

# Submission to the Safeguard Mechanism: International Best Practice Benchmarks Consultation

11 August 2023

Dear Safeguard Mechanism Team,

Ember welcomes the opportunity to make a submission to the *Safeguard Mechanism: International Best Practice Benchmarks* consultation. Our submission is directed solely at setting international best practice benchmarks for new coal mine facilities regulated under the safeguard mechanism.

The setting of international best practice benchmarks should be determined primarily on whether the benchmark is compatible with Australia's climate targets and the objects enshrined under the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act). Ember emphasises that s 3(2) of the NGER Act outlines a list of safeguard outcomes that are to be achieved through the administration of that Act.

As such, Ember **recommends against** using only a comparison between foreign facilities and the domestic industry to determine international best practice benchmarks, as currently anticipated in the [draft guidelines](#). International best practice benchmarks should be consistent with the [international consensus](#) that coal mine methane emissions must be reduced significantly this decade to comply with a 1.5 degree pathway, and should be set in such a way that the safeguard outcomes will be achieved irrespective of new coal facility entrants to the safeguard mechanism.

## Setting the International Best Practice Benchmark for Run-Of-Mine Coal Production

The International Energy Agency's (IEA) [Net Zero by 2050](#) report emphasises that no new coal mines or expansions should be approved in order to meet net zero by 2050. Ember's [analysis](#) indicates that for Australia's coal mine methane emissions to align with a 1.5 degree pathway, coal production should fall from 500 Mt to 200 Mt by 2030, largely driven by a thermal coal phaseout. As such, any new coal mine entrants to the safeguard mechanism represent a significant risk to the achievement of Australia's climate targets and should be held to the most stringent of emissions intensity standards.

Furthermore, according to the [IEA](#), coal mines can mitigate approximately ~42% of their methane emissions by implementing onsite measures. In combination with electrification measures, we anticipate it will be feasible for new coal facilities to drastically reduce their emissions intensity, and offset the remainder.

Ember therefore recommends that the run-of-mine coal production variable should be set at **net zero** for new coal facility entrants to the safeguard mechanism, that is, **0 CO<sub>2</sub>-e per tonne of run-of-mine coal**. This is not beyond scope for new coal entrants, given the government has already [committed](#) to net zero or zero baselines for other facilities including new shale gas projects. Such a baseline would also send a strong policy signal incentivising onsite methane emission reductions to the greatest possible extent.

However, if the government is committed to the current framework proposed in the draft guidelines, Ember urges the government to give appropriate weight to ["adjusting for Australian conditions"](#) in the context of coal

mining. The depth of Australia's coal seams results in, on average, less gassy coal production than [some foreign jurisdictions](#). Furthermore, as a developed country that has pioneered a range of coal mine methane mitigation technologies, Australia is positioned to be the world leader in decarbonising its coal production, and should strive for ambitious **run-of-mine coal baselines that go beyond** current international practice.

As such, **Ember encourages the use of international standards to set international best practice benchmarks, notably the MMP.**

Finally, data on the emissions intensity of coal facilities varies globally, and every endeavour should be made to collate a comprehensive database that ensures a representative sample of coal facilities. Ember urges the use of comprehensive databases to determine international best practice facilities. The IMEO is currently developing a global database on emissions from coal facilities. The European Industrial Production Information Exchange has recently launched the [EU Mine Data Viewer](#), and Ember is also developing a global database of coal mine methane emissions.

### Engaging with the Best Practice Standards Set by the MetCoal Methane Partnership

Ember commends the Safeguard Mechanism Team for engaging with international best practice standards, including the [MMP](#). The MMP draft standards, which have been developed collaboratively between the UNEP/IMEO and participating companies, have proposed that a **best practice intensity standard for metallurgical coal should be 1-3 kg of methane per tonne of marketed coal** (MMP intensity standard).

Ember notes that this proposed intensity standard differs from the scope of the production variable being set by the Safeguard Mechanism Team in important respects. First, the MMP intensity standard is directed at metallurgical coal, rather than thermal and metallurgical coal. Second, the MMP intensity standard reflects best practice for underground coal facilities rather than open cut coal facilities, which should be [required](#) to comply with a baseline of 0-1 kg of methane per tonne of coal.

Ember encourages the setting of a more stringent benchmark for new thermal coal entrants given the impact of thermal coal on climate change, and similarly, a lower baseline for new open cut coal facilities given their expected lower methane intensity.

### Appropriate Principles for Setting Benchmarks

The four principles (see 4 of the [draft guidelines](#)) are not entirely aligned with the objects of the NGER Act. Ember commends the recognition that high quality data and robust methodologies should underpin the setting of international best practice benchmarks. However, Ember recommends that the principles of *practical* and *consistent* be revised.

The concept that benchmarks should be set with consideration of what is 'simple' and 'low cost as possible' is entirely unrelated to the NGER Act's objects and the purpose of the safeguard mechanism. Indeed, the *practical* principle is likely to undermine the setting of robust standards that drive significant emissions reductions. Given the safeguard mechanism includes a cap on the cost of Australian carbon credit units, there is already a safety valve in the scheme to balance costs with emissions reductions.

Ember also considers the principle of *consistent*, as currently expressed in the draft guidelines, to be a missed opportunity to ensure international best practice benchmarks are set consistently with the international consensus on what emissions cuts are necessary to align with a 1.5 degree pathway. We urge the revision of the *consistent* principle to focus on consistency with Australia's international climate commitments (expressed at the highest level under the *Paris Agreement*, namely the long-term temperature goal expressed in Art 2).

We recommend the inclusion of the principle of *science-based* to ensure that international best practice benchmarks are set with consideration of the best available scientific knowledge regarding the extent of emissions that is technically feasible to mitigate. This reflects the preamble and intention of the *Paris Agreement*.

In summary, Ember makes the following recommendations:

- 1** The emissions intensity for the run-of-mine coal production variable should be set at net zero for new coal facility entrants to the safeguard mechanism, that is, **0 CO<sub>2</sub>-e per tonne of run-of-mine coal**. This is consistent with Australia's international climate commitments.
- 2** Any international best practice benchmarks set based upon a comparison with foreign coal facilities must be adjusted according to Australia's geological conditions and likely comparatively lower methane intensity.
- 3** The MetCoal Methane Partnership is an appropriate standard against which to set the run-of-mine coal production variable for new coal facility entrants.
- 4** International best practice benchmarks should be set based upon the following principles: effective, robust, consistent (revised) and science-based.

Ember has previously [assessed](#) the extent that Australian coal facilities can mitigate their emissions, and welcomes the opportunity to further consult with the Safeguard Mechanism Team and can be contacted via the below contact details.

**Annika Reynolds**, Climate Policy Advisor  
[annika@ember-climate.org](mailto:annika@ember-climate.org)

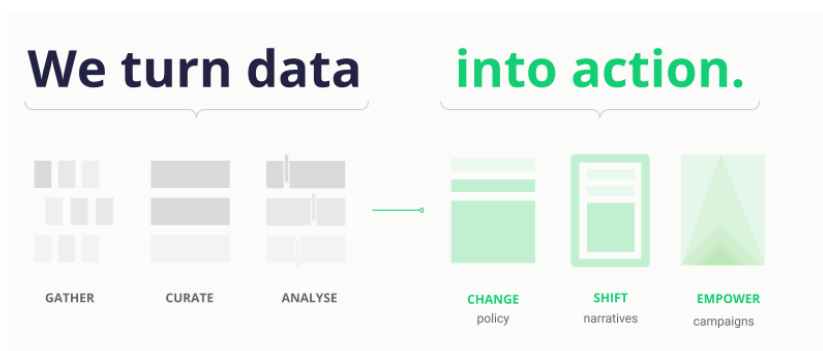
**Chris Wright**, Climate Strategy Advisor  
[chris.wright@ember-climate.org](mailto:chris.wright@ember-climate.org)

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## About Ember

Ember is an energy think tank that aims to shift the world to clean electricity using data.

Its team and board of energy experts are based in Australia, the European Union and the United Kingdom.



# Submission to the Safeguard Mechanism: Production Variables Update

15 August 2023

Dear Safeguard Mechanism Team,

Ember welcomes the opportunity to make a submission to the *Safeguard Mechanism: Production Variables Update* consultation. Our submission is solely in relation to the proposed production variable of 0.0653 of CO<sub>2</sub>-e per tonne of run-of-mine coal (see rr 2 and 7 of the Exposure Draft of the National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023).

We understand that the baselines of existing coal facilities under the safeguard mechanism will be determined from the algorithm set out at r 11 of the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Safeguard Mechanism Rule), with existing facilities' baselines [split](#) 50:50 between the calculated industry average and its site-specific emissions intensity by 2029-2030. Ember's analysis is derived from those policy settings, and if there are further amendments to the Safeguard Mechanism Rule, we would reconsider our position.

Ember is of the opinion that the proposed production variable is appropriate and should incentivise significant emissions reductions at Australia's most methane intense coal facilities, leading to an overall decrease in Australia's coal mine methane emissions. However, we have ongoing concerns that crediting benefits to some coal facilities, namely open cut coal facilities, will undermine efforts to achieve emissions reductions at those particular facilities.

## Driving Coal Mine Methane Reductions in Australia

The Australian government's reforms to the safeguard mechanism have been aimed at ensuring the scheme delivers genuine emissions abatement from Australia's largest polluters, including 59 coal facilities that emit over 100,000 CO<sub>2</sub>-e Scope 1 emissions per year (although some mines report as multiple facilities).

Ember has previously made [submissions](#) on the safeguard mechanism, emphasising the need to set industry average baselines that target the most methane intense coal mines as a priority. Our [analysis](#) shows that the most methane intense quartile of coal production emits 68% of the industry's total Scope 1 emissions. Incentivising coal mine methane mitigation at these mines has the capacity to drive significant emissions reduction.

Our analysis indicates that the proposed production variable for run-of-mine coal (0.0653 per tonne of CO<sub>2</sub>-e) will obligate the gassiest coal mines (mostly underground facilities) to make **steeper emissions reductions** than if their baselines were set on site-specific production variables alone. We calculate that across the industry, underground coal facilities reporting to the safeguard mechanism could be incentivised to reduce their emissions by up to 1 million tonnes of CO<sub>2</sub>-e by 2030 (assuming production remains constant and no mines close).

This is appropriate given the high average methane intensity and significant abatement opportunities for underground coal facilities. According to the [International Energy Agency's analysis](#), the total cost of

implementing best practice methane mitigation measures across Australia's coal mines would be approximately \$500 million AUD annually. This would deliver a 42.6% reduction in Australia's coal mine methane emissions by 2030, largely [driven](#) by underground coal facilities implementing improved housekeeping, extensive methane drainage and ventilation air methane abatement measures.

We anticipate that the proposed production variable will not incentivise the same level of emissions reduction at open cut coal facilities, partially because those facilities report using methane emissions factors that are significantly lower than the proposed production variable. Instead we expect that a number of open cut coal facilities will have their baselines increase to 2030 as they shift from predominantly site-specific variables to a greater share of the industry average, resulting in the generation of safeguard mechanism credits (SMCs) for those facilities.

Ember commends the government's efforts to establish a production variable for run-of-mine coal that sets an appropriate policy signal to drive coal mine methane emission reductions at Australia's most methane intense coal facilities. **We are of the opinion that the current proposed production variable of 0.0653 CO<sub>2</sub>-e per tonne of run-of-mine coal achieves an appropriate balance, and will drive genuine coal mine methane emissions reduction.**

Ember notes that the proposed standard of 0.0653 CO<sub>2</sub>-e per tonne of run-of-mine coal is within the best practice methane intensity standard proposed by the MetCoal Methane Partnership (1 to 3 kgs of methane per tonne of marketed coal).

### Ensuring Safeguard Mechanism Credits Have Integrity

The major risk associated with the current proposed industry average production variable is that it is likely to result in a number of open cut facilities generating modest to significant SMCs without onsite abatement action. Our calculations indicate that for most open cut coal facilities any SMCs generated will be minimal, with the exception of open cut coal facilities reporting under method 2 which are likely to experience particular windfall gains from this policy adjustment.

While SMCs are generated within a closed scheme, it is still essential that these credits represent genuine abatement rather than just trading baseline values between facilities. Any SMCs generated will be traded at a monetary value and are, in practice, fungible with Australian Carbon Credit Units (ACCUs). As such, SMCs should be held to the same integrity standards as ACCUs.

Ember is concerned that the current regulatory framework for the safeguard mechanism does not effectively ensure the integrity of any SMCs generated by coal facilities by virtue of the proposed industry average production variable, as follows:

- First, due to the current framework for reporting methane emissions, open cut coal facilities are able to rely upon factor-based emissions estimates that are not regularly updated, directly monitored or independently verified. This form of measurement carries the [significant risk](#) that open cut coal mines will be under-reporting their emissions, such that they fall below a facility's baseline, when in reality, the methane emissions are far higher;
- Second, allowing open cut coal facilities to generate SMCs without taking any abatement action is contrary to the principles that underpin carbon crediting. It would be a perverse outcome of this policy to generate credits without requiring coal facilities to prove [additionality](#); and
- Third, a policy setting where a large portion of open cut coal facilities automatically fall under the baseline does not incentivise onsite mitigation at those facilities. It is unfortunate that the safeguard mechanism, which is an emissions reduction scheme measured facility-by-facility, is not seeking to incentivise facility-by-facility emissions reduction.

Ember recommends that the government implement integrity measures within the safeguard mechanism to ensure that any SMCs generated by open cut coal facilities represent genuine *additional* abatement, rather than just windfall gains to certain open cut facilities. An additionality requirement could be readily integrated into the matters that the Regulator must consider under rr 56-57 of the Safeguard Mechanism Rule to issue SMCs for a financial year or multi-year periods. We emphasise that it is appropriate within the policy parameters of the safeguard mechanism to allow open cut coal facilities to generate SMCs for genuine abatement actions, including [extensive pre-mine drainage](#) and electrification measures.

We also urge the Australian government to commit to significant reforms to the *National Greenhouse and Energy Reporting Act 2007* (Cth) and associated regulations governing the measurement of coal mine methane emissions. At a [minimum](#), open cut coal facilities should be required to directly measure and monitor their coal mine methane emissions. Ember has previously made [submissions](#) to, and is currently engaged in consultations with, the Climate Change Authority, who is reviewing this scheme in 2023.

**Annika Reynolds**, Climate Policy Advisor  
[annika@ember-climate.org](mailto:annika@ember-climate.org)

**Chris Wright**, Climate Strategy Advisor  
[chris.wright@ember-climate.org](mailto:chris.wright@ember-climate.org)

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