

EXPLANATORY STATEMENT

Carbon Credits (Carbon Farming Initiative) Act 2011

*Carbon Credits (Carbon Farming Initiative) Methodology (Commercial Buildings)
Determination 2014*

EXPOSURE DRAFT

Background: Emissions Reduction Fund

The *Carbon Credits (Carbon Farming Initiative) Act 2011* (the **Act**¹) enables the crediting of greenhouse gas abatement from emissions reduction activities across the economy. Greenhouse gas abatement is achieved either by reducing or avoiding emissions or by removing carbon from the atmosphere and storing it in soil or trees.

In 2014, the Australian Government introduced the *Carbon Farming Initiative Amendment Bill 2014*, which establishes the Emissions Reduction Fund (ERF). The ERF expands on the Carbon Farming Initiative (CFI) by extending the scope of eligible emissions reduction activities and by streamlining existing processes. The ERF has three elements: crediting emissions reductions, purchasing emissions reductions, and safeguarding emissions reductions.

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 methodologies will ensure that emissions reductions are genuine—that they are both real and additional to business as usual.

In deciding to make a methodology determination the Minister must have regard to the advice of the Emissions Reduction Assurance Committee (ERAC), an independent expert panel that will be established to advise the Minister on proposals for methodology determinations. The Minister will also consider any adverse environmental, economic or social impacts likely to arise as a result of projects to which the determination applies.

The *Carbon Farming Initiative Amendment Bill 2014* also provides a process for an Interim ERAC to advise on draft methodology determinations before the Bill is passed by Parliament. In particular, clause 393 of Schedule 1 to the *Carbon Farming Initiative Amendment Bill 2014* enables the advice of the Interim ERAC to be used in the place of advice of the statutory ERAC after the Bill commences. It is intended that consultation on this exposure draft be used to inform the advice of the Interim ERAC under that provision.

The ERAC (or Interim ERAC) must include in its advice to the Minister the Committee's opinion on whether the proposed determination complies with the proposed offsets integrity

¹ All references to 'the Act' in this document refer to the *Carbon Credits (Carbon Farming Initiative) Act 2011*, as if amended by the *Carbon Farming Initiative Amendment Bill 2014* (as introduced into the Senate on 26 June 2014).

standards to be set out in section 133 of the Act. The offsets integrity standards require that an eligible project should result in carbon abatement that is unlikely to occur in the ordinary course of events and is eligible carbon abatement under the Act. In summary, the offsets integrity standards also include that:

- amounts are measurable and capable of being verified;
- the methods used are supported by clear and convincing evidence;
- material emissions which are a direct consequence of the project are deducted; and
- estimates, assumptions or projections used in the determination should be conservative.

Offsets projects that are undertaken in accordance with the methodology determination and approved by the Clean Energy Regulator (the Regulator) can generate Australian Carbon Credit Units (ACCUs), representing emissions reductions from the project.

Project proponents can receive funding from the ERF by submitting their projects into a competitive auction run by the Regulator. The Government will enter into contracts with successful proponents, which will guarantee the price and payment for the future delivery of emissions reductions.

Further information on the ERF is available on the Department of the Environment website, www.environment.gov.au/emissions-reduction-fund.

Background: Commercial buildings

Most greenhouse gas emissions generated by *commercial buildings* are indirect (scope 2), primarily emissions from electricity that is consumed in the building. Commercial buildings can also generate direct (scope 1) emissions, including through direct fuel combustion in, for example, boilers and gas heaters.

Improving the energy efficiency of commercial buildings can reduce emissions associated with fuel combustion and generating electricity consumed in the buildings. Activities to reduce energy consumption in commercial buildings could involve modifying, removing or replacing *energy-consuming equipment* in the building, changing energy use within the building, or changing the components or shell of the building to influence energy consumption (see next page for examples of the kinds of activities that could be undertaken).

The environmental performance of Australian buildings, tenancies and homes can be measured by the National Australian Built Environment Rating System (*NABERS*). *NABERS* is a national, industry-recognised rating system that measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment. It does this by using measured and verified operational performance information, such as utility bills, that is adjusted for the size and use of the building and converted into a star rating scale from one star (very poor performance) to six stars (market leading performance).

The Exposure Draft *Carbon Credits (Carbon Farming Initiative) Methodology (Commercial Buildings) Determination 2014* (the draft Determination) makes use of *NABERS energy ratings* and tools for commercial buildings to quantify emissions reductions and energy savings from energy efficiency activities undertaken as part of a commercial buildings ERF project. *NABERS* rates the energy performance of four types of commercial buildings –

office buildings, shopping centres, data centres and business hotels. The draft Determination calculates emissions reductions associated with upgrades to these types of buildings.

The draft Determination provides for multiple buildings to be included in a single *commercial buildings project*. The draft Determination does not specify the activities that should be undertaken, providing flexibility for project proponents to determine what activities are most appropriate for each building. Project proponents who could use this draft Determination once it comes into force include owners, operators or tenants of commercial building types covered by NABERS energy ratings or commercial buildings project aggregators.

Examples of activities that may contribute to emissions reductions under this draft Determination include:

- upgrading energy-consuming equipment in the building, such as:
 - lighting system upgrades;
 - replacing heating, ventilation and air conditioning systems with more efficient technologies and designs;
 - upgrading boilers to more efficient, better controlled designs; or
 - improving the efficiency of transportation systems in the building, such as lifts and escalators;
- making changes to the building shell to reduce the energy requirements of the building, such as:
 - improving the insulation value of glazing, for example by installing secondary glazing; or
 - installing additional insulation in walls, ceilings or under floors;
- making changes to the way energy is used in the building, such as:
 - adopting improved building energy management systems that automatically manage energy consumption; or
 - providing information on energy efficiency to building users.

The draft Determination is based on a similar method under the New South Wales Energy Savings Scheme.² In line with advice from stakeholders, the Department has sought to maintain consistency with the New South Wales method. However, there are a number of differences between the New South Wales method and the draft Determination due to differences in overall scheme design and coverage. For example, the draft Determination covers fuels other than electricity because the purpose of the ERF is to reduce emissions from a range of sources, while the aim of the New South Wales scheme is to reduce electricity consumption in the state.

Another area of difference from the New South Wales method is that the draft Determination applies to existing commercial buildings, whereas the New South Wales method applies to both existing and new commercial buildings. To set the baseline NABERS energy rating for new commercial buildings and estimate baseline energy consumption, the New South Wales method includes benchmark indices that list projected business as usual NABERS energy

² New South Wales Energy Savings Scheme Rule of 2009, Metered Baseline Method, NABERS baseline sub-method (clause 8.8), accessible in 2014 at <http://www.ess.nsw.gov.au/files/3b4bc901-796f-40cd-bace-a35000e9d4f5/ESSRule2of2014.pdf>.

ratings for new shopping centres, hotels, office buildings and data centres built in New South Wales. Further analysis would be required to extend this new buildings approach to states and territories other than New South Wales. Any decision to develop a separate ERF determination for new commercial buildings projects would need to be considered through the prioritisation process for new methods, as outlined in the ERF White Paper.

Application of the draft Determination

The draft Determination sets out the detailed rules for implementing and monitoring offsets projects that would reduce emissions of greenhouse gases by reducing energy consumption at a commercial building. These rules have been designed to help ensure that emissions reductions are real and additional to business as usual.

Project proponents wishing to implement projects under the draft Determination, once it is made, must make an application to the Regulator under section 22 of the Act. They must also meet the general eligibility requirements for an offsets project set out in subsection 27(4), which include compliance with the requirements set out in the draft Determination, and the additionality requirements in subsection 27(4A) of the Act. The additionality requirements are:

- the newness requirement;
- the regulatory additionality requirement; and
- the government program requirement.

Subsection 27(4A) of the Act provides that a methodology determination may specify requirements in lieu of any of the above requirements. The draft Determination does not specify any requirements in lieu, and so all three requirements in the Act apply to eligible commercial building upgrade projects.

Public consultation

The draft Determination has been developed by the Department of the Environment in collaboration with a technical working group of experts from the built environment and energy efficiency sectors and the Regulator. The buildings energy efficiency technical working group held meetings on 21 November 2013, 25 February 2014, 6 May 2014 and 31 July 2014. The technical working group has reviewed draft versions of this methodology prior to the release of this draft Determination for public consultation.

The exposure draft of the Determination has been published on the Department's website for public consultation from 25 September 2014 to 23 October 2014. Details for how to make a submission are provided on the Department of the Environment website, www.environment.gov.au.

Draft Determination details

The draft Determination will be a legislative instrument within the meaning of the *Legislative Instruments Act 2003*.

Details of the draft Determination are at [Attachment A](#).

Note on this explanatory statement

Numbered sections in this explanatory statement align with the relevant sections of the draft Determination.

Definitions for terms which are highlighted in ***bold italics*** can be found in the draft Determination.

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Details of the Methodology Determination

Part 1 Preliminary

1 Name

Section 1 sets out the full name of the draft Determination, which would be the *Carbon Credits (Carbon Farming Initiative) Methodology (Commercial Buildings) Determination 2014*.

2 Commencement

Section 2 provides that the draft Determination would commence on the day after it is registered.

3 Authority

Section 3 provides that the draft Determination would be made under subsection 106(1) of the Act.

4 Duration

Under subparagraph 122(1)(b)(i) of the Act, a methodology determination remains in force for the period specified in the determination.

Paragraph 4(a) provides that the draft Determination will be in force from the commencement until the day before it would otherwise be repealed under subsection 50(1) of the *Legislative Instruments Act 2003*.

Instruments are repealed under that provision on the first 1 April or 1 October following the tenth anniversary of registration on the Federal Register of Legislative Instruments.

Paragraph 4(b) ensures that the draft Determination would expire in accordance with subparagraph 122(1)(b)(i) of the Act.

If the draft Determination expires or is revoked during a crediting period for a project to which the draft Determination applies, the draft Determination will continue to apply to the project during the remainder of the crediting period under subsections 125(2) and 127(2) of the Act. Project proponents may apply to the Regulator during a reporting period to have a different methodology determination apply to their projects from the start of that reporting period (see subsection 128(1) of the Act).

5 Definitions

Section 5 defines a number of terms used in the draft Determination.

Generally, where terms are not defined in the draft Determination but are defined in section 5 of the Act, they have the meaning given by the Act.

Under section 23 of the *Acts Interpretation Act 1901*, words in the determination in the singular number include the plural and words in the plural number include the singular.

Key definitions in section 5 of the draft Determination include those set out below.

Electricity generated onsite refers to electricity consumption that is not taken into account in a NABERS energy rating. The concept is used in the calculation of the net abatement amount so that credits are not issued for reductions in grid electricity use arising from the installation of electricity generation units rather than energy efficiency activities undertaken as part of the project. The term is defined as electricity generated at the building in the **measurement period** which:

- is generated by a unit that was installed at the building after the **previous NABERS energy rating**;
- is consumed by equipment at the building within the scope of the NABERS rating;
- is not taken into account in the total amount of electricity consumption recorded in the **NABERS energy rating certificate**; and
- does not include electricity generated from fuel combustion at the building if the fuel combustion is taken into account in the NABERS energy rating certificate.

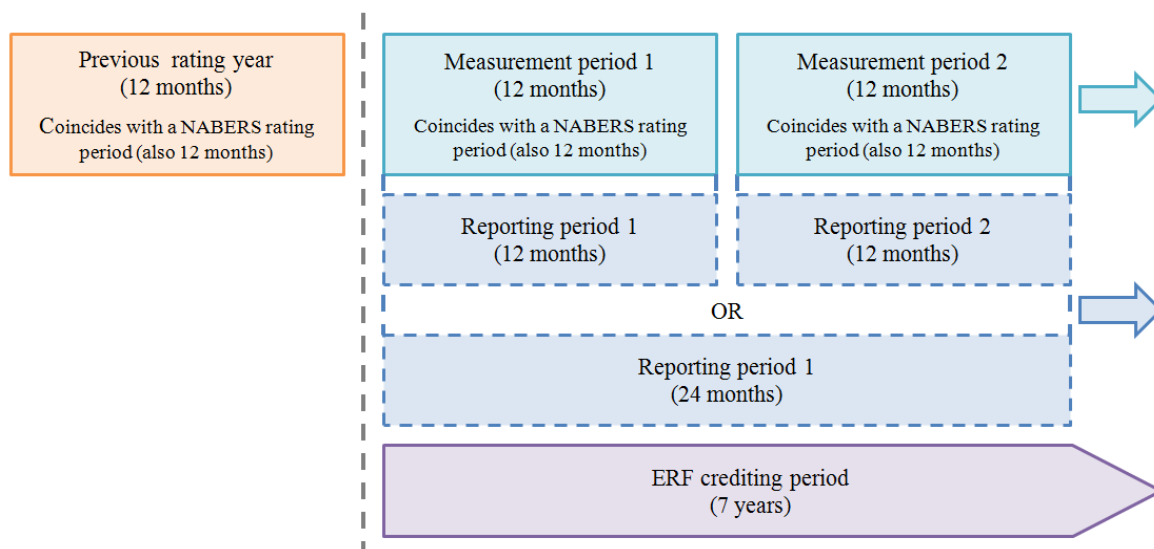
Energy-consuming equipment is a general term used to describe equipment (such as appliances) that consumes energy that is included in the total energy consumption recorded on the NABERS energy rating certificate for the building.

Measurement period refers to a 12-month period over which abatement for a commercial buildings project is calculated. The measurement period coincides with a **NABERS rating period** for the building, during which energy consumption and electricity generated onsite are measured. This period lasts for 12 months because NABERS energy ratings are calculated based on 12 months of energy consumption data.

One or two 12-month measurement periods can constitute a single reporting period for a commercial buildings project. Sections 76(1)(e) and 76(2)(e) of the Act limit the maximum length of a reporting period to two years. As a NABERS rating period lasts 12 months, reporting periods of less than one year are not possible under this draft Determination.

Figure 1 illustrates the relationship between NABERS rating periods, measurement periods, reporting periods and the crediting period for commercial buildings projects.

Figure 1: Time periods in the draft Determination



NABERS energy rating refers to the accredited energy rating, expressed as a number of stars, given to a building that is rated under NABERS. The energy rating is undertaken by an **accredited assessor** and certified by the NABERS National Administrator. The draft Determination requires that a NABERS energy rating be obtained for each building in each measurement period.

NABERS energy ratings can be expressed with or without **GreenPower**. The draft Determination uses the rating without GreenPower, which means that all electricity consumed by the building is treated as if it was purchased from the grid; that is, GreenPower purchases do not improve the rating. By using the NABERS energy ratings without GreenPower, the draft Determination ensures that abatement being credited under the ERF project is from energy efficiency improvements in the building.

If a NABERS energy rating is adjusted by the NABERS National Administrator (following an audit, for example), then the adjusted NABERS energy rating and adjusted NABERS energy rating certificate must be used for the purposes of calculating the net abatement amount. The proponent is not required to use an adjusted rating and adjusted certificate where the offsets report for the relevant reporting period has already been submitted.

NABERS energy rating certificate refers to the certificate issued by the NABERS National Administrator that sets out the NABERS energy rating for the building, as well as the key inputs used to calculate the rating such as the total amount of energy consumption at the building.

NABERS energy reverse calculator refers to the NABERS reverse calculator that is used to estimate a building's energy consumption and greenhouse gas emissions based on the configuration and NABERS energy rating of the building. There are different reverse calculators for different building types. For office buildings, there are different calculators for the different office rating types. NABERS reverse calculators are accessible at the NABERS website (www.nabers.gov.au/).

Previous NABERS energy rating refers to the most recent NABERS energy rating for the building before the **commencement of project activities**, and which is used (after adjusting

for business as usual improvements over time) to establish baseline emissions. This rating must satisfy a number of requirements to ensure that it is a robust basis from which to calculate baseline emissions. These requirements are intended to ensure that the previous rating and the rating for the measurement period are comparable, so that apparent emissions reductions arising from differences in scope or coverage are not credited.

The previous NABERS energy rating must be for the same type of commercial building as the building in the measurement period. For example, a building cannot be rated as a hotel in its previous NABERS energy rating and then be rated as a commercial office in a subsequent measurement period. To prevent crediting emissions reductions which result from shifting emissions from one party to another due to improved metering systems, the previous NABERS energy rating for the building must cover the same area containing energy-consuming equipment as the building in the measurement period.

In addition, the previous NABERS energy rating must relate to a NABERS rating period that ended no more than seven years before the last day of the measurement period. This is consistent with the New South Wales NABERS method. Finally, to ensure that any difference between baseline and project emissions is due to genuine differences in energy use and not differences in measurement, imports or exports of energy at the building need to be worked out for the previous NABERS energy rating in the same way as they are worked out for the NABERS energy rating for the building in the measurement period.

Part 2 Commercial buildings projects

6 Commercial buildings projects

The effect of paragraphs 27(4)(b) and 106(1)(a) of the Act is that a project must be covered by a methodology determination, and that the methodology determination must specify the kind of offsets project to which it applies.

Section 6 provides that the draft Determination would apply to an offsets project that aims to reduce greenhouse gas emissions by reducing energy consumption at one or more existing commercial buildings that have, or are eligible to have, NABERS energy ratings. The draft Determination defines this kind of project as a commercial buildings project.

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Part 3 Project Requirements

7 Operation of this Part

The effect of paragraph 106(1)(b) of the Act is that a methodology determination must set out requirements that must be met for a project to be an eligible offsets project. Under paragraph 27(4)(c) of the Act, the Regulator must not declare that a project is an eligible offsets project unless the Regulator is satisfied that the project meets these requirements.

Part 3 of the draft Determination specifies a number of requirements that must be met in order for a project to be an eligible offsets project. These requirements are set out in sections 8 to 11.

The Department is considering the possibility of including provisions in the calculation of the net abatement amount to set abatement for a building to zero where there has been a breach of project requirements in relation to that building. This would not remove the possibility of a project that breached the Part 3 project requirements being ruled ineligible, but would be intended to apply in situations where, for example, there had been an unintended breach at a single building within a broader project, but where other buildings in the project remained in compliance.

8 Building must have, or be eligible to have, a NABERS energy rating

Section 8 requires each building in the project to have, or be eligible to have, a NABERS energy rating as a commercial building. This means that each building in the project must be an office building, hotel, data centre or shopping centre that is rateable under NABERS energy.

Buildings in the project do not need to have a NABERS energy rating at the time the project is registered with the Regulator. However, the abatement calculations require each building in the project to have a NABERS energy rating covering a period before the commencement of project activities (known as the previous NABERS energy rating) and a NABERS energy rating for each measurement period.

9 Disposal of energy-consuming equipment

Section 9 applies if energy-consuming equipment is removed from a building in the project. If energy-consuming equipment is removed, the equipment must be disposed and not refurbished, re-used or sold. This prevents leakage into the secondary market, where replaced, inefficient appliances could remain in use with no overall reduction in emissions.

The requirement to not refurbish, re-use or sell replaced equipment does not prevent the energy-consuming equipment being broken down into components and those components being recycled.

Project proponents are expected to comply with relevant state, territory, Commonwealth and local government laws and regulations when implementing projects (including when disposing and decommissioning energy-consuming equipment) as is expected in normal business practices. Nothing in the draft Determination renders proponents immune from any other regulatory requirement that may affect the conduct of the project.

10 Not installing types of equipment for which a renewable energy certificate can be created

Section 10 requires that the project cannot involve installing types of equipment eligible to receive renewable energy certificates under the Renewable Energy Target (*Renewable Energy (Electricity) Act 2000* and associated regulations). This project requirement excludes the installation of all types of equipment for which a renewable energy certificate can be created, not just equipment for which a renewable energy certificate has or will be created. For instance, solar photovoltaic systems are excluded from being part of a project, including any models which are ineligible for the Renewable Energy Target.

If equipment eligible for a renewable energy certificate is installed independently of the project prior to or after the commencement of project activities, the installation of that equipment does not rule the project ineligible. However, electricity generation from equipment that is eligible for a renewable energy certificate is not taken into account in working out the net abatement amount calculated under Part 4.

11 No limiting the use of, or services provided in, a building

Section 11 states that project activities cannot involve limiting the use of a commercial building or reducing service levels provided in the building in order to reduce electricity or fuel consumption. For example, a project cannot involve reducing energy consumption in a building by intentionally not using part of the building (except under normal circumstances such as a renovation) or reducing lighting levels in the building below Australian standards. This requirement ensures that abatement that would be credited under the draft Determination is due to genuine energy efficiency improvements in the building.

Part 4 Net abatement amount

Division 1 Preliminary

12 Operation of this Part

Paragraph 106(1)(c) of the Act provides that a methodology determination must specify how to calculate the carbon dioxide equivalent (CO₂-e) net abatement amount for the project in relation to a reporting period.

13 Overview of gases accounted for in abatement calculations

Section 13 provides a summary of the greenhouse gas sources that are assessed in the draft Determination in order to determine the net abatement amount. The emissions sources which need to be taken into account when calculating abatement for the project are set out in Table 1.

Table 1: Overview of gases accounted for in the abatement calculations

Greenhouse gases and emissions sources		
Relevant emissions calculation	Emissions source	Greenhouse gas
Baseline emissions	Electricity consumption	Carbon dioxide (CO ₂)
Project emissions		Methane (CH ₄)
		Nitrous oxide (N ₂ O)
Baseline emissions	Fossil fuel combustion	Carbon dioxide (CO ₂)
Project emissions		Methane (CH ₄)
		Nitrous oxide (N ₂ O)

The draft Determination covers scope 1 emissions from onsite fuel combustion and scope 2 emissions from electricity consumed onsite. It does not cover scope 3 emissions associated with the extraction and processing of fossil fuels or the manufacture, transportation, installation and disposal or decommissioning of building elements. It is a scheme-wide policy to exclude scope 3 emissions from baseline and project emissions sources.

14 References to factors and parameters from external sources

The calculation of the net abatement amount in the draft Determination includes factors taken from other sources, such as emissions factors from the **NGER (Measurement Determination)**. The draft Determination specifies that such factors or parameters should be taken from the version of the external source that is current at the time of reporting emissions reductions from the project or at the time the report is required to be given to the Regulator (whichever is earlier).

The requirement to use versions of referenced documents current at the earlier of the time the offsets report is submitted or the time the report is due does not apply to the emissions factor for electricity. The draft Determination states that the relevant emissions factor for electricity must be derived from the **National Greenhouse Accounts (NGA) Factors document** in force on the day the project is declared an eligible offsets project.

The draft Determination does not impose restrictions on the version of the NABERS assessment tools used by a NABERS assessor to perform the previous rating and the rating for the measurement period, as this will be governed by the NABERS rules. The draft

Determination does specify that the project proponent should use a version of the NABERS energy reverse calculator in force between the date on which the NABERS rating for the building is issued and the date on which the offsets report is due to be provided to the Regulator. This is the period during which the proponent would undertake the net abatement amount calculations.

15 Data to be used in calculations

Section 15 requires that data on the configuration of the building and energy consumption be sourced from the NABERS energy rating certificate or the NABERS energy reverse calculator. Data used in NABERS energy ratings is monitored in accordance with NABERS rules and recorded by an accredited NABERS assessor, ensuring that the data is accurate and verified.

The only energy consumption data that is not sourced from a NABERS energy certificate or tool is electricity generated onsite because, by definition, it is not taken into account in the NABERS assessment. Electricity generated onsite must be monitored in accordance with Division 3 of Part 5.

Division 2 Method for calculating net abatement amount

16 Summary

The net abatement amount for a commercial buildings project is the sum of abatement for all buildings in the project. Where there are two measurement periods in the reporting period, abatement from both measurement periods is added to find total abatement from each building.

Each building in the project must meet a minimum threshold for abatement, referred to as the minimum abatement amount, in order for emissions reductions from that building to be credited. If this threshold is not achieved, the net abatement for the building is zero for that measurement period. Otherwise, abatement for the building is the difference between baseline and project emissions for the building, which includes the abatement associated with the one star improvement (that is, as long as the project passes the one star improvement threshold, it will receive credits for all the emissions reductions beyond the baseline).

17 Carbon dioxide equivalent net abatement amount

In **equation 1**, the carbon dioxide equivalent net abatement amount is worked out by adding the net abatement for all buildings in the project and for all measurement periods in the reporting period, in tonnes CO₂-e.

18 Abatement for a building in a measurement period

For a given 12-month measurement period, the abatement from each building is worked out using **equation 2.1** or **equation 2.2**. Which of these two equations is used depends on whether the minimum abatement amount for the building has been achieved.

If the difference between baseline emissions and project emissions for a single building is equal to or greater than the minimum abatement amount for the building worked out under Division 5, then the abatement for the building is calculated using **equation 2.1**. Abatement

for a building is equal to emissions under the baseline scenario (baseline emissions) minus emissions under the project (project emissions).

If the difference between baseline emissions and project emissions for a single building is less than the minimum abatement amount for the building worked out under Division 5, then **equation 2.2** applies and abatement for the building is equal to zero.

Section 26 describes the calculation of the minimum abatement amount.

Division 3 Calculations relating to baseline emissions

19 Summary

Baseline emissions for a building are the emissions that would have been attributable to the building had the project not occurred. Baseline emissions are worked out using data on electricity and fuel consumption from the NABERS energy reverse calculator for the relevant building type, based on a range of inputs. These inputs include the building specifications and the baseline NABERS energy rating.

20 Baseline emissions for a building

The baseline emissions for a building are calculated using **equation 3**.

Baseline emissions are estimated with reference to a baseline NABERS energy rating, which is an estimation of the star rating that would have applied to the building during the measurement period had the project not occurred (described in more detail in section 21). This rating is then used with the NABERS energy reverse calculator to estimate baseline emissions for the measurement period.

The NABERS energy reverse calculator determines the building's energy use based on a range of inputs. These inputs include a NABERS energy rating, the building's energy mix, and aspects of the building configuration that vary by type of commercial building. For example, the hotels NABERS energy reverse calculator requires data on the number of rooms in the hotel, the surface area of heated pools and the number of function room seats. Other than the NABERS energy rating, which will be the baseline NABERS energy rating, inputs to the NABERS energy reverse calculator must be consistent with the NABERS energy rating for the measurement period to ensure that the abatement calculation is measuring like for like.

The NABERS energy reverse calculator lists fuel and electricity consumption by energy type. Fuel consumption values are multiplied by the appropriate emissions factors in Schedule 1 to the *NGER (Measurement) Determination* to calculate emissions in tonnes CO₂-e.

The electricity emissions factor to be used refers to scope 2 emissions and is to be taken from the NGA Factors document published by the Department from time to time. If the building is connected to an electricity grid for which there is an emissions factor included in the NGA Factors document, then proponents will apply that emissions factor from the NGA Factors document, as in force on the day the project is declared an eligible offsets project. If the building is not connected to one of the electricity grids for which emissions factors are included in the NGA Factors document, then the proponent will apply the factor for off-grid electricity published in the NGA Factors document.

The electricity emissions factor to be used in the calculation of the net abatement amount is determined by the grid the building is connected to, not the specific source of the electricity

being considered. This means that the same emissions factor is used to calculate baseline emissions, project emissions and emissions corresponding to electricity generated onsite.

21 Baseline NABERS energy rating for a building

The baseline NABERS energy rating for a building in a measurement period is calculated using **equation 4**.

This calculation refers to the most recent NABERS rating prior to the commencement of project activities – this is referred to as the *previous NABERS rating*. A number of restrictions are placed on the use of a previous rating to ensure that it is a robust basis for establishing baseline emissions; these are described in more detail in the definition of previous NABERS rating in section 5.

To find the baseline NABERS rating, an annual rating adjustment is applied to the previous NABERS rating. This is intended to reflect the business as usual rate of improvement in the market over time.

The use of the annual rating adjustment is in line with the offsets integrity standards in the Act, which require that a method determination should result in emissions reductions that are unlikely to occur in the ordinary course of events and that estimates should be conservative. For example, energy-consuming equipment in buildings can become faulty or redundant over time, and is generally replaced with more efficient equipment that enters the market, increasing the energy efficiency in a building. The annual rating adjustment is defined in subsection (2) as 0.15 stars, which is consistent with the annual rating adjustment used in the NABERS method under the New South Wales Energy Savings Scheme.

Division 4 Calculations relating to project emissions

22 Summary

Project emissions are calculated from electricity and fuel consumption as recorded in the NABERS energy rating certificate, adjusting for onsite electricity generation not accounted for in the NABERS energy rating.

23 Project emissions for a building in a measurement period

The project emissions for a building in a measurement period are calculated using **equation 5**.

Electricity and fuel consumption as reported in the NABERS energy rating certificate for the measurement period are multiplied by the relevant emissions factors.

An adjustment is applied to project emissions to account for onsite electricity generation that was not taken into account when working out the NABERS energy rating for the building, and that was installed after the previous rating period. This adjustment is included because onsite electricity generation not included in total energy consumption for the NABERS rating can improve the building's NABERS rating even in the absence of improvements in energy efficiency. The adjustment is restricted to units installed after the previous rating period, that is, to situations where the onsite generation is not also represented in the baseline rating.

24 Emissions corresponding to electricity generation at a building in a measurement period

Equation 6 sets out the adjustment for onsite electricity generation.

Electricity generated onsite is defined in section 5 and refers to electricity generated at the building which, among other things, is not taken into account in the total amount of electricity consumption recorded in the NABERS energy rating certificate. For example, electricity generated onsite includes electricity from solar photovoltaic systems where electricity generated by the system is fed into the building rather than immediately exported to the grid.

The emissions of greenhouse gas that would have occurred if electricity generated onsite had instead been purchased from the electricity grid is calculated by multiplying the amount of electricity generated onsite by the relevant emissions factor. The amount of electricity generated onsite is worked out in accordance with the *monitoring requirements* at Division 3 of Part 5.

Division 5 Calculations relating to minimum abatement amount

25 Summary

The minimum abatement amount is a threshold that must be reached before abatement can be credited for a building. This approach is consistent with the offsets integrity standards outlined in section 133 of the Act, which specify that a method determination should result in emissions reductions that are unlikely to occur in the ordinary course of events. The minimum abatement amount is the reduction in emissions that would arise from a one-star improvement in the NABERS energy rating for the building, compared to the building's baseline NABERS energy rating. The requirement for a one-star rating improvement means that abatement can only be credited if the difference between baseline and project emissions is reflective of a significant improvement in energy efficiency in the building.

26 Minimum abatement amount

For commercial buildings projects the minimum abatement amount is calculated using **equation 7**.

The minimum abatement amount is estimated with reference to a NABERS energy rating that is one star higher than the baseline NABERS energy rating for the building in the measurement period. This rating is used with the NABERS energy reverse calculator to estimate the emissions reductions associated with a one star improvement in the building's NABERS energy rating.

Inputs to the NABERS reverse calculator must be consistent with the NABERS energy rating for the measurement period with the exception of the NABERS energy rating, which will be one star higher than the baseline NABERS energy rating for the building.

Electricity and fuel consumption values from the reverse calculator are multiplied by the appropriate emissions factors to calculate emissions in tonnes CO₂-e. Emissions for each energy type are added to find the total emissions that would be attributable to the building if its rating was one star higher than the baseline rating. This value is then subtracted from baseline emissions to calculate the minimum abatement amount.

Part 5 Reporting, monitoring and record-keeping requirements

Subsection 106(3) of the Act provides that a methodology determination may require the project proponent of an eligible offsets project to comply with specified monitoring, record-keeping and reporting requirements.

Under Parts 17 and 21 of the Act, a failure to comply with these requirements may constitute a breach of a civil penalty provision, and a financial penalty may be payable.

The monitoring, record-keeping and reporting requirements specified in Part 5 of the draft Determination are in addition to any requirements specified in the Act, Regulations³ and legislative rules.

Reporting periods

The Act and subordinate legislation provide for flexible reporting periods between six months and two years in duration. Proponents should be aware that the Act and subordinate legislation may also specify other reporting and notification requirements affecting the draft Determination, including to allow shorter reporting periods.

As described in Part 1 of this Explanatory Statement, NABERS energy ratings correspond to 12 months of energy consumption data, so reporting periods that meet the requirements set out in the calculations at Part 4 of the draft Determination can only be 12 months or 24 months in length.

Changed audit requirements

The Act provides for a risk-based approach to auditing emissions reductions. Subsections 13(1) and 76(4) of the Act provide for legislative rules to be made by the Minister, specifying the level of assurance, frequency and scope of the audit report that must be provided with project reports for different types of projects.

Notification requirements

No notification requirements are specified in the draft Determination. The Act and legislative rules will specify notification requirements that apply to all ERF projects. The Regulations currently include several notification requirements and the intention is to transfer these requirements from Regulations to legislative rules over time.

Division 1 Offsets report requirements

27 Operation of this Division

The effect of paragraph 106(3)(a) of the Act is that a methodology determination may set out requirements to be included in each offsets report.

³ The *Carbon Credits (Carbon Farming Initiative) Regulations 2011* can be accessed at <http://www.comlaw.gov.au/Details/F2012C00466>. It is intended that these requirements in Regulations will be revised and transferred to legislative rules for the ERF over time.

28 Information that must be included in an offsets report

Further to requirements under the Act or subordinate legislation, section 28 sets out specific additional information that must be included in each offsets report for a commercial buildings project.

In the first reporting period, the offsets report for a commercial buildings project must include a description of the energy efficiency activities undertaken during the reporting period and an address for each building that is included in the project abatement calculations for the reporting period.

In the second or subsequent reporting periods, the offsets report for a commercial buildings project must include:

- an address for each building that is included in the project abatement calculations for the reporting period, but was not included in the project abatement calculations in a previous reporting period; and
- an address for each building that is not included in the project abatement calculations for the reporting period, but was included in the project abatement calculations in a previous reporting period.

Addresses will assist the Regulator to establish whether the project is funded under another government program, in line with the additionality requirements in subsection 27(4A) of the Act.

These offsets report requirements are in addition to the general offsets report requirements specified in Division 6.1 of the Regulations, which are intended to be streamlined and transferred to legislative rules.

Division 2 Record-keeping requirements

29 Operation of this Division

The effect of paragraph 106(3)(c) of the Act is that a methodology determination may set out record-keeping requirements for an eligible offsets project.

30 Record-keeping requirements

Section 30 lists the records that must be kept for a commercial buildings project, in addition to record-keeping requirements that will apply to all projects as specified in the Act and legislative rules.

Records that must be kept specifically for a commercial buildings project include an address for each building in the project and a record of the version of the NABERS energy reverse calculator used for the abatement calculations for each reporting period.

In addition to the record-keeping requirements specified in the draft Determination, the Act and legislative rules will specify record-keeping requirements that apply to all projects. The Regulations currently include several record-keeping requirements and the intention is to revise these requirements and transfer them from Regulations to legislative rules over time. These requirements are expected to include:

- correspondence between the proponent and the Regulator in relation to an eligible offsets project;

- offset reports and CFI audit reports (if any);
- evidence that the project is, and continues to be, of a kind to which the determination applies, including details of the emissions reduction or sequestration activities undertaken for the project;
- evidence that in implementing and operating a project, the requirements for maintaining a project's declaration continue to be satisfied;
- evidence that the carbon dioxide equivalent net abatement amount has been ascertained using the method specified in, or ascertained in accordance with, the determination;
- records of all monitoring data required to be collected;
- evidence that the specified requirements to monitor the project have been met;
- where applicable, evidence that operation, monitoring and calibration of equipment for the project is in accordance with manufacturers' specifications and calibration instructions;
- information about significant variations in the scope of the project; and
- information about any event that is reasonably likely to significantly increase or decrease abatement.

All records required above must be kept in a form that is easily and quickly accessible for inspection and audit.

Division 3 Monitoring requirements

31 Operation of this Division

Division 3 provides a summary of parameters that require monitoring, including specifications for the manner and frequency of monitoring. Section 32 specifies requirements to monitor a commercial buildings project that is an eligible offsets project under paragraph 106(3)(d) of the Act.

32 Requirement to monitor electricity generated onsite at a building

Section 32 relates to each building in the project at which electricity is generated onsite, where that electricity meets the relevant definition in section 5.

For each building in the project in each measurement period, electricity that is generated onsite (noting '*electricity generated onsite*' has a specific technical definition in the Determination that is narrower than the general interpretation) must be monitored in kilowatt hours (annually or more frequently) in one of two ways:

- using a meter: if using a meter to monitor onsite electricity generation, the meter must be used in accordance with the relevant electricity metering requirements of the National Measurement Institute (see *NMI M 6 Electricity Meters*); or
- using an inverter: if using an inverter to monitor onsite electricity generation, the inverter must meet the requirements of Australian Standard AS 4777 or be on the list of approved inverters that is maintained by the Clean Energy Council

(at www.solaraccreditation.com.au) and be capable of taking the required measurements.

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Part 6 Dividing a commercial buildings project

33 Operation of this Part

Part 6 sets out requirements for dividing a commercial buildings project that is an eligible offsets project.

34 Requirements for division of project

Different buildings may receive their NABERS energy ratings at different times in the year, which has implications for the way in which abatement from multiple buildings can be combined in a reporting schedule for the project. Accordingly, the proponent may align reporting periods (that is, conduct NABERS energy ratings of different buildings in the project so that measurement periods for different buildings cover the same rating periods) or the proponent may make use of the provisions in section 77A of the Act, which allows the project to be split into parts for reporting purposes.

Section 34 specifies that a commercial buildings project can only be divided under section 77A of the Act so that each part is a whole building in the project, or a group of buildings in the project. Note that the draft Determination defines a 'building' as a single building that has a NABERS energy rating, or a group of buildings covered by a campus NABERS energy rating, or part of a building covered by a tenancy NABERS energy rating.

Each building in the project needs to be covered by a NABERS energy rating in order for abatement to be calculated. For example, if an individual office building is covered by a whole building NABERS energy rating for the purposes of a commercial building project, the proponent cannot report floors separately and treat each floor as a building in the project.