Carbon Credits (Carbon Farming Initiative—High Efficiency Commercial Appliances) Methodology Determination 2015

I, Greg Hunt, Minister for the Environment, make the following determination.

Dated 19:11:2015

Greg Hunt

Greg Hunt
Minister for the Environment

Contents

Part 1—Preliminary

1 Name

This is the *Carbon Credits (Carbon Farming Initiative—High Efficiency Commercial Appliances) Methodology Determination 2015*.

2 Commencement

This determination commences on the day after it is registered.

3 Authority

This determination is made under subsection 106(1) of the *Carbon Credits (Carbon Farming Initiative) Act 2011*.

4 Duration

This determination remains in force for the period that:

(a) begins when this determination commences; and

(b) ends on the day before this determination would otherwise be repealed under subsection 50(1) of the *Legislative Instruments Act 2003*.

5 Definitions

In this determination:

Act means the *Carbon Credits (Carbon Farming Initiative) Act 2011*.

air conditioner means an air conditioner or heat pump covered by the *Greenhouse and Energy Minimum Standards (Air Conditioners and Heat Pumps) Determination 2013*.

annual coefficient of performance for air conditioners has the meaning given by *AS/NZS 3823.1.1:2012 Performance of electrical appliances – Airconditioners and heat pumps Part 2: Energy labelling and minimum energy performance standards (MEPS) requirements*.

annual energy efficiency ratio for air conditioners has the meaning given by *AS/NZS 3823.1.1:2012 Performance of electrical appliances – Airconditioners and heat pumps Part 2: Energy labelling and minimum energy performance standards (MEPS) requirements*.

BCA means the Building Code of Australia, forming part of the National Construction Code, as in force from time to time.

close control air conditioner has the same meaning as in the *Greenhouse and Energy Minimum Standards (Close Control Air Conditioners) Determination 2012*.

CO_2-e means carbon dioxide equivalent.

commissioned: an equipment unit in an installation is ***commissioned*** when the installed unit is first used to provide heating or cooling services once it has been established that it operates as intended.

declaration day, for a high efficiency commercial appliances project, means the day the project is declared to be an eligible offsets project.

efficiency factor document—see section 16.

equipment unit—see section 7.

efficiency value of a model of refrigerated display cabinet on the GEMS Register—see subsection 10(10).

fully operational: an equipment unit is ***fully operational*** if it is capable of providing the intended heating or cooling function.

GEMS determination has the same meaning as in the *Greenhouse and Energy Minimum Standards Act 2012*.

GEMS Register has the same meaning as in the *Greenhouse and Energy Minimum Standards Act 2012*.

high efficiency commercial appliances project—see section 7.

installation—see section 7.

liquid-chilling package has the same meaning as in the *Greenhouse and Energy Minimum Standards (Liquid-chilling Packages Using the Vapour Compression Cycle) Determination 2012*.

model identifier has the same meaning as in the *Greenhouse and Energy Minimum Standards Act 2012*.

NCC climate zone, for a location, means the applicable climate zone for that location determined in accordance with the Climate Zone Map, prepared by the Australian Building Codes Board and as in force from time to time.

net abatement amount, of a high efficiency commercial appliances project for a reporting period, means the carbon dioxide equivalent net abatement amount for the project in the reporting period for the purposes of paragraph 106(1)(c) of the Act.

NGA Factors document means the document titled *National Greenhouse Accounts Factors*, published by the Department and as in force from time to time.

refrigerated display cabinet has the same meaning as in the *Greenhouse and Energy Minimum Standards (Refrigerated Display Cabinets) Determination 2012*.

sensible energy efficiency ratio, for a close control air conditioner, has the meaning given by *AS/NZS 4965.1:2008 Performance of close control air conditioners. Part 1: Testing for rating*.

6 References to factors and parameters from external sources

(1) If a calculation in this determination includes a factor or parameter that is defined or calculated by reference to another instrument or writing, the factor or parameter to be used for a reporting period is the factor or parameter referred to in, or calculated by reference to, the instrument or writing as in force at the end of the reporting period.

(2) Subsection (1) does not apply if:
   (a) this determination specifies otherwise; or
   (b) it is not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.

Part 2—High efficiency commercial appliances project

7 High efficiency commercial appliances project

(1) For paragraph 106(1)(a) of the Act, this determination applies to an offsets project if it involves 1 or more installations of equipment units, each of which can be reasonably expected to:

(a) result in lower energy usage than would result if high efficiency equipment units were not used for the relevant heating or cooling; and

(b) result in eligible carbon abatement.

(2) An ***installation*** consists of installing 1 of the following ***equipment units***:

(a) a liquid-chilling package;

(b) an air conditioner;

(c) a close control air conditioner;

(d) a refrigerated display cabinet;

to provide a particular heating or cooling service to or in a building, or part of a building, that is of a type listed in Schedule 6.

(3) To avoid doubt, an installation need not be part of any wider action, such as replacing an existing equipment unit. In particular, an installation may consist of:

(a) replacing an existing equipment unit with a more efficient one; or

(b) supplementing an existing system by installing an additional equipment unit that is of a high energy efficiency level; or

(c) installing an equipment unit to service a new facility or function.

(4) A project covered by subsection (1) is a ***high efficiency commercial appliances project***.

Part 3—Project requirements

8 Operation of this Part

For paragraph 106(1)(b) of the Act, this Part sets out requirements that must be met for a high efficiency commercial appliances project to be an eligible offsets project.

9 Information to be included in application for declaration

(1) The application under section 22 of the Act in relation to the project must include the following information:

(a) for each installation identified at the time of the application:

(i) the class of the equipment unit; and

(ii) the type of the building, or part of a building, that will be served by the equipment unit; and

(iii) whether the installation is replacing existing equipment units, supplementing existing equipment units, or providing a new service;

(b) for installations not individually identified at the time of the application:

(i) the classes of equipment unit expected to be installed; and

(ii) the types of the buildings, or parts of buildings, that will be served by the equipment units.

(2) For subsection (1):

(a) the class of an equipment unit is the class in accordance with Schedules 2, 3, 4 and 5; and

(b) the type of a building or part of a building is the type in accordance with Schedule 6.

10 Equipment unit requirements

Note: See section 16 to identify the applicable efficiency factor document referred to in this section.

(1) Each equipment unit installed as part of the project must comply with the requirements in this section at the time the equipment unit is commissioned.

(2) The equipment unit must be new.

(3) The model of the equipment unit must be on the GEMS Register.

(4) A liquid-chilling package must be of a model whose integrated part load value on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document.

(5) An air conditioner that:

(a) can be used only for cooling; or

(b) can be used for both heating and cooling, but is installed in NCC climate zones 1 to 3;

must be of a model whose annual energy efficiency ratio for cooling on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document.

(6) An air conditioner that:

(a) can be used for both heating and cooling; and

(b) is installed in NCC climate zones 4 to 8;

must be of a model:

(c) whose annual energy efficiency ratio for cooling on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document; and

(d) whose annual coefficient of performance for heating on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document.

(7) An air conditioner that can be used only for heating must be of a model whose annual coefficient of performance for heating on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document.

(8) A close control air conditioner must be of a model whose sensible energy efficiency ratio on the GEMS Register is equal to or greater than the high efficiency threshold specified for such a model in the efficiency factor document.

(9) A refrigerated display cabinet must be of a model whose efficiency value is equal to or lower than the high efficiency threshold specified for such a model in the efficiency factor document.

Note: The efficiency value of a refrigerated display cabinet is a parameter for which a lower number represents greater efficiency (see next subsection).

(10) For this determination, the ***efficiency value*** of a model of refrigerated display cabinet on the GEMS Register is the amount, in kWh/day/m^2 worked out using the following equation (***equation 1***):

$$efficiency\ value\ = \frac{energy\ consumption}{display\ area}$$

where:

energy consumption is daily total energy consumption, in kWh/day, that is on the GEMS Register for that model.

display area is the total display area, in m^2, that is on the GEMS Register for that model.

(11) The building, or part of a building, that will be served by the equipment unit must be of a type listed in Schedule 6.

Note: The effect of subsection (11) is to exclude installations in private dwellings or small boarding or guest houses and the like.

11 Requirement in lieu of newness requirement

(1) For subparagraph 27(4A)(a)(ii) of the Act, the substitute newness requirement is in lieu of the newness requirement for a high efficiency commercial appliances project.

(2) The project meets the ***substitute newness requirement*** if it has not begun to be implemented.

(3) The project also meets the ***substitute newness requirement*** if:

(a) the project proponent or project proponents for the project:

(i) gave the Regulator a written notice of intention to make an application in relation to the project that satisfied:

(A) paragraphs (1)(a) to (d) of item 388B of Schedule 1 to the amendment Act; or

(B) paragraphs (1)(a) to (d) of item 388C of that Schedule; and

(ii) made the application under section 22 of the Act, or were taken to have done so under the Act, before 1 July 2016; and

(b) the project had not begun to be implemented at the intention notice time.

(4) A determination as to whether a project has begun to be implemented at a particular time is to be done as if for the purposes of subparagraph 27(4A)(a)(i) of the Act (so that subsections 27(4B) to (4E) of the Act apply).

(5) In this section:

amendment Act means the *Carbon Farming Initiative Amendment Act 2014*.

intention notice time has the same meaning as in item 388B or 388C of Schedule 1 to the amendment Act, as appropriate.

Note: Transitional provisions in the *Carbon Farming Initiative Amendment Act 2014* allowed prospective proponents who gave notice of their intentions before the date of Proclamation of that Act to have the newness of their projects assessed as at the time of their notice, provided that they made the section 22 application before 1 July 2015. The effect of this section is to extend this deadline to 1 July 2016 for this determination.

Part 4—Net abatement amount

Division 1—Preliminary

12 Operation of this Part

For paragraph 106(1)(c) of the Act, this Part specifies the method for working out the carbon dioxide equivalent net abatement amount for a reporting period for a high efficiency commercial appliances project that is an eligible offsets project.

13 Overview of gases accounted for in abatement calculations

The following table provides an overview of the greenhouse gases and emissions sources that are relevant to working out the net abatement amount for a high efficiency commercial appliances project.

Greenhouse gases and emissions sources

Item	Relevant emissions calculation	Emissions source	Greenhouse gas
1	Baseline emissions Project emissions	Electricity consumption	Carbon dioxide (CO_2) Methane (CH_4) Nitrous oxide (N_2O)

14 Equipment units to be used in calculations

(1) In calculating the net abatement amount for the project for a reporting period:

(a) the project proponent may choose to exclude a particular equipment unit from the calculations; and

(b) the project proponent must exclude an equipment unit if, at any time during the reporting period, the equipment unit, or part of it, is modified in a way that has an effect, that is not minor or trivial, on the abatement for the equipment unit.

Note: An exclusion of an equipment unit from abatement calculations works to exclude the unit from both the baseline and project energy consumption calcuations.

(2) For paragraph (1)(b), ***modifying*** includes dismantling and otherwise making inoperative.

15 Data to be used in calculations

In calculating the net abatement amount, the project proponent must, for each equipment unit included in the calculation:

(a) record the model identifier of the unit used to identify the product in the GEMS Register; and

(b) use data for that product in the GEMS Register as at the time the unit is commissioned.

16 Efficiency factor document

(1) For this determination, a reference to the ***efficiency factor document*** is a reference to a document published by the Department on its website that is expressed to be the efficiency factor document for this determination.

(2) The efficiency factor document must contain:

(a) for liquid-chilling packages:
    (i) baseline efficiency integrated part load values for classes of products with the same condenser type and within the same cooling capacity range; and
    (ii) corresponding high efficiency thresholds; and
(b) for air conditioners:
    (i) baseline annual energy efficiency ratios for cooling for classes of products of the same type and within the same cooling capacity range; and
    (ii) corresponding high efficiency thresholds for cooling; and
    (iii) baseline annual coefficients of performance for heating for classes of products of the same type and within the same heating capacity range; and
    (iv) corresponding high efficiency thresholds for heating; and
(c) for close control air conditioners:
    (i) baseline sensible energy efficiency ratios for classes of products within the same net sensible cooling capacity range; and
    (ii) corresponding high efficiency thresholds; and
(d) for refrigerated display cabinets:
    (i) baseline efficiency values for classes of products of the same cabinet type and M-package temperature class; and
    (ii) corresponding high efficiency thresholds.

Determining baseline factors and corresponding high efficiency thresholds

(3) For paragraphs (2)(a), (b) and (c):
    (a) the baseline factor for a class of products is the average of the values of that factor for those products on the GEMS Register for which the data is publicly available; and
    (b) the corresponding high efficiency threshold for that class is the median of the values of that factor for those products with values of that factor that are higher than the baseline factor.

(4) For paragraph (2)(d):
    (a) the baseline efficiency value for a class of products is the average of the efficiency values for those products on the GEMS Register for which the data required to calculate the efficiency value is publicly available; and
    (b) the corresponding high efficiency threshold for that class is the median of the efficiency values for those products with efficiency values that are lower than the baseline factor.

Note: The efficiency value of a refrigerated display cabinet is a parameter for which a lower number represents greater efficiency (see subsection 10(10)).

Applicable efficiency factor document for installed equipment

(5) For a provision of this determination that relates to an installed equipment unit, the applicable efficiency factor document is the one in force at the time the installation was completed, unless subsection (6) applies.

(6) If:
    (a) the applicable efficiency factor document that would apply in relation to the equipment unit under subsection (5) is a revised version that was published on the Department's website on a particular day (the ***publication day***); and
    (b) the equipment unit that was installed was the subject of a contract or purchase order that specified that an equipment unit of that model was to be delivered to the location of the installation; and

(c) the contract or purchase order was entered into and dated before the publication day;

the project proponent may choose to apply the efficiency factor document that was in force on the day the contract or purchase order was entered into.

Department to maintain efficiency factor document

(7) The Department must publish an efficiency factor document within 3 months after the commencement of this determination, and must publish a revised version when satisfied that it is appropriate.

(8) The Department must consider, at intervals of not less than 12 months, whether it would be appropriate to publish a revised version, taking into account any views expressed by the Emissions Reduction Assurance Committee.

(9) A revised version of the efficiency factor document must be expressed to commence on a date at least 60 days after the document is published by the Department on its website.

Division 2—Method for calculating net abatement amount

17 Summary

The net abatement amount for a project for the reporting period is the sum of the abatement during the reporting period resulting from the installation of each equipment unit.

The abatement for an equipment unit is the baseline energy consumption minus the project energy consumption for the equipment unit multiplied by the relevant emissions factor for electricity for the unit.

18 Net abatement amount (*A*)

The net abatement amount for a reporting period, ***A***, in tonnes CO_2-e, is worked out using the equation (***equation 2***):

$$A = \sum_{i=1}^{n} A_i$$

where:

n is the number of equipment units over which abatement is measured for the reporting period.

$\boldsymbol{A_i}$ is the abatement for the reporting period of the i^{th} equipment unit of the high efficiency commercial appliances project, in tonnes CO_2-e, calculated using:

(a) for an equipment unit that is a liquid-chilling package, air conditioner or close control air conditioner—equation 3; and

(b) for an equipment unit that is a refrigerated display cabinet—equation 14.

19 Abatement for a liquid-chilling package, air conditioner or close control air conditioner (A_i)

(1) For equation 2, $\boldsymbol{A_i}$ for the i^{th} liquid-chilling package, air conditioner or close control air conditioner is worked out using the equation (***equation 3***):

$$A_i = \left(E_{B,i} - E_{P,i}\right) \times EF_{elec,i}$$

where:

$E_{B,i}$ is, for the i[th] equipment unit, the baseline energy consumption, in MWh, that is deemed would have occurred during the reporting period had there been no project, calculated using:

(a) if the equipment unit is a liquid-chilling package—equation 4; and
(b) if the equipment unit is an air conditioner—equation 6, and
(c) if the equipment unit is a close control air conditioner—equation 12.

$E_{P,i}$ is the project energy consumption, in MWh, for the i[th] equipment unit during the reporting period, calculated using:

(a) if the unit is a liquid-chilling package—equation 5; and
(b) if the unit is an air conditioner—equation 9; and
(c) if the unit is a close control air conditioner—equation 13.

$EF_{elec,i}$ is:

(a) for electricity obtained from an electricity grid that is a grid for which the NGA Factors document in force on the declaration day includes an emissions factor—that factor, in kilograms CO_2-e per kilowatt hour; or
(b) for electricity obtained from an electricity grid not covered by paragraph (a) or from a source other than an electricity grid:
    (i) if the supplier of the electricity is able to provide an emissions factor that reflects the emissions intensity of the electricity and is applicable on the declaration day—that factor, in kilograms CO_2-e per kilowatt hour; or
    (ii) otherwise—the emissions factor, in kilograms CO_2-e per kilowatt hour, for off-grid electricity included in the NGA Factors document in force on the declaration day.

(2) For subparagraph (b)(i) of the definition of $EF_{elec,i}$, the emissions factor must be worked out:

(a) on a sent-out basis; and
(b) using a measurement or estimation approach that is consistent with the *National Greenhouse and Energy Reporting (Measurement) Determination 2008*.

20 Baseline energy consumption for a liquid-chilling package ($E_{B,i}$)

For equation 3, $E_{B,i}$, for the i[th] liquid-chilling package, is worked out using the equation (***equation 4***):

$$E_{B,i} = \frac{P_{CC,i}}{IPLV_{B,i}} \times 24 \times t_i \times 0.9 \times 0.171 \times 10^{-3}$$

where:

$P_{CC,i}$ is the cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] installed liquid-chilling package.

$IPLV_{B,i}$ is, for the model of the i[th] liquid-chilling package, the baseline efficiency integrated part load value specified for such a model in the efficiency factor document.

t_i is the number of days in the reporting period for the i[th] liquid-chilling package after it is commissioned.

Note 1: The factor 0.9 is a factor that takes account of the fact that a liquid-chilling package may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: The factor 0.171 is the default capacity factor for liquid-chilling packages.

21 Project energy consumption for a liquid-chilling package ($E_{P,i}$)

For equation 3, $E_{P,i}$, for the i[th] liquid-chilling package, is worked out using the equation (***equation 5***):

$$E_{P,i} = \frac{P_{CC,i}}{IPLV_{P,i}} \times 24 \times t_i \times 0.9 \times 0.171 \times 10^{-3}$$

where:

$P_{CC,i}$ is the cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] installed liquid-chilling package.

$IPLV_{P,i}$ is the integrated part load value that is on the GEMS Register for the model of the i[th] liquid-chilling package.

t_i is the number of days in the reporting period for the i[th] liquid-chilling package after it is commissioned.

Note 1: The factor 0.9 is a factor that takes account of the fact that a liquid-chilling package may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: The factor 0.171 is the default capacity factor for liquid-chilling packages.

Note 3: $P_{CC,i,}$ and t_i have the same values in equations 4 and 5.

22 Baseline energy consumption for an air conditioner ($E_{B,i}$)

For equation 3, $E_{B,i}$, for the i[th] air conditioner, is worked out using the equation (***equation 6***):

$$E_{B,i} = C_{B,i} + H_{B,i}$$

where:

$C_{B,i}$ is the baseline cooling energy consumption, in MWh, for the i[th] air conditioner, which is:

(a) if the air conditioner can be used for cooling—calculated using equation 7; and

(b) if the air conditioner can be used only for heating—zero.

$H_{B,i}$ is the baseline heating energy consumption, in MWh, for the i[th] air conditioner, which is:

(a) if the air conditioner can be used for heating—calculated using equation 8; and

(b) if the air conditioner can be used only for cooling—zero.

23 Baseline cooling energy consumption for an air conditioner ($C_{B,i}$)

For equation 6, $C_{B,i}$, for the i[th] air conditioner, is worked out using the equation (***equation 7***):

$$C_{B,i} = \frac{P_{TCC,i}}{AEER_{B,i}} \times 24 \times t_i \times 0.9 \times CF_{C,i} \times 10^{-3}$$

where:

$\boldsymbol{P_{TCC,i}}$ is the total cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] air conditioner.

$\boldsymbol{AEER_{B,i}}$ is, for the model of the i[th] air conditioner, the baseline annual energy efficiency ratio specified for such a model in the efficiency factor document.

$\boldsymbol{t_i}$ is the number of days in the reporting period for the i[th] air conditioner after it is commissioned.

$\boldsymbol{CF_{C,i}}$ is, for the model of the i[th] air conditioner, the cooling capacity factor for the appropriate climate zone specified in Schedule 1.

Note: The factor 0.9 is a factor that takes account of the fact that an air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

24 Baseline heating energy consumption for an air conditioner ($H_{B,i}$)

For equation 6, $\boldsymbol{H_{B,i}}$, for the i[th] air conditioner, is worked out using the equation (***equation 8***):

$$H_{B,i} = \frac{P_{HC,i}}{ACOP_{B,i}} \times 24 \times t_i \times 0.9 \times CF_{H,i} \times 10^{-3}$$

where:

$\boldsymbol{P_{HC,i}}$ is the heating capacity power, in kW, that is on the GEMS Register for the model of the i[th] air conditioner.

$\boldsymbol{ACOP_{B,i}}$ is, for the model of the i[th] air conditioner, the baseline annual coefficient of performance for heating specified for such a model in the efficiency factor document.

$\boldsymbol{t_i}$ is the number of days in the reporting period for the i[th] air conditioner after it is commissioned.

$\boldsymbol{CF_{H,i}}$ is, for the model of the i[th] air conditioner, the heating capacity factor for the appropriate climate zone specified in Schedule 1.

Note: The factor 0.9 is a factor that takes account of the fact that an air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

25 Project energy consumption for an air conditioner ($E_{P,i}$)

For equation 3, $\boldsymbol{E_{P,i}}$ for the i[th] air conditioner, is worked out using the equation (***equation 9***):

$$E_{P,i} = C_{P,i} + H_{P,i}$$

where:

$\boldsymbol{C_{P,i}}$ is the project cooling energy consumption, in MWh, for the i[th] air conditioner, which is:

(a) if the air conditioner can be used for cooling—calculated using equation 10; and
(b) if the air conditioner can be used only for heating—zero.

$\boldsymbol{H_{P,i}}$ is the project heating energy consumption, in MWh, for the i[th] air conditioner, which is:

(a) if the air conditioner can be used for heating—calculated using equation 11; and
(b) if the air conditioner can be used only for cooling—zero.

26 Project cooling energy consumption for an air conditioner ($C_{P,i}$)

For equation 9, $C_{P,i}$, for the i[th] air conditioner is worked out using the equation (***equation 10***):

$$C_{P,i} = \frac{P_{TCC,i}}{AEER_{P,i}} \times 24 \times t_i \times 0.9 \times CF_{C,i} \times 10^{-3}$$

where:

$P_{TCC,i}$ is the total cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] air conditioner.

$AEER_{P,i}$ is the annual energy efficiency ratio that is on the GEMS Register for the model of the i[th] air conditioner.

t_i is the number of days in the reporting period for the i[th] air conditioner after it is commissioned.

$CF_{C,i}$ is, for the model of the i[th] air conditioner, the cooling capacity factor for the appropriate climate zone specified in Schedule 1.

Note 1: The factor 0.9 is a factor that takes account of the fact that an air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: $P_{TCC,i}$ and $CF_{C,i}$ have the same values in equations 7 and 10.

27 Project heating energy consumption for an air conditioner ($H_{P,i}$)

For equation 9, $H_{P,i}$, for the i[th] air conditioner, is worked out using the equation (***equation 11***):

$$H_{P,i} = \frac{P_{HC,i}}{ACOP_{P,i}} \times 24 \times t_i \times 0.9 \times CF_{H,i} \times 10^{-3}$$

where:

$P_{HC,i}$ is the heating capacity power, in kW, that is on the GEMS Register for the model of the i[th] air conditioner.

$ACOP_{P,i}$ is, for the model of the i[th] air conditioner, the annual coefficient of performance for heating that is on the GEMS Register.

t_i is the number of days in the reporting period for the i[th] air conditioner after it is commissioned.

$CF_{H,i}$ is, for the model of the i[th] air conditioner, the heating capacity factor for the appropriate climate zone specified in Schedule 1.

Note: The factor 0.9 is a factor that takes account of the fact that an air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: $P_{HC,i}$ and $CF_{H,i}$ have the same values in equations 8 and 11; t_i has the same value in equations 7, 8, 10 and 11.

28 Baseline energy consumption for a close control air conditioner ($E_{B,i}$)

For equation 3, $E_{B,i}$, for the i[th] close control air conditioner, is worked out using the equation (***equation 12***):

$$E_{B,i} = \frac{P_{CC,i}}{EERS_{B,i}} \times 24 \times t_i \times 0.9 \times 0.65 \times 10^{-3}$$

where:

$P_{CC,i}$ is the net sensible cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] close control air conditioner.

$EERS_{B,i}$ is, for the model of the i[th] close control air conditioner, the baseline sensible energy efficiency ratio specified for such a model in the efficiency factor document.

t_i is the number of days in the reporting period for the i[th] close control air conditioner after it is commissioned.

Note 1: The factor 0.9 is a factor that takes account of the fact that a close control air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: The factor 0.65 is the default capacity factor for close control air conditioners.

29 Project energy consumption for a close control air conditioner ($E_{P,i}$)

For equation 3, $E_{P,i}$, for the i[th] close control air conditioner, is worked out using the equation (***equation 13***):

$$E_{P,i} = \frac{P_{CC,i}}{EERS_{P,i}} \times 24 \times t_i \times 0.9 \times 0.65 \times 10^{-3}$$

where:

$P_{CC,i}$ is the net sensible cooling capacity power, in kW, that is on the GEMS Register for the model of the i[th] close control air conditioner.

$EERS_{P,i}$ is the sensible energy efficiency ratio that is on the GEMS Register for the model of the i[th] close control air conditioner.

t_i is the number of days in the reporting period for the i[th] close control air conditioner after it is commissioned.

Note 1: The factor 0.9 is a factor that takes account of the fact that a close control air conditioner may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Note 2: The factor 0.65 is the default capacity factor for close control air conditioners.

Note 3: $P_{CC,i,}$ and t_i have the same values in equations 12 and 13.

30 Abatement for a refrigerated display cabinet (A_i)

For equation 2, A_i for the i[th] refrigerated display cabinet is worked out using the equation (***equation 14***):

$$A_i = \left(\eta_{B,i} \times A_{TDA,i} - E_{TEC,i}\right) \times t_i \times 0.9 \times EF_{elec,i} \times 10^{-3}$$

where:

$\eta_{B,i}$ is, for the model of the i^{th} refrigerated display cabinet, the baseline efficiency specified for such a model, in kWh/day/m^2, in the efficiency factor document.

$A_{TDA,i}$ is the total display area of that cabinet, in m^2, on the GEMS Register for the model of the i^{th} refrigerated display cabinet.

$E_{TEC,i}$ is the daily total energy consumption of the cabinet, in kWh/day, on the GEMS Register for the model of the i^{th} refrigerated display cabinet.

t_i is the number of days in the reporting period for the i^{th} refrigerated display cabinet after it is commissioned.

$EF_{elec,i}$ has the same meaning as in equation 3.

Note: The factor 0.9 is a factor that takes account of the fact that a refrigerated display cabinet may be out of operation, or the use of the premises that it serves may be suspended, for reasons other than normal usage patterns during the reporting period.

Part 5—Reporting, notification and record-keeping requirements

Note: Other reporting, notification, record-keeping and monitoring requirements are set out in regulations and rules made under the Act.

Division 1—Offsets report requirements

31 Operation of this Division

For paragraph 106(3)(a) of the Act, this Division sets out information that must be included in an offsets report about a high efficiency commercial appliances project that is an eligible offsets project.

32 Information that must be included in an offsets report

(1) An offsets report for a reporting period must, for each installed equipment unit included in a calculation undertaken in accordance with Part 4 for the reporting period, state in a manner and form approved by the Regulator:

(a) its location; and

(b) its model number and serial number; and

(c) the class of equipment unit to which it belongs under Schedule 2, 3, 4 or 5; and

(d) whether it:

(i) was included in the most recent previous offsets report; or

(ii) is an old installation that was excluded from the most recent previous report; or

(iii) is a new installation that has not been included in a previous report.

(2) For an equipment unit that was included in calculations for an earlier reporting period, but is not included in calculations for this reporting period, the report must state:

(a) the reason for the exclusion; and

(b) whether the exclusion is expected to be temporary or permanent.

(3) If, in the circumstances described in paragraph 6(2)(b), a factor or parameter is defined or calculated for a reporting period by reference to an instrument or writing as in force from time to time, the offsets report must include the reasons why it was not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.

Division 2—Notification requirements

33 Operation of this Division

For paragraph 106(3)(b) of the Act, this Division sets out requirements to notify the Regulator of certain matters relating to a high efficiency commercial appliances project that is an eligible offsets project.

34 Notification requirements

(1) The project proponent must notify the Regulator of any safety issues that have been identified with an equipment unit installed or proposed to be installed in relation to the project as soon as practicable after the proponent becomes aware of that issue.

(2) The project proponent must notify the Regulator of any product performance issues that have been identified with an equipment unit installed or proposed to be installed in relation to the project within 30 days after the proponent becomes aware of that issue if:
  (a) a product recall notice has been issued; or
  (b) the issue affects:
    (i) more than 5% of the installations of the project; or
    (ii) more than 50 installations.

Division 3—Record-keeping requirements

35 Operation of this Division

For paragraph 106(3)(c) of the Act, this Division sets out record-keeping requirements for a high efficiency commercial appliances project that is an eligible offsets project.

36 Record-keeping requirements

For each installation, the project proponent must keep records of the following:
  (a) the date equipment unit was commissioned;
  (b) if the equipment unit, or part of it, is dismantled or made inoperative so that paragraph 14(1)(b) applies—the date when this occurs;
  (c) if the project proponent uses subsection 16(6) to apply an earlier efficiency factor document than would otherwise be applicable under this determination—the contract or purchase order relied on, including evidence that it was entered into and dated before the publication day mentioned in that subsection.

Part 6—Dividing a high efficiency commercial appliances project

37 Division of project for reporting purposes

For subsection 77A(2) of the Act, the project may be divided into parts only if:

(a) each part would qualify as a high efficiency commercial appliances project; and

(b) each part has achieved an abatement of at least 2,000 tonnes CO_2-e in the reporting period before the division; and

(c) all installations that service areas or buildings with the same physical address are in the same part.

Schedule 1—Air conditioner capacity factors

Air conditioner capacity factors			
Item	**NCC climate zone**	**Cooling capacity factor**	**Heating capacity factor**
1	Climate zone 1—High humidity summer, warm winter	0.192	0.010
2	Climate zone 2—Warm humid summer, mild winter	0.182	0.020
3	Climate zone 3—Hot dry summer, warm winter	0.192	0.010
4	Climate zone 4—Hot dry summer, cool winter	0.101	0.101
5	Climate zone 5—Warm temperate	0.101	0.101
6	Climate zone 6—Mild temperate	0.067	0.135
7	Climate zone 7—Cool temperate	0.020	0.182
8	Climate zone 8—Alpine	0.020	0.182

Schedule 2—Classification of liquid-chilling packages

Class	Condenser type	Cooling capacity (kW)
1	Air cooled	350 to <500
2	Air cooled	500 to <700
3	Air cooled	700 to <1,000
4	Air cooled	1,000 to <1,500
5	Air cooled	≥1,500
6	Water cooled	350 to <500
7	Water cooled	500 to <700
8	Water cooled	700 to <1,000
9	Water cooled	1,000 to <1,500
10	Water cooled	≥1,500

Schedule 3—Classification of air conditioners

Class	Product type	Capacity (kW)
1	Non-ducted unitary	<10
2	Non-ducted unitary	10 to <19
3	Non-ducted split systems	< 4
4	Non-ducted split systems	4 to <10
5	Non-ducted split systems	10 to <19
6	Ducted systems	<10
7	Ducted systems	10 to <19
8	Multi-split systems	<4
9	Multi-split systems	4 to <10
10	Multi-split systems	10 to <19
11	All configurations	19 to 39
12	All configurations	>39 to 65

Schedule 4—Classification of close control air conditioners

Class	Net sensible cooling capacity (kW)
1	<19.05
2	19.05 to <39.5
3	39.5 to <70.0
4	≥70.0

Schedule 5—Classification of refrigerated display cabinets

Class	Cabinet type	M-package temperature class
1	RS 1—Unlit shelves	All
2	RS 1—Lit shelves	All
3	RS 2—Unlit shelves	All
4	RS 2—Lit shelves	All
5	RS 3—Unlit shelves	All
6	RS 3—Lit shelves	All
7	RS 4—Glass door	All
8	RS 6—Gravity coil	All
9	RS 6—Fan coil	All
10	RS 7—Fan coil	All
11	RS 8—Gravity coil	All
12	RS 8—Fan coil	All
13	RS 9—Fan coil	All
14	RS 10—Low	All
15	RS 11	All
16	RS 12	All
17	RS 13—Solid sided	All
18	RS 13—Glass sided	All
19	RS14—Solid sided	All
20	RS 14—Glass sided	All
21	RS 15—Glass door	All
22	RS 16—Glass door	All
23	RS 18	All
24	RS 19	All
25	HC1	M1
26	HC1	M2
27	HC2	M2
28	HC3	M1
29	HC4	M1
30	HC4	M2
31	HC6	M2
32	VC1	M1
33	VC1	M2
34	VC2	M1
35	VC2	M2
36	VC4 (solid door)	M1
37	VC4 (solid door)	M2
38	VC4 (glass door)	M1
39	VC4 (glass door)	M2
40	HF4	L1
41	HF4	L2
42	HF6	L1
43	HF6	L2
44	VF4 (solid door)	L1
45	VF4 (solid door)	L2
46	VF4 (glass door)	L1

Class	Cabinet type	M-package temperature class
47	VF4 (glass door)	L2

Schedule 6—Types of buildings and parts of buildings

	Type of building or part of a building
1	BCA Class 2 buildings (Common Areas)
2	BCA Class 3 buildings
3	BCA Class 5 buildings
4	BCA Class 6 buildings
5	BCA Class 7 buildings
6	BCA Class 8 buildings
7	BCA Class 9 buildings
8	Other place not covered above, other than in BCA Class 1, 2, 4 or 10 buildings/ structures.