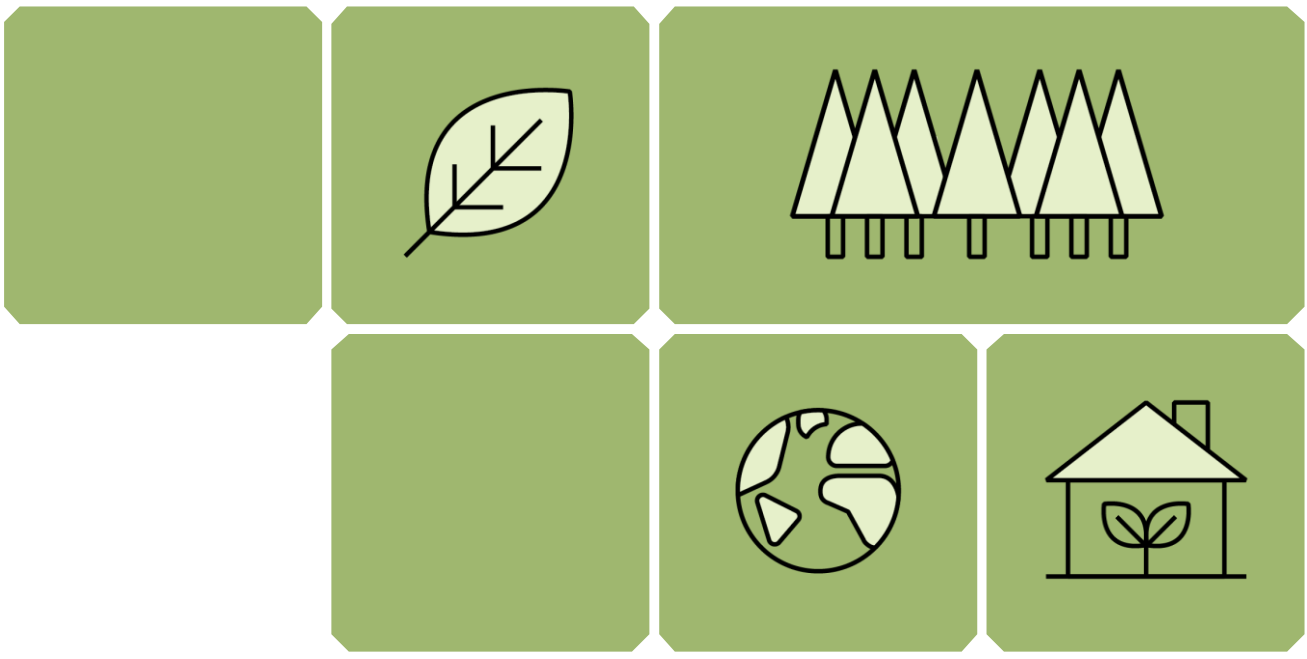
Australian Government
Clean Energy Regulator

Reducing the risk of fire and preserving sequestered carbon in ERF projects



CLEAN ENERGY REGULATOR

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Participating in the Emissions Reduction Fund (ERF) through activities such as storing carbon in regenerating native vegetation or establishing forests can lead to a range of environmental, economic, and social benefits. However, there are also a range of risks including fire, which ERF project proponents will need to actively manage to reduce the impacts on the carbon stored in projects.

Appropriate actions to manage the risk of fire on ERF vegetation projects will vary depending on a range of factors including vegetation type, rainfall, and location. Because actions to manage fire are location specific, the Clean Energy Regulator (CER) is unable to assess or evaluate the specific actions that land holders identify in their plans.

Purpose of this document

This document outlines the CER's expectations for how project proponents must manage the risk of fire in ERF vegetation projects[1]. Project proponents must provide information to the CER of their plans and activities to actively reduce the risk of reversal of carbon stores by fire and should keep evidence of these activities. Project proponents and project landholders should undertake reasonable action to prevent fire related reversals of carbon stored by the project. Proactive action will influence what action the CER takes if a significant reversal occurs[2].

This document provides proponents of vegetation projects registered under the ERF with information to understand:

- their obligations regarding managing projects to reduce the risk of disturbance from fire events
- that efforts by ERF proponents to meet these obligations will be taken into consideration when considering what action is to be taken by the CER following a loss of carbon through fire events
- what happens should a fire event affect carbon stores in their project.

Introduction

The CER encourages responsible action on ERF vegetation projects in relation to fire hazard reduction through annual direct messaging to proponents regarding responsibilities in the lead up to bushfire season. We also provide information regarding ERF projects annually to state emergency services to assist with planning and response. This guidance builds on this work to give proponents clear information on their obligations to actively reduce fire hazards.

Participation in the ERF comes with an **obligation to proactively protect carbon stores** for the permanence period[3]. This includes managing for the risk of fire. ERF proponents must replace carbon stores that have been credited and are lost in significant reversals – either by paying back the ACCUs that have been issued for the lost carbon (relinquishment) or restoring the vegetation on the project.

[1] This guidance was designed for project proponents participating in methods primarily focused on regeneration, protection or planting of vegetation.
[2] A significant reversal is defined in legislation and refers to a material loss of carbon in an ERF sequestration project. See page 5 of this guidance for more detail.
[3] Under the ERF, sequestration projects are required to store carbon in vegetation or soils for either 25 or 100 years. These so-called 'permanence' obligations run with the land. See www.cleanenergyregulator.gov.au/ERF/Choosing-a-project-type/Opportunities-for-the-land-sector/Permanence-obligations.

Obligations regarding management to avoid and reduce loss of credited sequestered carbon due to fire

There are four key components in the ERF legislation regarding protection of sequestered carbon:

1. Permanence obligation requirements including the requirement to provide a permanence plan to the CER at project registration, and in offset reports following years 8 and 24.
2. The requirement to notify the CER of significant reversal events.
3. Requirements to relinquish ACCUs to the CER and carbon maintenance obligations that run with the land.
4. Method specific requirements in relation to fire modelling, monitoring, management activity and record keeping.

1. Permanence obligations and requirements

When project proponents are issued ACCUs for stored carbon, it is on the basis that the carbon will stay out of the atmosphere (or is replaced) for the entire nominated permanence period (25 or 100 years). Fire and other disturbances can release carbon stored in vegetation back into the atmosphere, thereby reversing the sequestration of carbon for which project proponents have been issued credits.

All vegetation-based sequestration project proponents are required to provide the CER with a permanence plan which outlines actions they have taken and will take (or ensure landholders take) to protect the carbon sequestered and credited by the project for the permanence period. The permanence plan is required:

- at project registration (for projects registered after June 2018)[4]
- as part of the first offsets report following years 8 and 24[5] of the crediting period (for all projects)
- if the vegetation in the project has reached maximum sequestration and the proponent is applying for an exemption from the obligation to provide further offsets reports[6].

Permanence plan - requirements for fire management

The permanence plan is an explanation of the steps that have and will be undertaken to ensure carbon remains sequestered in the project area for the permanence period. The plan must include any management actions that have or will be undertaken to prevent the risk of fire starting and spreading on project areas, including the frequency and scale of these actions.

While the proponent remains responsible for protecting sequestered carbon, proponents who are not landholders should ensure this plan is developed and agreed with landholders and should provide a signed copy to the CER outlining the agreement. In some instances, a land-holder may be required to act under a local fire management plan, for example to maintain an access road. In such cases, these management actions should be included in the permanence plan for fire management for the relevant individual ERF project. A good permanence plan might also consider what actions would be taken in the case of a reversal

[4] Paragraph 13(1)(p) Carbon Credits (Carbon Farming Initiative) Rule 2015
[5] Subsection 70(4A) Carbon Credits (Carbon Farming Initiative) Rule 2015. These offsets reports also require an explanation of plan implementation.
[6] Subsection 80A(2) Carbon Credits (Carbon Farming Initiative) Rule 2015. Soil or savanna sequestration must complete their permanence periods before they can be exempted from the offset report obligation.

due to fire, to ensure vegetation is restored as quickly as possible, and in accordance with method requirements.

The provision of this information to the CER gives us assurance that proponents understand their obligations to actively protect the carbon that they have been credited for, for the entire permanence period.

Examples of reasonable management actions to reduce fire risk

The examples below are provided for illustrative purposes and are not an exhaustive list. Project proponents (and project landholders) need to seek their own advice on suitable fire management activities for their property.

- Preventing fire ignition.
  - » Ensuring power infrastructure and buffers around power infrastructure are properly maintained.
- Managing fuel loads to reduce intensity and spread of fires including:
  - » permitted hazard reduction burning (in accordance with state and territory fire legislation and local permit requirements)
  - » maintaining fire breaks.
- Maintaining fire trails.
- Your active engagement in local bushfire planning and management groups.
- Ensuring your permanence plan is consistent with and supports local fire plans where applicable.
- Quickly responding to any notices or requisitions from local fire authorities to reduce fire hazards or assist in local fire management.
- Compliance with all applicable state and territory legal obligations and recommended good practices for managing fire and the risk of fire.

Fire management actions will vary

The CER does not prescribe what type of management actions need to be undertaken to reduce the risk of fire and preserve the sequestered carbon on a project. Each property has unique circumstances. We strongly recommend that in developing a permanence plan, proponents (or project landholders) contact local fire authorities or other experts to get advice on protecting the project. Project proponents should then implement the permanence plan and keep records of their actions. Because actions to manage fire will, of necessity, be location specific, the CER is unable to assess or evaluate the specific actions that landholders identify in their plans.

Will reducing fire hazards on a project reduce carbon credits and breach permanence obligations?

In some cases, management actions to prevent the risk of reversal of carbon stores by fire could seem counter to the permanence obligations or proponents might be concerned that carbon credits will be reduced. For example, where prescribed burns in the off-fire season are used to reduce fuel loads in project areas.

This is not a valid reason to avoid undertaking reasonable and/or mandated fire prevention activity within project areas. In the example given, well planned, and conducted prescribed burning will have a far lower impact on credited carbon stores over the life of the project than an uncontrolled bushfire. The same is likely to be said for most fire risk reduction activity. In addition, any fire prevention activity required by state and territory legislation must be complied with and modelled appropriately.

State and territory fire laws

All states and territories have legislation on the management of properties in relation to bushfire. These laws include a general obligation that requires landholders (owners and occupiers) to take reasonable steps to inhibit the outbreak and spread of fire on the property but do generally not prescribe any specific actions that should be undertaken (with the exception of the *Northern Territory Bushfires Management Act 2016,* which contains specific requirements for land in fire protection zones and for the use of certain activities with a high fire ignition risk).

Even if no specific actions are required on your property under state, territory or local government legislation proponents must take reasonable action to reduce the risk of fire on ERF vegetation projects.

State and territory laws also set out delegations for local fire response planning and authorises investigation of complaints regarding fire hazards. This could result in the issuing of notices and in some cases, action to reduce hazards by fire authorities.

Project proponents must undertake all activities required by state and territory laws to manage the risk of fire and fire when it occurs and should also implement best practice recommendations of local fire authorities if they are available.

As already mentioned, state, territory and local fire authorities are a vital source of information on the most appropriate ways to protect your property from fire damage. ERF proponents (and/or project landholders) are encouraged to contact their local fire authorities for advice to inform a project's permanence plan and reduce the risk of reversal of carbon stocks by fire. Talking with local fire authorities about your project can also help with fire planning and response. Each year, the CER provides information on vegetation project locations to State Emergency Services to help with planning and response.

2. Requirements to notify the CER of a significant reversal event.

What is a significant reversal?

A **significant reversal**[7], is where stored carbon is released from at least 5 per cent of the size of the total project area for natural disturbances and the smaller of 5 per cent of the project size or 50 hectares for reversals resulting from actions of a person.

Where there has been a **significant reversal** you must notify the CER [8].

If a project area is affected by fire, human safety is our first concern and proponents should never put themselves, their employees or other persons at risk.

Once it is safe to do so, proponents will need to assess the areas and scale of damage by the fire.

There are two criteria that will determine the required actions: whether damage meets the definition of a significant reversal and whether ACCUs have already been issued for the lost carbon.

Has the fire caused a significant reversal in stored carbon?

If the fire damage does **not** meet the legislated definition of a significant reversal proponents must still report it through normal offsets reporting and follow the method to model the damage in FullCAM if applicable.[9]

If there is a **significant reversal**, in addition to following the requirements in the method to model the damage proponents must notify the CER in writing within 60 days of becoming aware of the bushfire (Section 81, *Carbon Credits (Carbon Farming Initiative) Act 2011*).

Have ACCUs been issued for the project Carbon Estimation Areas (CEAs) affected by the fire?

If no ACCUs have been issued, permanence requirements are not activated.

Where ACCUs have been issued, permanence obligations are in place and lost carbon stores that have been credited will need to be restored or ACCUs relinquished (provided to the CER) to offset the loss before any further ACCUs can be issued.

Was the significant reversal of carbon caused by a natural disturbance or action to reduce the risk of bushfire?

The relinquishment provisions of the Act[10], make allowances for significant disturbances related to **natural disturbances** (beyond the control of the proponent) and action to reduce the risk of bushfire.

[7] Section 81 and 82 of the Carbon Credits (Carbon Farming Initiative) Rule 2015
[8] Section 81 and 82 of the *Carbon Credits (Carbon Farming Initiative) Act 2011*
[9] Not all sequestration projects use FullCAM. Some regeneration projects use the RMT tool while others rely on direct measurement. The method will outline how loss of carbon due to fire should be measured or estimated, and how this will impact ACCU crediting.
[10] Section 90 of the *Carbon Credits (Carbon Farming Initiative) Act 2011*

Reversal from natural disturbance: the CER will assess whether the damage caused by the fire was due to a natural disturbance, in other words, whether the fire could have been reasonably prevented. In making this assessment the CER will refer to previously provided permanence plans (where applicable) and request further evidence of fire risk reduction activity. The CER may ask for information such as:

- Detail of the areas damaged by the fire including maps
- Details and evidence regarding management action to reduce the risk of fire-related damage that was undertaken prior to the event
- Whether any notifications had been issued and complied with under state, territory, or local government fire laws. We can also make a request to fire authorities for this information.

What is a Natural Disturbance?

Natural Disturbance is defined under the *Carbon Credits (Carbon Farming Initiative) Act 2011*:

natural disturbance, in relation to an eligible offsets project, means any of the following events, where the event **could not reasonably be prevented by the project proponent** for the project:
(a) flood;
(b) bushfire;
(c) drought;
(d) pest attack;
(e) disease;
(f) an event specified in the regulations or the legislative rules.

In the event of a significant disturbance, undertaking the steps outlined in a permanence plan and keeping evidence of these actions will help proponents demonstrate that reasonable action was taken to protect the sequestered carbon. Where a project proponent can clearly demonstrate that reasonable action had been taken in managing the project to reduce fire risk and that relevant fire laws and notifications had been complied with, the CER will likely determine the reversal is due to a natural disturbance. In this case, relinquishment will not be required but proponents will be expected to take action to restore the lost carbon and continue to meet permanence requirements.

Reversal from action to reduce the risk of bushfire: the same process would apply where a reversal was caused by reasonable action to reduce the risk of bushfire, for example, if fire authorities acted to reduce the risk of a bushfire, or permitted controlled burning became uncontrolled and resulted in a significant reversal. Evidence would be required to support this claim.

A plan to restore/replace lost carbon could include:

- Allowing carbon stores to regrow and replenish credited carbon levels, for example by managing grazing to prevent any post-fire regrowth from being eaten or by re-planting (where the method allows and there is no natural seedbank that trees will re-grow from).
- Restratifying to remove or isolate areas affected by the fire from the project. For example, if only part of a CEA is damaged, restratifying to remove the damaged area into a separate CEA will help meet method requirements for even growth of vegetation and minimises the area that will be affected by a growth pause.
- In some cases, proponents may wish to remove damaged areas from the project completely and voluntarily relinquish ACCUs so that the remaining areas of the project can continue to be credited.

How much credited carbon needs to be restored or replaced?

The amount of stored CO_2-e lost will either be calculated in modelling according to the method requirements for disturbances OR if the method does not include such provisions, it will be calculated by the CER using a reasonable method.

Once we know the amount of CO_2-e lost, this will be translated to the amount of ACCUs issued for which there is no longer carbon stored. Options in this case could be to:

- Remove the areas affected by the reversal from the project and voluntarily relinquish credits to equal the lost credited carbon. You can use ACCUs from any source.
- Keep the areas in the project and act to restore the lost credited carbon by regrowing the vegetation, noting no ACCUs can be issued until the total project carbon is restored to previous levels.
- A combination of both options.

3. Requirement to relinquish ACCUs and carbon maintenance obligations

Where there has been a significant reversal by fire and the CER forms the view that reasonable action has not been taken to reduce the risk of loss of credited carbon by fire, or that the fire was caused by an action of the project proponent or a person whose conduct was within the reasonable control of the project proponent (and is not reasonable action taken to reduce the risk of bushfire), a **relinquishment notice** may be issued. This is a requirement that ACCUs be returned to the CER within 90 days.

The CER may also consider requiring a relinquishment if it has reason to believe reasonable action will not be taken to restore lost carbon and/or there is a threat of further loss of credited carbon stores. This would be unlikely for a project that has a good permanence plan and fire management history.

If a relinquishment notice is not complied with an administrative penalty can be applied and a carbon maintenance obligation may be considered. A carbon maintenance obligation restricts activity on the affected land to protect carbon stores.

More information on permanence, relinquishment and carbon maintenance obligations can be found in the publication *The Emissions Reduction Fund and Permanence on the land*[11].

4. Method specific requirements

The various methods used to sequester carbon in vegetation under the ERF set out different requirements for fire disturbance modelling, management actions, monitoring and record keeping. Where the reversal is not a significant disturbance, the expectation is that proponents would use these provisions to reflect and account for loses due to fire.

Fire disturbance modelling

Different methods model fire disturbance (including disturbance through management activity such as prescribed burning) in different ways. A general rule for modelled vegetation methods is for the modelling to reflect the full set of land management activities and disturbance events that occur within CEAs. Each method has its own set of requirements, and these are generally set out in the following areas:

- Calculating the net abatement amount
- Offsets report requirements
- Project monitoring
- Record-keeping requirements
- FullCAM Guidelines (if applicable).

Management actions

Methods include some specified management actions to support the establishment, and maintenance of the carbon sequestration project activity. For many methods, there is no specific mention of fire risk reduction management activity.

> ***Even if no specific management actions are required by the method, proponents must take reasonable action to reduce the risk of fire on ERF projects.***

Monitoring

The project area should be monitored to:

- ensure compliance as an eligible offsets project under the selected method
- identify disturbance events for reporting purposes.

Monitoring is also an important aspect of land management, and with respect to fire risk reduction, monitoring activities could include fuel load and weed surveys.

[11] http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/The-Emissions-Reduction-Fund-and-permanence-on-the-land.aspx

Record keeping

Records must be kept by project proponents for a variety of different activity types under the different methods, including for land management actions. With respect to activities that reduce fire risk these could include:

- invoices for services provided
- dated photographic evidence of management activities undertaken
- log-book records for hours of machinery use such as for firebreak maintenance
- dated photographic evidence and notes for completion of monitoring such as fuel load surveys
- receipts for purchases to complete management activities such as herbicides or fuel reduction burning equipment.

Keeping evidence of good practice

Proponents **must** keep evidence to support the claims made regarding protecting permanence for seven years. This might include copies of prescribed burn permits, date stamped photos of fire hazard reduction activities or receipts from service providers.

Methods also have monitoring, reporting and record keeping requirements in relation to management activities, which may include fire management activity and disturbance events.

In the event of a natural disturbance causing a significant reversal, these records will help show that reasonable action to prevent reversal was taken.

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Helpful resources on management activities to reduce the risk of fire to your ERF projects and property.

Country Fire Authority Victoria[i]

NSW Rural Fire Service[ii]

- NSWRFS Farm Wise Guide[iii]
- Hotspots Fire Project[iv]

WA Department of Fire and Emergency Services[v]

QLD Rural Fire Service[vi]

SA Country fire service[vii]

Secure NT[viii]

ACT Emergency Services[ix]

Centre of excellence for prescribed burning[x]

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[i] https://www.cfa.vic.gov.au/plan-prepare/your-local-area
[ii] https://www.rfs.nsw.gov.au/plan-and-prepare/know-your-risk/Bush-fire-hazards-and-your-property
[iii] https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0019/9451/Guide-to-Farm-FireWise.pdf
[iv] http://hotspotsfireproject.org.au/
[v] https://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/pages/controlledburning.aspx
[vi] https://www.ruralfire.qld.gov.au/BushFire_Safety/Pages/default.aspx
[vii] https://www.cfs.sa.gov.au/site/prepare_for_a_fire.jsp
[viii] https://securent.nt.gov.au/prepare-for-an-emergency/bushfires
[ix] https://www.esa.act.gov.au/cbr-be-emergency-ready/bushfires
[x] https://knowledge.aidr.org.au/collections/centre-of-excellence-for-prescribed-burning/

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