

## Exposure Draft

### **DRAFT EXPLANATORY STATEMENT**

#### *Carbon Credits (Carbon Farming Initiative) Act 2011*

#### *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Variation 2020*

### **Purpose**

The *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Variation 2020* (the Variation) amends the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (the Determination).

The Determination credits emissions reductions achieved through the destruction of methane generated by decomposing waste at landfill. The Variation implements the findings of two statutory reviews of the Determination by the Emissions Reductions Assurance Committee (the Committee). These reviews recommended changes to the Determination to ensure credited emissions reductions continue to be genuine—both real and additional to business as usual.

The Variation changes the method in three ways. First, it strengthens the definition of an upgrade project. This ensures that eligible upgrades involve an increase in gas capture and combustion beyond what would occur in the ordinary course of business.

Secondly, it encourages additional gas capture and combustion activities by extending the crediting period to 12 years for projects that capture and combust landfill gas using flares (flaring only projects). For projects that switch from flaring to generation, crediting for the generation component is limited to 7 years, with the crediting period ceasing after 7 years of generation. The variation introduces the restarting flaring project as a new type of landfill gas project, to set out the conditions under which projects can switch back to flaring after a period of generation.

Thirdly, this variation amends the proportion of landfill gas sent to combustion devices that is methane ( $W_{LFG,CH_4}$ ), which is used to estimate the methane that would have been combusted under the baseline emissions calculations.

### **Legislative provisions**

The Determination was made under subsection 106(1) of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act).

The Variation amends the Determination, and is made under subsection 114(1) of the Act, which empowers the Minister to vary, by legislative instrument, a methodology determination.

### **Background**

The Act enables the crediting of greenhouse gas abatement from emissions reduction activities across the economy. Activities achieve greenhouse gas abatement either by

## Exposure Draft

reducing or avoiding emissions or by removing carbon from the atmosphere and storing it in soil or trees.

Emissions reduction activities are undertaken as offsets projects. The process involved in establishing an offsets project is set out in Part 3 of the Act. An offsets project must be covered by and undertaken in accordance with a methodology determination.

Subsection 106(1) of the Act empowers the Minister to make, by legislative instrument, a methodology determination. The purpose of a methodology determination is to establish procedures for estimating abatement (emissions avoidance or sequestration) from eligible projects, and rules for monitoring, record keeping and reporting. These determinations help ensure that emissions reductions are genuine—that they are both real and additional to business as usual.

Emissions Reduction Fund methods must comply with the offsets integrity standards—defined in Section 133 of The Act. These standards ensure abatement credited by a method is genuine and additional to what would occur through business as usual practices.

The Determination was made on 12 January 2015, and sets out the detailed rules for implementing and monitoring landfill gas projects. When organic waste decomposes in landfill it produces methane, a potent greenhouse gas. The method allows crediting of activities which collect and combust landfill gas. The captured landfill gas can be combusted using flares or boilers, or can be used to generate renewable electricity. Combusting methane in the presence of oxygen generates carbon dioxide, which has a lower global warming potential.

The Committee is established by the Act as an independent, expert committee which assesses whether methods meet the requirements of the Emissions Reduction Fund. One of the roles of the Committee is to conduct reviews of methods to ensure they continue to meet the offsets integrity standards and to conduct reviews of the crediting periods of methods.

The Committee completed the crediting period review of the landfill gas method in March 2018 and the periodic review of the method in March 2019. The Variation implements findings of these two reviews.

The Committee released proposed variations for public consultation during March-April 2019, receiving 7 submissions. After consideration of industry submissions the Committee sought and analysed data from industry and considered proposed further amendments in July 2020.

### **Operation**

Under the Determination eligible activities may be new, recommencing, upgrade or transitioning activities. The Determination requires an upgrade project to have a higher gas collection efficiency than applied in the two years before a project is registered.

The Committee found in its periodic review that requirements for an upgrade project should ensure that the upgrade involves an increase in gas capture and combustion beyond what would ordinarily occur.

## Exposure Draft

The Variation amends sections 11 and 29 of the Determination and adds a new section 13A after section 13 in Part 3 – Project requirements. The amendments to sections 11 and 29 strengthen the definition of an upgrade project by including additional requirements such as installing new wells and providing operational records for four years. These requirements ensure the upgrade involves an increase in gas capture and combustion beyond what would ordinarily occur. The amendment to section 29 also specifies that the collection efficiency of the existing landfill gas system is the higher of the annual average efficiency achieved in the two or four years immediately prior to the upgrade being implemented. Applying the higher of the two annual averages applies a wider range of historical data to determining previous site operational levels, while maintaining the conservativeness of the abatement calculations.

The new section 13A extends the crediting period for projects that switch between flaring and generating electricity, and vice-versa, to a total of twelve years, but with a maximum of seven years' of generation. The increased flexibility (in line with the Animal Effluent Method) will ensure continued capture and combustion, by encouraging flaring projects to shift to generation as gas collection expands, and conversely for generation projects to switch to flaring as gas collection declines. The longer crediting period also allows flaring project proponents time to determine feasibility of switching to generation, including time to verify the resource; design, procure and commission the generation system; and establish an electricity grid connection.

The Variation also adds a new section 11A after section 11 to provide a definition for a restarting flaring project. This provision sets out the conditions under which a generation project proponent can apply to restart as a flaring project once the crediting period has ended following seven years of generation. Section 11A sets out requirements to apply for a restarting flaring project.

The Variation does not affect projects that are already registered and using the existing Determination. Section 126 of the Act sets out that even after a determination has been varied, a registered eligible offsets project can continue to use the determination for the remainder of its crediting period in the form it was at the time the project was registered. Under section 128 of the Act the project proponent may choose to apply to the Clean Energy Regulator for approval to move to the varied determination. All decisions to approve eligible offsets projects after the commencement of the Variation will need to comply with the Determination as varied by the Variation, even if the applications were submitted before the Variation commenced.

The third aspect of this variation amends the proportion of landfill gas sent to combustion devices that is methane ( $W_{LFG,CH_4}$ ), from the default value of 0.50 applied under the NGER (Measurement) Determination to a value of 0.42. The proportion is used under subsection 24(2) to estimate the methane sent to a combustion device in the baseline emissions calculations. This adjustment is necessary to maintain the conservativeness of the abatement calculations, based on data voluntarily supplied by method proponents.

### **Public consultation**

The Variation has been developed by the Department of Industry, Science, Energy and Resources.

An exposure draft of the Variation was published on the Department's website for public consultation for 21 days in October 2020. The Committee approved a 21 day consultation period because industry stakeholders had already reviewed and commented on the bulk of the changes proposed. Stakeholders and members of the public who asked to be included on the Emissions Reduction Fund mailing list were notified of the public consultation period. The Technical Working Group members involved in the development of the Determination were also notified of the public consultation period. Details of non-confidential submissions are provided on the Department of Industry, Science, Energy and Resources website, [www.industry.gov.au](http://www.industry.gov.au).

### **Determination details**

Details of the Variation are at Attachment A. Numbered sections and items in this explanatory statement align with the relevant sections and items of the Variation and the Schedule. The definition of terms highlighted in *bold italics* can be found in the Variation or the Determination.

For the purpose of subsections 114(2), (2A) and (7B) of the Act, in varying a methodology determination the Minister must have regard to the advice of the Committee that the varied methodology determination complies with the offsets integrity standards and that the varied methodology determination should be made. The Minister must be satisfied that the carbon abatement used in ascertaining the carbon dioxide equivalent net abatement amount for a project is eligible carbon abatement from the project. The Minister also must have regard to whether any adverse environmental, economic or social impacts are likely to arise from the carrying out of the kind of project to which the varied methodology determination applies and other relevant considerations.

A Statement of Compatibility prepared in accordance with the *Human Rights (Parliamentary Scrutiny) Act 2011* is at Attachment B.

### **Regulatory impacts analysis**

In 2014, as part of the Emissions Reduction Fund White Paper process, a regulatory assessment was certified in accordance with the 2014 Government Guide to Regulation. This process assessed the regulatory impacts associated with the Emissions Reduction Fund. This included assessing the impacts associated with future methods to be developed under the *Carbon Credits (Carbon Farming Initiative) Act 2011*, such as the potential future education costs, application costs, contract negotiation costs, and monitoring, verification and compliance audit costs. The regulatory impacts of the Emissions Reduction Fund were assessed as low. There have been no changes since the original assessment that would change the outcomes and as a result no further assessment of regulatory impacts is warranted.

## Exposure Draft

## **Details of the Variation**

### 1 Name

Section 1 sets out the full name of the Variation, which is the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Variation 2020*.

### 2 Commencement

Section 2 provides that the Variation commences on the day after it is registered on the Federal Register of Legislation.

### 3 Authority

Section 3 provides that the Variation is made under subsection 114(1) of the Act.

### 4 Amendment of methodology determination

Section 4 provides that the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* is amended as set out in Schedule 1 of the Variation.

## Schedule 1

### **Amendments of the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015***

#### [1] Section 5

Item [1] adds a restarting flaring project to the list of definitions in Section 5.

#### [2] Subsection 7(3)

Item [2] adds the concept of a restarting flaring project to the four types of landfill gas projects under the method.

#### [3] Subsection 8(2)

Item [3] adds to the existing in-lieu of newness requirements an additional one relating to restarting flaring projects – by referring to requirements set out under the new subparagraph 13(1)(1A).

#### [4] Section 11 and a new section 11A

Section 11 of the Determination sets out requirements for *upgrade projects*.

Item [4] amends section 11 of the Determination by replacing the original requirements with amended requirements.

An upgrade project must be one that:

- upgrades an existing and operating landfill gas collection system to increase the annual collection efficiency of the system to a higher level than previously measured; and
- installs new gas wells to increase landfill gas collection; and
- combusts the gas collected using a combustion device.

These requirements ensure that the increase in gas capture and combustion as a result of the upgrade is likely to be beyond what would ordinarily occur.

For upgrade projects, proponents are required to include in their applications sufficient historical operational records to support the calculation of the collection efficiency of the existing landfill gas collection system. Proponents are required to use the higher of the two annual average proportions of methane collected and destroyed calculated over 2 years or 4 years prior to the commencement of the upgrade, in baseline emissions calculations.

Historical operational records must therefore cover the four-year period before the application.

Section 11 sets out that existing upgrade projects registered before the commencement of the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination Variation 2020* are considered upgrade projects if they complied with the requirements of this section before it was varied. This allows existing upgrade projects to transition to the revised method if they complied with the section as previously written.

## Exposure Draft

Item [4] also adds a new section 11A after section 11 to provide a definition and eligibility requirements in relation to a restarting flaring project. The definition of a restarting flaring project is a generation project covered by subsection 7(3) that was either a new, recommencing, upgrade or transitioning project that elects to switch to flaring. Subsection 11A(2) sets out eligibility requirements, including a written declaration from a chief executive officer or chief financial officer (however described) on the economics of the project, the likelihood of continued combustion activities in the absence of the project, and consultation requirements.

### [5] After subsection 13(1)

Item [5] adds in-lieu of newness requirements to restarting flaring projects, with a requirement that any flaring equipment that needs to be installed or reinstalled under the new project has not been installed or reinstalled at any point in the 2 years before the application for declaration of the project as an eligible offsets project. This provision is to ensure that the restarting flaring activity would be unlikely to occur in the ordinary course of business.

### [6] After section 13

Item [6] adds a new section 13A to Part 3 – Project requirements, after section 13. Under the Act, the standard crediting period for an emissions avoidance offsets project is seven years, unless it is otherwise specified in the applicable methodology determination. The new section 13A specifies longer crediting periods for landfill gas projects that involve flaring-only, or switch between flaring and generation. This new section also clarifies the crediting period for projects that involve electricity generation.

Subsection 13A(1) specifies that for a flaring-only landfill gas project, i.e. where the project does not use landfill gas to generate electricity, or a project that flares as well as generates electricity for less than 84 calendar months over a 12 year period, the crediting period is extended from the standard seven years to twelve years. The review of the crediting period of the method found extending the crediting period for flaring-only projects is unlikely to result in the issuance of Australian Carbon Credit Units (ACCUs) for emissions reductions that would likely occur in the ordinary course of events. The only source of revenue from the operation of flaring-only projects is the sale of ACCUs. The capture and combustion of landfill gas with flares involves ongoing capital expenditure for piping infrastructure, and maintenance and operational costs associated with equipment. The crediting period review found the capture and combustion activities are likely to cease at the end of the crediting period for flaring-only projects.

The crediting period extension review found extending the crediting period for electricity generation activities beyond seven years would be likely to result in the issuance of ACCUs for emissions reductions that would occur in the ordinary course of events. Therefore this variation maintains a crediting period of 7 years for generation-only projects.

Electricity generation may become uneconomic for projects that experienced a decline in gas collection, and such projects are unlikely to continue combusting the methane using flares at the end of their crediting periods. Subsections 13A(1) and 13A(2) extend the crediting period for projects that switch from flaring to electricity or vice-versa to up to 12 years, provided



## Exposure Draft

that generation activities within the 12-year period do not exceed 7 years. Subsection 13A(2) sets out that the crediting period ends at the beginning of the 8<sup>th</sup> year of the generation activity for a project that switched from flaring to generation, maintaining consistency with the 7-year crediting period for generation-only projects. The 7 year limit is triggered after the 84<sup>th</sup> month of generation, where any month where electricity was generated for more than three days is considered a month of generation. Some projects may be able to meet the criteria for a restarting flaring project under the new Section 11A.

### [7] Subsection 24(2) (definition of $W_{LFG,CH4}$ )

Subsection 24(2) sets out calculation option 1, using equation 8 (out of three possible options) for determining the amount of methane sent to a combustion device when calculating project emissions. Option 1 employs the measured volume of landfill gas multiplied by the stipulated proportion of the volume of landfill gas that is methane ( $W_{LFG,CH4}$ ).

Analysis of data from a broad sample of landfill sites following the periodic review found that the previous default  $W_{LFG,CH4}$  value of 0.5 as set out under section 5.14C of the NGER (Measurement) Determination was too high, resulting in a less-than-conservative abatement calculation. Historical records from 2018 and 2019 indicate the average across projects under the Landfill Gas method is 0.42. The proportion of methane in landfill gas is determined by a number of factors, including the proportion of organic waste and ambient conditions. The proportion of organic waste sent to landfill is likely to decline over time given objectives under the *National Waste Policy 2018* to reduce organic waste through diversion away from landfill. This amendment sets the default at 0.42 to maintain the conservativeness of abatement calculations, while continuing to offer the option of using actual measurements under subsection 24(2).

### [8] After subsection 24(2)

Item [8] inserts subsection 24(2A) to set out the types of projects and the applicable registration dates covered by subsection 24(2). This provision ensures that abatement calculations for existing projects are not affected by the change in the default methane proportion. The date chosen is the date when the intention to change this proportion was announced to industry participants.

### [9] Subsection 29(1) (definition of $W_{Com,Bef}$ )

Items [9] and [10] strengthen the eligibility requirements for **upgrade projects**. Item [9] substitutes a new subsection 29(1) which requires an upgrade project to exceed the higher of the average proportion of methane collected and destroyed from landfill in the 2 years or the 4 years before the upgrade is started.

Subsection 29(1) sets out how to calculate the proportion of methane that represents the magnitude of improvement to collection efficiency achieved by the upgrade project ( $W_{B,Ex}$ ). The calculation given in **equation 17** has two terms:

- the collection efficiency of the existing landfill gas capture system before the upgrade ( $W_{Com,Bef}$ )

## Exposure Draft

- *divided* by the collection efficiency of the landfill gas capture system after the upgrade ( $W_{Com,Aft}$ ).

This variation revises the definition of  $W_{Com,Bef}$  to mean the higher of the average annual proportion of the methane from the landfill that is collected and destroyed during the 2 or 4 years immediately before the upgrade is started. This parameter is calculated using equations 19 for the two-year average proportion and 19A for the four-year average proportion.

### [10] Subsection 29(3)

Item [10] substitutes a new Subsection 29(3) including Subsection 29(3A) which set out how to calculate the collection efficiency of the existing landfill gas collection system, before the upgrade ( $W_{Com,Bef}$ ). To perform this calculation, proponents require four years' information on the amount of landfill gas collected and combusted from the landfill prior to the upgrade. This requirement is included as an eligibility requirement for upgrade projects, to ensure that proponents have access to this historic data to establish baseline landfill gas combustion levels applying to the upgrade.

Equations 19 and 19A set out the calculation for an annual average proportion of methane from landfill collected and destroyed during the 2 years or 4 years before the upgrade is started, and contains the following terms:

- the sum of the amount of methane captured and combusted on site ( $Q_{cap,y} + Q_{flared,y}$ ) and the methane captured and destroyed when transferred out of the landfill ( $Q_{tr,y}$ ), which are terms defined in the *NGER (Measurement) Determination*  
*multiplied by*
- the conversion factor ( $\gamma$ ), which is used to express the amount of methane in tonnes CO<sub>2</sub>-e  
*divided by*
- the total amount of methane generated by the landfill ( $CH_{4,y}^*$ ), determined using the *NGER (Measurement) Determination*.

The calculation is repeated for each of the two or four years immediately prior to the upgrade starting. The higher of these two averages is used to determine the collection efficiency of the existing landfill gas capture system before the upgrade ( $W_{Com,Bef}$ ). The revision also sets out that the two or four year period ends either immediately before the upgrade is started, or before the registration date for the project. This enables users of the method to apply this provision even if the date on which the upgrade started is difficult to establish or document.

### [11] Subparagraph 29(4)(b)(i)

Item [11] prevents a calculation of collection efficiency that exceeds 100 per cent. Subsection 29(4) sets out that  $CH_{4,y}^*$  is determined using the *NGER (Measurement) Determination*. In other cases in the Determination, the amount of landfill gas generated in a landfill is calculated as  $CH_{4gen}$ , also using the *NGER (Measurement) Determination*. The parameter  $CH_{4,y}^*$  is used instead for this equation, because it has a calculation step (not

## Exposure Draft

used for the calculation of  $CH_{4\text{gen}}$ ) that ensures that the amount of landfill gas collected does not exceed the amount of landfill gas that is estimated to have been generated in the landfill.

Item [11] amends subparagraph 29(4)(b)(i) to require that the calculation of  $CH_4^*$  be based on data for four years before the upgrade, rather than two years in the original method.

The revision establishes that the four year period ends either immediately before the upgrade is started, or before the registration date for the project. This calculation requires the full four years of data.

### [12] Paragraph 29(6)

Item [12] sets out that, to avoid doubt, the time periods in Section 29 relating to a restarting flaring project which was previously an upgrade project relate to the previous upgrade project—and are not if the project is declared as a restarting flaring project.

### [13] Section 31A

Item [13] requires the offsets report for a reporting period to include the total number of calendar months that landfill gas has been used to generate electricity, noting that subsection 13A(3) specifies any month with 3 or more days of electricity generation must be counted and the months do not need to be consecutive. Subsection 31A(2) sets out that offsets reports for restarting flaring projects must indicate if landfill gas was used to generate electricity during the applicable reporting period.

## **Statement of Compatibility with Human Rights**

*Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011*

### ***Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Variation 2020***

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

#### **Overview of the Legislative Instrument**

The *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Variation 2020* (the Variation) amends the *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (the Determination). The Variation strengthens the definition of an upgrade project to ensure that the upgrade involves an increase in gas capture and combustion beyond what would ordinarily occur. The Variation also encourages additional gas capture by extending the crediting period for flaring-only projects to 12 years, while clarifying that the crediting period for projects that switch between flaring and generating ends after seven years of electricity generation within this 12 year period. The variation also establishes conditions for some projects to restart flaring for the remainder of the 12 year period after their crediting period has ended.

#### **Human rights implications**

This Legislative Instrument does not engage any of the applicable rights or freedoms.

#### **Conclusion**

This Legislative Instrument is compatible with human rights as it does not raise any human rights issues.