

Climate Change Licensee Requirements

Submission in response to NSW EPA's consultation on proposed
requirements for large emitters

October 2025

About The Superpower Institute

The Superpower Institute's (TSI's) mission is to help Australia seize the extraordinary economic opportunities of the post-carbon world.

A net zero Australian economy will reduce global emissions by just over 1 per cent. But if Australia successfully seizes the economic advantage in exporting zero emissions goods, this can create an opportunity for full employment with rising incomes for a growing population sustained over more than a generation, and reduce global emissions by up to 10 per cent.

Renowned economist Ross Garnaut and economic public policy expert Rod Sims have joined forces through The Superpower Institute, to focus on practical research and policy to unlock this opportunity. The Institute specialises in the policy settings and market incentives needed to make Australia an economic superpower and provides practical knowledge to governments and industry to realise this opportunity.

TSI works across the building blocks of the superpower economy including: renewable energy, green hydrogen, land carbon and minerals processing; the potential zero carbon export products including green iron and green aluminium; and the enablers of this economy including economic and fiscal policy, trade policy and regional development.

Please contact TSI's CEO Baethan Mullen and Chief Scientist Professor Peter Rayner via info@superpowerinstitute.com.au for any further information.

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Submission

TSI welcomes the opportunity to contribute to the New South Wales EPA's Consultation on requirements for large emitters. This submission includes feedback on all three of the consultation drafts relevant to this consultation.

Proposed Climate Change Licensee Requirements

Page 6 of this consultation draft correctly recognises that NSW is not on track to meet its 2030 and 2035 emissions reduction targets. It is also accurate to say that NSW is in 'the early stages of regulating for climate change' (also page 6); however, governments and large emitting industries have been aware for over 30 years of the need to reduce emissions. Due to the lack of action to date in reducing emissions, it is now necessary for abatement efforts to be rapidly accelerated. As such, we encourage the EPA to be more ambitious across the board in bringing forward measurement and mitigation methods, particularly relating to methane emissions (which have the highest short term warming impact and therefore represent the best option for mitigation over the next decade).

Annual Climate Change Emissions Report (page 9 and Appendix)

In addition to the data indicated in the consultation draft, licensees should also be required to disclose Scope 3 emissions into their emissions report.

Climate Change Mitigation and Adaptation Plans (page 10)

Please refer to our comments below on the *Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements* consultation draft.

Specific mitigation actions (page 11)

We agree with the initial focus being on the coal mining sector, and recognise the need for signalling incoming requirements for business. However, consultation timeframes and lead times for new regulations should be as short as possible given the urgency of reducing emissions.

We understand that many businesses have factored ACCUs into their mitigation plans. However, genuine emissions abatement should be strongly preferred to offsetting

from a policy perspective, and mitigation policies should not be contingent on whether they allow unfettered access to ACCUs.

Emissions measurement (page 11)

We support the implementation of regional greenhouse gas monitoring networks. We consider that facility-level monitoring of high-emitting sites across all sectors should be implemented concurrently with regional networks, rather than subsequently, to allow for more timely monitoring and input into updated estimation methodologies. This will also support bringing forward licence limits (discussed below).

We do not agree with the proposed exemptions for continuous methane monitoring (VAM) in mines in the Western Coalfields, or that are due to close. Monitoring should rather be extended to all coal mines that are not yet fully remediated to ensure that leaks from non-operational mines are identified and rectified.

We also do not agree with the proposed minimum emissions threshold of 25,000 t CO₂e for underground coal mines, and instead consider that all underground coal mines should implement continuous monitoring (or semi-continuous monitoring for smaller facilities).

There is evidence of significant uncertainty in methane measurements and monitoring, which further increases these risks. Preliminary results from Open Methane¹ show evidence that methane emissions from Australia's twenty highest-emitting fossil fuel sites may be emitting up to twice as much methane as is being self-reported through mechanisms such as the National Greenhouse and Energy Reporting Scheme.² This is supported by other recent studies.³ The reporting errors are most likely to be systematic, meaning that they apply regardless of the size or stage of the mine site.

¹ Open Methane is a free, open source platform that utilises satellite observations and environmental modelling to detect, measure and locate methane emissions in Australia.

² Rayner and Grant, Groundbreaking Satellite Monitoring Tool Shows Significant Underestimation of Methane Emissions from Fossil Fuel Sites (9 October 2024), <https://openmethane.org/analysis/top-methane-emitting-hotspots>.

³ See, for example, Karacan et al., 'Mitigating Climate Change by Abating Coal Mine Methane: A Critical Review of Status and Opportunities', *International Journal of Coal Geology* 295 (December 2024): 104623, <https://doi.org/10.1016/j.coal.2024.104623> and Borchardt et al., 'Insights into Elevated Methane Emissions from an Australian Open-Cut Coal Mine Using Two Independent Airborne Techniques', *Environmental Science & Technology Letters* 12, no. 4 (8 April 2025): 397–404, <https://doi.org/10.1021/acs.estlett.4c01063>.

Greenhouse gas emission licence limits (page 15)

We support evidence-based limits being imposed on new and existing licencees. This should be implemented as soon as possible, and should consider limiting emissions of individual greenhouse gas species, rather than on a tCO₂e basis.

We also consider that coal mines should be the first sector considered for evidence-based limits, noting the findings of the NSW Productivity and Equality Commission that Australian governments must make decisions as soon as possible about the future of coal mining.⁴

Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements

We support the requirement that licencees provide sufficient data to allow for the replication of emissions calculations (page 12).

As noted above, we consider that CCMAPs should include Scope 3 emissions. This is particularly important for fossil fuel sectors, where downstream Scope 3 emissions represent the bulk of the supply chain emissions for the industry (and hence the industry's climate impact, as noted in recent challenges to mining expansions).

For facilities with fixed lifetimes such as coal mines, emissions estimates should be provided for the expected life of the facility (including end of life activities), rather than for 10 years (page 13). This should be updated and revised every three years, taking into account factors such as direct measurement activities (which may show over- or under-estimates of particular emission sources), the deployment of new mitigation activities or technologies, changes in market conditions, or changes in the expected life of the facility.

Page 17 states that carbon offsets used *should* meet offset integrity requirements (emphasis added). This should instead be a hard requirement; i.e., carbon offsets *must* meet offset integrity requirements.

⁴ NSW Productivity and Equality Commission, *Ensuring a Cost-Effective Transition, Achieving Net Zero Paper 1* (November 2024), <https://www.productivity.nsw.gov.au/sites/default/files/2024-11/NSW-Productivity-and-Equality-Commission-Achieving-net-zero-paper-1-Ensuring-a-cost-effective-transition.pdf>.

Proposed Greenhouse Gas Mitigation Guide for NSW Coal Mines

A recent analysis by Climate Resource⁵ of least-cost emissions reduction scenarios consistent with 1.5 to 2 degree outcomes found that at both global and national levels, methane emissions from energy (as opposed to agriculture, forestry, and other land uses) need to decline rapidly by 2030. For example, in Australia methane emissions from energy are reduced by between 73% and 79% by 2030 relative to 2020, depending on whether the scenarios allow for peak warming of 1.6 degrees or 1.8 degrees (see Figure 2). This implies reducing fossil fuel methane emissions is some of the least cost mitigation in Australia and globally. If the reductions in fugitive methane emissions from fossil fuels are not achieved, the cost of limiting warming will be higher.

Australia: % reduction in emissions relative to 2020

Derived from NGFS5 scenarios evaluated under peak warming of 1.8°C, 33rd, 50th and 66th percentile range

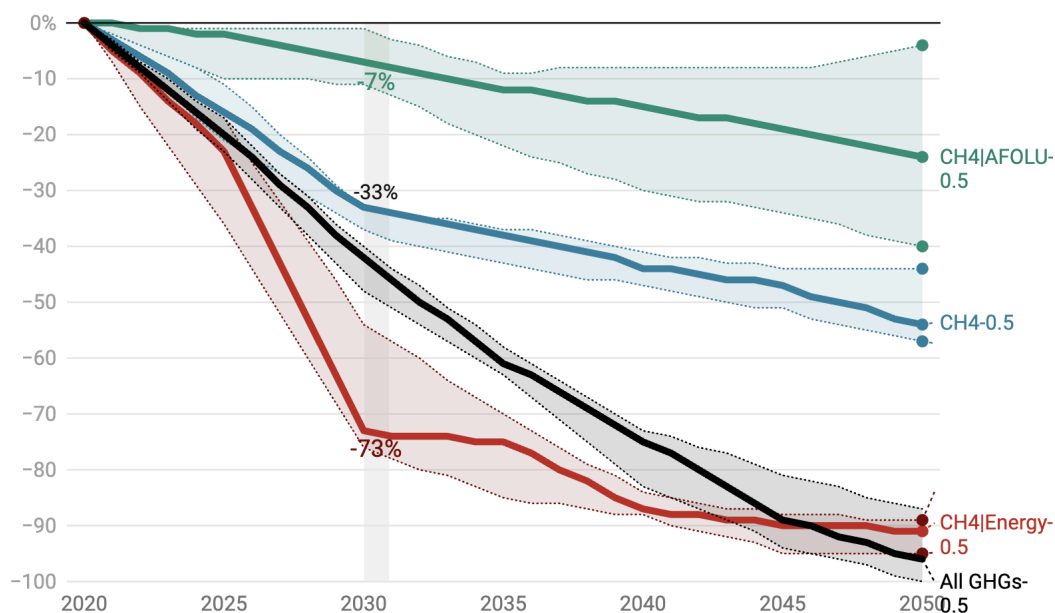


Figure 2: Australian methane emissions from energy and land use, under scenarios with a peak warming of 1.8 degrees.⁶

Conversely, increasing methane emissions in the near term (including through the expansion of fossil fuel extraction and consumption) risks making it more difficult to

⁵ Climate Resources specialises in assisting governments and business to tackle physical climate risks, transition challenges and opportunities on our journey to a zero-emissions future – <https://www.climate-resource.com/>.

⁶ Burdon, Lewis, and Spiller, 'Australian Methane Targets Consistent with the Paris Agreement Temperature Goal - Insights from Integrated Assessment Models' (June 2025), https://drive.google.com/file/d/1ic0N_OFSwHJdw0haGD_k2iXni0qwn8x_/view.

reach net zero, and also increases the likelihood that even if we meet net zero, we will exceed temperature perturbation targets.

As such, all efforts to rapidly mitigate coal mine methane emissions should be pursued, and we support the EPA's focus on coal mines with this consultation draft.

As noted above, we do not agree with the EPA providing advance notice of regulatory change for the purpose of coal mine operators accruing carbon credits. The aim of regulation should be to pursue genuine and ambitious emissions abatement, in line with the mitigation hierarchy on page 16 of the *Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements* consultation draft. Offsetting is the lowest-ranked of the mitigation hierarchy, and should not be prioritised.

We also consider that all coal mines in New South Wales should be covered by the provisions of this consultation draft, regardless of location, emissions threshold, or closure date. In particular, mines should be required to continue to measure emissions and undertake abatement initiatives during mine closure and remediation.

Pre-drainage and methane utilisation should be required of all mines, with flaring to be undertaken in very limited circumstances. The provisions relating to pre-drainage and VAM abatement should also be brought forward to the earliest possible date.

Exemptions from mitigation measures should not be permitted; rather, if a mine is unable to satisfy mitigation requirements its operations should be either closed or suspended until such time as it can meet the requirements.