

# Energy Efficiency (Cost of Living) Improvement (Eligible Activities) Determination 2012 (No 1)

Notifiable Instrument NI2012– 489

made under the

***Energy Efficiency (Cost of Living) Improvement Act 2012, section 10 (Eligible activities)***

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## **1 Name of instrument**

This instrument is the *Energy Efficiency (Cost of Living) Improvement (Eligible Activities) Determination 2012 (No 1)*.

## **2 Commencement**

This instrument commences the day after notification.

## **3 Determination of eligible activities**

I determine that —

- (1) The activities described in schedules 1 to 5 to this instrument are eligible activities under section 10 of the *Energy Efficiency (Cost of Living) Improvement Act 2012* that may be undertaken and for which an abatement factor may be determined to meet an energy savings obligation under the Act.
- (2) The dictionary in schedule 6 to this instrument is the dictionary for schedules 1 to 5 to this instrument.

Simon Corbell MLA

Minister for the Environment and Sustainable Development

13 September 2012

# 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 the 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.

*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 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 draft 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, the product meets 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<sub>2</sub>-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) to 1(d) the abatement factor is calculated as—

$$\text{Abatement Factor (tCO}_2\text{-e)} = \text{AAV} \times N$$

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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV} \times m^2$$

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**

<b>Activity item</b>	<b>Activity abatement value (tCO<sub>2</sub>-e )</b>
Items 1.1 (1)(a) to (1)(d)— doors	0.304
Items 1.1 (1)(e) to (1)(f)— external windows	0.022

## 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 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) 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

- (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 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<sub>2</sub>-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 —

$$\text{Abatement factor (tCO}_2\text{-e)} = \text{AAV} \times N$$

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 <sub>2</sub> -e)
1.2 (1) (a) Replace an unsealed ceiling or wall exhaust fan with a self-sealing exhaust fan	0.748
1.2 (1) (b) Sealing an existing exhaust fan	0.748

## 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.

### 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<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = AAV \times N$$

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.



**Table 1.3 Activity abatement values for ventilation opening sealing activities**

<b>Activity item</b>	<b>Activity Abatement Value (tCO<sub>2</sub>-e)</b>
1.3 (1) (b) Sealing ventilation openings in an external wall	0.190
1.3 (1) (a) install damper or flap to chimney or flue of an open solid fuel burning appliance	4.213

## **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 a minimum of 5 square metres of high thermal performance glazing or glazed products in a window opening or openings in an external wall to replace existing glazing 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) has a total U-value of not more than 4 when calculated exclusive of window coverings; and
- (c) has a WERS residential rating and label of a minimum of 4 stars for heating; 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.

#### 5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{-e)} = \text{AAV} \times m^2$$

Where—

- (a) AAV is the relevant activity abatement value prescribed for the WERS rating of the glazing product in table 1.4; and
- (b)  $m^2$  is the number of square metres to the nearest square centimetre of installed glazing with a thermal efficiency performance in the associated WERS rating range in table 1.4.

**Table 1.4 Activity abatement values for thermally efficient windows**

Product WERS rating range	Activity Abatement Value (tCO <sub>2</sub> -e)
Not less than 4.0 and not more than 4.9 stars	0.263
Not less than 5.0 and not more than 5.9 stars	0.328
6.0 stars or greater	0.394

## 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 a minimum of 5 square metres 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, Part 1.4, 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) is a—
  - (i) pane of glass or acrylic glazing; or
  - (ii) a film; and
- (b) when installed on a single glazed window, results in a still air gap between the existing glazing and the product; and
- (c) results in a window that has a greater thermal efficiency performance than the original window; and
- (d) is designed and suitable for installation on an existing window; and

(e) 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<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{-e)} = \text{AAV} \times m^2$$

Where—

- (a) AAV is the relevant activity abatement value prescribed for the glazing product in the table in table 1.5; and
- (b)  $m^2$  is the number of square metres to the nearest square centimetre of the type of glazing product installed.

**Table 1.5 Activity abatement values for thermally efficient windows**

Glazing product	Activity Abatement Value (tCO <sub>2</sub> -e)
Additional pane of glass or acrylic	0.179
Window film	0.083

## **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 and pelmets 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 be—
  - (a) a curtain or blind that complies with ANSI A100, where applicable; or
  - (b) 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) a honeycomb or roman blind that fits within the window reveal and provides a minimal air gap between the blind and window frame.
- (2) For pelmets, an installed product must—
  - (a) be a box pelmet; and
  - (b) work 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.
- (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 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<sub>2</sub>-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, to the nearest square centimetre, of the window or windows to which curtains and pelmets have been installed ( $m^2$ ) such that—

$$\textit{Abatement factor (tCO}_2\text{-e)} = \textit{AAV} \times m^2$$

Where *AAV* is a prescribed activity abatement value of 0.312.

## **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.



## 5. Calculation of abatement factor

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-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 to the nearest square centimetre of the window or windows all installed pelmets cover ( $m^2$ ) by the activity abatement value such that—

$$\textit{Abatement factor (tCO}_2\text{-e)} = \textit{AAV} \times m^2$$

Where *AAV* is a prescribed activity abatement value of 0.196.

## Schedule 2 Residential space heating and cooling activities

### Part 2.1 Replacing a ducted gas space heater with a high efficiency ducted gas space heater

#### 1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, decommissioning an existing ducted gas space heater that does not meet the installed product requirements in section 3, and installing a high efficiency ducted gas heater.

#### 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 undertaken together with the activity in Part 2.5 for the insulation of ductwork, where existing ductwork connected to the heater does not meet the installed product requirements in section 3 of Part 2.5; and
- (d) be completed and certified in accordance with the relevant code 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

An installed product must be a ducted gas heater that—

- (a) is certified by a relevant accredited body to achieve a minimum energy efficiency rating (**star 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

(d) 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, including but not limited to the disposal of any waste materials and lodgement of any statutory certifications for gasfitting work.

#### 5. Calculation of abatement factor

(1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the gas space heater installed, exclusive of any abatement factor calculated for insulation of ductwork under Part 2.5 where required, determined by using the equations prescribed in this section.

(2) The abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV$$

Where AAV is the relevant activity abatement value prescribed in table 2.1 for the rating output heating capacity and star rating of the installed gas heater.

**Table 2.1 Activity abatement values for high efficiency ducted gas heaters replacing a**

Rated output heating capacity	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Star rating	
	5.0 to 5.49 stars	5.5 stars or greater
10kW to 18 kW	8.27	10.34
Greater than 18.1 to 28 kW	10.47	13.08
Greater than 28 kW	13.09	16.36

## Part 2.2                    **Decommission a central electric space heater and install a high efficiency ducted gas heater**

### 1. Activity definition

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, decommissioning a fixed central electric resistance heater that provides heating to a floor area of at least 100 square metres, or all conditioned zones in a dwelling, and installing a high efficiency ducted gas heater.

### 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 ducted gas heater that:

- (a) is certified by a relevant accredited body to achieve a minimum energy efficiency rating (***star 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
- (d) complies with any product safety or other product 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 date all applicable prescribed activity requirements are completed, including but not limited to the disposal of any waste materials and lodgement of any statutory certifications for electrical and gasfitting work.

#### 5. Calculation of abatement factor

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the ducted gas space heater installed, determined by using the equations prescribed in this section.
- (2) The abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV$$

Where *AAV* is the relevant activity abatement value prescribed in table 2.2 for the rating output heating capacity and star rating of the installed gas heater.

**Table 2.2 Activity abatement values for ducted gas heaters replacing central electric heaters**

Rated output heating capacity	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Star rating	
	5.0 to 5.49 stars	5.5 stars or greater
10kW to 18 kW	104.2	106.4
Greater than 18kW to 28 kW	132.1	134.8
Greater than 28 kW	165.3	168.8

## **Part 2.3            Install a gas or liquid petroleum gas space heater**

### **1. Activity definition**

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, installing in a habitable room in a premises in which there is no operable existing gas space heater complying with the installed product requirements—

- (a) a high efficiency flued natural gas, or
- (b) a liquefied petroleum gas space heater of a premises located in an area without natural gas reticulation.

### **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 flued space gas heater that—

- (a) is certified by a relevant accredited body to achieve a minimum energy efficiency rating of 4 stars when tested and rated in accordance with AS 4553; and
- (b) has a minimum rated output heating capacity of 2 kW as determined in accordance with AS 4556 and:
- (c) is listed in the register of products for the activity; and
- (d) 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, including but not limited to, the disposal of any waste materials and lodgement of any statutory certifications for gasfitting work.

#### 5. Calculation of abatement factor

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the gas space heater installed, determined by using the equations prescribed in this section.
- (2) The abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV$$

Where *AAV* is the relevant activity abatement value prescribed in table 2.3 for the rating output heating capacity and star rating of the installed gas heater.

**Table 2.3 Activity abatement values for gas space heaters**

rating output heating capacity	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Star rating	
	4.0 to 4.9 stars	5.0 stars or greater
2 to 3 kW	5.31	5.83
Greater than 3kW to 6 kW	10.09	11.09
Greater than 6 kW	12.63	13.88

## **Part 2.4            Install a high efficiency ducted gas heater in a new residential premises**

### **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 in a new residential premises.

### **2. Minimum activity performance specifications**

To be an eligible activity the activity must—

- (a) be undertaken at an eligible new 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 ducted gas heater that—

- (a) 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
- (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 lodgement of any statutory certifications, and passing of mandatory inspections for electrical and building work in a new residential premises.

#### 5. Calculation of abatement factor

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the gas space heater installed, determined by using the equations prescribed in this section.
- (2) The abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV}$$

Where AAV is the relevant activity abatement value prescribed in table 2.4 for the rating output heating capacity and star rating of the installed gas heater.

**Table 2.4 Activity abatement values for ducted gas space heaters installed in a new residential premises**

Rated output heating capacity	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Star rating	
	5.0 to 5.9 stars	6.0 stars or greater
10kW to 18 kW	4.03	5.03
Greater than 18.1 to 28 kW	4.31	5.39
Greater than 28 kW	5.86	7.33

## **Part 2.5            Install insulated gas heating ductwork**

### **1. Activity definition**

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, decommissioning all existing gas heating ductwork that is connected to an operable ducted gas 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.

### **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 tested and certified by an approved laboratory as complying with AS 4254; and
- (b) is insulated using bulk insulation that is certified by an accredited body or approved laboratory as complying with AS/NZS 4859.1; and
- (c) is suitable for installation in a domestic ducted gas heating system; and
- (d) achieves a minimum R-value of 1.5 when measured in accordance with AS/NZS 4859.1; and
- (e) is longitudinally labelled at intervals of not more than 1.5 meters, 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 4254:2002; and
- (f) is installed and supported in accordance with the relevant requirements in AS 4254; and
- (g) uses fittings that achieve a minimum R-value of 0.4.

#### 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<sub>2</sub>-e) of greenhouse gas emissions saved in a premises for the activity is the relevant abatement factor for the gas space heater the installed ductwork is connected to, determined by using the equations prescribed in this section.
- (2) The abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV}$$

Where AAV is the relevant activity abatement value prescribed in table 2.5 for the rating output heating capacity in kW of the gas heater the installed ductwork is connected to.

**Table 2.5 Activity abatement values for ductwork connected to a ducted gas heater**

Rated output heating capacity	Activity Abatement Value (tCO <sub>2</sub> -e)
10kW to 18 kW	12.51
Greater than 18.1 to 28 kW	15.85
Greater than 28 kW	19.84

## Schedule 3 Residential hot water service activities

### Part 3.1 Decommission and replace electric resistance 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 not more than one of—

- (a) a natural gas or liquefied petroleum gas storage water heater;
- (b) a natural gas or liquefied petroleum gas instantaneous water heater;
- (c) a natural gas or liquefied petroleum gas boosted solar water heater;

#### 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 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

- (1) For the activity item in subsection 1(a), a natural gas or liquefied petroleum gas storage water heater that—
  - (a) is certified by a relevant accredited body as having a minimum energy efficiency rating of 5 stars when tested and rated to AS 4552; and

- (b) is listed in the register of products for the activity; and
  - (c) complies with any product safety or other product requirements in a relevant code of practice or other relevant legislation applying to the activity.
- (2) For the activity item in subsection 1(b), a natural gas or liquid petroleum instantaneous water heater that—
- (a) is certified by a relevant accredited body as having a minimum energy efficiency rating of 5 stars when tested and rated to AS 4552; and
  - (b) is listed in the register of products for the activity; and
  - (c) complies with any product safety or other product requirements in a relevant code of practice or other relevant legislation.
- (3) For the activity item in subsection 1(c), a natural gas or liquefied petroleum gas boosted solar water heater that—
- (a) is certified by a relevant accredited body to AS/NZS 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
  - (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 (tCO<sub>2</sub>-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) For activity item 1(a) the abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV$$

Where *AAV* is the activity abatement value prescribed in table 3.1.1 for the storage capacity of the tank of the gas storage water heater installed.

**Table 3.1.1 Activity abatement values for gas storage water heaters replacing electric resistance water heaters**

Tank storage capacity	Activity Abatement Value (tCo2-e)
Less than 95 litres	9.8
95 to 140 litres	18.2
Greater than 140 litres	23.9

(3) For activity item 1(b) the abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV}$$

Where AAV is the activity abatement value prescribed in table 3.1.2 for the water heating capacity at a 25°C rise of the installed gas instantaneous water heater.

**Table 3.1.2 Activity abatement values for gas instantaneous water heaters replacing electric resistance water heaters**

Water heating capacity @ 25°C rise	Activity Abatement Value (tCo2-e)
Less than 18 L/min at 25°C rise	11.1
18 to 22 L/min at 25°C rise	18.9
Greater than 22 L/min at 25°C rise	24.0

(4) For activity item 1(c) the abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV} - [0.00216 \times (\text{E}_{\text{supp}} + \text{E}_{\text{aux}})]$$

Where—

- (a) AAV is the activity abatement value prescribed in table 3.1.3 for the system size as determined in accordance with AS 4234 based on the system's peak daily thermal energy load delivery characteristics; and
- (b) *E<sub>supp</sub>* is the annual supplementary purchased energy consumption used by a solar water heater to directly heat water in megajoules per year (MJ/Yr) as determined in the performance evaluation process in AS/NZS4234; and
- (c) *E<sub>aux</sub>* is the annual electrical energy used by auxiliary equipment integral to the water heater other than resistive heating units in megajoules per year (MJ/Yr) as determined in the performance evaluation process in AS/NZS4234.

**Table 3.1.3 Activity abatement values for gas boosted solar water heaters replacing electric resistance water heaters**

<b>System size</b>	<b>Activity Abatement Value (tCo2-e)</b>
Small (25.2 MJ/day or 120 Litres/day)	21.65
Large (42 MJ/day or 200 Litres/day)	35.07

## **Part 3.2                   Decommission a gas or liquefied petroleum gas water heater and install a gas or liquefied petroleum gas boosted solar 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, that does not meet the installed product requirements in subsections (3)(1) or (3)(2) of Part 3.1, and installing a natural or liquefied petroleum gas boosted solar water heater.

### **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 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**

An installed product must be a natural gas or liquefied petroleum gas boosted solar water heater that—

- (a) is certified by a relevant accredited body to AS/NZS 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



(d) complies with any product safety or other product 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 (tCO<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV} - [0.00056 \times \text{E}_{\text{supp}} + 0.0022 \times \text{E}_{\text{aux}}]$$

Where —

- (a) AAV is the activity abatement value prescribed in table 3.2 for the system size as determined in accordance with AS 4234 based on the system's peak daily thermal energy load delivery characteristics; and
- (b) E<sub>supp</sub> is the annual supplementary purchased energy consumption used by a solar water heater to directly heat water in megajoules per year (MJ/Yr) as determined in the performance evaluation process in AS/NZS4234; and
- (c) E<sub>aux</sub> is the annual electrical energy used by auxiliary equipment integral to the water heater other than resistive heating units in megajoules per year (MJ/Yr) as determined in the performance evaluation process in AS/NZS4234.

**Table 3.2 Activity abatement values for gas boosted solar water heaters replacing gas water heaters**

System size	Activity Abatement Value (tCo2-e)
Small (25.2 MJ/day or 120 Litres/day)	7.80
Large (42 MJ/day or 200 Litres/day)	11.37

## **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 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; 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/NZS 3662; and
- (b) achieves maximum flow rate of 9 litres per minute and a minimum water efficiency rating of 3 stars when assessed and labelled in accordance with AS/NZS 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.

#### 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<sub>2</sub>-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 —

$$\textit{Abatement factor (tCO}_2\text{-e)} = \textit{AAV} \times \textit{N}$$

Where—

- (a) *AAV* is the prescribed activity abatement value of 1.96; and
- (b) *N* is the number of shower fixture outlets installed in the premises with a maximum value of 2.

## **Part 3.4 Hot water tap improvements**

### **1. Activity definition**

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, reduce the maximum flow rate of a hot water tap to 9 litres per minute or less by fitting one of—

- (a) an aerator; or
- (b) a flow restrictor.

### **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 activity item 1(a), an installed product must be—

- (a) an aerator that complies with all product certification requirements of the plumbing code and other relevant legislation; and
- (b) is suitable for fitting to the tap in which it is installed.

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

- (a) a flow restrictor that complies with all product certification requirements of the plumbing code and other relevant legislation; and
- (b) is suitable for fitting to the tap in which it is installed.

#### 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 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<sub>2</sub>-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, determined by using the equations prescribed in this section.

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

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV \times N$$

Where—

- (a) *AAV* is the activity abatement value prescribed in table 3.4 for an aerator; and
- (b) *N* is the number of taps to which an aerator has been installed.

(3) For activity item 1(b) the abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV \times N$$

Where—

- (a) *AAV* is the activity abatement value prescribed in table 3.4 for a flow restrictor; and
- (b) *N* is the number of taps to which a flow restrictor has been installed.

**Table 3.4 Activity abatement values for aerators and flow restrictors**

Installed product type	Activity Abatement (tCo2-e)
Aerator	0.32
Flow restrictor	0.35

## Schedule 4 Residential Lighting Activities

### Part 4.1 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) a low energy general lighting service lamp in place of a mains voltage incandescent general lighting service lamp of at least 25 watts (tungsten filament type) or 18 watts (tungsten halogen type);
- (b) a low energy reflector lamp in place of a mains voltage incandescent reflector lamp that is a halogen lamp of at least 35 watts;
- (c) a low energy lamp in place of an existing 12 volt halogen lamp of at least 35 watts; or
- (d) a mains voltage low energy recessed luminaire fitting in place of an existing 12 volt halogen recessed luminaire fitting that uses a 12 volt halogen lamp of at least 35 watts;

and decommissioning any removed lamps.

#### 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 activity item 1(a), an installed product must be a low energy general lighting service lamp that—
  - (a) has a light output equivalent to the replaced lamp; and
  - (b) if the product is a compact fluorescent lamp, complies with MEPS in accordance with AS/NZS 4847.2; and
  - (c) if the product is a product other than a compact fluorescent lamp, meets the performance requirements for compact fluorescent lamps prescribed in Table 1 of AS/NZS 4847.2; and
  - (d) to be determined standard efficiency achieves minimum lighting source efficacy levels of—
    - (i) 40 lumens/watt or more and less than 48 lumens/watt where light output is less than 350 lumens; or
    - (ii) 45 lumens/watt or more and less than 54 lumens/watt where light output is 350 lumens or more and less than 650 lumens; or
    - (iii) 52 lumens/watt or more and less than 62 lumens/watt where light output is 650 lumens or more and less than 850 lumens; or
    - (iv) 55 lumens/watt or more and less than 66 lumens/watt where light output is 850 lumens or more; or
  - (e) to be determined high efficiency achieves minimum lighting source efficacy levels of—
    - (i) 48 lumens/watt where light output is less than 350 lumens; or
    - (ii) 54 lumens/watt where light output is 350 lumens or more and less than 650 lumens; or
    - (iii) 62 lumens/watt where light output is 650 lumens or more and less than 850 lumens); or
    - (iv) 66 lumens/watt where light output is 850 lumens or more; and
  - (f) if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for use in that type of circuit; and
  - (g) has a minimum manufacturer's rated lifetime of 8000 hours; and
  - (h) has a colour temperature that is warm white (2700K to 3500K) or cool white (3500K to 4000K).
  
- (2) For activity item 1(b), an installed product must be a low energy reflector lamp that—
  - (a) has a light output equivalent to the replaced lamp; and
  - (b) meets the performance requirement for the relevant attributes in Table 1 of AS/NZS 4847.2; and
  - (c) to be determined as standard efficiency achieves minimum lighting source efficacy levels of 25 lumens/watt or more and less than 30 lumens/watt; or
  - (d) to be determined as high efficiency achieves minimum lighting source efficacy levels of 30 lumens/watt; and
  - (e) has a minimum manufacturer's rated lifetime of 8000 hours; and

- (f) if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit; and
  - (g) has a colour temperature that is warm white (2700K to 3500K) or cool white (3500K to 4000K); and
  - (h) the lamp installed is compatible with the type of transformer or converter used with the replaced halogen lamp.
- (3) For activity item 1(c), an installed product must be a low energy lamp that—
- (a) is compatible with the type of transformer or converter used with the replaced halogen lamp; and
  - (b) if the lamp is to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit; and
  - (c) meets the performance requirements for the relevant attributes in Table 1 of AS/NZS 4847.2; and
  - (d) to be considered standard efficiency, achieves lighting source efficacy level of 40 lumens/watt or greater and less than 48 lumens/watt; and
  - (e) to be considered high efficiency, achieves a minimum lighting source efficacy level of 48 lumens/watt or greater; and
  - (f) has a minimum light output of 350 lumens in the forward direction; and
  - (g) has a minimum manufacturer's rated lifetime of 8000 hours; and
  - (h) has a colour temperature that is warm white (2700K to 3500K) or cool white (3500K to 4000K); and
  - (i) has a beam angle of not less than 36 degrees when determined in accordance with IEC/TR 61341 Edition 2.0.
- (4) For activity item 1(d), an installed product must be a lamp mains voltage low energy recessed luminaire fitting that—
- (a) if the recessed luminaire fitting and lamp are to be installed in a dimmable circuit, is approved by the manufacturer as suitable for such a circuit; and
  - (b) uses a lamp that—
    - (i) meets the performance requirements for the attributes set out in Table 1 of AS/NZS 4847.2:2010; and
    - (ii) achieves a minimum lighting source efficacy of 50 lumens/watt; and
    - (iii) has a minimum light output of 400 lumens in the forward direction; and
    - (iv) has a minimum manufacturer's rated lifetime of 8000 hours; and
    - (v) has a colour temperature that is warm white (2700K to 3500K) or cool white (3500K to 4000K); and
    - (vi) has a beam angle of not less than 36 degrees when determined in accordance with IEC/TR 61341 Edition 2.0.



#### 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 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 (tCO<sub>2</sub>-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(d) the abatement factor is calculated as—

$$\text{Abatement factor (tCO}_2\text{ - e)} = AAV \times N \times PF$$

Where—

- (a) PF is the power factor of the product determined in accordance with AS/NZS 4847.1 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 determined by the lighting source efficacy level in accordance with subsection (3)(1)(d) or (3)(1)(e) of the low energy general lighting service lamp or lamps installed; 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 determined by the lighting source efficacy level in accordance with subsection (3)(2)(c) or (3)(2)(d) of the low energy reflector lamp or lamps installed; 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 determined by the lighting source efficacy level in accordance with subsection (3)(3)(d) or (3)(3)(e) of the low energy lamp or lamps installed; and
- (e) For activity item 1(d), *AAV* is the prescribed activity abatement value of 0.71; and
- (f) For all activity items, *N* is the number of lamps of the relevant type installed in the premises.

*Note* Multiple calculations for an activity item may be required to find the abatement factor for the item. For example, if a low energy reflector lamp with a manufacturer's rated lifetime of 10,000 hours, meeting the requirements for a high efficiency lamp and with a power factor of 1.0 ( $AF = 0.37 \times 1 \times 1.05$ ), and 3 low energy reflector lamps with a manufacturer's rated lifetime of 12,000, of standard efficiency and with a power factor of 0.8 ( $AF = 0.42 \times 3 \times 1.00$ ) 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 low energy general lighting service lamps**

Rated Life of Lamp (Hrs)	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Standard Efficiency	High Efficiency
8,000 or more and less than 10,000	0.26	0.28
10,000 or more and less than 12, 000	0.31	0.33
12,000 or more and less than 15,000	0.38	0.40
15,000 or greater	0.47	0.50

**Table 4.1.2 Activity abatement values for low energy reflector lamps**

Rated Life of Low Energy Lamp (Hrs)	Activity Abatement (tCO <sub>2</sub> -e)	
	Standard Efficiency (lighting source efficacy)	High Efficiency
8,000 or more and less than 10,000	0.29	0.31
10,000 or more and less than 12,000	0.35	0.37
12,000 or more and less than 15,000	0.42	0.44
15,000 or more	0.53	0.55

**Table 4.1.3 Activity abatement values for low energy lamps in place of an existing 12 volt halogen lamp**

Rated Life of Low Energy Lamp (Hrs)	Activity Abatement Value (tCO <sub>2</sub> -e)	
	Standard Efficiency	High Efficiency
8,000 or more and less than 10,000	0.21	0.22
10,000 or more and less than 12,000	0.25	0.27
12,000 or more and less than 15,000	0.30	0.32
15,000 or more	0.37	0.40

## **Schedule 5 Residential appliance activities**

### **Part 5.1 Decommissioning and disposal of pre-1996 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 manufactured before 1996 and 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; and
- (b) be undertaken on a refrigerator or freezer that was manufactured before 1996 and 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<sub>2</sub>-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.

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

$$\text{Abatement factor (tCO}_2\text{-e)} = AAV$$

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 <sub>2</sub> -e)
1-door refrigerator or freezer	2.76
2-door refrigerator or freezer	4.93

## **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 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; 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) 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 volume as determined in accordance with AS/NZS 4474:1 of not less than 100 litres and not more than 500 litres; and
  - (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.
- (2) 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 volume as determined in accordance with AS/NZS 4474:1 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.
- (3) 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 volume as determined in accordance with AS/NZS 4474:1 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.
- (4) 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 volume as determined in accordance with AS/NZS 4474:1 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

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = (0.9126 \times [200 + 4.0 \times (\text{Vff})^{0.67}] - \text{CEC}) \times 0.0113$$

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—

$$\text{Abatement factor } (tCO_2 - e) = (0.6954 \times [150 + 8.8 \times (V_{ff} + 1.60 \times V_{fr})^{0.67}] - \text{CEC}) \times 0.0113$$

Where—

- (a)  $V_{ff}$  is the volume in litres of fresh food compartment of the product; and
- (b)  $V_{fr}$  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—

$$\text{Abatement factor } (tCO_2 - e) = (0.6329 \times [150 + 7.5 \times (1.60 \times V_{fr})^{0.67}] - \text{CEC}) \times 0.0126$$

Where—

- (a)  $V_{fr}$  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.

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

$$\text{Abatement factor } (tCO_2 - e) = (0.7700 \times [150 + 7.5 \times (1.60 \times V_{fr})^{0.67}] - \text{CEC}) \times 0.0126$$

Where—

- (a)  $V_{fr}$  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.

## **Part 5.3            Installation of high efficiency gas clothes dryer**

### **1. Prescribed activity definition**

In accordance with the prescribed minimum activity performance specifications in section 2 of this part, installing not more than one high efficiency gas clothes dryer in a premises.

### **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 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 a gas clothes dryer that—

- (a) is not part of a combination clothes washer; and
- (b) is certified by a relevant accredited body as complying with AS 4554; and
- (c) complies with an product safety or other product performance requirement prescribed in a relevant code of practice or other relevant legislation applying to the activity; and
- (d) 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, including but not limited to lodgement of any statutory certification for the installation.



## 5. Calculation of abatement factor

- (1) The abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-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—

$$\textit{Abatement factor (tCO}_2\text{-e)} = 0.4425 \times R$$

Where *R* is the drying load of the product in kilograms as defined by AS 4554–2005

## **Part 4.4 Purchase of high efficiency electric clothes dryer**

### **1. Prescribed 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 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; 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) is registered for energy labelling in accordance with AS/NZS 2442.2; 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**

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<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = (48 \cdot 08 \times \text{Rated Capacity} - \text{CEC}) \times 0.01634$$

Where—

- (a) Rated Capacity is measured in kilograms and defined by AS/NZS 2442.1
- (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.

## **Part 5.5            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 a residential 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 2 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 2 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) 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—
    - (i) be suitable for use in an information technology environment; and
    - (ii) be capable of controlling the power of at least 4 appliances directly or indirectly; and
    - (iii) be fitted with a mains power switching device rated to a minimum of 50,000 switching cycles;

- (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 2 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 4 appliances directly or indirectly; and
    - (iii) be fitted with a mains power switching device rated to a minimum of 50,000 switching cycles;
    - (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;
      - (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 suitable for use with desktop and notebook computers that are not more than 2 years old; and
- (c) 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<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = \text{AAV} \times N$$

Where—

- (a) AAV is—
  - (i) the relevant activity abatement value prescribed in table 5.5 for the type of standby power controller installed; or
  - (ii) for a product that meets the relevant minimum installed product requirements and—
    - (A) for a standby power controller for an information technology environment is capable of automatically disconnecting mains power

to controlled appliances when the master computer enters Sleep Mode and has been demonstrated, to the satisfaction of the Administrator, to be capable of achieving abatement greater than or equal to 1.5 tonnes over a 10 year period and has been subject to a field trial approved by the Administrator; or

- (B) for a standby power controller for an audio visual environment does not operate solely on the basis of a master/slave arrangement and has been demonstrated, to the satisfaction of the Administrator, to be capable of achieving abatement greater than or equal to 1.5 tonnes over a 10 year period and has been subject to a field trial approved by the Administrator;

the tonnes of abatement, not exceeding 6.0, that the product has demonstrated to be capable of achieving to the satisfaction of the Administrator.

- (b)  $N$  is the number of standby power controllers of that type installed in the premises.

**Table 5.5 Activity abatement values for standby power controllers**

Type of standby power controller (SPC)	Activity Abatement Value (tCo2-e)
SPC for an information technology environment	0.8
SPC for an audio visual environment	0.8

## **Part 5.6 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;
- (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 5.5 stars as determined in accordance with AS/NZS 62087.2.2; and
- (c) has a comparative energy consumption on the energy rating label of not more than 450 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.



## 5. Calculation of abatement factor

- (1) The total abatement factor in tonnes of carbon dioxide-equivalent (tCO<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = (0.512 \times [\text{SA} \times 0.1825 + 127.5] - \text{CEC}) \times 0.00762$$

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.

## Part 5.7 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 6.0 to a swimming pool or spa in a residential premises.

### 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 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;
- (b) 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
- (c) 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<sub>2</sub>-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—

$$\text{Abatement factor (tCO}_2\text{ - e)} = (1622 - \text{PAEC}) \times 0.00571$$

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

## Schedule 6 Dictionary

- Note 1* This dictionary is the dictionary for schedules 1 to 5 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 Australian Standard 1288 as in force from time to time

**AS 2047** means Australian Standard 2047 as in force from time to time

**AS 4254** means Australian Standard 4254 as in force from time to time

**AS 4552** means Australian Standard 4552 as in force from time to time

**AS 4553** means Australian Standard 4553 as in force from time to time

**AS 4554** means Australian Standard 4554 as in force from time to time

**AS 4556** means Australian Standard 4556 as in force from time to time

**AS 5102** means Australian Standard 5102 as in force from time to time

**AS/NZS 2442** means Australian/New Zealand Standard 2442 as in force from time to time

**AS/NZS 2712** means Australian/New Zealand Standard 2712 as in force from time to time

**AS/NZS 3662** means Australian/New Zealand Standard 3662 as in force from time to time

**AS/NZS 4474** means Australian/New Zealand Standard 4847 as in force from time to time.

**AS/NZS 4847** means Australian/New Zealand Standard 4847 as in force from time to time

**AS/NZS 4859** means Australian/New Zealand Standard 4859 as in force from time to time

**AS/NZS 62087** means Australian/New Zealand Standard 62087 as in force from time to time

**AS/NZS 6400** means Australian/New Zealand Standard 6400 as in force from time to time

**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.

**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.

**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.

**decommission** means disable and render permanently unusable.

**draft protection device** 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 residential premises** means a residential premises 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.

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

**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.

**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 Kelvins.

**kW** means kilowatt.

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

**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.

**new residential premises** means a residential 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.

**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.

**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 as 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 associated with 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 residential premises.

**R-value** means the thermal resistance in  $\text{m}^2\text{K}/\text{W}$  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.

**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 U-Value** means the thermal transmittance in  $(\text{W}/\text{m}^2\text{K})$  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  $(\text{W}/\text{m}^2\text{K})$  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 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.