

Install an LED General Purpose Lamp; Residential Only	Activity No.
	L1

1. ACTIVITY SPECIFIC DEFINITIONS

Integral referring to a lamp means that the power supply electronics are integrated into the lamp housing allowing direct connection to the existing power supply (typically using a Bayonet cap or Edison screw fitting).

Standard LED means an integral LED lamp with initial efficacy of not less than 90 lm/W (non-directional lamp) or 85 lm/W (directional lamp)

High Efficiency LED means an integral LED lamp with initial efficacy of not less than 125 lm/W (non-directional lamp) or 100 lm/W (directional lamp)

Directional Lamp: Directional lamps include types PAR, ER, R, RE, XR, YR, ZR or MR 11-16 or any other type that has at least 80 % light output within a cone with an angle of 120°

Non-Directional Lamp: A lamp other than a directional lamp

2. ACTIVITY DESCRIPTION (SUMMARY)

Replace a mains voltage incandescent or halogen lamp (non-directional or directional) with a light emitting diode integral lamp (LED).

3. ACTIVITY ELIGIBILITY REQUIREMENTS

- (1) The number of individual lamp replacements in any one premises shall not exceed 40.
- (2) All equipment that is replaced must be in working order immediately prior to removal.
- (3) Replaced equipment (lamp) shall have rated power according to Table L1A (non-directional lamps) or Table L1B (directional lamps). Refer column B for tungsten incandescent and column C for halogen lamps. If required, intermediate values of rated power are referenced to the next lower rated power.
- (4) Where it can be demonstrated that the lamps being replaced have not previously been installed for the purposes of REES, Activity L1 can be delivered twice per premises, providing all other aspects of the specification are met.

4. INSTALLED PRODUCT REQUIREMENTS

The installed product shall:

- (1) Be installed at the time of removal of the existing equipment.
- (2) Have an equivalent light output to that of the replaced lamp
- (3) 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.
- (4) Have a measured average initial luminous flux (for LEDs test procedure as required by the programs described below) of at least the corresponding* value in column D of Table L1A

(non-directional lamps) or Table L1B (directional lamps). *Note that this should correspond to the class of replaced lamp.

- (5) Provide a minimum 2 years replacement warranty.
- (6) Either
 - (a) Be approved under the NSW ESS or VEET scheme, or
 - (b) demonstrate compliance with either Energy Star Integral LED Lamps V1.4 or Energy Star Lamps V1.0 by providing, where required for verification, current proof of program certification.
- (7) For High Efficiency LEDs, demonstrate, where required for verification, through test reports from a NATA or Energy Star recognised laboratory, a minimum initial efficacy of not less than 90 lm/W (non-directional lamp) or 85 lm/W (directional lamp).

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 person undertaking this activity in a residential customer's premises must satisfy the REES Code mandatory safety training requirements. Registered Plumbers, Gas Fitters, Electricians and Building Work Supervisors are exempt from this requirement.

6. ACTIVITY ENERGY SAVINGS

The normalised energy saved per lamp installed in a residential premises is equal to:

Normalised Energy Savings (GJ)=Savings factor expressed in column E, F, G or H of the tables below, as applicable:

Table L1A: Non-Directional Lamps

A	B	C	D	E	F
Class	Removed Lamp: Typical rated incandescent lamp power (W)	Removed Lamp: Typical rated halogen lamp power (W)	Installed Lamp: Minimum luminous flux (lumens)	Standard LED Savings Factor	High Efficiency LED Savings Factor
0	25	18	200	0.23	0.27
1	40	28	350	0.39	0.45
2	60	42	650	0.70	0.81
3	75	53	850	0.90	1.05
4	100	70	1150	1.22	1.41
5	150 or higher	105 or higher	1800	1.89	2.19

Table L1B: Directional Lamps

A	B	C	D	E	F
Class	Removed Lamp: Typical rated incandescent lamp power (W)	Removed Lamp: Typical rated halogen lamp power (W)	Installed Lamp: Minimum luminous flux (lumens)	Standard LED Savings Factor	High Efficiency LED Savings Factor
0	25	18	150	0.15	0.16
1	40	28	250	0.23	0.26
1a	50	35	350	0.31	0.35
2	60	42	460	0.40	0.44
3	75	53	600	0.51	0.57
4	100	70	810	0.69	0.76
4a	120	84	990	0.83	0.93
5	150 or higher	105 or higher	1260	1.05	1.17

7. GUIDANCE NOTES (INFORMATIVE ONLY – NOT MANDATORY)

All reasonable endeavours should be undertaken to recycle removed equipment.