



Australian Government

Clean Energy Regulator

EMISSIONS  
REDUCTION  
FUND

# Participating in the Emissions Reduction Fund

A guide to the native forest from  
managed regrowth method

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### **IMPORTANT INFORMATION ABOUT THIS GUIDE**

The Clean Energy Regulator is updating the information in this guide to align it with the Emissions Reduction Fund.

While the information in this guide about the Native Forest from Managed Regrowth method is current, and may be used to help you read and understand the method and its explanatory statement, general information about how to participate in the Emissions Reduction Fund requires updating.

## **The Emissions Reduction Fund**

The Emissions Reduction Fund is a voluntary scheme that aims to reduce Australia's greenhouse gas emissions by providing incentives for a range of organisations and individuals to adopt new practices and technologies to reduce their emissions.

Emissions Reduction Fund projects must be conducted according to an approved method. A number of activities are eligible under the scheme and individuals and organisations taking part may be able to earn Australian carbon credit units (ACCUs). One ACCU is earned for each tonne of carbon dioxide equivalent (tCO<sub>2</sub>-e) stored or avoided by a project. ACCUs may be sold to generate additional income, either to the Government through a Carbon Abatement Contract or on the secondary market.

### **Why participate?**

As well as contributing to Australia's efforts to reduce the amount of greenhouse gas entering the atmosphere and the opportunity to earn ACCUs, running an Emissions Reduction Fund project may offer a range of other benefits for scheme participants. Examples include increases in biodiversity, better air quality, reduced energy consumption or income from electricity generation exported into the grid.

### **Using this guide**

This guide provides an introduction to using the *Carbon Credits (Carbon Farming Initiative) (Native Forest from Managed Regrowth) Methodology Determination 2013* (the method). Methods set out the rules for conducting activities under the Emissions Reduction Fund to earn ACCUs.

The guide is complementary to the [Carbon Credits \(Carbon Farming Initiative\) Act 2011<sup>1</sup>](#) (the Act), the associated legislative rules, approved method and explanatory statement, but does not replace them. It has been prepared by the Clean Energy Regulator, an independent Australian statutory authority responsible for administering legislation to reduce carbon emissions and increase the use of clean energy.

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<sup>1</sup> <https://www.comlaw.gov.au/Series/C2011A00101>

# Overview of a Native Forest from Managed Regrowth project

A Native Forest from Managed Regrowth project allows native vegetation to grow and become forest by stopping activities that suppress or destroy regeneration of native vegetation. These activities must be replaced with new management practices that allow native trees to regenerate and become forest. In doing so, the project helps to reduce the amount of greenhouse gas entering the atmosphere because carbon is stored, or sequestered, in the trees as they grow. The carbon stored is called carbon stock, while the term ‘abatement’ refers to the overall reduction in greenhouse gases as a result of a project. You can earn ACCUs for the amount of emissions you store, or sequester, by running a Native Forest from Managed Regrowth project.

Native Forest from Managed Regrowth projects use a modelling tool called the Full Carbon Accounting Model, or FullCAM, to estimate changes in the amount of carbon stock as a result of the project.

As a sequestration activity, that is, an activity that stores carbon in vegetation or soil, a Native Forest from Managed Regrowth project is subject to a permanence obligation. This means the project must be maintained ‘permanently’. The Emissions Reduction Fund will allow sequestration projects to choose a permanence period of 25 or 100 years. If a fire or other disturbance occurs in the area during the project, causing a decline in the amount of carbon stock, regrowth must be managed to allow the carbon stock to return to previously reported values. Alternatively, ACCUs equivalent to the loss of carbon caused by the disturbance can be relinquished. More information is available on the Clean Energy Regulator website.

To conduct a Native Forest from Managed Regrowth project and earn ACCUs make sure you read and understand the method and other legislative requirements. To do this you will need to:

- Download the [Carbon Credits \(Carbon Farming Initiative\) \(Native Forest from Managed Regrowth\) Methodology Determination 2013](#)<sup>2</sup> and [Explanatory Statement](#)<sup>3</sup>.
- Download and understand how the [Carbon Credits \(Carbon Farming Initiative\) Act 2011 \(the CFI Act\)](#)<sup>4</sup>, the [Carbon credits \(Carbon Farming Initiative\) Regulations 2011](#)<sup>5</sup> and the [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#)<sup>6</sup> apply to a project.
- Download and use the [Carbon Farming Initiative Mapping Guidelines](#)<sup>7</sup> and [Mapping Tool](#)<sup>8</sup>.
- Download and use the [Full Carbon Accounting Model \(FullCAM\) and guidelines](#)<sup>9</sup>

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<sup>2</sup> <https://www.comlaw.gov.au/Details/F2013L02036>

<sup>3</sup> <https://www.comlaw.gov.au/Details/F2013L02036/Explanatory%20Statement/Text>

<sup>4</sup> <https://www.comlaw.gov.au/Series/C2011A00101>

<sup>5</sup> <https://www.comlaw.gov.au/Series/F2011L02583>

<sup>6</sup> <https://www.comlaw.gov.au/Details/F2015L00156>

<sup>7</sup> <http://www.environment.gov.au/climate-change/emissions-reduction-fund/cfi/publications/cfi-mapping-guidelines-2015>

<sup>8</sup> <http://www.environment.gov.au/climate-change/emissions-reduction-fund/cfi/reforestation-tools>

<sup>9</sup> <http://www.environment.gov.au/climate-change/greenhouse-gas-measurement/land-sector>

- Ensure you have the legal right to conduct your project as well as the carbon sequestration right or permission from the person or entity holding the carbon sequestration right to run a project on their land, and the consent of anyone with a legal interest in the land (eligible interest holders).
- Apply to register as a scheme participant, to open an account in the Australian National Registry of Emissions Units (ANREU) and to conduct a Native Forest from Managed Regrowth project.
- Set up your project according to the instructions in Parts 2 and 3 of the method. Set up record keeping and monitoring systems for your project as required by Parts 5 of the method.
- Estimate the average annual abatement of your project, obtain an audit schedule for your project from the Clean Energy Regulator and engage a Category 2 Greenhouse and Energy Auditor early on in your project. Submit audits of your project according to your audit schedule.
- Determine the amount of carbon your project stores using the calculations in Part 4 of the method. Convert the amount of carbon captured into carbon dioxide equivalents (CO<sub>2</sub>-e).
- Submit your project report and application for ACCUs to the Clean Energy Regulator for assessment.

### What's tCO<sub>2</sub>-e?

CO<sub>2</sub>-e is a measure of the warming effect of different greenhouse gases that allows them to be compared to the equivalent amount of carbon dioxide. It refers to the amount of carbon dioxide that would give the same warming effect as each greenhouse gas that is emitted or stored by an activity.

## What does a Native Forest from Managed Regrowth project look like?

A project must be located in Australia and only where there are FullCAM data. This currently covers areas of land within latitude of –9 to –44 degrees and longitude of 112 to 154 degrees, and excluding Australia's external territories.

There must be evidence of a decision to conduct a project; that is, to change land management practices that maintain pasture by suppressing or removing native vegetation regrowth, to a management regime that enables native tree regeneration.

Regeneration must arise from existing natural seed beds, rootstocks or lignotubers in the project area. Direct seeding or planting is not permitted. There must also be evidence to show the project activities were implemented on or after 1 July 2007.

The project area must also include land that has been cleared at least once for pastoral use, and there must have been forest cover on that land before it was cleared. At the time of the decision to change land management, the land must have had native vegetation and the potential to achieve forest cover, but not yet have achieved forest cover.

If there is forest cover in any part of the project area on the date the project started, it is taken to have occurred independently of a decision to change land management and may not be counted as part of a project.

Commercial harvesting is not permitted, however up to 10 per cent of fallen timber may be removed from the project area each year for personal use. Grazing is permitted, but evidence may be required to show that having livestock in the area is not preventing regeneration of native forest (See Division 3.3 of the method for more about restricted activities).

Details on what is required for a Native Forest from Managed Regrowth project to be considered eligible by the Clean Energy Regulator, including evidence showing how the project area meets those requirements, are in Part 2 of the method and explanatory statement.

Forest cover is defined as an area of at least 0.2 hectares with trees measuring 2 metres in height and providing crown cover over at least 20 per cent of the land.

## Setting up and running a Native Forest from Managed Regrowth project

How a Native Forest from Managed Regrowth project is set up and run is critical for calculating how much carbon is stored as a result of a project, which in turn determines the amount of abatement that has occurred and how many ACCUs may be issued for a project. Parts 3 and 4 of the method and explanatory statement describe in detail how to set up a project, how to calculate changes in carbon stock as well as the net abatement that has occurred.

### Establish the project area

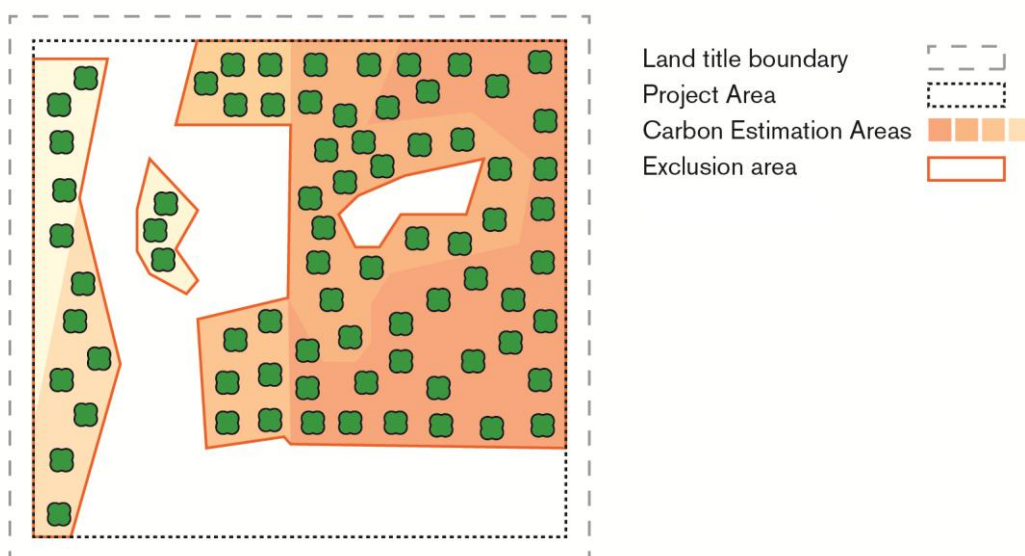
Identify the area in which your project will occur using the CFI Mapping Tool and CFI Mapping Guidelines. Then divide or stratify the project area into a combination of carbon estimation areas (CEAs) and exclusion zones by following the CFI Mapping Guidelines and the instructions in Division 3.2 of the method. CEAs are the core areas of your project where carbon will be stored and for which ACCUs may be issued. CEAs must be identified based on consistent site characteristics including vegetation type and maturity.

Exclusion zones are those parts of your project area that will not store carbon and where project activities will not be conducted. Examples of exclusion zones are a road, building, dam or areas that have forest cover at the start of the project (see Figure 1).

The boundary of each CEA and exclusion zone must be defined according to the CFI Mapping guidelines. When defining CEA boundaries you will also need to use at least one of the following: field surveys; aerial photographs; date-stamped, geo-referenced remotely-sensed imagery, including derived vegetation cover data; or soil, vegetation and landform maps.

You may need to re-stratify CEAs and exclusion zones if the area is disturbed for example by fire, or if the management of the regrowth is no longer uniform. This will need to be done before submitting your next offsets report.

**Figure 1: Example of a project area, carbon estimation areas and exclusion areas for a Native Forest from Managed Regrowth project.**



## Calculate project baseline

The project baseline represents what would happen if your project did not occur. It provides a point against which any changes in the amount of carbon stored by a project in a reporting period is measured.

For Native Forest from Managed Regrowth projects, the baseline may be either zero or non-zero (see Subdivisions 4.3.1, 4.3.2 and 4.3.3 in the method).

A baseline is zero if regrowth in CEAs has been suppressed to the point that the carbon mass of trees is considered immaterial and regrowth has not achieved forest cover for 10 years before the project started.

A non-zero baseline is applied if the carbon mass of trees has reached a level that is considered to be material from time to time during the 10 years before the project started. The carbon mass of trees is material if it is at least 5 per cent of the total in the 10 years before a project starts compared to the carbon mass 100 years after the project starts. Whether the carbon mass of trees is material or immaterial is identified using FullCAM and is called the baseline materiality test.

For projects with a non-zero-baseline, the long-term average of carbon stock for the project area is used as the project baseline and is determined using FullCAM (See Subdivisions 4.3.3 and 4.3.4 in

the method). There are three different scenarios that can be used to calculate a non-zero- baseline, namely the default baseline management event scenario, the historic baseline management event scenario and the hybrid baseline event management scenario. The scenario you use will depend on the type of evidence you have available with regard to clearing practices.

The non-zero-baseline must be recalculated for each reporting period.

### **Material vs immaterial**

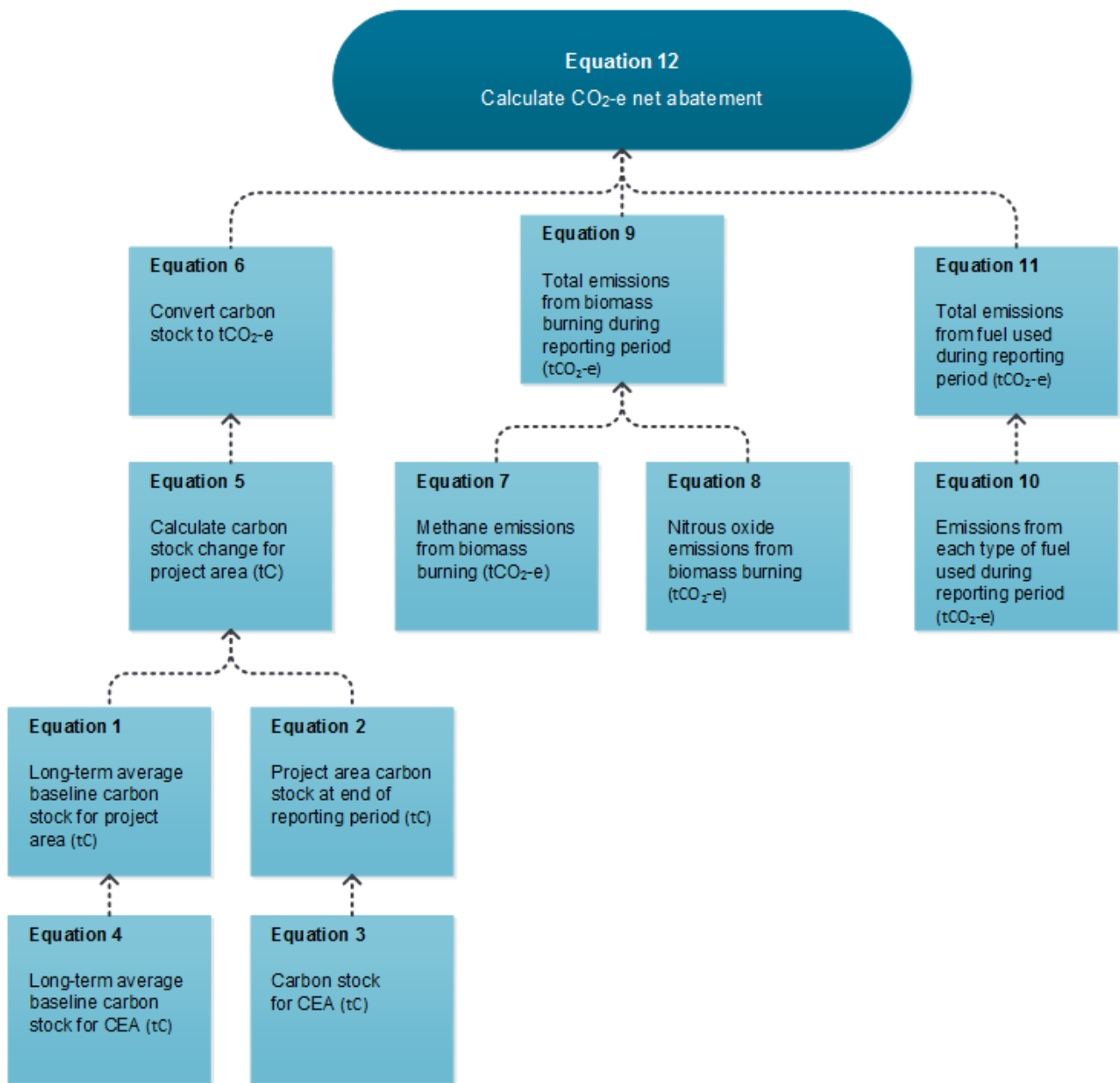
In this context, the term immaterial refers to regrowth that is considered so low, the amount of carbon stock that might be in a given area is irrelevant. Regrowth that is considered to be material on the other hand, has carbon stock that can be measured and is therefore relevant to project calculations.

### **Modelling with FullCAM**

FullCAM is a calculation engine that estimates changes in carbon stock in forests and agricultural land. Inputs to and outputs from FullCAM are essential to model your project and calculate net abatement. Using a modelling tool like FullCAM means you do not need to conduct measurement of trees in the field to gather information needed for the equations. Instead, outputs from FullCAM are used in many of the equations in Part 4 of the method (See Division 4.7). The sequence of equations is necessary to determine the tCO<sub>2</sub>-e net abatement as a result of a project.

Inputs to FullCAM include site locations and data and information about management and disturbance events to estimate carbon stocks in CEAs and to develop a project model that simulates some of the changes in carbon stocks for a project area (See Subdivisions 4.3.4 and 4.3.5 in the method).

A crediting period is the period of time over which a project is eligible to apply to claim ACCUs. Crediting periods vary depending on the type of project. For Native Forest from Managed Regrowth projects, the crediting period under the Emissions Reduction Fund is 25 years.



**Figure 2: All equations lead to working out the net abatement achieved by your project**



## All equations lead to working out the net abatement achieved by your project (see figure 2)

There is a sequence of equations to be followed for a Native Forest from Managed Regrowth project to calculate tCO<sub>2</sub>-e net abatement and in turn the number of ACCUs you may be eligible to receive in a reporting period (Equation 12). Equations 1 and 4 give the baseline for a project in tonnes of carbon (tC). The baseline is a point against which any changes in the amount of carbon stored by a project in a reporting period is measured. The carbon stored is referred to as carbon stock.

Equations 2 and 3 are used to calculate carbon stock in Carbon Estimation Areas (CEAs) and the project area at the end of a reporting period. Equation 5 calculates any change in carbon stock for the project area and Equation 6 converts that change in carbon stock to tCO<sub>2</sub>-e.

Emissions from the project need to be calculated and include emissions from biomass burning and from fuel used to run the project (Equations 7 – 11). The figures from Equations 6, 9 and 11 are used in Equation 12 to calculate tCO<sub>2</sub>-e net abatement, the value of which is used in an application to be issued with ACCUs.

Data needed to complete the sequence of equations is drawn from a number of sources. Some data will come from FullCAM while other data are readily available from the [National Greenhouse and Energy Reporting \(NGER\) Measurement Determination<sup>10</sup>](#) and [NGER Regulations<sup>11</sup>](#).

Information recorded by the person responsible for the project such as fuel use, is also an essential source of data.

## Calculating emissions from the project

Every project needs to take into account emissions that arise from running it (see Division 4.5 in the method). This is to ensure these emissions are included in calculations that determine changes in carbon stock and net tCO<sub>2</sub>-e abatement for a reporting and crediting period. Emissions from fires that occur and from fuel used in running the project are subtracted from the total amount of tCO<sub>2</sub>-e abatement to arrive at the net amount.

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<sup>10</sup> <https://www.comlaw.gov.au/Series/F2008L02309>

<sup>11</sup> <https://www.comlaw.gov.au/Details/F2008L02230>

## Calculating the net amount of abatement and number of ACCUs

This is the final step in the calculations to determine the number of ACCUs that may be issued for a reporting period. At this stage the total change in carbon stock for the project area is calculated and then converted to tonnes of carbon dioxide equivalents or tCO<sub>2</sub>-e (see Equations 5 and 6).

Once carbon stock has been converted to tCO<sub>2</sub>-e, calculate the total emissions from the project. To do this, use Equations 7 and 8 to work out emissions of methane and nitrous oxide from biomass burning. Then apply the results of equations 7 and 8 into Equation 9 to work out total emissions from biomass burning. Use Equation 10 to work out the volume of emissions from each fuel type used in running the project and apply the results to Equation 11 to arrive at the total volume of emissions from fuel. The results of Equations 6, 9 and 11 are applied to Equation 12, where total emissions from biomass burning and fuel are subtracted from the total tCO<sub>2</sub>-e to arrive at the net abatement amount in tCO<sub>2</sub>-e.

### About equation 12

Equation 12 calculates the net abatement for the reporting period. To do so, the equation takes the total change in carbon stock for the entire project (converted to tCO<sub>2</sub>-e) minus any project emissions. However, this number does not take into account what has been reported and credited for the project previously. It is therefore necessary for the equation to remove any previously credited abatement and any previously reported emissions from the project total.

For example, Sally has just completed the second reporting period for her project.

In her first reporting period, Sally calculated the total carbon stock change for her whole project, relative to the baseline, and converted it to tCO<sub>2</sub>-e using equation 6. At that stage, her project had stored 400 tonnes of CO<sub>2</sub>-e. Emissions from running her project (from fuel use and fire) were 50 tonnes CO<sub>2</sub>-e.

Therefore, at the end of the first reporting period, Sally's net abatement was 350 tonnes of CO<sub>2</sub>-e, for which she received ACCUs.

At the end of the second reporting period, Sally calculates the total change in carbon stock for her project as 550 tonnes CO<sub>2</sub>-e. This means that since the start of her project, Sally's project has stored a total of 550 tonnes CO<sub>2</sub>-e. To work out net abatement for the second period, Sally must subtract the following from this total:

*Project emissions from fuel and fire for the second reporting period: (50 tonnes CO<sub>2</sub>-e)*

*Abatement she has already received credits for: (350 tonnes CO<sub>2</sub>-e)*

*Tonnes of emissions from fuel and fire from the first reporting period: (50 tonnes CO<sub>2</sub>-e)*

$$550 - 50 - 350 - 50 = 100 \text{ tonnes CO}_2\text{-e}$$

*Sally's net abatement for the second crediting period is: 100 tonnes CO<sub>2</sub>-e.*

## Monitoring and record keeping

The Clean Energy Regulator recommends you draw up a plan for the monitoring, data collecting and record keeping required for a project report as specified in Division 4.7 and Part 5 of the method. The means of collecting and recording data will need to be in place from the start of the project. Should a project report and associated audit show that data collecting and record keeping has not been in place for the entire reporting period, ACCUs may not be issued for some or all of that reporting period.

When developing your plan, make sure you have the right controls and processes around your data. Are you collecting your data efficiently? Will you be able to maintain your data in the event of an emergency such as a fire?

## Project and audit reports

You need to report on your project to the Clean Energy Regulator and may report as frequently as every six months where allowed for in the legislative rules made under the *Carbon Farming Initiative Act (2011)*. Audits are required where indicated in your project's audit schedule, which the Clean Energy will provide following registration of your project.

For sequestration projects, the first report must be made between six months to five years from the date the project was declared eligible and then up to every five years thereafter.

Division 5.4 of the method lists the information that must be included in your project reports. Applications for ACCUs can be made at the same time as you submit your project and audit reports using the *Certificate of entitlement including offsets report form*. Full reporting, record keeping and monitoring requirements are set out in regulations and rules made under the Act. You should familiarise yourself with these requirements.

The Clean Energy Regulator will not issue Australian carbon credit units automatically on receipt of a project report.

Emissions Reduction Fund projects are able to generate credits throughout their crediting period. Crediting periods for each type of project are set out in Part 5 of *the Act*. The crediting period for a Native Forest from Managed Regrowth project is 25 years.

## The role of audit

Audits assess whether a project complies with the project registration, the relevant method and legislative requirements. Audit reports must be prepared by a registered Category 2 Greenhouse and Energy Auditor; a list of auditors is available on the Clean Energy Regulator website under [National Greenhouse and Energy Reporting](http://www.cleanenergyregulator.gov.au/NGER/Pages/default.aspx)<sup>12</sup>.

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<sup>12</sup> <http://www.cleanenergyregulator.gov.au/NGER/Pages/default.aspx>

The Clean Energy Regulator recommends you engage your auditor early when developing your project to ensure the project is auditable and to assist the auditor to plan activities throughout the reporting and post-reporting periods. The costs of any audit are your responsibility or the responsibility of your organisation. You must make available to the auditor all necessary documents and information, including data records, receipts and other supporting documentation, and calculation spread sheets.

### Making changes to a project

You must notify the Clean Energy Regulator of any changes to your or your project's circumstances or operations that may affect project ownership, the project's eligibility or the amount of abatement reported and the number of ACCUs claimed. A project owner must seek approval from the Clean Energy Regulator if they intend to make a significant change from the project as outlined in the application.

## Resources

- For more information on participating in the ERF - [www.cleanenergyregulator.gov.au](http://www.cleanenergyregulator.gov.au)
- For more information regarding method development – [www.environment.gov.au](http://www.environment.gov.au)
- [www.comlaw.gov.au](http://www.comlaw.gov.au) is the site where you can find all legislative instruments including the:
  - » [Carbon credits \(Carbon Farming Initiative\) Act 2011 \(current version\)](#)<sup>13</sup>
  - » [Carbon credits \(Carbon Farming Initiative\) Regulations 2011](#)<sup>14</sup>
  - » [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#)<sup>15</sup>
  - » [Carbon Credits \(Carbon Farming Initiative\) Act 2011 \(the CFI Act\)](#)<sup>16</sup>, the [Carbon credits \(Carbon Farming Initiative\) Regulations 2011](#)<sup>17</sup>
  - » [Methodology Determination 2015](#)<sup>18</sup>
  - » [Explanatory statement](#)<sup>19</sup>
- Enquiries on participating in the ERF - 1300 553 542; [enquiries@cleanenergyregulator.gov.au](mailto:enquiries@cleanenergyregulator.gov.au)

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<sup>13</sup> <https://www.comlaw.gov.au/Series/C2011A00101>

<sup>14</sup> <https://www.comlaw.gov.au/Series/F2011L02583>

<sup>15</sup> <https://www.comlaw.gov.au/Details/F2015L00156>

<sup>16</sup> <https://www.comlaw.gov.au/Series/C2011A00101>

<sup>17</sup> <https://www.comlaw.gov.au/Series/F2011L02583>

<sup>18</sup> <https://www.comlaw.gov.au/Details/F2013L02036>

<sup>19</sup> <https://www.comlaw.gov.au/Details/F2013L02036/Explanatory%20Statement/Text>



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