

# Space Conditioning, Shower Rose and Incandescent Lighting Activity Guide

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# Introduction

Accredited persons (APs) and their installers under the Victorian Energy Upgrades (VEU) program must comply with program requirements when undertaking space conditioning, shower rose and incandescent lighting activities to create Victorian energy efficiency certificates (VEECs).

## About this guide

Use this guide for assistance meeting the specific requirements (product, installation, decommissioning, training, safety and evidentiary) of space conditioning, shower rose and incandescent lighting activities. We have split the guide into four key sections:

- Section 1: Introduction to space conditioning, shower rose and incandescent lighting activities
- Section 2: Requirements for space conditioning activities
- Section 3: Requirements for shower rose activities
- Section 4: Requirements for incandescent lighting activities

This document must be read in conjunction with our Obligations and Program Guide for Accredited Persons which provides you with:

- overarching information about the VEU program,
- your obligations under the program
- guidance on how to create Victorian energy efficiency certificates (VEECs) under the program.

Access this document at [www.esc.vic.gov.au/veu-accredited-persons](http://www.esc.vic.gov.au/veu-accredited-persons)

## Who should use this guide

You should use this guide if you are:

- seeking accreditation to undertake space conditioning, shower rose and/or incandescent lighting activities under the program
- accredited to undertake these activities under the program
- an installer seeking to undertake installations for these activities under the program.

This guide will help you to understand the activity, your responsibilities and evidentiary requirements you must meet to create and register VEECs.

To apply to become accredited for this activity, access the required documents from [www.esc.vic.gov.au/become-veu-accredited](http://www.esc.vic.gov.au/become-veu-accredited)

## Legal context for this guide

We have prepared this guide as a general summary of relevant parts of:

- 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)

View these documents at [www.esc.vic.gov.au/veu-legislation](http://www.esc.vic.gov.au/veu-legislation)

This guide should not be relied upon as substitute for legal advice and should be read in conjunction with the above source documents. In the event of inconsistency between this guide and the source documents, the content in the source documents apply.

# 1. Introduction to space conditioning, shower rose and incandescent lighting activities

The VEET Regulations gives activities under the program a ‘fresh start’ in terms of the number of times an activity can occur at the premises. Premises that previously received an upgrade under the program prior to 10 December 2018 will not be prevented from receiving further upgrades. The installation limits set out in Schedule 4 of the regulations apply only to installations undertaken at premises from 10 December 2018. Activities still need to meet any relevant baseline and decommissioning requirements.

An exception to this ‘fresh start’ is for low flow shower rose installations – see Section 1.2 below.

## 1.1. Space conditioning activities

The following activities are covered by the space conditioning category:

- Activity 12: Underfloor insulation
- Activity 13: Double glazed window
- Activity 14: Thermally efficient window product
- Activity 15: Weather sealing – there are eight distinct scenarios (15A to 15H) available under this activity.

## 1.2. Low flow shower rose activity

The VEET Regulations introduced a six month transitional period for low flow shower rose (activity 17) products. This meant that until 9 June 2019, shower roses which met the 2008 VEET Regulations product requirements (i.e. with a flow rate of 9 L/min or less) could be installed. However, the new VEEC values introduced by the current regulations applied and premises which had previously received upgrades under the program were not eligible for VEEC claims.

From 10 June 2019, the ‘fresh start’ commenced for this activity. Only shower roses with a flow rate of 7.5 L/min or less are eligible for installation for activity 17 from this date.

## 1.3. Incandescent lighting activities

The following activities are covered by this activity category:

- Activity 21A: Incandescent GLS or CFL replacement
- Activity 21B: Incandescent reflector lamp replacement
- Activity 21C: 12V halogen lamp replacement
- Activity 21D: 12V downlight and transformer replacement
- Activity 21E: Mains voltage GU10 halogen lamp replaced with GU10 lamp

- Activity 21F: Mains voltage GU10 downlight replaced with integrated downlight

### 1.3.1. Meeting EPA’s waste management requirements

From 1 July 2019, every person must comply with the Environment Protection Authority’s Waste Management Policy (E-Waste) (e-waste policy) which is banning e-waste from landfill.

The e-waste policy places operational and recordkeeping requirements on e-waste service providers, which is defined as any person who conducts a business or undertaking that accepts e-waste for collection, storage, handling, transport or reprocessing.

There are additional recordkeeping requirements placed on those who transport and/or reprocess lighting equipment, as they are categorised as specified electronic waste.

The e-waste policy can be found on the [Victorian Government Gazette website](#).

### 1.3.2. Meeting your recycling requirements for mercury-containing equipment under VEU program

If your activity involves the decommissioning of mercury containing equipment, you must dispose of that equipment prior to certificate creation in the waste disposal facility set out in Table 1 below.

Table 1: Eligible disposal facilities for mercury-containing lighting equipment

Type of lighting equipment	Eligible disposal facilities
Mercury-containing equipment: Lamps that use mercury for their operation and any other lighting equipment potentially contaminated with mercury as a result of in-house recycling or disassembling attempts.	A licensed recycling facility <sup>1</sup> : a facility licensed by the EPA to accept D121 waste for the purpose of recycling at that facility (i.e. has a license with treatment code R4 for D121 waste)

This requirement does not preclude you from transporting your equipment to a licensed temporary holding facility<sup>2</sup> that will forward your equipment to a licensed recycling facility for recycling. As evidence of proper disposal and decommissioning, you must obtain and maintain a recycling invoice from the licensed recycling facility for the decommissioned lighting equipment prior to VEEC creation.

A list of facilities and their EPA license conditions is available from <https://portal.epa.vic.gov.au>

Details of your decommissioning practices must be supplied to us for review before you are accredited to undertake this activity.

<sup>1</sup> Facilities licensed to recycle mercury-containing waste by the relevant environmental protection regulator in other jurisdictions, are also considered a licensed recycling facility for the purposes of this determination.

<sup>2</sup> A facility licensed by the EPA to accept D121 waste for storage pending recycling or accumulation of material intended for recycling (i.e. has a license with treatment codes D15 and/or R13 for D121 waste).

### 1.3.3. Activity 21A requirements and transition arrangements

For incandescent GLS or CFL replacement (activity 21A), we have implemented special accreditation and VEEC assessment requirements for this activity given the risk profile of this activity. All accredited persons approved to undertake this activity under the previous 2008 VEET Regulations will need to meet these requirements, prior to installing under 21A of the 2018 VEET Regulations as detailed in Appendix A.

## 1.4. Mandatory safety training obligations

Your installers must obtain units of competency before they can undertake certain activities. Installers are approved for activities by having a certificate of competency from a registered training organisation (RTO) for the relevant units. We require all installers new to the program to have current MST units for each prescribed activity they intend to work in before we approve them as installer. See Table 2 for available MST units for each of the three MST groups.

All installers must have completed the required training to undertake prescribed activities for Activities 12, 13, 14, 15, 17 and 21. Qualified and licensed electricians and plumbers, and registered builders are exempt from these requirements. For activities 21A, 21C, 21D, 21E and 21F, installations must be undertaken by a licensed electrician.

You will have to make sure that installers for the above activities are submitted and approved by us prior to undertaking installations under the scheme. This includes electricians, plumbers and builders. You must keep your installer database up to date and keep files on record to support those entries (whether that be a copy of their licence of completion of the relevant MST unit).

Table 2: Mandatory safety training requirements

Group	Available Mandatory Safety Training units	
<b>Group A</b> – units relating to health and safety risks and OH&S requirements	<b>VU21858:</b>	Minimise health and safety risk when retrofitting for energy and water efficiency.
	<b>CPCCOHS2001A:</b>	Apply OHS requirements, policies and procedures in the construction industry.
	<b>CPCCM2043A:</b>	Carry out WHS requirements.
<b>Group B</b> – unit relating to energy and water efficiency retrofits	<b>VU21859:</b>	Undertake retrofitting to improve energy and water efficiency.
<b>Group C</b> – units relating to working at heights	<b>CPCCM2010B:</b>	Work safely at heights.
	<b>CPCCM2010:</b>	Work safely on scaffolding higher than two meters.
	<b>RIIWH204D:</b>	Work safely at heights.



## 1.5. Common requirements for space conditioning, shower rose and incandescent lighting activities

### Accredited person (AP) Requirements

You, or your associate, or an entity under your instructions, must not install a product for the purposes of decommissioning it as part of an activity under the program (e.g. you have not altered the baseline environment for a given installation for the purposes of inflating the VEEC claim for that installation).

For an activity involving the decommissioning of product(s), you, your installer, and the 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.

You must ensure you comply with the Australian Consumer Law (ACL) when engaging in marketing practices under the program (including telemarketing practices, door to door sales, and lead generation materials). See Section 2.4 of our [Obligations and Program Guide for Accredited Persons](#) for more detail.

Given issues/complaints we have received in respect of marketing/lead generation practices under activity 21A, we have placed some additional requirements on APs undertaking installations under this activity. These requirements are detailed in Appendix B.

You must ensure that all installers show evidence of their licence/s to the consumer prior to starting the installation. In addition, installers need to present photo identification showing which AP they represent in the VEU program.

You must ensure all installers provide a copy of the following documents to the consumer, where applicable:

- VEEC assignment form
- Invoice/proof of purchase
- Manufacturer's instructions
- VBA Compliance Certificate and/or Certificate of Electrical Safety.

You are required to take geo-tagged photographs to verify the activities have been performed in accordance with the VEET Regulations. Geo-tagged photographs must:

- be clear and in focus
- include any relevant markings
- include a date stamp showing the date the photographs were taken
- 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 photographs).

We expect you to meet the geo-tagging requirements. In some instances where geo-tagged photos cannot be obtained, we may accept alternative evidence (e.g. a statutory declaration) that the existing unit was eligible and has been permanently rendered inoperable. You should state the reason why geo-tagged photos are not obtained.

## **1.6. Audit requirements**

You as the AP should undertake internal audits to ensure that VEECs undertaken for these activities are created in compliance with the VEET Act, the VEET Regulations and the VEET guidelines.

You are required to implement service and quality assurance measures to uphold the integrity of the VEU program. The more detailed the audits, the greater assurance for you that your installers are carrying out activities in accordance with the requirements of the program's legislation.

Appendix C outlines the minimum requirements for information that you should collect as part of your internal audits. When undertaking phone and field audits, you should ensure that, at a minimum, the following information is verified and recorded. This is not an exhaustive list and is recommended for use as a guide only. Changing circumstances, such as new activities and new business environments, may result in the need to collect information beyond what is listed below.

It is your responsibility to remain responsive to changing circumstances and to alter your internal audit regimes where necessary to maintain suitable levels of assurance. If in doubt, you should contact us to discuss acceptable quality assurance measures.

## 2. Requirements for space conditioning activities

### 2.1. Activity 12: Under floor insulation

A review is pending relating to administrative and installation requirements for the underfloor insulation activity. This review will be undertaken when ceiling insulation is re-introduced into the program. Until this review is complete, VEECs cannot be created for this activity.

Requirements	Description
Activity	Installers must: <ul style="list-style-type: none"><li>• install a product that meets the below product criteria</li><li>• install in a floor area that is not insulated for a minimum of 20m<sup>2</sup> in accordance with AS 3999.</li></ul>
Product criteria	A product (or multiple products) that: <ul style="list-style-type: none"><li>• complies (or together comply) with AS/NZS 4859.1 performance requirements once installed</li><li>• has (or altogether have) a winter value of R2.5 as determined in accordance with AS/NZS 4859.1</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	Review pending
Eligible environments and installation limits	<ul style="list-style-type: none"><li>• Residential premises — no limits</li><li>• Business/non-residential premises — no limits</li></ul>
Evidence	Review pending

## 2.2. Activity 13: Double glazed window

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>• install a product which meets the below product criteria in place of a window in an external wall</li><li>• install on a minimum glazing area of 5m<sup>2</sup>.</li></ul>
Product criteria	<p>A glazing product that:</p> <ul style="list-style-type: none"><li>• achieves a maximum total U-value of 4 in accordance with AS 2047</li><li>• is WERS labelled and rated with a minimum star rating of 4 for heating</li><li>• complies with the performance requirements of AS 2047 and AS 1288</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<ul style="list-style-type: none"><li>• Residential premises — no limits</li><li>• Business/non-residential premises — no limits</li></ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/ proof of purchase listing all products (brand and model) installed.</li></ul>

## 2.3. Activity 14: Thermally efficient window product

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>• install a product which meets the below product criteria in place of a window in an external wall</li><li>• install on a minimum glazing area of 5m<sup>2</sup></li><li>• ensure the existing window is operable after the upgrade to the same extent it was before the upgrade.</li></ul>
Product criteria	<p>A product that:</p> <ul style="list-style-type: none"><li>• when installed on a single glazed window, results in a still air gap being created between the single glazed window and the product and raises the thermal efficiency performance of the window</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<ul style="list-style-type: none"><li>• Residential premises — no limits</li><li>• Business/non-residential premises — no limits</li></ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/ proof of purchase listing all products (brand and model) installed.</li></ul>

## 2.4. Activity 15: Weather sealing activities

### Activity 15A: Sealing door

Requirements	Description
Activity	<p>Installers must install a product:</p> <ul style="list-style-type: none"><li>• which meets the below product criteria</li><li>• on the frame of an external door or to each edge of an external door in accordance with manufacturer's instructions.</li></ul>
Product criteria	<p>A door sealing product that:</p> <ul style="list-style-type: none"><li>• when installed restricts airflow around the entire perimeter of the door</li><li>• does not impair normal operation of the door</li><li>• is covered by warranty against defects for at least 2 years</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/ proof of purchase listing all products (brand and model) installed.</li><li>• Geo-tagged photo(s) of each installed door seal.</li></ul>

## Activity 15B: Sealing window

Requirements	Description
Activity	<p>Installers must install a product:</p> <ul style="list-style-type: none"><li>• which meets the below product criteria</li><li>• on to the frame or each edge of an openable external window in accordance with the manufacturer's instructions.</li></ul>
Product criteria	<p>A window sealing product that:</p> <ul style="list-style-type: none"><li>• when installed restricts airflow around the relevant edges of the window</li><li>• does not impair normal operation of the window</li><li>• is covered by warranty against defects for at least 2 years</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/ proof of purchase listing all products (brand and model) installed.</li><li>• Geo-tagged photo(s) of each installed window seal.</li></ul>

## Activity 15C: Self-sealing ceiling or wall exhaust fan

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"> <li>remove and decommission a ceiling or wall exhaust fan that does not comply with the upgrade product criteria</li> <li>install a product which meets the below product criteria in accordance with the manufacturer's instructions and in the place of the decommissioned fan.</li> </ul>
Product criteria	<p>A product that:</p> <ul style="list-style-type: none"> <li>is a ceiling or wall exhaust fan</li> <li>expels air either outside or into the roof space of the premises it is installed in</li> <li>is fitted with a self-closing damper, flap, filter or other sealing product that is designed to: <ul style="list-style-type: none"> <li>allow airflow through the exhaust of the fan when the fan is operating</li> <li>restrict airflow when the fan is not operating</li> </ul> </li> <li>is covered by a warranty against defects for a period of at least 2 years from the date of installation</li> <li>is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"> <li>One MST unit from Group A</li> <li>One MST unit from Group B</li> <li>One MST unit from Group C.</li> </ul> <p>Refer to Table 2 above.</p> <p>Installers must be licensed electricians registered with Energy Safe Victoria if electrical work is required.</p>
Eligible environments and installation limits	Residential premises — no limits
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>VEEC assignment form completed and signed by the installer and consumer</li> <li>Invoice/ proof of purchase listing all products (brand and model) installed</li> <li>Certificate of Electrical Safety detailing the method of decommissioning, where wiring work is required</li> <li>Geo-tagged photo(s) of each installed self-sealing wall exhaust or ceiling fan</li> <li>Geo-tagged photo(s) of each removed exhaust or ceiling fan.</li> </ul>



## Activity 15D: Sealing existing ceiling or wall exhaust fan

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>• install a product in accordance with the manufacturer's instructions and which meets the below product criteria</li><li>• install a product on a ceiling or wall exhaust fan in which a damper, flap or filter is not already installed</li><li>• conduct a compatibility check to ensure the installed exhaust fan seal is compatible with the existing exhaust fan.</li></ul>
Product criteria	<p>A product that</p> <ul style="list-style-type: none"><li>• is a self-closing damper, flap, filter or other sealing product</li><li>• is designed so that when installed on a ceiling or wall exhaust fan, it allows airflow through the exhaust of the fan when the fan is operating and restricts airflow when the fan is not operating</li><li>• is covered by a warranty against defects for a period of at least 2 years from the date of installation</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	Installers must be licensed electricians registered with Energy Safe Victoria
Eligible environments and installation limits	Residential premises — no limits
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/ proof of purchase listing all products (brand and model) installed.</li><li>• Certificate of Electrical Safety, where wiring work is required</li><li>• Geo-tagged photo(s) of each installed exhaust fan seal.</li></ul>

## Activity 15E: Sealing external wall vent

Requirements	Description
Activity	<p>Installers must install a product:</p> <ul style="list-style-type: none"><li>• in accordance with the manufacturer's instructions and which meets the product criteria below</li><li>• in an unsealed wall vent (interior-facing side of an external wall)</li><li>• with the result that a ventilation opening in an external wall is sealed or closed.</li></ul>
Product criteria	<p>A wall vent sealing product that:</p> <ul style="list-style-type: none"><li>• is made of a robust non-shrinking sealing material</li><li>• is covered by a warranty against defects for a period of at least 2 years from the date of installation</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form – completed and signed by the installer and consumer</li><li>• invoice/proof of purchase listing all products (brand and model) installed</li><li>• geo-tagged photo(s) of each installed wall seal.</li></ul>

## Activity 15F: Permanent sealing of chimney or flue

Requirements	Description
Activity	<p>Installer must install a product:</p> <ul style="list-style-type: none"> <li>• which meets the below product criteria in accordance with the manufacturer’s instructions</li> <li>• that is an appropriate size to be installed in the chimney or flue</li> <li>• in an unsealed chimney or flue of a fireplace in which a permanent chimney or flue seal is not already installed</li> <li>• so that it is fitted permanently to the chimney or flue.</li> </ul> <p>Installer must explain to the consumer how the product should be used, including the required maintenance of the chimney or flue seals.</p>
Product criteria	<p>A chimney or flue sealing product that:</p> <ul style="list-style-type: none"> <li>• is designed to be fitted to a chimney or flue of an open fireplace used to burn solid fuel</li> <li>• restricts the airflow into or out of the chimney or flue when closed</li> <li>• allows the fireplace to operate safely and effectively when open</li> <li>• is designed to be fitted permanently to the chimney or flue</li> <li>• is covered by a warranty against defects for a period of at least 5 years from the date of installation</li> <li>• is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"> <li>• One MST unit from Group A</li> <li>• One MST unit from Group B</li> <li>• One MST unit from Group C.</li> </ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises which is mainly heated by gas or electricity — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer and consumer</li> <li>• Invoice/proof of purchase listing all products (brand and model) installed</li> <li>• Geo-tagged photo(s) of each installed permanent chimney or flue seal.</li> </ul>

## Activity 15G: Temporary sealing of chimney or flue

Requirements	Description
Activity	<p>Installers must install a product:</p> <ul style="list-style-type: none"> <li>• which meets the below product criteria in accordance with manufacturer's instructions</li> <li>• into an unsealed chimney or flue of a fireplace in which an approved seal is not already installed</li> <li>• that is an appropriate size to be installed in the chimney or flue</li> <li>• with instructions for removing the product.</li> <li>• Installer must explain to the consumer how the product should be used, including the required maintenance of the chimney or flue seals.</li> </ul>
Product criteria	<p>A product that:</p> <ul style="list-style-type: none"> <li>• is designed so that when fitted to a chimney or flue of an open fireplace used to burn solid fuel, the product: <ul style="list-style-type: none"> <li>– restricts the airflow into or out of the chimney or flue when closed</li> <li>– allows the fireplace to operate safely and effectively when open</li> </ul> </li> <li>• is designed to be fitted to the chimney or flue temporarily or on a seasonal basis</li> <li>• is covered by a warranty against defects for a period of at least 5 years from the date of installation</li> <li>• is not a chimney or flue balloon</li> <li>• is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"> <li>• One MST unit from Group A</li> <li>• One MST unit from Group B</li> <li>• One MST unit from Group C.</li> </ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises which is predominantly heated by gas or electricity — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer and consumer</li> <li>• Invoice/proof of purchase listing all products (brand and model) installed</li> <li>• Geo-tagged photo(s) of each installed chimney product.</li> </ul>

## Activity 15H: Sealing of evaporative cooler outlet

Requirements	Description
Activity	<p>Installers must install a product (not being the reinstallation of a product):</p> <ul style="list-style-type: none"><li>• in accordance with the manufacturer's instructions and which meets the product criteria below</li><li>• on a ducted evaporative cooling system to which a ceiling outlet sealing is not already installed</li><li>• with instructions regarding:<ul style="list-style-type: none"><li>– the installation and removal of the product</li><li>– the time of year that the product should be installed and removed.</li></ul></li></ul>
Product criteria	<p>An evaporative cooler outlet sealing product that:</p> <ul style="list-style-type: none"><li>• is designed to cover the ceiling outlet of a ducted evaporative cooling system and restrict airflow from inside the residential premises into the evaporative cooling ductwork</li><li>• is designed to be installed on a temporary or seasonal basis</li><li>• is covered by a warranty against defects for a period of at least 2 years from the date of installation</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST units:</p> <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p>
Eligible environments and installation limits	<p>Residential premises — no limits</p>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/proof of purchase listing all products (brand and model) installed</li><li>• Geo-tagged photo(s) of each installed evaporative cooling cover.</li></ul>

## 3. Requirements for shower rose activities

### 3.1. Activity 17: Low flow shower rose

#### Guidance notes for undertaking shower rose activity

- We strongly encourage installers to measure the flow rate of the existing shower rose using a simple bucket test with the water running at a typical showering temperature. Hold a bucket under the running shower for 15 seconds. Measure the quantity of water captured and multiply by 4 to ascertain the per minute flow rate. To be eligible for replacement, the flow rate of the existing shower rose must exceed 9 litres per minute.
- Efficient showerheads are typically not compatible with gravity-fed water heaters (most already have low flow rates). They may also not be compatible with older instantaneous gas water heaters as reduced flow can interfere with the water heater operations

Requirements	Description
Activity	Installers must: <ul style="list-style-type: none"><li>• physically remove and decommission a shower rose with a flow rate above 9L/min</li><li>• install a shower rose which meets the below product criteria</li><li>• verify the existing shower rose was connected to a water supply before the installation</li><li>• ask the consumer if they have had a low flow shower rose installation before.</li></ul>
Product criteria	A low flow shower rose product that: <ul style="list-style-type: none"><li>• complies with the requirements of AS/NZS 3662 that achieves a minimum 3 star rating and a flow rate of range E when assessed, registered and labelled in accordance with AS/NZS 6400</li><li>• is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	Installers must complete the following MST units: <ul style="list-style-type: none"><li>• One MST unit from Group A</li><li>• One MST unit from Group B</li><li>• One MST unit from Group C.</li></ul> Refer to Table 2 above.
Eligible environments and installation limits	<ul style="list-style-type: none"><li>• Residential premises — maximum of two products up to 9 June 2019 and three products from 10 June 2019 onwards</li><li>• Business/non-residential premises — no limits</li></ul>

Requirements	Description
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"><li>• VEEC assignment form completed and signed by the installer and consumer</li><li>• Invoice/proof of purchase listing all products (brand and model) installed</li><li>• Stock reconciliation</li><li>• Recycling invoice</li><li>• Geo-tagged photo(s) of each removed shower rose.</li></ul>

## 4. Requirements for incandescent lighting activities

### 4.1. Activity 21A: Incandescent GLS lamp or CFL replacement

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>decommission a mains voltage incandescent GLS lamp of at least 25 watts (tungsten filament lamp) or 18 watts (tungsten halogen lamp) or a mains voltage compact fluorescent lamp of at least 5 watts</li><li>take away the decommissioned lamp for recycling</li><li>physically install a lamp which meets the below product criteria.</li></ul> <p>Installers must not:</p> <ul style="list-style-type: none"><li>install a LED lamp into dimmable circuits unless the lamp is listed as suitable for dimmable circuits in our Register of Products</li><li>give the consumer spare LED lamps</li><li>replace LED lamps</li></ul>
Product criteria	<p>A LED GLS lamp that:</p> <ul style="list-style-type: none"><li>has a light output equivalent to or higher than the decommissioned lamp</li><li>achieves a minimum light source efficacy level of 84 lumens/watt</li><li>if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit</li><li>has a minimum lifetime rating of 8000 hours</li><li>has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li><li>has a minimum power factor of 0.55</li><li>is listed on the Register of Products by the time VEECs are created.</li><li>meets the omni-directional performance requirement described in the Lighting Product Application Guide</li></ul>



Requirements	Description
Training/licensing	<p>Installers must be:</p> <ul style="list-style-type: none"> <li>• a licensed electrician (also known as an 'A Grade' electrician). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework<sup>3</sup>.</li> <li>• suitably trained to minimise mercury risks associated with the replacement of CFLs.</li> </ul>
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>• Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>• Residential premises — one lamp per luminaire at premises</li> <li>• Business/non-residential premises — one lamp per luminaire at premises.</li> </ul>

<sup>3</sup> In particular, the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>

Requirements	Description
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer (i.e. 'A grade' electrician) and consumer. The installer (i.e. 'A grade' electrician) must sign the form at the installation premises.</li> <li>• Invoice/proof of purchase listing: <ul style="list-style-type: none"> <li>– the installed product brand and model</li> <li>– purchaser's name and address</li> </ul> </li> <li>• Recycling invoice<sup>4</sup> clearly showing: <ul style="list-style-type: none"> <li>– an itemised breakdown of the disposed lighting equipment</li> <li>– the date of collection</li> </ul> </li> <li>• Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each installation and the recycling invoice</li> <li>• Stock delivery docket (or equivalent documentation) which enables you to track the product batch for an installed lamp</li> <li>• Certificate of Electrical Safety, where wiring work is required</li> <li>• Geo-tagged photo(s): <ul style="list-style-type: none"> <li>– of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>– of the installer at every installation showing their face and identity tag (or another form of ID)</li> <li>– showing the quantity of removed lamps</li> <li>– showing all models of upgrade lamp products including all relevant markings.</li> </ul> </li> </ul> <p>You must also establish and maintain:</p> <ul style="list-style-type: none"> <li>• training documents regarding mitigation of mercury risks and spillages</li> <li>• training log recording installer training, including evidence of achievement of installer competency against training requirements.</li> </ul>

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<sup>4</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

## 4.2. Activity 21B: Incandescent reflector lamp replacement

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>decommission a mains voltage incandescent reflector lamp and take it away for recycling</li><li>physically install a lamp which meets the below product criteria.</li></ul> <p>Installers must not:</p> <ul style="list-style-type: none"><li>install a LED lamp into dimmable circuits unless the lamp is listed as suitable for dimmable circuits in our Register of Products</li><li>give the resident/business spare LED lamps</li><li>replace LED lamps.</li></ul>
Product criteria	<p>A LED lamp that:</p> <ul style="list-style-type: none"><li>achieves a minimum light source efficacy level of 45 lumens/watt</li><li>has a minimum lifetime rating of 12,000 hours</li><li>when externally installed, must have a minimum tested total luminous flux of 950 lumens, a minimum IP rating of IP44 and be fit for purpose</li><li>if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit</li><li>has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li><li>has a minimum power factor of 0.55</li><li>is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must complete the following MST requirements units:</p> <ul style="list-style-type: none"><li>One MST unit from Group A</li><li>One MST unit from Group B</li><li>One MST unit from Group C.</li></ul> <p>Refer to Table 2 above.</p> <p>If electrical work is required, installers must be licensed electricians (also known as 'A Grade' electricians). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework.<sup>5</sup></p>

<sup>5</sup> In particular the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>

Requirements	Description
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>Residential premises — one lamp per luminaire(socket) at premises</li> <li>Business/non-residential premises — one lamp per luminaire(socket) at premises.</li> </ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>VEEC assignment form completed and signed by the installer and consumer</li> <li>Invoice/proof of purchase listing the: <ul style="list-style-type: none"> <li>installed product brand and model</li> <li>purchaser's name and address</li> </ul> </li> <li>Recycling invoice<sup>6</sup> clearly showing: <ul style="list-style-type: none"> <li>an itemised breakdown of the disposed lighting equipment</li> <li>the date of collection</li> </ul> </li> <li>Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each installation and the recycling invoice</li> <li>Certificate of Electrical Safety, where wiring work is required</li> <li>Geo-tagged photo(s): <ul style="list-style-type: none"> <li>of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>showing the quantity of removed lamps</li> <li>showing all models of upgrade lamp products including all relevant markings.</li> </ul> </li> </ul>

<sup>6</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

### 4.3. Activity 21C: 12V halogen lamp replacement

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>• decommission a 12volt tungsten halogen lamp of at least 35 watts and take away for recycling</li><li>• physically install a lamp which meets the below product criteria</li><li>• conduct a pre-installation safety and compatibility inspection of existing lamps and transformers to confirm the compatibility of the new low energy lamps with the transformers and record the brand and model number of all existing electronic or magnetic transformers</li><li>• explain the installation process to the consumer, specifically the purpose and outcomes of the pre-installation check (including incompatible lamp/transformer combinations)</li><li>• provide the consumer with information relating to their lamp's compatibility with standard Australian transformers</li><li>• outline what the consumer should do if there are any post-installation issues.</li></ul> <p>Installers must not:</p> <ul style="list-style-type: none"><li>• install a LED lamp into dimmable circuits unless the lamp is listed as suitable for dimmable circuits in our Register of Products</li><li>• give the resident/business spare LED lamps</li><li>• replace LED lamps</li><li>• replace mains voltage lamps.</li></ul>

Requirements	Description
Product criteria	<p>A non-integrated LED lamp that:</p> <ul style="list-style-type: none"> <li>• if installed in a dimmable circuit, is approved by the manufacturer as suitable for a dimmable circuit</li> <li>• achieves a minimum light source efficacy level of 52 lumens/watt</li> <li>• has a minimum light output of 420 lumens</li> <li>• has a minimum lifetime rating of 15,000 hours</li> <li>• has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li> <li>• in the case of a product installed in residential premises, has a minimum beam angle of 55 degrees as determined in accordance with IEC/TR 61341</li> <li>• is compatible with the type of transformer or converter used with the replaced halogen lamp – compatibility as listed on the Register of Products</li> <li>• has a combined lamp circuit power factor (lamp and transformer) of <math>\geq 0.7</math> for lamps to be installed in residential premises</li> <li>• has a combined lamp circuit power factor (lamp and transformer) of <math>\geq 0.9</math> for lamps to be installed in business or other non-residential premises</li> <li>• is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must be a licensed electrician (also known as an 'A Grade' electrician). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework.<sup>7</sup></p>
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>• Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>• Residential premises — one lamp per luminaire at premises</li> <li>• Business/non-residential premises — one lamp per luminaire at premises.</li> </ul>

<sup>7</sup> In particular the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>

Requirements	Description
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer (i.e. 'A grade' electrician) and consumer. The installer (i.e. 'A grade' electrician) must sign the form at the installation premises.</li> <li>• Invoice/proof of purchase listing the: <ul style="list-style-type: none"> <li>– installed product brand and model</li> <li>– purchaser's name and address</li> </ul> </li> <li>• Recycling invoice<sup>8</sup> clearly showing: <ul style="list-style-type: none"> <li>– an itemised breakdown of the disposed lighting equipment</li> <li>– the date of collection</li> </ul> </li> <li>• Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each installation and the recycling invoice</li> <li>• Geo-tagged photo(s): <ul style="list-style-type: none"> <li>– of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>– showing the quantity of removed lamps</li> <li>– showing all models of upgrade lamp products including all relevant markings</li> </ul> </li> <li>• Non-prescribed Certificate of Electrical Safety listing all wiring work conducted.</li> </ul>

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<sup>8</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

## 4.4. Activity 21D: 12V downlight and transformer replacement

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"><li>decommission a 12 volt tungsten halogen downlight luminaire that uses a 12 volt tungsten halogen lamp of at least 35 watts and the transformer associated with the replaced lamp and take them away for recycling</li><li>physically install a luminaire which meets the product criteria below</li><li>explain the installation process to the consumer</li><li>outline what the consumer should do if there are any post-installation issues.</li></ul> <p>Installers must not:</p> <ul style="list-style-type: none"><li>install a luminaire into dimmable circuits unless the luminaire is listed as suitable for dimmable circuits in our Register of Products</li><li>give the resident/business spare LED luminaires</li><li>replace existing LED luminaires</li><li>replace mains voltage luminaires.</li></ul>
Product criteria	<p>A mains voltage downlight LED luminaire that:</p> <ul style="list-style-type: none"><li>if the downlight luminaire is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for a dimmable circuit</li><li>achieves a minimum light source efficacy level of 48 lumens/watt</li><li>has a minimum light output of 400 lumens</li><li>has a minimum lifetime rating of 15,000 hours</li><li>has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li><li>in the case of a product installed in residential premises, has a minimum beam angle of 40 degrees when determined in accordance with IEC/TR 61341</li><li>has a minimum power factor of 0.55</li><li>is listed on the Register of Products by the time VEECs are created.</li></ul>
Training/licensing	<p>Installers must be a licensed electrician (also known as an 'A Grade' electrician). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework.<sup>9</sup></p>

<sup>9</sup> In particular the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>



Requirements	Description
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>Residential premises — one lamp per luminaire(socket) at premises</li> <li>Business/non-residential premises — one lamp per luminaire(socket) at premises.</li> </ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>VEEC assignment form completed and signed by the installer (i.e. 'A grade' electrician) and consumer. The installer (i.e. 'A grade' electrician) must sign the form at the installation premises.</li> <li>Invoice/proof of purchase listing the: <ul style="list-style-type: none"> <li>installed product brand and model</li> <li>purchaser's name and address</li> </ul> </li> <li>Recycling invoice<sup>10</sup> clearly showing: <ul style="list-style-type: none"> <li>an itemised breakdown of the disposed lighting equipment</li> <li>the date of collection</li> </ul> </li> <li>Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each upgrade site and the recycling invoice</li> <li>Geo-tagged photo(s): <ul style="list-style-type: none"> <li>of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>showing the quantity of removed lamps</li> <li>showing all models of upgrade lamp and transformer products including all relevant markings</li> </ul> </li> <li>Non-prescribed Certificate of Electrical Safety listing all wiring work conducted.</li> </ul>

<sup>10</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

## 4.5. Activity 21E: Mains voltage GU10 halogen lamp replaced with GU10 lamp

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"> <li>decommission a mains voltage tungsten halogen lamp of at least 35 watts with a GU10 base and take away lamps for recycling</li> <li>physically install a lamp which meets the product criteria below</li> <li>outline what the consumer should do if there are any post-installation issues.</li> </ul> <p>Installers must not:</p> <ul style="list-style-type: none"> <li>install a LED lamp into dimmable circuits unless the lamp is listed as suitable for dimmable circuits in our Register of Products</li> <li>give the resident/business spare GU10 LED lamps</li> <li>replace existing GU10 LED lamps.</li> </ul>
Product criteria	<p>A LED lamp with integrated driver that has a GU10 base which:</p> <ul style="list-style-type: none"> <li>achieves a specified minimum light source efficacy level of 48 lumens/watt</li> <li>has a minimum light output of 400 lumens</li> <li>has a minimum lifetime rating of 15,000 hours</li> <li>has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li> <li>if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for a dimmable circuit</li> <li>in the case of a product installed in residential premises, has a minimum beam angle of 55 degrees when determined in accordance with IEC/TR 61341</li> <li>has a minimum power factor of 0.55</li> <li>is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must be a licensed electrician (also known as an 'A Grade' electrician). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework.<sup>11</sup></p>

<sup>11</sup> In particular, the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>

Requirements	Description
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>• Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>• Residential premises — one lamp per luminaire at premises</li> <li>• Business/non-residential premises — one lamp per luminaire at premises.</li> </ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer (i.e. 'A grade' electrician) and consumer. The installer (i.e. 'A grade' electrician) must sign the form at the installation premises.</li> <li>• Invoice/proof of purchase listing the: <ul style="list-style-type: none"> <li>– installed product brand and model</li> <li>– purchaser's name and address</li> </ul> </li> <li>• Recycling invoice<sup>12</sup> clearly showing: <ul style="list-style-type: none"> <li>– an itemised breakdown of the disposed lighting equipment</li> <li>– the date of collection</li> </ul> </li> <li>• Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each upgrade site and the recycling invoice</li> <li>• Geo-tagged photo(s): <ul style="list-style-type: none"> <li>– of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>– showing the quantity of all removed lamps</li> <li>– showing all models of upgrade lamp products including all relevant markings</li> </ul> </li> <li>• Certificate of Electrical Safety listing all wiring work conducted.</li> </ul>

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<sup>12</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

## 4.6. Activity 21F: Mains voltage GU10 downlight replaced with integrated downlight

Requirements	Description
Activity	<p>Installers must:</p> <ul style="list-style-type: none"> <li>decommission a mains voltage tungsten halogen downlight luminaire that uses a tungsten halogen lamp of at least 35 watts with a GU10 base and take it away for recycling</li> <li>physically install a luminaire which meets the product criteria below</li> <li>outline what the consumer should do if there are any post-installation issues.</li> </ul> <p>Installers must not:</p> <ul style="list-style-type: none"> <li>install a luminaire into dimmable circuits unless the lamp is listed as suitable for dimmable circuits in our Register of Products</li> <li>give the resident/business spare LED lamps and/or LED luminaires</li> <li>replace existing LED lamps and/or LED luminaires.</li> </ul>
Product criteria	<p>A mains voltage downlight LED integrated luminaire that:</p> <ul style="list-style-type: none"> <li>achieves a minimum light source efficacy level of 48 lumens/watt</li> <li>has a minimum light output of 400 lumens</li> <li>has a minimum lifetime rating of 15,000 hours</li> <li>has a colour temperature that is, or is capable of being set to, warm white (2700K up to and including 3500K) or cool white (more than 3500K up to and including 4000K)</li> <li>if the luminaire is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for a dimmable circuit</li> <li>in the case of a product installed in residential premises, has a minimum beam angle of 40 degrees when determined in accordance with IEC/TR 61341</li> <li>has a minimum power factor of 0.55</li> <li>is listed on the Register of Products by the time VEECs are created.</li> </ul>
Training/licensing	<p>Installers must be a licensed electrician (also known as an 'A Grade' electrician). Work may also be performed by the holder of a supervised worker's licence (L) or (ES) (i.e. apprentices) provided they are effectively supervised by an A Grade electrician in accordance with the guidance outlined in Energy Safe Victoria's supervising framework.<sup>13</sup></p>

<sup>13</sup> In particular, the elements of effective supervision outlined in <https://www.esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/electrical-technical-guidelines-and-determinations/requirements-for-the-effective-supervision-of-apprentice-electricians/>

Requirements	Description
Eligible environments and installation limits	<ul style="list-style-type: none"> <li>• Lamp must be installed in a light fitting that is connected to an electricity supply before installation, and operable after the installation</li> <li>• Residential premises — one lamp per luminaire at premises</li> <li>• Business/non-residential premises — one lamp per luminaire at premises.</li> </ul>
Evidence	<p>For each installation you must collect and maintain the following:</p> <ul style="list-style-type: none"> <li>• VEEC assignment form completed and signed by the installer (i.e. 'A grade' electrician) and consumer. The installer (i.e. 'A grade' electrician) must sign the form at the installation premises.</li> <li>• Invoice/proof of purchase listing the: <ul style="list-style-type: none"> <li>– installed product brand and model</li> <li>– purchaser's name and address</li> </ul> </li> <li>• Recycling invoice<sup>14</sup> clearly showing: <ul style="list-style-type: none"> <li>– an itemised breakdown of the disposed lighting equipment</li> <li>– the date of collection</li> </ul> </li> <li>• Stock reconciliation itemising the disposed lighting equipment decommissioned per upgrade site in kilograms to establish a link between each upgrade site and the recycling invoice</li> <li>• Geo-tagged photo(s): <ul style="list-style-type: none"> <li>– of each upgrade space showing the inefficient lamps and/or fittings in each area before removal from their original position</li> <li>– showing the quantity of removed lamps</li> <li>– showing all models of upgrade lamp products including all relevant markings</li> </ul> </li> <li>• Certificate of Electrical Safety listing all wiring work conducted.</li> </ul>

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<sup>14</sup> From 1 July 2019, EPA requires that all e-waste in Victoria must be provided to an e-waste service provider. Please refer to section 1.3.1 for further information.

# Glossary

Term	Definition
CFL	Compact fluorescent lamp
Cool white	A colour temperature above 3500 Kelvin up to and including 4000 Kelvin.
Decommission	Disable and render permanently unusable.
Flue or chimney balloon	A device that, when inflated, is intended to block the movement of air in a chimney or flue.
Incandescent GLS lamp	An incandescent lamp designed for general use.
Incandescent lamp	A lamp in which light is produced by means of an element heated to incandescence by means of an electric current.
LED	Light emitting diode
LED integrated luminaire	A product that contains a LED device and the equipment required to distribute, filter or transform the light being transmitted and includes: <ul style="list-style-type: none"> <li>• all parts necessary for supporting, fixing and protecting the product and for connecting the product to the electricity supply</li> <li>• any lighting control device for the product.</li> </ul>
LED lamp with integrated driver	A self-ballasted LED module, incorporating control gear and any additional elements necessary for stable operation, that is designed for direct connection to an electricity supply.
Licensed electrician	Licensed electrician means an A Grade electrician licensed under the Electricity Safety Act 1998 to carry out electrical work.
Light output	The luminous flux emitted by a lamp or luminaire measured in lumens.
Light source	In relation to a non-integrated luminaire, is the lamp fitted to the luminaire, or in relation to a LED integrated luminaire, is the whole luminaire.
Light source efficacy	The initial luminous flux of a light source or the total radiant flux in the visible spectrum weighted by the spectral response of the eye, divided by the electric power that will be consumed by the light source but excluding any remote ballast and control gear power losses.
Luminaire	A non-integrated luminaire or a LED integrated luminaire.
Reflector lamp	A lamp in which part of the bulb is coated with reflective material in order to direct light.
Residential premises	A building classified as a Class 1, 2, 3 or 4 building under Part A3 of Volume One of the Building Code.
Total U-value	Total U-value means the thermal transmittance ( $W/m^2K$ ) of the composite element allowing for the effect of any airspace and associated surface resistances.
Tungsten filament lamp	An incandescent lamp whose luminous element is a filament of tungsten.

Term	Definition
Tungsten halogen lamp	A gas-filled lamp that contains halogens or halogen compounds and a filament of tungsten.
VEEC	Victorian energy efficiency certificate created under section 17 of the Victorian Energy Efficiency Target Act 2007.
Warm white	A temperature of at least 2700 Kelvin up to and including 3500 Kelvin.
Warranty	A warranty against defects.
WERS	The Window Energy Rating Scheme managed by the Australian Window Association.
Window	Includes glass roof light, glass panel, glass block, glass brick, glazed sash, glazed part of a door or similar glass product that, when closed, transmits natural light but does not include a louvered product.

# Appendix A: Activity approval and VEEC assessment requirements for activity 21A

## Approval requirements

All accredited persons currently accredited to undertake activity 21 (lighting) who intend to undertake installations under activity 21A from 10 December 2018 will need to be approved by us to undertake this activity under the 2018 VEET Regulations.

To apply for approval to undertake this activity, you need to provide us with updated information and/or process documentation on the following items:

- Estimated monthly VEEC creation – include methodology
- Lead generation methods – include details of any subcontracting of this service
- Compliance and quality assurance processes
- Internal training materials
- Decommissioning process – include step by step details of your reconciliation methods to ensure decommissioning occurs prior to VEEC creation.

You must submit your information and documentation by email to [veu@esc.vic.gov.au](mailto:veu@esc.vic.gov.au) with the subject heading 'AP Name – activity 21A – updated accreditation materials'.

Following review of your submitted information, you may be required to meet with our Audit and Compliance team and the VEU Director to discuss your business model and demonstrate to us how your organisation will manage compliance with the activity requirements.

If you have not operated under the VEU program for some time, you must inform of us of any significant changes to your business. In particular:

- transfer of ownership of your VEU accredited entity to a different party
- transfer of operations of your VEU accredited entity to a different party.

## VEEC assessment requirements

Upon submission of VEEC creation claims for activity 21A, all APs will be subject to a first creation assessment to ensure you meet the relevant evidence requirements for this revised activity. Subsequent VEEC creation claims may be delayed until the first creation assessment is complete.

We will also be increasing our phone and field audit program for this activity. We encourage you to increase your own phone and field audit program for this activity to identify non-compliant installations by installers.



## Appendix B: Lead generation requirements

All accredited persons (AP) undertaking installations under activity 21A must:

- provide us with details of the service level agreements with your lead generator and sales organisations clearly showing your relationship with these organisations
- provide us with the following information on a weekly basis (by COB each Monday) via [veu@esc.vic.gov.au](mailto:veu@esc.vic.gov.au):
  - lead generator and sales organisations you have used in the previous week [and the postcodes targeted]
  - and the lead generators and sales organisation you propose to use in the coming week [and the postcodes targeted]
- ensure that all lead generators, salespeople and doorknockers wear ID and inform the consumer their name, and the name and address of the AP they represent
- ensure that all lead generators, salespeople and doorknockers inform the consumer the VEU program is a **voluntary** government initiative and that consumers can learn more about the program at the commission website, [www.esc.vic.gov.au/veu](http://www.esc.vic.gov.au/veu)
- ensure that all lead generators, salespeople and installers do not make false or misleading claims such as claiming they work for, or on behalf of, the Victorian Government

## Appendix C: Minimum phone and field audit requirements for Activities 15, 17 and 21

### Accredited person internal audits

We recommend that accredited persons undertake internal audits to ensure that VEECs are created in compliance with the legislation and evidence requirements governing the VEU program. Your implementation of service and quality assurance measures is necessary to uphold the integrity of the VEU program.

You are assigned a risk rating by the commission upon accreditation. Based on this rating, where undertaking a prescribed activity deemed to be 'high risk', you are required to audit a certain percentage of these upgrades.

### Minimum audit and compliance requirements

Outlined below are the minimum evidence requirements that should be collected by you during internal audits. The more detailed your audit, the greater assurance you will gain that installers are carrying out prescribed activities in accordance with the requirements of the program.

This activity guide does not provide an exhaustive list of all information that you should gather in all instances and is recommended for use as a guide only. Changing circumstances, such as new prescribed activities and new business environments, may result in the need to collect information beyond what is listed in this activity guide.

You are responsible for being responsive to changing circumstances and altering your internal audit regimes where necessary, in order to maintain suitable levels of assurance.

If in doubt, you should contact the commission to discuss acceptable quality assurance measures.

### General requirements applicable to Activities 15, 17 and 21

For phone and field audits, you should verify:

- the name of the resident/business
- the address of the resident/business
- whether the resident/authorised signatory was present at the time of the installation
- the number of rooms/levels in the residence/premises
- whether the resident/business had ever previously had the same activity performed at the residence/premises

- whether a copy of the all relevant documents were provided to the resident/authorised signatory.

## Specific field and phone audit requirements

### Activity 15: Weather sealing

For phone and field audits, you should verify or determine:

- the total number of products physically installed into the premises per product type
- if the products were all physically installed by the installer. If not, why?
- if any spares were provided. If so, how many?
- if any of the areas were previously sealed. If so, how many?
- if the installer provided instructions on how to use the installed product (e.g. manufacturer's instructions)
- if any sealing products had been removed or were no longer being used by the resident. If so, how many and why?
- if the door seals were installed on internal or external doors (Activity 15A)
- if any of the door seals impair the normal operation of the door (Activity 15A)
- if the window seals were installed on external windows (Activity 15B)
- if the window seals impair the normal operation of the window (Activity 15B)
- whether the installation required wiring work to be undertaken, and whether a qualified electrician conducted the installation (Activities 15C and 15D)
- if the installer undertaking the installation was a qualified electrician (Activity 15D)
- if wiring work was undertaken and, if so, whether the resident/business was supplied with a Certificate of Electrical Safety (Activities 15C and 15D)
- whether the sealing product allows airflow when fan is in use and restricts airflow when not operating and expels air outside or into the roof space of the premises (Activity 15C and 15D)
- if wall seals were installed on unsealed wall vents (Activity 15E)
- whether the chimney or flue is attached to a chimney used to burn solid fuel and restricts the airflow when closed (Activity 15F and Activity 15G)
- if any chimneys or flues had previously been sealed. If so, how many? (Activities 15F and 15G)
- if a chimney or flue sealing product has been installed (Activity 15G)
- if the sealing product was fitted to the ceiling outlet of a unsealed ducted evaporative cooling system and restricts the airflow from inside the premises (Activity 15H)
- any other comments or issues.

### Activity 17: Low flow shower rose

For phone and field audits, you should verify or determine:

- the total number of shower roses physically installed into the residence/premises

- if the shower roses were all physically installed by the installer. If not, why?
- if any of the existing shower roses at the premises were under 9L/min flow rate and if any of these were replaced. If so, how many?
- the total number of bathrooms in the premises
- if any spares were provided. If so, how many?
- if the existing shower roses were removed from the premises. If not, why?
- any other comments or issues.

### Activity 21: Incandescent lighting

For phone and field audits, you should verify or determine:

- the total number of LED lamps physically installed into the premises
- the total number of LED lamps physically installed into each room/area of the premises and the types of existing lamps, to ensure compliance with the VEET Regulations. For example:
  - Activity 21B - 10 external incandescent reflector flood light (compliant), 2 external incandescent GLS lamp (non-compliant)
- if the LED lamps were all physically installed by the installer? If not, how many and why?
- if any spare LED lamps were provided. If so, how many?
- if any existing LED lamps were replaced with LED lamps. If so, how many?
- if any unapproved (non-dimmable) LED lamps were installed into dimmable circuits. If so, how many?
- if any of the LED lamps had experienced flickering/failure. If so, how many? (Activities 21C, 21D, 21E and 21F)
- if the existing transformers were replaced by the installer. If so, how many? (Activities 21C and 21D)
- if any existing transformers were replaced by the installer, to distinguish if the claim is being made for the correct sub-schedule (Activities 21E and 21F)
- if the existing lamps were taken away for decommissioning and confirm the quantity and types of lamps decommissioned
- if the installer explained the installation process to the consumer and did a pre-installation check, including incompatible lamp/transformer combinations (Activity 21C)
- if the installer undertaking the installation was a licensed electrician (Activities 21A, 21C, 21D, 21E and 21F)
- if the licensed electrician conducted a pre-installation safety and compatibility inspection of all lamps and transformers (Activity 21C)
- if wiring work was undertaken and, if so, whether the resident/business was supplied with a Certificate of Electrical Safety
- any other comments or issues.

## Document Version History

Version	Amendments	Date published
1.0	First release	10 December 2018
1.1	Clarification to photograph requirements for activities 21A to 21F	31 January 2019
1.2	Release of training/licensing requirements for activity 21A Clarification on installation of non-omni directional lamps for activity 21A	12 February 2019
1.3	Clarification of licensed electrician requirement for activity 21 Clarification of audit requirements for activity 21	4 April 2019
1.4	Update to extend period allowing non omni-directional lamps under activity 21A to be installed until 31 July 2019	1 May 2019
2.0	Update to:- <ul style="list-style-type: none"> <li>incorporate 10 June 2019 specification amendments</li> <li>remove activity 28 (moved to another activity guide)</li> </ul>	10 June 2019
2.1	Update to: <ul style="list-style-type: none"> <li>reflect introduction of EPA's e-waste policy and associated update to decommissioning evidence.</li> <li>include additional lead generation requirements for Activity 21A in Appendix B</li> </ul>	1 July 2019
2.2	Update to: <ul style="list-style-type: none"> <li>clarify eligible environment requirements for activity 21</li> <li>clarify sign-off requirement on VEEC assignment forms for activities 21A, 21C, 21D, 21E and 21F</li> <li>remove transition arrangements/requirements in respect of installation of non-omni directional lamps</li> </ul>	29 August 2019