

<b>Install an LED Down-light Lamp or LED Down-light Luminaire; Residential Only</b> <b>L2A – ELV Down-Light Lamp Replacement</b> <b>L2B – ELV Down-Light Luminaire Replacement</b>	<b>Activity No.</b>
	<b>L2</b>

## 1. ACTIVITY SPECIFIC DEFINITIONS

**Integral ELV LED lamp** means a lamp with power supply electronics integrated into the lamp housing allowing direct connection to existing 12V power supply

**Integral MV LED lamp** means a lamp with power supply electronics integrated into the lamp housing allowing direct connection to existing mains power supply

**Mains voltage (MV) LED down-light luminaire** means a mains voltage LED light fixture incorporating light source, power supply electronics and luminaire housing that does not rely on any existing components of the replaced equipment in order to operate

**ELV** means extra low voltage, which in this context means nominal 12V a.c. or d.c.

**Luminaire** means apparatus which distributes, filters or transforms the light transmitted from one or more lamps and which includes, except the lamps themselves, all the parts necessary for fixing and protecting the lamps and, where necessary, circuit auxiliaries together with the means for connecting them to the electricity supply

**Beam Angle:** the angle between the opposing points on the beam axis where the intensity drops to 50 per cent of its maximum

## 2. ACTIVITY DESCRIPTION (SUMMARY)

L2A Replace ELV halogen lamp with an integral ELV LED lamp.

L2B Replace ELV halogen lamp and transformer with an integral MV LED lamp or MV LED down-light luminaire.

## 3. ACTIVITY ELIGIBILITY REQUIREMENTS

- (1) All equipment that is replaced must be in working order immediately prior to removal.
- (2) Where it can be demonstrated that the lamps and transformer being replaced have not previously been installed for the purposes of REPS, activity L2A and L2B can be delivered twice per premises, providing that all other aspects of the specification are met.

## 4. INSTALLED PRODUCT REQUIREMENTS

- (1) Be installed at the time of removal of the existing equipment.
- (2) Be either a "warm white" (rated colour temperature of 2700K to 3500K) or "cool white" (rated colour temperature of 3500K to 4000K) lamp. The installer is required to install either warm white or cool white according to the preference of the home owner, where no preference is provided then warm white shall be installed.
- (3) Have a measured average initial luminous flux (verified by test report - test procedure as required by one of the programs described below) of at least 400 lumens.
- (4) Have a measured average minimum initial luminous efficacy of 90 Lumens/Watt.
- (5) Have a minimum beam angle of 40 degrees.
- (6) Either:

- (a) Be approved under the NSW ESS or Victorian VEU scheme or
  - (b) meet Energy Star specifications (Integral LED Lamps V1.4 or Energy Star Lamps V1.0) by providing, where required for verification, current proof of program certification.
- (7) Provide a minimum 2 years replacement warranty.

## 5. MINIMUM INSTALLATION REQUIREMENTS

- (1) A person or entity undertaking this activity shall use best endeavours to ensure that any replacements are targeted at high usage luminaires in the first instance.
- (2) All equipment replaced shall be removed from the premises and not re-used.
- (3) Installed equipment shall not be connected to a transformer, dimmer, timer, motion sensor, daylight switch or other automated switch or control (or combination thereof) unless specified by the manufacturer as being compatible with such device or combinations of devices.
- (4) If connected to a dimmer, the installer shall test the equipment through its full dimming range to ensure that the equipment works to the satisfaction of the customer.
- (5) Where installed equipment causes sub-optimal operation, the installer shall either reinstall equipment equivalent to the original equipment or replace any components of the equipment that are causing the installation not to operate, at no expense to the resident. Such a request for reinstatement must be acted upon if made within 20 business days of the installation of the new equipment.
- (6) The activity must be performed by a licensed electrical worker under the supervision of a licensed electrical contractor.
- (7) An Electrical Certificate of Compliance must be provided and retained for verification purposes.

## 6. NORMALISED REPS GIGAJOULES

The normalised REPS gigajoules achieved (per unit installed) from undertaking this activity is equal to:

Normalised REPS Gigajoules = The relevant Productivity factor (as per table below) x REPS Transition Factor (as per table below).

### ACTIVITY L2 – PRODUCTIVITY FACTORS

A	Replacement Lamp Efficacy Range					
Activity	90 – 99 Lm/W	100-109 Lm/W	110-119 Lm/W	120-129 Lm/W	130-139 Lm/W	140 + Lm/W
L2A - Lamp only replacement	0.147	0.189	0.224	0.253	0.278	0.299
L2B - Lamp and transformer replacement	0.155	0.197	0.231	0.260	0.284	0.304

## ACTIVITY L2 – REPS TRANSITION FACTORS

Year of Installation	REPS Transition Factor
2021	2.5
2022	1.25
2023	1
2024	1
2025 onwards	1

### 7. GUIDANCE NOTES (INFORMATIVE ONLY – NOT MANDATORY)

All reasonable endeavours should be undertaken to recycle removed equipment

Transition factors have been applied to certain REPS activities to provide a pathway to transition the REPS toward delivery of a preferred mix of activities over the first five-year stage. Application of these factors provides a phased trajectory for retailers that addresses both the challenge of managing the downgrading of deemed gigajoules for lighting activities due to reducing additionality, as well as the pivot toward business models to deliver deeper retrofit activities and demand response activities