Australian Capital Territory

Energy Efficiency (Cost of Living) Improvement (Eligible Activities) Determination 2016 (No 2)

Notifiable Instrument NI2016–692

made under the

Energy Efficiency (Cost of Living) Improvement Act 2012, s10 (Eligible activities)

1 Name of instrument

This instrument is the *Energy Efficiency (Cost of Living) Improvement (Eligible Activities) Determination 2016 (No 2).*

2 Commencement

This instrument commences on the day after notification.

3 Determination of eligible activities

I determine that the activities described in schedules 1 to 5 are eligible activities.

4 Dictionary

I determine that schedule 6 is the dictionary for schedules 1 to 5.

5 Revocation

Energy Efficiency (Cost of Living) Improvement (Eligible Activities) Determination 2016 (NI2016-382) is revoked.

Shane Rattenbury MLA
Minister for Climate Change and Sustainability

13 December 2016

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Schedule 1 Residential building envelope activities

Part 1.1 Building sealing activities

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, restrict pre-existing air infiltration into, or air leakage out of, a premises by installation of fixed sealing to one or more of—

(a) an unsealed door frame in an external wall; or

(b) an unsealed door frame in a part of an internal wall that divides a conditioned zone or zones from an unconditioned zone or zones; or

(c) each unsealed edge of an external door; or

(d) each unsealed edge of a door in a part of an internal wall that divides a conditioned zone or zones from an unconditioned zone or zones; or

(e) an unsealed window frame in an external wall; or

(f) each unsealed edge of an openable window.

2. Minimum activity performance specifications

To be an eligible activity, a building sealing activity in section 1 must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed such that when undertaken—

(i) separately; or

(ii) in association with another eligible activity or activities; or

(iii) in association with other work in the premises;

the installation maintains natural air changes and ventilation at a rate that complies with the building code and other relevant legislation in force at the time of installation; and

(d) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(e) be recorded in accordance with any relevant code of practice for the activity.

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Note Activities may be subject to audit, inspection or investigation to confirm compliance with prescribed activity requirements.

3. Installed product requirements

(1) For sealing a door frame or a door edge, other than the bottom edge of a door, an installed product must be a product that is a lightweight self-adhesive or mechanically fixed weather sealing or air sealing product made of foam, flexible plastic, polypropylene pile, rubber compressible strip, fibrous seal or the like and that is suitable for use on the door frame or door edge on which it is installed.

(2) For sealing the bottom edge of a door, an installed product must be a product that is a draught protection device.

(3) For sealing a window edge or a window frame, an installed product must be a product that is a lightweight self-adhesive weather sealing or air sealing product made of foam, flexible plastic, polypropylene pile, rubber compressible strip, fibrous seal or the like and that is suitable for use on the window frame or window edge on which it is installed.

(4) For all installed products—

(a) the product must meet any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity; and

(b) the product must effectively restrict the airflow into or out of the dwelling around the perimeter of the door or window; and

(c) the product must not impair the proper operation of the door or window.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved for the activity is the sum of all abatement factors for each item in the activity definition in section 1 of this Part undertaken in the same premises, determined by using the equations prescribed in this section.

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(2) For activity items in subsections 1(a) to 1(d) the abatement factor is calculated as—

$$Abatement\ Factor\ (tCO_2 - e) = AAV \times N$$

Where—

(a) *AAV* is the relevant activity abatement value prescribed for the activity item in Table 1.1; and

(b) *N* is the number of doors, including the associated door frame, in the premises to which sealing has been installed and each door is counted once only.

(3) For activity items in subsections 1(e) and 1(f) the abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times m^2$$

Where—

(a) *AAV* is the relevant activity abatement value prescribed for the activity in Table 1.1; and

(b) m^2 is the area of glazing in square meters, rounded to the nearest square centimetre, of all the windows, including the associated window frame, in the premises to which sealing has been installed and each window is counted once only.

Table 1.1 Activity abatement values for building sealing activities

Activity item	**Activity abatement value (tCO_2-e)**
Items 1.1 (1)(a) to (1)(d) — doors	0.1684
Items 1.1 (1)(e) to (1)(f) — external windows	0.0122

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Part 1.2 Exhaust fan sealing activities

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, restrict the air infiltration into, or air leakage out of, a premises by carrying out one or more of—

(a) removing and decommissioning an exhaust fan that is not fitted with a self-closing sealing device and is installed in a ceiling or wall and replacing the removed exhaust fan with an exhaust fan fitted with a self-closing sealing device; or

(b) fitting a self-closing sealing device on an existing exhaust fan that is not fitted with a self-closing sealing device.

2. Minimum activity performance specifications

To be an eligible activity the exhaust fan sealing activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

(1) For the activity item in subsection (1) (a), an installed product must be a product that is a ceiling or wall exhaust fan that is fitted with a self-closing damper, flap, filter or other sealing product that can be closed to seal the exhaust of a fan and is suitable for installation in the location in which it is installed.

(2) For the activity item in subsection (1) (b), an installed product must be a product that is a self-closing damper, flap, filter or other sealing product that can be closed to seal the exhaust of a fan and is suitable for installation on the exhaust fan on which it is installed.

(3) For all products, an installed product must comply with any product safety or other product performance requirements in a relevant code of practice or other relevant

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legislation applying to the activity or product such as prescribed articles of electrical equipment.

(4) If the product is a self-closing sealing device to be fitted to an existing exhaust fan, it must—

(a) not interfere with the normal operation of the exhaust fan; and

(b) be compatible with the existing exhaust fan in accordance with the exhaust fan and sealing device manufacturer's specifications; and

(5) For all products, the product must be listed in the register of products.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved for the activity is the sum of all abatement factors for each item in the activity definition in section 1 of this Part undertaken in the same premises determined by using the equations prescribed in this section.

(2) For activity items in subsections 1(a) and 1(b) the abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times N$$

Where—

(a) *AAV* is the relevant activity abatement value prescribed for the activity item in Table 1.2; and

(b) *N* is the number of activity items undertaken.

Table 1.2 Activity abatement values for exhaust fan sealing activities

Activity item	Activity Abatement Value (tCO_2-e)
1.2 (1) (a) Replace an unsealed ceiling or wall exhaust fan with a self-sealing exhaust fan	0.4171
1.2 (1) (b) Sealing an existing exhaust fan	0.4171

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Part 1.3 Ventilation opening sealing activities

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, restrict the air infiltration into, or air leakage out of, a premises by carrying out one or more of—

(a) installing a sealing product or products to permanently seal ventilation openings in an external wall, other than external wall openings to underfloor enclosures; or

(b) installing a damper or flap in a chimney or flue of an open solid fuel burning appliance that can be closed to seal the chimney or flue.

2. Minimum activity performance specifications

To be an eligible activity the ventilation opening sealing activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed such that when undertaken—

(i) separately; or

(ii) in combination with another eligible activity or activities; or

(iii) in association with other work in the premises;

the installation maintains natural air changes and ventilation at a rate that complies with the building code and other relevant legislation in force at the time of installation; and

(d) for the activity item in subsection 1(b), allow the safe and effective operation of the solid fuel burning appliance; and

(e) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(f) be recorded in accordance with any relevant code of practice for the activity.

Note 1 Sealing of ventilation openings and installation of sealing to a chimney or flue of a solid fuel burning appliance are subject to obtaining any required building approvals.

Note 2 All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

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3. Installed product requirements

(1) For the activity item in subsection 1(a), an installed product must be a product suitable for sealing, or restricting air infiltration and leakage from a ventilation opening in an external wall.

(2) For the activity item in subsection 1(b), an installed product must be a product that is a damper or flap suitable for installation in the solid fuel burning appliance in which it is installed that can be closed to seal a chimney or flue chimney and can be opened to allow the safe and effective operation of the appliance.

(3) For all activity items**,** an installed product must be a product that—

(a) complies with any product safety or other product performance requirements in a relevant code of practice or any other relevant legislation applying to the activity; and

(b) is listed on the register of products for the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved for the activity is the sum of all abatement factors for each item in the activity definition in section 1 of this Part undertaken in the same premises, determined by using the equations prescribed in this section.

(2) For activity items in subsections 1(a) and 1(b) the abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times N$$

Where—

(a) *AAV* is the relevant activity abatement values prescribed for the activity item in Table 1.3; and

(b) for activity item 1(a), *N* is the number of vents sealed; and

(c) for activity item 1(b), *N* is the number of chimneys or flues in which a sealing product has been installed.

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Table1.3 Activity abatement values for ventilation opening sealing activities

Activity item	Activity Abatement Value (tCO_2-e)
1.3 (1) (a) Sealing ventilation openings in an external wall	0.1054
1.3 (1) (b) Install damper or flap to chimney or flue of an open solid fuel burning appliance	2.3451

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Part 1.4 Install a thermally efficient window

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing of high thermal performance glazing or glazed products in a window opening or openings in an external wall of a conditioned zone to replace existing single glazed window/s that does not meet the minimum thermal performance requirements in section 3, so that the glazing fills the entire window opening or openings.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be a glazing product that—

(a) complies with the relevant performance requirements of AS 2047 and AS 1288; and

(b) is a window product currently rated under the WERS scheme; and

(c) has a maximum total Uw value of 4.0, as rated by WERS when calculated exclusive of window coverings; and

(d) has a minimum solar heat gain co-efficient of 0.4, as rated by WERS; and

(e) is fit for the purpose for which it is intended to be used; and

(f) must be listed in the register of products; and

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(g) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved for the activity is the sum of all abatement factors for each installed window undertaken in the same premises determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = ((-0.074 * Uw) + 0.9028) * A$$

Where—

(a) Uw = the total U value for the window system (as certified under WERS) – maximum = 4.0; and

(b) A = the area of the installed thermally efficient window (m2) measured from the outside of its frame to the nearest square centimetre.

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Part 1.5 Retrofit thermally efficient glazing

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing of a product that improves the thermal efficiency of a window to one or more single glazed windows in an external wall of a conditioned zone where the existing glazing does not meet the minimum thermal performance requirements prescribed in section 3 below, so that the glazing product covers all panes of the window unit or units.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be a glazing product that—

(a) when installed, creates a still air gap between an existing single glazed window and the product and raises the thermal efficiency performance of the window; and

(b) is either glass, acrylic or polycarbonate (films are not eligible); and

(c) is designed and suitable for installation on an existing window; and

(d) is simply removable by the home owner so as to permit access to the formed air gap for cleaning/drying purposes; and

(e) is a window product currently rated under the WERS scheme; and

(f) when installed, has a maximum total Uw value of 4.0, as rated by WERS when calculated exclusive of window coverings; and

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(g) when installed, has a minimum solar heat gain co-efficient of 0.4, as rated by WERS; and

(h) complies with the relevant performance requirements of AS 2047 and AS 1288; and

(i) is fit for the purpose for which it is intended to be used; and

(j) must be listed in the register of products; and

(k) complies with any product safety or other product requirements in a relevant code of practice or other relevant legislation.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved is the sum of all abatement factors for each glazing product installed in the premises, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = ((-0.0452 * Uw) + 0.5517) * A$$

Where—

(a) Uw = the total U value for the window system (as certified under WERS) – maximum = 4.0; and

(b) A = is the number of square metres to the nearest square centimetre of the type of glazing product installed (m^2).

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Part 1.6 Install thermally efficient window coverings

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing window coverings to a window in an external wall of a conditioned zone that fully cover the window and restrict the convective air flow from between the window covering and glazing to the internal space.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

(1) For window coverings an installed product must—

(a) be a curtain or blind that complies with ANSI A100, where applicable; or

(b) be a heavy drape or curtain made of a fabric, or a composite of layered materials, that does not readily allow air, visible light or ultraviolet light to pass through it and through which the presence of a light source cannot be detected by eye; or

(c) be a honeycomb or roman blind that fits within the window reveal and provides a minimal air gap between the blind and window frame; and

(d) comply with the mandatory product and installation standard of Product Safety Australia, including the safe installation of cords; and

(e) be made of a fire retardant material.

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(2) For all products, an installed product must comply with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity must be determined by using the equations prescribed in this section.

(2) The abatement factor is calculated by multiplying the area in square metres (m^2), to the nearest square centimetre, of the window or windows to which curtains have been installed such that—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times m^2$$

Where *AAV* is a prescribed activity abatement value of 0.1655.

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Part 1.7 Install window pelmets

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing a box pelmet to a window in an external wall of a conditioned zone so that the pelmet fully encloses the top of an existing curtain, drape or blind that meets the installed product requirements of Part 1.6 and restricts the convective air flow from beside or above the pelmet to the window.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be a box pelmet that—

(a) works in combination with the curtain or drape to enclose the top of the curtain, drape or blind to prevent air plunging by convection from beside or above the pelmet to the window; and

(b) complies with any product safety or other product requirements in a relevant code of practice or other relevant legislation.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

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5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity must be determined by using the equations prescribed in this section.

(2) The abatement factor is calculated by multiplying the area in square metres (m^2) to the nearest square centimetre of the window or windows all installed pelmets cover by the activity abatement value such that—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times m^2$$

Where *AAV* is a prescribed activity abatement value of 0.1002.

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Schedule 2 Space heating and cooling activities

Part 2.1 Install a specified high efficiency central electric space heater

1. Activity Definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing a specified high efficiency central electric space heater for a residential premise.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises that includes one of three categories of pre-existing heater types as described below. Each different pre-condition attracts differing abatement values as specified in Table 2.1. These categories of pre-condition are as follows:

(i) Category HC1: a fixed electric resistance central space heater that is hard wired and services more than 100m^2 in a household, including resistance electric slab heaters, ducted resistance electric heaters or fixed electric resistance panel heaters, and excluding portable or plug-in electric heaters of any description

(ii) Category HC2: a ducted, flued gas heater or flued gas space heater, excluding portable or unflued gas heaters of any description

(iii) Category HC3: any other type of fixed heater not specified above or a premises with no pre-existing form of fixed heater installed.

Note: In Table 2.1 these categories of pre-condition (i.e. HC1, HC2 and HC3) form the first 3 characters of the code noted in the left hand column of that table.

if the pre-conditions include an existing heater as specified above, the existing heater must be decommissioned when the new replacement system is installed; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be undertaken together with the activity in Part 2.4 for the insulation of ductwork, where the new product requires ductwork and where existing ductwork connected to a replaced heater does not meet the installed product requirements in section 3 of Part 2.4; and

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(d) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(e) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

A specified high efficiency central electric space heater for this activity is a central space heater that meets the following requirements—

(a) complies with Minimum Energy Performance Standard (MEPS) requirements (AS/NZS 3823.2); and

(b) achieves a minimum annual coefficient of performance (ACOP) of 3.7 at condition H1 (AS/NZS 3823.2); and

(c) has a minimum rated heating capacity of 10 kW at H1 condition (AS/NZS 3823.1.1, AS/NZS 3823.1.2 or AS/NZS 3823.1.4 as applicable); and

(d) is a ducted, non-ducted or a multi-split system that is capable of heating an area that is comparable to the system being replaced (where applicable); and

(e) is listed on the register of products; and

(f) is installed by a person who is familiar with the “Air Conditioning Residential Best Practice Guideline published by the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) and who undertakes to follow this guideline as far as possible when installing the new product.

Products that have been tested and registered for low temperature performance under condition H2 and meet the requirements of Clause 3.7 of AS/NZS3823.2 earn additional abatement.

Note: Where a gas ducted heater is rated in mega-joules per hour (MJ/h) this may be converted to a kilowatt (kW) rating by dividing the MJ/h rating by 3.6.

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4. Time Activity is Deemed to be Undertaken

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials, lodgement of any statutory certifications for gasfitting work, the completed installation of the new appliance is completed and lodgement of any statutory certifications for electrical work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the specified high efficiency central electric space heater installed, exclusive of any abatement factor calculated for insulation of ductwork under Part 2.4 where required, is determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\textit{Abatement factor}\ (t\ CO_{2\text{-}e}) = [AAV_{fixed} + H2 + AAV_{var} \times (ACOP - \textit{baseline})] \times \textit{Capacity}$$

Where:

AAV_{fixed}, AAV_{var} and *baseline* are the relevant values prescribed in Table 2.1 for the existing heater type (where applicable) and the new product type.

ACOP is the Annual Coefficient of Performance recorded for the installed model in the Energy Rating database for condition H1

Capacity is the rated heating capacity of the installed model for condition H1 in kW. Where the Capacity is greater than 30kW, the value of 30 is used in the equation for Abatement factor.

H2 is a value of 0.04 if the installed model has been tested and registered for low temperature performance under condition H2 and meets the requirements of Clause 3.7 of AS/NZS3823.2 otherwise H2 is a value of 0.0 for all other products.

Note: Where a gas ducted heater is rated in megajoules per hour (MJ/h) this may be converted to a kilowatt (kW) rating by dividing the MJ/h rating by 3.6.

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Table 2.1 Activity abatement values for a specified high efficiency central electric space heater

Code	Existing Heater Type	New product type	Base Efficiency (*Baseline*) ACOP	Fixed Emissions Savings (AAV_{fixed}) *t* CO_2-e	Variable Emissions Savings (AAV_{var}) *t* CO_2-e/kW
HC1A	Qualifying electric resistance - fixed panel heaters	Ducted High Efficiency Central Heat Pump	3.6	1.02	0.15
HC1B	Qualifying electric resistance - fixed panel heaters	Non-ducted High Efficiency Central Heat Pump	3.6	1.12	0.13
HC1C	Qualifying electric resistance - slab or ducted	Ducted High Efficiency Central Heat Pump	3.6	1.44	0.15
HC1D	Qualifying electric resistance - slab or ducted	Non-ducted High Efficiency Central Heat Pump	3.6	1.55	0.13
HC2A	Qualifying gas ducted heater	Ducted High Efficiency Central Heat Pump	3.6	3.77	0.15
HC2B	Qualifying gas ducted heater	Non-ducted High Efficiency Central Heat Pump	3.6	3.88	0.13
HC3A	None, any, not specified	Ducted High Efficiency Central Heat Pump	3.6	0.00	0.15
HC3B	None, any, not specified	Non-ducted High Efficiency Central Heat Pump	3.6	0.10	0.13

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Part 2.2 Replace a ducted gas heater with a high efficiency ducted gas heater

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing a high efficiency ducted gas heater.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

1) be undertaken at an eligible residential premises, where the qualifying existing gas heater is—

a) a ducted, flued gas heater excluding non-ducted gas heaters of any description; and

b) the existing heater be decommissioned when the new replacement system is installed;

2) be undertaken using a product or products meeting the installed product requirements in section 3; and

3) be undertaken together with the activity in Part 2.4 for the insulation of ductwork, where the new product requires ductwork and where existing ductwork connected to a replaced heater does not meet the installed product requirements in section 3 of Part 2.4;

4) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

5) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

(a) An installed product must be a ducted gas heater that is certified by a relevant accredited body to achieve a minimum energy efficiency rating of 5 stars when tested and rated in accordance with AS 4556; and

(b) has a minimum rated output heating capacity of 10 kW as determined in accordance with AS 4556; and

(c) is listed in the register of products for the activity; and

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(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation that applies to the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials, lodgement of any statutory certifications for gasfitting work, the installation of the new appliance is completed and lodgement of any statutory certifications for electrical work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the gas ducted heater installed, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\textit{Abatement factor}\ (t\ CO_{2\text{-}e}) = [AAV_{fixed} + AAV_{var} \times (SRI – \textit{baseline})] \times \textit{Capacity}$$

Where:

AAV_{fixed}, AAV_{var} and *baseline* are the relevant values prescribed in Table 2.2

Capacity is the rated heating capacity for the installed model as listed in the register of products for the activity in kW

SRI is the decimal star rating of the installed model as listed in the register of products for the activity

Note: Where a gas ducted heater is rated in megajoules per hour (MJ/h) this may be converted to a kilowatt (kW) rating by dividing the MJ/h rating by 3.6.

Table 2.2 Activity abatement values for high efficiency gas ducted heaters

Code	Existing heater type	New product type	Base Efficiency (*Baseline*) SRI	Fixed Emissions Savings (AAV_{fixed}) $t\ CO_2$-e	Variable Emissions Savings (AAV_{var}) $t\ CO_2$-e/kW
HC4	Qualifying ducted gas heater	Gas Ducted Heater	3.5	0.00	0.57

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Part 2.3 Install a specified high efficiency electric room heater

1. Activity Definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing a specified high efficiency electric room heater.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises where that includes one of three categories of pre-existing heater types as described below. Each different pre-condition attracts differing abatement values as specified in Table 2.3. These categories of pre-condition are as follows:

(i) Category HR1: a fixed electric resistance space heater that is hard wired, including resistance electric slab heaters, ducted resistance electric heaters or fixed electric resistance panel heaters, and excluding portable or plug-in electric heaters of any description.

(ii) Category HR2: a ducted, flued gas heater or flued gas heater, excluding portable or unflued gas heaters of any description.

(iii) Category HR3: any other type of fixed heater not specified above or a premises with no pre-existing form of fixed heater installed.

Note: In table 2.3 these categories of pre-condition (i.e. HR1, HR2 and HR3) form the first 3 characters of the code noted in the left hand column of that table.

If the pre-conditions include an existing heater as specified above, the existing heater must be decommissioned when the new replacement system is installed; and

(a) be undertaken using a product or products meeting the installed product requirements in section 3; and

(b) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(c) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

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3. Installed product requirements

A specified high efficiency electric room heater for this activity is a room heater that meets the following requirements:

(a) is listed in the register of products for the activity; and

(b) complies with Minimum Energy Performance Standards (MEPS) requirements (AS/NZS 3823.2); and

(c) achieves a minimum annual coefficient of performance (ACOP) of 4.0 at condition H1 (AS/NZS 3823.2); and

(d) has a minimum rated heating capacity of 2 kW at condition H1 (AS/NZS 3823.1.1 or AS/NZS3823.1.4 as applicable) and a rated heating capacity of not more than 10kW at condition H1.

(e) is installed by a person who is familiar with the "Air Conditioning Residential Best Practice Guideline published by the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) and who undertakes to follow this guideline as far as possible when installing the new product.

Note Products that have been tested and registered for low temperature performance under condition H2 and meet the requirements of Clause 3.7 of AS/NZS3823.2 earn additional abatement.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials, lodgement of any statutory certifications for gasfitting work, the installation of the new appliance is completed and lodgement of any statutory certifications for electrical work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the specified high efficiency electric room heater installed, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\textit{Abatement factor}\ (t\ CO_{2\text{-}e}) = [AAV_{fixed} + H2 + AAV_{var} \times (ACOP - \textit{baseline})] \times \textit{Capacity}$$

Where:

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AAV_{fixed}, AAV_{var} and *baseline* are the relevant values prescribed in Table 2.3 for the qualifying existing heater type (where applicable) and the new product type

ACOP is the Annual Coefficient of Performance recorded for the installed model in the Energy Rating database for condition H1

Capacity is the rated heating capacity of the installed model for condition H1 in kW.

H2 is a value of 0.04 if the installed model has been tested and registered for low temperature performance under condition H2 and meets the requirements of Clause 3.7 of AS/NZS3823.2 or H2 is a value of 0.0 for all other products.

Note: Where a gas ducted heater is rated in megajoules per hour (MJ/h) this may be converted to a kilowatt (kW) rating by dividing the MJ/h rating by 3.6.

Table 2.3 Activity abatement values for a specified high efficiency electric room heater

Details (system size) **Activity Abatement Value (tCO_2-e)**

Code	Existing Heater Type	Base Efficiency (*Baseline*) ACOP	Fixed Emissions Savings (AAV_{fixed}) *t* $CO_{2\text{-}e}$	Variable Emissions Savings (AAV_{var}) *t* $CO_{2\text{-}e}$/kW
HR1	Any qualifying fixed electric resistance heater	3.7	1.22	0.13
HR2	Any qualifying fixed gas room heater	3.7	3.26	0.13
HR3	Any other heater type not specified above, no heater	3.7	0.00	0.13

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Part 2.4 Install insulated space conditioning ductwork

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, decommissioning all existing space conditioning ductwork that is connected to an operable ducted gas heater or to an operable electric heat pump heater and does not achieve a minimum insulating R-value of 1.5 and replacing it with new ductwork that achieves an insulating R-value of 1.5 or higher.

The installation of ductwork with an R value that equals R1.0 or higher must not be otherwise required by law, for example as condition of a development approval.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be ductwork that—

(a) Is installed within a roof space or between a floor and the natural ground

(b) is tested and certified by an approved laboratory as complying with AS 4254; and

(c) is insulated using bulk insulation that is certified by an accredited body or approved laboratory as complying with AS/NZS 4859.1; and

(d) is suitable for installation in a ducted gas heating system or a ducted electric heat pump heating system ; and

(e) achieves a minimum R-value of 1.5 when measured in accordance with AS/NZS 4859.1; and

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(f) is longitudinally labelled at intervals of not more than 1.5 metres, in characters that are clearly legible and at least 18mm high stating—

(i) the duct manufacturer's or duct assembler's name; and

(ii) the diameter of the duct core; and

(iii) the R-value of the bulk insulation; and

(iv) whether the ductwork complies with AS 4254; and

(l) is installed and supported in accordance with the relevant requirements in AS 4254; and

(m) uses fittings that achieve a minimum R-value of 0.4.

(n) includes dampers (where required) that have positive seal damper mechanisms to prevent leakage

(o) When installing the new flexible duct work system the installer must at a minimum:

(i) Undertake the installation in accordance with manufacturer's instructions

(ii) duct tape the inner liner to the collar and ensure the insulation is pulled up over the collar before the outer is duct taped and mechanically fixed to minimize heat loss at the collar join;

(iii) tape any small tears/holes in the outer or inner sleeve using foil tape for the outer sleeve and duct tape for the inner sleeve. Taping of any significant tears of more than one quarter of the circumference of the duct may not last and therefore that section of duct is no longer suitable and should be replaced.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the type of ducted heater the installed ductwork is connected to, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated by multiplying the rated output capacity of the heater to which the installed ductwork is connected, to the nearest kW*, such that—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times Capacity$$

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Where –

AAV is the relevant activity abatement value prescribed in Table 2.5, and

Capacity is the rated heating capacity for the installed model in kW

Table 2.4 Activity abatement values for insulated space conditioning ductwork

Existing Heater Type	**AAV Factor**
Gas Ducted	0.7525
Electric ducted Heat pump	0.1200

Note: Where a gas ducted heater is rated in megajoules per hour (MJ/h) this may be converted to a kilowatt (kW) rating by dividing the MJ/h rating by 3.6.

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Schedule 3 Hot water service activities

Part 3.1 Decommission an electric resistance water heater and install a specified high efficiency water heater

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, decommissioning an electric resistance water heater in a hot water system servicing sanitary fixtures and appliances and installing a specified high efficiency water heater.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises with an existing electric resistance water heater (excluding solar and heat pump); and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be undertaken in conjunction with replacement of all relevant shower fixture outlets where required by Schedule 2 Part 2.6 of the *Water and Sewerage Regulation 2001*;

(d) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(e) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

A specified high efficiency water heater for this activity includes any of the following water heater options as set out in (1) or (2) below:

(1) An electric boosted solar water heater that—

(a) is certified by a relevant accredited body to AS 2712; and

(b) achieves minimum energy performance of 60% solar contribution in climate zone 4 as determined in accordance with AS/NZS 4234; and

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(c) is listed in the register of products for the activity; and

(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

(2) An electric heat pump water heater that—

(a) has been tested in accordance with AS/NZS5125.1 Heat pump water heaters—Performance assessment Part 1: Air source heat pump water heaters; and

(b) is registered with the Clean Energy Regulator as an air source heat pumps with a volumetric capacity of no more than 425 L and is listed in the current CER register; and

(c) is rated a medium size under AS/NZS4234 and listed as achieving not less than 28 certificates (RECs) in Zone 5 (HP5-AU) as determined in accordance with AS/NZS4234 and TRNSYS simulation; and

(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and the lodgement of statutory certifications for electrical, gasfitting and plumbing work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (t CO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the type of water heater installed, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\textit{Abatement factor}\ (t\ CO_2\text{-e}) = AAV_{base} - (AAV_{Bs} \times Bs) - (AAV_{Be} \times Be)$$

Where—

(a) AAV_{base}, AAV_{Bs} and AAV_{Be} are the activity abatement values prescribed in Table 3.1 for the system size and type as determined in accordance with AS/NZS 4234 based on the system's peak daily thermal energy load delivery characteristics; and

(b) Bs is the annual supplementary purchased energy consumption used by a high efficiency water heater to directly heat water in Gigajoules per year (GJ/Yr) as determined in the performance evaluation process in AS/NZS 4234 and as recorded in the register of products for the activity; and

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(c) Be is the annual electrical energy used by auxiliary equipment integral to the water heater other than resistive heating units in Gigajoules per year (GJ/Yr) as determined in the performance evaluation process in AS/NZS 4234 and as recorded in the register of products for the activity.

For medium sized Heat Pump water heaters, the value of Bs and Be are given as follows:

Be = 0 (for medium size heat pump systems only)

Bs = (1 – RECs × 0.0214) × 16.67 (for medium size heat pump systems only) in GJ

Where RECs is the number of certificates for an installation in Zone 5 for the specific model as listed by the Clean Energy Regulator in the register of air source heat pumps with a volumetric capacity of no more than 425 L and where the number of RECs is greater than or equal to 28 for Zone 5 (HP5-AU).

Table 3.1 Activity abatement values for a specified high efficiency water heater replacing an electric resistance water heater

New system size and type	**AAV_{base}**	**AAV_{Bs}**	**AAV_{Be}**
Solar electric small (25.2 MJ/day or 120 litres per day)	4.07	0.396	0.396
Solar electric medium (42 MJ/day or 121 to 200 litres/day)	6.60	0.396	0.396
Electric heat pump medium (42 MJ/day or 200 litres/day)	6.60	0.396	0.396

Note that large or very large systems may be installed but the maximum credit available is for a medium system.

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Part 3.2 Decommission a gas or liquefied petroleum gas water heater and install a specified high efficiency water heater

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, decommissioning a natural gas or liquefied petroleum gas water heater in a hot water system servicing sanitary fixtures and appliances, which does not meet the installed product requirements in section 3 of this Part, and installing a specified high efficiency water heater.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises with an existing LPG or gas water heater (excluding solar); and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be undertaken in conjunction with replacement of all relevant shower fixture outlets where required by Schedule 2 Part 2.6 of the *Water and Sewerage Regulation 2001*;

(d) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(e) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

A specified high efficiency water heater for this activity includes any of the following water heater options as set out in (1) or (2) below:

(1) An electric boosted solar water heater that—

(a) is certified by a relevant accredited body to AS 2712; and

(b) achieves minimum energy performance of 60% solar contribution in climate zone 4 as determined in accordance with AS/NZS 4234; and

(c) is listed in the register of products for the activity; and

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(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

(2) An electric heat pump water heater that—

(a) has been tested in accordance with AS/NZS5125.1 Heat pump water heaters – Performance assessment Part 1: Air source heat pump water heaters; and

(b) is registered with the Clean Energy Regulator (CER) as an air source heat pump with a volumetric capacity of no more than 425 L and is listed in the current CER register; and

(c) is rated a medium size under AS/NZS4234 and listed as achieving not less than 28 certificates (RECs) in Zone 5 (HP5-AU) as determined in accordance with AS/NZS4234 and TRNSYS simulation; and

(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and the lodgement of statutory certifications for gasfitting and plumbing work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (t CO_2-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the type of water heater installed, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\textit{Abatement factor}\ (t\ CO_2\text{-e}) = AAV_{base} - (AAV_{Bs} \times Bs) - (AAV_{Be} \times Be)$$

Where —

(a) AAV_{base}, AAV_{Bs} and AAV_{Be} are the activity abatement values prescribed in Table 3.2 for the system size and type as determined in accordance with AS/NZS 4234 based on the system's peak daily thermal energy load delivery characteristics; and

(b) Bs is the annual supplementary purchased energy consumption used by a high efficiency water heater to directly heat water in megajoules per year (MJ/Yr) as determined in the performance evaluation process in AS/NZS 4234 and as recorded in the register of products for the activity; and

(c) Be is the annual electrical energy used by auxiliary equipment integral to the water heater other than resistive heating units in Gigajoules per year (GJ/Yr)

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as determined in the performance evaluation process in AS/NZS 4234 and as recorded in the register of product for the activity.

For medium sized Heat Pump water heaters, the value of Bs and Be are given as follows:

Be = 0 (for medium size heat pump systems only)

Bs = (1 – RECs × 0.0214) × 16.67 (for medium size heat pump systems only) in GJ

Where RECs is the number of certificates for an installation in Zone 5 for the specific model as listed by the Clean Energy Regulator in the register of air source heat pumps with a volumetric capacity of no more than 425 L and where the number of RECs is greater than or equal to 28 for Zone 5 (HP5-AU).

Table 3.2 Activity abatement values for a specified high efficiency water heater replacing a gas water heater

New system size and type	**AAV_{base}**	**AAV_{Bs}**	**AAV_{Be}**
Solar electric small (25.2 MJ/day or 120 litres per day)	9.64	0.396	0.396
Solar electric medium (MJ/day or 121 to 200 litres/day)	14.11	0.396	0.396
Electric heat pump medium (42 MJ/day or 200 litres/day)	14.11	0.396	0.396

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Part 3.3 Replace an existing shower fixture outlet with a low flow shower fixture outlet

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, removing a shower fixture outlet or outlets with a flow rate of greater than 9 litres per minute and replacing with a shower fixture outlet or outlets with a WELS rated flow rate of 9 litres per minute or less.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be a shower fixture outlet, including the shower head, flow restrictor and any other components integral to and supplied with the fixture that—

(a) complies with the requirements of AS 3662; and

(b) achieves maximum flow rate of 9 litres per minute or less and a minimum water efficiency rating of 3 stars when assessed and labelled in accordance with AS 6400; and

(c) carries a mark from a relevant accredited body certifying that the shower fixture outlet complies with the plumbing code; and

(d) complies with any product safety or other product performance requirements in a relevant code of practice or other relevant legislation applying to the activity; and

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(e) if undertaken at a residential premises, is undertaken on a maximum of 2 shower fixtures in a single premises including the showers with the highest usage rates according to the occupant.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and lodgement of all statutory certifications for plumbing work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises must be determined by using the equation prescribed in this section.

(2) The abatement factor for the activity is calculated as —

$$Abatement\ factor\ (tCO_2 - e) = AAV \times N$$

Where—

(a) *AAV* is the relevant activity abatement value prescribed for the WELS rated flow rate of the showerhead in Table 1.4; and

(b) *N* is the number of shower fixture outlets installed in the premises with a maximum value of 2 in a residential premises.

Table 3.3 Activity abatement values for low flow shower fixtures

Product WELS rated flow rate	Activity Abatement Value (tCO_2-e)
Over 6.0 and not more than 9.0 litres/minute	0.359
Not more than 6.0 litres/minute	0.530

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Schedule 4 Lighting Activities

Part 4.1 Residential Lighting activities

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing one or more of—

(a) low energy general lighting service (GLS) lamp in place of a mains voltage incandescent GLS lamp of at least 25 watts (tungsten filament type) or 18 watts (tungsten halogen type); or

(b) low energy reflector lamp in place of a mains voltage incandescent reflector lamp; or

(c) low energy 12 volt lamp to replace 12 volt halogen; or

(d) mains voltage low energy downlight fitting in place of existing 12 volt halogen downlight fitting; or

(e) low energy lamp with a GU10 base in place of existing mains voltage halogen lamp of at least 35 watts with a GU10 base.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental, waste disposal and decommissioning requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity; and

(e) only replace existing equipment that is in working order immediately prior to removal.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

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3. Existing and Replacement equipment requirements

(1) For activity item 1(a), an installed product must—

(a) have a light output equivalent to the replaced lamp; and

(b) be a compact fluorescent lamp that complies with MEPS in accordance with AS 4847; or be a product other than a compact fluorescent lamp that meets—

(i) the performance requirements for compact fluorescent lamps set out in Table 1 of AS 4847; or

(ii) if the Administrator determines that the performance requirements for compact fluorescent lamps set out in Table 1 of AS 4847 are not applicable to the product, any other performance requirement determined by the Administrator; and

(c) achieve minimum lighting source efficacy levels of—

(i) 40 lumens/watt where light output is less than 350 lumens; or

(ii) 45 lumens/watt where light output is 350 lumens or more and less than 650 lumens; or

(iii) 52 lumens/watt where light output is 650 lumens or more and less than 850 lumens; or

(iv) 55 lumens/watt where light output is 850 lumens or more; and

(d) if the lamp is to be installed in a dimmable circuit, be approved by the manufacturer as suitable for such a circuit; and

(e) have a minimum manufacturer's rated lifetime of 8,000 hours; and

(f) have a colour temperature that is, or is capable of being set at, warm white (2700K to 3500K) or cool white (3500K to 4000K); and

(g) be listed in the register of products for the activity.

(2) For activity item 1(b), an installed product must—

(a) have a light output equivalent to the replaced lamp; and

(b) have the following characteristics—

(i) meet the performance requirements for the attributes set out in Table 1 of AS 4847, or if the Administrator determines that the performance requirements for attributes set out in Table 1 of AS 4847 are not applicable to the lamp, any other performance requirement determined by the Administrator; and

(ii) achieve a minimum lighting source efficacy level of 45 lumens/watt; and

(iii) have a minimum manufacturer's rated lifetime of 12,000 hours; and

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(iv) if the lamp is to be installed in a dimmable circuit, be approved by the manufacturer as suitable for such a circuit; and

(v) have a colour temperature that is, or is capable of being set at, warm white (2700Kto 3500K) or cool white (3500K to 4000K); and

(c) be listed in the register of products for the activity.

(3) For activity item 1(c), an installed product must—

(a) if the lamp is to be installed in a dimmable circuit, be approved by the manufacturer as suitable for such a circuit; and

(b) have the following characteristics—

(i) meet the performance requirements for the attributes set out in Table 1 of AS 4847, or if the Administrator determines that the performance requirements for attributes set out in Table 1 of AS 4847 are not applicable to the lamp, any other performance requirement determined by the Administrator; and

(ii) achieve minimum lighting source efficacy levels of 52 lumens/watt; and

(iii) have a minimum light output of 420 lumens in the forward direction; and

(iv) have a minimum manufacturer's rated lifetime of 15,000 hours; and

(v) have a colour temperature that is, or is capable of being set to, warm white (2700K to 3500K) or cool white (3500K to 4000K); and

(vi) in the case of a product installed in residential premises, have a beam angle of not less than 50 degrees when determined in accordance with IEC/TR 61341 Edition 2.0, and

(c) be listed in the register of products for the activity.

(4) For activity item 1(d), an installed product must—

(a) if the downlight fitting and lamp are to be installed in a dimmable circuit, be approved by the manufacturer as suitable for such a circuit; and

(b) use a lamp that has the following characteristics—

(i) meet the performance requirements for the attributes set out in Table 1 of AS 4847, or if the Administrator determines that the performance requirements for attributes set out in Table 1 of AS 4847 are not applicable to the lamp, any other performance requirement determined by the Administrator; and

(ii) achieve a minimum lighting source efficacy of 48 lumens/watt; and

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(iii) have a minimum light output of 400 lumens in the forward direction; and

(iv) have a minimum manufacturer's rated lifetime of 15,000 hours; and

(v) have a colour temperature that is, or is capable of being set to warm white (2700K to 3500K) or cool white (3500K to 4000K); and

(vi) in the case of a product installed in residential premises, have a beam angle of not less than 40 degrees when determined in accordance with IEC/TR 61341 Edition 2.0, and

(c) be listed in the register of products for the activity.

(5) For activity item 1(e), an installed product must—

(a) if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit; and

(b) have the following characteristics—

(i) meet the performance requirements for the attributes set out in Table 1 of AS 4847, or if the Administrator determines that the performance requirements for attributes set out in Table 1 of AS 4847 are not applicable to the lamp, any other performance requirement determined by the Administrator; and

(ii) achieve a minimum lighting source efficacy of 48 lumens/watt; and

(iii) have a minimum light output of 400 lumens in the forward direction; and

(iv) have a minimum manufacturer's rated lifetime of 15,000 hours; and

(v) have a colour temperature that is, or is capable of being set at, warm white (2700K to 3500K) or cool white (3500K to 4000K); and

(vi) in the case of a product installed in residential premises, has a beam angle of not less than 36 degrees when determined in accordance with IEC/TR 61341 Edition 2.0; and

(c) be listed in the register of products for the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and the lodgement of all statutory certifications for any electrical work.

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5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises is the sum of all abatement factors for each activity item in the prescribed activity definition at section 1 of this Part undertaken in the premises, determined by using the equation prescribed in this section.

(2) For each activity item 1(a) to 1(e) the abatement factor is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times N \times PF$$

Where—

(a) PF is the power factor of the product determined in accordance with AS 4847 such that—

(i) if the power factor of the product is less than 0.9, *PF* has a prescribed value of 1.00; or

(ii) if the power factor of the product 0.9 or more, *PF* has a prescribed value of 1.05; and

(b) For activity item 1(a), *AAV* is the prescribed activity abatement value in Table 4.1.1 for the relevant manufacturer's rated lifetime and efficiency level of the low energy general lighting service lamp or lamps installed determined by the lighting source efficacy level in accordance with subsection 3 (1) of this Part; and

(c) For activity item 1(b), *AAV* is the prescribed activity abatement value in Table 4.1.2 for the relevant manufacturer's rated lifetime and efficiency level of the low energy directional lamp or lamps installed determined by the lighting source efficacy level in accordance with subsection 3 (2) of this Part; and

(d) For activity item 1(c), *AAV* is the prescribed activity abatement value in Table 4.1.3 for the relevant manufacturer's rated lifetime and efficiency level of the low energy directional lamp or lamps installed determined by the lighting source efficacy level in accordance with subsection 3 (3) of this Part; and

(e) For activity item 1(d), *AAV* is the prescribed activity abatement value in Table 4.1.4 for the relevant manufacturer's rated lifetime and efficiency level of the low energy directional lamp or lamps installed determined by the lighting source efficacy level in accordance with subsection 3 (4) of this Part; and

(f) For activity item 1(e), *AAV* is the prescribed activity abatement value in Table 4.1.5 for the relevant manufacturer's rated lifetime and efficiency level of the low energy directional lamp or lamps installed determined by the lighting source efficacy level in accordance with subsection 3 (5) of this Part; and

(g) For all activity items, *N* is the number of lamps of the relevant type installed in the premises.

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Note Multiple calculations for an activity item may be required to find the abatement factor for the item. For example, if a low energy 12 volt downlight with a manufacturer's rated lifetime of 20,000 hours, an efficacy of 75 lumens/Watt and with a power factor of 1.0 (AF = 0.107 x 1 x 1.05) and three low energy reflector lamps with a manufacturer's rated lifetime of 15,000, an efficacy of 25 lumens/Watt and with a power factor of 0.8 (AF = 0.082 x 3 x 1.00) are installed in a premises then the abatement factor for each type of lamp with differing activity abatement values, power factors and/or lighting source efficacy levels will need to be determined and summed to find the abatement factor for the item.

Table 4.1.1 Activity abatement values for installation of low energy general lighting services in place of mains voltage incandescent general lighting services

		Activity Abatement Value TCO_2-e															
	Light Output Range (lm):	<350	350-649	650-849	850+	<350	350-649	650-849	850+	<350	350-649	650-849	850+	<350	350-649	650-849	850+
	Min Efficacy (lm/W):	40	45	52	55	48	54	62	66	58	65	75	79	69	78	90	95
Lamp Life (hours)	8000 to 9999	0.028				0.031				0.032				0.033			
	10000 to 11999	0.032				0.035				0.037				0.038			
	12000 to 14999	0.037				0.040				0.042				0.044			
	15000 to 19999	0.043				0.047				0.050				0.052			
	20000 to 24999	0.055				0.060				0.063				0.065			
	25000+	0.067				0.074				0.077				0.081			

Table 4.1.2 Activity abatement values for installation of a low energy reflector lamp in place of a mains voltage incandescent reflector lamp

	Activity Abatement Value (tCO_2-e)			
Efficacy	Min 45 lumens/watt	Min 54 lumens/watt	Min 65 lumens/watt	Min 78 lumens/watt
12000 to 14999 hrs	0.049	0.050	0.051	0.052
15000 to 19999 hrs	0.058	0.059	0.061	0.061
20000 to 24999 hrs	0.073	0.075	0.076	0.078
25000 hrs +	0.090	0.092	0.094	0.095

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Table 4.1.3 Activity abatement values for installation of low energy 12 volt lamp to replace 12 volt halogen

	Activity Abatement Value (tCO_2-e)			
Efficacy	**52 l/W**	**62 l/W**	**75 l/W**	**90 l/W**
15,000 to 19,999 hrs	0.052	0.055	0.057	0.059
20,000 hrs to 24,999 hrs	0.065	0.069	0.072	0.075
25,000 hrs +	0.080	0.085	0.089	0.092

Table 4.1.4 Activity abatement values for installation of mains voltage low energy downlight in place of existing 12 volt halogen downlight

	Activity Abatement Value (tCO_2-e)				
Efficacy	**Min 48 lumens/watt**	**Min 58 lumens/watt**	**Min 69 lumens/watt**	**Min 83 lumens/watt**	**Min 100 lumens/watt**
15000 to 19999 hrs	0.053	0.056	0.058	0.060	0.061
20000 to 24999 hrs	0.067	0.070	0.073	0.076	0.078
25000 hrs +	0.082	0.086	0.090	0.093	0.095

Table 4.1.5 Activity abatement values for installation of low energy lamp with a GU10 base in place of existing mains voltage halogen lamp of at least 35 watts with a GU10 base

	Activity Abatement Value (tCO_2-e)				
Efficacy	Min 48 lumens/watt	Min 58 lumens/watt	Min 69 lumens/watt	Min 83 lumens/watt	Min 100 lumens/watt
15,000 to 19,999 hrs	0.065	0.067	0.070	0.072	0.073
20,000 hrs to 24,999 hrs	0.082	0.085	0.088	0.090	0.092
25,000 hrs +	0.101	0.105	0.108	0.111	0.114

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Part 4.2 Commercial Lighting Upgrade Activities

1. Activity description

A commercial lighting upgrade activity, being the upgrade of building lighting equipment in a business premises by replacing it with more efficient lighting equipment.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible business premises; and

(b) the premises must be a building which is classified under the Building Code of Australia (BCA) as either Class 3, 5, 6, 7, 8, 9, 10 or the Common Areas of Class 2; and

Note For detailed explanation of Classes 3-10 in the BCA see NSW Energy Saving Scheme (ESS) Commercial Lighting Method – Appendix A

(c) only replace existing lighting equipment that is in working order immediately prior to removal; and

(d) not be undertaken as part of development or refurbishment requiring development approval under the *ACT Planning and Development Act 2007*; and

(e) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental, waste disposal and decommissioning requirements; and

(f) be recorded in accordance with any relevant code of practice for the activity.

3. Installed Product Requirements

(a) Installed lamp and luminaire products must, at the time of installation, be—

(i) listed on the public list of accepted Emerging Lighting Technologies (ELTs) as published by the NSW Energy Saving Scheme (ESS) Administrator[1]; or

(ii) listed on the Victorian Energy Efficiency Target (VEET) Scheme product register; and

[1] Eligible products under the NSW Energy Savings scheme include products of a class listed in the following:
NSW 'Energy Savings Scheme (Amendment No. 2) Rule, 2014 – Schedule A – Table A9.1 'Standards Equipment Classes for Lighting Upgrades'; or
NSW 'Energy Savings Scheme (Amendment No. 2) Rule, 2014 – Schedule A – Table A9.3 'Other Equipment Classes for Lighting Upgrades' (Excluding T5 Adaptor kits); or
products listed under NSW Energy Saving Scheme "Public List of Accepted Emerging Lighting Technologies"
http://www.ess.nsw.gov.au/Projects_and_equipment/Lighting_Technologies/Using_Lighting_Technologies_for_Commercial_Lighting;
and/or more recent updated versions of the above rules and list.

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Note If a lamp or luminaire product is suspended either by the ESS or VEET schemes then it is no longer an eligible product under the EEIS commercial lighting activity.

(b) the following types of lamp and luminaire products may not be installed—

(i) portable lighting or desk lamps; or

(ii) T5 adaptor kits; or

(iii) heat lamps; or

(iv) retrofitting fluorescent luminaires with LED linear lamps without modifications; and

Note (iv) forbids simple T5, T8 or T12 Luminaire replacement with an LED linear lamp. This cannot involve modification to the wiring of the Luminaire other than removal, replacement or modification of the starter.

Note LED linear lamps, listed on the ESS register for approved modified linear LED luminaires[2], *can* be used as modified luminaire replacements for linear fluorescent luminaires. This is where a T5, T8 or T12 luminaire has been modified to be replaced with an LED linear lamp. This involves modifying and removing the ballast, capacitor and any wiring or structure of the fluorescent luminaire, beyond the replacement of a starter.

(c) installed products shall comply with all applicable mandatory safety, electromagnetic compatibility, performance and efficiency standards; and

(d) installed products shall be supplied with a minimum 2 years product warranty.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and the lodgement of all statutory certifications for any electrical work.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO2-e) of greenhouse gas emissions saved for the activity is calculated as—

$$Abatement\ factor\ (tCO2-e) = AAV\ x\ Energy\ Savings\ x\ ACTAM$$

Where—

(a) *AAV* is the relevant activity abatement value and is equal to 0.153 tCO_2-e/MWh; and

(b) *Energy Savings* is *the* total energy savings, in megawatt-hours (MWh), calculated in accordance with Clause 9.4 of the ESS Rule.

(c) *Energy Savings* for this Activity will be calculated using Equations 6, 7 and 9 of the commercial lighting energy savings formula in Section 9 of the NSW *Energy Savings*

[2] NSW Energy Saving Scheme (ESS)'s approved list of *modified* LED linear luminaire products is available on http://www.ess.nsw.gov.au/ELT/Product_Search?c=21&b=&m=&d=&v=&r=&s=

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Scheme (Amendment No.2) Rule 2014. This will be done using the ESS Commercial Lighting Calculation Tool as current at the time the Activity is undertaken; and

(d) calculations will use the factors and values from Schedule A – Default Factors and Classifications of the NSW 'Energy Savings Scheme' (Amendment No.2) Rule 2014, with the exception of the value for AM (the air conditioning multiplier used in ESS commercial lighting energy savings formula) which shall adopt a value of 1.0.

(e) *ACTAM* is the air conditioning multiplier for the ACT, which shall be 1.05 where the space upgraded is air conditioned or 1.00 where the space upgraded is not air conditioned.

(f) where linear florescent luminaires are modified to accept linear LED tubes, energy saving will be calculated using the ESS Commercial Lighting Calculation Tool using the lighting category *'Modified Luminaire LED Linear Lamp'*.

Note The ESS Commercial Lighting Calculation Tool is published by the ESS Administrator on the ESS Commercial Lighting website. http://www.ess.nsw.gov.au/Methods_for_calculating_energy_savings/Commercial_Lighting

Note Further explanation on energy savings calculation methods is outlined in the NSW ESS Commercial Lighting Method Guide – see Appendix C.

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Schedule 5 Appliance activities

Part 5.1 Decommissioning and disposal of refrigerator or freezer

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, removing a refrigerator or freezer in working order, from a premises and destroying the refrigerator or freezer.

2. Minimum activity performance specifications

To be an eligible activity the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises; and

(b) be undertaken on a refrigerator or freezer that is currently in working order; and

(c) result in the refrigerator or freezer being destroyed by the disposal, in accordance with the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Commonwealth), of scheduled substances within the meaning of that Act; and

(d) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(e) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to independent inspection or audit to confirm compliance with prescribed activity requirements.

3. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

4. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises is the sum of all abatement factors for each refrigerator or freezer destroyed, determined by using the equations prescribed in this section.

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(2) The abatement factor for each refrigerator or freezer is calculated by—

$$Abatement\ factor\ (tCO_2 - e) = AAV$$

Where—

(a) *AAV* is the relevant activity abatement value prescribed in Table 5.1 for the type of refrigerator or freezer destroyed.

Table 5.1 Activity abatement values for type of refrigerator or freezer destroyed

Type of refrigerator	Activity Abatement Value (tCO_2-e)
1-door refrigerator or freezer	0.5926
2-door refrigerator or freezer	1.0603

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Part 5.2 Purchase of high efficiency refrigerator or freezer

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, purchase for installation in a premises of a high efficiency—

(a) single door refrigerator; or

(b) two door refrigerator; or

(c) chest freezer; or

(d) upright freezer.

2. Minimum activity performance specifications

To be an eligible activity—

(a) the product or products must be purchased by a resident of the ACT for installation and use in a residential premises or business premises within the ACT; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) the activity must be completed and certified in accordance with the relevant code of practice and other relevant legislation for the activity; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to random independent audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

(1) General requirements for all products**—**

(a) The product has valid registration with an Australian or New Zealand energy regulator and has a registration status of “Approved” at the time of sale; and

(b) The refrigerating appliance shall not have a designation of cooled appliance under AS/NZS4474.1; and

(c) The refrigerating appliance shall not be a wine storage appliance or have any compartment that is intended exclusively for wine or beverage storage; and

(d) Is on the register of products for the activity.

(2) For activity item 1(a), a single door refrigerator that is a Group 1 refrigerator as defined by AS/NZS 4474.1 that—

(a) has a total gross volume as determined in accordance with AS/NZS 4474 of not less than 100 litres and not more than 500 litres; and

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(b) has a minimum star rating index of 2.0 as determined in accordance with AS/NZS 4474.2; and

(c) is on the register of products for the activity.

(3) For activity item 1(b), a two door refrigerator that is a Group 4, 5B, 5S or 5T refrigerator as defined by AS/NZS 4474.1 that—

(a) has a total gross volume as determined in accordance with AS/NZS 4474 of not less than 100 litres and not more than 700 litres; and

(b) has a minimum star rating index of 2.7 as determined in accordance with AS/NZS 4474.2; and

(c) is on the register of products for the activity.

(4) For activity item 1(c), a chest freezer that is a Group 6C product as defined by AS/NZS 4474.1 that—

(a) has a total gross volume as determined in accordance with AS/NZS 4474 of not less than 100 litres and not more than 700 litres; and

(b) has a minimum star rating index of 3.3 as determined in accordance with AS/NZS 4474.2; and

(c) is on the register of products for the activity.

(5) For activity item 1(d), an upright freezer that is a Group 6U or 7 product as defined by AS/NZS 4474.1 that—

(a) has a total gross volume as determined in accordance with AS/NZS 4474 of not less than 100 litres and not more than 400 litres; and

(b) has a minimum star rating index of 2.5 as determined in accordance with AS/NZS 4474.2; and

(c) is on the register of products for the activity.

Note Refrigerator and freezer group definitions can be located at http://www.energyrating.gov.au/products-themes/refrigeration/domestic-refrigeration/meps/

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

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(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises is the sum of all abatement factors for each refrigerator or freezer purchased for the premises, determined by using the equations prescribed in this section.

(2) The abatement factor for activity item 1(a) is calculated by—

$$Abatement\ factor\ (tCO_2 - e) =$$

$$(0.9126 \times [200 + \ 4.0\ \times (Vff)^{0.67}] \ - \ CEC) \times 0.0019$$

Where—

(a) Vff is the volume in litres of fresh food compartment of the product; and

(b) CEC is the comparative energy consumption specified on energy rating label as defined by AS/NZS 4474.2.

(3) The abatement factor for activity item 1(b) is calculated by—

$$Abatement\ factor\ (tCO_2 - e) =$$

$$(0.6954 \times [150 + \ 8.8 \times (Vff \ + \ 1.60 \times Vfr)^{0.67}] \ - \ CEC) \times 0.0019$$

Where—

(a) Vff is the volume in litres of fresh food compartment of the product; and

(b) Vfr is the volume in litres of the freezer compartment; and

(c) CEC is the comparative energy consumption specified on energy rating label as defined by AS/NZS 4474.2.

(4) The abatement factor for activity item 1(c) is calculated by—

$$Abatement\ factor\ (tCO_2 - e) =$$

$$(0.6329 \times [150 + \ 7.5 \times (1.60 \times Vfr)^{0.67}] \ - \ CEC) \times 0.00224$$

Where—

(a) Vfr is the volume in litres of the freezer compartment; and

(b) CEC is the comparative energy consumption specified on energy rating label as defined by AS/NZS 4474.2.

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(5) The abatement factor for activity item 1(d) is calculated by—

$$Abatement\ factor\ (tCO_2 - e) =$$

$$(0.7700 \times [150 + 7.5 \times (1.60 \times Vfr)^{0.67}] - CEC) \times 0.00224$$

Where—

(a) Vfr is the volume in litres of the freezer compartment; and

(b) CEC is the comparative energy consumption specified on energy rating label as defined by AS/NZS 4474.2.

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Part 5.3 Purchase of high efficiency electric clothes dryer

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, purchase for installation in a premises of a high efficiency clothes dryer.

2. Minimum activity performance specifications

To be an eligible activity—

(a) the product or products must be purchased by a resident of the ACT for installation and use in a residential premises or business premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) the activity must be completed and certified in accordance with the relevant code of practice and other relevant legislation for the activity; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to random independent audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

A product purchased for installation must be an electric clothes dryer that—

(a) is not part of a combination clothes washer; and

(b) has valid registration with an Australian or New Zealand energy regulator for energy labelling in accordance with AS/NZS 2442.2 and has a registration status of "Approved" at the time of sale; and

(c) achieves a minimum energy efficiency rating of 5 stars when tested in accordance with AS/NZS 2442.2; and

(d) is listed in the register of eligible products for the activity; and

(e) complies with any product safety or other product performance requirement prescribed in a relevant code of practice or other relevant legislation applying to the activity.

4. Time the activity is taken to be completed

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The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises must be determined by using the equation prescribed in this section.

(2) The abatement factor for the activity is calculated by—

$$Abatement\ factor\ (tCO_2 - e) = (48 \cdot 08 \times Rated\ Capacity - CEC) \times 0.0026$$

Where—

(a) Rated Capacity is measured in kilograms and defined by AS/NZS 2442.2; and

(b) CEC is the comparative energy consumption and is measured in kilowatt hours per year (kWh/y) specified on the energy rating label as defined by AS/NZS 2442.2.

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Part 5.4 Install a standby power controller

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, installing one or more standby power controllers in a premises for—

(a) an information technology environment; or

(b) an audio visual environment.

2. Minimum activity performance specifications

To be an eligible activity, the activity must—

(a) be undertaken in an eligible residential premises or an eligible business premises; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) for a standby controller in an information technology environment be installed so that the master appliance is a computer and the controller is connected to at least two controlled appliances at the time of installation; or

(d) for a standby controller in an audio visual environment be installed so that the master appliance is a television and is connected to at least two controlled appliances at the time of installation; and

(e) be completed and certified in accordance with the relevant code of practice and other relevant legislation for the activity; and

(f) not more than 3 standby power controllers in an information technology environment shall be installed in a single premises. Not more than 3 standby power controllers in an audio visual environment shall be installed in a single premises. Not more than 4 standby power controllers of any type shall be installed in a single premises; and

(g) be recorded in accordance with any relevant code of practice for the activity.

3. Installed product requirements

(1) For activity item 1(a), an installed product must be a product that when installed in an information technology environment is able to automatically reduce the standby energy consumption of information technology equipment connected to it and—

(a) when tested by an approved laboratory in accordance with a laboratory test approved by the Administrator is determined to—

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(i) be suitable for use in an information technology environment; and

(ii) be capable of controlling the power of at least four appliances directly or indirectly; and

(iii) be fitted with a mains power switching device rated to a minimum of 50,000 switching cycles; and

(iv) has an electric power consumption of 1 Watt or less; and

(v) automatically disconnect mains power from controlled appliances when the master computer is switched to Off Mode; and

(vi) automatically reconnect mains power to the controlled appliances when the master computer enters Active State; and

(vii) does not rely on a universal serial bus connection to determine the operating mode of the computer; and

(viii) does not require manual setting of a current or power threshold; and

(ix) is able, at the time of installation, to disconnect mains power from or reconnect mains power to controlled appliances without having to be set up to have those functions assigned to the operation of an existing appliance remote control; and

(b) is suitable for use with desktop and notebook computers that are not more than two years old; and

(c) is listed in the register of products for the activity.

(2) For activity item 1(b), an installed product must be a product that when installed in an audio visual environment is able to automatically reduce the standby energy consumption of home audio visual equipment connected to it and—

(a) when tested by an approved laboratory in accordance with a laboratory test approved by the Administrator is determined to—

(i) be suitable for use in an audio visual environment; and

(ii) be capable of controlling the power of at least four appliances directly or indirectly; and

(iii) be fitted with a mains power switching device rated to a minimum of 50,000 switching cycles; and

(iv) has an electric power consumption of 1 Watt or less; and

(v) automatically disconnect mains power from controlled appliances—

(A) in the case of a product that relies on a master/slave arrangement, when the master appliance is turned off;

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(B) in the case of a product that relies on sensing infra-red signals from the remote controls of controlled appliances, after a period of time specified in the laboratory test when the product does not detect infra-red signals from those remote controls that are triggered by a user; and

(vi) automatically reconnect mains power to the controlled appliances only when—

(A) in the case of a product that relies on a master/slave arrangement, when the master appliance is turned on;

(B) in the case of a product that relies on sensing infra-red signals from the remote controls of controlled appliances, when any of the controlled appliances are operated by a user; and

(vii) does not rely on a universal serial bus connection to determine the operating mode of the computer; and

(viii) does not require manual setting of a current or power threshold; and

(ix) is able, at the time of installation, to disconnect mains power from or reconnect mains power to controlled appliances without having to be set up to have those functions assigned to the operation of an existing appliance remote control; and

(b) is listed in the register of products for the activity.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises is the sum of abatement factors for each activity item, determined by using the equation prescribed in this section.

(2) The abatement factor for each activity item is calculated by—

Abatement Factor (t CO_2-e) for each standby power controller (*i*) = (VAF) × 0.16

Where—

(a) *VAF* is the relevant activity abatement value listed in the register of products for the activity for the type of standby power controller installed.

Abatement Factor (t CO_2-e) for premises = $\sum_{i=1}^{n} Abatement - factor_i$

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Where—

- for each standby power controller *i* the abatement factor installed in each premises is calculated and then summed to give the total abatement factor; and
- *n* is the number of standby power controllers installed in the premises, which is in the range 1 to 4 (maximum).

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Part 5.5 Purchase of a high efficiency television

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, purchase for installation in a premises a high efficiency television.

2. Minimum activity performance specifications

To be an eligible activity—

(a) the activity must be undertaken using a product or products meeting the installed product requirements in section 3; and

(b) the product or products must be purchased by a resident of the ACT for installation and use in a residential premises or business premises;

(c) the activity must be completed and certified in accordance with the relevant code of practice and other relevant legislation for the activity; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to random independent audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be a television that—

(a) is registered for energy labelling in accordance with AS/NZS 62087.2.2; and

(b) has a minimum star rating of 7 stars as determined in accordance with AS/NZS 62087.2.2 (2013 algorithm); and

(c) has a comparative energy consumption on the energy rating label of not more than 270 kWh/y.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

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5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises must be determined by using the equation prescribed in this section.

(2) The abatement factor for the activity is calculated by—

a. for televisions with a registered screen area of not more than 7221cm^2

$$Abatement\ factor\ (tCO_2 - e) = (0.32768 \times [SA \times 0.09344 + 65.408] - CEC) \times 0.0008415$$

b. for televisions with a registered screen area of greater that 7221cm^2

$$Abatement\ factor\ (tCO_2 - e) = (270 - CEC) \times 0.0008415$$

Where—

(a) SA is the area of the screen in square centimetres as defined in AS/NZS 62087.2.2; and

(b) CEC is the comparative energy consumption in kWh/y specified on the energy rating label as defined by AS/NZS 62087.2.2.

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Part 5.6 Install a high efficiency swimming pool pump

1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this Part, install a high efficiency pool pump with a minimum energy efficiency rating (***star rating***) of 3.0 to a swimming pool or spa in a residential or an eligible business premises.

2. Minimum activity performance specifications

To be an eligible activity, the activity must—

(a) be undertaken at an eligible residential premises or an eligible business premises; and

(b) be undertaken using a product meeting the installed product requirements in section 3; and

(c) be completed and certified in accordance with the relevant code or codes of practice and other relevant legislation applying to the activity, including any licensing, registration, statutory approval, activity certification, health, safety, environmental or waste disposal requirements; and

(d) be recorded in accordance with any relevant code of practice for the activity.

Note All activities are subject to random independent audit to confirm compliance with prescribed activity requirements.

3. Installed product requirements

An installed product must be pool pump for use with a domestic pool or spa that is—

(a) a single phase, single speed, dual speed, multiple speed or variable speed pump unit with an input power of not less than 100W and not more than 1500W when tested in accordance with AS 5102.1; and/or

(b) For pool pumps installed from calendar year 2018, pool pump controllers shall comply with AS/NZS 4755.3.2 *Demand response capabilities and supporting technologies for electrical products - Interaction of demand response enabling devices and electrical products - Operational instructions and connections for devices controlling swimming pool pump-units*; and.

(c) is listed as part of a labelling scheme determined in accordance with the Equipment Energy Efficiency (E3) Committee's Voluntary Energy Rating Labelling Program for Swimming Pool Pump-units: Rules for Participation, April 2010 and achieves a minimum energy efficiency rating of 3 stars when determined in accordance with AS 5102.2; or

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(d) is registered for energy labelling and achieves a minimum 3 star rating when determined in accordance with AS 5102.2.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved in a premises must be determined by using the equation prescribed in this section.

(2) The abatement factor for the activity is calculated by—

$$Abatement\ factor\ (tCO_2 - e) = (1622 - PAEC) \times 0.001228$$

Where PAEC is the projected annual energy consumption in kWh/y listed on the energy rating label.

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Part 5.7 High Efficiency Refrigerated Display Cabinet Activities

1. Activity description

Installing a refrigerated display cabinet that is rated as 'high efficiency' within the meaning of the AS 1731 series of standards.

2. Minimum activity performance specifications

To be an eligible activity—

(a) the product or products must be for installation and use in a business premises within the ACT; and

(b) be undertaken using a product or products meeting the installed product requirements in section 3; and

(c) the activity must be—

(i) conducted in accordance with any relevant code or code of practice, including health, safety, environmental or waste disposal requirements; and

(ii) recorded in accordance with any relevant code of practice for the activity.

3. Installed product requirements

(a) The product or products must be—

(i) rated as 'high efficiency' within the meaning of the AS 1731 series of standards when tested in accordance with the AS 1731 series of standards as applicable; and

(ii) listed in the register of products for the activity.

(b) The product or products must not—

(i) include retrofitting of existing refrigeration equipment, unless the components are compliant with the equipment manufacturer’s specification.

4. Time the activity is taken to be completed

The activity is taken to be completed on the day all applicable prescribed activity requirements are completed.

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5. Calculation of abatement factor

The total abatement factor in tonnes of carbon dioxide-equivalent (tCO_2-e) of greenhouse gas emissions saved for the activity is calculated as—

$$Abatement\ factor\ (tCO_2 - e) = AAV \times TDA$$

Where—

(a) *AAV* is the relevant activity abatement value as prescribed in Table 5.3 below for the particular refrigerated display cabinet type as defined in the AS 1731 series of standards; and

(b) *TDA* is the Total Display Area of the Refrigerated Display Cabinet as defined in the AS 1731 series of standards.

Table 5.3 Activity abatement values by type of refrigerated display cabinets

Refrigerated display cabinet type and sub-class	Activity Abatement Value (tCO_2-e)
RS 1 - Unlit shelves	1.622
RS 1 - Lit shelves	2.755
RS 2 - Unlit shelves	1.645
RS 2 - Lit shelves	2.196
RS 3 - Unlit shelves	1.754
RS 3 - Lit shelves	2.379
RS 4 - Glass door	1.149
RS 6 - Gravity coil	1.680
RS 6 - Fan coil	1.673
RS 7 - Fan coil	1.913
RS 8 - Gravity coil	1.447
RS 8 - Fan coil	1.560
RS 9 - Fan coil	1.564
RS 10 - Low	2.204
RS 11	4.505

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Refrigerated display cabinet type and sub-class	Activity Abatement Value (tCO_2-e)
RS 12	7.835
RS 13 - Solid sided	2.519
RS 13 - Glass sided	2.313
RS 14 - Solid sided	1.568
RS 14 - Glass sided	9.399
RS 15 - Glass door	3.753
RS 16 - Glass door	4.106
RS 18	3.427
RS 19	2.553
HC1	1.164
HC4	1.591
VC1	3.357
VC2	2.678
VC4 - solid door	3.861
VC4 - glass door	2.542
HF4	2.716
HF6	0.815
VF4 - solid door	4.249
VF4 - glass door	4.249

Note 1: This activity applies only to M-package temperature classes M1, M2, L1 and L2 (as applicable) as defined in the AS 1731 series of standards

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Schedule 7 Dictionary

Note 1 This dictionary is the dictionary for schedules 1 to 6 of this instrument and should be used for the interpretation of provisions for eligible activities described in the parts to those schedules.

Note 2 Other terms may apply to the schedules to this instrument. Terms not defined in this schedule but defined in associated legislation have the same meaning as in that legislation unless it is evident a contrary meaning is intended.

accredited body, in relation to a product, means a conformity assessment body or other body accredited under Territory law or the Joint Accreditation System of Australia and New Zealand to give product certification or component certification of certain products.

Active State, in relation to a computer, means a state in which the computer is carrying out useful work in response to prior or concurrent—

(a) user input; or

(b) instruction over a network.

activity certification means the certification prepared by a person or people involved in carrying out an activity declaring compliance with relevant activity eligibility requirements and includes any statutory certifications required under another law of the Territory.

air sealing means sealing of openings between materials in a building to minimise air leakage from and air infiltration between rooms in a building, but not necessarily to exclude rain or other effects of weather.

ANSI A100 means the *American National Standard for Safety of Corded Window Covering Products* as in force from time to time.

approved laboratory means a laboratory that is accredited by the National Association of Testing Authorities or registered by an authority recognised by the National Association of Testing Authorities under a mutual recognition agreement.

AS 1288 means the relevant parts of Australian Standard 1288 as in force from time to time.

AS 1731 means the relevant parts of Australian Standard 1731 (parts 1 – 14) as in force from time to time.

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AS 2047 means the relevant parts of Australian Standard 2047 as in force from time to time.

AS/NZS 2442 means the relevant parts of Australian/New Zealand Standard 2442 as in force from time to time.

AS/NZS 2712 means the relevant parts of Australian/New Zealand Standard 2712 as in force from time to time.

AS 3662 means the relevant parts of Australian Standard 3662 as in force from time to time.

AS 3823 means the relevant parts of Australian Standard 3823 as in force from time to time.

AS 4234 means the relevant parts of Australian Standard 4234 as in force from time to time.

AS 4254 means the relevant parts of Australian Standard 4254 as in force from time to time.

AS/NZS 4474 means the relevant parts of Australian/New Zealand Standard 4474 as in force from time to time.

AS 4556 means the relevant parts of Australian Standard 4556 as in force from time to time.

AS/NZS 4847 means the relevant parts of Australian/New Zealand Standard 4847 as in force from time to time.

AS/NZS 4859 means the relevant parts of Australian/New Zealand Standard 4859 as in force from time to time.

AS 5102 means the relevant parts of Australian Standard 5102 as in force from time to time.

AS/NZS 6400 means the relevant parts of Australian/New Zealand Standard 6400 as in force from time to time.

AS/NZS 62087 means the relevant parts of Australian/New Zealand Standard 62087 as in force from time to time.

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building code means the ACT building code, which is comprised of Volumes 1 and 2 of the National Construction Code published by the Australian Building Codes Board and the ACT Appendix to the building code as determined by the responsible Minister.

building lighting has the same meaning as in the ESS Rule Section 10.

business premises means a premises that—

(a) is not a residential premises; and

(b) is not a new premises; and

(c) for which the energy consumption is not included in a reporting obligation under of any of the following;

i. the *National Greenhouse and Energy Reporting Act 2007* (Commonwealth); or

ii. the Australian Government's Energy Efficiency in Government Operations Policy; or

iii. the Carbon Neutral ACT Government Framework.

Note 1 A business premises may be occupied by a business, not-for-profit organisation or other enterprise.

Note 2 A business premises may represent part of a larger building.

code of practice means a code of practice made by the administrator under section 25 (Codes of practice) of the *Energy Efficiency (Cost of Living) Improvement Act 2012* that may address consumer protection obligations, quality, health, safety and environmental requirements, record keeping requirements and reporting requirements for eligible activities.

commercial lighting energy savings formula method means the use of clause 9.4 of the Energy Savings Scheme Rule to calculate the number of Energy Savings Certificates arising from the activity.

conditioned space means a space within a building where the environment is likely, by the intended use of the space, to have its temperature controlled.

conditioned zone means a room or rooms in a residential premises that due to their use is capable of being fully enclosed and is likely to be artificially heated and/or cooled. Conditioned zones include, but are not limited to habitable rooms, internal corridors and utility rooms without direct natural ventilation to the room such as an ensuite bathroom.

control gear means lighting ballasts, transformers or drivers.

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decommission means disable and render permanently unusable.

draught protection device means a permanently fixed device designed to fit to the bottom of a door to prevent air leakage from or air infiltration from a room or building.

electrical work— see *electrical wiring work* as defined in the Dictionary of the *Electricity Safety Act 1971.*

eligible business premises means a business premises located in the Territory that meets all criteria for an eligible activity and is not excluded by another law of the Territory, or by the failure to obtain a required approval for any part of the activity, from the activity being undertaken at the premises.

Note An eligible business premises may be occupied by a business, not-for-profit organisation or other enterprise.

eligible residential premises means a residential premises located in the Territory that meets all criteria for an eligible activity and is not excluded by another law of the Territory, or by the failure to obtain a required approval for any part of the activity, from the activity being undertaken at the premises.

Energy Savings Scheme refers to the NSW Government's energy efficiency obligation scheme. Specifically it is defined and has the same meaning as in Part 9 of the *Electricity Supply Act 1995 (NSW)*.

ESS Administrator has the same meaning as Scheme Administrator in Part 9 of the *Electricity Supply Act 1995 (NSW)*.

ESS Rule has the same meaning as Scheme Rule in Part 9 of the *Electricity Supply Act 1995 (NSW)*.

Equipment Energy Efficiency (E3) Committee means the committee responsible for managing the joint Australian, State and Territory Equipment Energy Efficiency Program.

existing lighting equipment means the equipment that provides artificial lighting services that was already installed and in working order at the time of implementation of the activity, including luminaires and/or lamps, control gear, and lighting control systems.

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external wall means an outer wall of a building other than a wall separating or common to adjoining buildings.

glazing means a transparent or translucent element and its supporting frame located in an external wall of a building and includes a window other than a roof light.

habitable room— see section 1.1.1 Definitions in Volume 2 *Building Code of Australia Class 1 and Class 10 Buildings* of the National Construction Code Series.

high efficiency refrigerated display cabinet means a Refrigerated Display Cabinet that meets the 'high efficiency' standard prescribed within the AS 1731.14.

IEC/TR 61341 Edition 2.0 means the Method of measurement of centre beam intensity and beam angle(s) of reflector lamps Edition 2.0 2010-02, published by the International Electrotechnical Commission on 18 February 2010.

in association, in relation to work or other eligible activities undertaken in a premises, includes at the same time as, or subsequent to, alterations and additions to a premises, or part of a premises, or as a result of an eligible activity, or as part of the same contract with a lessee or occupier of a premises.

install includes modify or replace to achieve compliance with eligible activity criteria.

K means Kelvin.

kW means kilowatt.

large electricity customer means a business who consumes electricity at or above the upper consumption threshold for electricity, as defined in the *National Energy Retail Regulations*.

Note The upper consumption threshold for large electricity customers is more than 160 MWh per annum per National Meter Identifier in the 12 months prior to upgrade.

lessee— see section 234 of the *Planning and Development Act 2007*.

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lighting source efficacy means the initial luminous flux of a lamp 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 lamp but excluding ballast and control gear power losses.

mains power switching device means a relay or other device that switches the power to the controlled appliances on or off.

manual dimmer means a product that enables manual control of a light fitting's light output by a dial, slider or other mechanism.

master/slave arrangement, in relation to a standby power controller, means an arrangement where the standby power controller is connected to an uncontrolled master appliance, whose current or power is solely used to control the electrical input to controlled appliances connected to the standby power controller.

MEPS means a minimum energy performance standard.

MJ means megajoules.

modified light emitting diode installation means modification style installations are those where the existing linear fluorescent lamp is replaced with a linear LED lamp, the original starter is replaced with a fuse as supplied with the LED lamp (in accordance with instructions provided with the LED lamp), and the original fluorescent lamp control gear – including both the ballast and capacitor where fitted – is rendered inoperable by removal and destruction of the whole item.

M-package temperature class means the operational temperature range for the refrigerated display cabinet as defined in AS 1731.6

new premises means a premises for which—

(a) the building approval for the construction of the residence is issued after 1 January 2011, under the *Building Act 2004*; and

(b) no certificate of occupancy for the respective dwelling has been issued; and

(c) the premises has never been occupied.

occupier of premises, includes—

(a) a person believed, on reasonable grounds, to be an occupier of the premises; and

(b) a person apparently in charge of the premises; and

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(c) a person authorised to enter into an arrangement for work for the premises.

Off Mode, in relation to a computer, means the lowest power state, of the computer when the computer is switched off by the user, but does not include Sleep Mode.

product includes appliance, equipment and material.

purchase does not include by private sale

record includes report on all or certain criteria of an eligible activity where an obligation to report exists.

register of products**,** in relation to an eligible activity, means a register of products that meet one or more of the installed product requirements and product testing criteria for the activity that is prescribed by the administrator under a relevant code of practice and provided to NERL retailers with an energy savings obligation under the Act. The register of products includes those available under the Victorian Energy Efficiency Target (VEET) or the NSW Energy Savings Scheme (ESS) or both. If a product is suspended by either the VEET or EES scheme then that product is nolonger eligible to be used in the Energy Efficiency Improvement Scheme (EEIS).

relevant legislation means of law of the Territory or another jurisdiction that applies to all or part of the activity being undertaken, including but not limited to the—

- *Building Act 2004*
- *Gas Safety Act 2000*
- *Electricity Safety Act 1971*
- *Water and Sewerage Act 2000*
- *Dangerous Substances Act 2004*
- *Work Health and Safety Act 2011*
- *Unit Titles Act 2001*
- *Fair Trading Act (Australia Consumer Law) Act 1992*
- *Environment Protection Act 1997*
- *Construction Occupations (Licensing) Act 2004*
- *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Commonwealth)
- *Trade Practices Act 1974* (Commonwealth)

residential premises means a building or part of building located in the Australian Capital Territory and classified under Part A3 of the Building Code of Australia as a class 1 building, a class 10a building attached to a class 1 building, a sole occupancy unit in a class 2 building, or a class 4 building, or is a transportable home or vehicle designed for habitation that is not used for short-stay or holiday accommodation, but is not a new premises.

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R-value means the thermal resistance in m^2K/W of a component calculated by dividing its thickness by its thermal conductivity.

Sleep Mode, in relation to a computer, means a low power state that the computer is capable of entering automatically after a period of inactivity or by manual selection.

small electricity customer means a business who consumes electricity below the upper consumption threshold for electricity, as defined in the *National Energy Retail Regulations*.

Note A small electricity customer uses less than 160 MWh per annum per National Meter Identifier in the 12 months prior to upgrade.

thermal efficiency performance, in relation to a window or glazing, means the capacity of the product to resist undesirable heat transfers across the material, specific to the predominant climatic conditions in the Territory and the location and orientation of the product when installed in a building.

Total Display Area (TDA) is the area as defined in AS 1731.1 and AS 1731.14, Appendix D

total U-Value means the thermal transmittance in W/m^2K of the composite element allowing for the effect of any airspace and associated surface resistances.

unconditioned zone means a room or rooms in a premises that is not a conditioned zone.

unsealed**,** in relation to a door, door frame, window, window frame, exhaust fan or chimney or flue to a solid fuel burning appliance, means not sealed in accordance with the relevant building sealing provisions of the building code for the class of building, and may include partially sealed frames and/or sealing that is in a condition that renders the sealing ineffective.

U value means the thermal transmittance in W/m^2K of a material or product

ventilation opening means an opening in the external wall, floor, or roof of a building designed to allow air movement into or out of a building by natural means including a permanent opening or other device that can be held open but does not include an openable part of a window or a door.

weather sealing means sealing of openings between elements in a building to minimise air leakage from and air infiltration from the outside of a building

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and the inside of a building and to weatherproof the building to prevent the ingress of precipitation.

WERS means the Window Energy Rating Scheme managed by the Australian Window Association.

window includes a glass panel, glass block, glass brick, glazed sash, or similar glazing product that, when closed, transmits natural light directly from outside a premises to the inside of the premises, but does not include a louvred product, and includes a door in an external wall that has a glazing pane or panes that comprise 60 per cent or more of the door.

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