



Water Heating and Space Heating and Cooling Activity Guide

29 June 2023



An appropriate citation for this paper is:

Essential Services Commission, Water Heating and Space Heating and Cooling Activity Guide, 29 June

Copyright notice

© Essential Services Commission 2023



This work, Water Heating and Space Heating and Cooling Activity Guide, is licensed under a Creative Commons Attribution 4.0 licence [creativecommons.org/licenses/by/4.0]. You are free to re-use the work under that licence, on the condition that you credit the Essential Services Commission as author, indicate if changes were made and comply with the other licence terms.

The licence does not apply to any brand logo, images or photos within the publication.

Contents

G	uide o	verview	2
1.	Intro	duction to water heating and space heating and cooling activities	4
	1.1.	Water heating activities	4
	1.2.	Space heating and cooling activities	5
2.	Activ	ity requirements – water heating activities	7
	2.1.	Eligible activities	7
	2.2.	Eligible premises and installation limits	10
	2.3.	Licence/registration requirements for installers	10
	2.4.	Pre-installation requirements – sizing (residential premises only)	11
	2.5.	Installation requirements	11
	2.6.	Decommissioning and disposal requirements	12
	2.7.	Consumer information provision requirements	15
	2.8.	Record-keeping requirements	16
3.	Activ	ity requirements – space heating and cooling activities	19
	3.1.	Eligible activities	19
	3.2.	Eligible premises and installation limits	28
	3.3.	Licence requirements for installers	30
	3.4.	Pre-installation requirements (activity 6 only)	31
	3.5.	Decommissioning and/or disposal requirements	32
	3.6.	Consumer information provision requirements	36
	3.7.	Record-keeping requirements	37
4.	Activ	ity process for water heating or space heating and cooling activities	40
	4.1.	Become accredited	40
	4.2.	Get product approved (if not already approved)	40
	4.3.	Provide advice to consumer/agree scope of work	41
	4.4.	Undertake the activity and collect records	41
	4.5.	Assignment of rights	41
	4.6.	Dispose of waste and debris from the activity	41
	4.7.	Collect documentation and create VEECs online	42
	4.8.	Activity assessment	42
	4.9.	Commission registers VEECs (if deemed eligible)	42
5.	Calc	ulating the number of eligible VEECs	43
	5.1.	VEEC calculation method for water heating activities	43
	5.2.	VEEC calculation method for space heating and cooling activities	44
Ap	pend	ix A: List of Refrigerant GWPs	48
Es	sentia	al Services Commission Water Heating and Space Heating and Cooling	1

Activity Guide

Guide overview

Accredited persons (APs) and their installers under the Victorian Energy Upgrades (VEU) program must comply with program requirements when undertaking water heating and space heating and cooling activities to create Victorian energy efficiency certificates (VEECs).

About this guide

Use this guide for assistance in understanding the specific requirements for the water heating and space heating and cooling activities under the VEU program. This document also provides guidance about the key requirements that must be met and expectations of the commission in the carrying out of prescribed activities.

The guide has five sections:

- Section 1: Introduction to water heating and space heating and cooling activities
- Section 2: Activity requirements for water heating activities
- Section 3: Activity requirements for space heating and cooling activities
- Section 4: Activity process for water heating or space heating and cooling activities
- Section 5: Calculating the number of eligible VEECs

Who should use this guide?

You should use this guide if you are:

- seeking accreditation to undertake water heating and/or space heating and cooling activities under the VEU program
- an accredited person seeking guidance to undertake water heating and/or space heating and cooling activities under the VEU program.

For information about, or to apply for accreditation please refer to the commission's website: www.esc.vic.gov.au/become-veu-accredited

To access information about, or to apply for a product to be listed on the commission's Register of Products, please refer to the commission's website at: <u>www.esc.vic.gov.au/veu-product-applicants</u>

Obligations and Program Guide

The <u>Obligations and Program Guide for Accredited Persons</u> provides overarching information about the VEU program and summarises key requirements that apply to all accredited persons and

provides information about how to create Victorian energy efficiency certificates (VEECs) under the program.

Legislative requirements

The legal requirements for accredited persons and scheme participants (including installers) participating in water heating activities and space heating and cooling activities under the VEU program are set out in:

- Victorian Energy Efficiency Target Act 2007 (the VEET Act)
- Victorian Energy Efficiency Target Regulations 2018 (the VEET Regulations)
- Victorian Energy Upgrades Specifications 2018 (the VEU Specifications)
- Victorian Energy Efficiency Target Guidelines (the VEET Guidelines).

These documents can be accessed at: <u>www.esc.vic.gov.au/veu-legislation</u>

The information in this publication is intended to provide general guidance only. It does not constitute legal or other professional advice and should not be relied on as a statement of the law in any jurisdiction. While the commission has made every effort to provide current and accurate information, you should obtain professional advice if you have any specific concern, before relying on the accuracy, currency or completeness of this information.

1. Introduction to water heating and space heating and cooling activities

An activity prescribed by the VEET Regulations is referred to as a 'prescribed activity'. The product category, category number and the criteria applying to that activity are contained in Schedule 2 of the VEET Regulations. Any specifications applicable to that product are published by the Secretary of the Department of Environment, Energy and Climate Action (the department) in the VEU Specifications.

Each activity must be undertaken in compliance with the legal requirements for that activity. These requirements relate to matters such as:

- product requirements
- eligibility requirements and installation limits
- licensing requirements for installers
- pre-installation requirements
- installation requirements
- · decommissioning and disposal requirements
- · consumer information provision requirements
- record-keeping requirements.

1.1. Water heating activities

Activities involving the installation of gas water heating products (activities 1A, 1B, 1F and 3B) will no longer be prescribed activities after 30 June 2023. Installations under these activities after this date (i.e. from 1 July 2023) will no longer be eligible for the creation of VEECs.

Parts 1 and 3 of Schedule 2 of the VEET Regulations prescribe activities for the installation of efficient water heating products under the VEU program. The VEU Specifications set out eligible water heating scenarios and any additional requirements, including product performance requirements, decommissioning and disposal requirements, refrigerant requirements and pre-installation sizing requirements. The scenarios within a given activity require a different type of specified product to be installed. For this reason, each water heating activity scenario is treated as a separate activity for the purposes of VEEC creation and has its own separate creation form in the VEU Registry.

The water heating activities under the VEU program are listed in Table 1 below.

Table 1:Current water heating activities under the VEU program

VEU activity number	Changes
Activity 1A: Replacing an electric storage water heater with a gas or LPG storage water heater	Available only for installations up to 30 June 2023
Activity 1B: Replacing an electric storage water heater with a gas or LPG instantaneous water heater	Available only for installations up to 30 June 2023
Activity 1C: Replacing an electric storage water heater with an electric boosted solar water heater	Revised to include two scenarios from 31 May 2023
Activity 1D: Replacing an electric storage water heater with a heat pump water heater	Revised to include two scenarios from 31 May 2023
Activity 1F: Replacing an electric storage water heater with a gas or LPG boosted solar water heater	Available only for installations up to 30 June 2023
Activity 3B: Replacing a gas or LPG water heater with a gas or LPG boosted solar water heater	Available only for installations up to 30 June 2023
Activity 3C: Replacing a gas or LPG water heater with a heat pump water heater	New activity introduced into VEU program on 31 May 2023
Activity 3D: Replacing a gas or LPG water heater with an electric boosted solar water heater	New activity introduced into VEU program on 31 May 2023

1.2. Space heating and cooling activities

Activities 5, 7, 9, 10 and 23 will no longer be prescribed activities after 30 June 2023. Installations under these activities after this date (i.e. from 1 July 2023) will no longer be eligible for the creation of VEECs.

Parts 5, 6, 7, 9, 10, 23 and 28 of Schedule 2 of the VEET Regulations prescribe activities for the installation of space heating and cooling products under the VEU program.

The VEU Specifications set out the eligible space heating and cooling scenarios and any additional requirements, including product performance requirements, decommissioning and disposal requirements, refrigerant requirements and pre-installation sizing requirements. The scenarios within a given activity are based on the type of product installed and the decommissioned product, if any. The space heating and/or cooling activities under the VEU program are listed in Table 2 below.

Table 2:Current space heating and/or cooling activities under the VEU program

VEU activity	Changes
Activity 6: Installing a high efficiency air-conditioner	New activity introduced into VEU program on 31 May 2023.
Activity 5: Installing a high efficiency ducted gas heater	Available only for installations up to 30 June 2023.
Activity 7: Installing a high efficiency ducted air-to-air heat pump	Available only for installations up to 30 June 2023. Ducted air-to-air heat pumps will be eligible to be installed under the new activity 6.
Activity 9: Installing a high efficiency room gas LPG heater	Available only for installations up to 30 June 2023.
Activity 10: Installing a high efficiency room air-to-air heat pump	Available only for installations up to 30 June 2023. Room air-to-air heat pumps will be eligible to be installed under the new activity 6.
Activity 23: Installing a ducted evaporative cooler	Available only for installations up to 30 June 2023.
Activity 28: Gas heating ductwork	Continues to be an eligible prescribed activity – no change.

2. Activity requirements – water heating activities

This information below provides a summary of the requirements when undertaking water heating activities under the VEU program. Accredited persons and scheme participants must ensure that they have reviewed the program rules as listed in the VEET Act, VEET Regulations and VEU Specifications and VEET Guidelines.

In addition, all water heating activities under the VEU program must be undertaken in accordance with the provisions of the Electricity Safety Act 1998, the Gas Safety Act 1997, the Occupational Health and Safety Act 2004 or the Building Act 1993 or the regulations under any of those Acts.

Accredited persons, their employees, and scheme participants (e.g., lead generators or installers) must also comply with all other relevant laws applicable to the activities they undertake, including the:

- Code of conduct provisions in Schedule 6 of the <u>VEET Regulations</u>
- Australian Consumer Law (ACL) when engaging in marketing practices under the program
- <u>Telecommunications (Telemarketing and Research Calls) Industry Standard 2017</u> when engaging in telemarketing practices under the program.

2.1. Eligible activities

Activities involving the installation of gas water heating products (activities 1A, 1B, 1F and 3B) will no longer be prescribed activities after 30 June 2023. Installations under these activities after this date (i.e. from 1 July 2023) will no longer be eligible for the creation of VEECs.

Table 3: Eligible water heating activities – activities 1 and 3

 Installer(s) must decommission an electric resistance water heater¹ and install a product which meets the product criteria. Gas/LPG storage water heater which: is certified by an accredited body as having a rating of 5 or more stars when tested and rated in accordance with AS/NZSAS/NZS 5263.1.2 is listed on the commission's Register of Products by the time VEECs are created. 	Activity	Activity description	Product criteria
	1A	electric resistance water heater ¹ and install a product which meets	 is certified by an accredited body as having a rating of 5 or more stars when tested and rated in accordance with AS/NZSAS/NZS 5263.1.2 is listed on the commission's Register of Products by the

¹ Existing electric resistance water heater must be connected to an electricity supply before it is decommissioned. Essential Services Commission Water Heating and Space Heating and Cooling

Activity Guide

Activity	Activity description	Product criteria
1B	Installer(s) must decommission an electric resistance water heater ¹ and install a product which meets the product criteria.	 Gas/LPG instantaneous water heater which: is certified by an accredited body as having a rating of 5 or more stars when tested and rated in accordance with AS/NZSAS/NZS 5263.1.2 is listed on the commission's Register of Products by the time VEECs are created.
1C	Installer(s) must decommission an electric resistance water heater ¹ and install a product which meets the product criteria.	 Electric boosted solar water heater which: is certified by an accredited body as complying with AS/NZS 2712 has an insulated storage volume not exceeding 700 litres achieves ≥ 60% annual energy savings determined in
3D	Installer(s) must decommission a gas/LPG water heater ² and install a product which meets the product criteria.	 Achieves 2 00% annual energy savings determined in accordance with either: AS/NZS 4234:2021 and the <u>Water Heating and Space</u> <u>Heating/Cooling Product Application Guide</u> when modelled in climate zone 4 (for activities 1C(i) and 3D)³ AS/NZS 4234:2008 and the <u>Water Heating and Space</u> <u>Heating/Cooling Product Application Guide</u> when modelled in climate zone 4 (for activities 1C and 1C(ii))⁴
		 is modelled based on two load sizes. Product to be used for a medium upgrade, must be modelled under 'medium' and 'small' load conditions based on AS/NZS 4234:2021. Product intended for a small upgrade must be modelled under 'small' and 'very small' load conditions based on AS/NZS4234:2021.⁵ (for activities 1C(i) and 3D) is listed on the commission's Register of Products by the time VEECs are created.
1D	Installer(s) must decommission an electric resistance water heater ¹ and install a product which meets the product criteria.	 Heat pump water heater which: is certified by an accredited body as complying with AS/NZS 2712 achieves ≥ 60% annual energy savings determined in accordance with either:
3C	Installer(s) must decommission a gas/LPG water heater ² and install a product which meets the product criteria.	 AS/NZS 4234:2021 and the <u>Water Heating and Space</u> <u>Heating/Cooling Product Application Guide</u> when modelled in climate zone HP4-AU for products installed in climatic zone 4³ (for activities 1D(i) and 3C)

² Existing gas/LPG water heater must be connected to a gas supply before it is decommissioned.

³ Product used for a 'medium upgrade' must be modelled at the 'medium' load and product used for a 'small upgrade' must be modelled at the 'small' load under AS/NZS 4234:2021 when calculating % annual energy savings.

⁴ Product used for a 'medium upgrade' must be modelled at the 'medium' load and product used for a 'small upgrade' must be modelled at the 'small' load under AS/NZS 4234:2028 when calculating % annual energy savings.

⁵ Modelling for two load sizes is required as the VEU Specifications provide that the Bs and Be values to be used in calculating the emission reduction for a 'medium upgrade' is to be determined when modelled with the 'small' load as defined in the AS/NZS 4234:2021 standard, and that the Bs and Be values for a 'small upgrade' is to be determined when modelled with the 'very small' load as defined in the AS/NZS 4234:2021 standard.

Activity	Activity description	Product criteria
		 achieves ≥60% annual energy savings determined in accordance with AS/NZS 4234:2021 and the <u>Water Heating and Space Heating/Cooling Product</u> <u>Application Guide</u> when modelled in climate zone HP5-AU for products installed in climatic zone 5³ (for activities 1D(i) and 3D) AS/NZS 4234:2008 and the <u>Water Heating and Space Heating/Cooling Product Application Guide</u> when modelled in climate zone HP4-AU for products installed in climatic zone 4⁴ (for activities 1D, 1D(ii) and 3D) AS/NZS 4234:2008 and the <u>Water Heating and Space Heating/Cooling Product Application Guide</u> when modelled in climate zone HP4-AU for products installed in climatic zone 4⁴ (for activities 1D, 1D(ii) and 3D) AS/NZS 4234:2008 and the <u>Water Heating and Space Heating/Cooling Product Application Guide</u> when modelled in climate zone HP5-AU for products installed in climatic zone 5⁴ (for activities 1D, 1D(ii) and 3D) use a refrigerant that has a global warming potential of less than 700^{6, 7} is modelled based on two load sizes. Products to be used for a medium upgrade must be modelled under 'medium' and 'small' load conditions based on the AS/NZS 4234: 2021. Products to be used for a small upgrade must be modelled under 'medium' and 'small' load conditions based on the AS/NZS 4234: 2021. Products to be used for a small upgrade must be modelled under 'small' and 'very small' load conditions based on AS/NZS4234:2021⁵ (for activities 1D(i) and 3D) is listed on our Register of Products by the time VEECs are created.
1F	Installer(s) must decommission an electric resistance water heater ¹ and install a product which meets the product criteria.	 Gas/LPG boosted solar or heat pump water heater which: is certified by an accredited body as complying with AS/NZS 2712 achieves ≥60% annual energy savings determined in accordance with AS/NZS 4234 and the <u>Water Heating and Space Heating/Cooling Product Application Guide</u> when modelled in climate zone 4 is listed on the commission's Register of Products by the time VEECs are created.
3B	Installer(s) must decommission a gas/LPG water heater ² and install a product which meets the product criteria.	 Gas/LPG boosted solar water heater which: is certified by an accredited body as complying with AS/NZS 2712 achieves ≥60% annual energy savings determined in accordance with AS/NZS 4234 and the <u>Water Heating and Space Heating/Cooling Product Application Guide</u> when modelled in climate zone 4 is listed on the commission's Register of Products by the time VEECs are created.

⁶ A requirement for products installed under the VEU program from 1 July 2024.

⁷ See Appendix A for list of refrigerant types with global warming potential (GWP) values.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

2.2. Eligible premises and installation limits

Activities	Premises type	Premises requirement	Installation limit
All water heating activities	Residential	Construction of premises in which the activity is undertaken was not completed within 2 years of the activity being undertaken	Maximum of 2 products per premises
All water heating activities	Non-residential	Construction of premises in which the activity is undertaken was not completed within 2 years of the activity being undertaken	Maximum of 5 products per premises

Table 4: Eligible premises and installation limits for water heating activities

2.3. Licence/registration requirements for installers

Water heating activities under the program must be undertaken in accordance with the Building Act 1993, Electricity Safety Act and regulations made under the legislation. Table 5 identifies licence and/or registration requirements set out in the Plumbing Regulations 2018 and Electricity Safety (Registration and Licensing) Regulations 2020. This table is provided for guidance only and is not a replacement for accredited persons and installers taking appropriate measures to make sure they understand and comply with relevant laws.

Table 5: Licence requirements for installers	undertaking water heating activities
--	--------------------------------------

Type of work	Licensing requirements for installer(s)
Plumbing work	 All plumbing work involved in decommissioning and/or installing a water heating product must be undertaken by an appropriately registered or licensed plumber by the Victorian Building Authority (VBA)⁸: For plumbing work involving decommissioning an electric resistance water heater, the
	plumber must be registered ⁹ or licensed in water supply work.

⁸ See <u>Victorian Building Authority website</u> for the different classes of plumbing works and the difference between registered and licensed plumbers.

⁹ Registered plumbers must be supervised by licensed plumber when undertaking the plumbing work.

	 For plumbing work involving installing an electric boosted solar water heater, the plumber must be registered⁹ or licensed in water supply work. For plumbing work involving installing a self-contained heat pump water heater, the plumber must be registered⁹ or licensed in water supply work For plumbing work involving installing a split system heat pump water heater, the plumber must be registered⁹ or licensed in water supply work For plumbing work involving installing a split system heat pump water heater, the plumber must be registered⁹ or licensed in water supply work and refrigerated air-conditioning work For plumbing work involving decommissioning or installing a gas-fuelled water heater (gas/LPG storage, gas/LPG instantaneous or gas boosted solar), the plumber must be registered⁹ or licensed in gas-fitting work and water supply work.
Electrical work	 All electrical work involved in decommissioning and/or installing a water heating product must be undertaken by an appropriately licensed electrician by Energy Safe Victoria: For electrical work involving decommissioning an electric resistance water heater and installing a gas-fuelled water heater (gas/LPG storage, gas/LPG instantaneous or gas/LPG boosted solar), the person must be a licensed electrician (grade A). For electrical work involving decommissioning a gas-fuelled water heater (gas/LPG storage, gas/LPG instantaneous or gas/LPG boosted solar) and installing an electric water heater (electric boosted solar or heat pump), the person must be a licensed electric resistance water and installing an electric water heater (electric and the pump), the person must be a licensed electric resistance water and installing an electric water heater (gas/LPG boosted solar) and installing an electric and the person must be a licensed electrician (grade A). For electrical work involving decommissioning an electric resistance water and installing an electric water heater (electric boosted solar or heat pump), the person must be a licensed electrician (grade A).

2.4. Pre-installation requirements – sizing (residential premises only)

Table 6: Pre-installation sizing requirements (residential premises only)

a licensed electrician (grade A).

1C(i), 1C(ii), Before the consumer agrees to undertake the activity, an accredited person or scheme 1D(i) and 1D(ii) participant must: 3C and 3D

- provide the consumer with a copy of the current <u>VEU Water Heating Consumer Fact</u> <u>Sheet</u>, as published on the department's website
- give clear and accurate information to the energy consumer about the suitability of the product to be installed for the hot water needs of the consumer, having regard to the consumer's premises
- advise the energy consumer on whether the size of the product to be installed is consistent with the size recommended in the VEU Water Heating Consumer Fact Sheet.

2.5. Installation requirements

Table 7: Installation requirements

Activity	Installation requirement
1C, 1C(i), 1C(ii), 1D, 1D(i), 1D(ii), 1F, 3B, 3C, 3D	The product must not be installed together (in-line) with an additional hot water storage tank or hot water system e.g. a 'manifold system'.

2.6. Decommissioning and disposal requirements

The decommissioning and disposal requirements that must be complied with when undertaking water heating activities are listed in Table 8 below.

Table 8 Decommissioning and disposal requirements for all water heating activities

Requirement

The decommissioned product must be decommissioned in a practical and safe manner to ensure it cannot be re-used again.

Any waste or debris generated from the activity, including the decommissioned product (where it is practical and safe to remove the decommissioned product), must be removed from the consumer's premises and disposed of in accordance with all applicable waste management requirements under the Environment Protection Act 2017 and its regulations.

Accredited persons or scheme participants must not install a product for the purposes of decommissioning it as part of an activity under the program (e.g. the baseline environment for a given installation has not been altered for the purposes of inflating the VEEC claim for that installation).

For an activity involving the decommissioning of product(s), the accredited person, the installer, and the energy consumer will need to provide a declaration to the commission stating that the decommissioned product was not installed for the purposes of decommissioning it as part of an activity under the program.

The commission has developed a flowchart (see Figure 1 below) and a step-by-step guide (see Table 9 below) to assist accredited persons and scheme participants understand the key steps and decisions involved in determining how to decommission a product in a safe and practical manner.

The guidance includes:

- matters which installers must comply with as they are legislated requirements
- matters we expect installers to comply with as they align with best practice standards in order to
 protect the integrity of the program and consumers under the program
- guidance for installers on how to interpret a particular legislated requirement.

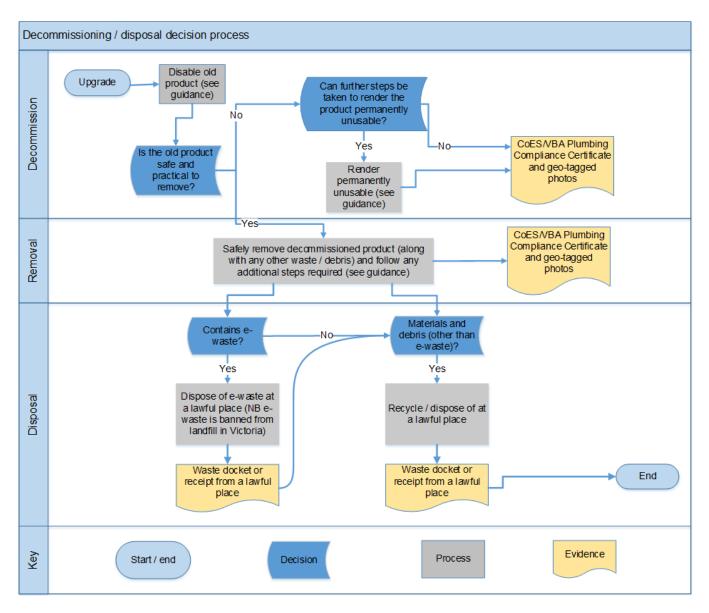


Figure 1: Decommissioning guidance flowchart for water heating activities

Table 9: Decommissioning step-by-step guidance and considerations

Stage	Decommissioning guidance
Decommission	 Steps involved in disabling the old product. Is product connected to electrical supply? If yes, the product must be disconnected and appropriate steps taken to make the electrical connection safe. Is product connected to gas supply? If yes, the product must be disconnected and appropriate steps taken to make the gas connection safe (e.g., sealed to be gastight) Is product connected to water supply? If yes, the product must be disconnected and appropriate steps taken to make the gas connection safe (e.g., sealed to be gastight) Is product connected to water supply? If yes, the product must be disconnected and appropriate steps taken to make the inlet and outlet water connections safe (e.g., sealed to be gastight)
	 Is the water heater product attached to a solid fuel appliance? If yes, the water jacket must be removed from the solid fuel appliance or where it cannot be removed, appropriate steps taken to make the water jacket safe. Is the product a gravity-fed water heater? If yes, it is the commission's expectation that you drain the water from the tank.
	 Is the old product safe and practical to remove? If yes, the old product must be removed and recycled or disposed of appropriately. If the old product is not safe and practical to remove, it is the commission's expectation that consumers are informed that the product will be left in-situ before the consumer agrees to undertake the upgrade. Products which the commission understands may not be safe and practical to remove include: systems where removal is impractical (e.g., gravity-fed water heater systems) systems where removal would result in substantial remediation work to the building environment systems where removal would raise health and safety risks. Where removal of product involves asbestos, the removal or disposal or asbestos must be removed and disposed of in accordance with applicable legislation.¹⁰ If the old product is not safe and practical to remove, can further steps be taken to render the product permanently unusable in a safe and practical include: Removal of heating element or burner /electrical component /control board or unit. If a water tank is present, damaging the tank to render permanently unusable, e.g., by drilling a hole in the tank.
Removal	 If no further safe and practical steps can be taken, leave product in a disabled state. If it is safe and practical to remove the product: any waste and debris (including the decommissioned product) must be removed from the consumer's premises. it is the commission's expectation that there is clear agreement between the
	consumer and installer prior to the commencement of the installation about the scope

¹⁰ See <u>absestos.vic.gov.au website</u> for detailed information about responsibilities and legal duties of tradespeople and builders when dealing with asbestos.

Stage	Decommissioning guidance
	of the installation, including whether a product is to be removed and the scope of any building repair work (if any) to be undertaken by the installer.
Disposal	 You must manage your waste in accordance with the Victorian environment protection framework, established by the Environment Protection Act 2017 (EP Act) and Environment Protection Regulations 2021 (EP Regulations). This includes complying with the relevant waste duties. Under the EP Act and EP Regulations, waste duties apply to all business that generate, transport or receive industrial waste. In summary, businesses managing industrial waste must: <u>classify all waste streams</u> to determine the relevant waste code and waste type (industrial, priority or reportable priority waste). For instance, a decommissioned water heater or space heater is likely to be classified as waste code T300 (E-waste) which is priority waste. ensure waste is safely contained during transportation and provide the transporter with enough information about the waste. ensure waste goes to a place that is lawfully authorised to receive it, which is called a lawful place. Some common types of lawful places are permissioned resource recovery facilities, transfer stations and landfills. Sites with an Environment Protection Authority (EPA) permission are listed on a public register maintained by the EPA. Note: e-waste is banned from landfill in Victoria. Find out more about your waste duties on EPA's website. If waste is to temporarily stored before it is collected and further transported for disposal, it must be stored properly and in accordance with relevant EP Act requirements, including any required EPA permissions. Up to 5m3 of non-priority industrial waste or e-waste (excluding batteries) can be stored temporarily requiring an EPA permission.¹¹

2.7. Consumer information provision requirements

Table 10 below provides a summary of the records and information that must be provided to the consumer:

Activity stage	Document or information
Prior to undertaking the installation	 VEET Scheme Consumer Factsheet. VEU Water Heating Consumer Fact Sheet (residential installations only). Information as set out in the <u>VEU Code of Conduct</u>, including clear and accurate information on the activity (e.g. product performance and suitability of the product to that person and premises), information about your rights and obligations under the VEU program, terms and conditions of the contract, and contact details of the person to be undertaking the installation.
On completion of the installation	Tax invoice or proof of purchaseVEEC Assignment Form

Table 10: Information to be provided to consumer for all water heating activities

¹¹ See schedule 1 and regulation 63 of the Environment Protection Regulations 2017.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

Activity stage	Document or information
	 Victorian Building Authority (VBA) Compliance Certificate and/or Certificate of Electrical Safety (as applicable to the installation). Manufacturer's instructions and warranty. Information as set out in the <u>VEU Code of Conduct</u> including dispute resolution information, manufacturer's instructions and warranty for products supplied or installed (if applicable), contact details of the accredited person and/or scheme participant who undertook the installation.

2.8. Record-keeping requirements

Accredited persons are required to keep documents that record and explain all transactions and other acts engaged in, or required to be engaged in, as provided in the VEET Act.

All documents are required to be maintained for at least 6 years and must be kept in writing in English or in a manner which enables the documents to be readily accessible and convertible into writing in English.

Table 11 below sets out the documents accredited persons are required to collect and retain for each water heating activity undertaken. The commission may require these documents be produced on request.

Document(s)	Details to be provided
VEEC assignment form	Assignment form to be completed and signed by the installer and energy consumer, including signed agreement between the consumer and installer about the scope of the installation, including whether a product is to be removed and the scope of any building repair work (if any) to be undertaken by the installer.
Invoice or proof of purchase	 Document must identify: the installed product brand and model. the name and address of the energy consumer the name, address and ABN of the installer business For business or non-residential upgrades, the document must list: the Australian Business Number/Australian Company Number (ABN/ACN) of the energy consumer (where relevant)

Document(s)	Details to be provided
Non prescribed certificate of electrical safety (CoES) ¹² and VBA Compliance Certificate ¹³	 Either the VBA Compliance Certificate or CoES must detail: the installed product brand, model and serial number the type of the product decommissioned the brand and model of the decommissioned product where visible the method of decommissioning. An appendix(s) may be provided with the VBA Compliance Certificate or a CoES. Where an appendix is used, the following criteria must be met: the certificate must refer to the appendix and list the number of pages the appendix must be attached to the certificate each appendix page must be numbered, with the certificate number referenced on each page each appendix page must be signed by the plumber or electrician responsible for the completed work all premises being claimed for must be listed with the corresponding installed product information in the appendix (where multiple units at one address receive an upgrade) the type of work performed is specified for each premises being claimed for.
Geotagged photographs	 Geo-tagged photographs which are date and time stamped showing: the existing product before the upgrade the brand, model and serial number of the existing product the existing product either disabled or rendered permanently unusable (where the product is not being removed from premises for disposal) the decommissioned product (either disabled or ready to be removed from the consumer's premises) the installed product after installation the brand, model and serial number of the installed product. the tank model number and heat pump model number of installed product (where product installed is a heat pump) All geo-tagged photographs must: be clear and in focus; include any relevant markings; include the GPS derived latitude and longitude coordinates (this should be stored in the metadata and generated automatically by the device used to take the geotagged photos).

¹² A prescribed certificate of electrical safety is only required if the electrical mains conductors, main earthing system or main switchboard is modified.

¹³ A VBA compliance certificate is required for all plumbing work where total value of the work (parts and labour is \$750 or more) of where work involves <u>specific types of plumbing work</u>

Document(s)	Details to be provided
Disposal documentation	 Documentation by accredited person and any third-party installer contractors, recording how the business complies with EPA waste duties, including: the classification of waste codes and waste type for the business' waste streams details of any contracts or arrangements with contracted transporters or disposal agents the name and location of the various authorised waste receivers you will be delivering your different waste streams to appropriate authorisation for the temporary storage of waste if more than 5m³ of industrial waste (that is not reportable priority waste) is being stored by the business prior to disposal.¹⁴
Disposal or recycling record/ disposal transportation record	 For all decommissioned products removed from the premises, records that satisfy either option 1 or 2 below. A waste receipt of invoice from a place authorised by the EPA to receive that particular type(s) of waste recording: name and address of the authorised recipient ACN and/or ABN of the authorised recipient ACN and/or ABN of the authorised recipient the date of delivery waste description (including class of waste) waste amount (e.g. number of units or kg). Where the waste receipt or invoice is for decommissioned products from multiple upgrade sites, a document itemising the products removed per upgrade site to demonstrate the link between each upgrade site and the bulk waste receipt or invoice must also be maintained. Third party contractor information – if disposed of via a contracted transporter or disposal agent, a document recording: the name, ACN and ABN of the third party contractor company the date service was provided waste amount (e.g. number of units or kg) Where the document is for decommissioned products from multiple upgrade site to demonstrate the link between each upgrade site and the bulk waste is to be disposed at ABN of the business operating the lawful place the waste is to be disposed at.

¹⁴ See schedule 1 and regulation 63 of the Environment Protection Regulations 2017.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

3. Activity requirements – space heating and cooling activities

This information below provides a summary of the requirements when undertaking space heating and cooling activities under the VEU program. Accredited persons and scheme participants must ensure that they have reviewed the program rules as listed under the VEET Act, VEET Regulations, VEU Specifications and VEET Guidelines.

In addition, all space heating and cooling activities undertaken under the VEU program must be undertaken in accordance with the provisions of the Electricity Safety Act 1998, the Gas Safety Act 1997, the Occupational Health and Safety Act 2004 or the Building Act 1993 or the regulations under any of those Acts.

Accredited persons, their employees, and scheme participants (e.g., lead generators or installers) must also comply with the:

- Code of conduct provisions in Schedule 6 of the <u>VEET Regulations</u>
- Australian Consumer Law (ACL) when engaging in marketing practices under the program
- <u>Telecommunications (Telemarketing and Research Calls) Industry Standard 2017</u> when engaging in telemarketing practices under the program.

3.1. Eligible activities

Activities 5, 7, 9, 10 and 23 will no longer be prescribed activities after 30 June 2023. Installations under these activities after this date (i.e. from 1 July 2023) will no longer be eligible

3.1.1. Activity 5: Space heating – Ducted gas heater

 Table 12: Eligible activity scenarios under activity 5: Space heating – Ducted gas heater

Activity scenario	Description	Product criteria
5A(i)	Installer(s) must decommission a ducted gas heater ¹⁵ and install a product which meets the product criteria.	Ducted gas heater which:

¹⁵ Existing gas heater must be connected to a gas supply before it is decommissioned.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

Activity scenario	Description	Product criteria
5A(ii)	Installer(s) must decommission a central electric resistance heater ¹⁶ which provides heating to a space with a floor area of at least 100 m2 and install a product which meets the product criteria.	 is certified by an accredited body to achieve a minimum 5-star rating when tested and rated in accordance with AS/NZSAS/NZS 5263.1.6 has a minimum rated thermal capacity of 10 kW is listed on our Register of Products by the time VEECs are created.
5A(iii)	Installer(s) must install a product which meets the product criteria ((no decommissioning scenario). No space heating or cooling product is permitted to be installed in the premises prior to the installation.	

3.1.2. Activity 6: Space heating and cooling – High efficiency reverse cycle airconditioner

Activity 6 requires installer(s) to:

- decommission product(s) under one of 11 different decommissioning scenarios, including one no decommissioning scenario (see Table 13 below)
- install one or more reverse cycle air-conditioners which meet the performance requirements from one of nine different product categories (6A, 6B(i), 6B(ii), 6C, 6D, 6E(i), 6E(ii), 6F and 6G) under the VEU Specifications (see Tables 14 and 15 below). Different product categories have been assigned to a reverse cycle air-conditioner based on whether it is ducted or non-ducted, and its size (cooling capacity).

Table 13 Eligible decommissioning scenarios for activity 6

Activity scenarios	De	commissioning scenario requirements
6A-G	(i)	Installer(s) must decommission a hard-wired resistance electric room heater only ¹⁵ (no refrigerative air conditioner) which is the main form of heating any premises.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

¹⁶ Existing electric heater must be connected to an electric supply before it is decommissioned.

Activity scenarios	Dec	commissioning scenario requirements
	(ii)	 Installer(s) must decommission: a hard-wired resistance electric heater¹⁵ which is the main form of heating any premises, and a refrigerative air conditioner (whether ducted or not) ¹⁵ that is not located in: in the case of an air conditioner in residential premises, a bedroom; or in the case of an air conditioner in business or non-residential premises, a room with an area of less than 20 m².
	(iii)	Installer(s) must decommission a central electric resistance that provides heating to a space with a floor area of at least 100 m ² or slab heater only ¹⁵ (no refrigerative air conditioner) which is the main form of heating any premises.
	(iv)	 Installer(s) must decommission: a central electric resistance that provides heating to a space with a floor area of at least 100 m² or slab heater¹⁶ which is the main form of heating any premises; and a refrigerative air conditioner (whether ducted or not) ¹⁵ that is not located in: in the case of an air conditioner in residential premises, a bedroom; or in the case of an air conditioner in business or non-residential premises, a room with an area of less than 20 m².
	(v)	Installer(s) must decommission a ducted reverse cycle air conditioner ¹⁵ which is the main form of heating any premises.
	(vi)	Installer(s) must decommission a non-ducted reverse cycle air conditioner. ¹⁵
	(vii)	Installer(s) must decommission a ducted gas heater only ¹⁴ (no refrigerative air conditioner) which is the main form of heating any premises.
	(viii)	 Installer(s) must decommission: a ducted gas heater which is the main form of heating any premises; and a refrigerative air conditioner¹⁵ (whether ducted or not) that is not located in: in the case of an air conditioner in residential premises, a bedroom; or in the case of an air conditioner in business or non-residential premises, a room with an area of less than 20 m².
	(ix)	Installer(s) must decommission a non-ducted gas heater only ¹⁴ (no refrigerative air conditioner)
	(x)	Installer(s) must decommission:

Activity scenarios	Deo	commissioning scenario requirements
		 a non-ducted gas heater¹⁴; and refrigerative air conditioner¹⁵ (whether ducted or not) that is not located in: in the case of an air conditioner in residential premises, a bedroom; or in the case of an air conditioner in business or non-residential premises, a room with an area of less than 20 m².
	(xi)	No decommissioning.

Table 14 Product criteria for reverse-cycle air conditioners to be installed under activity 6

Product criteria

- Product must be registered to the Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019 (Cth) (GEMS 2019 Determination).
- Product must be listed on the Register of Products by the time VEECS are created.
- For products registered to the GEMS 2019 Determination that have a HSPF and TCSPF for the specified GEMS Residential or Commercial Cold Zone, the product must:
 - achieve the minimum HSPF and TCSPF for the specified GEMS Residential Cold Zone (categories 6A, 6B, 6D, and 6F) specified in Table 15 below.
 - achieve the minimum HSPF and TCSPF for the specified GEMS Commercial Cold Zone (categories 6C and 6G) specified in Table 15 below; and
 - be registered to the relevant class (or classes) under that determination, specified in Table 15 below.
- For products registered to the GEMS 2019 Determination that do not have a HSPF and TCSPF for the specified GEMS Residential or Commercial Cold Zone, the product must:
 - achieve the minimum ACOP and AEER specified in Table 15 below
 - be registered to the relevant class (or classes) under that determination, specified in Table 15 below
- The global warming potential (GWP) of the refrigerant used in an air conditioner to be installed with a rated cooling capacity below 15 kW must be less than 700.¹⁷

¹⁷ See Appendix A for list of refrigerant types with global warming potential (GWP) values.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

VEU product category	Product description ¹⁸	GEMS 2019 Class	GEMS 2019 min HSPF	GEMS 2019 min TCSPF	GEMS 2019 ACOP	GEMS 2019 AEER
6A	Ducted air to air R < 10 kW	Classes 10 or 15	3.6	4.4	3.9	3.5
6B(i)	Ducted air to air 10 kW ≤ R < 25 kW	Classes 6 (ducted units only), 11 or 16	3.4	4.2	3.7	3.4
6B(ii)	Ducted air to air 25 kW ≤ R ≤ 39 kW	Classes 6 (ducted units only), 11 or 16	3.2	3.6	3.7	3.4
6C	Ducted air to air 39 kW < R ≤ 65 kW	Classes 7 (ducted units only), 12 or 17	3.2	4.8	3.5	3.2
6D	Non-ducted air to air R < 4kW	Classes 8, 13 or 18	4.2	5.4	4.4	4.1
6E(i)	Non-ducted air to air 4 kW ≤ R < 7 kW	Classes 9, 14 or 19	3.7	5.0	4.0	3.7
6E(ii)	Non-ducted air to air 7 kW ≤ R < 10 kW	Classes 9, 14 or 19	3.6	4.8	3.9	3.7
6F	Non-ducted air to air 10kW ≤ R ≤ 39kW	Classes 6 (non- ducted units only), 11, 16 or 20	3.6	4.6	3.9	3.6
6G	Non-ducted air to air 39kW < R ≤ 65kW	Classes 7 (non- ducted units only),	2.7	5.3	3.8	3.4

Table 15 Minimum efficiency requirements for reverse-cycle air conditioners to be installed

¹⁸ 'R' refers to the standard rated standard cooling full capacity as defined in the Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019.

VEU product category	Product description ¹⁸	GEMS 2019 Class	GEMS 2019 min HSPF	GEMS 2019 min TCSPF	GEMS 2019 ACOP	GEMS 2019 AEER
		12, 17 or 21				

3.1.3. Activity 7: Space heating – Ducted air to air heat pump

Table 16 Eligible activity scenarios under activity 7: Space heating – Ducted air to air heat pump

Activity scenario	Activity description	Product criteria
7A(i)	Installer(s) must decommission a ducted air-to-air heat pump ¹⁵ and install a product which meets the product criteria.	 Ducted air to air heat pump which: when measured, tested and rated in accordance with the GEMS (Air Conditioners and Heat Pumps) Determination 2013 (Cth), it achieves:
7A(ii)	Installer(s) must decommission a central electric resistance heater ¹⁵ that provides heating to a space with a floor area of at least 100m ² and install a product which meets the product criteria.	 a minimum RTHC of at least 10kW at the H1 temperature condition a minimum ACOP of: 3.9 if the RTHC is 18 KW or less at the H1 temperature condition, or 3.7 in any other case is listed on the Commonwealth GEMS Register at time
7A(iii)	Installer(s) must install a product which meets the product criteria (no decommissioning scenario). No other space heating or cooling product is permitted to be installed in the premises at the time of the upgrade.	of installation

3.1.4. Activity 9: Space heating – Gas/LPG room heater

Table 17 Eligible activity scenarios under activity 9: Space heating – Gas/LPG space heating

Activity scenario	Activity description	Product criteria
9A(i)	Installer(s) must decommission a hard- wired electric room heater ¹⁵ used as the main form of heating the premises and install a product which meets the product criteria	 Gas/LPG space heater which: is certified by an accredited body to achieve a minimum 4 star rating when tested and rated to AS/NZS 5263.1.3

Activity scenario	Activity description	Product criteria
9A(ii)	Installer(s) must decommission a gas/LPG room heater ¹⁶ or other type of room heater and install a product which meets the product criteria.	 has minimum thermal output of 2 kW has a room sealed flue is listed on our Register of Products by the time VEECs are created.
9A(iii)	 Installer(s) must decommission either a: plug in electric heater¹⁵ when used as the main form of heating any premises, or wood fired room heater used as the main form of heating: an entire Class 1a, 4, 5, 6, 7b or 8 Building an entire dwelling within a Class 1b or 2 Building a room within a Class 3 or 9 Building as per the Building Code of Australia. and install a product which meets the product criteria. 	

3.1.5. Activity 10: Space heating – Room air-to-air heat pump

Table 18 Eligible activity scenarios under activity 10: Space heating – Room air to air heat pump

Activity scenario	Activity description	Product criteria
10A(i)	Installer(s) must decommission a hard-wired electric room heater ¹⁵ used as the main form of heating the premises and install a product which meets the product criteria.	Room air to air heat pump (other than a ducted air to air heat pump) which: when measured, tested and rated in
10A(ii)	Installer(s) must decommission a room air-to-air heat pump ¹⁵ or other room heater and install a product which meets the product criteria.	 accordance with the GEMS (Air Conditioners and Heat Pumps) Determination 2013 (Cth), it achieves: a minimum RTHC of at least 2kW at the H1 temperature condition
10A(iii)	 Installer(s) must decommission either a: plug in electric heater¹⁵ when used as the main form of heating the premises, or wood fired room heater used as the main form of heating: an entire Class 1a, 4, 5, 6, 7b or 8 Building 	 the H1 temperature condition a minimum ACOP of: 4.2 if the RTHC is 3kW or less, or 4.0 in any other case is listed on the Commonwealth GEMS Register at time of installation.

Activity scenario	Activity description	Product criteria
	 an entire dwelling within a Class 1b or 2 Building a room within a Class 3 or 9 Building as per the Building Code of Australia and install a product which meets the product criteria: 	
10A(iv)	 Installer(s) must decommission both: a refrigerative air conditioner (non-ducted) that is not located in: a bedroom of a residential premises, or a room with an area less than 20m²; and a hard-wired electric room heater¹⁵ and install a product which meets the product criteria. The refrigerative air conditioner and the electric room heater must be two separate products where the air conditioner was primarily or exclusively used to perform the function of cooling. 	
10A(v)	 Installer(s) must decommission both: a refrigerative air conditioner (non-ducted)¹⁵ that is not located in: a bedroom of a residential premises, or a room with an area less than 20m²; and a plug in electric room heater¹⁵ used as the main form of heating the premises and install a product which meets the product criteria. 	
10A(vi)	 Installer(s) must decommission both: a refrigerative air conditioner (non-ducted)¹⁵ that is not located in: a bedroom of a residential premises, or a room with an area less than 20m²; and a gas or LPG room heater¹⁴ and install a product which meets the product criteria. 	26

3.1.6. Activity 23: Space heating and cooling – Ducted evaporative cooler

Table 19 Eligible activity scenarios under activity 23: Space heating and cooling – evaporative cooler

Activity	Activity description	Product criteria
		A ducted evaporative cooler which:
23	 Installers must decommission a refrigerative air conditioner (whether ducted or not)¹⁵ that is not located in if in residential premises, a bedroom, or in business or non-residential, a room with an area less than 20m². and install a product which meets the product 	 complies with AS 2913 has a minimum rated output of 7 kW has a minimum energy efficiency ratio of 20 kW based on measurements of nominal rating and electricity consumption in accordance with AS 2913 is listed on our Register of Products by the time VEECs are created.

3.1.7. Activity 28: Space heating and cooling – Gas heating ductwork

 Table 20 Eligible activity scenarios under activity 28: Space heating and cooling – Gas heating ductwork

Activity	Activity description	Product criteria
28A	 Installers must: decommission gas heating ductwork that is connected to a ducted gas heater install a product which meets the product criteria install the ductwork according to requirements set out in AS 4254-2002 connect it to an operable space heating product. 	 Flexible ductwork which: is constructed in accordance with AS 4254.1, tested and certified by an approved laboratory as complying with that standard, and labelled in accordance with the requirements set out in that standard is insulated using bulk insulation that is certified by an accredited body as complying with AS/NZS 4859.1and achieves a minimum R-value of 1.5 if installed in class 1 or 10 buildings, uses fittings that achieve the R-values specified by Table 3.12.5.2 of Volume Two of the BCA if installed in class 2 to class 9 building, uses fittings that achieve the minimum total R value specified by Specification J5.2b of Volume One of the BCA is listed on our Register of Products by the time VEECs are created.
28B		 Rigid ductwork which: is constructed in accordance with AS 4254.2, certified by an approved laboratory as complying with that standard is longitudinally labelled at intervals of no more than 1.5 meters in characters that are clearly legible and at least 18mm high and state the

Activity Activit	y description	Product criteria
		 duct manufacturer or assembler name, the diameter of the duct core, the R-value of the bulk insulation and whether the ductwork complies with AS 4254.2 is insulated using bulk insulation that is certified by an accredited body as complying with AS/NZS 4859.1and achieves a minimum R-value of 1.5 if installed in class 1 or 10 buildings, uses fittings that achieve the R-values specified by Table 3.12.5.2 of Volume Two of the BCA if installed in class 2 to class 9 building, uses fittings that achieve the minimum total R value specified by Specification J5.2b of Volume One of the BCA is listed on our Register of Products by the time VEECs are created.

3.2. Eligible premises and installation limits

Table 21 Eligible premises and installation limits for space heating and cooling activities

Activities	Premises type	Premises requirement	Installation limits
5 and 7 (Ducted)	Residential	Not applicable	1 product per premises ¹⁸
5 and 7 (Ducted)	Business/non- residential	Not applicable	 5 products per premises for installations involving decommissioning¹⁹ 2 products per premises for installations not involving decommissioning¹⁸ Total cap of 5 products per premises¹⁸ – 5 ducted products only able to be installed if the 3rd, 4th and 5th products are installed as a result of decommissioning an existing product
9 and 10 (Non- ducted)	Residential	Not applicable	5 products per premises for installations involving decommissioning ²⁰ 3 products per premises for installations not involving decommissioning ¹⁹

¹⁹ Where products are installed under activities 5, 6, 7 and/or 23

²⁰ Where products are installed under activities 6, 9 or 10

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

Activities	Premises type	Premises requirement	Installation limits
			Total cap of 5 products per premises ¹⁹ – 5 non-ducted products only able to be installed if the 4 th and 5 th products are installed as a result of decommissioning an existing product
9 and 10 (Non- ducted)	Business/non- residential	Not applicable	 10 products per premises for installations involving decommissioning¹⁹ 3 products per premises for installations not involving decommissioning¹⁹ Total cap of 10 products per premises¹⁹ - 10 non-ducted products only able to be installed if the 4th to 10th products are installed as a result of decommissioning an existing product
6A, 6B (Ducted)	Residential	For activities involving decommissioning, construction of premises in which the activity is undertaken was not completed within 2 years of the activity being undertaken	1 product per premises ¹⁸
6A, 6B, 6C (Ducted)	Business/non- residential	For activities involving decommissioning, construction of premises in which the activity is undertaken was not completed within 2 years of the activity being undertaken	 5 products per premises for installations involving decommissioning¹⁸ 2 products per premises for installations not involving decommissioning¹⁸ Total cap of 5 products per premises¹⁸ – 5 ducted products only able to be installed if the 3rd, 4th and 5th products are installed as a result of decommissioning an existing product
6D, 6E, 6F (Non- ducted)	Residential	For activities involving decommissioning, construction of premises in which the activity is undertaken was not completed within 2 years of the activity being undertaken	 5 products per premises for installations involving decommissioning¹⁹ 3 products per premises for installations not involving decommissioning¹⁹ Total cap of 5 products per premises¹⁹ – 5 non-ducted products only able to be installed if the 4th and 5th products are installed as a result of decommissioning an existing product
6D, 6E, 6F, 6G (Non- ducted)	Business/non- residential	For activities involving decommissioning, construction of premises was not completed	 10 products per premises for installations involving decommissioning¹⁹ 3 products per premises for installations not involving decommissioning¹⁹

Activities	Premises type	Premises requirement	Installation limits
		within 2 years of the activity being undertaken	Total cap of 10 products per premises ¹⁹ – 10 non-ducted products only able to be installed if the 4 th to 10 th products are installed as a result of decommissioning an existing product

3.3. Licence requirements for installers

A prescribed activity must be undertaken in accordance with the Building Ac 1993, Electrical Safety Act 1998 and regulations made under that legislation. Table 22 identifies requirements set out in the Plumbing Regulations 2018 and Electricity Safety (Registration and Licensing) Regulations 2020. This table is provided for guidance only and is not a replacement for accredited persons and installers taking appropriate measures to ensure they understand and comply with relevant laws.

Table 22 Licensing requirements for installers undertaking space heating and cooling activities

Type of work	Licensing requirements for installer(s)
Plumbing work	 All plumbing work involved in decommissioning and/or installing a space heating and cooling product must be undertaken by an appropriately registered or licensed plumber by the Victorian Building Authority (VBA)²¹ For plumbing work involving decommissioning or installing gas heaters (ducted or non-ducted), the plumber must be registered²² or licensed in gas-fitting work. For plumbing work involving decommissioning refrigerative air conditioners (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioning work or the appropriate class of mechanical services work. For plumbing work involving decommissioning or installing a reverse cycle air conditioner (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioner (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioner (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioner (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioner (ducted or non-ducted), the plumber must be registered²² or licensed in refrigerated air-conditioning work involving installing a ducted evaporative cooler, the plumber must be registered²² or licensed in mechanical services work. For plumbing work involved in installing gas heating ductwork, the plumber must be registered²² or licensed in the appropriate class of mechanical services work and gas fitting work. For plumbing work involving decommissioning a wood-fired heater, the plumber rectifying any flue penetration through a metal roof must be registered²² or licensed in mechanical services work or roofing (stormwater) work.
Electrical work	All electrical work involved in decommissioning and/or installing a space heating and cooling product must be undertaken by an appropriately licensed electrician by Energy Safe Victoria

²¹ See <u>Victorian Building Authority website</u> for the different classes of plumbing works and the difference between registered and licensed plumbers

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

²² Registered plumbers must be supervised by licensed plumber when undertaking the plumbing work

Type of work	Licensing requirements for installer(s)	
	 For electrical work involving decommissioning gas heaters and installing reverse cycle air-conditioners, person must be a licensed electrician (grade A). For electrical work involving decommissioning electric products and installing gas heaters, person must be a licensed electrician (grade A). For electrical work involving decommissioning and installing the same type of electric product, person must be a Restricted Electrical Worker's Licence holder (with correct classification)²³ or be a licensed electrician (grade A). For electrical work involving decommissioning and installing different types of electric products, person must be a licensed electrician (grade A). For electrical work involving decommissioning and installing different types of electric products, person must be a licensed electrician (grade A). For electrical work involving a new installation of reverse cycle air-conditioners, person must be a licensed electrician (grade A). 	
Handling of refrigerants	 All work involving the handling of refrigerants (i.e. installing or decommissioning a reverse cycle air-conditioner or refrigerative air-conditioner) must be undertaken by person holding the relevant refrigerant handling licence issued by the Australian Refrigeration Counsel. See <u>Arctick website</u> for detail of type of licenses required depending on type of work to be carried out. 	

Plumbers registered or licensed in refrigerated air-conditioning work are required to understand and comply with requirements set out in a range of AS/NZS standards, codes of practice and best practice guides when replacing or installing air-conditioners. These requirements can be found on the <u>VBA website</u>. In addition, we recommend that installers of air-conditioner products under the program familiarise themselves with:

- the <u>Air Conditioning Residential Best Practice Guideline (Victoria)</u>, a guidance document published by the Australian Institute of Refrigeration Air Conditioning and Heating (AIRAH).
- <u>AS/NZS 5141:2018 Residential heating and cooling systems</u> Minimum applications and requirements for energy efficiency, performance and comfort criteria. This standard specifies the requirements for design, selection, installation, commissioning and maintenance of residential heating and cooling systems.

3.4. Pre-installation requirements (activity 6 only)

Table 23 Pre-installation sizing requirements for activity 6 – residential premises only

Pre-installation requirement

Before the consumer agrees to undertake the activity, an accredited person or scheme participant must:

²³ See <u>Energy Safety Victoria website</u> for more information about the various classifications available for restricted electrical licences and the type of electrical work permitted under each classification. A Restricted Electrical Licence holder can only perform disconnection of electrical equipment and reconnection of electrical equipment of equivalent power and current in the same location without alteration to existing cables.

- provide the energy consumer with a copy of the current <u>VEU Space Heating and Cooling Consumer</u> <u>Fact Sheet</u>, as published on the department's public website; and
- give clear and accurate information to the energy consumer about the suitability of the product to be installed for the heating and cooling needs of the consumer having regard to the consumer's premises; and
- advise the energy consumer on whether the size of the product to be installed is consistent with the size recommended in the VEU Space Heating and Cooling Consumer Fact Sheet.

3.5. Decommissioning and/or disposal requirements

3.5.1. Decommissioning and disposal requirements – space heating and cooling activities (activities 5, 7, 9, 10, 23 and 28)

The decommissioning and disposal requirements that are required to be complied with when undertaking space heating and cooling activities (activities 5, 7, 9, 10, 23 and 28) are listed in Table 24 below.

Table 24 Decommissioning requirements for activities 5, 7, 9, 10, 23 and 28

Requirement

Where decommissioning is required to be undertaken as part of a prescribed activity, the decommissioned product must be disabled and rendered permanently unusable.

Any decommissioned products which are disposed of under these activities must be disposed of in accordance with all applicable waste management requirements under the Environment Protection Act 2017 and its regulations²⁴. This includes e-waste products being banned from landfill in Victoria.

Accredited persons or scheme participants must not install a product for the purposes of decommissioning it as part of an activity under the program (e.g. the baseline environment for a given installation has not been altered for the purposes of inflating the VEEC claim for that installation).

For an activity involving the decommissioning of product(s), the accredited person, the installer, and the energy consumer will need to provide a declaration to us stating that the decommissioned product was not installed for the purposes of decommissioning it as part of an activity under the program.

3.5.2. Decommissioning and disposal requirements – space heating and cooling activities (activity 6)

The decommissioning and disposal requirements that are required to be complied with when undertaking space heating and cooling activities under activity 6 are listed in Table 25 below.

²⁴ See schedule 1 and regulation 63 of the Environment Protection Regulations 2017.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

Table 25 Decommissioning and disposal requirements for activity 6

Requirement

The decommissioned product must be decommissioned in a practical and safe manner to ensure it cannot be re-used again.

Any waste or debris generated from the activity, including the decommissioned product (where it is practical and safe to remove the decommissioned product), must be removed from the consumer's premises and disposed of in accordance with all applicable waste management requirements under the Environment Protection Act 2017 and its regulations.

Accredited persons or scheme participants must not install a product for the purposes of decommissioning it as part of an activity under the program (e.g. the baseline environment for a given installation has not been altered for the purposes of inflating the VEEC claim for that installation).

For an activity involving the decommissioning of product(s), the accredited person, the installer, and the energy consumer will need to provide a declaration to us stating that the decommissioned product was not installed for the purposes of decommissioning it as part of an activity under the program.

The commission has developed a flowchart (see Figure 2) and a step-by-step guide (see Table 26) to assist accredited persons and scheme participants to understand the key steps and decisions in determining how to decommission a product in a safe and practical manner.

The guidance includes:

- matters which the installers must comply with as they are legislated requirements
- matters we expects installers to comply with as they align with best practice standards in order to protect the integrity of the program and consumers under the program
- guidance for installers on how to interpret a particular legislated requirement.

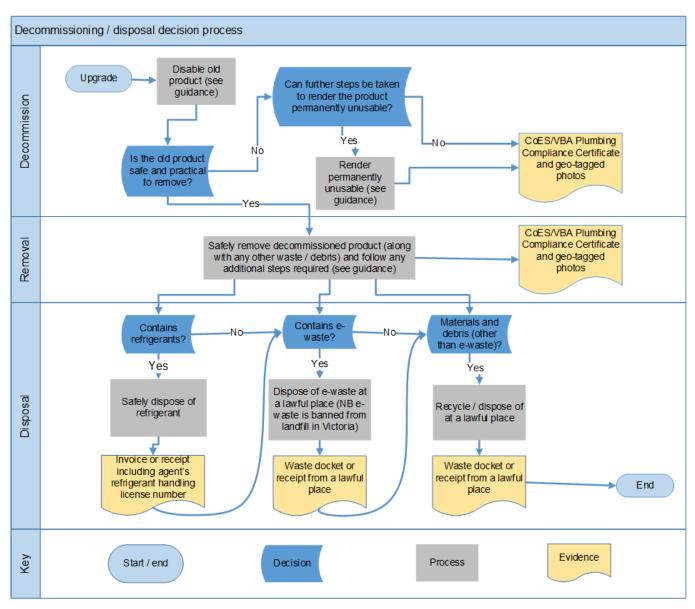


Figure 2 Decommissioning guidance flowchart for activity 6

Table 26 Decommissioning step-by-step guidance and considerations for activity 6

Stage	Decommissioning guidance
Decommission	Steps involved in disabling the old product.
	 Is product connected to electrical supply? If yes, the product must be disconnected, and appropriate steps taken to make the electrical connection safe. Is product connected to gas supply? If yes, the product must be disconnected and appropriate steps taken to make the gas connection safe (e.g., sealed to be gastight) Does product contain refrigerant? If yes, you will need to take steps to recover refrigerants for safe disposal.
	Is the old product safe and practical to remove?
	• If yes, the old product must be removed and recycled appropriately.
	 If the old product is not safe and practical to remove, it is the commission's expectation that consumers are informed that the product will be left in-situ before the consumer agrees to undertake the upgrade. Products which the commission understands may not be safe and practical to remove include:
	 systems where removal is impractical (e.g., central electric resistance heating systems and slab heating systems) systems where removal would result in substantial remediation work to the building environment systems where removal would raise health and safety risks. Where removal of product involves asbestos, removal or disposal or asbestos must be removed and disposed of in accordance with applicable legislation.²⁵
	If the old product is not safe and practical to remove, can further steps be taken to render the old product permanently unusable in a safe and practical manner?
	 Steps which the commission considers may be safe and practical include the removal of heating element or burner / electrical component / control board or unit. If no further safe and practical steps can be taken, leave product in a disabled state.
Removal	If it is safe and practical to remove the product:
	 any waste and debris (including the product) must be removed from the consumer's premises. it is the commission's expectation that there is clear agreement between the consumer and installer prior to the commencement of the installation about the scope of the installation, including whether a product is to be removed and the scope of any building repair work (if any) to be undertaken by the installer.

²⁵ See <u>Absestos.vic.gov.au website</u> for detailed information about responsibilities and legal duties of tradespeople and builders when dealing with asbestos.

Stage	Decommissioning guidance
Disposal	 You must manage your waste in accordance with the Victorian environment protection framework, established by the Environment Protection Act 2017 (EP Act) and Environment Protection Regulations 20 (EP Regulations). This includes complying with the relevant waste duties. Under the EP Act and EP Regulations, waste duties apply to all business that generate, transport or receive industrial waste. In summary, businesses managing industrial waste must: classify all waste streams to determine the relevant waste code and waste type (industrial, priority or reportable priority waste). For instance, a decommissioned water heater or space heater is likely to be classified as waste code T300 (E-waste) which is priority waste. ensure waste is safely contained during transportation and provide transporter enough information about the waste. Ensure waste goes to a place that is lawfully authorised to receive it, which is called a lawful place. Some common types of lawful places are permissioned resource recovery facilities, transfer stations and landfills. Sites with an EPA permission are listed on a public register maintained by the EPA. Note: e-waste is banned from landfill in Victoria.
	 Find out more about your waste duties on <u>EPA's website</u> If waste is to temporarily stored before it is collected and further transported for disposal, it must be stored properly and in accordance with relevant EP Act requirements, including any required <u>EPA permission</u>s. Up to 5m3 of non-priority industrial waste or e-waste (excluding batteries) can be stored temporarily requiring an EPA permission.²⁶

3.6. Consumer information provision requirements

Table 27 below provides a summary of the records and information that must be provided to the consumer.

Activity stage	Document or information
Prior to undertaking the installation	 VEET Scheme Consumer Factsheet. VEU Space Heating and Cooling Consumer Fact Sheet (residential installations only under activity 6). Information as set out in the <u>VEU Code of Conduct</u>, including clear and accurate information on the activity (e.g. product performance and suitability of the product to that person and premises), information about your rights and obligations under the VEU program, terms and conditions of the contract, and contact details of the person to be undertaking the installation.

Table 27 Information to be provided to consumer for all space heating and cooling activities

²⁶ See schedule 1 and regulation 63 of the Environment Protection Regulations 2017.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

Activity stage	Document or information
On completion of the installation	 Tax invoice or proof of purchase. VEEC Assignment Form. Victorian Building Authority (VBA) Compliance Certificate and/or Certificate of Electrical Safety (as applicable to the installation) . Manufacturer's instructions and warranty. Information as set out in the <u>VEU Code of Conduct</u> including dispute resolution information, manufacturer's instructions and warranty for products supplied or installed (if applicable), contact details of the accredited person and/or scheme participant who undertook the installation.

3.7. Record-keeping requirements

Accredited persons are required to keep documents that record and explain all transactions and other acts engaged in, or required to be engaged in, as provided in the VEET Act.

All documents are required to be maintained for at least 6 years and must be kept in writing in English or in a manner which enables the documents to be readily accessible and convertible into writing in English.

Table 28 below sets out the documents an accredited persons are required to collect and retain for each water heating activity undertaken. These documents are to be provided to the commission upon request.

Document(s)	Details to be provided
VEEC Assignment Form	Assignment form to be completed and signed by the installer and energy consumer.
	For installations under activity 6, form includes signed agreement between the consumer and installer about the scope of the installation, including whether a product is to be removed and the scope of any building repair work (if any) to be undertaken by the installer.
Invoice / proof	Document must list:
of purchase	 the installed product brand and model. the name and address of the energy consumer the name, address and ABN of the installer business.
	 For business or non-residential upgrades, the document must list: the Australian Business Number/Australian Company Number (ABN/ACN) of the energy consumer (where relevant) the installation address (if different to the energy consumer).
Non prescribed certificate of electrical safety	Either the VBA Compliance Certificate or CoES must detail:
	 the installed product brand, model and serial number the type of the product decommissioned, including brand, model and serial number (where products are decommissioned as part of the installation)

Table 28 Record-keeping requirements for space heating and cooling activities

Document(s)	Details to be provided
(CoES) ²⁷ and VBA Compliance Certificate ²⁸	 the method of decommissioning (where products are decommissioned as part of the installation) the floor area heated by existing product (activity 5A(ii) only) the method of decommissioning including but not limited to, disconnection and removal of flue, supply fan (where fitted), air intake and/or damper and removal of the heater door and heater (activities 9A(iii) and 10A(iii) only) the reparation of any ceiling or roof / wall penetration where relevant (activities 9A(iii) and 10A(iii) only). An appendix(s) may be provided with the VBA Compliance Certificate or a CoES. Where an appendix is used, the following criteria must be met: the certificate must refer to the appendix and list the number of pages the appendix page must be numbered, and the certificate number is referenced on each page each appendix page must be signed by the plumber or electrician responsible for the completed work all premises being claimed for must be listed with the corresponding installed product information in the appendix (where multiple units at one address is
Geotagged photographs	 receiving an upgrade). Geo-tagged photographs which are date and time stamped showing: the existing product before the upgrade providing eligibility (for installations involving decommissioning) the brand, model and serial number of the existing product (for installations involving decommissioning – not required for activity 28) the existing product either disabled or rendered permanently unusable where the product is not being removed from premises for disposal (for installations involving decommissioning) the decommissioned product either disabled or ready to be removed from the consumer's premises (for installations involving decommissioning) reparation of any ceiling or roof / wall penetration if required (activities 9A(iii) and 10A(iii) only). the installed product after installation (not required for activity 28) All geo-tagged photographs must:
	 be clear and in focus include any relevant markings include the GPS derived latitude and longitude coordinates (this should be stored in the metadata and generated automatically by the device used to take the geo- tagged photos).
Disposal documentation	Documentation by you and/or your third-party installer contractors, recording how the business will comply with EPA waste duties, including:

²⁷ A prescribed certificate of electrical safety is only required if the electrical mains conductors, main earthing system or main switchboard is modified

²⁸ A VBA compliance certificate is required for all plumbing work where total value of the work (parts and labour is \$750 or more) of where work involves <u>specific types of plumbing work</u>

Document(s)	Details to be provided
	 the classification of waste codes and waste type for the business' waste streams details of any contracts or arrangements with contracted transporters or disposal agents the name and location of the various authorised waste receivers you will be delivering your different waste streams to appropriate authorisation for the temporary storage of waste if more than 5 m³ of industrial waste (that is not reportable priority waste) is being stored by the business prior to disposal.²⁹
Disposal or recycling record/ disposal transportation record	 For decommissioned products removed from the premises, records that satisfy either option 1 or 2 below. A waste receipt of invoice from a place authorised by EPA to receive that particular type(s) of waste recording: name and address of the authorised recipient ACN and/or ABN of the authorised recipient the date of delivery waste description (including class of waste) waste amount (e.g. number of units or kg). Where the waste receipt or invoice is for decommissioned products from multiple upgrade sites, a document itemising the products removed per upgrade site to demonstrate the link between each upgrade site and the bulk waste receipt or invoice must also be maintained. Third party contractor information – If disposed via a contracted transporter or disposal agent, a document recording: The name, ACN and ABN of company the date service was provided waste amount (e.g. number of units or kg) name and address of the lawful place the waste is to be disposed at ABN of the business operating the lawful place the waste is to be disposed at.
Refrigerant recovery and disposal (activity 6 only)	Agent's refrigerant handling license number recorded on VEEC assignment form.

²⁹ See schedule 1 and regulation 63 of the Environment Protection Regulations 2017.

Essential Services Commission Water Heating and Space Heating and Cooling Activity Guide

4. Activity process for water heating or space heating and cooling activities

This section provides you with an overview of the steps for undertaking a water heating and/or space heating and cooling activity under the program.

Figure 3 Activity process steps for water heating or space heating and cooling activities



4.1. Become accredited

A person or organisation must be accredited/approved to undertake the relevant activity to create VEECs for the activity. Visit <u>www.esc.vic.gov.au/become-veu-accredited</u> for information on how to become accredited.

4.2. Get product approved (if not already approved)

To create VEECs for water heating and or space heating and cooling activities, the product installed must be listed as an approved product on our <u>Register of Products</u>. Accredited persons should check our register to see if the product you wish to install has already been approved as another organisation may have submitted the product for approval (e.g. product manufacturer/supplier).

Learn more about getting products approved in our Water Heating and Space Heating/Cooling Product Guide at <u>www.esc.vic.gov.au/veu-product-applicants</u>.

4.3. Provide advice to consumer/agree scope of work

Prior to undertaking the upgrade, accredited persons or scheme participants must provide the consumer with information as listed in Table 10 for water heating activities and Table 27 for space heating and cooling activities.

There should be agreement between the consumer and installer prior to the commencement of the installation about the scope of the installation, including whether a product is to be removed and the scope of any building repair work (if any) to be undertaken by the installer.

4.4. Undertake the activity and collect records

Installer must comply with all installation and decommissioning requirements as detailed in the VEET Regulations and VEU Specification. In addition, certificates cannot be created unless a prescribed activity is undertaken in accordance with the provisions of the Electricity Safety Act 1998, the Gas Safety Act 1997, the Occupational Health and Safety Act 2004 or the Building Act 1993 or the regulations under any of those Acts.

The installer must collect records as listed in Table 11 for water heating activities and Table 28 for space heating and cooling activities.

4.5. Assignment of rights

An important part of the certificate creation process is the valid assignment of the right to create VEECs from the consumer to an accredited person. A VEEC assignment form must be completed for accredited persons to create VEECs and demonstrate compliance with the legislation.

Download the VEEC assignment form template for these activities from the <u>water heating and</u> <u>space heating and cooling page</u> on the commission's website.

Consumers must be provided a copy of the VEEC assignment form at the time of signing (for written forms) or within 10 business days of signing (for electronic forms). Accredited persons should consider taking steps to ensure that all personal information collected in the VEEC assignment form is held in accordance with the Information Privacy Principles under the Privacy and Data Protection Act 2014 (Vic). Details of how to comply can be found at: https://ovic.vic.gov.au/privacy/.

4.6. Dispose of waste and debris from the activity

For all water heating installations and space heating and cooling installations undertaken under activity 6, installers must remove, or arrange for the removal of, any waste or debris generated from the activity, including the decommissioned product (where it is practical and safe to remove

the decommissioned product), from the consumer's premises and disposal in accordance with all applicable waste management requirements under the Environment Protection Act 2017.

For space heating installations undertaken under activities 5, 7, 9 and 10, we recommend installers remove and dispose of the decommissioned product (where it is practical and safe to remove the decommissioned product) from the consumer's premises. Product disposal must be undertaken in accordance with all applicable waste management requirements under the Environment Protection Act 2017.

See Table 11 for disposal records to be collected for water heating activities and Table 28 for disposal records to be collected for space heating and cooling activities.

4.7. Collect documentation and create VEECs online

Prior to creating VEECs for an activity, accredited persons must have collected the required documents as specified in Table 11 for water heating activities and Table 28 for space heating and cooling activities. The commission may ask for these records as part of our certificate assessment process.

To create VEECs, you can upload the activity using either an upload form or the online user interface on the VEU Registry. Different activity types have different data input requirements, so it is important that you input the correct data in the relevant fields.

4.8. VEEC assessment

After you press the 'create' button, the VEECs associated with your activities are created and assigned a unique identifier.

We assess the created VEECs for eligibility for registration. This process involves checks to verify that VECCs have been created in accordance with the VEET Act and VEET Regulations. We may require you submit to us record evidence as part of that assessment process.

4.9. Commission approves or refuses VEECs for registration

If we consider your VEECs are eligible for registration and you have paid the certificate registration fee of \$1 per certificate, we will register your VEECs. Once registered, the VEECs are available to be traded and/or surrendered to us.

5. Calculating the number of eligible VEECs

The number of Victorian energy efficiency certificates (VEECs) you receive for a given water heating or space heating and cooling activity is awarded based on the method and variables set out in the VEU Specifications.

5.1. VEEC calculation method for water heating activities

There are a range of different GHG equation reduction calculations for water heating activities under the program. Table 29 sets out the different activity scenarios, equation references in the VEU Specifications and applicable period for the different equations for awarding VEECs under the program.

You can use the VEEC calculator to <u>www.veu-registry.vic.gov.au/calculators</u> to calculate the number of expected VEECS for the below activities. You will need to enter details of an approved product (i.e. the product brand, product model, and system size (for activities 1C and 1D)) and postcode for the installation to calculate eligible VEECS for an activity.

We have prepared the VEEC Calculator to assist you to calculate the number of eligible VEECs for a given activity, but you should not rely on this calculator to discharge your legal responsibilities. We do not guarantee the accuracy of the calculator. It is up to you to verify the accuracy of the VEECs eligible to be created for an activity by reference to the relevant equation in the VEU Specifications.

Activity scenario	Upgrade product standard	Equation reference in VEU Specifications	Applicable period
1A: Decommissioning electric and installing gas storage	Product tested and rated to AS/NZS 5263.1.2.	Equation 1.1 of VEU Specifications	Until 30 June 2023
1B: Decommissioning electric and installing gas storage	Product tested and rated to AS/NZS 5263.1.2.	Equation 1.2 of VEU Specifications	Until 30 June 2023
1C: Decommissioning electric and installing electric boosted solar	Product tested and modelled to AS/NZS 4234:2008	Equation 1.3 of VEU Specifications	Until 30 June 2023

Table 29 Activity scenarios, equation references and applicable period for water heating activities

Activity scenario	Upgrade product standard	Equation reference in VEU Specifications	Applicable period
1C(i): Decommissioning electric and installing electric boosted solar	Product tested and modelled to AS/NZS 4234:2021	Equation 1.4 of VEU Specifications	From 31 May 2023
1C(ii): Decommissioning electric and installing electric boosted solar	Product tested and modelled to AS/NZS 4234:2028	Equation 1.5 of VEU Specifications	From 1 July 2023 to 30 June 2024
1D: Decommissioning electric and installing heat pump	Product tested and modelled to AS/NZS 4234:2008	Equation 1.6 of VEU Specifications	Until 30 June 2023
1D(i): Decommissioning electric and installing heat pump	Product tested and modelled to AS/NZS 4234:2021	Equation 1.7 of VEU Specifications	From 31 May 2023
1D(ii): Decommissioning electric and installing heat pump	Product tested and modelled to AS/NZS 4234:2028	Equation 1.8 of VEU Specifications	From 1 July 2023 to 30 June 2024
1F: Decommissioning electric and installing electric boosted solar	Product tested and modelled to AS/NZS 4234:2028	Equation 1.9 of VEU Specifications	Until 30 June 2023
3B: Decommissioning gas and installing gas boosted solar	Product tested and modelled to AS/NZS 4234:2028	Equation 3.1 of VEU Specifications	Until 30 June 2023
3C: Decommissioning gas and installing heat pump	Product tested and modelled to AS/NZS 4234:2021	Equation 3.2 of VEU Specifications	From 31 May 2023
3D: Decommissioning gas and installing electric boosted solar	Product tested and modelled to AS/NZS 4234:2021	Equation 3.3 of VEU Specifications	From 31 May 2023

5.2. VEEC calculation method for space heating and cooling activities

There are a range of different GHG equation reduction calculations for space heating and cooling activities under the program. Table 30 sets out the different activity scenarios, equation references in the VEU Specifications and applicable period for the different equations for awarding VEECs under the program.

You can use the VEEC calculator to <u>www.veu-registry.vic.gov.au/calculators</u> to calculate the number of expected VEECS fo the below activities. You will need to enter details of an approved

product (i.e. the product brand and product model), activity scenario, and postcode for the installation to calculate eligible VEECS for an activity.

We have prepared the VEEC Calculator to assist you to calculate the number of eligible VEECs for a given activity, but you should not rely on this calculator to discharge your legal responsibilities. We do not guarantee the accuracy of the calculator. It is up to you to verify the accuracy of the VEECS eligible to be created for an activity by reference to the relevant equation in the VEU Specifications

Table 30 Activity scenarios, equation references and applicable period for space heating and cooling activities

Activity scenario	Upgrade product standard	Equation reference in VEU Specifications	Applicable period
5A(i): Decommissioning existing ducted gas space heater and installing high efficiency ducted gas space heater	Product tested and modelled to AS/NZS 5263.1.6	Equation 5.1 of VEU Specifications	Until 30 June 2023
5A(ii): Decommissioning a central electric resistance heater and installing a high efficiency ducted gas space heater	Product tested and modelled to AS/NZS 5263.1.6	Equation 5.2 of VEU Specifications	Until 30 June 2023
5A(ii): Installing ducted gas heater in a new premises	Product tested and modelled to AS/NZS 5263.1.6	Equation 5.3 of VEU Specifications	Until 30 June 2023
6A to 6G (i-xi): Installing high efficiency GEMS registered air- conditioner	Product registered to the Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019 (Cth	Equation 6.1 of VEU Specifications	From 31 May 2023
7A(i): Decommissioning existing ducted air to air heat pump and installing high efficiency ducted air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 7.1 of VEU Specifications	Until 30 June 2023
7A(ii): Decommissioning central electric resistance heater and installing high efficiency ducted air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 7.2 of VEU Specifications	Until 30 June 2023

Activity scenario	Upgrade product standard	Equation reference in VEU Specifications	Applicable period
7A(iii): Installing high efficiency ducted air to air heat pump in a new premises	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 7.3 of VEU Specifications	Until 30 June 2023
9A(i): Decommissioning hard-wired electric room heater and installing high efficiency gas room heater	Product tested and modelled to AS/NZS 5263.1.3	Equation 9.1 of VEU Specifications	Until 30 June 2023
9A(ii): Decommissioning existing gas room heater or other heater and installing high efficiency gas room heater	Product tested and modelled to AS/NZS 5263.1.3	Equation 9.2 of VEU Specifications	Until 30 June 2023
9A(iii): Decommissioning an existing plug-in electric room heater or wood heater and installing high efficiency gas room heater	Product tested and modelled to AS/NZS 5263.1.3	Equation 9.3 of VEU Specifications	Until 30 June 2023
10A(i): Decommissioning hard-wired electric room heater and installing high efficiency room air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 10.1 of VEU Specifications	Until 30 June 2023
10A(ii): Decommissioning room air to air heat pump and installing high efficiency room air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 10.2 of VEU Specifications	Until 30 June 2023
10A(iii): Decommissioning plug in electric heater or wood heater and installing high efficiency room air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 10.3 of VEU Specifications	Until 30 June 2023
10A(iv): Decommissioning room refrigerative air conditioner and hard-wired electric room heater and	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat	Equation 10.4 of VEU Specifications	Until 30 June 2023

Activity scenario	Upgrade product standard	Equation reference in VEU Specifications	Applicable period
installing high efficiency room air to air heat pump	Pumps) Determination 2013 (Cth)		
10A(v): Decommissioning room refrigerative air conditioner and plug in electric room heater and installing high efficiency room air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 10.5 of VEU Specifications	Until 30 June 2023
10A(vi): Decommissioning room refrigerative air conditioner and gas room space heater and installing high efficiency room air to air heat pump	Product tested and rated to the Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013 (Cth)	Equation 10.6 of VEU Specifications	Until 30 June 2023
23: Decommissioning refrigerative air conditioner and installing ducted evaporative cooler	Product tested and rated to AS 2913	Equation 23.1 of VEU Specifications	Until 30 June 2023
28: Retrofitting gas ductwork with flexible or rigid ductwork	 Product tested as complying with: AS 4254.1 (for flexible ductwork) AS 4254.2 for rigid ductwork 	Equation 28.1 of VEU Specifications	Ongoing – no change

Appendix A: List of Refrigerant GWPs

Table 31 List of refrigerant types with global warming potentials (GWP) values*

Refrigerant type	Substance name	GWP
R-1234yf	HFO-1234yf	5
R-1234ze(E)	HFO-1234ze	5
R-125	HFC-125	3500
R-1270	HC-1270	5
R-12A	HC-12A	5
R-134A	HFC-134A	1430
R-143A	HFC-143a	4470
R-152A	HFC-152a	124
R-170	HC-170	5
R-227EA	HFC-227EA	3220
R-22A	HC-22A	5
R-23	HFC-23	14800
R-236CB	HFC-236CB	1340
R-236EA	HFC-236EA	1370
R-236FA	HFC-236FA	9810
R-245CA	HFC-245CA	693
R-245FA	HFC-245FA	1030
R-290	HC-290	3

Refrigerant type	Substance name	GWP	Refrigerant type
R-419B	HFC-419B	2384	R-437A
R-421A	HFC-421A	2631	R-438A
R-421B	HFC-421B	3190	R-439A
R-422A	HFC-422A	3143	R-440A
R-422B	HFC-422B	2526	R-442A
R-422C	HFC-422C	3085	R-444A
R-422D	HFC-422D	2729	R-444B
R-422E	HFC-422E	2592	R-445A
R-423A	HFC-423A	2280	R-446A
R-424A	HFC-424A	2440	R-447A
R-425A	HFC-425A	1505	R-447B
R-426A	HFC-426A	1508	R-448A
R-427A	HFC-427A	2138	R-449A
R-428A	HFC-428A	3607	R-449B
R-429A	HFC-429A	13	R-449C
R-430A	HFC-430A	94	R-450A
R-43-10MEE	HFC-43-10MEE	1640	R-451A
R-431A	HFC-431A	36	R-451B
R-434A	HFC-434A	3245	R-452A
R-435A	HFC-435A	26	R-452B

Refrigerant type	Substance name	GWP
R-437A	HFC-437A	1805
R-438A	HFC-438A	2264
R-439A	HFC-439A	1983
R-440A	HFC-440A	144
R-442A	HFC-442A	1888
R-444A	HFC-444A	87
R-444B	HFC-444B	293
R-445A	HFC-445A	129
R-446A	HFC-446A	459
R-447A	HFC-447A	582
R-447B	HFC-447B	739
R-448A	HFC-448A	1386
R-449A	HFC-449A	1396
R-449B	HFC-449B	1411
R-449C	HFC-449C	1250
R-450A	HFC-450A	601
R-451A	HFC-451A	146
R-451B	HFC-451B	160
R-452A	HFC-452A	2139
R-452B	HFC-452B	697

Refrigerant type	Substance name	GWP
R-452C	HFC-452C	2219
R-453A	HFC-453A	1765
R-454A	HFC-454A	236
R-454B	HFC-454B	465
R-454C	HFC-454C	145
R-455A	HFC-455A	145
R-456A	HFC-456A	684
R-457A	HFC-457A	136
R-458A	HFC-458A	1650
R-500	HFC-500	8077
R-502A	HC-502A	5
R-503	HFC-503	14560

* Sources: Intergovernmental Panel on Climate Change (IPCC) fourth assessment report, 2007 and the Department of Climate Change, Energy, the Environment and Water website.

Document version history

CM Reference: C/21/28378

Version	Amendments	Effective date
1.0	First release	10 December 2018
1.1	Update to:remove requirement for an installer to show photo IDfix an error to product criteria under Activity 7 and 10	21 February 2019
2.0	Update to:incorporate 10 June 2019 VEU specifications amendmentsinclude activity 28 into this activity guide	10 June 2019
2.1	Revision to reflect introduction of EPA's e-waste policy	1 July 2019
2.2	 Update to incorporate changes to evidentiary requirements: added brand and model of existing product to Certificate of Electrical Safety for activities 1B, 1C, 1D, 1F and 3B update to move certain information requirements from VBA Compliance Certificate to Certificate of Electrical Safety for activities 5A(ii) and 7A(ii) added geo-tagged photos of installed product to activity 5A(iii) Update to outline criteria for use of appendix(s) with VBA Compliance Certificate and Certificate of Electrical Safety in common requirements 	28 November 2019
2.3	Update to clarify evidentiary requirements for invoices for business and non-residential activities	1 April 2021
2.4	 Update to: provide greater flexibility on persons able to decommission water heaters and the document that can capture the details of decommissioning clarify: 	11 November 2021

	 licensing and evidentiary requirements for the decommissioning of wood-fired room heaters and fireplaces. that two different products must be decommissioned for scenarios 10A(iv) and 10A(v) 	
2.5	Update to reflect minor updates to activities 23 and 28 to align with VEU Specifications - Version 13.0	19 September 2022
3.0	Update to document structure and to reflect new activity requirements contained in amended VEET Regulations and VEU Specifications – 15.0	31 May 2023
3.1	 Update to: clarify eligible premises requirement for activity 6 clarify record-keeping requirements for water heating activities and activity 6 	29 June 2023