Carbon Credits (Carbon Farming Initiative—Facilities) Methodology Determination 2015

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

Dated 24 August 2015

Greg Hunt
Minister for the Environment

Federal Register of Legislative Instruments F2015L01346

Contents

Part 1—Preliminary

1 Name

This is the *Carbon Credits (Carbon Farming Initiative—Facilities) Methodology Determination 2015*.

2 Commencement

(1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	**Column 2**	**Column 3**
Provisions	**Commencement**	**Date/Details**
1. The whole of this instrument	The day after this instrument is registered.	

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

(2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

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(b) ends on the day before this determination would otherwise be repealed under subsection 50(1) of the *Legislative Instruments Act 2003*.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

Allocation of Emissions from a CHP Plant Guide has the meaning given by subsection 62(2).

amendment Act has the meaning given by subsection 19(5).

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applicable monitoring requirements, for electricity exported from a facility, means:

(a) if electricity is a production variable for the facility—the requirements that apply under sections 79 and 80; or

(b) otherwise—the requirements that apply under section 80.

appropriate abatement estimation approach has the meaning given by subsection 28(6).

baseline period: the ***baseline period*** for a facilities project consists of the 4 consecutive NGER reporting years preceding the NGER reporting year in which the first project abatement activity begins to be implemented.

baseline period monitoring requirements has the meaning given by section 6.

baseline year, for a facility, means the baseline year worked out in accordance with section 33 for each of the facility's production variables.

Note: The baseline year worked out in accordance with that section will be the same year for each of the facility's production variables.

biomass means organic matter other than:

(a) fossil fuels; or

(b) biofuels.

Note 1: Examples of fossil fuels include coal, lignite, petroleum products and natural gas.

Note 2: Examples of biofuels include ethanol and biodiesel.

by-product means a saleable output that:

(a) results from a chemical or physical process undertaken by a facility other than for the purpose of producing the output; and

(b) will be disposed of, by sale or gift, without any further processing by the facility (other than further processing in accordance with standard industry practice).

calculation year has the meaning given by subsection 38(1).

chief financial officer, of a person that has operational control over a facility, means:

(a) if the person is a body corporate—the chief financial officer (however described) of the body corporate; or

(b) otherwise—the individual who is primarily responsible for financial matters in relation to the person.

CHP plant (short for combined heat and power plant) means a combined heat and power plant that:

(a) generates electricity; and

(b) uses the waste heat resulting from that generation of electricity for heat or cooling or both heat and cooling.

declaration day, for a facilities project, means the day the project is declared to be an eligible offsets project.

default emission factor means an emission factor specified by number (rather than by reference to a method for determining or estimating the factor) in:

(a) Schedule 1 to the NGER (Measurement) Determination; or

(b) an NGER measurement method referred to in subsection 1.4(2) of that determination as method 2.

default energy content factor means an energy content factor specified by number (rather than by reference to a method for determining or estimating the factor) in:

(a) Schedule 1 to the NGER (Measurement) Determination; or

(b) an NGER measurement method referred to in subsection 1.4(2) of that determination as method 2.

designated metering point, for a generating unit at a facility, means:

(a) if, at the time of measurement, the generating unit is connected to the national electricity market—the metering point determined under the National Electricity Rules in force at the time of measurement; or

(b) if paragraph (a) does not apply and a relevant authority of the State or Territory where the generating unit is located has determined a metering point that applies at the time of measurement—the metering point determined by the relevant authority; or

(c) if neither paragraph (a) nor (b) applies—a metering point that allows electricity that is generated by the generating unit and exported from the facility to be measured at a time that is as close as possible to when the electricity leaves the facility.

displaced electricity:

(a) for the purposes of equation 18—has the meaning given by subsection 48(2); and

(b) for the purposes of equation 20—has the meaning given by subsection 52(2).

distribution network means a network or system that is a distribution network or a distribution system under a law that governs the operation of the network or system.

eligible renewable energy source has the same meaning as in the *Renewable Energy (Electricity) Act 2000*.

essential component, of a generating unit, means the generator of electricity, and any related equipment, that comprise the generating unit.

excluded heat or cooling emissions has the meaning given by subsection 44(3).

excluded NGER fugitive emissions means fugitive emissions to which any of the following provisions of the NGER (Measurement) Determination apply:

(a) Part 3.2 (fugitive emissions from coal mining);

(b) Division 3.3.2 (fugitive emissions from venting or flaring from oil or gas exploration activities);

(c) Subdivision 3.3.3.3 (fugitive emissions from crude oil production (flared));

(d) Subdivision 3.3.3.4 (fugitive emissions from crude oil production (non-flared));
(e) Subdivision 3.3.5.2 (fugitive emissions from deliberate releases from process vents, system upsets and accidents during crude oil refining activities);
(f) Subdivision 3.3.5.3 (fugitive emissions released from gas flared from oil refineries);
(g) Division 3.3.9 (fugitive emissions from venting or flaring from natural gas production or processing activities);
(h) Part 3.4 (fugitive emissions from the transport of captured carbon dioxide).

existing generating unit: a generating unit is an ***existing generating unit*** for a facility during an NGER reporting year if:

(a) the generating unit was used to generate electricity at the facility during the baseline year; and
(b) the generating unit is used to generate electricity at the facility during the NGER reporting year; and
(c) no essential component of the generating unit has been added, removed or replaced after the end of the baseline year.

facilities project has the meaning given by subsection 13(2).

facility has the same meaning as in the NGER Act.

facility site means a site at which an activity that is part of a facility is undertaken.

facility-specific apportioning metric has the meaning given by subsection 37(5).

fixed proportion has the meaning given by section 7.

generating unit means the generator of electricity and all related equipment that is essential to its functioning as a single entity.

Global Warming Potential means a Global Warming Potential for a greenhouse gas, mentioned in regulation 2.02 of the NGER Regulations.

heat means heating or steam.

higher method has the same meaning as in the NGER (Measurement) Determination.

ineligible abatement activity has the meaning given by section 8.

input means anything that undergoes a chemical or physical process to produce an intermediate product or an output.

input or output purity change has the meaning given by subsection 38(3).

input purity means the percentage of the total quantity of an input that represents, or is required to produce, the key substance of value in the output produced from the processing of the input.

intention notice time has the meaning given by subsection 19(5).

intermediate product means a product that:

(a) results from a chemical or physical process undertaken by a facility using one or more inputs; and

(b) is then used as an input for the production of an output at the same facility.

Jobs and Competitiveness Program means the Jobs and Competitiveness Program that was in force under the *Clean Energy Act 2011* immediately before the repeal of that Act by item 1 of Schedule 1 to the *Clean Energy Legislation (Carbon Tax Repeal) Act 2014*.

lower method has the same meaning as in the NGER (Measurement) Determination.

major change: a facility undergoes a ***major change*** during an NGER reporting year if, during the NGER reporting year:

(a) the facility undergoes ramp-up; or

(b) a major disruption to production occurs at the facility; or

(c) the facility undergoes a significant expansion; or

(d) the facility undergoes a significant output variable change.

major disruption to production: a ***major disruption to production*** occurs at a facility during an NGER reporting year (the ***disruption year***) if:

(a) a maintenance activity or a plant shutdown (a ***disrupting activity***) occurs at the facility during the disruption year; and

(b) there is a change of 10% or more in the emissions intensity of a production variable for the facility for the disruption year when compared with the emissions intensity of the variable for:

(i) the NGER reporting year that immediately precedes the disruption year; or

(ii) the NGER reporting year that immediately follows the disruption year.

material effect has the meaning given by section 9.

material emissions source means an emissions source that, on its own or in combination with one or more other emissions sources, has a material effect on project abatement.

materially similar has the meaning given by section 10.

National Electricity Rules means the National Electricity Rules, as in force from time to time, made under the National Electricity Law set out in the Schedule to the *National Electricity (South Australia) Act 1996* (SA).

NEM standard metering means the standard of metering mentioned in the National Electricity Rules.

new factor has the meaning given by subsection 38(2).

new generating unit: a generating unit is a ***new generating unit*** for a facility during an NGER reporting year if:

(a) the generating unit includes an essential component that:

(i) was not used by the generating unit to generate electricity at the facility during the baseline year; and

(ii) is used by the generating unit to generate electricity at the facility during the NGER reporting year; or

(b) the following apply:

(i) the generating unit uses electricity generating equipment (the ***shared equipment***) that either is also used by an existing generating unit at the facility or, if electricity is the only production variable for the facility, is not part of a generating unit at the facility;

(ii) the shared equipment was not used to generate electricity at the facility during the baseline year;

(iii) the shared equipment is used to generate electricity at the facility during the NGER reporting year;

(iv) the emissions resulting from, or required to operate, the shared equipment in the NGER reporting year are at least 10 000 tonnes CO_2-e or at least 5% of the total emissions associated with any generating unit that uses the shared equipment.

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

NGER Act means the *National Greenhouse and Energy Reporting Act 2007*.

NGER facility level emissions data, for a facility, means data about the greenhouse gas emissions from the facility that is included in an NGER report about the operations of the facility.

NGER (Measurement) Determination means the *National Greenhouse and Energy Reporting (Measurement) Determination 2008*.

NGER measurement method means a method that:

(a) the NGER (Measurement) Determination provides for the measurement of greenhouse gas emissions; and

(b) is referred to in subsection 1.4(2) of that determination as method 1, method 2, method 3 or method 4.

NGER Regulations means the *National Greenhouse and Energy Reporting Regulations 2008*.

NGER report means a report about the operations of a facility that is required to be provided to the Regulator under any of the following sections of the NGER Act:

(a) section 19;

(b) section 22G;

(c) section 22X.

NGER reporting year means a financial year.

non-monitored period has the meaning given by subsection 81(1).

officer, of a person that has operational control over a facility, means:

(a) if the person is an individual—the individual; or

(b) otherwise—an individual who:

(i) makes, or participates in making, decisions that affect the whole, or a substantial part, of the business or affairs of the person; or

(ii) has the capacity to affect significantly the person's financial standing.

operational control has the same meaning as in the NGER Act.

output means a product that is the last product resulting from a chemical or physical process undertaken by a facility using one or more inputs or intermediate products.

output purity means the percentage of the total quantity of an output that represents the key substance of value in the output.

output variable: a product that is produced or processed by a facility is an ***output variable*** for the facility if:

(a) the product is the last saleable output from a chemical or physical process undertaken by the facility; and

(b) an increase in the quantity of the product produced or processed by the facility would result in an increase in the quantity of greenhouse gas emissions from the facility; and

(c) a decrease in the quantity of the product produced or processed by the facility would result in a decrease in the quantity of greenhouse gas emissions from the facility; and

(d) the quantity of the product can be expressed in a unit of measurement that complies with the *National Measurement Act 1960*; and

(e) the product is not an intermediate product, a by-product or a waste product.

person:

(a) before 1 July 2016—means a group entity within the meaning of the NGER Act; and

(b) on and after 1 July 2016—has the same meaning as in the NGER Act.

plant shutdown: a ***plant shutdown*** occurs at a facility during an NGER reporting year if all or part of the facility is not in operation for a period during the NGER reporting year.

production variable, for a facility, means an output variable, input or intermediate product chosen to be a production variable for the facility in accordance with section 16 or 17.

production variable data, for a facility to which a facilities project relates, means data about the quantity and purity of each production variable that is produced or processed by the facility during an NGER reporting year, being data that is collected as a result of the variable being monitored in accordance with:

(a) if the NGER reporting year is in a reporting period for the project—the reporting period monitoring requirements for the variable; or

(b) otherwise—the baseline period monitoring requirements for the variable.

project abatement activity has the meaning given by subsection 13(3).

ramp-up: a facility undergoes ***ramp-up*** until production at the facility reaches 50% of the facility's productive capacity over a 6-month period for the first time.

replaced generating unit: a generating unit is a ***replaced generating unit*** for a facility during an NGER reporting year if:

(a) in the baseline year, the generating unit included an essential component that:
  (i) was used by the generating unit to generate electricity at the facility during the baseline year; and
  (ii) is not used by the generating unit to generate electricity at the facility during the NGER reporting year; or

(b) the generating unit includes an essential component that:
  (i) was not used by the generating unit to generate electricity at the facility during the baseline year; and
  (ii) is used by the generating unit to generate electricity at the facility during the NGER reporting year; or

(c) the following apply:
  (i) in the baseline year, the generating unit used electricity generating equipment (the ***shared equipment***) that either was also used by an existing generating unit at the facility or, if electricity is the only production variable for the facility, was not part of a generating unit at the facility;
  (ii) the shared equipment was used to generate electricity at the facility during the baseline year;
  (iii) the shared equipment is not used to generate electricity at the facility during the NGER reporting year;
  (iv) the emissions resulting from, or required to operate, the shared equipment in the NGER reporting year would have been at least 10 000 tonnes CO_2-e or at least 5% of the total emissions associated with any generating unit that uses the shared equipment.

reported electricity imports, for a facility during an NGER reporting year, means the quantity of purchased electricity that was consumed by the facility during the NGER reporting year, as reported to the Regulator:

(a) in an NGER report; or

(b) in an offsets report in accordance with section 68.

reported scope 1 emissions, for a facility during an NGER reporting year, means the quantity of scope 1 emissions from the facility during the NGER reporting year, as reported to the Regulator:

(a) in an NGER report; or

(b) in an offsets report in accordance with section 68.

reported scope 2 emissions, for a facility during an NGER reporting year, means the quantity of scope 2 emissions from the facility during the NGER reporting year, as reported to the Regulator:

(a) in an NGER report; or

(b) in an offsets report in accordance with section 68.

reporting period monitoring requirements, for a production variable for a facility, means:

(a) if the variable is not electricity exported from the facility—the requirements that apply to the variable under section 79; or

(b) if the variable is electricity exported from the facility—the requirements that apply to the variable under sections 79 and 80.

scope 1 emission has the same meaning as in the NGER Act.

scope 2 emission has the same meaning as in the NGER Act.

shared equipment means electricity generating equipment mentioned in subparagraph (b)(i) of the definition of ***new generating unit*** or subparagraph (c)(i) of the definition of ***replaced generating unit***.

significant expansion has the meaning given by section 11.

significant output variable change has the meaning given by section 12.

similar input has the meaning given by subsection 17(4).

similar intermediate product has the meaning given by subsection 17(4).

similar output variable has the meaning given by subsection 16(2).

single site has the same meaning as in the NGER Regulations.

statement of activity intent, for a facility to which a project relates, means a statement, in a form approved by the Regulator for the purpose of this definition, that all project abatement activities that the project proponent intends to implement (or has implemented) at the time the statement is made would not be (or would not have been) implemented at the facility during the crediting period for the project in the absence of a declaration of the project as an eligible offsets project.

substitute newness requirement has the meaning given by subsections 19(2) and (3).

transmission network means a network or system that is a transmission network or a transmission system under a law that governs the operation of the network or system.

transport facility has the same meaning as in the NGER Regulations.

waste product means an output that:

(a) results from a chemical or physical process undertaken by a facility other than for the purpose of producing the output; and

(b) will be disposed of without any further processing by the facility (other than further processing in accordance with standard industry practice); and

(c) is not a by-product.

6 Meaning of *baseline period monitoring requirements*

(1) The ***baseline period monitoring requirements***, for a production variable for a facility that is not electricity exported from the facility, are as follows:

(a) the variable must have been monitored in the same manner during each NGER reporting year in the baseline period;

(b) the quantity and purity of the variable produced or processed by the facility during the baseline period must have been measured at a time that is as close as possible to when the variable entered, or left, the production or processing process.

(2) The ***baseline period monitoring requirements***, for a production variable for a facility that is electricity exported from the facility, are the requirements mentioned in subsection (1), subject to the following:

(a) if all generating units at the facility had the same designated metering point during the baseline period, the quantity of electricity generated at the facility and exported from the facility must have been measured:

(i) in megawatt hours, at the designated metering point; and

(ii) at any time during the baseline period when the facility was connected to the national electricity market, using NEM standard metering;

(b) if not all generating units at the facility had the same designated metering point during the baseline period, the quantity of electricity generated by a generating unit at the facility and exported from the facility must have been measured:

(i) in megawatt hours, at the generating unit's designated metering point; and

(ii) at any time during the baseline period when the generating unit was connected to the national electricity market, using NEM standard metering;

(c) at any time during the baseline period when a generating unit at the facility was not connected to the national electricity market, the quantity of electricity generated by the generating unit and exported from the facility must have been measured using metering that allows the Regulator to determine the total quantity of the exported electricity;

(d) the quantity of electricity generated by particular generating units at the facility must have been measured using equipment that allows the total quantity of exported electricity to be apportioned to each particular generating unit.

7 Meaning of *fixed proportion*

During the baseline period

(1) Two inputs, or 2 intermediate products, are used by a facility to which a facilities project relates in a ***fixed proportion*** to each other during the project's baseline period if there is no more than a 5% difference between:

(a) the ratio of the amount of one of those inputs, or intermediate products, to the amount of the other input, or intermediate product, used by the facility during an NGER reporting year in the baseline period; and

(b) the ratio of the amount of one of those inputs, or intermediate products, to the amount of the other input, or intermediate product, used by the facility during any other NGER reporting year in the baseline period.

(2) An output is produced by a facility to which a facilities project relates in a ***fixed proportion*** to an input or intermediate product during the project's baseline period if there is no more than a 5% difference between:

(a) the ratio of the amount of the output produced, to the amount of the input or intermediate product used, by the facility during an NGER reporting year in the baseline period; and

(b) the ratio of the amount of the output produced, to the amount of the input or intermediate product used, by the facility during any other NGER reporting year in the baseline period.

During a reporting period

(3) Two inputs, or 2 intermediate products, are used by a facility to which a facilities project relates in a ***fixed proportion*** to each other during a reporting period if there is no more than a 5% difference between:

(a) the ratio of the amount of one of those inputs, or intermediate products, to the amount of the other input, or intermediate product, used by the facility during an NGER reporting year in the reporting period; and

(b) the ratio of the amount of one of those inputs, or intermediate products, to the amount of the other input, or intermediate product, used by the facility during any other NGER reporting year in the reporting period or in the project's baseline period.

(4) An output is produced by a facility to which a facilities project relates in a ***fixed proportion*** to an input or intermediate product during a reporting period if there is no more than a 5% difference between:

(a) the ratio of the amount of the output produced, to the amount of the input or intermediate product used, by the facility during an NGER reporting year in the reporting period; and

(b) the ratio of the amount of the output produced, to the amount of the input or intermediate product used, by the facility during any other NGER reporting year in the reporting period or in the project's baseline period.

8 Meaning of *ineligible abatement activity*

(1) An abatement activity that is in operation at a facility to which a facilities project relates is an ***ineligible abatement activity*** for the project if:

(a) the activity is ineligible for the project under subsection (2), (3), (4) or (5); and

(b) one of the following applies:

(i) the activity was in operation at the facility for only part of the baseline year;

(ii) the activity was not in operation at the facility for any part of the baseline year;

(iii) the activity was in operation at the facility for the whole of the baseline year and there is an increase in abatement from the activity

during an NGER reporting year in a reporting period for the project that has a material effect on the project abatement for the project for the NGER reporting year.

(2) An abatement activity is ineligible for the project under this subsection if:

(a) the activity is being implemented at the facility as part of another eligible offsets project; or

(b) the activity was, at any time in the past, implemented at the facility as part of another eligible offsets project and the crediting period for the other project, or if the other project has more than one crediting period, the last crediting period for the other project, has ended.

(3) An abatement activity is ineligible for the project under this subsection if:

(a) were the activity to be implemented as a separate offsets project, the activity:

(i) would not meet the additionality requirements under subsection 27(4A) of the Act; or

(ii) would be an excluded offsets project; or

(iii) would be a project covered by the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015*; and

(b) the operation of the activity at the facility, on its own or in combination with one or more activities of a kind mentioned in this subsection or subsection (4) or (5), has a material effect on the project abatement for the project for an NGER reporting year during which the activity is in operation.

(4) An abatement activity is ineligible for the project under this subsection if:

(a) the activity results in an increase in the excluded NGER fugitive emissions for the facility; and

(b) the operation of the activity at the facility, on its own or in combination with one or more activities of a kind mentioned in this subsection or subsection (3) or (5), has a material effect on the project abatement for the project for an NGER reporting year during which the activity is in operation.

(5) An abatement activity is ineligible for the project under this subsection if:

(a) the amount by which the activity increases emissions outside the boundary of the facility is more than the amount by which the activity decreases emissions outside the boundary of the facility; and

(b) were the activity to cause the same overall increase in emissions inside the boundary of the facility, the activity would, on its own or in combination with one or more activities of a kind mentioned in this subsection or subsection (3) or (4), have a material effect on the project abatement for the project for an NGER reporting year during which the activity is in operation; and

(c) the activity is not an input or output purity change.

(6) For the purposes of paragraph (5)(a), the following are not to be taken into account in determining whether the amount by which an activity increases emissions outside the boundary of a facility (the ***relevant facility***) is more than

the amount by which the activity decreases emissions outside the boundary of the relevant facility:

(a) increases or decreases in emissions associated with:
  (i) the extraction, transportation, transmission or distribution of fuel to the relevant facility; or
  (ii) the production and installation of new equipment at the relevant facility; or
  (iii) the sale or other disposal of equipment removed from the relevant facility; or
  (iv) the transportation, transmission, distribution, storage, consumption or disposal, outside the relevant facility, of a production variable for the relevant facility; or
  (v) the disposal of waste from the relevant facility;

(b) increases or decreases in emissions that occur at another facility as a result of changes in the importation or exportation of electricity, heat or cooling from the relevant facility, if the emissions are:
  (i) scope 1 emissions of a category mentioned in subsection 1.3(4) of the NGER (Measurement) Determination; or
  (ii) emissions associated with electricity consumption at the other facility; or
  (iii) emissions of a kind mentioned in paragraph (a) that occur at the other facility;

(c) decreases in emissions that have, or will be, used to calculate:
  (i) the carbon dioxide equivalent net abatement amount for another eligible offsets project; or
  (ii) the abatement associated with an activity that would not meet the additionality requirements under subsection 27(4A) of the Act if the activity were implemented as a separate offsets project;

(d) increases or decreases in emissions associated with the use of an eligible renewable energy source used by the relevant facility to produce a production variable, electricity, heat or cooling.

9 Meaning of *material effect*

Something has, or would have, a ***material effect*** on the project abatement for a project for an NGER reporting year if its occurrence results, would result, or is likely to result, in a change to the project abatement for the project for the NGER reporting year of the smaller of the following:

(a) 5% or more;

(b) 25 000 tonnes CO_2-e or more.

10 Meaning of *materially similar*

(1) The emissions per unit of production of 2 output variables, or outputs, for a facility to which a project relates are ***materially similar*** if the average emissions per unit of production of one of those variables, or outputs, during the project's baseline period is no more than 5% greater than the average emissions per unit of production of the other variable, or output, during that period.

(2) The emissions per unit of each similar input, or similar intermediate product, used by a facility to which a project relates are ***materially similar*** if the average emissions per unit of one of the similar inputs, or similar intermediate products, used during the project's baseline period is no more than 5% greater than the average emissions per unit of any other similar input, or similar intermediate product, used during that period.

11 Meaning of *significant expansion*

(1) Subject to subsection (2), a facility to which a facilities project relates undergoes a ***significant expansion*** during an NGER reporting year if:

(a) new equipment is used by the facility during the NGER reporting year to produce or process an output variable; and

(b) emissions associated with the new equipment have not been included in any NGER reports for the facility provided to the Regulator before the installation of the equipment; and

(c) the maximum productive capacity of all equipment used to produce or process the output variable during the NGER reporting year is 20% greater than the maximum productive capacity of the equipment that was used to produce or process the output variable in the earliest of the NGER reporting years in the baseline period.

(2) A facility does not undergo a ***significant expansion*** if the new equipment is primarily used to generate electricity (whether or not the new equipment is a CHP plant).

(3) In working out the maximum productive capacity of the equipment that was used to produce or process the output variable in the baseline year, the productive capacity of equipment that existed at the facility site during the baseline year is not to be included if the equipment:

(a) was not used to produce or process the output variable during the baseline year; and

(b) has now been decommissioned.

12 Meaning of *significant output variable change*

Significant output variable change in the baseline period

(1) A facility to which a facilities project relates undergoes a ***significant output variable change*** during an NGER reporting year (the ***change year***) in the project's baseline period if:

(a) during the change year the facility starts to produce or process an output variable (the ***new variable***) not produced or processed by the facility during a previous NGER reporting year in the baseline period; and

(b) the change results in a 5% or more difference to the emissions from the facility for the change year when compared with the emissions from the facility for the NGER reporting year that immediately precedes the change year; and

(c) the project proponent cannot choose the new variable and one or more of the facility's other output variables to be a single production variable for the facility under subsection 16(2).

Significant output variable change in a reporting period

(2) Subject to subsection (3), a facility to which a facilities project relates undergoes a ***significant output variable change*** during an NGER reporting year in a reporting period for the project if:

(a) during the NGER reporting year the facility starts to produce or process an output variable (the ***new variable***) not produced or processed by the facility during the project's baseline period; and

(b) the change has a material effect on the project abatement for the project for the NGER reporting year; and

(c) the project proponent cannot choose the new variable and one or more of the facility's other output variables to be a single production variable under subsection 16(2).

(3) A facility does not undergo a ***significant output variable change*** during an NGER reporting year in a reporting period for the project if the new variable is electricity, heat or cooling.

Part 2—Facilities projects

13 Facilities projects

(1) For paragraph 106(1)(a) of the Act, this determination applies to an offsets project that involves the implementation of activities that could reasonably be expected to result in eligible carbon abatement from a facility.

(2) A project covered by subsection (1) is a ***facilities project***.

(3) An activity mentioned in subsection (1) is a ***project abatement activity***.

Part 3—Project requirements

Division 1—General requirements

14 Operation of this Division

For paragraph 106(1)(b) of the Act, this Division sets out requirements that must be met for a facilities project to be an eligible offsets project.

15 Implementation of activities that aim to reduce emissions from a facility

(1) The project must implement one or more project abatement activities at one or more facilities.

(2) Each facility must meet the following requirements:
- (a) the facility is identified in the application made under section 22 of the Act in relation to the project;
- (b) NGER reports about the operation of the facility during the project's baseline period have been provided to the Regulator;
- (c) the facility has one or more production variables;
- (d) the facility has not undergone a major change in the project's baseline period;
- (e) the project proponent has access to NGER facility level emissions data, and production variable data, for each NGER reporting year in the project's baseline period;
- (f) the facility is not a transport facility;
- (g) the facility is not a facility to which another facilities project relates;
- (h) the facility does not use biomass that is not an eligible renewable energy source to produce energy;
- (i) the facility does not import off-grid electricity generated from biomass that is not an eligible renewable energy source;
- (j) the facility does not import heat or cooling generated from biomass that is not an eligible renewable energy source.

(3) NGER reports relating to the operation of each facility during the project's baseline period or a reporting period for the project must not include amounts for a facility that have been aggregated with amounts for another facility under regulation 4.25 of the NGER Regulations.

(4) The project abatement activities must not be ineligible abatement activities for the project.

Note: If a facility to which the project relates involves an ineligible abatement activity, the abatement resulting from the activity must be excluded from the total facility abatement for the project by using the adjusted on-site facility abatement, instead of the on-site facility abatement, for the facility to calculate the total facility abatement (see sections 26 and 28).

(5) The project must not involve the implementation of a project abatement activity that is expected to:

(a) result in abatement primarily by changing the quantity of a production variable produced or processed by the facility; and

(b) have a material effect on the project abatement for the project for an NGER reporting year.

16 Choosing production variables for facilities—output variables

(1) Subject to subsections (2) and (3) and section 17, the project proponent must choose the following to be a production variable for a facility to which the project relates:

(a) if the facility has one output variable only—that variable;

(b) if the facility has more than one output variable—each of those variables.

Similar output variables

(2) If:

(a) 2 or more of a facility's output variables (the ***similar output variables***) can be quantified using the same unit of measurement; and

(b) the emissions per unit of production of each of the similar output variables are materially similar;

the project proponent may choose the similar output variables to be a single production variable for the facility instead of choosing them to be separate production variables for the facility.

Note: If the facility has other output variables that are not similar output variables, the project proponent must also choose the other output variables to be production variables for the facility (see paragraph (1)(b)).

New output variables

(3) If:

(a) during an NGER reporting year a facility starts to produce or process an output variable (the ***new output variable***) not produced or processed by the facility during the project's baseline period; and

(b) the facility does not undergo a significant output variable change as a result of starting to produce or process the new output variable; and

(c) the project proponent has not chosen an input, or intermediate product, to be a production variable for the facility under section 17; and

(d) the project proponent may choose the new output variable and one or more other similar output variables to be a single production variable for the facility under subsection (2);

the project proponent must choose the new output variable and one or more other similar output variables to be a single production variable for the facility.

17 Choosing production variables for facilities—inputs and intermediate products

(1) If:

(a) an input or an intermediate product is used to produce a facility's outputs; and

(b) the input or intermediate product meets the requirements set out in subsection (5); and

(c) no other input or intermediate product that meets the requirements set out in subsection (5) is used to produce any of the facility's outputs;

the project proponent may choose the input, or the intermediate product, to be the production variable for the facility instead of the facility's output variables.

Note: The input, or the intermediate product, chosen under this subsection will be the only production variable for the facility.

Multiple inputs and intermediate products

(2) If:

(a) 2 or more inputs, or 2 or more intermediate products, are used to produce all of a facility's outputs; and

(b) the inputs or intermediate products are used in a fixed proportion to each other during the project's baseline period; and

(c) the inputs or intermediate products meet the requirements set out in subsection (5);

the project proponent may choose one of the inputs or intermediate products to be the production variable for the facility instead of the facility's output variables.

Note: The input or intermediate product chosen under this subsection will be the only production variable for the facility.

(3) Of the inputs or intermediate products that may be chosen under subsection (2), the project proponent must chose the one that is reasonably considered to have made the largest contribution to the facility's emissions during the baseline period.

Similar inputs and similar intermediate products

(4) If:

(a) 2 or more inputs or 2 or more intermediate products are used to produce all of a facility's outputs; and

(b) 2 or more of the inputs (the ***similar inputs***), or 2 or more of the intermediate products (the ***similar intermediate products***), can be quantified using the same unit of measurement; and

(c) the emissions per unit of each similar input, or similar intermediate product, used are materially similar; and

(d) the similar inputs, or similar intermediate products, meet the requirements set out in subsection (5);

the project proponent may choose the similar inputs, or similar intermediate products, to be a single production variable for the facility instead of the facility's output variables.

Note: The similar inputs, or similar intermediate products, chosen to be a single production variable under this subsection will be the only production variable for the facility.

Requirements that must be met

(5) An input, or an intermediate product, that is used by a facility to produce multiple outputs meets the requirements set out in this subsection if:

(a) either:

(i) the outputs are produced in a fixed proportion to the input or intermediate product during the project's baseline period; or

(ii) each output can be quantified using the same unit of measurement, and the emissions per unit of production of each output are materially similar; and

(b) an increase in the quantity of the input or intermediate product processed by the facility to produce the outputs would result in an increase in the quantity of greenhouse gas emissions from the facility; and

(c) a decrease in the quantity of the input or intermediate product processed by the facility to produce the outputs would result in a decrease in the quantity of greenhouse gas emissions from the facility; and

(d) either:

(i) the input or intermediate product is an essential component of the production process, and omitting it would prevent the production process working; or

(ii) omitting the input or intermediate product from the production process during an NGER reporting year would have a material effect on the project abatement for the NGER reporting year; and

(e) the quantity of the input or intermediate product can be expressed in a unit of measurement that complies with the *National Measurement Act 1960*; and

(f) for a facility that is a petroleum refinery—the input or intermediate product is used as an input to a production process (whether or not it is also a fuel that produces energy at the facility); and

(g) for a facility that is not a petroleum refinery—the input or intermediate product is not a fuel that produces energy at the facility.

18 Information to be included in application for declaration

The application under section 22 of the Act in relation to the project must include:

(a) a description of each facility to which the project relates; and

(b) a description of each production variable for each facility to which the project relates, including details of the following:

(i) if the production variable is an output variable (other than an output variable that is electricity, heat, cooling or a multi-component, elaborately transformed product)—the key substance of value in the output variable;

(ii) if the production variable is an input or intermediate product—the key substance of value in the input or intermediate product; and

(c) information that shows that each production variable has been chosen in accordance with section 16 or 17; and

(d) if biomass will be, or is likely to be, used to produce energy at the facility—a declaration that the biomass is an eligible renewable energy source; and

(e) if the facility will, or is likely to, import off-grid electricity, or heat or cooling, generated from biomass—a declaration that the biomass is an eligible renewable energy source; and

(f) a statement of activity intent for each facility to which the project relates, that is signed by the chief financial officer, or another officer, of the person that has operational control over the facility.

Note: If the statement of activity intent for a facility is not signed by the chief financial officer of the person that has operational control over the facility, the total facility abatement for the facility for an NGER reporting year may be capped in certain circumstances (see subsection 26(2)).

Division 2—Additionality requirements

19 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 facilities 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

20 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 facilities project that is an eligible offsets project.

Division 2—Method for calculating net abatement amount

21 Carbon dioxide equivalent net abatement amount

The carbon dioxide equivalent net abatement amount for a reporting period is worked out by adding together the project abatement for each NGER reporting year that ends during the reporting period.

22 Basis of calculation for certain NGER reporting facilities

(1) This section applies to a facilities project if:

(a) the project relates to more than one facility; and

(b) the project's baseline period includes one or more NGER reporting years that ended on or before 30 June 2014; and

(c) an NGER report provided to the Regulator in relation to any of those NGER reporting years included aggregated information about the operation of 2 or more facilities to which the project relates (the ***relevant facilities***) under regulation 4.29 of the NGER Regulations as in force on 30 June 2014.

Note: Under regulation 4.29 of the NGER Regulations as in force on 30 June 2014, an NGER report could, in certain circumstances, include aggregated information about facilities involved in a vertically integrated production process.

(2) For the purposes of working out the carbon dioxide equivalent net abatement amount for a reporting period under this Part, the relevant facilities are to be treated as if they were a single facility.

Division 3—Method for calculating project abatement

23 Summary

The project abatement is the amount by which the greenhouse gas emissions from all the facilities to which the project relates have been reduced during an NGER reporting year as a result of the project.

24 Timing of calculation

The project abatement for an NGER reporting year must be worked out, after the end of the NGER reporting year, in relation to project abatement activities implemented during the NGER reporting year.

25 Calculation of project abatement

(1) The project abatement for an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 1***):

$$A_P = \sum_f A_{T,f}$$

where:

A_P means the project abatement for the NGER reporting year, in tonnes CO_2-e.

$A_{T,f}$ means the total facility abatement for facility f for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 26.

(2) However, if the crediting period for the project ends part way through an NGER reporting year (the ***final NGER reporting year***), the project abatement for the final NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 2***):

$$A_P = \frac{D_{CP}}{D_{NGER}} \times \sum_f A_{T,f}$$

where:

A_P means the project abatement for the final NGER reporting year, in tonnes CO_2-e.

D_{CP} means the number of days in the final NGER reporting year that fall within the crediting period.

D_{NGER} means the number of days in the final NGER reporting year.

$A_{T,f}$ means the total facility abatement for facility f for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 26.

(3) If the amount worked out under subsection (1) or (2) for an NGER reporting year is less than zero, the project abatement for the NGER reporting year is taken to be zero.

(4) This section has effect subject to subsection 81(2).

Note: Under subsection 81(2), the project abatement for an NGER reporting year in a reporting period is taken to be zero if the project proponent fails to monitor a production variable, an input, an output or electricity as required by section 79 or 80 for more than 20% of the days in the reporting period.

26 Total facility abatement

(1) Subject to subsection (2), the total facility abatement for a facility for an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 3***):

$$A_{T,f} = A_{F,f} + A_{E,f} + A_{R,f}$$

where:

$A_{T,f}$ means the total facility abatement, in tonnes CO_2-e.

$A_{F,f}$ means:

(a) if the on-site facility abatement for facility f must be adjusted under section 28 for the NGER reporting year—the adjusted on-site facility abatement, in tonnes CO_2-e, worked out in accordance with that section; or

(b) otherwise—the on-site facility abatement for facility f for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 27.

$A_{E,f}$ means:

(a) if Subdivision A of Division 7 applies to facility f for the NGER reporting year—electricity abatement adjustment A for the facility during the NGER reporting year, in tonnes CO_2-e, worked out in using equation 18; or

(b) otherwise—zero.

Note: Subdivision A of Division 7 applies to a facility for an NGER reporting year if electricity is a production variable for the facility and additional electricity is exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility.

$A_{R,f}$ means:

(a) if Subdivision B of Division 7 applies to facility f for the NGER reporting year—electricity abatement adjustment B for the facility during the NGER reporting year, in tonnes CO_2-e, worked out in using equation 20; or

(b) otherwise—zero.

Note: Subdivision B of Division 7 applies to a facility for an NGER reporting year if electricity generated using new generating units at the facility is exported from the facility during the NGER reporting year (whether or not electricity is a production variable for the facility).

(2) If:

(a) the amount worked out under subsection (1) for a facility for an NGER reporting year is more than 100 000 tonnes CO_2-e; and

(b) a statement of activity intent for the facility, that is signed by the chief financial officer of the person that has operational control over the facility, has not been given to the Regulator;

the total facility abatement for the facility for the NGER reporting year is taken to be 100 000 tonnes CO_2-e.

(3) For the purpose of paragraph (2)(b), a statement of activity intent for a facility, that is signed by the chief financial officer of the person that has operational control over the facility, has not been given to the Regulator unless such a statement:

(a) was, under paragraph 18(f), included in the application under section 22 of the Act in relation to the project; or

(b) was otherwise given to the Regulator before the offsets report about the project for the reporting period that includes the NGER reporting year was given to the Regulator.

27 On-site facility abatement

(1) Subject to subsections (2), (3) and (4), the on-site facility abatement for a facility for an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 4***):

$$A_F = \left(E_{CB} - E_{NGER,r}\right) + \left(E_{CB,Elec} - E_{Elec,\ NGER,r}\right)$$

where:

A_F means the on-site facility abatement, in tonnes CO_2-e.

E_{CB} means:

(a) if the crediting baseline (general) for the facility must be worked out under section 30 for the NGER reporting year—the crediting baseline (general), in tonnes CO_2-e, worked out using equation 6; or

(b) otherwise—zero.

$E_{NGER,r}$ means:

(a) if the NGER emissions (general) for the facility must be worked out under section 44 for the NGER reporting year—the NGER emissions (general), in tonnes CO_2-e, worked out using equation 16; or

(b) otherwise—zero.

$E_{CB,Elec}$ means:

(a) if the crediting baseline (electricity) for the facility must be worked out under section 31 for the NGER reporting year—the crediting baseline (electricity), in tonnes CO_2-e, worked out using equation 7; or

(b) otherwise—zero.

$E_{Elec,NGER,r}$ means:

(a) if the NGER emissions (electricity) for the facility must be worked out under section 45 for the NGER reporting year—the NGER emissions (electricity), in tonnes CO_2-e, worked out using equation 17; or

(b) otherwise—zero.

(2) The on-site facility abatement for the facility for an NGER reporting year is taken to be zero if:

(a) the amount worked out under subsection (1) for the NGER reporting year is less than zero; and

(b) neither Subdivision A nor Subdivision B of Division 7 applies to the facility for the NGER reporting year.

Note 1: Subdivision A of Division 7 applies to a facility for an NGER reporting year if electricity is a production variable for the facility and additional electricity is exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility.

Note 2: Subdivision B of Division 7 applies to a facility for an NGER reporting year if electricity generated using new generating units at the facility is exported from the facility during the NGER reporting year (whether or not electricity is a production variable for the facility).

(3) The on-site facility abatement for the facility for an NGER reporting year in a reporting period is taken to be zero if:

(a) the project proponent has, under section 17, chosen an input or intermediate product, or similar inputs or similar intermediate products, to be the production variable for the facility; and

(b) either:

(i) the outputs that are produced by the facility using the input or intermediate product, or similar inputs or similar intermediate products, are not produced in a fixed proportion to the input or intermediate product, or to each similar input or similar intermediate product, during the reporting period; or

(ii) the input or intermediate product is an input or intermediate product that was chosen under subsection 17(2), and the input or intermediate product is not used in a fixed proportion to the facility's other inputs or intermediate products during the reporting period.

(4) The on-site facility abatement for the facility for an NGER reporting year (the ***relevant NGER reporting year***), and all subsequent NGER reporting years, is taken to be zero if the facility undergoes a significant expansion or a significant output variable change during the relevant NGER reporting year.

28 Adjusted on-site facility abatement

(1) The on-site facility abatement for a facility must be adjusted for an NGER reporting year if one or more ineligible abatement activities for the project were in operation at the facility during the NGER reporting year.

(2) Subject to subsection (3), the adjusted on-site facility abatement for the facility for the NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 5***):

$$A_A = A_F - \sum_a E_{NA}$$

where:

A_A means the adjusted on-site abatement, in tonnes CO_2-e.

A_F means the on-site facility abatement for the facility for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 27.

E_{NA} means:

(a) if an ineligible abatement activity was not in operation at the facility for any part of the baseline year—the amount of abatement associated with the activity for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with whichever of subsection (4) or (5) applies; or

(b) if an ineligible abatement activity was in operation at the facility for only part of the baseline year—the amount of abatement associated with the activity for the NGER reporting year, in tonnes CO_2-e, worked out as follows:

(i) work out the amount of the abatement in accordance with whichever of subsection (4) or (5) applies; and

(ii) adjust that amount on a pro rata basis by reference to the number of days in the baseline year on which the activity was not in operation at the facility; or

(c) if an ineligible abatement activity was in operation at the facility for the whole of the baseline year and there is an increase (of a kind mentioned in subparagraph 8(1)(b)(iii)) in abatement from the activity during the NGER reporting year—the amount of the increase in abatement from the activity during the NGER reporting year, worked out using an appropriate abatement estimation approach for the activity.

(3) The adjusted on-site facility abatement for the facility for the NGER reporting year is taken to be zero if:

(a) the amount worked out under subsection (2) for the NGER reporting year is less than zero; and

(b) neither Subdivision A nor Subdivision B of Division 7 applies to the facility for the NGER reporting year.

Note 1: Subdivision A of Division 7 applies to a facility for an NGER reporting year if electricity is a production variable for the facility and additional electricity is exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility.

Note 2: Subdivision B of Division 7 applies to a facility for an NGER reporting year if electricity generated using new generating units at the facility is exported from the facility during the NGER reporting year (whether or not electricity is a production variable for the facility).

Abatement associated with ineligible abatement activity

(4) If the abatement associated with the ineligible abatement activity is required to be calculated and reported to a government body other than because of this determination, the amount of the abatement for the NGER reporting year, in tonnes CO_2-e, is the amount that:

(a) is included in the most recent of those reports for the activity; and

(b) relates to the operation of the activity on days that fall within the crediting period for the project; and

(c) has not been used before to calculate the adjusted on-site facility abatement for the facility.

(5) If subsection (4) does not apply, or the adjusted on-site facility abatement for the NGER reporting year is being calculated for inclusion in the final offsets report about the project and a report mentioned in subsection (4) that covers the NGER reporting year is not available, the amount of the abatement associated with the ineligible abatement activity for the NGER reporting year, in tonnes CO_2-e, must be estimated:

(a) using an appropriate abatement estimation approach for the activity; and

(b) in relation to the operation of the activity on days that fall within the crediting period for the project.

Meaning of ***appropriate abatement estimation approach***

(6) An ***appropriate abatement estimation approach***, for an activity, is an approach for estimating the abatement associated with the activity that:

(a) uses data from the records of the facility; and

(b) is consistent with an estimation approach that applies to the activity under another methodology determination or, if there is no methodology determination that deals with the activity, is consistent with an estimation approach that applies to activities of that kind under another abatement scheme; and

(c) is consistent with relevant measuring and estimation requirements that apply to facilities under the NGER (Measurement) Determination; and

(d) results in an estimate that is measurable, capable of being verified and conservative.

Division 4—Method for calculating crediting baseline

29 Summary

The crediting baseline for a facility is what the emissions from the facility would have been if the project had not been undertaken.

The crediting baseline (general) must be worked out for a facility if the facility has a production variable that is not electricity (whether or not electricity is also a production variable for the facility).

The crediting baseline (electricity) must be worked out for a facility if electricity is a production variable for the facility (whether or not the facility also has other production variables).

30 Crediting baseline (general)

(1) The crediting baseline (general) for a facility must be worked out under this section for an NGER reporting year if the facility has a production variable that is not electricity (whether or not electricity is also a production variable for the facility).

(2) The crediting baseline (general) for the facility for the NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 6***):

$$E_{CB} = \sum_{n} \left(I_n \times Q_{n,r} \right)$$

where:

E_{CB} means the crediting baseline (general), in tonnes CO_2-e.

I_n means the baseline emissions intensity of production variable n during the baseline year, in tonnes CO_2-e per unit of the variable produced or processed, worked out in accordance with Division 5.

$Q_{n,r}$ means the quantity of production variable n produced or processed by the facility during the NGER reporting year, worked out using production variable data.

n means a production variable for the facility other than electricity.

31 Crediting baseline (electricity)

(1) The crediting baseline (electricity) for a facility must be worked out under this section for an NGER reporting year if electricity is a production variable for the facility (whether or not the facility also has other production variables).

(2) The crediting baseline (electricity) for the facility for the NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 7***):

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$$E_{CB,Elec} = \left[I_{Exist,b} \times \left(Q_{Exist,r} - Q_{Therm} \right) + I_{Rep} \times Q_{Rep/New} \right] \times MLF_r$$

where:

$E_{CB,Elec}$ means the crediting baseline (electricity), in tonnes CO_2-e.

$I_{Exist,b}$ means the baseline emissions intensity of electricity generated using existing generating units at the facility and exported from the facility, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 23.

$Q_{Exist,r}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

Q_{Therm} means the quantity of additional electricity exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility, in megawatt hours, worked out using equation 19.

I_{Rep} means:

(a) if the value of ***I_{New}*** for the NGER reporting year (worked out using equation 21) multiplied by ***MLF_r*** (within the meaning of subsection 52(1)) is less than the value of ***EF_{Elec}*** (within the meaning of subsection 52(1))—the emissions intensity of electricity generated using replaced generating units at the facility and exported from the facility during the baseline year, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 25; or

(b) otherwise—zero.

$Q_{Rep/New}$ means the smaller of the following:

(a) the value of Q_{Rep} (within the meaning of subsection 54(1));

(b) the value of Q_{New} (within the meaning of section 53) for the NGER reporting year.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

Division 5—Method for calculating baseline emissions intensity

Subdivision A—Baseline emissions intensity

32 Summary

The baseline emissions intensity of a production variable is the lowest annual emissions intensity of the variable out of all the NGER reporting years in the project's baseline period. The NGER reporting year in which the lowest annual emissions intensity occurred is the baseline year.

The baseline emissions intensity will remain the same for all NGER reporting years for which the crediting baseline is calculated, unless a recalculation is required to take account of changed circumstances that would have a material effect on the project abatement.

33 Baseline emissions intensity and baseline year

(1) The baseline emissions intensity of a production variable, in tonnes CO_2-e per unit of the variable produced or processed, and the baseline year for the variable are worked out as follows:

(a) in accordance with Subdivision B, calculate the emissions intensity of the production variable for each NGER reporting year in the project's baseline period;

(b) identify the lowest emissions intensity of the production variable and the NGER reporting year to which it relates.

(2) Subject to subsection (3), the lowest emissions intensity of the production variable is the baseline emissions intensity of the variable, and the NGER reporting year to which the lowest emissions intensity relates is the baseline year.

(3) If Subdivision C applies to the baseline emissions intensity of a production variable:

(a) the baseline emissions intensity must be recalculated in accordance with that Subdivision; and

(b) if either or both of sections 40 and 41 are used for the recalculation—the baseline emissions intensity of the variable is the baseline emissions intensity as recalculated under those sections; and

(c) if section 42 is used for the recalculation—the lowest emissions intensity of the production variable as identified under that section is the baseline emissions intensity of the variable and the NGER reporting year to which that lowest emissions intensity relates is the baseline year.

Subdivision B—Calculations relating to emissions intensity

34 Emissions intensity of a production variable

The emissions intensity of a production variable for an NGER reporting year, in tonnes CO_2-e per unit of the variable produced or processed, is worked out using the formula (***equation 8***):

$$I_n = \frac{E_n}{Q_{n,b}}$$

where:

I_n means the emissions intensity of production variable n, in tonnes CO_2-e per unit of the variable produced or processed.

E_n means the baseline NGER emissions attributable to production variable n for the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 35.

$Q_{n,b}$ means the quantity of production variable n produced or processed by the facility during the NGER reporting year, worked out using production variable data.

35 Baseline NGER emissions attributable to a production variable

The baseline NGER emissions attributable to a production variable (the ***first variable***) for an NGER reporting year are worked out as follows:

(a) work out the total baseline NGER emissions for the facility for the NGER reporting year using equation 9;

(b) if the first variable is the only production variable for the facility—the total baseline NGER emissions are the baseline NGER emissions attributable to the first variable for the NGER reporting year;

(c) if the facility has more than one production variable—apportion the total baseline NGER emissions to each of the facility's production variables in accordance with section 37, and the emissions apportioned to the first variable in accordance with that section are the baseline NGER emissions attributable to the first variable for the NGER reporting year.

36 Total baseline NGER emissions

The total baseline NGER emissions for a facility for an NGER reporting year, in tonnes CO_2-e, are worked out using the formula (***equation 9***):

$$E_{NGER,b} = E_{S1,b} + \left(EI_b \times EF_{EP} \times MLF_b \right) + E_{S2,Other,b} - E_{Fug,b}$$

where:

$E_{NGER,b}$ means the total baseline NGER emissions, in tonnes CO_2-e.

$E_{S1,b}$ means the reported scope 1 emissions for the facility during the NGER reporting year, in tonnes CO_2-e.

EI_b means the reported electricity imports for the facility during the NGER reporting year, in megawatt hours.

EF_{EP} means:

(a) for electricity obtained from an electricity grid that is a grid in relation to 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.

MLF_b means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is imported by the facility from the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is imported by the facility from the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

$E_{S2,Other,b}$ means the reported scope 2 emissions from heat or cooling for the facility during the NGER reporting year, in tonnes CO_2-e.

$E_{Fug,b}$ means any excluded NGER fugitive emissions for the facility during the NGER reporting year, in tonnes CO_2-e, as reported to the Regulator in an NGER report.

37 Apportioning of total baseline NGER emissions

(1) If a facility has more than one production variable, the total baseline NGER emissions for a facility for an NGER reporting year are apportioned to each production variable using the formula (***equation 10***):

$$E_n = AD_n \times E_{NGER,b}$$

where:

E_n means the emissions apportioned to production variable n, in tonnes CO_2-e.

AD_n means the apportioning percentage for production variable n, worked out using equation 11.

$E_{NGER,b}$ means the total baseline NGER emissions for the NGER reporting year, in tonnes CO_2-e, worked out using equation 9.

(2) The percentage of the total baseline NGER emissions for the NGER reporting year to be apportioned to a production variable is worked out using the formula (***equation 11***):

$$AD_n = \frac{M_n \times Q_{n,b}}{\sum_n \left(M_n \times Q_{n,b} \right)}$$

where:

AD_n means the apportioning percentage for production variable n.

M_n means:

(a) if the project proponent provided, or has access to, data about the facility that was used to establish baselines for the Jobs and Competitiveness Program—the weighted average emissions intensity of production variable n for the financial years beginning on 1 July 2006 and 1 July 2007, worked out using equation 12; or

(b) if paragraph (a) does not apply and production variable n is covered by an item in the table in clause 1 of Schedule 1—the industry average emissions intensity of production variable n, in tonnes CO_2-e per unit of the variable, worked out using equation 13; or

(c) if neither paragraph (a) nor (b) applies—the facility-specific apportioning metric for production variable n.

$Q_{n,b}$ means the quantity of production variable n produced or processed by the facility during the NGER reporting year, worked out using production variable data.

(3) The weighted average emissions intensity of a production variable for the financial years beginning on 1 July 2006 and 1 July 2007 is worked out using the formula (***equation 12***):

$$M_n = \frac{\left(E_{n,2006\text{-}07} + \left(TC_{Elec,n,2006\text{-}07} \times EF_{EP} \right) \right) + \left(E_{n,2007\text{-}08} + \left(TC_{Elec,n,2007\text{-}08} \times EF_{EP} \right) \right)}{Q_{n,2006\text{-}07} + Q_{n,2007\text{-}08}}$$

where:

M_n means the weighted average emissions intensity of production variable n.

$E_{n,2006\text{-}07}$ means the total direct emissions data for the period 1 July 2006 to 30 June 2007, in tonnes CO_2-e, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

$TC_{Elec,n,2006-07}$ means the total electricity consumed data for the period 1 July 2006 to 30 June 2007, in megawatt hours, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

EF_{EP} means:

(a) for electricity obtained from an electricity grid that is a grid in relation to 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.

$E_{n,2007-08}$ means the total direct emissions data for the period 1 July 2007 to 30 June 2008, in tonnes CO2-e, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

$TC_{Elec,n,2007-08}$ means the total electricity consumed data for the period 1 July 2007 to 30 June 2008, in megawatt hours, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

$Q_{n,\ 2006-07}$ means the production data for the period 1 July 2006 to 30 June 2007, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

$Q_{n,\ 2007-08}$ means the production data for the period 1 July 2007 to 30 June 2008, that:

(a) was used to establish baselines for the Jobs and Competitiveness Program; and

(b) is attributable to production variable n.

(4) The industry average emissions intensity of a production variable covered by an item in the table in clause 1 of Schedule 1, in tonnes CO_2-e per unit of the variable, is worked out using the formula (***equation 13***):

$$M_n = I_{S1,n} + \left(I_{EI,n} \times EF_{EP} \right)$$

where:

M_n means the industry average emissions intensity of production variable n, in tonnes CO_2-e per unit of the variable.

$I_{SI,n}$ means the scope 1 emissions intensity of production variable n, determined in accordance with the table in clause 1 of Schedule 1.

$I_{EI,n}$ means the electricity intensity of production variable n, determined in accordance with the table in clause 1 of Schedule 1.

EF_{EP} means:

(a) for electricity obtained from an electricity grid that is a grid in relation to 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.

(5) The ***facility-specific apportioning metric*** for a production variable is the apportioning metric determined by the project proponent for the production variable in accordance with the following requirements:

(a) the apportioning metric must be determined once, for use in relation to all NGER reporting years in the project's baseline period;

(b) the apportioning metric must be determined using an approach that:

(i) includes any material emissions source associated with the production variable; and

(ii) if an emissions source overlaps 2 or more output variables, including the production variable—apportions emissions from that source between the variables so that the sum of the emissions apportioned to the variables in any year of the baseline period is no more than 5% greater than the total emissions from that source during that year; and

(iii) if the production variable is electricity generated by a CHP plant at the facility and exported from the facility—apportions emissions to that electricity using equation 27; and

(iv) measures and apportions emissions in a manner that is consistent with the NGER (Measurement) Determination; and

(v) only apportions greenhouse gas emissions that are not excluded NGER fugitive emissions; and

(vi) if the approach converts electricity use to an amount of emissions—uses the same electricity emissions factor that is used to convert purchased electricity in kilowatt hours to emissions in kilograms CO_2-e for the purpose of calculating the total baseline NGER emissions for the facility (see the parameter EF_{EP} in section 36); and

(vii) reasonably represents the actual emissions attributable to the production variable;

(c) if the production variable is electricity generated using existing generating units at the facility and exported from the facility, the apportioning metric must not result in the baseline emissions intensity of the production variable being less than an amount calculated by dividing:

(i) the emissions from fuel combusted by the existing generating units to generate electricity exported from the facility during the baseline year; by

(ii) the quantity of electricity generated using the existing generating units and exported from the facility during the baseline year.

Subdivision C—Recalculating emissions intensity

38 Application of Subdivision

(1) This Subdivision applies to the baseline emissions intensity of a production variable for a facility if:

(a) one or more of the following apply:

(i) a new factor is used to calculate the NGER facility level emissions data for the facility for the NGER reporting year for which the crediting baseline is being calculated (the ***calculation year***);

(ii) an input or output purity change occurs at the facility during the calculation year and the production variable is not electricity, heat, cooling or a multi-component, elaborately transformed product;

(iii) an error in the data previously used to calculate the baseline emissions intensity is identified during the calculation year; and

(b) recalculating the baseline emissions intensity in accordance with this Subdivision will have a material effect on the project abatement for the calculation year.

(2) For the purposes of subparagraph (1)(a)(i), a ***new factor*** is used to calculate the NGER facility level emissions data for a facility for an NGER reporting year if:

(a) a default energy content factor or default emission factor that applies to the calculation is different from the factor that applied to the calculation for the preceding NGER reporting year; or

(b) a Global Warming Potential that applies to the calculation is different from the Global Warming Potential that applied to the calculation for the preceding NGER reporting year; or

(c) the NGER measurement method used to measure the emissions is a higher method, or a lower method, that is different from the NGER measurement method used to measure the emissions for the preceding NGER reporting year; or

(d) a measurement procedure or frequency that applies to the calculation is different from the measurement procedure or frequency (as applicable) that applied to the calculation for the preceding NGER reporting year.

(3) An ***input or output purity change*** occurs at a facility if there is a change to the purity of inputs used by the facility or outputs produced by the facility, other than a change that is, or is part of, a project abatement activity.

39 Recalculating emissions intensity

The baseline emissions intensity (the ***original baseline emissions intensity***) for a production variable for a facility must be recalculated as follows:

(a) if this Subdivision applies because of one or more new factors only—in accordance with section 40;

(b) if this Subdivision applies because of one or more input or output purity changes only—in accordance with section 41;

(c) if this Subdivision applies because of one or more new factors and one or more input or output purity changes—by recalculating the original baseline emissions intensity in accordance with section 40 and then applying section 41 to the recalculated baseline emissions intensity as if it were the original baseline emissions intensity;

(d) if this Subdivision applies because one or more errors in the data used to calculate the original baseline emissions intensity are identified—in accordance with section 42.

40 Recalculating because of a new factor

(1) If this Subdivision applies because one or more new factors are used to calculate the NGER facility level emissions data for the calculation year, the baseline emissions intensity of a production variable for the baseline year must be recalculated as follows:

(a) recalculate the NGER facility level emissions data for the baseline year using the same default energy content factor, default emission factor, Global Warming Potential, NGER measurement method and measurement procedure and frequency as is used for the calculation year;

(b) using the recalculated NGER facility level emissions data for the baseline year, work out the emissions intensity of the production variable for the baseline year in accordance with Subdivision B.

(2) If, in recalculating the NGER facility level emissions data for the baseline year, it is not possible to calculate the emissions for a production variable using the same NGER measurement method, measurement procedure or frequency as is used for the calculation year, the emissions are to be worked out using the formula (***equation 14***):

$$E_{P,b} = \frac{E_{P,c}}{Q_{P,c}} \times Q_{P,b}$$

where:

$E_{P,b}$ means the recalculated emissions for the production variable for the baseline year, in tonnes CO_2-e.

$E_{P,c}$ means the emissions for the production variable for the calculation year, in tonnes CO_2-e, calculated using the NGER measurement method, measurement procedure and frequency that applied in the calculation year.

$Q_{P,c}$ means the quantity of the production variable produced or processed by the facility during the calculation year, measured using the NGER measurement method, measurement procedure and frequency that applied in the calculation year.

$Q_{P,b}$ means the quantity of the production variable produced or processed by the facility during the baseline year, measured using the NGER measurement method, measurement procedure and frequency that applied in the baseline year.

41 Recalculating because of an input or output purity change

(1) If this Subdivision applies because one or more input or output purity changes occur during the calculation year, the baseline emissions intensity of a production variable for the baseline year must be recalculated as follows:
  (a) adjust the baseline NGER emissions attributable to production variable n in the baseline year using equation 15; and
  (b) use the adjusted baseline NGER emissions attributable to production variable n in the baseline year to recalculate the emissions intensity of the variable for the baseline year using equation 8.

(2) The baseline NGER emissions attributable to production variable n in the baseline year is to be adjusted using the formula (***equation 15***):

$$E_{Adj,n} = E_{n,b} \times P_n$$

where:

$E_{Adj,n}$ means the adjusted emissions apportioned to production variable n during the baseline year, in tonnes CO_2-e.

$E_{n,b}$ means the emissions apportioned to production variable n during the baseline year, in tonnes CO_2-e, worked out using equation 10.

P_n means the lesser of:
  (a) the change in processing factor for production variable n during the baseline year, worked out in accordance with subsection (3); and
  (b) 1.5.

(3) The change in processing factor for production variable n during the baseline year, to take account of the input or output purity changes, is to be worked out using an approach that:
  (a) is specific to the production process used by the facility; and
  (b) is based on documented historical evidence, including data for the facility, of the relationship between the input or output purity changes and greenhouse gas emissions from the facility; and
  (c) can be shown to accurately reflect the change in greenhouse gas emissions from the facility resulting from the input or output purity changes; and

(d) takes into account all the relevant variables within the facility that may cause a change in the emissions intensity of production variable n as a result of the input or output purity changes; and

(e) is independent of any changes at the facility that are not input or output purity changes; and

(f) is credible, robust and conservative with respect to any effect on project abatement.

42 Recalculating because of an error

If this Subdivision applies because one or more errors are identified during the calculation year, the baseline emissions intensity of a production variable and the baseline year must be recalculated as follows:

(a) correct the error and recalculate the NGER facility level emissions data for each NGER reporting year in the project's baseline period;

(b) using the recalculated data, work out the emissions intensity of the production variable for each NGER reporting year in the project's baseline period in accordance with Subdivision B;

(c) identify the lowest emissions intensity of the production variable and the NGER reporting year to which it relates.

Division 6—Method for calculating NGER emissions

43 Summary

The NGER emissions are the emissions from a facility to which the project relates during an NGER reporting year. They are used to calculate the on-site facility abatement for the facility during the NGER reporting year.

The NGER emissions (general) must be worked out for a facility if the facility has a production variable that is not electricity (whether or not electricity is also a production variable for the facility).

The NGER emissions (electricity) must be worked out for a facility if electricity is a production variable for the facility (whether or not the facility also has other production variables).

44 NGER emissions (general)

(1) The NGER emissions (general) for a facility must be worked out under this section for an NGER reporting year if the facility has a production variable that is not electricity (whether or not electricity is also a production variable for the facility).

(2) The NGER emissions (general) for the facility for the NGER reporting year, in tonnes CO_2-e, are worked out using the formula (***equation 16***):

$$E_{NGER,r} = E_{S1,r} + \left(EI_r \times EF_{EP} \times MLF_r \right) + E_{S2,Other,r} - E_{Fug,r} - E_{Elec,r} - E_{HC,r}$$

where:

$\boldsymbol{E_{NGER,r}}$ means the NGER emissions (general), in tonnes CO_2-e.

$\boldsymbol{E_{S1,r}}$ means the reported scope 1 emissions for the facility during the NGER reporting year, in tonnes CO_2-e.

$\boldsymbol{EI_r}$ means the reported electricity imports for the facility during the NGER reporting year, in megawatt hours.

$\boldsymbol{EF_{EP}}$ means:

(a) for electricity obtained from an electricity grid that is a grid in relation to 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.

***MLF*$_r$** means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is imported by the facility from the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is imported by the facility from the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

***E*$_{S2,Other,r}$** means the reported scope 2 emissions from heat or cooling for the facility during the NGER reporting year, in tonnes CO_2-e.

***E*$_{Fug,r}$** means the excluded NGER fugitive emissions for the facility during the NGER reporting year, in tonnes CO_2-e, as reported to the Regulator:

(a) in an NGER report; or

(b) in an offsets report in accordance with section 68.

***E*$_{Elec,r}$** means the total emissions from electricity exported from the facility during the NGER reporting year, in tonnes CO_2-e, worked out using equation 26.

***E*$_{HC,r}$** means:

(a) if heat or cooling is exported from the facility during the NGER reporting year (but not during the baseline year) and the emissions attributable to the heat or cooling exported are excluded heat or cooling emissions for the NGER reporting year—the emissions attributable to the heat or cooling exported, in tonnes CO_2-e, worked out using an emissions apportioning approach that is not inconsistent with the approach that applies to CHP plants under Division 8; or

(b) otherwise—zero.

(3) For paragraph (a) of the definition of ***E*$_{HC,r}$** in subsection (2), emissions are ***excluded heat or cooling emissions*** for an NGER reporting year if:

(a) including the emissions in the NGER emissions (general) would have a material effect on the project abatement for the NGER reporting year; or

(b) the project proponent chooses to treat the emissions as excluded emissions for the NGER reporting year.

45 NGER emissions (electricity)

(1) The NGER emissions (electricity) for a facility must be worked out under this section for an NGER reporting year if electricity is a production variable for the facility (whether or not the facility also has other production variables).

(2) The NGER emissions (electricity) for the facility for the NGER reporting year, in tonnes CO_2-e, are worked out using the formula (***equation 17***):

$$E_{Elec,NGER,r} = \left[I_{Exist,r} \times \left(Q_{Exist,r} - Q_{Therm} \right) + I_{New} \times Q_{Rep/New} \right] \times MLF_r$$

where:

$E_{Elec,NGER,r}$ means the NGER emissions (electricity), in tonnes CO_2-e.

$I_{Exist,r}$ means the emissions intensity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 24.

$Q_{Exist,r}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

Q_{Therm} means the quantity of additional electricity exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility, in megawatt hours, worked out using equation 19.

I_{New} means:

(a) if the emissions intensity of electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year (worked out using equation 21) multiplied by MLF_r (within the meaning of subsection 52(1)), is less than the value of EF_{Elec} (within the meaning of subsection 52(1))—the emissions intensity of that electricity, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 21; or

(b) otherwise—zero.

$Q_{Rep/New}$ means the smaller of the following:

(a) the value of Q_{Rep} (within the meaning of subsection 54(1));

(b) the value of Q_{New} (within the meaning of section 53) for the NGER reporting year.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian

Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

Division 7—Method for calculating electricity abatement adjustments

Subdivision A—Electricity abatement adjustment A

46 Summary

Electricity abatement adjustment A for a facility is to be calculated under this Subdivision if electricity is a production variable for the facility, and additional electricity is exported from the facility during an NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility.

47 Application of Subdivision

This Subdivision applies to a facility for an NGER reporting year if:

(a) electricity is a production variable for the facility; and

(b) additional electricity is exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility.

48 Calculation of electricity abatement adjustment A

(1) Electricity abatement adjustment A for a facility during an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 18***):

$$A_E = \left(EF_{Elec} - I_{Exist,r} \right) \times Q_{Therm} \times MLF_r$$

where:

A_E means electricity abatement adjustment A, in tonnes CO_2-e.

EF_{Elec} means:

(a) for electricity exported to an electricity grid that is a grid in relation to 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 exported otherwise than in paragraph (a) (whether to a grid or not):

(i) if the receiver of the electricity is able to provide an emissions factor that reflects the emissions intensity of the displaced electricity (worked out in accordance with subsection (3)) 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.

$I_{Exist,r}$ means the emissions intensity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 24.

Q_{Therm} means the quantity of additional electricity exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility, in megawatt hours, worked out using equation 19.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

(2) For the definition of ***EF_{Elec}*** in subsection (1), ***displaced electricity*** is electricity that would have been produced for the receiver if the electricity had not instead been produced by the facility.

(3) For subparagraph (b)(i) of the definition of ***EF_{Elec}*** in subsection (1), the emissions factor must:

(a) be worked out on a sent-out basis; and

(b) be worked out using a measurement or estimation approach that is consistent with the NGER (Measurement) Determination; and

(c) if the displaced electricity would have been produced from more than one source—reflect the weighted average of the emissions intensity, applicable on the declaration day, of all the sources.

49 Additional electricity exported as a result of improved thermal efficiency of existing generating units

(1) Subject to subsection (2), the quantity of additional electricity exported from a facility during an NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility, in megawatt hours, is worked out using the formula (***equation 19***):

$$Q_{Therm} = \left[\left(\frac{e_{E,R}}{e_{E,B}} \right) - 1 \right] \times Q_{Exist,r}$$

where:

Q_{Therm} means the quantity of additional electricity exported from the facility as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility, in megawatt hours.

$e_{E,R}$ means the efficiency of electricity generation within the facility during the NGER reporting year, worked out as follows:

(a) work out the quantity of electricity generated within the facility from existing generating units during the NGER reporting year, in gigajoules;
(b) divide that quantity by the quantity of fuel consumed by the facility in generating that electricity, in gigajoules.

$e_{E,B}$ means the efficiency of electricity generation within the facility during the baseline year, worked out as follows:

(a) work out the quantity of electricity generated within the facility from existing generating units during the baseline year, in gigajoules;
(b) divide that quantity by the quantity of fuel consumed by the facility in generating that electricity, in gigajoules.

$Q_{Exist,r}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

(2) The quantity of additional electricity exported from the facility during the NGER reporting year as a result of project abatement activities that improve the thermal efficiency of existing generating units at the facility is taken to be zero if:

(a) the amount worked out under subsection (1) for an NGER reporting year is less than zero; or
(b) the value of parameter $e_{E,B}$ is zero.

Subdivision B—Electricity abatement adjustment B

50 Summary

Electricity abatement adjustment B for a facility is to be calculated under this Subdivision if electricity generated using new generating units at the facility is exported from the facility during an NGER reporting year (whether or not electricity is a production variable for the facility).

51 Application of Subdivision

This Subdivision applies to a facility for an NGER reporting year if electricity generated using new generating units at the facility is exported from the facility during the NGER reporting year (whether or not electricity is a production variable for the facility).

Section 52

52 Calculation of electricity abatement adjustment B

(1) Electricity abatement adjustment B for a facility during an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 20***):

$$A_R = \left(EF_{Elec} - I_{New} \right) \times Q_{New,net} \times MLF_r$$

where:

A_R means electricity abatement adjustment B, in tonnes CO_2-e.

EF_{Elec} means:

(a) for electricity exported to an electricity grid that is a grid in relation to 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 exported otherwise than in paragraph (a) (whether to a grid or not):

(i) if the receiver of the electricity is able to provide an emissions factor that reflects the emissions intensity of the displaced electricity (worked out in accordance with subsection (3)) 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.

I_{New} means the emissions intensity of electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 21.

$Q_{New,net}$ means the net quantity of electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, worked out using equation 22.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

(2) For the definition of EF_{Elec} in subsection (1), ***displaced electricity*** is electricity that would have been produced for the receiver if the electricity had not instead been produced by the facility.

(3) For subparagraph (b)(i) of the definition of EF_{Elec} in subsection (1), the emissions factor must:

(a) be worked out on a sent-out basis; and

(b) be worked out using a measurement or estimation approach that is consistent with the NGER (Measurement) Determination; and

(c) if the displaced electricity would have been produced from more than one source—reflect the weighted average of the emissions intensity, applicable on the declaration day, of all the sources.

53 Emissions intensity of electricity generated using new generating units and exported from a facility

The emissions intensity of electricity generated using new generating units at a facility and exported from the facility during an NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, is worked out using the formula (***equation 21***):

$$I_{New} = \frac{E_{New}}{Q_{New} \times MLF_r}$$

where:

I_{New} means the emissions intensity of electricity generated using new generating units at the facility and exported from the facility, in tonnes CO_2-e per megawatt hour of electricity exported.

E_{New} means the emissions apportioned to electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 59.

Q_{New} means the quantity of electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is

valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

54 Electricity generated using new generating units and exported from a facility

(1) Subject to subsection (2), the net quantity of electricity generated using new generating units at a facility and exported from the facility during an NGER reporting year, in megawatt hours, is worked out using the formula (***equation 22***):

$$Q_{New,net} = Q_R - Q_{Exist,r} - Q_{Rep}$$

where:

$Q_{New,net}$ means the net quantity of electricity generated using new generating units at the facility and exported from the facility, in megawatt hours.

Q_R means the quantity of electricity exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

$Q_{Exist,r}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

Q_{Rep} means the quantity of electricity generated using replaced generating units at the facility and exported from the facility during the baseline year, in megawatt hours, worked out using production variable data.

(2) If the amount worked out under subsection (1) for the NGER reporting year is less than zero, the net quantity of electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year is taken to be zero.

Division 8—General calculations relating to electricity

55 Baseline emissions intensity of electricity generated using existing generating units and exported from a facility

(1) The baseline emissions intensity of electricity generated using existing generating units at a facility and exported from the facility during the baseline year, in tonnes CO_2-e per megawatt hour of electricity exported, is worked out using the formula (***equation 23***):

$$I_{Exist,b} = \frac{E_{Exist,b}}{Q_{Exist,b} \times MLF_b}$$

where:

$I_{Exist,b}$ means the baseline emissions intensity of electricity generated using existing generating units at the facility and exported from the facility, in tonnes CO_2-e per megawatt hour of electricity exported.

$E_{Exist,b}$ means the baseline NGER emissions attributable to electricity generated using existing generating units at the facility and exported from the facility during the baseline year, in tonnes CO_2-e, worked out in accordance with section 35 as that section applies for the purposes of this definition (see subsection (2)).

$Q_{Exist,b}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the baseline year, in megawatt hours, worked out using production variable data.

MLF_b means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

(2) For the purposes of the definition of ***$E_{Exist,b}$*** in subsection (1), section 35 applies as if:

(a) electricity generated using existing generating units at the facility and exported from the facility; and

(b) electricity generated using replaced generating units at the facility and exported from the facility;

were 2 separate production variables for the facility.

56 Emissions intensity of electricity generated using existing generating units and exported from a facility

The emissions intensity of electricity generated using existing generating units at a facility and exported from the facility during an NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, is worked out using the formula (***equation 24***):

$$I_{Exist,r} = \frac{E_{Exist,r}}{Q_{Exist,r} \times MLF_r}$$

where:

$I_{Exist,r}$ means the emissions intensity of electricity generated using existing generating units at the facility and exported from the facility, in tonnes CO_2-e per megawatt hour of electricity exported.

$E_{Exist,r}$ means the emissions apportioned to electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 59.

$Q_{Exist,r}$ means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the baseline year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

MLF_r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

57 Emissions intensity of electricity generated using replaced generating units and exported from a facility

(1) The emissions intensity of electricity generated using replaced generating units at a facility and exported from the facility during the baseline year, in tonnes CO_2-e

per megawatt hour of electricity exported, is worked out using the formula (***equation 25***):

$$I_{Rep} = \frac{E_{Rep}}{Q_{Rep} \times MLF_b}$$

where:

I_{Rep} means the emissions intensity of electricity generated using replaced generating units at the facility and exported from the facility during the baseline year, in tonnes CO_2-e per megawatt hour of electricity exported.

E_{Rep} means the baseline NGER emissions attributable to electricity generated using replaced generating units at the facility and exported from the facility during the baseline year, in tonnes CO_2-e, worked out in accordance with section 35 as that section applies for the purposes of this definition (see subsection (2)).

Q_{Rep} means the quantity of electricity generated using replaced generating units at the facility and exported from the facility during the baseline year, in megawatt hours, worked out using production variable data.

MLF_b means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

(2) For the purposes of the definition of ***E_{Rep}*** in subsection (1), section 35 applies as if:

(a) electricity generated using existing generating units at the facility and exported from the facility; and

(b) electricity generated using replaced generating units at the facility and exported from the facility;

were 2 separate production variables for the facility.

58 Total emissions from exported electricity

The total emissions from electricity exported from a facility during an NGER reporting year, in tonnes CO_2-e, is worked out using the formula (***equation 26***):

$$E_{Elec,r} = \left(I_{Exist,r} \times Q_{Exist,r} \times MLF_r \right) + E_{New}$$

where:

E**Elec,r means the total emissions from electricity exported from the facility during the NGER reporting year, in tonnes CO_2-e.

I**Exist,r means the emissions intensity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e per megawatt hour of electricity exported, worked out using equation 24.

Q**Exist,r means the quantity of electricity generated using existing generating units at the facility and exported from the facility during the NGER reporting year, in megawatt hours, measured in accordance with the applicable monitoring requirements for the electricity.

MLF**r means the marginal loss factor for the facility for the NGER reporting year, which is:

(a) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a distribution network—taken to be 1; or

(b) if, during the NGER reporting year, electricity is exported from the facility to the national electricity market and the facility is directly connected to a transmission network—the relevant factor published by the Australian Energy Market Operator Limited (ACN 072 010 327) that is valid at the end of the NGER reporting year; or

(c) if neither paragraph (a) nor (b) applies, and a relevant authority of the State or Territory in which the facility is located has determined a factor that is valid at the end of the NGER reporting year—the factor determined by the relevant authority; or

(d) in any other case—taken to be 1.

E**New means the emissions apportioned to electricity generated using new generating units at the facility and exported from the facility during the NGER reporting year, in tonnes CO_2-e, worked out in accordance with section 59.

59 Emissions apportioned to electricity generated using new or existing generating units and exported from a facility

(1) The emissions apportioned to electricity generated using new generating units, or existing generating units, (the ***relevant units***) at a facility and exported from the facility during an NGER reporting year (the ***relevant NGER reporting year***), in tonnes CO_2-e, are worked out as follows:

(a) work out the total emissions for the facility during the relevant NGER reporting year, in tonnes CO_2-e, using equation 9 as it applies for the purposes of this paragraph (see subsection (2));

(b) apportion those emissions to electricity generated using the relevant units at the facility and exported from the facility during the relevant NGER

reporting year, using an apportioning metric determined by the project proponent in accordance with the requirements set out in subsection (3).

(2) For the purposes of paragraph (1)(a), equation 9 applies as if:
  (a) a reference to the "total baseline NGER emissions" for a facility were a reference to the total emissions for the facility; and
  (b) a reference to an "NGER reporting year" were a reference to the relevant NGER reporting year.

(3) For the purposes of paragraph (1)(b), the requirements are as follows:
  (a) the apportioning metric must be determined using an approach that:
    (i) includes any material emissions source associated with the electricity generated using the relevant units and exported from the facility during the relevant NGER reporting year; and
    (ii) if the emissions source is associated with electricity generated using shared equipment and exported from the facility during the relevant NGER reporting year—apportions emissions from that source between electricity generated using the relevant units; and
    (iii) if the relevant units include a CHP plant at the facility—apportions emissions to the electricity generated using the relevant units and exported from the facility during the relevant NGER reporting year using equation 27; and
    (iv) measures and apportions emissions in a manner that is consistent with the NGER (Measurement) Determination; and
    (v) reasonably represents the actual emissions attributable to the electricity generated using the relevant units and exported from the facility during the relevant NGER reporting year;
  (b) the apportioning metric must not result in the emissions intensity of the electricity generated using the relevant units and exported from the facility during the relevant NGER reporting year being less than an amount calculated by dividing:
    (i) the emissions from fuel combusted in order for the relevant units to generate the electricity exported from the facility during the relevant NGER reporting year; by
    (ii) the quantity of electricity generated using the relevant units and exported from the facility during the relevant NGER reporting year.

60 Emissions apportioned to electricity generated by a CHP plant

(1) Subject to subsections (2) and (3), the emissions apportioned to electricity generated by a CHP plant during an NGER reporting year, in tonnes CO_2-e, are worked out using the formula (***equation 27***):

$$E_{E,p} = \left[\frac{\left(Q_{E,p} \times F_{MWh \rightarrow GJ} \right) / e_{E,p}}{\left(\left(Q_{E,p} \times F_{MWh \rightarrow GJ} \right) / e_{E,p} \right) + \left(Q_{H,p} / e_{H,p} \right) + \left(Q_{C,p} / e_{C,p} \right)} \right] \times E_{T,p}$$

where:

$E_{E,p}$ means the emissions apportioned to electricity generated by CHP plant p, in tonnes CO_2-e.

$Q_{E,p}$ means the quantity of electricity generated by CHP plant p during the NGER reporting year, in megawatt hours, worked out in accordance with section 6.2 of the NGER (Measurement) Determination.

$F_{MWh \rightarrow GJ}$ means 3.6, being the factor to convert megawatt hours to gigajoules.

$e_{E,p}$ means the thermal efficiency of electricity generation by CHP plant p during the NGER reporting year, worked out in accordance with section 62.

$Q_{H,p}$ means the quantity of heat generated by CHP plant p during the NGER reporting year, in gigajoules, worked out using equation 28.

$e_{H,p}$ means the thermal efficiency of heat generation by CHP plant p during the NGER reporting year, worked out in accordance with section 62.

$Q_{C,p}$ means the quantity of cooling generated by CHP plant p during the NGER reporting year, in gigajoules, worked out using equation 29.

$e_{C,p}$ means the thermal efficiency of cooling generation by CHP plant p during the NGER reporting year, worked out in accordance with section 62.

$E_{T,p}$ means the total emissions from CHP plant p during the NGER reporting year, worked out in accordance with Chapter 2 of the NGER (Measurement) Determination.

(2) If the value of parameter ***$Q_{H,p}$*** is zero, a term in equation 27 that includes that parameter should be excluded from the equation.

(3) If the value of parameter ***$Q_{C,p}$*** is zero, a term in equation 27 that includes that parameter should be excluded from the equation.

61 Quantity of heat and cooling generated

Quantity of heat

(1) The quantity of heat generated by a CHP plant during an NGER reporting year, in gigajoules, is worked out using the formula (***equation 28***):

$$Q_{H,p} = \frac{\left(m_{SO} \times h_{SO}\right) - \left(m_{SI} \times h_{SI}\right)}{1\ 000\ 000}$$

where:

$Q_{H,p}$ means the quantity of heat generated by CHP plant p, in gigajoules.

m_{SO} means the mass of the steam produced by the boiler, in kilograms.

h_{SO} means the enthalpy of the steam produced by the boiler, in kilojoules per kilogram.

m_{SI} means the mass of the boiler feedwater, in kilograms.

h_{SI} means the enthalpy of the boiler feedwater, in kilojoules per kilogram.

Quantity of cooling

(2) The quantity of cooling generated by a CHP plant during an NGER reporting year, in gigajoules, is worked out using the formula (***equation 29***):

$$Q_{C,p} = \frac{\left(m_{WI} \times h_{WI}\right) - \left(m_{WO} \times h_{WO}\right)}{1\ 000\ 000}$$

where:

$Q_{C,p}$ means the quantity of cooling generated by CHP plant p, in gigajoules.

m_{WI} means the mass of the return water that goes into the absorption chiller of the CHP plant, in kilograms.

h_{WI} means the enthalpy of the return water that goes into the absorption chiller, in kilojoules per kilogram.

m_{WO} means the mass of the cool water outflow from the absorption chiller, in kilograms.

h_{WO} means the enthalpy of the cool water outflow from the absorption chiller, in kilojoules per kilogram.

Enthalpy values

(3) For the purposes of equations 28 and 29, the enthalpy values used must correspond to the values for the appropriate phase (such as saturated liquid or superheated vapour) for the measured temperature and pressure of the water (or other refrigerant used) in the CHP plant.

62 Thermal efficiency of electricity, heat and cooling generation

(1) The thermal efficiencies of electricity, heat or cooling generation (as applicable) by a CHP plant during an NGER reporting year are worked out using an

approach that is consistent with the efficiency method described in the Allocation of Emissions from a CHP Plant Guide.

(2) In this section:

Allocation of Emissions from a CHP Plant Guide means the document entitled "Allocation of GHG Emissions from a Combined Heat and Power (CHP) Plant, Guide to calculation worksheets", version 1, published by the World Resources Institute and the World Business Council for Sustainable Development in September 2006.

Note: The Allocation of Emissions from a CHP Plant Guide could in 2015 be viewed on the Greenhouse Gas Protocol website (http://www.ghgprotocol.org).

Part 5—Reporting, record keeping and monitoring requirements

Division 1—Offsets report requirements

Subdivision A—Requirements relating to timing

63 Operation of this Subdivision

For subparagraph 76(4)(e)(ii) of the Act, this Subdivision specifies the period within which an offsets report about a facilities project that is an eligible offsets project must be given to the Regulator.

64 Timing for final offsets report

(1) This section applies if the crediting period for a facilities project ends part way through an NGER reporting year (the ***final NGER reporting year***).

(2) The offsets report about the project for the reporting period that includes the final NGER reporting year must be given to the Regulator within 6 months after the end of the final NGER reporting year.

Subdivision B—Information that must be included in an offsets report

65 Operation of this Subdivision

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

66 Information about new production variables

(1) The offsets report about a facilities project for a reporting period must include a description of any output variable that, in accordance with subsection 16(3), is chosen with one or more other similar output variables to be a single production variable for a facility to which the project relates.

(2) The description must include details of the key substance of value in the output variable (unless the output variable is electricity, heat, cooling or a multi-component, elaborately transformed product).

67 Information about biomass used to produce energy, and imported off-grid electricity, heat and cooling generated from biomass

(1) This section applies to an offsets report about a facilities project for a reporting period if:

(a) biomass is used during the reporting period to produce energy at a facility to which the project relates; or

(b) a facility to which the project relates imported off-grid electricity, or heat or cooling, generated from biomass for use at the facility during the reporting period.

(2) The offsets report must include a declaration that the biomass used during the reporting period is an eligible renewable energy source.

Note: Biomass used to produce energy at a facility to which a facilities project relates, or biomass used to generate off-grid electricity, or heat or cooling, imported by a facility to which a facilities project relates, must be an eligible renewable energy source (see paragraphs 15(2)(h) to (j)).

68 Information about greenhouse gas emissions, energy production and energy consumption

(1) This section applies to an offsets report about a facilities project for a reporting period if an NGER report about the operation of a facility to which the project relates during an NGER reporting year in the reporting period:

(a) is not required to be provided to the Regulator; or

(b) is not required to include information about the greenhouse gas emissions, energy production or energy consumption from the operation of the facility because a threshold in section 13 of the NGER Act is not met.

(2) The offsets report must include:

(a) the same information about the greenhouse gas emissions, energy production and energy consumption from the operation of the facility during the NGER reporting year as would be required to be included in an NGER report about the operation of the facility if:

(i) an NGER report were required to be provided to the Regulator; and

(ii) a threshold in section 13 of the NGER Act were met; and

(b) any other information about the greenhouse gas emissions, energy production or energy consumption from the operation of the facility during the NGER reporting year notified in writing by the Regulator.

69 Information about facilities

The offsets report about a facilities project for a reporting period must, for each facility to which the project relates, set out the following:

(a) the name of the facility;

(b) the total facility abatement for the facility, in tonnes CO_2-e, worked out using equation 3 for each NGER reporting year that ends during the reporting period;

(c) whether a statement of activity intent for the facility, that is signed by the chief financial officer of the person that has operational control over the facility, has been given to the Regulator as referred to in subsection 26(3).

70 Determination of certain parameters

If section 81 applies for the purpose of working out the carbon dioxide equivalent net abatement amount for a facilities project for a reporting period, the

offsets report about the project for the reporting period must include the following information:

(a) the name of the parameter that the project proponent failed to monitor;

(b) the start and end dates of each non-monitored period;

(c) if the value of the parameter was determined under subsection 81(3)—the value of the parameter and how that value was estimated;

(d) the reasons why the project proponent failed to monitor the parameter as required by the monitoring requirements.

Division 2—Notification requirements

71 Operation of this Division

For paragraph 106(3)(b) of the Act, this Division sets out notification requirements for a facilities project that is an eligible offsets project.

72 Notification requirements

(1) The project proponent for a facilities project must notify the Regulator, in writing, if an NGER report about the operation of a facility to which the project relates during an NGER reporting year in a reporting period for the project:

(a) will not be required to be provided to the Regulator; or

(b) will not be required to include information about the greenhouse gas emissions, energy production and energy consumption from the operation of the facility because a threshold in section 13 of the NGER Act will not be met.

(2) The project proponent must notify the Regulator of a matter mentioned in subsection (1) within 60 days after the project proponent becomes aware of the matter.

Division 3—Record-keeping requirements

73 Operation of this Division

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

74 Record-keeping requirements

If, as part of a facilities project, equipment or other components at a facility are:

(a) removed from the facility; and

(b) disposed of;

the project proponent must keep a record of evidence that the equipment was disposed of in accordance with relevant Commonwealth, State or Territory legislative requirements.

Division 4—Monitoring requirements

75 Operation of this Division

For paragraph 106(3)(d) of the Act, this Division sets out requirements to monitor a facilities project that is an eligible offsets project.

76 Requirement to monitor greenhouse gas emissions, energy production and energy consumption

The project proponent for a facilities project must monitor the greenhouse gas emissions, energy production and energy consumption (the ***relevant matters***) from the operation of each facility to which the project relates in such a manner as will enable accurate reports about the relevant matters to be provided to the Regulator in accordance with:

(a) the NGER Act; or

(b) section 68.

77 Requirement to monitor abatement activities implemented

(1) This section applies if:

(a) after the end of the baseline period for a facilities project, an abatement activity is implemented at a facility to which the project relates; and

(b) the project proponent identifies the abatement activity as potentially having a material effect on the project abatement of the project for an NGER reporting year.

(2) The project proponent must monitor the abatement activity in such a manner as will enable an assessment to be made as to whether or not the activity has had a material effect on the project abatement of the project for the NGER reporting year.

78 Requirement to monitor changes relating to operation of a facility

(1) This section applies if:

(a) after the end of the baseline period for a facilities project, a change is implemented at a facility to which the project relates; and

(b) the project proponent identifies that, as a result of the change, the facility has potentially undergone a significant expansion, or a significant output variable change, during an NGER reporting year.

(2) The project proponent must monitor the change in such a manner as will enable an assessment to be made as to whether or not the facility has undergone a significant expansion, or a significant output variable change, during the NGER reporting year.

79 Requirement to monitor production variables etc.

(1) The project proponent for a facilities project must monitor the quantity and purity of each production variable that is produced or processed by a facility to which the project relates in accordance with the following requirements:

(a) each variable must be monitored in the same manner as the variable was monitored at the facility during the project's baseline period;

(b) the quantity and purity of each variable produced or processed must be measured at a time that is as close as possible to when the variable enters, or leaves, the production or processing process.

(2) If a production variable consists of similar output variables, similar inputs or similar intermediate products, subsection (1) applies as if each similar output variable, similar input or similar intermediate product were a separate production variable.

(3) If an input used by, or an output produced by, a facility to which the project relates is not a production variable for the facility, the project proponent must monitor the purity of the input or output in accordance with the following instructions:

(a) the input or output must be monitored in the same manner as the input or output was monitored at the facility during the project's baseline period;

(b) the purity of the input or output must be measured at a time that is as close as possible to when the variable enters, or leaves, the production or processing process.

(4) This section has effect subject to section 80.

80 Requirement to monitor exported electricity

The project proponent for a facilities project must monitor any electricity that is exported from a facility to which the project relates in accordance with the following requirements:

(a) if all generating units at the facility have the same designated metering point, the quantity of electricity generated at the facility and exported from the facility must be measured:

(i) in megawatt hours, at the designated metering point; and

(ii) at any time when the facility is connected to the national electricity market, using NEM standard metering;

(b) if not all generating units at the facility have the same designated metering point, the quantity of electricity generated by a generating unit at the facility and exported from the facility must be measured:

(i) in megawatt hours, at the generating unit's designated metering point; and

(ii) at any time when the generating unit is connected to the national electricity market, using NEM standard metering;

(c) at any time when a generating unit at the facility is not connected to the national electricity market, the quantity of electricity generated by the generating unit and exported from the facility must be measured using

metering that allows the Regulator to determine the quantity of the exported electricity;

(d) the quantity of electricity generated by particular generating units at the facility must be measured using equipment that allows the total quantity of exported electricity to be apportioned to each particular generating unit.

81 Consequences of not meeting certain monitoring requirements

(1) This section applies for the purpose of working out the carbon dioxide equivalent net abatement amount for a facilities project for a reporting period if, during one or more periods (a ***non-monitored period***) in the reporting period, a project proponent for a facilities project fails to monitor a production variable, an input, an output or electricity (a ***parameter***) as required by section 79 or 80.

(2) If the number of days in all the non-monitored periods in the reporting period is more than 20% of the number of days in the reporting period, the project abatement for each NGER reporting year in the reporting period is taken to be zero.

(3) If the number of days in all the non-monitored periods in the reporting period is equal to or less than 20% of the number of days in the reporting period, the project proponent must make a conservative estimate of the value of the parameter for each non-monitored period having regard to:

(a) any relevant measurement or estimation approaches or requirements that apply to the parameter under the NGER (Measurement) Determination; and

(b) any relevant historical data for the project; and

(c) any other data for the project that relates to the parameter; and

(d) any other matter the project proponent considers relevant.

(4) To avoid doubt, this section does not prevent the Regulator from taking action under the Act, or regulations or rules made under the Act, in relation to the project proponent's failure to monitor a parameter as required by the monitoring requirements.

Note: Examples of action that may be taken include the following:

(a) if the failure constitutes a breach of a civil penalty provision in section 194 of the Act (which deals with project monitoring requirements), the Regulator may apply for a civil penalty order in respect of the breach;

(b) if false or misleading information was given to the Regulator in relation to the failure, the Regulator may revoke the project's section 27 declaration under regulations or rules made for the purposes of section 38 of the Act;

(c) if the giving of false or misleading information in relation to the failure led to the issue of Australian carbon credit units, the Regulator may require all or some of those units to be relinquished under section 88 of the Act.

Part 6—Dividing a facilities project

82 Operation of this Part

For subsection 77A(2) of the Act, this Part sets out requirements for dividing a facilities project that is an eligible offsets project.

83 Requirements for division of project

(1) A facilities project may only be divided into parts if the project relates to 2 or more facilities.

(2) If a facilities project is divided into parts:

(a) each part must consist of at least one facility to which the project relates; and

(b) a facility to which the project relates must be included in one part only.

Clause 1

Schedule 1—Industry average emissions intensities

Note: See the definitions of $I_{SI,n}$ and $I_{EI,n}$ in subsection 37(4).

1 Industry average emissions intensities

The scope 1 emissions intensity and the electricity intensity of a production variable produced from an activity undertaken at a facility site are set out in the following table.

Note: Petroleum refining (see item 43 of the table) and the production of high purity ethanol (see item 62 of the table) are measured in kilolitres. All other activities are measured in tonnes.

Industry average emissions intensity

	Column 1	Column 2	Column 3	Column 4
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
1	Production of bulk flat glass	Bulk flat glass of saleable quality	0.841	0.276
2	Production of methanol	100% equivalent methanol	0.389	0.490
3	Production of carbon black	Dry pelletised carbon black of saleable quality	2.66	0.514
4	Production of silicon	Silicon of saleable quality	1.42	11.7
5	Smelting zinc	Zinc of saleable quality	0.120	4.25
6	Manufacture of newsprint	Air dried coated or uncoated newsprint of saleable quality	0.496	0.697
7	Manufacture of newsprint	Bone dried equivalent pulp from either or both of the following: (a) woodchips; (b) sawdust	0.0595	2.48
8	Manufacture of newsprint	Bone dried equivalent pulp from recovered paper	0.0404	0.431
9	Aluminium smelting	Primary aluminium (A1)	2.00	15.0

Industry average emissions intensity

Item	Column 1 Activity	Column 2 Production variable	Column 3 Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)	Column 4 Electricity intensity (megawatts per tonne or kilolitre of production)
10	Production of magnesia	Dry caustic calcined magnesia of saleable quality	1.44	0.0757
11	Production of magnesia	Dry deadburned magnesia of saleable quality	0.103	0.202
12	Production of magnesia	Dry electrofused magnesia of saleable quality	0.0751	2.45
13	Dry pulp manufacturing	Dry pulp of saleable quality	0.873	0.404
14	Dry pulp manufacturing	Air dried equivalent pulp	0.130	0.448
15	Cartonboard manufacturing	Cartonboard of saleable quality	0.866	0.776
16	Cartonboard manufacturing	Air dried equivalent pulp from either or both of the following: (a) woodchips; (b) sawdust	0.130	0.448
17	Packaging and industrial paper manufacturing	Packaging and industrial paper of saleable quality	0.338	0.554
18	Packaging and industrial paper manufacturing	Air dried equivalent pulp from either or both of the following: (a) woodchips; (b) sawdust	0.130	0.448
19	Printing and writing paper manufacturing	Printing and writing paper of saleable quality	0.617	0.880
20	Printing and writing paper manufacturing	Air dried equivalent pulp from either or both of woodchips and sawdust	0.130	0.448

Clause 1

Industry average emissions intensity				
	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
21	Printing and writing paper manufacturing	Air dried equivalent pulp from recovered paper	0.0	0.824
22	Alumina refining	Alumina of saleable quality	0.630	0.228
23	Manufacture of carbon steel from cold ferrous feed	Continuously cast carbon steel products and ingots of carbon steel of saleable quality	0.0836	0.532
24	Manufacture of carbon steel from cold ferrous feed	Long products of hot-rolled carbon steel of saleable quality	0.0756	0.133
25	Manufacture of carbon steel from cold ferrous feed	Flat products of hot-rolled carbon steel of saleable quality	0.0317	0.116
26	Production of clinker	Dry Portland cement clinker of saleable quality	0.886	0.0709
27	Production of copper	Copper cathode produced from copper compounds of saleable quality	0.480	1.69
28	Production of copper	Copper anode produced from copper compounds of saleable quality	0.422	1.31
29	Production of copper	Copper cathode produced from brought in copper anode of saleable quality	0.0573	0.387
30	Production of ethene (ethylene)	100% equivalent ethene (ethylene) of saleable quality	1.83	0.275
31	Production of fused alumina	Fused alumina of saleable quality	0.0138	2.03

Industry average emissions intensity

Item	Column 1 Activity	Column 2 Production variable	Column 3 Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)	Column 4 Electricity intensity (megawatts per tonne or kilolitre of production)
32	Integrated iron and steel manufacturing	Dry iron ore sinter	0.227	0.0397
33	Integrated iron and steel manufacturing	Dry iron ore pellets	0.114	0.0742
34	Integrated iron and steel manufacturing	Dry coke oven coke	0.462	0.0397
35	Integrated iron and steel manufacturing	Dry lime	0.825	0.0405
36	Integrated iron and steel manufacturing	Continuously cast carbon steel products and ingots of carbon steel of saleable quality	1.56	0.145
37	Integrated iron and steel manufacturing	Long products of hot-rolled carbon steel of saleable quality	0.0756	0.133
38	Integrated iron and steel manufacturing	Flat products of hot-rolled carbon steel of saleable quality	0.0317	0.116
39	Production of lime	Dry lime of saleable quality	1.21	0.0476
40	Production of manganese	Manganese sinter of saleable quality	0.264	0.0300
41	Production of manganese	Ferromanganese alloy of saleable quality	1.42	2.61
42	Production of manganese	Silicomanganese alloy of saleable quality	1.85	4.31
43	Petroleum refining	Combined stabilised crude petroleum oil, condensate, tallow, vegetable oil and eligible petroleum	0.160	0.0421

Clause 1

Industry average emissions intensity				
	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
		feedstocks		
44	Production of sodium carbonate (soda ash) and sodium bicarbonate	Combined light sodium carbonate, dense sodium carbonate and refined sodium bicarbonate of saleable quality	0.828	0.130
45	Production of synthetic rutile	Synthetic rutile of saleable quality	2.10	0.114
46	Production of ammonium nitrate	100% equivalent ammonium nitrate of saleable quality	2.10	0.114
47	Production of ammonia	100% equivalent anhydrous ammonia of saleable quality	1.79	0.224
48	Production of glass beads	Dry weight glass beads of saleable quality	1.75	0.400
49	Production of sodium silicate glass	Dry weight sodium silicate glass of saleable quality	0.622	0.0205
50	Production of polymer grade propene (polymer grade propylene)	100% equivalent dry sodium hydroxide	0.0732	2.67
51	Production of rolled aluminium	Coiled aluminium sheet of saleable quality	0.469	0.982
52	Production of chlorine gas and sodium hydroxide solution	100% equivalent dry sodium hydroxide	0.0732	2.67
53	Production of coke oven coke	Dry weight coke oven coke of saleable quality	0.775	0.0109
54	Production of	Fused zirconia of	0.794	6.07

Industry average emissions intensity				
	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
	fused zirconia	saleable quality		
55	Production of dried distillers grains with solubles	Dried distillers grains with solubles of saleable quality that has a moisture content of equal to or less than 12% and a protein content of equal to or more than 20% (on a dry solids basis)	0.560	0.0785
56	Production of coal char	Dry weight coal char of saleable quality	0.680	0.120
57	Production of glass containers	Blown and pressed glass containers of saleable quality	0.495	0.308
58	Production of white titanium dioxide pigment	White titanium dioxide pigment of saleable quality	1.62	0.986
59	Integrated production of lead and zinc	Lead metal of saleable quality with a concentration of lead of at least 99.97%	1.12	0.355
60	Integrated production of lead and zinc	Lead metal of saleable quality with a concentration of lead of at least 99.5% but less than 99.97%	0.833	0.371
61	Integrated production of lead and zinc	100% equivalent zinc in fume	3.07	0.820
62	Production of high purity ethanol	100% equivalent ethanol	0.728	0.168
63	Tissue paper	Uncoated tissue	0.646	1.67

Clause 1

Industry average emissions intensity				
	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
	manufacturing	paper of saleable quality		
64	Tissue paper manufacturing	Air dried equivalent pulp from either or both of woodchips and sawdust	0.130	0.448
65	Production of carbamide (urea)	100% equivalent carbamide of saleable quality	0.315	0.285
66	Production of polyethylene	Pelletised polyethylene of saleable quality	0.129	0.646
67	Production of iron ore pellets	Dry weight iron ore pellets of saleable quality	0.0745	0.0498
68	Production of liquefied natural gas	Liquefied natural gas	0.378	0.0640
69	Production of magnetite concentrate	100% equivalent iron contained in saleable magnetite concentrate	0.000323	0.0826
70	Production of ceramic floor and wall tiles	Ceramic floor and wall tiles of saleable quality	0.316	0.221
71	Manufacture of reconstituted wood-based panels	Raw reconstituted wood-based panel of saleable quality	0.0888	0.372
72	Production of hydrogen peroxide	100% equivalent hydrogen peroxide of saleable quality	0.928	0.858
73	Production of nickel	100% equivalent nickel contained in primary nickel products of saleable quality produced from nickel bearing	13.2	9.29

Industry average emissions intensity				
	Column 1	**Column 2**	**Column 3**	**Column 4**
Item	**Activity**	**Production variable**	**Scope 1 emissions intensity (tonnes CO_2-e per tonne or kilolitre of production)**	**Electricity intensity (megawatts per tonne or kilolitre of production)**
		inputs		
74	Production of nickel	100% equivalent nickel contained in intermediate nickel products of saleable quality produced from nickel bearing inputs	6.80	6.45
75	Production of nickel	100% equivalent nickel contained in primary nickel products of saleable quality produced from nickel intermediate products	6.41	2.84
76	Production of nickel	100% equivalent cobalt contained in cobalt products of saleable quality	11.4	8.89
77	Production of helium	100% equivalent helium of saleable quality	0.0	36.5
78	Production of glass wool	Glass wool of saleable quality	0.497	1.78
79	Rendering of animal by-products	Processed animal protein meal of saleable quality	0.440	0.248