Carbon Credits (Carbon Farming Initiative—Oil and Gas Fugitives) Methodology Determination 2015

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

Dated 4:8:2015

GREG HUNT

Greg Hunt
Minister for the Environment

OPC60998 - A

Contents

Part 1—Preliminary

1 Name

This is the *Carbon Credits (Carbon Farming Initiative—Oil and Gas Fugitives) 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Note: This table relates only to the provisions of this instrument as originally made.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 the 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(b) ends on the day before this determination would otherwise be repealed under subsection 50(1) of the *Legislative Instruments Act 2003*.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*.

amendment Act has the meaning given by subsection 11(5).

API Compendium has the same meaning as in the NGER (Measurement) Determination.

component, in relation to a gas, means a component of the gas that is listed in an item of the table in subsection 2.22(3) of the NGER (Measurement) Determination.

declaration day, for an oil or gas fugitives (RTF) project, means the day the project is declared to be an eligible offsets project.

facility has the same meaning as in the NGER Act.

flare device means a device that flares fugitive leak emissions or process venting emissions, but does not include a device that is directly associated with the operation of an electricity production device.

flare device included in the project for a reporting period means a flare device that, for one or more periods during the reporting period, combusts fugitive leak emissions or process venting emissions that would have been vented to the atmosphere if the project had not been undertaken.

flaring means the combustion of gas for a purpose other than producing energy.

fugitive leak emissions means any of the following that are not process venting emissions:

(a) emissions from equipment, including emissions from:
  (i) storage tanks; and
  (ii) loading losses; and
  (iii) equipment listed in section 5.4.3, 5.6.4, 5.6.5 or 6.1.2 of the API Compendium;
(b) fugitive emissions within the meaning of section 6 of the API Compendium.

fugitive leak measurement period has the meaning given by section 33.

gas capture equipment: equipment (which may be a single piece of equipment, or multiple pieces of equipment that make up a system) is ***gas capture equipment*** if:

(a) the equipment captures fugitive leak emissions or process venting emissions; and
(b) without the equipment, the emissions would be released to the atmosphere.

gas quantity means a quantity of gas expressed in tonnes.

historical sampling data has the meaning given by subsection 34(1).

intention notice time has the meaning given by subsection 11(5).

mass fraction means the fraction by mass, expressed as a percentage, of a particular component in a gas quantity.

molar fraction means the fraction, expressed as a percentage, of a particular component of a gas quantity measured in moles of the component per mole of the gas quantity.

monitored operating period for a flare device has the meaning given by section 32.

monitoring requirements means the requirements set out in sections 31 to 34.

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

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.

oil or gas facility has the meaning given by section 6.

oil or gas fugitives (RTF) project (short for oil or gas fugitives (re-route to flare) project) has the meaning given by subsection 8(2).

process venting emissions means emissions from the engineered or intentional release of gas directly associated with a production process.

Note: Examples of process venting emissions include emissions released from the following kinds of equipment:

(a) acid gas removal units;
(b) nitrogen rejection units;
(c) dehydrators;
(d) regenerators.

relevant component gas measurements has the meaning given by subsection 22(3).

re-routed gas quantity has the meaning given by section 19.

s means the number of component gases present in a gas quantity.

standard conditions has the same meaning as in the NGER (Measurement) Determination.

substitute newness requirement has the meaning given by subsections 11(2) and (3).

6 Meaning of *oil or gas facility*

A facility is an ***oil or gas facility*** if the facility is undertaking one or more of the following activities:

(a) an oil or gas exploration activity that is:
  (i) drill stem testing; or
  (ii) well completion; or
  (iii) well workovers;
(b) crude oil production;
(c) crude oil transport;
(d) crude oil refining;
(e) natural gas production or processing;
(f) natural gas transmission.

7 References to factors and parameters from external sources

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

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

Part 2—Oil or gas fugitives (RTF) projects

8 Oil or gas fugitives (RTF) projects

(1) For paragraph 106(1)(a) of the Act, this determination applies to an offsets project that:

(a) involves the installation and operation of gas capture equipment and the use of the equipment to re-route process venting emissions or fugitive leak emissions to a flare device for combustion; and

(b) is undertaken at an oil or gas facility; and

(c) does not relate to process venting emissions or fugitive leak emissions that are the result of:

(i) coal mining activities; or

(ii) oil exploration well drilling activities; or

(iii) gas exploration well drilling activities.

(2) A project covered by subsection (1) is an ***oil or gas fugitives (RTF) project***.

Part 3—Project requirements

Division 1—General requirements

9 Operation of this Division

For paragraph 106(1)(b) of the Act, this Division sets out requirements that must be met for an oil or gas fugitives (RTF) project to be an eligible offsets project.

10 General requirements

(1) An oil or gas fugitives (RTF) project must be undertaken at an oil or gas facility for the project.

(2) An oil or gas fugitives (RTF) project must involve the following abatement activities:

(a) installing and operating gas capture equipment to capture and re-route:

(i) fugitive leak emissions; or

(ii) process venting emissions;

at an oil or gas facility that would otherwise have been released to the atmosphere;

(b) re-routing the emissions captured by the equipment to a flare device for combustion.

(3) An oil or gas fugitives (RTF) project must not relate to fugitive leak emissions or process venting emissions from a particular source if emissions from that source were being captured by gas capture equipment and flared at any time before the declaration day for the project.

(4) An oil or gas fugitives (RTF) project must not relate to process venting emissions from equipment that is used in a production process and that was not installed before the declaration day for the project.

Division 2—Additionality requirements

11 Requirement in lieu of newness requirement

(1) For subparagraph 27(4A)(a)(ii) of the Act, the substitute newness requirement is in lieu of the newness requirement for an oil or gas fugitives (RTF) project.

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

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

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

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

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

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

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

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

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

(5) In this section:

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

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

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

Part 4—Net abatement amount

Division 1—Preliminary

12 Operation of this Part

For paragraph 106(1)(c) of the Act, this Part specifies the method for working out the carbon dioxide equivalent net abatement amount for a reporting period for an oil or gas fugitives (RTF) project that is an eligible offsets project.

Division 2—Method for calculating net abatement amount

13 Summary

An oil or gas fugitives (RTF) project involves carbon abatement from capturing, re-routing and flaring gas that would otherwise be released to the atmosphere.

The carbon dioxide equivalent net abatement amount for a reporting period is worked out by comparing the emissions resulting from flaring the re-routed gas with the emissions that would have resulted from the gas being released to the atmosphere if the project had not been carried out.

Amounts of re-routed gas consisting of process venting emissions, which are intentional emissions from equipment used in a production process and are likely to vary with changes in production, must be measured continually. Amounts of re-routed gas consisting of fugitive leak emissions, which are not directly associated with production levels, may be measured during a fugitive leak measurement period. Amounts of re-routed gas that contain both kinds of emissions must be treated as process venting emissions.

The carbon dioxide equivalent net abatement amount for a reporting period is adjusted by a sampling discount factor for sampling uncertainty associated with relevant component gas measurements. Ancillary emissions are taken into account if doing so would have a material effect on net abatement.

14 Net abatement amount

(1) The carbon dioxide equivalent net abatement amount for a reporting period, in tonnes CO_2-e, is worked out using the formula (***equation 1***):

$$A_{NA} = \sum_{i=1}^{n}\left[\left(E_{V,i} - E_{F,i}\right) \times SDF_i\right] - E_{AN}$$

where:

A_{NA} means the carbon dioxide equivalent net abatement amount for the reporting period, in tonnes CO_2-e.

n means the number of flare devices included in the project for the reporting period.

i means a flare device included in the project for the reporting period.

$E_{V,i}$ means the emissions that would have resulted from the release of the re-routed gas quantity in relation to flare device i in the reporting period if the project had not been undertaken, in tonnes CO_2-e, worked out using equation 2.

$E_{F,i}$ means the emissions from flaring the re-routed gas quantity in relation to flare device i in the reporting period, in tonnes CO_2-e, worked out using equation 3.

SDF$_i$ means the sampling discount factor for flare device i in the reporting period, worked out in accordance with section 21.

E$_{AN}$ means the ancillary emissions associated with implementing the project in the reporting period, in tonnes CO_2-e, worked out using equation 10.

(2) For the purposes of subsection (1), disregard any carbon abatement that is not eligible carbon abatement from the project.

Division 3—Method for calculating emissions

Subdivision A—Calculation of emissions that would have occurred if project not undertaken

15 Emissions that would have occurred if project not undertaken

The emissions that would have resulted from the release of the re-routed gas quantity in relation to a flare device in a reporting period if the oil or gas fugitives (RTF) project had not been undertaken, in tonnes CO_2-e, are worked out using the formula (***equation 2***):

$$E_{V,i} = Q_{R,i} \times \sum_{y=1}^{s} \left[GWP_y \times \frac{mol_{y,i}\% \times \frac{mw_y}{V}}{d_{TOTAL,i}} \right]$$

where:

$E_{V,i}$ means the emissions that would have resulted from the release of the re-routed gas quantity in relation to flare device i in the reporting period if the project had not been undertaken, in tonnes CO_2-e.

$Q_{R,i}$ means the re-routed gas quantity in relation to flare device i in the reporting period, in tonnes, worked out in accordance with section 19.

s means the number of component gases present in the re-routed gas quantity in relation to flare device i, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

y means a component gas present in the re-routed gas quantity in relation to flare device i, identified:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—as a result of monitoring parameters s and molar fraction in accordance with the monitoring requirements.

GWP_y means:

(a) if component y is covered by an item of the table in regulation 2.02 of the NGER Regulations as in force on the declaration day—the Global Warming Potential specified for component y in the table; or

(b) otherwise—zero.

$mol_{y,i}\%$ means the molar fraction of component y in the re-routed gas quantity in relation to flare device i, in mol%, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or
(b) otherwise—in accordance with the monitoring requirements.

mw$_y$ means the molecular weight of component y, in kilograms per kilomole, set out in the table in subsection 2.22(3) of the NGER (Measurement) Determination.

V means the volume of 1 kilomole of a gas at standard conditions, which is 23.6444 cubic metres.

d$_{TOTAL,i}$ means the density of the re-routed gas quantity in relation to flare device i, in kilograms per cubic metre, worked out using equation 7.

Subdivision B—Calculation of emissions from flaring

16 Emissions from flaring

The emissions from flaring the re-routed gas quantity in relation to a flare device in a reporting period, in tonnes CO_2-e, are worked out using the formula (***equation 3***):

$$E_{F,i} = Q_{R,i} \times \left(EF_i \times OF_F + m_{CO2,i}\% + \left(1 - m_{CO2,i}\%\right) \times \left(EF_{CH4} + EF_{N2O} \right) \right)$$

where:

E$_{F,i}$ means the emissions from flaring the re-routed gas quantity in relation to flare device i in the reporting period, in tonnes CO_2-e.

Q$_{R,i}$ means the re-routed gas quantity in relation to flare device i in the reporting period, in tonnes, worked out in accordance with section 19.

EF$_i$ means the emissions factor for flaring the re-routed gas quantity in relation to flare device i in the reporting period, in tonnes CO_2-e per tonne flared, worked out using equation 4.

OF$_F$ means the correction factor for the oxidation of a flared fuel, as set out in section 3.86 of the NGER (Measurement) Determination.

m$_{CO2,i}$% means the mass fraction of carbon dioxide in the re-routed gas quantity in relation to flare device i, in mass%, worked out using equation 5.

EF$_{CH4}$ means the CH_4 emissions factor for flaring, in tonnes CO_2-e per tonne flared, as set out in the table in subsection 3.85(2) of the NGER (Measurement) Determination.

EF$_{N2O}$ means the N_2O emissions factor for flaring, in tonnes CO_2-e per tonne flared, as set out in the table in subsection 3.85(2) of the NGER (Measurement) Determination.

17 Emissions factor for a re-routed gas quantity

The emissions factor for flaring the re-routed gas quantity in relation to a flare device, in tonnes CO_2-e per tonne flared, is worked out using the formula (***equation 4***):

$$EF_i = \sum_{y=1}^{s} \left[\frac{mol_{y,i}\% \times \frac{mw_y}{V} \times 100}{d_{TOTAL,i}} \times \frac{44.010 \times f_y \times OF_g}{mw_y \times 100} \right]$$

where:

EF$_i$ means the emissions factor for flaring the re-routed gas quantity in relation to flare device i, in tonnes CO_2-e per tonne flared.

s means the number of component gases present in the re-routed gas quantity in relation to flare device i, not including carbon dioxide, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

Note: Carbon dioxide in the gas quantity is accounted for by equation 5.

y means a component gas, other than carbon dioxide, that is present in the re-routed gas quantity in relation to flare device i, identified:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—as a result of monitoring parameters s and molar fraction in accordance with the monitoring requirements.

mol$_{y,i}$% means the molar fraction of component y in the re-routed gas quantity in relation to flare device i, in mol%, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

mw$_y$ means the molecular weight of component y, in kilograms per kilomole, set out in the table in subsection 2.22(3) of the NGER (Measurement) Determination.

V means the volume of 1 kilomole of a gas at standard conditions, which is 23.6444 cubic metres.

d$_{TOTAL,i}$ means the density of the re-routed gas quantity in relation to flare device i, in kilograms per cubic metre, worked out using equation 7.

f$_y$ means the number of carbon atoms in a molecule of component y, as set out in the table in subsection 2.22(3) of the NGER (Measurement) Determination.

OF$_g$ means the oxidation factor for gaseous fuels, and has the same value as in subsection 2.22(1) of the NGER (Measurement) Determination.

18 Mass fraction of carbon dioxide in a re-routed gas quantity

The mass fraction of carbon dioxide in the re-routed gas quantity in relation to a flare device is worked out using the formula (***equation 5***):

$$m_{CO2,i}\% = \frac{mol_{CO2,i}\% \times \frac{mw_{CO2}}{V}}{d_{TOTAL,i}}$$

where:

$m_{CO2,i}$% means the mass fraction of carbon dioxide in the re-routed gas quantity in relation to flare device i, in mass%.

$mol_{CO2,i}$% means the molar fraction of carbon dioxide in the re-routed gas quantity in relation to flare device i, in mol%, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

mw_{CO2} means the molecular weight of carbon dioxide, in kilograms per kilomole, set out in the table in subsection 2.22(3) of the NGER (Measurement) Determination.

V means the volume of 1 kilomole of a gas at standard conditions, which is 23.6444 cubic metres.

$d_{TOTAL,i}$ means the density of the re-routed gas quantity in relation to flare device i, in kilograms per cubic metre, worked out using equation 7.

Subdivision C—Other calculations relating to emissions

19 Re-routed gas quantity

(1) The ***re-routed gas quantity*** in relation to a flare device in a reporting period is the total of the gas quantities (the ***relevant gas quantities***), in tonnes, worked out in accordance with this section in relation to particular periods (***relevant periods***) within the reporting period.

Process venting emissions

(2) If any of the gas passing through the flare device in a relevant period consists of process venting emissions, the relevant gas quantity for the relevant period is to be measured, in tonnes, in accordance with the monitoring requirements (other than section 33).

Fugitive leak emissions

(3) If all of the gas passing through the flare device in a relevant period consists of fugitive leak emissions, the relevant gas quantity for the relevant period is:

(a) if the flare device is continuously monitored during the relevant period in accordance with the monitoring requirements (other than section 33)—the gas quantity recorded as a result of that monitoring; or

(b) if paragraph (a) does not apply, and there is a fugitive leak measurement period for the flare device that ends before the start of the relevant period—the amount worked out using equation 6; or

(c) if neither paragraph (a) nor (b) applies—zero.

(4) The relevant gas quantity in relation to flare device i in a relevant period, in tonnes, for a case where paragraph (3)(b) applies, is worked out using the formula (***equation 6***):

$$Q_{O,i} = T_{O,i} \times \frac{Q_{M,i}}{T_{M,i}}$$

where:

$Q_{O,i}$ means the relevant gas quantity in relation to flare device i in the relevant period, in tonnes.

$T_{O,i}$ means the duration of the relevant period, in hours.

$Q_{M,i}$ means the gas quantity passing through flare device i in the fugitive leak measurement period for flare device i, in tonnes, measured in accordance with the monitoring requirements.

$T_{M,i}$ means the duration of the fugitive leak measurement period for flare device i, in hours.

Disregard periods that are not monitored operating periods

(5) A period is to be disregarded for the purposes of working out a gas quantity, or the duration of a relevant period, in relation to a flare device under this section if the period is not a monitored operating period for the flare device.

20 Density of a re-routed gas quantity

The density of a re-routed gas quantity in relation to a flare device, in kilograms per cubic metre, is worked out using the formula (***equation 7***):

$$d_{TOTAL,i} = \sum_{y=1}^{s} \left[mol_{y,i}\% \times \frac{mw_y}{V} \right]$$

where:

$d_{TOTAL,i}$ means the density of the re-routed gas quantity in relation to flare device i, in kilograms per cubic metre.

s means the number of component gases present in the re-routed gas quantity in relation to flare device i, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

y means a component gas that is present in the re-routed gas quantity in relation to flare device i, identified:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—as a result of monitoring parameters s and molar fraction in accordance with the monitoring requirements.

$mol_{y,i}$% means the molar fraction of component y in the re-routed gas quantity in relation to flare device i, in mol%, worked out:

(a) if, under section 34, the project proponent has chosen to use historical sampling data in relation to the reporting period—using that data; or

(b) otherwise—in accordance with the monitoring requirements.

mw_y means the molecular weight of component y, in kilograms per kilomole, as set out in the table in subsection 2.22(3) of the NGER (Measurement) Determination.

V means the volume of 1 kilomole of a gas at standard conditions, which is 23.6444 cubic metres.

Note: Equation 7 provides for the density of a re-routed gas quantity ($d_{TOTAL,i}$) to be worked out by reference to all components (y) in the gas quantity. This means that, in equation 3, the entire quantity of gas flared ($Q_{R,i}$) can be used to work out the emissions from flaring ($E_{F,i}$).

Division 4—Method for calculating sampling discount factor

21 Sampling discount factor

(1) Subject to subsection (2), the sampling discount factor for a flare device in a reporting period is worked out using the formula (***equation 8***):

$$SDF_i = 1 - \left(SU_i - 0.05 \right)$$

where:

SDF$_i$ means the sampling discount factor for flare device i in the reporting period.

SU$_i$ means the sampling uncertainty for flare device i during the reporting period, worked out using equation 9.

(2) If the value worked out under subsection (1) for a flare device in a reporting period is greater than 1, the sampling discount factor for the flare device in the reporting period is taken to be 1.

22 Sampling uncertainty

(1) The sampling uncertainty for a flare device during a reporting period is worked out using the formula (***equation 9***):

$$SU_i = \frac{t_i \times RSD_i}{\sqrt{n_i}}$$

where:

SU$_i$ means the sampling uncertainty for flare device i during the reporting period.

t$_i$ means the Student's 2-sided t-value, at the 95% confidence interval, for the number of relevant component gas measurements for flare device i during the reporting period.

RSD$_i$ means the relative standard deviation of all relevant component gas measurements for flare device i during the reporting period, worked out in accordance with subsection (2).

n$_i$ means the number of relevant component gas measurements for flare device i during the reporting period.

(2) The relative standard deviation of all relevant component gas measurements for a flare device during a reporting period is worked out:

(a) by dividing the standard deviation of those measurements by the mean of those measurements; and

(b) based on the hydrocarbon species with the highest concentration for the flare device.

(3) In this section:

relevant component gas measurements, for a flare device, means the measurements made to work out the parameters s and molar fraction in relation to the flare device, whether those measurements are:

(a) historical sampling data for the parameters; or

(b) made during monitoring of the parameters in accordance with the monitoring requirements.

Division 5—Method for calculating ancillary emissions

23 Ancillary emissions

(1) The ancillary emissions associated with implementing an oil or gas fugitives (RTF) project in a reporting period, in tonnes CO_2-e, are worked out using the formula (***equation 10***):

$$E_{An} = \left(Q_{Elec} \times EF_{Elec} \right) + \sum_{j} \sum_{k} \frac{Q_{SE,j} \times EC_{j} \times EF_{j,k}}{1000}$$

where:

E_{An} means the ancillary emissions associated with implementing the project in the reporting period, in tonnes CO_2-e.

Q_{Elec} means the quantity of electricity consumed from the operation of the project, in megawatt hours, worked out in accordance with the monitoring requirements.

EF_{Elec} 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 its equivalent of tonnes CO_2-e per megawatt hour); or

(b) for electricity obtained otherwise (whether from a grid or not):

(i) if the supplier of the electricity is able to provide an emissions factor that reflects the emissions intensity of the electricity (worked out in accordance with subsection (2)) and is applicable on the declaration day—that factor, in kilograms CO_2-e per kilowatt hour (or its equivalent of tonnes CO_2-e per megawatt hour); or

(ii) otherwise—the emissions factor, in kilograms CO_2-e per kilowatt hour (or its equivalent of tonnes CO_2-e per megawatt hour), for off-grid electricity included in the NGA Factors document in force on the declaration day.

$Q_{SE,j}$ means the quantity of additional fuel type j combusted for stationary energy purposes from the operation of the project in the reporting period (if any), in units appropriate for the application of the energy content factor (***EC_j***), worked out in accordance with the monitoring requirements.

EC_j means the energy content factor of fuel type j combusted for stationary energy purposes in Part 1, 2 or 3 (as appropriate) of Schedule 1 to the NGER (Measurement) Determination, in gigajoules per kilolitre (or other appropriate units).

$EF_{j,k}$ means the emissions factor for each gas type k released due to the combustion of fuel type j for stationary energy purposes in Part 1, 2 or 3 (as appropriate) of Schedule 1 to the NGER (Measurement) Determination, in kilograms of CO_2-e per gigajoule of fuel type j.

Note: The emissions factor incorporates relevant oxidisation factors for the gas type.

(2) For subparagraph (b)(i) of the definition of $\boldsymbol{EF_{Elec}}$ in subsection (1), the emissions factor must be worked out:

(a) on a sent-out basis; and

(b) using a measurement or estimation approach that is consistent with the NGER (Measurement) Determination.

(3) In working out the ancillary project emissions, the project proponent must include any emissions that are reasonably associated with any energy required for the collection, transport and combustion of a gas quantity combusted as part of the project.

(4) This includes any emissions resulting from the combustion of fossil fuel or the consumption of electricity purchased from a State, Territory or electricity grid by the following:

(a) compressors, blowers or gas gathering systems;

(b) transporting gas for the purposes of combusting it as part of the project.

(5) However, emissions relating to equipment installed for the safety of the facility are not ancillary project emissions.

(6) If the project involves the installation of one or more new flare devices, in working out the ancillary project emissions for the project the proponent must include the proportion of emissions associated with the operation of the following:

(a) installed flare devices;

(b) supporting equipment for those devices.

Note: The proportion of emissions associated with existing devices are not ancillary project emissions. This includes emissions from devices mentioned in paragraph (b) to the extent those emissions are associated with the operation of existing devices.

Material effect

(7) The ancillary emissions associated with implementing an oil or gas fugitives (RTF) project are taken to be zero if including the ancillary emissions in the carbon dioxide equivalent net abatement amount for the project for the reporting period would not result in a difference of 5% or more in that net abatement amount.

Part 5—Reporting, record-keeping and monitoring requirements

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

Division 1—Reporting requirements

24 Operation of this Division

For paragraph 106(3)(a) of the Act, this Division sets out information that must be included in an offsets project report about an oil or gas fugitives (RTF) project that is an eligible offsets project.

25 Offsets report requirements

(1) If emissions (other than ancillary emissions) relating to activities undertaken as part of the project have been, or are likely to be, included in an NGER report, the offsets report must contain the following information:

(a) the identifying information, for the corporation or entity providing the NGER report, that is set out in the NGER report in accordance with the NGER Regulations;

(b) the facility or facilities in relation to which the emissions will be included in the NGER report;

(c) the provision or provisions of the NGER (Measurement) Determination that were applied, or are likely to be applied, to the measurement of emissions relating to the activities (including the method or methods being used) for the purposes of the NGER report;

(d) the re-routed gas quantity in relation to each flare device included in the project in the reporting period;

(e) for each re-routed gas quantity referred to in paragraph (d):

(i) the mass fraction of CO_2 in the re-routed gas quantity; and

(ii) the quantity of CO_2 produced from flaring the re-routed gas quantity; and

(iii) the quantity of CH_4 produced from flaring the re-routed gas quantity; and

(iv) the quantity of N_2O produced from flaring the re-routed gas quantity; and

(v) the emissions factor for flaring each component gas (other than CO_2) present in the re-routed gas quantity, in tonnes CO_2-e per tonne of the re-routed gas quantity flared.

(2) However, subsection (1) does not require an offsets report to include information under paragraph (1)(a), (b) or (c) if it is not reasonably practicable for the project proponent to obtain the information.

(3) A quantity or value required to be included in the offsets report under paragraph (1)(d) or (e) must be worked out in the same way as that quantity or

value is worked out for the purposes of working out the carbon dioxide equivalent net abatement amount for a reporting period for the project.

Division 2—Record-keeping requirements

26 Operation of this Division

For paragraph 106(3)(c) of the Act, this Division sets out record-keeping requirements for an oil or gas fugitives (RTF) project that is an eligible offsets project.

27 Records of choices

The project proponent must keep a record in relation to each choice made under section 33 or 34 (including evidence of the day the choice is made).

28 Records relating to ancillary emissions

The project proponent must keep records in relation to any assessment that including an amount of ancillary emissions in the carbon dioxide equivalent net abatement amount for the project would not result in a difference of 5% or more in that net abatement amount, including records setting out the reasons for the assessment.

Note: See subsection 23(7).

29 Records relating to historical sampling data

If, for the purposes of working out the carbon dioxide equivalent net abatement amount for a reporting period, data is used on the basis that it is historical sampling data, the project proponent must keep a record of information that demonstrates that the data is historical sampling data.

Division 3—Monitoring requirements

30 Operation of this Division

For paragraph 106(3)(d) of the Act, this Division sets out:

(a) requirements to monitor an oil or gas fugitives (RTF) project that is an eligible offsets project (see sections 31 to 34); and

(b) certain consequences if the project proponent fails to monitor the project as required (see section 35).

31 Monitoring requirements—general

(1) The project proponent for an oil or gas fugitives (RTF) project must monitor a parameter set out in an item of the following table in accordance with the instructions in the item.

Monitored parameters

Item	Parameter or type of parameter	Description	Unit	Measurement procedure (including frequency as required)
1	Gas quantity	Any measurement of gas quantity used for a calculation in Part 4 of this determination	t	Measured in accordance with: (a) the AAA criterion in Division 2.3.6 of the NGER (Measurement) Determination; or (b) the BBB criterion in section 2.38 of the NGER (Measurement) Determination. The measurement must be corrected to standard conditions. If measured in cubic metres, the quantity in tonnes is calculated by multiplying the quantity in cubic metres by the density of the gas quantity in kilograms per cubic metre, then dividing the result by 1,000. Frequency: (a) if the measurement is in accordance with the AAA criterion in Division 2.3.6 of the NGER (Measurement) Determination—as required by that criterion; or (b) otherwise—at least once every 15 minutes, but not more frequently than once per second.

Monitored parameters				
Item	**Parameter or type of parameter**	**Description**	**Unit**	**Measurement procedure (including frequency as required)**
2	Q_{Elec}	Quantity of electricity consumed from the operation of the project (if any)	MWh	Evidenced by invoices, contractual arrangements or industry metering records. Frequency—continuous.
3	$Q_{SE,j}$	Quantity of additional fuel type j combusted for stationary energy purposes from the operation of the project (if any)	Units appropriate for the application of the energy content factor ($\boldsymbol{EC_j}$)	Estimated in accordance with Division 2.2.5, 2.3.6 or 2.4.6 (as appropriate) of the NGER (Measurement) Determination. Frequency—continuous.
4	s	Number of component gases present in a gas quantity	N/A	Measured in accordance with sections 2.23 and 2.24 of the NGER (Measurement) Determination. Samples used for the purpose of this measurement must: (a) be taken as close as practicable to the equipment used to measure the gas quantity; and (b) include only gas taken into account in measuring the gas quantity. Frequency—on at least 2 occasions, at intervals distributed evenly across a reporting period.
5	molar fraction ($mol_{y,i}$% or $mol_{CO2,i}$%)	Molar fraction of a component gas present in a gas quantity	mol%	Measured in accordance with the procedure set out in item 4 of this table.

Note: If the frequency at which parameter s is measured results in a sampling uncertainty of more than 5%, a sampling discount factor will apply to the calculation of the carbon dioxide equivalent net abatement amount (see section 14).

Excluded gas quantities

(2) A measurement of a gas quantity used in relation to a project must not include any gas quantity that would not have been vented to the atmosphere if the project had not been undertaken.

Exception to certain monitoring requirements

(3) Parameters s and molar fraction are not required to be monitored in accordance with items 4 and 5 of the table in subsection (1) during a reporting period if, under section 34, the project proponent has chosen to use historical sampling data for those parameters in relation to that period.

32 Monitoring requirements—monitored operating period

(1) For the purposes of this determination, a period is a ***monitored operating period*** for a flare device if the flare device:
  (a) is operating in accordance with the manufacturer's specifications (if any); and
  (b) is measured as operating, in accordance with subsections (2) to (5).

(2) Subject to subsections (3), (4) and (5), the project proponent may use one of the following methods to measure whether a flare device is operating in a particular period:
  (a) temperature measurement;
  (b) a UV detection sensor coupled to a flare management system;
  (c) another internationally recognised apparatus for monitoring the operation of a flare device.

(3) If temperature measurement is used, then the flare device is taken not to be operating in a particular period if:
  (a) there is no record of the temperature of the exhaust gas of the flare device for the period; or
  (b) the recorded temperature is less than 500°C at any time in the period.

(4) If a UV detection sensor or another internationally recognised apparatus is used, then the flare device is taken not to be operating in a period if:
  (a) there is no record of the operation of the device for the period; or
  (b) the operation of the device falls below one of the following operational thresholds at any time in the period:
    (i) if the manufacturer has specified an operational threshold for the device—that threshold;
    (ii) otherwise—the internationally recognised standard for the device.

(5) Measurements of whether the flare device is operating must be taken at least once every 15 minutes, but not more frequently than once per second.

33 Monitoring requirements—fugitive leak measurement period

(1) If an oil or gas fugitives (RTF) project includes a flare device at which only fugitive leak emissions are flared, the project proponent may choose a period that starts at or after the start of the first reporting period for the project to be the ***fugitive leak measurement period*** for the flare device.

Note: If there is no fugitive leak measurement period for the flare device, it must be continuously monitored (see section 19).

(2) In choosing a period under subsection (1), the project proponent must ensure that the period:
  (a) covers the full range of operating conditions for the flare device that are likely to exist during the reporting periods for the project; and
  (b) is long enough to allow samples to be collected on enough occasions to produce a representative sample.

(3) The project proponent must measure the gas quantity (the ***fugitive leak measurement gas quantity***) passing through the flare device during the fugitive leak measurement period in accordance with section 31.

(4) A period is to be disregarded for the purposes of working out the fugitive leak measurement gas quantity and the duration of the fugitive leak measurement period if the period is not a monitored operating period for the flare device.

(5) If:
  (a) the fugitive leak measurement period in relation to a flare device has ended; and
  (b) there is a significant change in the equipment from which the fugitive leak emissions occur;

the flare device is taken not to have a fugitive leak measurement period at and after the time the change occurs.

(6) Subsection (5) does not prevent the project proponent choosing a new period that starts at or after the time the change occurs to be the fugitive leak measurement period for the flare device.

34 Monitoring requirements—use of historical sampling data

(1) Before the start of each reporting period for an oil or gas fugitives (RTF) project, the project proponent may choose to use data that meets the requirements in subsection (2) (***historical sampling data***) for parameters s and molar fraction for the reporting period instead of otherwise monitoring those parameters in accordance with the monitoring requirements during the reporting period.

(2) The historical sampling data must meet the following requirements:
  (a) the data must have been collected within 5 years before the start of the reporting period;
  (b) since the data was collected, there must have been no significant changes made to the equipment that will deliver the gas quantity that will be monitored in accordance with the monitoring requirements during the reporting period;
  (c) the project proponent must be able to demonstrate that:
    (i) the data is representative of what would have been collected if parameters s and molar fraction had been monitored in accordance with the monitoring requirements during the reporting period; and
    (ii) the data is able to be used to work out a sampling discount factor for each flare device included in the project during the reporting period (see sections 14 and 21).

Note: If the measurements on which the historical sampling data is based have a sampling uncertainty of 5% or more, a sampling discount factor will apply to the calculation of the carbon dioxide equivalent net abatement amount for the reporting period in relation to which the historical sampling data is used (see sections 14 and 21).

(3) To avoid doubt, a failure to comply with subsection (2) in relation to data used under subsection (1) in relation to a parameter is a failure to monitor the parameter in accordance with the monitoring requirements.

35 Consequences of not meeting requirement to monitor certain parameters

(1) If, during a particular period (the ***non-monitored period***) in a reporting period, a project proponent for an oil or gas fugitives (RTF) project fails to monitor a parameter as required by the monitoring requirements, the value of the parameter for the purpose of working out the carbon dioxide equivalent net abatement amount for the reporting period is to be determined for the non-monitored period in accordance with the following table.

Consequence of not meeting requirement to monitor certain parameters

Item	Parameter	Determination of parameter for non-monitored period
1	Each of the following: (a) gas quantity; (b) s; (c) molar fraction ($mol_{y,i}$% or $mol_{CO2,i}$%)	The parameter is zero.
2	Each of the following: (a) Q_{Elec}; (b) $Q_{SE,j}$	The project proponent must make a conservative estimate of the parameter for the 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.

(2) 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.