

<b>HC3 Install an Efficient New Ducted Evaporative Air Conditioner Residential and Small Energy Consuming Customers Only</b>	<b>Activity No.</b>
	<b>HC3</b>

## 1. ACTIVITY SPECIFIC DEFINITIONS

**Ducted Evaporative Air-conditioner** means a ducted evaporative air conditioner within the scope of AS 2913 – 2000. This can include either direct or indirect type ducted evaporative coolers provided they meet the installed product requirements.

**Ducted Refrigerative Cooler** means a ducted air conditioner with a cooling mode (can also have a heating mode) that is covered by the GEMS energy labelling and MEPS scheme under AS/NZS 3823.2 (2013) or GEMS Air Conditioners up to 65kW Determination 2019 as applicable.

**Multi-split Refrigerative Cooler** means a multi-split air conditioner with a cooling mode (can also have a heating mode) that is covered by the GEMS energy labelling and MEPS scheme under AS/NZS 3823.2 (2013) or GEMS Air Conditioners up to 65kW Determination 2019 as applicable.

**Non-ducted Refrigerative Cooler** means a non-ducted air conditioner with a cooling mode (can also have a heating mode) that is covered by the GEMS energy labelling and MEPS scheme under AS/NZS 3823.2 (2013) or GEMS Air Conditioners up to 65kW Determination 2019 as applicable.

**Fixed Resistance Electric Heater** means an electric heater that utilizes a resistance electric heating element (ACOP = 1) that is permanently fixed within the building. Portable electric heaters such as fan convectors radiant or oil column heaters that are not permanently fixed do not qualify as a “**fixed resistance electric heater**”.

**Effective EER** means the annual energy efficiency ratio as defined AS 2913 – 2000.

**Inverter or Inverter Drive** refers to a ducted evaporative air-conditioner that has a variable speed drive utilizing a frequency converter for regulating the power fed into the fan. The inverter sits between the electrical supply and the motor and allows the fan motor to run at a speed or torque commensurate with the cooling demand.

## 2. ACTIVITY DESCRIPTION (SUMMARY)

Install an efficient new ducted evaporative air conditioner. This can take one of four forms:

- HC3(i) – Installation into a space with a pre-existing ducted refrigerative air-conditioner
- HC3(ii) – Installation into a space with a pre-existing multi-split refrigerative air-conditioner
- HC3(iii) - Installation into a space with a pre-existing non-ducted refrigerative air-conditioner
- HC3(iv) – Installation into a space with a pre-existing ducted non-inverter type evaporative air-conditioner
- HC3(v) - Installation into a space with no pre-existing air-conditioner of any type (e.g. into a new dwelling)

Note: In cases where a dwelling has multiple single split air-conditioners installed, provided that those multiple units serve at least 50% of the total floor area then such an

arrangement shall be deemed to be a multi-split central refrigerative system i.e. type HC3(ii) rather than type HC3(iii)

### **3. ACTIVITY ELIGIBILITY REQUIREMENTS**

Any Residential building or Small Energy Consuming Customers in South Australia where the installed product requirements and minimum installation requirements can be met. This can include new or replacement systems.

This activity is not permitted in buildings where the main form of heating is fixed resistance electric heating (or specified to be fixed resistance electric heating in the case of buildings under construction or renovation).

In relation to activity HC3(i), HC3(ii) and HC3(iii) all the pre-existing refrigerative air-conditioning systems within the conditioned spaces of the building that are of the cooling only type, must be fully decommissioned, removed from the property and disposed of (note: this does not apply to reverse cycle type air-conditioners).

In relation to activity HC3(iv) the pre-existing evaporative cooler must be fully decommissioned, removed from the property and disposed of.

Wherever possible, a replacement system for a cooling only incumbent system should use the same circuit breakers in the switchboard as had been used by the replaced system. Where this is not possible the replaced system must be disconnected at the switchboard by a licenced electrician such that it cannot be re-activated by the householder.

### **4. INSTALLED PRODUCT REQUIREMENTS**

The ducted evaporative cooler must:

- (1) Have a minimum capacity of 7 kW determined in accordance with AS 2913-2000
- (2) Be compliant with all provisions within AS 2913 -2000
- (3) Have a warranty of at least 2 years
- (4) Be installed using ductwork rated at a minimum of R1.0

### **5. MINIMUM INSTALLATION REQUIREMENTS**

- (1) All electrical wiring must be undertaken in accordance with AS/NZS 3000:2018 by an electrical worker under the supervision of a licensed electrical contractor.
- (2) All plumbing work must be undertaken by a licenced plumber in accordance with current South Australian plumbing regulations.
- (3) All installation work must be undertaken by a person who has received a qualification commensurate with Work Safely at Heights CPCCCM2012 or RIIWHS204E.
- (4) Where a pre-existing ducted system that is to be decommissioned is not to have its outlets reused by the replacement system then the outlets of that decommissioned system must be effectively sealed at ceiling level such that there is no transmission of conditioned air from a space into any adjoining unconditioned space e.g. into the ceiling space above.
- (5) No water discharge from the new evaporative system may be to a potable water supply (e.g. to a household water tank)
- (6) Removed pre-existing coolers shall have refrigerants and any other scheduled substances disposed of in accordance with the Australian and New Zealand refrigerant handling code of practice as established under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth).

**6. NORMALISED REPS GIGAJOULES**

The normalised REPS gigajoules per appliance from undertaking this activity is **Normalised REPS Gigajoules = REPS Gigajoules** (as per the first table below) x **REPS Transition Factor** (as per the final table below).

Separate values are provided for “NCC climate zones 4&5 and zone 6.

Normalised REPS gigajoules are based on the installed products fan motor drive type (inverter or non-inverter).

HC3		
Activity	Non-Inverter Drive	Inverter Drive
<b>NCC Climate Zones 4 and 5</b>		
HC3(i) Installation into a space with a pre-existing Ducted Refrigerative Air-conditioner	79.8	107.1
HC3(ii) Installation into a space with a pre-existing Multi-split Air-conditioner	39.2	66.5
HC3(iii) Installation into a space with a pre-existing Non-Ducted Refrigerative Air-conditioner	31.4	58.7
HC3(iv) Installation into a space with a pre-existing Ducted Evaporative air-conditioner (non-inverter type)	Not applicable	27.3
HC3(v) Installation into a space with no pre-existing Air-conditioner	43.1	70.4
<b>NCC Climate Zones 6</b>		
HC3(i) Installation into a space with a pre-existing Ducted Refrigerative Air-conditioner	20.6	27.6
HC3(ii) Installation into a space with a pre-existing Multi-split Air-conditioner	10.1	17.1
HC3(iii) Installation into a space with a pre-existing Non-Ducted Refrigerative Air-conditioner	8.1	15.1
HC3(iv) Installation into a space with a pre-existing Ducted Evaporative air-conditioner (non-inverter type)	Not Applicable	7.0
HC3(v) Installation into a space with no pre-existing Air-conditioner	11.1	18.1

**ACTIVITY HC3 – REPS TRANSITION FACTORS**

Year of installation	REPS Transition Factors
2024	<b>4</b>
2025	<b>4</b>

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

Persons installing heating/cooling systems should have regard to the “Air Conditioning Residential Best Practice Guideline” (2003) published by the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH). All reasonable endeavours should be used to recycle removed systems.

Refrigerants and any other scheduled substances must be disposed of in accordance with the Australian and New Zealand refrigerant handling code of practice as established under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth).

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