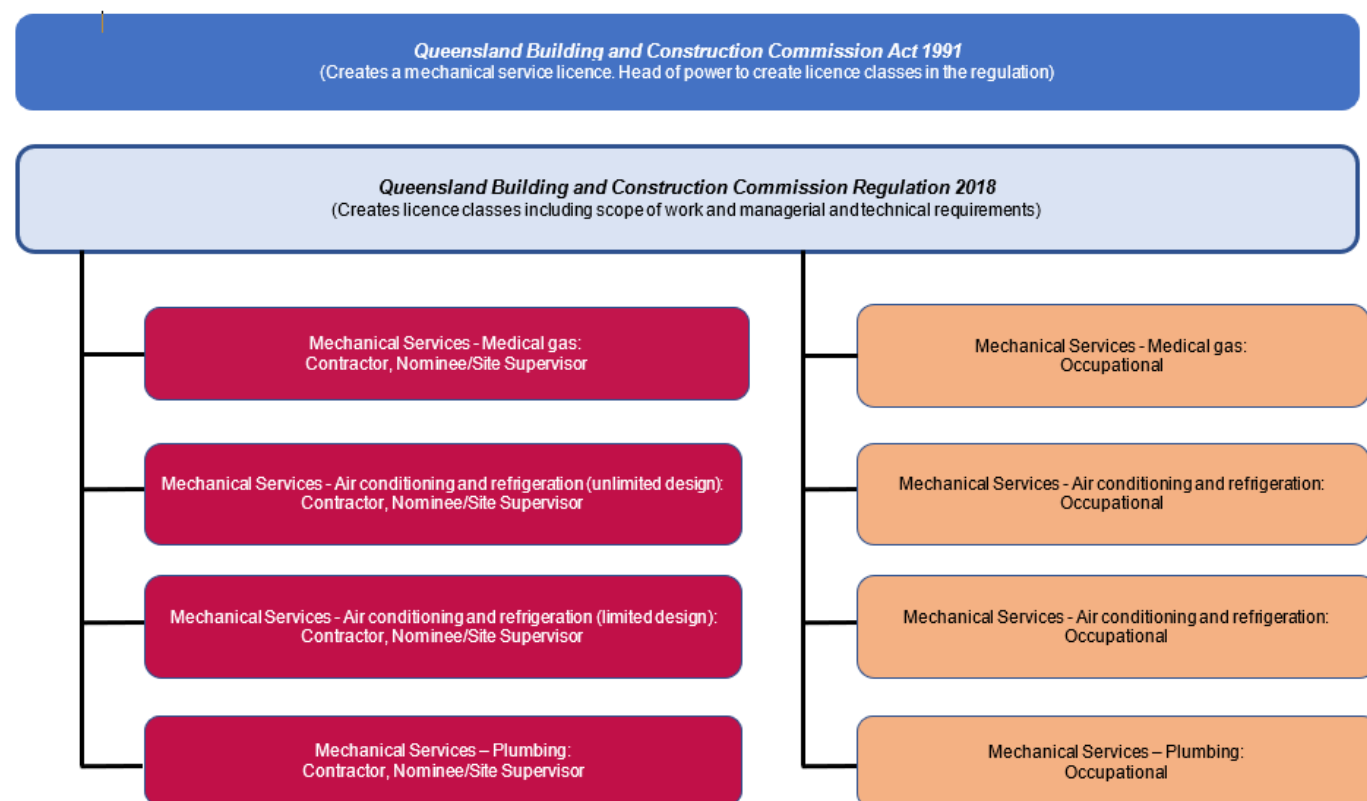
## 2.1 Legislative framework

Amendments to the QBCC Act has establish a mechanical services licensing framework and will commence on proclamation. Similar to other occupationally licensed trades, such as fire protection and plumbing, the QBCC Regulation will prescribe the contractor, nominee, site supervisor and occupational licence classes for mechanical services work.

It is proposed to establish the following mechanical services licence classes in the QBCC Regulation:

1. Mechanical services – medical gas
2. Mechanical services – air conditioning and refrigeration (unlimited design)
3. Mechanical services – air conditioning and refrigeration (limited design)
4. Mechanical services – plumbing

**Figure 1** illustrates how the mechanical services licensing framework will be established in legislation.



**Figure 1: Legislative framework**

## 2.2 Definitions

### 2.2.1 Mechanical services work

The mechanical services licensing framework, subject to certain exclusions (explained below), covers work on medical gas systems, refrigeration and air conditioning systems, and plumbing work for mechanical services systems.

The PDA amends Schedule 2 of the QBCC Act to insert a definition for ‘Mechanical services work’. Mechanical services work means the construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating or cooling system in a building or a medical gas system.

Mechanical services work does not include:

- work carried out on ventilation systems;



- gas work regulated under the *Petroleum and Gas (Production and Safety) Act 2004*; or
- any treatment of cooling water; or
- the connection or disconnection of a system (i.e. a building's mechanical heating or cooling system or a medical gas system) from a water supply other than disconnection of the system from a water supply at an isolating valve adjacent to a mechanical component of that system; or
- design work that is a professional engineering service under the *Professional Engineers Act 2002*; or
- manufacturing of pipe or ducting or components manufactured off-site; or
- installation of a single head split system; or
- installing ductwork and enclosures for air conditioning, air handling and mechanical ventilation systems; or
- any other work prescribed by regulation.

The draft Regulation (**Appendix 1**) excludes mechanical services work carried out:

- on class 1a (detached house and townhouse) and class 10 (shed and garage) buildings;
- on buildings located in land regulated under certain Acts (refer to schedule 2BA of the draft Regulation in **Appendix 1**);
- as part of prescribed environmentally relevant activities and prescribed resource activities.

For the full definition of mechanical services work refer to section 196 of the *Plumbing and Drainage Act 2018* and schedule 2BA of the draft Regulation in **Appendix 1**.

**Note:** Although some work being performed, such as the installation of ductwork, is excluded from the definition of mechanical services work, the work may fall within the definition of building work in the QBCC Act and require a contractor licence to be held before performing work over \$3,300 (including GST) in value.

Are there any other aspects of mechanical services work or other building work that should be identified through the definitions of mechanical services work?

### 2.2.2 Medical gas system and medical gas

Upon proclamation, the terms 'medical gas system' and 'medical gas' will be defined in the QBCC Act as follows:

Medical gas system means any fixed component used –

- (a) In a reticulation system for the supply or removal of medical gas from the gas source to a wall outlet; and
- (b) For patient care, therapeutic, diagnostic purposes or surgical tools.

Medical gas means any gas or mixture of gases or other substance or process used for hospital or medical use that is supplied to, removed from or conducted at, a hospital or other place where medical procedures are carried out, by way of a pipeline reticulation system and includes oxygen, helium, nitrous oxide, nitrogen, medical air, surgical tool gas, carbon dioxide and common mixtures of those gases as well as anaesthesia waste.

Is the definition for 'medical gas system' sufficient? If it is not sufficient, what should the definition include?

Is the definition for 'medical gas' sufficient? If it is not sufficient, what should the definition include?

## 2.3 Proposed scopes of work

The scope of work for each licence class describes the work that may be performed by the holder of the licence for the licence class. The following sections describe the proposed scopes of work for each of the proposed mechanical services work licence classes.

The department is seeking feedback regarding the adequacy and workability of these scopes of work.

### 2.3.1 Mechanical services – medical gas

This is a new licence class. It is believed that certain aspects of the proposed scope of work is currently being undertaken by holders of a plumbing licence, a builders licence, a gas works licence, or by unlicensed workers. Individuals currently performing this work may need to undertake additional training or have their skills assessed through RPL or a similar process to meet the technical qualifications for this licence class.

#### *Scope of work*

The draft Regulation proposes the following scope of work for the mechanical services - medical gas licence class:

*Construction, installation, replacement, repair, alteration, testing, maintenance or commissioning of a medical gas system.*

Should the scope of work include decommissioning a medical gas system?

What other work undertaken on medical gas systems should be included in the scope of work?

Is there any work that a contractor licensee would perform (excluding contracting, subcontracting and advertising to contract) that would be different to an occupational licensee? If so, should this work be included in the scope of work for the contractor licensee?

### 2.3.2 Mechanical services – air conditioning and refrigeration (unlimited and limited design)

#### **Contractor licences**

The current contractor licence classes for RAC and mechanical services (limited or unlimited design) permits a licensee to perform both building work that is not mechanical services work, such as work performed on ventilation systems, and mechanical service work. The scope of work for the new mechanical services air conditioning and refrigeration contractor licence classes will be the same as the current contractor licence classes, with the only changes being the name of the licence class and threshold value dropping from \$3,300 down to \$0 for this type of work.

#### **Contractor licence: Mechanical services – air conditioning and refrigeration (unlimited design)**

The below draft scope of work below is different to the draft Regulation (**Appendix 1**) and more accurately reflects that this licence class includes both mechanical services work and building work that is not mechanical services work. The proposed wording may change in the final version of the Regulation, but has been included in this document to reflect the policy intent and inform discussions.

The following is the proposed scope of work for the mechanical services – air conditioning and refrigeration (unlimited design) licence class. **Figure 2** summarises the transition from the current to the new contractor licence class as explained in this section.

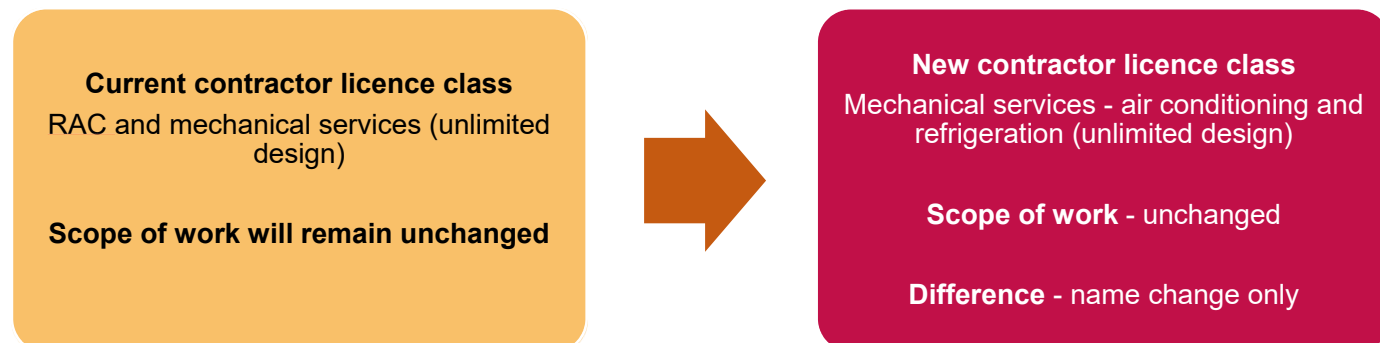
## Scope of work

The proposed scope of work for the mechanical services – air conditioning and refrigeration (unlimited design) contractor licence is as follows:

- (1) Mechanical services work that is:
  - (a) installing, commissioning, servicing or repairing refrigeration, air conditioning, and air handling systems for a building, including the installation, commissioning and handling of refrigerant gases; and
  - (b) design and prepare plans and specifications for refrigeration, air conditioning, and air handling systems for a building that are—
    - (i) for the licensee's personal use; or
    - (ii) for use in building work to be performed by the licensee personally.
- (2) Building work (other than mechanical services work) that is:
  - (a) installing, commissioning, servicing or repairing refrigeration, air conditioning, mechanical ventilation and air handling systems for a building;
  - (b) design and prepare plans and specifications for refrigeration, air conditioning, mechanical ventilation systems and air handling systems for a building (that are—
    - (i) for the licensee's personal use; or
    - (ii) for use in building work to be performed by the licensee personally.

The existing contractor's licence, which includes "building work" of the class of refrigeration and air conditioning (unlimited and limited design, and captures, amongst other things "mechanical ventilation" work over \$3,300) under the QBCC Act will continue to apply. The technical qualifications requirements for these licence classes will also continue to apply.

Refer to section 3.4 for information about proposed transitional arrangements.



**Figure 2: Current RAC and mechanical services (unlimited design) contractor licence class and new contractor licence class**

### ***Contractor licence: Mechanical services – air conditioning and refrigeration (limited design)***

Like the previous section, the below drafting is different to the draft Regulation (**Appendix 1**) and more accurately reflects that the licence class includes both mechanical services work and building work that is not mechanical services work. The proposed wording may change in the final version of the Regulation, but has been included in this document to reflect the policy intent and inform discussions.

**Figure 3** summarises the transition from the current to the new contractor licence class as explained in this section.

### Scope of work

The proposed scope of work for the mechanical services – air conditioning and refrigeration (limited design) contractor licence is as follows:

- (1) Mechanical services work that is installing, commissioning, servicing or repairing refrigeration, air conditioning, and air handling systems for a building, including the installation, commissioning and handling of refrigerant gases; and
- (2) Building work (other than mechanical services work) that is installing, commissioning, servicing or repairing refrigeration, air conditioning, mechanical ventilation and air handling systems for a building;
- (3) Designing and preparing plans and specifications for air conditioning, mechanical ventilation systems and air handling systems are for a building -
  - a)
    - i. that is not more than 3 storeys; and
    - ii. that has a floor area of not more than 2,000m<sup>2</sup>; and
    - iii. for which that plant capacity for any one system for the building is not more than 34kW;
  - but only if -
  - b) to the extent the plans and specifications are for systems that do not form part of a fire or smoke hazard management system for a building; and
  - c) the plans and specifications are -
    - i. for the licensee's personal use; or
    - ii. for use in building work to be performed by the licensee personally.

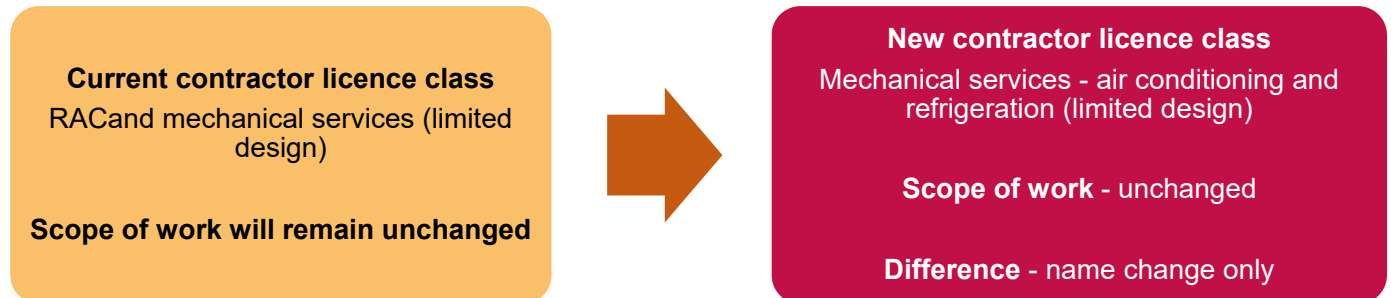


Figure 3: Current RAC and mechanical services (limited design) contractor licence class and new contractor licence class

### Occupational licence

This occupational licence is a new licence class. It is understood that certain aspects of the proposed scope of work may be undertaken by holders of a restricted plumbing licence, a restricted electrical licence (required for the connection of electrical wiring), or by unlicensed workers. Individuals currently performing this work may need to undertake additional training or have their skills assessed through an RPL or similar process, to meet the technical qualification requirements for this licence class.

The mechanical services licensing framework will require all individuals who perform mechanical service work to hold a licence, regardless the value of the work being performed. Therefore the scope of work for the mechanical services occupational licences will only incorporate mechanical services work, meaning the scope of work will be different between the mechanical services air conditioning and refrigeration contractor and occupational licence classes.

The draft Regulation (**Appendix 1**) proposes two different occupational licence classes for mechanical services air conditioning and refrigeration work.

Peak bodies have advised that work at the occupational level does not include design work or the preparation of plans and specifications. Consequently the department is considering excluding this type of work from the scope of work for the air conditioning and refrigeration occupational licence classes. Excluding design type work would negate the need for two occupational licence classes (unlimited and limited design), resulting in a single occupational licence class for air conditioning and refrigeration.

#### *Scope of work*

If a single occupational licence was introduced for the air conditioning and refrigeration industry the proposed scope of work is as follows:

*Installing, commissioning, servicing, repairing and decommissioning refrigeration, air conditioning and air handling systems for a building, including the installation, commissioning and handling of refrigerant gases.*

Would you support a single occupational licence for mechanical services air conditioning and refrigeration work? If not, why?

Would you support excluding design work from a mechanical services air conditioning and refrigeration occupational licence? If not, why?

Would you support excluding 'prepare plans or specifications' from the scope of work for a mechanical services air conditioning and refrigeration occupational licence? If not, why?

### **2.3.3 Mechanical services – plumbing**

This will be a newly created licence class, with the scope of work including work that historically has included both unregulated and regulated work dependent upon the value of work being performed. Individuals currently performing this work may need to undertake additional training or have their skills assessed through an RPL or similar process to meet the technical qualifications for this licence class.

#### *Scope of work*

As the new mechanical services – plumbing licence classes (occupational and contractor) have been created solely to perform mechanical services work, the scope of work for both the contractor and occupational licence classes will be the same. However, consistent with other QBCC licensees, to be eligible for a contractor licence, applicants would need to satisfy the technical, managerial and financial requirements prescribed under the Regulation, while an individual applying for an occupational licence would need to satisfy the technical requirements.

The proposed scope of work for the mechanical services – plumbing licence classes (occupational and contractor) is as follows:

*The construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating or cooling system in a building which is associated with the heating and cooling of that building but **does not** include the installation, commissioning or handling of refrigerant gases.*

Do you support the scope of work for a mechanical services plumbing occupational licence being the same as the mechanical services plumbing contractor licence? If not, why?

Is the proposed scope of work sufficient to enable mechanical services plumbers to perform their trade? If not, what needs to be changed?

## 2.4 Proposed technical qualifications

To be eligible to obtain a mechanical services licence applicants will need to satisfy the technical qualification requirements (occupational and contractor licences) and managerial qualifications for a contractor licence. The following table (**Table 1**) shows the managerial and technical qualifications proposed for each of the proposed mechanical services licence classes. The department is seeking feedback about the suitability, availability and any other issues regarding the proposed qualifications.

All contractor licensees, in addition to these proposed qualifications, will be required to meet the minimum financial requirements for licensing<sup>2</sup>.

Licence class	Proposed technical qualifications
<b>Mechanical services – medical gas</b>  Contractor, nominee, site supervisor and occupational licensees	<p><b>Proposed managerial requirements</b>  <i>(Contractor, nominee and site supervisor licensees only)</i></p> <ul style="list-style-type: none"> <li>Successful completion of BSBSMB401 - Establish legal and risk management requirements of small business, or course the commission considers as equivalent.</li> </ul> <p><b>Proposed technical qualifications</b>  <i>(Contractor, nominee, site supervisor and occupational licensees)</i></p> <p>Must satisfy (1) <b>and</b> (2) below.</p> <p>(1) One of the following-</p> <ol style="list-style-type: none"> <li>Certificate III in Plumbing Mechanical Services CPC32513; or</li> <li>Certificate III in Plumbing (CPC32413); or</li> <li>Successful completion of a course the QBCC considers is at least equivalent to 1(i) or 1(ii).</li> </ol> <p>(2) Both of the following</p> <ol style="list-style-type: none"> <li>Install medical gas pipeline system CPCPMS3034A; and</li> <li>Carry out WHS requirement CPCPCM2043A;</li> </ol> <p><u>Or</u></p> <ol style="list-style-type: none"> <li>Successful completion of a course/s the QBCC considers is at least equivalent to 2(i) and 2(ii).</li> </ol>

<sup>2</sup> QBCC, *Minimum Financial Requirements: myQBCC user guide for licensees*, web: [https://www.qbcc.qld.gov.au/sites/default/files/Minimum\\_Financial\\_Requirements\\_-\\_myQBCC\\_user\\_guide.pdf](https://www.qbcc.qld.gov.au/sites/default/files/Minimum_Financial_Requirements_-_myQBCC_user_guide.pdf), accessed April 2019

Licence class	Proposed technical qualifications
<p><b>Mechanical services – air conditioning and refrigeration (unlimited design)</b></p> <p>Contractor, nominee and site supervisor licensees</p>	<p><b>Proposed managerial requirements</b></p> <p><i>(Contractor, nominee and site supervisor licensees only)</i></p> <ul style="list-style-type: none"> <li>Successful completion of BSBSMB401 - Establish legal and risk management requirements of small business, or course the commission considers as equivalent.</li> </ul> <p><b>Proposed technical qualifications</b></p> <p><i>(Contractor, nominee and site supervisor licensees only)</i></p> <ol style="list-style-type: none"> <li>successful completion of UEE51211 – Diploma of Air Conditioning and Refrigeration Engineering;</li> <li>successful completion of a course the QBCC considers is at least equivalent to either course mentioned in paragraph (a);</li> <li>a qualification or statement of attainment of required competency for the class of licence.</li> </ol> <p><i>* It is proposed that if UEE51211 is to be relied on to demonstrate eligibility for the licence, that electives should be included that deal with energy efficiency.</i></p>
<p><b>Mechanical services – air conditioning and refrigeration (limited design)</b></p> <p>Contractor, nominee and site supervisor licensees</p>	<p><b>Proposed managerial requirements</b></p> <p><i>(Contractor, nominee and site supervisor licensees only)</i></p> <ul style="list-style-type: none"> <li>Successful completion of BSBSMB401 - Establish legal and risk management requirements of small business, or course the commission considers as equivalent.</li> </ul> <p><b>Proposed technical qualifications</b></p> <p><i>(Contractor, nominee, site supervisor and occupational licensees)</i></p> <ol style="list-style-type: none"> <li>successful completion of any of the following courses— <ol style="list-style-type: none"> <li>an apprenticeship in refrigeration and air conditioning; or</li> <li>Certificate III in Engineering Mechanical Trade (Refrigeration and Air Conditioning) MEM30205; or</li> <li>Certificate III in Air Conditioning and Refrigeration UEE32211; or</li> </ol> </li> <li>successful completion of a course the QBCC considers is at least equivalent to a course mentioned in paragraph (a); or</li> <li>a recognition certificate as a qualified refrigeration and air conditioning mechanic; OR</li> <li>a qualification or statement of attainment of required competency for the class of licence.</li> </ol>
<p><b>Mechanical services – air conditioning and refrigeration</b></p> <p>Occupational licensees</p> <p>(Based on a single occupational licence as proposed in section 2.3.2 above)</p>	<p><b>Proposed technical qualifications</b></p> <p><i>(Occupational licensees only)</i></p> <ol style="list-style-type: none"> <li>Successful completion of any of the following courses— <ol style="list-style-type: none"> <li>an apprenticeship in refrigeration and air conditioning; or</li> <li>Certificate III in Engineering Mechanical Trade (Refrigeration and Air Conditioning) MEM30205; or</li> <li>Certificate III in Air Conditioning and Refrigeration UEE32211; or</li> </ol> </li> <li>successful completion of a course the QBCC considers is at least equivalent to a course mentioned in paragraph (a); or</li> <li>a recognition certificate as a qualified refrigeration and air conditioning mechanic; or</li> <li>a qualification or statement of attainment of required competency for the class of licence.</li> </ol>



Licence class	Proposed technical qualifications
<b>Mechanical services – plumbing</b>	<p><b>Proposed managerial requirements</b></p> <p><i>(Contractor, nominee and site supervisor licensees only)</i></p> <ul style="list-style-type: none"> <li>Successful completion of BSBSMB401 - Establish legal and risk management requirements of small business, or course the commission considers as equivalent.</li> </ul> <p><b>Proposed technical qualifications</b></p> <p><i>(Contractor, nominee, site supervisor and occupational licensees)</i></p> <p>Any of the following</p> <ol style="list-style-type: none"> <li>Certificate III in Plumbing (CPC32413)*; or</li> <li>Certificate III in Plumbing Mechanical Services (CPC32513); or</li> <li>Successful completion of a course the QBCC considers is at least equivalent to a course mentioned in paragraph (a).</li> </ol> <p>* It is proposed that if a Certificate III in Plumbing (CPC32413) is to be relied on to demonstrate eligibility for the licence, that eleven prescribed units of competency (discussed below) relevant to the mechanical services work must be completed.</p>

Table 1: proposed technical qualifications

### Certificate III in Plumbing (CPC32413) requirements for a mechanical services plumbing licence

In recognition that plumbing work relating to mechanical services is a specialist stream of plumbing, it is proposed to mandate completion of the following units of competency as a part of the Certificate III in Plumbing (CPC32413) in order to be eligible for the mechanical services – plumbing licence class:

- CPCPMS2021A – Assemble mechanical services components
- CPCPMS3031A – Fabricate/install steel pressure piping
- CPCPMS3033A – Install small bore heat systems
- CPCPMS3035A – Install/test ducting systems
- CPCPMS3032A – Select/fit insulation/sheathing
- CPCPMS3036A – Install air handling units
- CPCPMS3038A – Install air conditioning control equipment
- CPCPMS3039A – Maintain mechanical services equipment
- MEM05049B – Perform routine gas tungsten arc welding
- MEM05050B – Perform routine gas metal arc welding
- CPCCCM3001 – Operate elevated work platforms up to 11 metres

Alternatively the mechanical services stream must be completed to be eligible to obtain the mechanical services – plumbing licence.

Are the proposed qualifications for the mechanical services medical gas contractor and occupational licence classes appropriate? If not, why?

Is the proposed qualification for the mechanical services air conditioning and refrigeration contractor licence class appropriate? If not, why?

Is the proposed qualification for the mechanical services air conditioning and refrigeration occupational licence class appropriate? If not, why?

Are the proposed qualifications for the mechanical services plumbing contractor and occupational licence classes appropriate? If not, why?

Should the Certificate III in Plumbing (CPC32413) be accepted as a suitable qualification for the mechanical services – plumbing licence only if additional units (as outlined) from the Certificate III in Mechanical Services (CPC32513) are included? If not, why?

Should the Certificate III in Plumbing (CPC32413) be accepted as a suitable qualification for the mechanical services - plumbing licence only if the individual has completed the mechanical services stream of that qualification? If not, why?

Should the Diploma in Air Conditioning and Refrigeration Engineering (UEE51211) be accepted as a suitable qualification for the mechanical services – air conditioning and refrigeration (unlimited) contractor licence only if additional units dealing with energy efficiency are included? If not, why?

## 2.5 Additional requirements for licensees

In addition to the proposed technical qualifications presented in section 2.4, HPW is considering whether applicants for mechanical services contractor licences and nominee supervisor licences should demonstrate a minimum amount of industry experience. This requirement would be in addition to industry experience gained through an apprenticeship.

HPW is considering establishing a minimum requirement of two years' experience in the scope of work for the relevant contractor and nominee supervisor licence class (i.e. medical gas, air conditioning and refrigeration, or mechanical services - plumbing), or other work the QBCC is satisfied is at least equivalent. This would be comparative to the experience requirements for various existing builder contractor and nominee supervisor licences regulated by the QBCC (e.g. builder and fire protection licence classes).

Costs associated with meeting this proposed requirement are difficult to quantify as they relate to loss of potential earnings should an occupational licensee wish to move to a contractor licence but does not have the experience requirements. However, considering the serious risks associated with mechanical services work, HPW considers that it may be beneficial for contractor licensees and nominee supervisors to demonstrate a sufficient amount of relevant industry experience before contracting with consumers and signing off work.

Consistent with the QBCC Act licensing framework, no industry experience requirement is proposed for mechanical services occupational licences.

Other jurisdictions that licence mechanical services type work have different experience requirements. For example, Victoria's mechanical services practitioners and contractors require an apprenticeship or four years' experience. Tasmania sets different categories of work based on level of risk and generally require an apprenticeship plus different experience and ongoing CPD requirements. New South Wales' RAC licensees are required to undertake an apprenticeship but no additional industry experience requirements are specified.

Would you support establishing a two-years relevant industry experience requirement for contractor and nominee supervisor licences? If not, why?

## 3.0 Implementation for industry

### 3.1 Commencement timeframes

To provide a seamless transition for industry, including the impacts of potential costs or displacement of existing workers, the department is considering implementing the licensing requirements in two stages.

- **Stage 1:** From 1 January 2020, all new entrants (those who have completed an apprenticeship within 3 months prior to commencement) into the industry would be required to hold the mechanical services licence (full licence). All existing individuals working in the industry would be required to provide evidence that they are employed by a contractor and performing mechanical services work. Upon providing this evidence existing workers would be issued an interim mechanical services licence, which would expire on 30 December 2021. Individuals may choose to apply for a mechanical services licence instead of an interim licence if they meet the eligibility requirements.

Individuals not working in the industry on commencement (1 January 2020) and who do not meet the eligibility requirements (including technical qualifications), will need to undertake the relevant training before being able to work in the industry.

- **Stage 2:** From 1 January 2022, all individuals and companies performing mechanical services would need to meet the new licensing requirements to be able to continue to work within the industry, noting that apprentices and trainees do not need to be licensed but must be supervised.

#### Benefits

The benefits of implementing the licensing requirements in two stages include:

- achieving a reasonable balance between the interests of workers and consumers;
- enables the regulator to take action against individuals performing substandard mechanical services work;
- minimises the impact on industry by providing two years for existing practitioners to meet the eligibility requirements for the new licence classes;
- minimises the disruption of service delivery in the rural areas;
- provides employers and consumers transparency about the people who are performing mechanical services work; and
- improved accountability of workers in the industry.

## Risks

Previously, the heating, ventilation, air conditioning and refrigeration (HVACR) industry raised concerns that HVACR technicians would be displaced by plumbers and electricians under the model discussed as a part of the Queensland Building Plan. This risk has been mitigated through the establishment of a dedicated mechanical services – air conditioning and refrigeration occupational licence, which recognises the HVACR industry as a specialist stream with a specific skillset. The department has consulted with peak bodies and has been advised that the proposed model has alleviated the HVACR industry concerns about being displaced. However, feedback through this RIS process will refine the department's understanding of the potential impacts to industry.

The potential risks associated with implementing the new licensing framework are listed below. However, it is believed that these risks would be mitigated through the two-staged implementation approach:

- An initial decline in the number of individuals performing mechanical services work due to the eligibility requirements, potentially disrupting service delivery in rural areas, reducing industry competition and increasing consumer costs.
- New entrants (those who have completed an apprenticeship) in the industry may not have elected the prescribed units of competency, meaning that although they have completed a nationally accredited apprenticeship they are ineligible to hold a licence and perform mechanical services work in Queensland.
- Individuals currently undertaking study may need to adjust their study program to ensure they are able to be licensed at the completion of the course.
- Registered Training Organisations being inundated with applications for enrolment and trade assessment tests, delaying the obtainment of the new licence classes.

There are also implementation risks for the industry regulator (QBCC), including insufficient time to:

- ensure systems and processes are updated to accommodate the new licensing framework
- provide adequate notice to industry of the new licensing requirements
- design and deliver education and awareness campaigns.

## 3.2 Current vs future licensing requirements

Prior to commencement of the mechanical services licensing provisions on 1 January 2020, the current licensing requirements under the QBCC Act and PDA will apply. However, from 1 January 2020, all individuals will be required to hold a licence (interim or full licence) or be exempt from holding a licence before being able to perform mechanical services work.

About 2,500 (current as at 30 December 2018) QBCC licensees who hold a RAC and mechanical services (unlimited or limited design) contractor licence will automatically transition to the equivalent mechanical services contractor licence. It is not proposed to change the scope of work or technical qualifications for the equivalent mechanical services licence. However, the name of the licence class and monetary threshold for when a licence is required will change.

As is the case with other QBCC occupationally licensed trades, a licence will be required to perform mechanical services work, regardless of the value of the work. This licence can be either an occupational licence or if an individual also wants to contract, subcontract or advertise to perform mechanical services work, a contractor licence.

**Table 2** compares the current and future QBCC licensing requirements to be able to perform the various streams of mechanical services work.

Mechanical services (MS) type of work stream	Current licensing requirements	New QBCC licensing requirements
Work on medical gas systems	<b>Contract and perform the work:</b> Nil	<b>Contract and perform the work:</b> MS – medical gas contractor licence
	<b>Perform the work:</b> Nil	<b>Perform the work:</b> MS – medical gas occupational licence
Work on air-conditioning and refrigeration systems	<b>Contract and perform the work:</b> RAC and MS including unlimited design contractor licence <u>or</u> RAC and MS including limited design contractor licence (Monetary threshold \$3,300)	<b>Contract and perform the work:</b> MS – RAC (unlimited design) contractor licence <u>or</u> MS – RAC (limited design) contractor licence (monetary threshold \$0)
	<b>Perform the work:</b> Nil	<b>Perform the work:</b> MS – air conditioning and refrigeration occupational licence
Plumbing work related to MS systems	<b>Contract and perform the work:</b> Nil	<b>Contract and perform the work:</b> MS – plumbing contractor licence
	<b>Perform the work:</b> Nil	<b>Perform the work:</b> MS – plumbing occupational licence

Table 2: Current vs future licensing requirements

### 3.3 Costs

The costs of transitioning to the mechanical services licensing framework will differ for each individual and company, dependent upon their previous training (formal and informal), skillset, knowledge and experience. However, the following section provides an indication of the costs associated with the licence application process and training requirements.

#### 3.3.1 Licence fees

Consistent with other QBCC licence applications, an application for a mechanical services licence will be decided by the QBCC Commissioner in accordance with the legislation and fees will apply.

The QBCC Regulation will prescribe the fees associated with obtaining the initial licence or renewing or restoring a licence. When making the initial application for a licence two fees will apply, an application fee and a licence fee, where a licence fee applies when applying to renew a licence. As a licence may be issued under the QBCC Act for one year or three years, the licence fees differ dependent upon the duration of the licence.

Contractor licence fees are charged according to the licensee's licence categories as prescribed through the Minimum Financial Requirements (MFR). Generally licence fees increase with government indexation annually.

The QBCC licence fees for 2018-2019 are set out in **Table 3**.

**QBCC licence fees: 2018-2019**

Licence type and Maximum revenue <sup>1</sup>	Individual QBCC licence types			Company QBCC licence types		
	Application fee	1-year licence fee 2018-19	3-year licence fee 2018-19	Application fee	1-year licence fee 2018-19	3-year licence Fee 2018-19
Nominee Supervisor	\$209.05	\$209.05	\$533.00	N/A	N/A	N/A
Site Supervisor	\$209.05	\$209.05	\$533.00	N/A	N/A	N/A
Fire Occupational	\$119.00	\$119.00	\$303.40	N/A	N/A	N/A
Plumbing and Drainage Occupational (issued under PDA)	\$67.45	\$139.95	N/A	N/A	N/A	N/A
SC1 (\$200,000)	\$365.85	\$279.35	\$712.45	\$610.95	\$558.65	\$1,424.45
SC2 (\$600,000)	\$418.10	\$349.50	\$891.30	\$697.45	\$697.45	\$1,778.55
Cat 1 (\$600,001-\$3M)	\$565.90	\$418.10	\$1,066.15	\$958.90	\$837.95	\$2,136.65
Cat 2 (\$3,000,001 - \$ 12M)	\$565.90	\$418.10	\$1,066.15	\$958.90	\$837.95	\$2,136.65
Cat 3 (\$12,000,001 – 30M)	\$785.55	\$629.00	\$1,604.00	\$1,308.45	\$1,256.05	\$3,202.95
Cat 4 (\$30,000,001 – 60M)	\$785.55	\$629.00	\$1,604.00	\$1,308.45	\$1,256.05	\$3,202.95
Cat 5 (\$60,000,001 - \$120M)	\$785.55	\$629.00	\$1,604.00	\$1,308.45	\$1,256.05	\$3,202.95
Cat 6 (\$120,000,001-\$240M)	\$785.55	\$629.00	\$1,604.00	\$1,308.45	\$1,256.05	\$3,202.95
Cat 7 (>\$240M)	\$785.55	\$629.00	\$1,604.00	\$1,308.45	\$1,256.05	\$3,202.95

**Table 3: QBCC licence fees 2018-2019**

It is proposed that the mechanical services licence fees will be the same as for other licences issued under the QBCC Act. For occupational licences the mechanical services licence would be the same as the fire protection occupational licence and for contractor licences the fees will vary according to the licensee's MFR category (refer to **Table 3** for indicative costings).

**3.3.2 Employer costs**

Employers may have staff undertaking mechanical services work that:

- will be eligible to obtain a mechanical services licence upon commencement;
- may need to complete some gap training; or
- will need complete an apprenticeship.

The following provides an overview of the potential costs associated with employers transitioning into the mechanical services licensing framework.

Employer costs may include:

- recruitment costs for specialist expertise;
- higher wages and entitlements because of the specialist skillset and licensing requirements;
- loss of productivity associated with the use of an employee to supervise and train an apprentice and the need for apprentices to attend off the job training. However, business can expect productivity to improve in the long term due to a highly skilled work force;
- travel and/or accommodation costs for an apprentice or trainee to attend training;
- training costs for staff; and
- tool allowances or costs for apprentices or trainees.

A number of incentive programs exist to encourage and assist employers to employ apprentices. The following provide some information into these programs.

The Australian Apprenticeships Incentives Program provides a number of incentive payments to assist employers who take on an Australian Apprentice, particularly where the Australian Apprenticeship is in a trade experiencing a skills shortage<sup>3</sup>.

Employers who use the Australian Government's JobActive service may be eligible for wage subsidies when employing eligible persons who are mature aged, young, long-term unemployed or indigenous.

#### *Queensland Government programs*

Eligible employers have access to two programs - Employer Support Payment of up to \$15,000 and Youth Boost Payment of up to \$20,000 - when they employ eligible unemployed jobseekers.

From 1 July 2017, WorkCover Queensland has offered employers a discount on their premium if they employ an apprentice. The discount is applied by removing the apprentice wages from the employer's premium calculation. This does not apply to the employment of trainees.

Employers may also be eligible for a payroll tax exemption for the wages paid to their apprentices and trainees.

Employers will also benefit from less competition. This is because there would be fewer underqualified and unlicensed individuals competing and underpricing the services being delivered.

### **3.3.3 Apprentice and trainee costs**

While individuals undertaking an apprenticeship or traineeship are not required to be licensed while undertaking formal training, there will be costs associated with undertaking the training and entering the industry. The following provides an overview of the costs that would be incurred while completing an apprenticeship or traineeship.

Apprentice or trainee costs may include:

- Reduction in wages if the person has been working in the industry whilst unqualified
- Study costs such as fees, specialist tools, text books, standards, travel and /or accommodation
- parking or transport costs (to attend training).

Training costs will depend on the training organisation chosen to deliver the training and assessment for the apprenticeship or traineeship. These training organisation determine the fees to be charged to deliver their services. Some training organisations<sup>4</sup> are contracted by the Queensland Department of Employment, Small Business and Training to deliver these services at a subsidised rate.

Non-funded apprentices and trainees are charged a fee for service cost which is outlined in a training plan prior to the commencement of training.

A number of Commonwealth and State initiatives exist to financially assist individuals undertaking an apprenticeship, including high school graduates and people returning to work after a lengthy period of being unemployed.

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<sup>3</sup> Information accessed from <https://www.australianapprenticeships.gov.au/employer-incentives> on 29 March 2019.

<sup>4</sup> Information regarding training organisations is available from the Queensland Training Information Service (QTIS) website <http://www.qtis.training.qld.gov.au/>.



To support year 12 graduates into work, the Queensland Government offers free TAFE in high priority areas, including:

- Certificate III in Engineering - Mechanical Trade (Refrigeration and Air Conditioning) – Apprenticeship
- Certificate III in Plumbing - Apprenticeship
- Certificate III in Plumbing (Mechanical Services) – Apprenticeship.

Eligible apprentices and trainees that meet Queensland funding support requirements are charged a set fee per nominal hour. According to information sourced from TAFE with regard to the Certificate III in Plumbing, these fees are calculated at a regulated rate of \$1.60 per nominal hour. Concession rates apply for students who hold a current Health Care card or who identify as Aboriginal or Torres Strait Islander.

Advice from peak bodies is that it is rare for apprentices to pay for their nominal hours and this cost is generally covered by their employer. It is understood this arrangement is not mandated and any individuals undertaking training are encouraged to discuss payment of fees with their employers.

**Table 4** provides an indication of course fees sourced from the Australian Government's MySkills website and TAFE Queensland.

Course	Average full course fees <sup>5</sup>	Course fees: subsidised <sup>6</sup>	Course fees: concession <sup>3</sup>	Average course duration
Certificate III in Plumbing (CPC32413)	\$7,085	\$1,654	\$662	42 months
Certificate III in Engineering - Mechanical Trade (MEM30205)	\$10,300	Unknown	Unknown	48 months
Certificate III in Air Conditioning and Refrigeration (UEE32211)	\$6,321	\$1,712 – \$1,808	\$683 - \$723	48 months

**Table 4: Indicative course fees**

Like employers incentive programs exist to encourage individuals to undertake an apprenticeship or traineeship. The following provides a non-exhaustive list of support offered to apprentices and trainees:

- travel and accommodation subsidy<sup>7</sup> for apprentices and trainees (not school-based) who have to travel more than 100 km to attend training.
- Commonwealth Government allowances such Youth Allowance, Austudy and ABSTUDY. As part of this assistance, apprentices and trainees may be eligible for a health care card which may entitle them to a reduction in some of the costs of training.
- Commonwealth Government Australian Apprenticeships Incentives Scheme - Apprentice incentives includes access to the Trade Support Loans designed to assist in the costs associated with being an apprentice and Living Away From Home Allowance.
- other financial support, including disability support.

<sup>5</sup> Average course cost entered on My Skills website by training providers. Not all training providers enter this information on My Skills <https://www.myskills.gov.au/courses/search>

<sup>6</sup> TAFE Queensland, [www.tafeqld.gov.au](http://www.tafeqld.gov.au), accessed March 2019

<sup>7</sup> Queensland government subsidy

### 3.3.4 Costs for existing employees

Unlicensed individuals currently performing mechanical services work will be required to hold a licence and meet the eligibility requirements, including the technical qualification requirements, from 1 January 2022.

Individuals who do not hold a formal qualification may be able to demonstrate competence through other means including the RPL process (refer to section 3.5). The costs for RPL are determined by the registered training organisation and varies depending on the number of units successfully recognised, the fee structure of the course, and any assessment or training required<sup>8</sup>. However, a scan of information available online indicates that the cost ranges between \$60 to \$400 per unit of competency. Advice received from an RTO is the approximate cost for an RPL assessment is \$900.

If the applicant is unable to demonstrate sufficient competence to be eligible for the full qualification, they may be required to undertake gap training, which could include completing one or more units of competency. The cost of completing a unit of competency will vary between organisations and between the unit of competency being undertaken. However, through industry feedback and by reviewing the available information it expected that the cost will generally range between \$50 and \$300 per unit of competency.

Costs are provided to the applicant on an individual basis. Individuals in the air conditioning and refrigeration mechanical services stream can apply for funding to cover the costs of RPL and gap training under the Trade Skills Assessment and Gap Training Program<sup>9</sup> (discussed on following pages).

The following three case studies demonstrate the potential costs to existing employees. (*Note: These costs will vary and applicants are encouraged to discuss costs with training providers before enrolling*).

#### **Case study – Brian (15 years' experience, no formal qualifications)**

Brian has installed and maintained large commercial air conditioning systems for a large refrigeration and air conditioning company for 15 years. He has received extensive on the job training, is highly skilled and holds the refrigerant handling licence (Commonwealth requirement).

Brian does not hold a QBCC licence and lawfully performs his work under his employer's contractor's licence. However when the mechanical services licensing framework commences, Brian will need to obtain his own licence in order to continue to perform his work.

Brian identifies the most appropriate licence for him is a mechanical services – air conditioning and refrigeration occupational licence. He hasn't undertaken an apprenticeship or obtained formal qualifications but he has plenty of industry experience.

A registered training organisation assesses Brian's skills and gives him recognition of prior learning for a large part of the required qualification. He identifies that he needs to undertake four units of competency to gain the full qualification.

As his line of work has been identified as a priority trade, he is eligible for funding assistance from the Queensland Government's Trade Skills Assessment and Gap Training Program.

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<sup>8</sup> TAFE, *Recognition of prior learning*, <https://tafeqld.edu.au/courses/ways-you-can-study/recognition-of-prior-learning.html>, accessed March 2019

<sup>9</sup> Department of Employment, Small Business and Training, *Trade Skills Assessment and Gap Training Program*, <https://desbt.qld.gov.au/training/providers/funded/tradegap>, accessed March 2019

Brian chooses to undertake the training prior to the new licence classes commencing so that he can obtain his licence and continue work uninterrupted.

Brian's out of pocket expenses include a nominal contribution of \$1.60 per hour for his gap training, as well as any enrolment and education material fees. He may also be out of pocket for the time needed off work to attend classes, unless paid leave arrangements are agreed to with his employer.

### **Case Study – Jane (Different eligibility requirements)**

Jane obtained completed her plumbing apprenticeship in 1990 interstate. This qualification has since been superseded by a qualification which is not considered to be equivalent to Jane's qualification. Jane has extensive industry experience and was not required to hold a licence while working interstate.

Jane moved to Queensland and obtained a restricted water plumber water and sanitary licence to enable her to perform certain plumbing work. Jane does not need a contractor licence as she is an employee for licensed contractor (company).

Jane does not want to run her own business, therefore requires a mechanical services occupational licence "Mechanical services -plumbing" under the new licensing framework. If Jane were to apply to the QBCC on 1 January 2020 for a full mechanical services occupational licence, it is unlikely that she would be successful as she does not meet the proposed technical qualification requirements (unless she can demonstrate to the QBCC that she has an equivalent qualification to the proposed technical qualifications).

On 1 January 2020, Jane will need to apply for an interim mechanical services occupational licence. However, will only need evidence that she has been working in the industry and performing mechanical services work. Jane may fulfil this requirement by producing a letter from her employer and referee reports.

On 30 December 2021 Jane's interim licence will expire and she knows that she will need a full mechanical services licence. Jane applies to a registered training organisation for RPL or a trade assessment test because of her work experience, at a cost of \$1200. Jane is required to undertake a theoretical and practical test and attend a one hour interview.

Jane is advised that she is required to complete one unit of competency to be able to meet the equivalent requirements of the current qualification. This training would be undertaken over a three month period. Jane pays total of \$150 to undertake the process and complete her training, with employer and government refunds offsetting the cost.

### **Case Study – Ahmed (just entered the industry)**

Ahmed graduated from high school in November 2018. In July 2019, Ahmed found work with a company that specialises in installing and maintaining medical gas systems in dental practices across Queensland. Since joining the company, Ahmed has been working under supervision to test and maintain medical gas systems and is looking forward to learning how to perform other work on the systems, such as construction, installation, repair and decommissioning. He works full time and gets paid \$21.32/hour.

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On 1 January 2020, the new mechanical services licensing framework commences. This includes a requirement that everyone performing work on medical gas systems needs to hold a mechanical services medical gas licence (interim or full licence). Ahmed provides the QBCC with a letter from his employer, confirming that Ahmed has been employed and undertaking mechanical services work since July 2019. The QBCC issues him with an interim licence that will permit him to continue doing this work until he is able to prove that he meets the licensing eligibility requirements and obtains a full licence.

Although Ahmed has six months experience, he recognises that he is unlikely to be successful through an RPL process because of his limited time working in the industry. Ahmed decides to undertake an apprenticeship under his current employer.

Ahmed's wages are reduced to \$13.62/hour as a first year apprentice but will soon move to a 2nd year apprentice wage of \$15.95/hour. His out of pocket expenses to undertake his trade studies are minimal as these costs are subsidised and paid for by his employer. His employer pays Ahmed for his time spent in structured off-the-job training with TAFE. In addition, as Ahmed is now an apprentice, he is exempt from holding a licence while he is undertaking formal training through the apprenticeship. However, once Ahmed completes his apprenticeship he will not be able to work in the industry until he holds the relevant licence.

### 3.3.5 Industry cost benefit analysis

As certain work within the mechanical services licensing framework has historically been unregulated it is difficult to accurately identify the number of people who will be impacted by the reforms. However, based on the Commonwealth's information<sup>10</sup>, as at 30 June 2018, there were 89,237 active industry permits issued to the RAC industry under the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995*. This includes 18,758 refrigerant trading authorisations and 70,479 refrigerant handling licences (issued by the Australian Refrigeration Council - ARC).

Current forecast industry statistics shows 6,890 businesses operating in the RAC industry nation-wide<sup>11</sup>. The industry comprised about 3,400 establishments in 2012. There was a relatively even cross-section of organisational sizes with on average five people employed per organisation, with most of the established organisations in the industry providing a broad range of services, while small- to medium-sized contractors specialised and operating in distinct geographical areas. It was estimated that Queensland's share of national industry establishments is 24%<sup>12</sup> of the Australian RAC industry.

The Department of Jobs and Small Business' September 2018 industry survey, shows that there are currently around 3900 air-conditioning and refrigeration mechanics employed in Queensland. It also shows there were around 370 air-conditioning and refrigeration mechanic apprenticeship commencements and 150 completions in Queensland as at March 2018.<sup>13</sup>

HPW estimates that 4,461 individuals would be working unlicensed in the RAC industry in Queensland in 2019.

Using the estimation of 4,461 individuals and assuming that all employees transition to the new mechanical services RAC occupational licence, the licensing costs to industry would equate to \$1,061,718 (based on the 2018-2019 QBCC annual licence fees for the fire protection occupational licence).

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<sup>10</sup> Department of Environment and energy Annual report, <http://www.environment.gov.au/system/files/resources/01c37c28-eb86-4608-b029-5eabd0006ff4/files/annual-report-2017-18-full.pdf>, accessed March 2019

<sup>11</sup> IBISWorld, Air conditioning and Heating Services (E3233), <https://www.ibisworld.com.au/industry-trends/market-research-reports/construction/services/>, accessed April 2019

<sup>12</sup> NOLA, Decision Regulation Impact Statement, Proposal for national licensing of the refrigeration and air-conditioning occupations

<sup>13</sup> Department of Jobs and Small Business, Airconditioning and Refrigeration Mechanic Queensland, ANZSCO 3421-11, September 2018 <https://docs.jobs.gov.au/system/files/doc/other/334211airconrefrigmechqld.pdf>

The potential sector wide educational and training costs to obtain full formal qualifications are presented in **Figure 4** below for various scenarios. Each scenario assumes:

- a total of 4,461 unlicensed air conditioning and refrigeration workers in Queensland
- a course fee of \$6,321 for the Certificate III in Air Conditioning and Refrigeration (UEE32211)<sup>14</sup>
- the eligible worker pays the full course fee to undertake the full formal qualification prior to receiving subsidised or concessional fee (funding sources including Commonwealth and state funding, private training provider covering part or full fee)<sup>15</sup>.

Estimated cost impact of unlicensed air conditioning and refrigeration workers needing to undertake full formal qualifications to be eligible for a mechanical services occupational licence, based on four scenario's		
% unlicensed workers	No of workers	Cost impact
10%	446	\$2,819,798
25%	1115	\$7,047,915
50%	2230	\$14,098,990
75%	3346	\$21,148,485

**Figure 4: Indicative sector-wide training costs for the air conditioning and refrigeration stream**

Other potential costs include:

- time costs associated with obtaining the new licence, estimated to be 1.5 hours per application
- job losses for individuals failing to meet the licensing requirements by 1 January 2022 (full implementation date)
- wage decrease for individuals needing to undertake an apprenticeship to meet licensing eligibility requirements.

The wage decreases will vary from employer to employer, however as an indication of the potential wage decrease it is estimated that the average weekly wage of a RAC mechanic in Australia is \$1,500<sup>16</sup>, while the average wage of a RAC apprentice in their third year apprentice is about \$795<sup>17</sup>. The department proposes to mitigate the impact of the above issue by implementing generous transitional provisions.

Although the benefits that result from these training requirements are not easily quantifiable, the department believes that this cost will be more than offset by benefits in the form of:

- safety benefits and productivity improvement for employers, as they will continue to rely on workers' registration in training and obtaining the licence as evidence of competency. Long term, it is estimated that businesses will not have to compete with the unlicensed for low risk work level projects.

<sup>14</sup> Average course cost entered on My Skills website by training providers. Not all training providers enter this information on My Skills <https://www.myskills.gov.au/courses/search>

<sup>15</sup> Australian Industry and Skills Committee <https://nationalindustryinsights.aisc.net.au/industries/electrotechnology/refrigeration-and-air-conditioning> accessed 1 April 2019

<sup>16</sup> Australian Government, Job Outlook: Airconditioning and refrigeration mechanics, web: <https://joboutlook.gov.au/occupation.aspx?code=3421>, accessed March 2019

<sup>17</sup> Fair Work Ombudsman, Pay Calculator, <https://www.fairwork.gov.au/pay>, accessed March 2019

- additional benefits to the individual from improved career and opportunities for work, including being able to seek work across state borders and benefiting from greater labour mobility<sup>18</sup>. There is also the opportunity for unlicensed individuals currently working in the sector, to work in other aspects of the air-conditioning and refrigeration industry in public buildings and commercial buildings, or in the residential sector (given, for example, class 1a buildings are not covered by the scope of work).
- increased safety and consumer protection, compared to a no licence option. It is anticipated that the licensing framework would result in a reduced amount of defective work and rectification and/or injury or death.

### ***Trade Skills Assessment and Gap Training Program for priority trade qualifications***

The Trade Skills Assessment and Gap Training Program is a Queensland Government program, which enables individuals to apply to have their trade skills assessed and gap training funded to gain an eligible qualification.

This program, administered by the Department of Employment, Small Business and Training, involves:

- assessing the skills of experienced individuals who can demonstrate substantial competency in a priority trade qualification<sup>19</sup>; and
- providing gap training of no more than 40 per cent of the funded competencies to complete the trade qualification.

Currently the following qualifications, which are relevant to the mechanical services – air conditioning and refrigeration licence are eligible for assistance under the program:

- Certificate III in Air Conditioning and Refrigeration UEE32211; and
- Certificate III in Engineering Mechanical Trade MEM30205.

Funding is provided at the rate of \$2,000 per eligible participant for RPL and \$2,700 per participant to deliver the gap training required. Participants are required to contribute to the cost of their gap training at the rate of \$1.60 per nominal hour or, where eligible, a concessional rate.<sup>20</sup>

### ***Trades Recognition Service (Australian Government)***

Funding the costs for the RPL process may be available to people who do not have an Australian vocational education and training (VET) qualification relevant to the mechanical service occupation. The Australian Government's Department of Education and Training provides information about the trades recognition services and the RTOs approved by Trades Recognition Australia (TRA)<sup>21</sup>.

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<sup>18</sup> Definition of 'labour mobility' from Cambridge English Dictionary: People will be able and willing to move from one job to another, or move from one area to another, in order to work

<sup>19</sup> Department of Employment, Small Business and Training, *Trade Skills Assessment and Gap Training Program*, <https://desbt.qld.gov.au/training/providers/funded/tradegap>, accessed March 2019

<sup>20</sup> Department of Employment, Small Business and Training, TSAGT Program frequently asked questions, <https://desbt.qld.gov.au/training/providers/funded/tradegap/faqs>, accessed March 2019

<sup>21</sup> Australian Government Department of Education and Training, *Trades Recognition Services*, <https://www.tradesrecognitionaustralia.gov.au/programs/trades-recognition-service>, accessed 25 March 2019.



## 3.4 Transitional provisions

### 3.4.1 Mechanical services - medical gas work

Currently medical gas work in Queensland is regulated administratively through Queensland Health's internal policies and procedures. The mechanical services licensing framework will require all individuals performing medical gas work to hold a QBCC licence from 1 January 2020 and a full licence by 1 January 2022. The exact number of individuals undertaking this type of work is unknown. However, there are currently 193 health facilities and hospitals<sup>22</sup> and 723 Queensland dentists clinics<sup>23</sup>, amongst other medical facilities which require this type of work to be carried out. The department has been advised that trade qualified plumbers or gas fitters currently perform this work and therefore the transition from the existing regime to the mechanical services licensing regime is expected to be minimal.

### 3.4.2 Mechanical services - air conditioning and refrigeration work

As at December 2018, there were approximately 2500 individuals or companies that held a RAC and mechanical services (limited or unlimited design) contractor licence.

An amendment to the QBCC Act (yet to commence on proclamation) provides that if a licensee, immediately before commencement of the mechanical services contractor licensing provisions, held a RAC and mechanical services (limited or unlimited design) contractor licence they are taken to hold the equivalent mechanical services contractor licence.

Holders of the new mechanical services contractor licence will have the same competency and qualification requirements as holders of the current licence.

Individuals or companies who do not hold a RAC and mechanical services (limited or unlimited design) contractor licence immediately before commencement of the provisions will need to make an application (and pay the relevant fees) for a mechanical services licence, which may initially be an interim licence.

### 3.4.3 Mechanical services - plumbing

Plumbing is an occupationally licensed trade, meaning all individuals performing plumbing work as an occupation must hold a QBCC licence. Consequently it is not anticipated that any significant issues would arise while transitioning to the new licensing framework, as plumbers will be performing work within the scope of the mechanical services plumbing licence. However, if individuals do not hold the proposed technical qualification, they may need to undertake some additional training or have their skills assessed (i.e. RPL or similar process) to be eligible to hold a licence in the new licence class.

As at December 2018, there were approximately 10,000 occupational plumbers licensed in Queensland.

What tradespeople currently perform medical gas work (other than plumbers or gasfitters)?

Do individuals who are not trade qualified currently perform medical gas work? If so, what work do they perform?

Would you have concerns if the mechanical services licence is required by new entrants (those who have completed an apprenticeship) from late 2019 / early 2020?

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<sup>22</sup> Queensland Health, Hospital and Health Service facility profiles <https://www.health.qld.gov.au/services>

<sup>23</sup> Australian Dentist Directory <https://www.australiandentistsdirectory.com.au/brisbane-dentists-and-queensland-dentists> , accessed 25 March 2019.



Would you have concerns if the mechanical services licence is required by contractors from late 2019 / early 2020?

Would you have concerns if the mechanical services licence is required by all individuals from 30 September 2020?

In considering the commencement date, what other transitional matters should be considered? (e.g. matters regarding the proposed use of recognised prior learning or a trade skills assessment).

What additional transitional arrangements should be considered regarding the mechanical services licence classes?

### 3.5 Individuals without formal qualifications

To provide a seamless transition for industry and individuals while transitioning to the mechanical services licensing framework, the department is considering ways to recognise the skills of individuals currently performing mechanical services work without any relevant formal qualification or licence.

#### Recognised prior learning (RPL)

Currently under the Australian Qualification Framework, individuals can apply for RPL. RPL is an assessment process that involves assessment of an individual's relevant prior learning (including formal, informal and non-formal learning) to determine credit outcomes towards a course or qualification<sup>24</sup>. It is the responsibility of organisations who issue qualifications to offer RPL assessment to students.

#### Trade skills assessment

Additionally, the department is considering a trade skills assessment process, which would involve existing practitioners having to apply (and pay a fee) for a certificate of competency. The certificate would be issued by a registered training organisation upon being satisfied that the applicant has the necessary skills, practical experience and employment history (employed in the relevant trade for a minimum period), to demonstrate that they have acquired the competencies of the trade.

#### Apprentices, trainees and students

Individuals undertaking an apprenticeship, traineeship or other form of formal study for the purpose of obtaining a relevant mechanical services qualification, are exempt from holding a mechanical services licence while studying.

Would you support using the RPL process to transition unlicensed individuals who currently perform mechanical services work, and who do not hold a relevant formal qualification, into the mechanical services work licensing regime? If not, why?

Would you support introducing a trade skills assessment process to transition unlicensed individuals who currently perform mechanical services work, and who do not hold a relevant formal qualification, into the mechanical services work licensing regime? If not, why?

What other approaches exist for transitioning unlicensed individuals who do not hold a relevant formal qualification into a licensing regime?

<sup>24</sup> Australian Qualifications Framework Council, 2012, *Recognition of Prior Learning: An Explanation*, web: <https://www.aqf.edu.au/sites/aqf/files/rpl-explanation.pdf>, accessed March 2019

## 4.0 Jurisdictional discussion

### 4.1 Jurisdiction comparison

The building and construction industry licensing requirements vary significantly across Australia. While Victoria and Tasmania are the only jurisdictions that currently issue a mechanical services work licence, other jurisdictions regulate certain aspects of this work, for example air conditioning and refrigeration work is regulated in New South Wales. Similarly Victoria and Tasmania are the only jurisdictions that licence medical gas work.

### 4.2 Australian Refrigeration Council (ARC) licensing scheme

States and Territories are responsible for administering the National Construction Code, which is achieved through licensing and compliance activities. The Australian Government is responsible for, among other things, regulating the use of ozone depleting gases, such as refrigerants used in air conditioning units. The licensing regimes often work in parallel to each other and serve different purposes, as is the case for air conditioning and refrigeration work.

Under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (C'wth) an individual who installs, services or repairs air conditioning equipment is required to hold a refrigerant handling licence (RHL). A RHL is issued by the ARC<sup>25</sup>. An individual must complete a certificate II level qualification to be eligible to obtain a RHL permitting them to commission and decommission single head split air conditioning systems.

Under the QBCC Act an individual must hold a QBCC licence before contracting or performing building work involving a single head split air conditioning system (including installing a unit), where the value of the work exceeds \$3,300 (including GST). Therefore, currently an individual can install a single head split air conditioning unit without holding a QBCC licence, if the value of the work is less than \$3,300 (including GST). However, the individual would be required to hold a RHL regardless the value of the work. Any electrical work associated with installation or maintenance will need to be undertaken by a licensed electrician. The introduction of the Queensland mechanical services licensing framework does not alter the national licensing requirements for handling refrigerants nor the licensing requirements for electrical work.

Are there any technical aspects of mechanical services licensing in other jurisdictions that should be considered?

## 5.0 Consultation

The introduction of a mechanical services licence was consulted on as a part of the Queensland Building Plan (QBP), with ongoing consultation occurring with key stakeholders. The QBP proposal was to adopt a mechanical services licensing model similar to the Victorian model, which would have resulted in mechanical services work being performed by qualified plumbers and displacing the existing licensing arrangements for the air conditioning and refrigeration sector.

In response to the 2017 QBP discussion paper, HPW received 684 responses to the online surveys, including 188 responses to the proposed regulation of medical gas and 159 written submissions.

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<sup>25</sup> Australian Refrigeration Council, <https://www.arctick.org/licensing>, accessed March 2018

The consultation identified broad industry concern about Queensland simply adopting the Victorian mechanical services licensing model. In response to feedback received, the Queensland model was substantially modified to recognise the specialist streams of mechanical services work and enable the regulation to divide the licence into licence classes that reflect the specialist streams of work.

## 5.1 Consultation on the draft Regulation

In December 2018, HPW consulted peak bodies regarding the draft Regulation, including the Air Conditioning and Mechanical Contractors' Association, Air Conditioning and Refrigeration Mechanics Association, Master Plumbers Association Queensland, Plumbers Union Queensland and Service Trades College. These organisations generally support the proposed licence classes, scopes of work and technical qualifications. Feedback received during these consultation sessions have been considered when developing this RIS.

The responses to this RIS will assist in refining the final Regulation and inform government decision making about the licence classes, scopes of work, transitional arrangements and technical qualification requirements.

HPW consulted with the QBCC while preparing this document and about the draft Regulation.

Targeted confidential consultation also occurred with the following organisations and agencies and members of the Ministerial Construction Council and the Service Trades Council:

- Air Conditioning and Mechanical Contractors' Association
- Association of Wall and Ceiling Industries Queensland
- Australian Institute of Architects
- Australian Institute of Building Surveyors
- Australian Manufacturers and Workers Union
- Board of Architects of Queensland
- Board of Professional Engineers of Queensland
- Communications, Electrical and Plumbing Union, Plumbing Division, Queensland Branch
- Construction, Forestry, Mining and Energy Union
- Department of Employment, Small Business and Training
- Department of Housing and Public Works
- Electrical Trades Union
- Engineers Australia
- Housing Industry Association
- Institute of Plumbing Inspectors Queensland Inc
- Landscape Queensland
- Local Government Association of Queensland Ltd
- Master Builders Queensland
- Master Concreters Australia
- Master Electricians Australia
- Master Painters Queensland
- Master Plumbers Association of Queensland
- National Association of Women in Construction
- National Fire Industry Association
- Office of Fair Trading Queensland
- Plumbers' Union Queensland
- Queensland Building and Construction Commission

- Queensland Council of Unions
- Queensland Training Ombudsman
- Queensland Health
- Subcontractors Alliance
- TAFE Queensland.

## 6.0 Implementation and evaluation

It is anticipated that the mechanical services licensing regime would commence on 1 January 2020 and be fully implemented by 1 January 2022.

In the lead up to the commencement of the new regulation, QBCC and the department will meet with key industry stakeholders, including peak bodies to ensure that industry is informed of the changes.

The QBCC will administer the new mechanical services licensing regime using its existing administrative processes and procedures.

The QBCC and the department will employ mechanisms for monitoring and evaluating the mechanical services licensing framework to ensure it remains effective and relevant over time. This would include:

- monitoring developments relevant to the regulation of building standards in Queensland;
- monitoring the impact on the industry; and
- monitoring any administrative costs that may be incurred by the QBCC.

### QBCC implementation costs

Many individuals currently performing mechanical services work, do so under a contractor, plumbing occupational or gas work licence. The QBCC has advised that similar to other licensed trades, the costs of regulating the mechanical services industry will be funded by the revenue raised from licensing and compliance activities.

Therefore, while the exact revenue is unknown because of the unknown number of unlicensed individuals the new licence streams are estimated to provide a modest annual increase in QBCC's revenue (approximate average of \$20,000 annually), which would provide a cost-neutral net result.

### Closing date for submissions and for completing the survey: 5 July 2019

Submissions, comments or inquiries regarding this paper should be directed to:

Queensland Department of Housing and Public Works

Building Legislation and Policy Division

GPO Box 2457

Brisbane QLD 4001

Email: [BIP@hpw.qld.gov.au](mailto:BIP@hpw.qld.gov.au)

Web: [www.yoursayhpw.engagementhq.com/mechanical-services-licensing](http://www.yoursayhpw.engagementhq.com/mechanical-services-licensing)

## **Appendix 1**

**DRAFT**

### **Queensland Building and Construction Commission (Mechanical Services Licence) Amendment Regulation 2017**

Tabled on 10 October 2017 in the Queensland Parliament and available online at:  
[www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T1976.pdf](http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2017/5517T1976.pdf)



Queensland

# Queensland Building and Construction Commission (Mechanical Services Licence) Amendment Regulation 2017

Subordinate Legislation 2017 No. ...

made under the

*Queensland Building and Construction Commission Act 1991*

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Tabled draft - October 2017

Queensland Building and Construction Commission (Mechanical Services Licence)  
Amendment Regulation 2017

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**1 Short title**

This regulation may be cited as the *Queensland Building and Construction Commission (Mechanical Services Licence) Amendment Regulation 2017*.

**2 Commencement**

This regulation commences on the commencement of the *Plumbing and Drainage Act 2017*, part 10, division 3.

**3 Regulation amended**

This regulation amends the *Queensland Building and Construction Commission Regulation 2003*.

**4 Insertion of new s 14D**

After section 14C—

*insert—*

**14D Classes of mechanical services occupational licence—Act, s 30D(3)**

Mechanical services occupational licences are divided into the classes specified in schedule 2AAA.

**5 Insertion of new s 16C**

After section 16B—

*insert—*

**16C Requirements for mechanical services occupational licence—Act, s 32AB**

For section 32AB(1)(a) of the Act, the qualifications for a mechanical services occupational licence are the technical qualifications stated in schedule 2AAA for the relevant class of licence.

**6 Insertion of new 27B**

After section 27A—

*insert—*

**27B Mechanical services work—Act, s 42CA(2)**

For section 42CA(2) of the Act, the mechanical services work mentioned in schedule 2BA is prescribed.

**7 Amendment of sch 1AA (Work that is not building work)**

(1) Schedule 1AA, section 2(a), after 'fire protection licence'—

*insert—*

or a mechanical services licence

(2) Schedule 1AA, section 33(2), after 'fire protection licence'—

*insert—*

or a mechanical services licence

**8 Amendment of sch 1 (Fees)**

(1) Schedule 1, item 1(a)(iii), after 'licence'—

*insert—*

or mechanical services occupational licence

(2) Schedule 1, item 2(a)(v), after 'licence'—

*insert—*

or mechanical services occupational licence

**9 Amendment of sch 2 (Classes of licences and licence requirements)**

(1) Schedule 2—

*insert—*

## **Part 1A                      Mechanical services licence**

### **1      Licence classes**

- (1) Mechanical services—medical gas.
- (2) Mechanical services—air-conditioning and refrigeration (unlimited design).
- (3) Mechanical services—air-conditioning and refrigeration (limited design).
- (4) Mechanical services—plumbing.

### **2      Scope of work**

- (1) For the licence class mentioned in section 1(1), construction, installation, replacement, repair, alteration, testing, maintenance or commissioning of a medical gas system.
- (2) For the licence class mentioned in section 1(2)—
  - (a) installing, commissioning, servicing or repairing refrigeration, air-conditioning, mechanical ventilation and air handling systems for a building; and
  - (b) designing and preparing plans and specifications for refrigeration, air-conditioning, mechanical ventilation and air handling systems for a building if the plans and specifications are—
    - (i) for the licensee's personal use; or
    - (ii) for use in building work to be performed by the licensee personally.
- (3) For the licence class mentioned in section 1(3)—
  - (a) installing, commissioning, servicing or repairing refrigeration, air-conditioning,

mechanical ventilation and air handling systems for a building; and

- (b) designing and preparing plans and specifications for—

- (i) refrigeration systems for a building; or
- (ii) air-conditioning and mechanical ventilation and air handling systems for a building—

(A) that is not more than 3 storeys; and

(B) that has a floor area of not more than 2,000m<sup>2</sup>; and

(C) for which the plant capacity for any one system for the building is not more than 34kW;

but only if—

- (c) to the extent the plans and specifications are for air-conditioning and mechanical ventilation and air handling systems for a building—the systems do not form part of a fire or smoke hazard management system for the building; and

- (d) the plans and specifications are—

- (i) for the licensee's personal use; or
- (ii) for use in building work to be performed by the licensee personally.

- (4) For the licence class mentioned in section 1(4), the construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating or cooling system in a building which is associated with the heating and cooling of that building, but does not include the installation of gases used in an air-conditioning system.

**3 Technical qualifications**

The technical qualifications stated in the technical qualifications document for the licence class applied for.

**4 Managerial qualifications**

An approved managerial qualification.

**5 Financial requirements**

The relevant financial requirements in the board's policies.

- (2) Schedule 2, pts 44 and 45—

*omit.*

**10 Insertion of new sch 2AAA**

After schedule 2AA—

*insert—*

**Schedule 2AAAClasses and  
requirements of  
mechanical services  
occupational licences**

section 14D

**1 Licence classes**

- (1) Mechanical services—medical gas.
- (2) Mechanical services—air-conditioning and refrigeration (unlimited design).
- (3) Mechanical services—air-conditioning and refrigeration (limited design).

- (4) Mechanical services—plumbing.

## 2 Scope of work

- (1) For the licence class mentioned in section 1(1), construction, installation, replacement, repair, alteration, testing, maintenance or commissioning of a medical gas system.
- (2) For the licence class mentioned in section 1(2)—
  - (a) installing, commissioning, servicing or repairing refrigeration, air-conditioning and air handling systems for a building; and
  - (b) designing and preparing plans and specifications for refrigeration, air-conditioning and air handling systems for a building if the plans and specifications are—
    - (i) for the licensee's personal use; or
    - (ii) for use in building work to be performed by the licensee personally.
- (3) For the licence class mentioned in section 1(3)—
  - (a) installing, commissioning, servicing or repairing refrigeration, air-conditioning and air handling systems for a building; and
  - (b) designing and preparing plans and specifications for—
    - (i) refrigeration systems for a building; or
    - (ii) air-conditioning and air handling systems for a building—
      - (A) that is not more than 3 storeys; and
      - (B) that has a floor area of not more than 2,000m<sup>2</sup>; and

- (C) for which the plant capacity for any one system for the building is not more than 34kW;

but only if—

- (c) to the extent the plans and specifications are for air-conditioning and air handling systems for a building—the systems do not form part of a fire or smoke hazard management system for the building; and
- (d) the plans and specifications are—
  - (i) for the licensee's personal use; or
  - (ii) for use in building work to be performed by the licensee personally.
- (4) For the licence class mentioned in section 1(4), the construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating or cooling system in a building which is associated with the heating and cooling of that building, but does not include the installation of gases used in an air-conditioning system.

### 3 Technical qualifications

The technical qualifications stated in the technical qualifications document for the licence class applied for.

#### 11 Insertion of new sch 2BA

After schedule 2B—

*insert—*

### **Schedule 2B Mechanical Services work by individuals**



- 1 Mechanical services work carried out on a class 1a or class 10 building.
- 2 Mechanical services work carried out on a building located on land to which any of the following Acts applies—
  - (a) the *Mineral Resources Act 1989*;
  - (b) the *Petroleum and Gas (Production and Safety) Act 2004*;
  - (c) the *Petroleum Act 1923*;
  - (d) the *Geothermal Energy Act 2010*;
  - (e) the *Greenhouse Gas Storage Act 2009*.
- 3 Mechanical services work carried out as part of any of the following activities—
  - (a) an ERA prescribed under the following sections of the *Environmental Protection Regulation 2008*, schedule 2—
    - (i) section 5 (Alcohol production);
    - (ii) section 6 (Asphalt manufacturing);
    - (iii) section 7 (Chemical manufacturing);
    - (iv) section 8 (Chemical storage);
    - (v) section 9 (Hydrocarbon gas refining);
    - (vi) section 10 (Gas producing);
    - (vii) section 11 (Oil refining or processing);

- (viii) section 12 (Plastic product manufacturing);
- (ix) section 13 (Tyre manufacturing or retreading);
- (x) section 14 (Electricity generation);
- (xi) section 19 (Metal forming);
- (xii) section 20 (Metal recovery);
- (xiii) section 22 (Beverage production);
- (xiv) section 23 (Bottling and canning);
- (xv) section 24 (Edible oil manufacturing or processing);
- (xvi) section 25 (Meat processing);
- (xvii) section 28 (Sugar milling or refining);
- (xviii) section 29 (Metal foundry operation);
- (xix) section 30 (Metal smelting and refining);
- (xx) section 31 (Mineral processing);
- (xxi) section 32 (Battery manufacturing);
- (xxii) section 33 (Crushing, milling, grinding or screening);
- (xxiii) section 36 (Pulp or paper manufacturing);
- (xxiv) section 38 (Surface coating);
- (xxv) section 39 (Tanning);
- (xxvi) section 40 (Textile manufacturing);

- 
- (xxvii)section 41 (Cement manufacturing);
  - (xxviii)section 42 (Clay or ceramic products manufacturing);
  - (xxix)section 44 (Glass or glass fibre manufacturing);
  - (xxx)section 45 (Mineral wool or ceramic fibre manufacturing);
  - (xxxi)section 55 (Regulated waste recycling or reprocessing);
  - (xxxii)section 61 (Waste incineration and thermal treatment);
  - (xxxiii)section 63 (Sewage treatment);
  - (xxxiv)section 64 (Water treatment);
  - and
  - (b) a resource activity comprised of 1 or more ancillary activities that is an ERA prescribed under the following sections of the *Environmental Protection Regulation 2008*, schedule 2—
    - (i) section 6 (Asphalt manufacturing);
    - (ii) section 7 (Chemical manufacturing);
    - (iii) section 8 (Chemical storage);
    - (iv) section 9 (Hydrocarbon gas refining);
    - (v) section 10 (Gas producing);
    - (vi) section 11 (Oil refining or processing);
    - (vii)section 12 (Plastic product manufacturing);
-

- (viii) section 13 (Tyre manufacturing or retreading);
- (ix) section 14 (Electricity generation);
- (x) section 19 (Metal forming);
- (xi) section 22 (Beverage production);
- (xii) section 25 (Meat processing);
- (xiii) section 28 (Sugar milling or refining);
- (xiv) section 29 (Metal foundry operation);
- (xv) section 30 (Metal smelting and refining);
- (xvi) section 31 (Mineral processing);
- (xvii) section 32 (Battery manufacturing);
- (xviii) section 33 (Crushing, milling, grinding or screening);
- (xix) section 36 (Pulp or paper manufacturing);
- (xx) section 38 (Surface coating);
- (xxi) section 40 (Textile manufacturing);
- (xxii) section 41 (Cement manufacturing);
- (xxiii) section 42 (Clay or ceramic products manufacturing);
- (xxiv) section 44 (Glass or glass fibre manufacturing);
- (xxv) section 45 (Mineral wool or ceramic fibre manufacturing);
- (xxvi) section 63 (Sewage treatment);

(xxvii)section 64 (Water treatment).

**12 Amendment of sch 3 (Dictionary)**

Schedule 3—

*insert—*

***mechanical services licence*** means a licence of a class mentioned in schedule 2, part 1A and schedule 2AAA.

ENDNOTES

- 1 Made by the Governor in Council on [Made by Governor Date].
- 2 Notified on the Queensland legislation website on [Notification Date].
- 3 The administering agency is the Department of Housing and Public Works.

Tabled draft - October 2017

## Appendix 2

### Terminology and definitions

**Australian Refrigeration Council Ltd (ARC)**

Is the peak body for the refrigeration and air conditioning industry in Australia, servicing individuals and businesses through licensing and regulatory assistance. ARC administers refrigerant handling licences and refrigerant trading authorisations on behalf of the Australian Government, to professionals in the refrigeration/air conditioning and auto industry.

On the 1<sup>st</sup> of July 2005, the Australian Government implemented a licensing scheme to support regulations under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*, designed to reduce emissions of environmentally harmful refrigerant gases.

Under the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995*, a Refrigerant Trading Authorisation is required when a business or individual wishes to acquire, store or dispose of refrigerant.

Anyone wanting to install, service or repair an air conditioner, or any other piece of refrigeration and air conditioning equipment must be a licensed technician under the regulations. The holder of a Refrigerant Handling Licence is an individual who is qualified in their field of activity and has met the licensing requirements under the regulations.

**Building work**

Means work regulated by the QBCC and includes (but is not limited to) the erection, construction, renovation, alteration, extension, improvement or repair of buildings.

**Contractor licence**

A contractor licence permits an individual or company to contract, subcontract, advertise to contract and perform the work within the scope of work for their licence class.

**Draft Regulation**

Means the draft Queensland Building and Construction Commission (Mechanical Services Licence) Amendment Regulation 2017, tabled in the Queensland Parliament on 10 October 2017. This draft regulation is included in this RIS as Appendix 1 and is available on the Parliament website: [www.parliament.qld.gov.au](http://www.parliament.qld.gov.au).

**Licensees**

QBCC licence holders, including building and trade contractors, occupational (plumbing and drainage and fire protection), pool safety inspectors and certifiers

**Minimum Financial Requirements (MFR) Policy**

A policy for licensing administered by the QBCC. The MFR policy was repealed on 2 April 2019 as all of requirements for licensing are included in the Queensland Building and Construction Commission (Minimum Financial Requirements) Regulation 2018 under the *Queensland Building and Construction Commission Act 1991*.

The objectives of minimum financial requirements are to promote financially viable businesses and foster professional business practices in the Queensland building industry.



<b>National Construction Code (NCC)</b>	The NCC is an initiative of the ABCB. It provides the minimum necessary requirements for safety and health, amenity and accessibility, and sustainability in the design, construction, performance and liveability of new buildings (and new building work in existing buildings) throughout Australia.
<b>Occupational licence</b>	An occupational licence permits an individual to carry out work within the scope of work for their licence class, but do not permit the individual to contract or advertise to contract for mechanical services work.
<b>Refrigerant</b>	<p>According to the <i>Australia and New Zealand refrigerant handling code of practice</i> (Australian Refrigeration Council Ltd (ARC), the medium used for heat transfer in a refrigerating system, which absorbs heat on evaporating at a low temperature and a low pressure and rejects heat on condensing at a higher temperature and higher pressure. (The term 'gas' should be avoided when referring to refrigerants). Unless specified otherwise, refrigerant in this code refers to fluorocarbon refrigerant only. Any person whose business includes manufacturing, installation, servicing, modifying, or dismantling of any refrigeration and/or air conditioning equipment which:</p> <ul style="list-style-type: none"> <li>(a) contains</li> <li>(b) is designed to use, or</li> <li>(c) is manufactured using</li> </ul> <p>fluorocarbon refrigerant, must ensure that they and/or any of their employees who handle fluorocarbon refrigerant are appropriately licensed under the <i>Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995</i> and any regulations that supersede it.</p>
<b>Refrigerant handling licence</b>	A licence issued by the Australian Refrigeration Council required to carry out work in relation to refrigeration and air conditioning equipment.
<b>Queensland Building and Construction Commission (QBCC)</b>	Queensland's building and construction industry regulator.
<b>Queensland Building Plan (QBP)</b>	Released in October 2017 by the Queensland Government, the QBP outlines a long-term strategic direction for Queensland's building and construction industry.

## Appendix 3

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