

Policy Update: Australia's Senate Inquiry recognises the “massive climate harm” of Coal Mine Methane but fails to outline steps to tackle it

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Background

This is an analysis of Australia’s Safeguard mechanism reforms and the final report of the federal Senate Standing Committee on Environment and Communications’ Inquiry into the Safeguard Mechanism (Crediting) Amendment Bill 2022.

The analysis focuses on coal mine methane emissions, in which the team preparing this note have expertise and up to date knowledge of the issue in Australia and globally.

Acknowledgement of Country

Ember acknowledges the Traditional Custodians of the many nations across Australia and their enduring connection to Country and the lands, seas and skies. We pay our respects to Elders past and present and extend that respect to all Indigenous Peoples today.

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Executive Summary

On March 8 2023 Australia’s federal Senate Standing Committee on Environment and Communications handed down its findings from an inquiry into the Australian government’s proposed reforms to the safeguard mechanism.

The Senate Committee recognised the “massive climate harm” arising from Australia’s coal mine methane emissions, relying upon Ember’s research and evidence of the [scale of Australia’s coal mine methane problem](#). But the Senate Committee’s final recommendations missed a key opportunity to tackle this problem and deliver on the Australian government’s commitments to lower its greenhouse gas emissions, including a [30% reduction in methane emissions by 2030](#).

Our key takeaways from the inquiry are that:

Inquiry into the Australian government’s proposed reforms to the safeguard mechanism

Key takeaways

-  **Win**
The Senate Committee has recognised the scale of Australia’s methane emissions and urgent need to tackle its growing coal mine methane problem. It accepted our evidence that “methane, if we look at it over a 20-year timescale, has around 82 times more global warming impact than CO2.”
-  **Win**
The Senate Committee has recommended prioritising the recommendations from an independent review of Australia’s carbon credits to improve the integrity of the safeguard mechanism.
-  **Missed Opportunity**
The Senate did not formally recommend that reforms to the safeguard mechanism be underpinned by more rigorous measurement, reporting and verification of Australia’s energy sector methane emissions.
-  **Missed Opportunity**
The Senate did not recommend measures that would ensure the safeguard mechanism directly regulates and incentivises methane emission reductions at coal mines and other safeguard facilities.

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This policy paper provides an overview of the proposed safeguard mechanism reforms and how they could be strengthened to tackle Australia’s coal mine methane

problem. We also share our analysis of the key findings of the Senate Committee's final report on the safeguard mechanism reforms and next steps.

The Safeguard Mechanism Reforms

Since taking office last year, the Australian government has made [bold promises](#) to cut greenhouse gas emissions, especially from its biggest industrial polluters.

One of its cornerstone policy tools to achieve this goal is reforms to the existing safeguard mechanism under the Emissions Reduction Fund. The mechanism was first implemented in 2016 and imposed [obligations](#) upon Australia's 215 largest emitters, that is facilities that emit more than 100,000 CO₂-e Scope 1 emissions per year, to measure, report and manage their emissions.

The Australian federal government has proposed reforms to the safeguard mechanism through the introduction of the [Safeguard Mechanism \(Crediting\) Amendment Bill 2022 \(Bill\)](#).

The Bill is intended to deliver an [estimated 205 million tonnes of CO₂ abatement by 2030](#), by imposing a production-adjusted emissions intensity baseline. This baseline is proposed to [decline by 4.9% each year to 2030](#), to ensure that Australia's major greenhouse gas emitters are reducing their total emissions.

In addition to establishing declining emissions baselines, the Bill also enables the [creation and trading of safeguard mechanism credits \(SMCs\)](#) under Australia's National Registry of Emissions Units. SMCs would be issued to facilities that reduce their emissions below the emissions intensity baseline, and could be traded with facilities that require offsets to meet their obligations under the safeguard mechanism. However, major emitters would still have unlimited access to Australian carbon credit units (**ACCUs**) to also offset their emissions to meet their obligations.

While the proposed reforms are a positive step towards more ambitious emissions reduction, there are significant concerns that the amended safeguard mechanism does not directly regulate coal mine methane emissions or sufficiently incentivise onsite mitigation of such emissions at Australia's gassiest coal mines.

In December 2022, the federal Senate referred the Bill to the Senate Standing Committee on Environment and Communications. The Senate Committee received submissions and held two public hearings to inform their findings regarding whether the Bill should be amended and ultimately passed into law.

Ember's Recommendations to the Senate Committee Inquiry

On 27 February 2023 Ember gave evidence to the Senate Standing Committee on Environment and Communications' Inquiry into the safeguard mechanism, alongside the Environmental Defense Fund.

Our evidence proceeded on the basis that tackling Australia's coal mine methane emissions is an [urgent but achievable aim](#). We emphasised to the Senate Committee that:

"Methane, if we look at it over a 20-year timescale, has around 82 times more global warming impact than CO2. It's really one of the gases for which, if we can start targeting it now, we're going to see reductions in global warming or climate change straight away, much faster than CO2, which has a lifetime of hundreds of years to decades. We also need to tackle CO2, but methane will give us a much faster response."

Recent data from the International Energy Agency (IEA) [found](#) that Australia's coal mines emitted 1,673,000 tonnes of methane in 2022, a figure 60% higher than the 2020 [official estimates](#) from the Australian government. This significant discrepancy is only the latest evidence that Australia is significantly underestimating its coal mine methane emissions (see our [previous research](#) for more details).

Our evidence to the Senate Committee emphasised that Australia must integrate more rigorous measurement, reporting and verification (**MRV**) standards into its national greenhouse and energy reporting to inform the safeguard mechanism. We outlined to the Senate Committee that:

"[I]mproved measurement of each coalmine's methane emissions would improve the capacity of the safeguard mechanism to be driving genuine emission reduction."

Currently, Australia measures and reports on methane emissions from its surface and underground mines differently. Underground mines are required to directly measure their methane emissions, but these measurements are often not sensitive enough to estimate the absolute volume of methane released onsite. Conversely, methane being released from surface mines is not required to be directly measured, but relies only on standardised emissions estimates. This [increases the risk](#) that we are missing potential methane super-emitters, jeopardising Australia's capacity to meet its 30% reduction in methane by 2030 commitments under the [Global Methane Pledge](#).

Ember also made a series of recommendations to ensure the safeguard mechanism directly regulates and incentivises the abatement of coal mine methane emissions

from major emitters. Many of our recommendations were addressed by the Senate Committee, and are discussed in more detail in the next section.

The measurement and regulation of methane emissions was a live issue for the Senate Committee and was discussed by a range of participants invited to give evidence at the public hearings.

The Senate Committee's Findings on the Safeguard Mechanism Reforms

The Senate Committee handed down its [final report](#) and five major recommendations on March 6, including that the Bill should be passed. The Senate Committee reviewed a wide range of concerns with the federal government's proposed safeguard mechanism reforms.

Notably, the Senate Committee recommended that the federal government and Clean Energy Regulator prioritise the implementation of the [Chubb Review's recommendations](#) and to specifically incorporate the publication of carbon estimation areas of eligible offsets projects, as recommended by the Chubb Review, into the safeguard mechanism.

The Senate Committee's consideration of the Chubb Review reflects the real risk that a lack of transparency and integrity within Australia's existing carbon credits market, ACCUs, would undermine any emissions reduction that could be delivered by the reformed safeguard mechanism.

An additional concern recognised by the Senate Committee was that allowing major emitters unlimited access to ACCUs to meet the safeguard mechanism's declining emissions baseline weakens the incentive for facilities covered under the mechanism to invest in the reduction of onsite emissions. This is particularly concerning given the majority of Scope 1 coal mine emissions is methane.

The Australian Conservation Fund [submitted](#) to the Senate Committee that the proposed safeguard mechanism reforms should be amended to require:

All facilities covered by the Safeguard Mechanism must demonstrate that they have taken steps to achieve genuine on-site emissions reduction before they can gain access to the purchase of SMCs or ACCUs to acquit their emissions reduction obligations...Limits will be placed on the use of ACCUs to meet baseline requirements. Limits will be sector specific, set on a percentage basis and determined by the emissions reduction technology solutions available to each sector including the degree to which the sector qualifies as genuinely 'hard-to-abate' and essential.

In relation to methane regulation specifically, the Senate Committee recognised, in light of the [IEA's 2023 Methane Tracker](#) data, that Australia is potentially under-reporting its methane emissions by 63%.

Importantly the Committee accepted that “significant levels of Australia’s methane emissions are produced by the coal, gas and oil sector as fugitive emissions”, and further, that it is technically and economically feasible for those industries to be implementing methane abatement measures. In this regard, the Senate Committee directly quoted Ember’s evidence that:

“In terms of policy levers, it's much more feasible to be directly mitigating and reducing methane in coal mines. As has been stated by both the Environmental Defense Fund and Ember in our reports, it is cost effective to mitigate at the source. Offsetting, from a policy perspective, should be the last resort in those very, very difficult to abate sectors. Coal mine methane does not fall into that category in our analysis.”

The Senate Committee further quoted our evidence that methane is a potent greenhouse gas that cannot be adequately compensated by carbon offsets:

“Most offsets are carbon offsets, carbon dioxide offsets, and methane is a completely different gas that behaves differently...Cross-offsetting is meaningless, and you need to physically get rid of methane going into the atmosphere, rather than trying to find a CO2 project.”

Ultimately, the Senate Committee suggested that the “government should undertake work to better understand the scale of Australia’s methane emissions.”

In addition to supporting more rigorous MRV standards, the Senate Committee canvassed several other issues that risk the safeguard mechanism driving genuine methane emissions reduction.

Notably, the Senate Committee addressed the impact of new entrants to the safeguard mechanism. If not effectively regulated, new entrants to the safeguard mechanism are projected to lead to an increase in the total emissions of major emitters by 146 Mt CO₂-e in 2029-30, according to the [federal government's own position paper](#).

In this regard, a number of participants in the inquiry recommended mechanisms that would ensure new entrants to the safeguard mechanism contributed their fair share to the mechanism’s emissions reduction target and to deter major new fossil fuel projects. Ember’s [research](#) demonstrates that if Australia continues to allow new coal mines and coal mine expansions, annual coal mine methane emissions would increase by 50% by 2030, severely hindering emissions reduction efforts under the safeguard mechanism.

The Senate Committee formally recommended that the Australian government “monitor the impact of new entrants on the delivery of the safeguard mechanism's share of Australia's emissions reduction targets, and reports to Parliament on progress through the Annual Climate Change Statement”. But did not make further recommendations to impose more stringent obligations upon new entrants, commensurate with the additional burden they will impose upon Australia's greenhouse gas emissions abatement task.

Ember's Key Takeaways

Ember welcomes the Senate Committee's recognition of the scale of Australia's methane emissions and the need to improve Australia's measurement of its methane emissions as a foundation for methane abatement measures.

However, it was a missed opportunity that the Senate Committee did not call for more rigorous MRV standards as a standalone recommendation. All coal mines should be required to implement best practice methane measurement and monitoring, equivalent to Level 5 of the [Oil and Gas Methane Partnership 2.0](#).

The capacity of any reforms to the safeguard mechanism to drive methane emissions reduction is limited by the fact that those reforms do not directly regulate or incentivise onsite methane emissions reduction by the coal sector. We recommended to the Senate Committee that the safeguard mechanism should incorporate [a separate production-adjusted emissions intensity baseline for methane](#) to drive methane reduction under the safeguard mechanism.

We also urged against allowing Australia's major emitters to have unlimited access to carbon offsets to meet any methane emissions reduction targets. Instead we outlined that the safeguard mechanism should be amended to incentivise the mitigation of coal mine methane onsite. This is because it is more effective at reducing Australia's coal mine methane emissions and [cost effective](#) for major emitters. As we outlined to the Senate Committee:

“[We] don't think offsets will work with methane. CO2 and methane are very different gases. Most offsets are carbon offsets, carbon dioxide offsets, and methane is a completely different gas that behaves differently. It has a much shorter lifetime. Cross-offsetting is meaningless, and you need to physically get rid of methane going into the atmosphere, rather than trying to find a CO2 project. That has an impact over hundreds of years, whereas methane has an impact of almost immediately, so we would really advise against offsetting methane.”

Similarly, Carmel Flint, National Coordinator of Lock the Gate Alliance, [emphasised](#) that there are “a whole suite of tools that the IEA has identified that they [coal sector] could be using right now to reduce their direct methane emissions”.

To that effect, Senator Pocock’s additional comments, that formed part of the final report, recommended:

Methane abatement from Safeguard-covered facilities should only be tradeable with methane emissions of other Safeguard-covered facilities, and should be confined to the Safeguard Mechanism Credit market, not the Australian Carbon Credit Market.

Equally, the Senate Committee forewent recommending reforms relating to the regulation of new entrants to the scheme that would strengthen the integrity of the safeguard mechanism. We note, however, the support from a range of participants in the inquiry for the implementation of restrictions upon the use of ACCUs by new entrants to meet their emissions baseline limit. This would drive greater onsite emissions reduction from new entrants to the scheme.

As the federal Parliament considers the Senate Committee’s findings, we recommend the following cost effective measures to ensure the safeguard mechanism is able to effectively tackle Australia’s coal mine methane emissions in the future:

Key Recommendations

- **Improve MRV standards to accurately measure coal mine methane emissions**

All coal mines should be required to implement best practice methane measurement and monitoring, equivalent to Level 5 of the [Oil and Gas Methane Partnership 2.0](#).

- **Apply a separate production-adjusted emissions intensity baseline for methane emissions**

Ember [recommends](#) baseline emissions standards based upon international best-practice. The standard should be set at 3 kg of methane per tonne of coal for coking coal mines and 1 kg of methane per tonne of coal for thermal coal mines.

- **Limitations should be placed upon the use of ACCUs and SMCs by the energy sector to offset their methane emissions**

The safeguard mechanism should be amended to incentivise the mitigation of coal mine methane onsite, which Ember's [analysis](#) has found is both technically and economically feasible.

Next Steps

While the Senate Committee recommended that the Bill be passed, negotiations are ongoing in the Senate regarding what reforms should be integrated into the safeguard mechanism to ensure it delivers the 205 million tonnes of CO2 abatement by 2030 estimated by the Australian government.

However, there are ongoing opportunities to contribute to the strengthening of the safeguard mechanism as the Australian government [continues to consult](#) on amendments to national greenhouse and energy reporting rules and regulations that will underpin the implementation of the reformed safeguard mechanism.

We encourage the Australian government to use these opportunities to build upon the Senate Committee's recognition of Australia's coal mine methane problem, and to start implementing measures that would tackle it at the source.

Methodology

This policy response was developed from Ember's previous research on the [scale of Australia's coal mine methane emissions](#), how [Australia could deliver two-thirds of its Global Methane Pledge](#) by tackling this major source of emissions and how [cost effective reducing coal mine methane through the safeguard mechanism](#) would be.

Extensive reference has also been made to the Senate Standing Committee on Environment and Communications' Inquiry into the Safeguard Mechanism (Crediting) Amendment Bill 2022. The Senate Committee's [website](#) contains submissions, a transcript of the public hearings and its final report.

Acknowledgement

Chris Wright also contributed to this policy response. The inquiry evidence of Dr Sabina Assan, Anatoli Launay-Smirnov and Annika Reynolds is quoted throughout.