

Public Comments to Australia's Department of Climate Change, Energy, the Environment and Water on the reconsideration of 15 coal projects

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Delineation

This document is Ember's feedback regarding the reconsideration of 15 coal mine proposals, published by the Department of Energy, Climate Change, the Environment and Water.

Our feedback focuses on coal mine methane emissions, in which the team preparing this note have expertise and up to date knowledge of the issue globally and in Australia. Part of this paper also has comments regarding the issue of anthropogenic methane emissions in general, where the writers of this report have strong understanding.

Our comments may be relevant to other sector-specific methane emissions such as oil and gas; but this is outside of the scope of this document.

Overview

We welcome the opportunity to comment on the reconsidered coal projects.

This document describes the importance of specifically focussing on methane emissions from the coal mining sector in Australia's and proposes actions on each of coal mine proposals currently under reconsideration.

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Chapter 1

Importance of Coal Mine Methane

Australia has a duty to protect its people and environment from climate change. We highlight two key methane targets which will be vital to put Australia on a climate safe trajectory, and address the country's ambitions for climate action.

Over the last few years, methane has leapt to the forefront of international climate efforts, as it is now seen as the single most effective opportunity to reduce global warming in the short term. On average, over a period of 20 years the greenhouse gas is over 80 times more potent than carbon dioxide, and emissions are increasing at [record](#) rates.

Methane is inherently linked to any coal deposit. When mining coal, whether underground or open-cut, methane is released to the atmosphere. In the case of underground mines, these emissions can continue for decades after the mining ends.

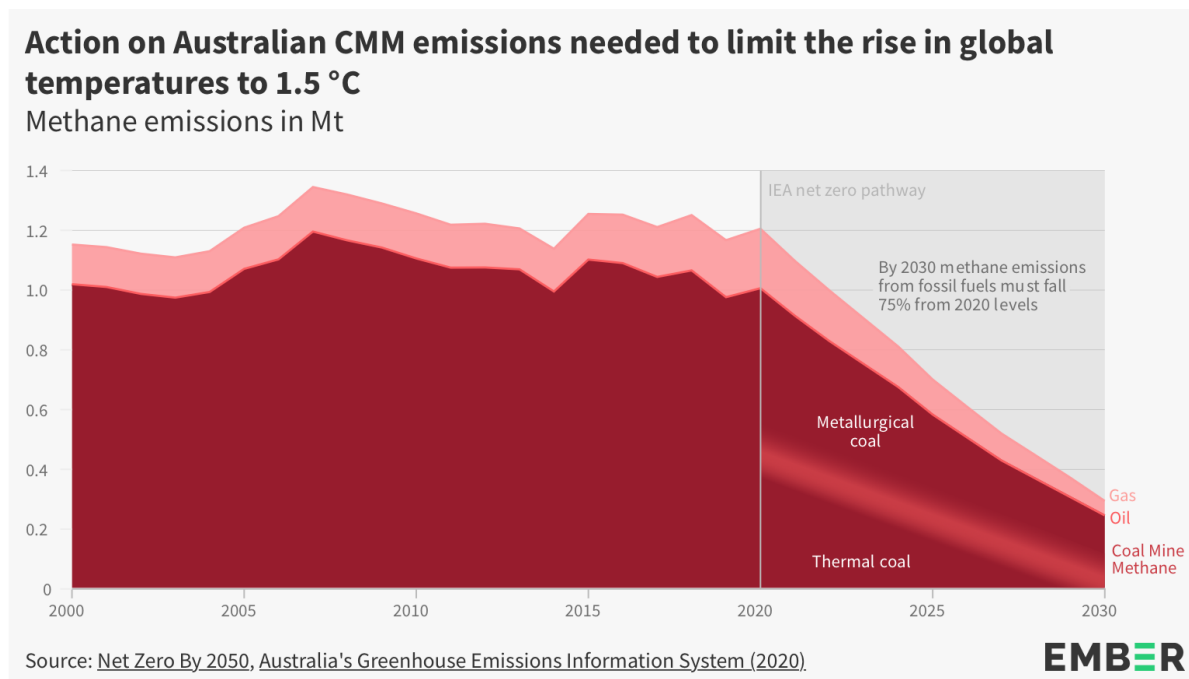
Coal mines in New South Wales and Queensland dominate Australia's coal mine methane (CMM) emissions, releasing over 1 million tonnes of methane in 2020 ([AGEIS](#)). In Australia, coal mines are responsible for over 75% of the country's methane emissions from the energy sector and 23% of its total methane emissions.

- For an in-depth briefing on the scale of methane emissions from Australia's coal mines please see our report "[Tackling Australia's Coal Mine Methane Problem](#)".
- For more information on CMM reduction potential in Australia, and links to further documentation on mitigation technologies currently available to coal mines, see our report "[Australia's coal mines can deliver two thirds of methane cuts](#)"

Key Methane Targets

75% reduction in energy sector methane emissions by 2030

The International Energy Agency (IEA) [study](#) of how to transition to a net zero energy system by 2050, found that methane emissions from the coal mining industry must be reduced by 75% from 2020 levels by 2030 to limit the rise in global temperatures to 1.5C. This decline needs a steep reduction in thermal coal use for electricity and an increase in the deployment of emissions reduction measures, in particular for metallurgical coal which will still be critical for steel production in 2030.



30% methane emissions reductions by 2030

Recently (October 23, 2022), Australia has joined the [Global Methane Pledge](#). The Methane Pledge is a non-binding but diplomatically significant document, where its signatories recognise that in order to keep global warming to 1.5 degrees Celsius, action must be taken to reduce methane emissions by 2030. The Pledge notes that methane's short atmospheric lifetime means that by reducing emissions we would gain an opportunity to quickly restrain global warming, giving the world a chance to tackle longer-acting greenhouse gases.

To achieve this, signatories commit to improve their measurement, reporting and verification (MRV) processes and to mitigate all feasible emissions from the waste and energy sectors. The goal is for collective action to reduce global anthropogenic methane emissions by over 30% by 2030.

Chapter 2

Reconsidered Coal Projects

Our analysis found that if the 15 reconsidered coal projects go ahead, Australia's annual coal mine methane emissions will increase by approximately 190 thousand tonnes a year - adding one fifth to Australia's already hefty annual coal mine methane emissions.

The majority of these emissions, 120 thousand tonnes, or 63% of the additional emissions will be from thermal coal mines.

We found five of the proposed projects (China Stone, Winchester South, Caval Ridge, The Range and Alpha Rail) have used outdated emission factors to estimate their fugitive emissions. Emissions from these mines are likely to be higher than the figures used in this analysis.

For six of the proposed projects (Spur Hill, Meandu Mine, Valeria, Lake Vermont, Baralaba and Moorland) there was no publicly available emission estimate for fugitive emissions, for these mines Ember estimated potential emissions using default emission factors and data from similar coal projects.

[See the table below for individual mine information, and recommendations for action.](#)

Decision for thermal coal mines

Closure of the gassiest thermal coal mines and crucially, not opening new coal mines. This applies particularly to thermal coal used for electricity generation as this can be replaced with renewable energy. [Our research](#) has demonstrated that it is not feasible to achieve the reduction targets necessary to keep global warming below 1.5C by only implementing mitigation technologies, without action on reducing coal production.

Decision for metallurgical coal mines

We advise against the opening of new, gassy metallurgical coal mines as even with intensive mitigation measures, there is still the probability of significant emissions. For non-gassy metallurgical coal mines, we suggest approval should be given only if they mitigate methane emissions using readily available technologies, including VAM destruction for underground mines, and extensive pre-drainage for open-cut mines.

We also recommend that all metallurgical coal mining companies be required to cooperate with the UNEP's International Methane Emissions Observatory [to develop state of the art methane measurement methodologies for coal mines](#). Expanding and furthering such collaborations will aid in improving the reporting of emissions, and facilitate mitigation of methane from specific CMM sources.

A particularly relevant initiative is the new [partnership for the metallurgical coal sector](#), to measure and mitigate methane emissions. Once negotiated, the Framework will be similar to the Oil and Gas Methane Partnership (OGMP) 2.0 framework.

Australia's 15 proposed new coal mines would increase the country's coal mine methane emissions by almost a fifth

■ Thermal ■ Metallurgical

Mine	Annual capacity (Mt)	Estimated annual methane emissions (kT)	Recommendations
Narrabri Stage 3	11	1170	Oppose
Saraji East		502	Oppose
Spur Hill*		502	Oppose
Ensham	12	430	Oppose
China Stone †	38	352	Oppose
Meandu Mine King 2 East*	11	345	Oppose
Winchester South †	15	290	Oppose
Valeria*	16	272	Oppose
Lake Vermont Meadowbrook*		259	Approved only with significant mitigation
Mt Pleasant Optimisation Project	21	179	Oppose
Caval Ridge Mine Horse Pit †	15	162	Approved only with significant mitigation
Baralaba South*		102	Oppose
The Range †		90	Oppose
Moorlands*		32	Oppose
Alpha (mine and rail) †	40	11	Oppose

Source: Ember's own research, EIS

† EIS calculations are based on outdated emission factors, emissions likely to be higher

*No public information on emissions estimates, calculations by Ember

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