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EMISSIONS
REDUCTION
ASSURANCE
COMMITTEE

Emissions Reduction Fund

Review of the Carbon Credits (Carbon Farming Initiative—Beef Cattle Herd Management) Methodology Determination 2015

Discussion Paper

EMISSIONS REDUCTION ASSURANCE COMMITTEE

September 2022

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1. INTRODUCTION

The Emissions Reductions Assurance Committee (the Committee) is reviewing the *Carbon Credits (Carbon Farming Initiative—Beef Cattle Herd Management) Methodology Determination 2015* (the beef herd method) against the Offsets Integrity Standards set out in the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act) (Table 1). Section 1.2 contains links to the method and other relevant documents. This discussion paper provides an overview of the beef herd method. The Committee invites submissions from the public on the method's compliance with the Offsets Integrity Standards and any other issues with the method.

The Committee will consider submissions received by 21 October 2022. Following this, the Committee will prepare its advice to the Minister for Climate Change and Energy based on the outcomes of its review.

1.1 Scope of review

Offsets Integrity Standards

Under the Act, all Emissions Reduction Fund (ERF) methods must comply with a set of criteria known as the Offsets Integrity Standards. These standards ensure that carbon credits issued under methods represent real emissions reductions that may be counted towards meeting Australia's international emissions reduction obligations. These standards are summarised in Table 1.

Table 1 - Offsets Integrity Standards set out in the Act

Standard	Paragraph in the Act	Text
Additionality	133(1)(a)	A method should result in carbon abatement that is unlikely to occur in the ordinary course of events (disregarding the effect of the Act).
Measurable and verifiable	133(1)(b)	Removals of greenhouse gases from the atmosphere, emissions reductions and emissions covered by the method should be measurable and capable of being verified.
Eligible carbon abatement	133(1)(c)	A method should provide abatement that is able to be used to meet Australia's international mitigation obligations.
Evidence-based	133(1)(d)	A method should be supported by clear and convincing evidence.
Project emissions	133(1)(e)	Material greenhouse gas emissions emitted as a direct result of the project should be deducted.
Conservative	133(1)(g)	Where a method involves an estimate, projection or assumption, it should be conservative.
Legislative rules	133(1)(h)	A method should satisfy any other standard set out in applicable legislative rules. Currently, there are no other standards.

The Committee's Information Paper on the Offsets Integrity Standards provides information on how the Committee interprets the standards. It is available [here](#).

Additional considerations for the review

The Minister must consider any potential adverse impacts when creating, varying, or revoking ERF methods. Therefore, in addition to a method's compliance with the Offsets Integrity Standards, the Committee will also consider any adverse social, environmental, and economic outcomes it is aware of that may result from beef herd projects. The Committee is also interested in whether any changes should be made to the method to improve the implementation and operation of beef herd projects. Additional considerations that the Committee is seeking feedback on are set out in Section 3.2.

1.2 Sources of information

Beef herd method

- [Method](#)
- [Explanatory Statement \(2015\)](#)
- [Explanatory Statement \(2017 variation\)](#)
- [Clean Energy Regulator - beef herd method](#)
- [Department of Industry, Science, Energy and Resources - beef herd method](#)

Emissions Reduction Fund legislative framework

- [Carbon Credits \(Carbon Farming Initiative\) Act 2011](#)
- [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#)

Herd Management Calculator

- [Estimating the abatement – beef cattle herd management method](#)

The Committee's advice to the Minister on making of the method

- [The Committee's advice to the Minister on making the method in 2015](#)
- [The Committee's advice to the Minister on making the method in 2017](#)

2. OVERVIEW OF THE METHOD

2.1 Development of the method

The beef herd method credits emissions reductions from improving the production efficiency of pasture-fed beef cattle herds¹.

In 2017, a variation to the method was made to simplify operational requirements and increase flexibility for project proponents. The variation largely addressed issues surrounding the transfer of cattle between herds and allowed separate mustering and weighing times for each herd (with the crediting period commencing after the mustering and weighing times for each herd to provide 7 years of crediting). The 2015 version of the method required mustering and weighing at the start of the crediting period which could not accommodate different herds with different mustering and weighing times.

As of June 2022, 10 projects were registered under the beef herd method. A total of 593,000 ACCUs have been issued to 3 beef herd projects.

2.2 Objectives, eligibility requirements and activities

The beef herd method allows registered projects to generate abatement and earn Australian carbon credit units (ACCUs) by adopting one or more agricultural practices that reduce the emissions intensity of beef cattle production, which means reducing methane and nitrous oxide emissions per kilogram of liveweight produced. To be an eligible project activity, an agricultural practice must be one that can reasonably be expected to reduce emissions from the herd through one of the following measures:

- increasing the ratio of weight to age of the herd,
- reducing the average age of the herd,
- reducing the proportion of unproductive animals in the herd, or
- changing the ratio of livestock classes within the herd (e.g., the mix of bulls, cows, and steers of different ages) to increase total annual liveweight gain of the herd.

The method is not specific about which agricultural practices must be undertaken to achieve these goals, provided the practice was not carried out during the 7-years prior to project registration. Examples of project activities include increased planting of improved pastures, increasing the density of watering points, installation of fences to enable improved management of joining time², and the use of estimated breeding values to select bulls and improving genetics.

Proponents must satisfy several criteria to be eligible to run a beef herd project. These criteria are designed to ensure that project activities can be reported on and that emissions reductions resulting from these activities can be accurately quantified.

¹ In the context of the beef herd method, the “herd” of a business operation at a particular time, is defined as all cattle that are on the livestock inventory of the business operation at that time. Note that an animal in utero is not considered to be a separate member of the herd.

² Joining time refers to the period in which cows and heifers are exposed to a bull.

Firstly, in addition to the general ERF eligibility requirements set out in the CFI Act such as legal right, proponents must ensure that their herds are grazed in Australia, that herd diet is predominantly from grazing or forage, and that herds are managed in a way that is consistent with ANZIC class³ 0142⁴ (beef cattle farming), ANZIC class 0144⁵ (sheep-beef cattle farming), or ANZIC class 0145⁶ (grain-sheep or grain-beef cattle farming) to be eligible under the beef herd method.

Secondly, project herds must be managed and pastured separately from non-project herds except for when an ‘arm’s length agistment’ agreement applies. This agreement is a written contract under which one party uses the excess grazing capacity of another party. Similarly, the livestock inventory for each project herd must be maintained separately and have continuity over time.

Lastly, any movement of cattle from herds of linked business operations (linked herds)⁷ must be for a genuine business purpose, at a fair value, and involve the physical movement of cattle. Transfers of cattle from other herds must be from a purchase or sale at fair value.

A project proponent with several herds may include all of them in the project, even if some are not expected to generate significant emissions reductions, to allow joint pasturing and to simplify transfers of cattle from one herd to another.

Low-emissions livestock feed technologies

While not designed with these activities in mind, the beef herd method does not prevent the use of low-emissions livestock feed technologies such as Asparagopsis or 3-nitrooxypropanol (3-NOP). In theory, the method could credit abatement from productivity gains arising from this type of feed supplementation in reduced emissions intensity from a herd compared to the baseline. This would likely be a high-cost option and it is not clear that currently available feed supplements are feasible for use on broad-acre pasture. The method does not allow for eligible activities to be implemented in feed lots.

Furthermore, the method cannot account for changes in methane production per unit of feed (as opposed to unattributed increases in liveweight gain that could arise from the supplement) because the necessary calculations to do so are not included in the method. In practice, this means that calculating emissions reductions that directly arise from feed supplements that reduce emissions produced during enteric fermentation is beyond the scope of this method.

ERAC further notes that issues such as correct dosage for these feed supplements and any possible adverse effects on livestock have not been tested through the ERF method development process. Project proponents are advised to seek expert advice on these matters before using these feed supplements under the method.

To account directly for the abatement achieved by low-emissions livestock feed technologies in the beef herd method would require either a variation to the beef herd method, or the development of a new method. These are beyond the scope of this periodic review. However, the CER will consider crediting

³<https://client-portal.wgea.gov.au/s/article/What-is-our-ANZSIC-industry-code>

⁴<https://www.abs.gov.au/ausstats/abs@.nsf/latestproducts/6F8C2A4F170BC6B8CA257B9500133E25?opendocument>

⁵<https://www.abs.gov.au/ausstats/abs@.nsf/latestproducts/48AEA999E1726AB0CA257B9500133E32?opendocument>

⁶<https://www.abs.gov.au/ausstats/abs@.nsf/latestproducts/C71806CB7C84D649CA257B9500133E4A?opendocument>

⁷For the definitions of linked business operations and linked entities, please refer to Section 5 of the [beef herd method](#).

reductions in livestock emissions through the Integrated Farm Management⁸ method following the conclusion of this review.

Stakeholders are also encouraged to engage with the Government's Methane Emissions Reduction in Livestock (MERiL) program⁹, which has provided grants to projects that trial low-emissions livestock feed technologies. In addition to research grants, the MERiL program is supporting the development of a Livestock Emissions Framework for Feed Technologies to estimate emissions reductions from the use of low emissions feed technologies. The framework will underpin potential updates to Australia's National Greenhouse Gas Inventory, a potential new livestock method under the Emissions Reduction Fund (subject to method prioritisation¹⁰), and carbon neutral certifications. To support the development of the framework, the Government has provided \$1 million in funding to Meat and Livestock Australia's Integrated Management Systems (IMS) work area to integrate, analyse and evaluate the outputs and data from the MERiL program. The IMS work, which sits under MLA's Carbon Neutral 2030 program, aims to identify new and emerging mitigation and sequestration options, to evaluate emission reduction technologies in the context of Australian farming systems.

2.3 Calculating abatement

Project proponents are required to determine mean liveweight and liveweight gain for each project herd through direct measurement of either the entire herd, a sample herd, or a random sample of all animals and all classes in the herd (a random sample is one where every animal has an equal chance of being selected for sampling). This data is entered into the Beef Cattle Herd Management Calculator to estimate emissions reductions for a defined period. An updated version of the calculator is used for projects registered under the varied version of the method. Proponents must calculate abatement every year for every project herd.

2.4 Monitoring, record-keeping and reporting

Under the beef herd method, project proponents are required to follow several record-keeping requirements. For each project herd, a separate, self-contained record must be kept for auditing, noting that ERF projects are required to have a minimum of three audits¹¹. This record must prove herd continuity and contain information about the movement of cattle between linked herds throughout the crediting period.

Under certain circumstances, records must also be kept for purchased feed. This applies if the management activity was a dietary change for the herd or for a livestock class. If the feed was purchased from a commercial feed supplier, the project proponent must keep a commodity vendor declaration form, fodder declaration form, or equivalent specifying the raw protein and dry matter digestibility of the purchased feed. If the feed was purchased from a person who is not a commercial feed supplier, a purchase invoice describing the purchased feed must be kept.

⁸ <https://www.cleanenergyregulator.gov.au/ERF/method-development/method-development-priorities>

⁹ <https://www.industry.gov.au/news/meril-program-awards-4-million-to-support-low-emissions-livestock-feed-rd>

¹⁰ For more information about method prioritisation under the Emissions Reduction Fund refer to 'Nominating method priorities' at <https://www.industry.gov.au/regulations-and-standards/methods-for-the-emissions-reduction-fund>

¹¹ <https://www.cleanenergyregulator.gov.au/ERF/Want-to-participate-in-the-Emissions-Reduction-Fund/Step-3-Reporting-and-auditing/Audit-Requirements>



3. REVIEW OF THE METHOD

3.1 Assessment against Offsets Integrity Standards

This section outlines elements of the method designed to meet the Offsets Integrity Standards (Table 1), and issues stakeholders may like to consider in their submissions to the review of the method.

Additionality: A method should result in carbon abatement that is unlikely to occur in the ordinary course of events (disregarding the effect of the Act)

The beef herd method is based on the premise that the emissions-intensity of Australia's beef herd is stable or gradually increasing. Australian Bureau of Statistics (ABS) and Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) survey data showed that the emissions intensity of Australia's beef herd increased by about 0.6% annually between 1994 and 2013¹². As such, nation-wide reductions in emissions-intensity were considered unlikely to occur in the ordinary course of events when the method was last varied in 2015.

The beef herd method has additional requirements to ensure that the agricultural practice implemented by the project was unlikely to occur in the ordinary course of events. The agricultural practice must be one that either:

- was not undertaken in relation to the herd during the emissions intensity reference period¹³; **or**
- is a variation of a practice that was undertaken in relation to the herd during the emissions intensity reference period; **and**
- does not consist of feeding non protein nitrogen to a herd; **and**
- does not consist only of grazing the herd on a different area of land.

The last two agricultural practices are specifically excluded on the basis that these are likely to occur in the ordinary course of events.

In the application to register a project, applicants need to demonstrate how their proposed project activity will result in reduced emissions intensity. At least one project activity must be conducted each year for every herd in a project.

Considerations for comment

The Committee is aware of new research¹⁴ that uses slaughter and live export statistics to calculate national herd productivity and performance statistics. The research suggests that the emissions-intensity of Australia's beef herd may be declining because of improvements in national herd productivity. This productivity improvement may be driving emissions-intensity improvements in the

¹² <https://www.legislation.gov.au/Details/F2015L01434/Explanatory%20Statement/Text>

¹³ The emissions intensity reference period is the historical period prior to the commencement of the project and thus project activities. Data from this period is used to estimate emissions intensity and to calculate baseline emissions. The emissions intensity reference period is calculated using either 2 (limited data herds) or 3 (full data herds) of the immediate past 7 years—where the liveweight gain for the herd for the year was greater than zero.

¹⁴ [Fordyce, G., Shephard, R., Moravek, T., McGowan, M. \(2021\) Australian cattle herd: a new perspective on structure, performance and production. Animal Production Science.](#)

ordinary course of events that are not accounted for in the method. However, it is possible that the emissions-intensity of individual beef herds varies significantly across geographic regions or using different estimation approaches and data sets. This review seeks new sources of data or research on changes in the emissions-intensity of beef herds across Australia.

Since the release of the method in 2015, and its amendment in 2017, the context under which beef herd projects are run has changed significantly. In particular, the price of beef has risen substantially, most notably over the past few years.¹⁵ This price increase could be driving, in the ordinary course of events, increased adoption of new agricultural practices that increase livestock productivity and therefore reduce the emissions intensity of beef cattle production. This review seeks evidence on the extent to which agricultural practices to improve the production efficiency of beef herds are being undertaken by the industry in the ordinary course of events. Are there any agricultural practices currently eligible under the method that should be excluded under the method on the basis that they are likely to occur in the ordinary course of events? Are there agricultural practices not yet business-as-usual that could be incentivized by the method?

Feedback is also sought on the impact of regulatory and other changes since 2015 that may influence the additionality of new projects under the method.

Measurable and verifiable: Estimates of abatement should be measurable and capable of being verified

A project earns one ACCU for every tonne of carbon dioxide equivalent abatement it achieves.

To calculate abatement, project proponents must use the Beef Cattle Herd Management Calculator. The Beef Cattle Herd Management Calculator includes all the calculations required to determine the net abatement amount in accordance with the method. The calculator uses data inputs entered by proponents to automatically calculate emissions for the project and the change between baseline and project emissions. Emissions are calculated for methane emissions from enteric fermentation (according to diet, duration of emissions, animal numbers and class, liveweight and liveweight gain) and nitrous oxide emissions from dung and urine.

Reductions in methane emissions from dung are excluded from the Beef Cattle Herd Management Calculator. This adds a source of conservatism when calculating abatement due to the impact of project activities, as these generally involve cattle being on the land for shorter periods of time and will therefore produce less dung than would have been the case had the project not been implemented. Furthermore, when the method was developed in 2015, methane emissions from dung were assessed to be immaterial. However, the implied emission factor for methane emitted from dung changed in the 2018 National Inventory Report (submitted 2020) because of updates to several model parameters, particularly to account for the proportion of dung that flows into anaerobic conditions in farm dams. This increased the implied emission factor significantly from about 0.02 kg CH₄/head/year to 5.8 kg CH₄/head/year (5-year

¹⁵ <https://www.awe.gov.au/abares/data/weekly-commodity-price-update/australian-agricultural-prices;>
<https://www.mla.com.au/prices-markets>

averages). Excluding methane emissions from dung now provides a greater source of conservatism as these may be material. In the most recent inventory, total CO₂-e emissions from pasture-fed beef cattle are made up of 8.1% from manure management (methane emissions from dung), 85.6% from enteric methane and 6.3% from nitrous oxide emissions from dung and urine.

Project participants must keep records for seven years according to the general record-keeping requirements of the Act and Rules, including:

- separate and self-contained records for each herd, for example:
 - records of yearly liveweight gain,
 - movements of cattle in and out of the herd with liveweights at entry into and exit from herd, and
- records showing the business structure, location, and management changes in the emission intensity reference period.

The method also states that records must be kept for purchased feed if the project activity involved a change to the herd's diet and if some or all the feed was purchased. All inputs and outputs from the Beef Cattle Herd Management Calculator for the reporting period must be supplied with each offsets report for the project. This includes records of livestock class for each animal in the herd. Any data presented on the herd, the business operation or the land associated with such operations may be subject to audit and a request for independent data and information for verification.

Considerations for comment

The review seeks feedback, including any supporting examples, on whether method provisions for measuring and verifying abatement estimates are fit for purpose.

Are there material reductions or increases in emissions that should be accounted for in the method (e.g., methane from dung)?

Eligible carbon abatement: A method should provide abatement that is able to be used to meet Australia's international mitigation obligations

Carbon abatement from a project is eligible carbon abatement where it is able to contribute towards Australia's international reporting obligations and targets. The Australian Government's National Greenhouse Accounts, which are prepared in accordance with these obligations, include tracking of greenhouse gas emissions associated with agriculture. Agricultural emissions included in the accounts are methane emissions from enteric fermentation and nitrous oxide emissions from dung and urine – both of which are accounted for in the beef herd method. These requirements aim to ensure ACCUs are only issued for avoided emissions that would otherwise have been counted in Australia's National Greenhouse Accounts.

Considerations for comment

The review seeks feedback, including evidence, on whether changes to the method should be made with respect to eligible carbon abatement that can be counted in Australia's National Greenhouse Accounts.

Evidence-based: A method should be supported by clear and convincing evidence

The method was developed on the basis of a substantial body of scientific evidence, which demonstrated that adopting new and improved beef cattle herd management practices can reduce the emissions intensity of beef cattle production through the following measures:

- increasing the weight to age ratio of the herd,
- reducing the average age of the herd,
- reducing the proportion of unproductive animals in the herd, or
- changing the ratio of livestock classes within the herd to increase total annual liveweight gain of the herd.

Key examples of scientific evidence to support the development of the method include Wiedemann et al. (2015)¹⁶ and Wiedemann et al. (2016)¹⁷.

Considerations for comment

The review seeks feedback on whether there is new or different evidence relevant to beef herd management and the estimation of activities to reduce emissions from beef herds that should be considered in this review.

The review also seeks feedback, including any supporting examples, on whether there is evidence demonstrating that there are activities that can reduce the emissions intensity of beef cattle production beyond those listed above.

Project emissions: Material greenhouse gas emissions emitted as a direct result of the project should be deducted

The emissions sources and greenhouse gases that are considered when calculating the net abatement for the project are enteric methane emissions and nitrous oxide emissions from dung and urine.

A number of emissions sources are excluded from the abatement calculations, due to the following reasons (cited in the 2015 method's explanatory statement)¹⁸:

- Emissions from fossil fuel use in farm vehicles and equipment: These emissions are small relative to livestock emissions. Published information shows that use of fossil fuels for all purposes in beef production represents approximately 2% of enteric emissions of each (adult) animal. Any change in emissions from fossil fuels due to project activities would be immaterial.
- Emissions from the production and transport of supplementary feed, where feed supplementation is a project activity. The cost of growing and transporting cattle feed, particularly to northern Australia, is considerable compared to benefits and there is little

¹⁶ Wiedemann, S., Henry, B., McGahan, E., Grant, T., Murphy, C. and Niethe, G. (2015) 'Resource use and greenhouse gas intensity of Australian beef production: 1981–2010', *Agricultural Systems*, 133, pp. 109-118.

¹⁷ Wiedemann, S., McGahan, E., Murphy, C. and Yan, M. (2016) 'Resource use and environmental impacts from beef production in eastern Australia investigated using life cycle assessment', *Animal Production Science*, 56(5), pp. 882-894.

¹⁸ <https://www.legislation.gov.au/Details/F2015L01434/Explanatory%20Statement/Text>

evidence of this type of feeding except when driven by drought situations. In southern Australia the emissions from this source would occur anyway for alternative markets in the absence of the project. Alternative markets may include for example, grains for human consumption, export of grain, or production for other livestock production.

- Emissions from animal feed production and transport from off-site sources: Such emissions are highly variable and difficult to quantify. For example, nitrous oxide emissions associated with irrigated grain production will be higher than for dryland production because of the use of higher rates of nitrogen fertiliser. However, proponents may not be able to identify the source of feed supplements, for example when purchased as bulk grain.
- Emissions from nitrogen fertilisers used in pasture establishment are not likely to be material because most pastures used in beef cattle production rely on legumes (which do not require nitrogen fertiliser) for their nitrogen requirements.
- Emissions from the operation of the property and routine operations to bring beef to market such as cattle breeding, husbandry, transport, and processing. These emissions will not change materially between the baseline and project. Projects are likely to be managed within a given property carrying capacity and focus on the production of the same or fewer numbers at the same or higher liveweight gain in less time (in other words productivity increases do not necessarily result in increased breeder numbers). This means while emissions associated with the transport of cattle may increase due to greater weight and number of cattle brought to market at a given time, these emissions are not likely to be material given that transport emissions make up only a small proportion of emissions associated with beef production.

Considerations for comment

The review seeks feedback, including any supporting examples, on whether the method sufficiently accounts for material greenhouse gas emissions directly resulting from carrying out the project. In particular:

- Are increases in emissions from supplementation or off-site animal feed production and transport to the project material and if so, are they quantifiable?
- Are the emissions from on-site increases in feed production, such as the use of lime to improve pastures, material and if so, are they quantifiable?
- While some studies indicate that productivity and emissions intensity improvements do not result in increase in absolute cattle numbers¹⁹, is there evidence to the contrary for particular production systems?

Conservative: Where a method involves an estimate, projection or assumption, it should be conservative

The inputs and variables used in the Beef Cattle Herd Management Calculator are intended to align with those used in the National Inventory Report and other regulations including the *National Greenhouse and Energy Reporting Regulations 2008*. However, the Committee is aware that the daily methane production

¹⁹ [Fordyce, G., Shephard, R., Moravek, T., McGowan, M. \(2021\) Australian cattle herd: a new perspective on structure, performance and production. Animal Production Science](#)

factor used in the calculator²⁰ does not use the daily methane production factor used by the National Greenhouse Gas Inventory. As such, the Committee is seeking feedback on amending the Beef Cattle Herd Management Calculator to align the enteric daily methane production factor with the factor used by the National Greenhouse Gas Inventory. This would change the daily methane production factor from 21.5 to 20.7 grams of CH₄ per kilogram of dry matter intake, per animal, per day²¹.

Considerations for comment

Beyond the global warming potential of methane, the review also seeks feedback, including supporting examples, on whether the inputs and variables used in the Beef Cattle Herd Management Calculator remain conservative.

The 4% variance discount

Beef herd projects may include multiple herds, and each individual herd may experience an increase or decrease in emissions intensity (tonnes of carbon dioxide equivalent per tonne of live weight) in a given year due to the influence of both environmental and management factors. For a given herd, abatement is calculated as the difference between the baseline herd emissions (live weight gain in kilograms multiplied by emissions intensity) and the annual herd emissions during the project. Net abatement is the sum of the abatement for all herds, where the difference between baseline herd emissions and annual herd emissions is greater than zero.

In the method calculations, abatement is assumed to be zero for any herd where this difference is negative. This means that negative abatement for individual herds is not subtracted from abatement achieved by the high performing herds in the project or carried over to subsequent reporting periods for the same herd. The zero abatement for an individual herd was included in the method to address the possibility that negative abatement could result from climatic factors or pests rather than human action.

The method applies a variance discount factor of 4% to address the potential over-crediting risk from zeroing out increases in emissions. This means that ACCUs are issued when annual herd emissions intensity for a given herd is more than 4% below baseline herd emissions intensity.

The 4% variance discount applied to baseline emissions is based on 25 years of cattle herd weight and emissions data from the ABS and ABARES. The variance discount assumes a year-to-year cattle liveweight gain variation of 8% and that half of this variation is from environmental factors beyond proponents' control, and half is from management actions. Notably, this discount is based on national data, which may have the effect of 'smoothing' variation at the individual herd- or project scale.

The Committee considered whether the 4% variance discount remains appropriate as part of the crediting period extension review conducted in late 2021 and early 2022. The Committee found²² that there was insufficient evidence to inform a change to the discount.

²⁰ <https://www.industry.gov.au/regulations-and-standards/methods-for-the-emissions-reduction-fund/beef-cattle-herd-management-method>

²¹ [Charmley E., Williams S. R. O., Moate P. J., Hegarty R. S., Herd R. M., Oddy V. H., Reyenga P., Staunton K. M., Anderson A., Hannah M. C. \(2016\) A universal equation to predict methane production of forage-fed cattle in Australia. *Animal Production Science* 56, 169-180.](#)

²² https://www.industry.gov.au/sites/default/files/2022-04/beef_herd_method_cpe_review_report.pdf;
https://www.industry.gov.au/sites/default/files/2022-04/erac_advice_-_beef_herd_-_cpe_review_2022.docx

Considerations for comment

The review seeks feedback on whether the 4% variance discount remains appropriate or whether an alternative variance discount factor or other approach should be applied. If another approach should be used, please provide evidence or reasons for the basis for the proposed new approach, and any data that could be used to determine a change to the discount.

3.2 Feedback sought from stakeholders

To assist its review, the Committee welcomes feedback on the matters within the scope of the review outlined above. The Committee is particularly interested in issues relating to whether the method meets the Offsets Integrity Standards.

The Committee also welcomes feedback on other aspects of the design and operation of the method, including:

- proponents' experiences in implementing projects (including estimating abatement) under the method, including any opportunities to remove barriers and increase uptake by small- and medium-sized producers;
- whether there are circumstances where the aggregation provisions in the method are not appropriate for small- and medium-sized producers; and
- issues related to adverse or beneficial environmental, economic, or social outcomes from projects under the method.