

Fossil Methane: A Near-Term Abatement Opportunity

August 2026



The National Farmers' Federation (NFF) is the voice of Australian farmers.

The NFF was established in 1979 as the national peak body representing farmers and more broadly, agriculture across Australia. The NFF's membership comprises all of Australia's major agricultural commodities across the breadth and the length of the supply chain.

Operating under a federated structure, individual farmers join their respective state farm organisation and/or national commodity council. These organisations form the NFF.

The NFF represents Australian agriculture on national and foreign policy issues including workplace relations, trade, and natural resource management. Our members complement this work through the delivery of direct 'grass roots' member services as well as state-based policy and commodity-specific interests.

NFF Member Organisations



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Introduction

The *National Farmers' Federation* (NFF) welcomes the opportunity to provide a submission to the *Climate Change Authority* (Authority) *Fossil Methane: A Near-Term Abatement Opportunity Discussion Paper*. We acknowledge that this consultation is focussed on seeking evidence and views on practical technologies and other opportunities to accelerate reductions in fossil methane emissions in Australia. We also note the broader observation that methane emissions will need to decline across all sectors, notwithstanding the Authority's current focus on fossil methane, as reflected in the following statement found on Page 5:

While methane emissions will need to come down across all sectors, the Authority is focusing on fossil methane this year because it is one of the most practical opportunities for near-term emissions reductions. In contrast to agricultural methane, fossil methane comes from a relatively small number of concentrated sources and there are well-established technologies and practices to reduce it (IEA 2026a; IPCC 2019).

NFF supports the Authority's focus. Fossil methane is an appropriate area for action given emissions are relatively concentrated and practical opportunities exist to reduce them. As correctly noted, commercially viable technologies to address enteric methane remain limited in Australia and especially across extensive livestock production systems. While ongoing research and development, including through the Commonwealth-funded *Methane Emissions Reduction in Livestock* (MERiL) Program, has yielded promising results, commercially ready delivery systems and technological solutions are simply limited.¹ This is materially different from fossil methane where emissions are comparatively more concentrated, and there are more established technologies and practices available.

NFF also notes the significant body of work underway to improve the measurement and estimation of fugitive methane emissions (especially for open-cut coal mining). The Authority itself recognises that methodology improvements may affect reported emissions levels, and preliminary analysis has pointed toward a potentially significant underestimation in this regard. As this work continues to progress, it is important that national reporting continues to reflect the best available evidence and that any resulting changes to the relative contribution of different sectors, including agriculture, are transparently recognised and fairly accounted.

From the outset, it is important to recognise that agricultural methane is different in character and atmospheric behaviour from fossil methane, and that it forms part of the natural biogenic carbon cycle. The Discussion Paper recognises on Page 10 that methane has historically existed within a natural balance between sources and sinks, including through soils, and that human activity has disrupted that equilibrium. This natural cycle is tied to agriculture and forms part of the bigger picture, and consistent with *NFF Climate Policy (Attachment 1)*, it needs to be recognised and accounted for to support equitable,

¹ December 2025, Department of Climate Change, Energy, the Environment, and Water, Australian Government: [Reducing Agricultural and Land Sector Emissions – Reducing Methane From Livestock](#)

science-based reporting of agriculture's full emissions profile, particularly enteric methane. Further work is required to ensure national reporting is reflective of this.

Agriculture is also a complex and hard-to-abate sector, and these characteristics need to be considered together. Policy settings must reflect what is achievable on-farm, recognise improvements in both emissions and emissions intensity, and ensure climate action does not come at the expense of food and fibre production.

Further, a consultation focussed on fossil methane should not become a pathway for imposing broader methane targets and/or national goals. While the Authority is not proposing changes to Australia's *Nationally Determined Contribution*, it is seeking views on potential establishment of methane goals at national, sub-national, or sectoral levels. NFF does not support sector-specific targets, and we reiterate existing commitments from the Commonwealth including in writing and within the *Agriculture and Land Sector Plan*² that agricultural decarbonisation will not be imposed or driven by arbitrary targets, and that there is no consideration around herd reduction or mandatory livestock emissions reduction.

The focus for agriculture must instead remain on investment in practical and commercially viable emissions reduction pathways. This includes expanding opportunities under the *Australian Carbon Credit Unit (ACCU) Scheme* through the development of methodologies that support methane-reducing livestock technologies and other practical abatement opportunities beyond the existing focus on vegetation. This includes early development of a livestock methodology to replace the sunset *Beef Cattle Herd Management Methodology* and a proper and fit-for-purpose *Integrated Farm and Land Management Methodology*.

We also wish to note that the upcoming *2026-27 Review of the Safeguard Mechanism* will be the appropriate forum to consider any recommendations for changes to its broader operation and contribution toward emissions reduction. This is the proper forum to address questions around scope and effectiveness, and it will also ensure greater visibility and opportunity for consultation. We further note that emissions reduction should be considered as a whole rather than through the prism of a singular Greenhouse Gas (GHG) category. We look forward to contributing our views through the formal review process later this year.

Methane Metrics

The Authority's consideration of a GWP20 metric is particularly relevant to agriculture. It is NFF Policy that proven, defensible, and credible alternative reporting metrics are considered where they can better reflect agriculture's actual warming impact and achievements. This includes split-gas reporting and use of other suitable alternative metrics such as GWP*, alongside existing GWP100. As more is understood about the accuracy and viability of alternative metrics, pathways to incorporate these so that agriculture is treated equitably should continue to be progressed.

² 2025, Commonwealth of Australia: [Agriculture and Land Sector Plan](#)

Agricultural Innovation

It is important to note that a stronger focus on reducing fossil methane emissions must not come at the expense of reduced support for innovation and research and development within agriculture. Agriculture remains hard-to-abate, and available methane reduction technologies vary significantly between production systems. Continued public and private investment is required to develop commercially viable technologies and practices capable of reducing emissions while maintaining (or increasing) productivity and broader international food and fibre commitments (particularly in the emerging and rapidly growing South-East Asian market). This is especially relevant where technologies may be effective in controlled environments but remain difficult or costly to deploy at-scale across extensive grazing operations. Greater investment is required to move emerging technologies from research and demonstration through to commercial readiness.

Reiterating No Targets

NFF does not support the establishment of sector nor regionally specific targets (whether that be masked as a goal or otherwise) for emissions reduction in agriculture (Consultation Question 9). We are concerned that such measures, even if not strictly framed as a target, will send the wrong policy signal. Again, this is consistent with the *NFF Climate Policy* and multiple commitments from the Commonwealth including in writing that agricultural decarbonisation will not be driven through such an approach.

Australian producers remain global leaders in low-emissions food and fibre production. The sector also continues to make significant voluntary industry-led contributions. For example, the red-meat sector has reduced its net-GHG emissions by 70.1% since 2005, and other sectors are committing to outcomes as early as 2030. This progress and investment to-date needs to be recognised.

Global Methane Pledge Correction

NFF notes that the wording in Appendix C of the Discussion Paper describes Australia as one of the signatories “*working to reduce global methane emissions across all sectors by at least 30% below 2020 levels by 2030*”. This wording could be read as implying that a 30% reduction applies individually across each sector of the economy as a consequence of the *Global Methane Pledge*.

The *Global Methane Pledge* is instead a voluntary and non-binding collective objective under which participating nation states contribute toward reducing global anthropogenic methane emissions by at least 30% from 2020 levels by 2030. It is a global objective and not a 30% national or sector-specific target, and it carries no mandatory domestic targets, laws, taxes, or penalties for non-compliance. It would be incorrect to phrase it is an Australian Policy (as referred to on Page 34). A more appropriate framing would be International Commitment or Agreement. These above issues need to be corrected prior to finalisation. The NFF has received Government assurances that, as a consequence of the methane Pledge, there will be no impact or target for the agriculture sector. Those assurances must be honoured. This is also consistent with the disposition of the *Agriculture and Land Sector Plan*, i.e., no targets for agriculture.

Closing Remarks

Please do not hesitate to contact Warwick Ragg, General Manager, Natural Resource Management, via e-mail: WRagg@nff.org.au in the first instance to progress this discussion.

Attachments List

1. ***NFF Policy (May 2026): NFF Climate Policy.***



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Climate Policy

Policy Principles

The following set of policy principles are to both inform NFF activities and priorities, and also to influence the policy design and development processes of Governments:

- Agriculture's significant progress in reducing net-emissions and emissions intensity of production is recognised;
- Agriculture is complex and a hard-to-abate sector that has already made significant progress in emissions reduction relevant to other sectors of the economy. It is an emitter, sequestor, and food and fibre producer to domestic and global markets;
- Innovation focussed on commercially viable technologies and solutions, together with maturing markets for carbon is required to reduce emissions intensity of production and contribute to emissions objectives;
- Continued public and private investment is required to support innovation and economic adaptation;
- Impacts from Government legislation, for example reforms to the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*, must not have unacceptable nor perverse impacts on achieving climate outcomes, food and fibre production, and innovation;
- Any requirement for climate-related reporting that is not mandated must be a negotiated commercial transaction recognising the value of the data or information that a farmer holds;
- Coordinated whole-of-Government policy settings across all sectors, particularly energy and transport, are required to ensure policy coherence, avoid unintended outcomes particularly on production and productivity, and support a just transition;
- Action on climate change does not come at the expense of food and fibre production nor farmers' property rights. Where rights are compulsorily acquired, this must occur on just terms.

- Paris Agreement commitments continue to be acknowledged. Policy recognises Article 2 language that *“increasing the ability adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas [GHG] emissions development, in a manner that does not threaten food production”* and that Parties are on different GHG trajectories;
- Policy settings are evidence-based, reflect what is achievable on-farm, support long-term farm profitability and productivity, and are informed by both emissions reduction and emissions intensity outcomes will provide agriculture with the necessary confidence to continue and grow;
- Emissions reduction Schemes are well considered, promote stability and confidence, and not be impractical nor inappropriate for agricultural production;
- The biogenic carbon cycle is appropriately quantified and accounted for to support equitable, science-based reporting of agriculture’s full emissions profile, especially of enteric methane;
- Enteric methane, which is agriculturally specific, is different in character and atmospheric behaviour than fossil methane; and
- As more is understood about the accuracy and viability of alternate reporting metrics, then ways to utilise those so that agriculture is treated equitably must be progressed.

Policy Position

The NFF supports an economy-wide aspiration of net-zero emissions by 2050 provided that:

- There are identifiable and economically viable pathways to net-neutrality, including impacts from inputs such as energy are available to the sector; and
- Commonwealth and State legislation is effective, equitable, and advantageous to deliver on ground programs that benefit agricultural interests and do not provide unnecessary regulatory impediment or unintended constraints that could restrict the sector’s capacity to produce climate-smart low-emissions food and fibre, including that:
 - No sector nor regionally specific targets are imposed;
 - Global and local food security is considered in conjunction with overarching goals, not separately; and
 - Food production is recognised as an essential service.

NFF will review its position regularly to ascertain if technological and economically credible pathways to achieve this aspiration remain evident. NFF will hold Government to its policy commitments outlined during the Sustainable Agriculture Summit and now reflected in the Agriculture and Land Sector Plan. Specifically:

1. Action on climate change cannot come at the expense of food security;
2. Support diverse landscapes that balance agricultural production, carbon storage and nature repair; and
3. Decarbonisation of agriculture and land must deliver real benefits for regional communities, producers, and land managers. It is critical to enable a just transition for regional, rural, and remote communities.

NFF opposes any agriculture sector targets under the voluntary and non-binding Global Methane Pledge. Australian producers remain global leaders in low-emissions food and fibre production. Continued efficiency gains and improvements in emissions intensity will be necessary to meet growing demand while contributing to broader objectives.

NFF recognises that enteric methane and nitrous-oxide emissions require sector-specific consideration due to their distinct characteristics and warming impacts. While a net-zero target is appropriate for carbon-dioxide, alternative approaches are required for other GHGs.

Government needs to ensure, should it seek to make international agreements and as the upcoming scheduled Subsidiary Body for Scientific and Technological Advice 2027 Review of Common Reporting Metrics becomes more prominent in policy discussions, agriculture is closely consulted on:

- How these agreements will translate;
- How and what assurances will be provided;
- How appropriate reporting metrics can be incorporated to better reflect agriculture's impact and achievement for example including dual split-gas reporting of emissions in both GWP* or another suitable metric and existing GWP100 for agriculture;
- Ensuring agriculture is not unfairly or unnecessarily targeted; and
- That the achievements that agriculture has already made are clearly recognised.

NFF recognises that Research and Development Corporations (RDCs) will continue to support industry to progress low-emissions pathways which underpin agriculture's \$100 billion growth target. Coordinated research through RDCs and other research organisations including the Zero Net Agriculture CRC accelerate progress and strengthen Australia's leading position in producing low-emissions agricultural products.

In meeting Australia's emissions reduction goals, Australian farmers expect a greater focus on industry and Government investment in integrating practical climate solutions that strengthen farm resilience and productivity. This can be delivered by:

- Focusing on innovative technologies that provide a competitive advantage for existing products;
- Developing new markets that benefit from innovative GHG reducing technologies;
- Collaborating across all of industry to make the greatest gains from the adoption of the latest R&D;
- Adapting and adopting proven and credible alternate metrics in the National Greenhouse Gas Inventory;
- Supporting efforts to accurately and appropriately attribute emissions reductions and sequestration outcomes from Land Use, Land-Use Change and Forestry (LULUCF) to agriculture; and
- Promoting a split-gas approach to accounting and reporting of GHGs.

The long-term success of Australian agriculture depends on its ability to innovate and adapt to a changing climate, while maintaining secure access to productive land and water. Australian farmers have always operated in a challenging and varied environment, and their continued prosperity relies on both effective climate action and the protection of agricultural assets. Agricultural land is a strategic national resource that Governments must preserve for the future of the sector and the nation. Land-use decisions must ensure compatibility with agriculture, enable farmers to genuinely influence outcomes, and protect land from unreasonable change or regulation.

This policy document is complementary to NFF policy positions on Natural Capital, Electricity, Climate-Related Financial Disclosure, Energy and Industry Engagement Guidelines for On-Farm Activities.

Background

NFF recognises that climate change presents both significant challenges and opportunities for Australian farmers. The world's population is forecast to exceed 9.8 billion people by 2050, and demand for food and fibre is on track to increase 70% from 2005-07 levels by that timeframe.

Agriculture is Australia's largest land-use and is closely connected to the land sector, including LULUCF and forestry, which together represent Australia's largest terrestrial carbon sink. Agriculture contributes to Australia's National Greenhouse Gas Inventory through carbon sequestration in soils and vegetation and GHG emissions from practices such as livestock production, cropping, fertiliser use, and savanna burning. Combined, agriculture accounts for 18-19% of national emissions.

NFF recognises that climate ambition is a significant factor influencing agricultural market access and Australia's reputation as a global leader in climate-smart agriculture.

Issue

Climate policy must recognise agricultural producers for the role they play in the sustainable management of Australia's landscapes, their contribution to food security, and must provide a pathway for a profitable, productive, and sustainable sector into the future.

Agriculture seeks that other sectors of the economy to contribute to their own emissions reductions and not rely on agriculture or agricultural land as a primary source for their offsets. NFF is concerned that current rules and regulations do not adequately ensure other industries reduce emissions within their operations, instead allowing them to rely on agricultural land to meet legislated targets. This risks distorting land-use and placing an inequitable burden on agriculture.

In line with the Intergovernmental Panel on Climate Change (IPCC), agriculture recognises that different GHGs have different warming characteristics and trajectories. The IPCC's Sixth Assessment Report indicates that limiting global warming to 1.5°C with no or limited overshoot involves reducing global methane emissions by approximately 45% and nitrous-oxide emissions by 20% by 2050 relative to 2019 levels. Achieving these reductions in agriculture remains constrained by technological, economic, and scalability barriers, requiring innovation at-scale to build productivity without compromising animal welfare and cost structures.

While emissions reduction is one goal, broader social, environmental, and (particularly regional) community impacts must also be considered. There is a strong need for enhanced guidance on how to manage and incentivise new projects that have multiple co-benefits. This would facilitate a range of technology options and land-based activities which can deliver cost-effective outcomes for emissions reduction and broader economic, social, and environmental outcomes.

Progress

The Australian agricultural sector remains at the forefront of national emissions reduction since the 1990s, primarily due to the land clearing legislation imposed on farmers to meet Kyoto Protocol emissions reduction targets.

Between 1990-2023, agriculture reduced its net-GHG emissions by at least 12.58% or 11.85 Mt CO₂-e. These reductions have been achieved while advancing profitability, productivity, and sustainability without the imposition of sector specific targets consistent with the Red Meat 2030 Vision and MLA Strategic Plan 2030. Australian

agriculture has among the lowest emissions intensities of major agricultural exporters, with emissions estimated to be upward of 42% lower than comparable peer nations. This has been achieved alongside a 20% reduction in GHG emissions and a 60% increase in output since 1990.

The sector also continues to make significant voluntary industry-led contributions. For example, the red-meat sector has reduced its net-GHG emissions by 70.1% since 2005 and other sectors are committing to outcomes as early as 2030.

Agriculture also delivers significant environmental co-benefits, including but not limited to biodiversity stewardship, landscape management, soil health improvement, and sustainable natural resource management.

The Carbon Farming Initiative (CFI) and subsequent Australian Carbon Credit Unit (ACCU) Scheme continues to be the substantive mechanism under which farmers have reduced emissions. Care must be taken to ensure that philosophical drivers do not compromise the scope and opportunity for ACCU method development and that agriculture is not treated as an offset for other sectors to carry on as business-as-usual.

What the Industry Needs

Policy

Economic

- Maintain clear assurances that no targets and taxes are placed on agriculture;
- Non-tariff barriers including a Carbon Border Adjustment Mechanism are not imposed on agriculture or critical inputs to agriculture;
- Appropriate restrictions are placed on the Safeguard Mechanism ensuring that agriculture is not adversely impacted by offset purchases that diminish agricultural productivity and food and fibre production;
- Amend the Carbon Credits (Carbon Farming Initiative) Rule 2015 to apply the 30% threshold for Ministerial consideration to environmental planting projects on agricultural land, provided it is applied flexibly and does not restrict landholders' decision-making authority nor property rights;
- NFF will collaborate with other aligned jurisdictions to promote a split-gas approach to accounting and reporting of GHGs;
- Ensure that Government attributes LULUCF equitably to agriculture;
- Recognise and compensate landholders for emissions reduction delivered under mandatory land-clearing legislation to meet Australia's Kyoto Protocol obligations;
- Acknowledge that mandatory cap and trade policies are not suited to the farm sector, and specifically exclude the sector from any such schemes;

- Recognise that more than 79% of Australian agricultural produce is exported, and that as a trade-exposed sector, we must remain competitive within those markets;
- Reintroduce legislation that would see carbon and biodiversity income treated as primary production income for all typical farm business models to ensure that eligible business input deductions can be appropriately offset against farm income;
- Forestry residues are recognised as carbon storage within accounting frameworks; and
- Engage in or facilitate the review property valuation methodologies at least to the extent that those methodologies are not adequately acknowledging the income or capital growth attributable to carbon and other non-core commodities; and

Regulatory Alignment

- In consultation with the agricultural sector, ensure that the most equitable, defensible and appropriate reporting mechanisms are used that recognise international reporting obligations, improved or more accurate measurement systems, and apply principles of equity and balance for the agricultural sector;
- Ensure eligibility for the instant tax/asset write off includes climate action investments;
- Ensure vegetation management policies do not burden farmers with the cost of achieving emissions reduction goals, nor unreasonably restrict development by imposing on existing land management practice;
- Ensure the operation of the EPBC Act and other relevant Commonwealth, State and Territory environmental and planning frameworks do not create unnecessary regulatory impediments to the production of low-emissions food and fibre for domestic and global markets, with timely and proportionate approval processes that support climate-smart, globally competitive agriculture;
- Prioritise development of CFI methodologies that encourage and provide ACCUs for the adoption of methane reducing livestock feed, coated or slow-release fertilisers, and other technologies as soon as practical;
- All market-based policies for emissions reduction that seek to incentivise climate outcomes must have mechanisms such as standardised contract terms, dispute resolution processes, and upfront transparent pricing; and
- Agriculture needs harmonisation of methodologies, reporting frameworks, and auditing across all jurisdictions.

Education and Awareness

- Recognise it may be more beneficial for farmers to identify carbon and use this within their own business (insetting) rather than selling to other sectors (as offsets), and that care is needed to prevent market and regulatory distortions.

Incentives

- Allocate a component of investment from the National Reconstruction Fund to fast-track the viability assessment and establishment of regional low-emissions input fertiliser manufacturing capability in regional Australia and ensure funding under the Future Made in Australia initiative is directly allocated to improving domestic manufacturing for critical agricultural inputs;
- Provide refundable tax offsets on equipment which reduces emissions such as that used in zero till and controlled traffic systems;
- Ensure biodiversity certificates and payments are accessible for the agriculture sector; and
- While Australian Carbon Credit Unit methodologies are supported, they will not be suitable for all farm businesses and Government should provide complementary incentives, including grants and other financial measures, to support broader participation in emissions reduction.

Coordination

- That the Safeguard Mechanism and National Greenhouse and Energy Reporting Scheme continues to focus on large scale fugitive emissions only.

Operational

Economic

- Support adaptation and facilitate investment into R&D to ensure agriculture remains productive, competitive, and prepared to address emerging challenges under changing climatic conditions; and
- Continue to ensure opportunities for emissions reduction and sequestration in the farm and forestry sectors, and facilitate participation of farmers and foresters in carbon markets and natural capital markets;

Education and Awareness

- Develop on-farm extension programs to support natural capital measurement and markets as a key facilitator of climate change mitigation. Support investment in education decision support tools and awareness programs to assist farmers' understanding of carbon emissions, baseline accounting, sequestration, offsets, insetting, and carbon markets, including:
 - a) support for what producers at the farm level are currently doing;
 - b) support for navigating the current system of markets and incentives;

- c) on-farm support to engage in new and emerging practices to increase emissions reduction; and
- d) the need for a positive, constructive, and overarching climate policy for the agriculture sector, along with providing incentives and subsidies to farmers, including for batteries.

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