

SUBMISSION

Submission to the Department of Climate Change, Energy, the Environment and Water

Submission to the 2026-27 Safeguard Mechanism Review

18 September 2026

The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

As governments seek to reduce greenhouse gas emissions, major economies are increasingly likely to price carbon domestically and implement carbon border adjustments, as the European Union now does. Australia should prepare for falling demand for high-emissions exports and rising demand for green exports; the Safeguard Mechanism can help position Australian industry for this transition.

A key challenge is ensuring our existing production plants remain competitive. The current trend is for new large industrial plants to be built in places with fewer emissions restrictions, like Indonesia (Leng, 2026; Dominikus, 2025). A poorly tuned Safeguard regime could drag on these exporting Australian firms. Safeguard Mechanism rules should remain stable over time to bring certainty to large (\$1-5 billion) long-term (20–25-year cycles) investments in hard-to-abate industries. The design of a facility largely sets its lifetime emissions. It is therefore important for the current review to make minor changes to the Safeguard Mechanism to better support industry to achieve technology-driven emissions reductions.

ATSE makes the following recommendations to refine Safeguard Mechanism policy settings:

Recommendation 1: Define sector-specific standards for low-carbon technologies, linked to streamlined approval processes.

Recommendation 2: Encourage low-carbon design by applying a discount rate to ACCUs for new facilities, facility expansions, and significant renewal of capital equipment on existing facilities that do not meet these standards.

Recommendation 3: Consider reducing the Safeguard Mechanism threshold.

Recommendation 4: Sequence post-2030 coal mining baseline arrangements with improvements to National Greenhouse and Energy Reporting (NGER) fugitive methane estimation methods and ensure method-driven changes in reported emissions are handled as measurement corrections rather than as headroom or emissions growth.

Recommendation 5: Base eligibility to trade-exposed baseline adjustment (TEBA) on carbon leakage risk and not on the Safeguard Mechanism emissions cost.

Embedding best practices in the Safeguard Mechanism

Beyond 2030, on-site abatement costs are likely to rise; as cheap abatement tonnes are exhausted the more expensive tonnes remain. Meanwhile, technical progress should reduce the technology-specific abatement costs. The Safeguard Mechanism needs to cope with rising abatement costs, promote technical development and encourage early adoption of low-carbon technologies.

Australian Carbon Credit Units (ACCUs) can support compliance with the Safeguard Mechanism and provide a mechanism for abatement to occur where it is cheaper. Recent reviews have concluded that ACCUs represent genuine abatement and that the scheme does not require major redesign (Chubb, 2022; Climate Change Authority, 2026). However, it is important that ACCUs are not used excessively to delay investment in lowering on-site emissions; this has been identified as an issue for hard-to-abate sectors (Investor Group on Climate Change, 2026).

During 2024-25 net Safeguard emissions fell faster at 5.5% than gross (covered) emissions at 2.4%, and the gap was met by 10.8 million ACCUs. On-site emissions were also reduced modestly. As facilities delivered emissions below their baseline, they were rewarded with 2.6 million Safeguard Mechanism Credits (SMCs) that have a higher price than ACCUs and can be traded (Carbon Market Institute, 2026). These are indications that the Safeguard Mechanism is now closer to achieving its purpose. Further adjustments could support the objectives of the Safeguard Mechanism.

Any new industrial asset is where emissions are most cheaply avoided and most expensively locked in. The Safeguard Mechanism will reduce on-site emissions more effectively if it defines standards for low-carbon

approaches for these new assets and raises the cost of abatement if these standards are not met. The Safeguard Mechanism objectives would be supported by defining sector-specific standards for best-practice, economic, low-carbon technologies in key emitting industries, considering both last-used technology and best-available technology. These standards would define a technology pathway, rather than an intensity number as already provided for in the Safeguard Mechanism, and would also apply to major capital renewal at existing facilities. These standards could be linked to the Environment Protection and Biodiversity Conservation updates that simplify and speed up permitting for low-carbon projects. These standards should also be met to attract direct SMC crediting and co-investment from the Net Zero Fund, amongst others. Discounting ACCU use (for example, 0.5 tonnes of abatement, or 0.33 tonnes, not 1 tonne) could be used for new assets that do not meet the standards. Discounting ACCUs would be used only for genuinely unavoidable residual emissions after a facility has exhausted the available on-site options (ATSE, 2025). These measures will have a substantial impact over investment cycles but avoid raising ACCU costs now.

Another option for lowering carbon emissions is to gradually expand the Safeguard Mechanism. The Productivity Commission has identified this as an opportunity (Australian Productivity Commission, 2025). The Productivity Commission has suggested lowering the emissions threshold from 100,000 tonnes (of carbon dioxide equivalent emissions) to 25,000 tonnes. Some experts consulted for ATSE's Decarbonising Diesel Industries report also suggested reducing the Safeguard Mechanism threshold. One desirable outcome of lowering the threshold would be to incentivise the mining sector to transition away from diesel. This could be further supported with reforms to the fuel tax credit scheme. Additionally, updating the proportional share of the Safeguard Mechanism to 29.8%, as proposed in the consultation paper, would support alignment with the emissions reduction pathway.

Recommendation 1: Define sector-specific standards for low-carbon technologies, linked to streamlined approval processes.

Recommendation 2: Encourage low-carbon design by applying a discount rate to ACCUs for new facilities, facility expansions, and significant renewal of capital equipment on existing facilities that do not meet these standards.

Recommendation 3: Consider reducing the Safeguard Mechanism threshold.

Accurately applying the Safeguard Mechanism to coal mining

High-quality emissions monitoring and reporting is critical to a functioning Safeguard Mechanism regime, as highlighted in ATSE's submission to the previous Safeguard Mechanism consultation (ATSE, 2023). Measuring coal-mine emissions illustrates the challenges that arise when emissions are difficult to quantify and verify, undermining the fairness of baseline setting.

As the consultation paper notes, coal mining accounts for around 24% of covered emissions, of which 19.5 Mt is methane, and these emissions have been broadly stable (DCCEEW, 2026a). Fair baseline setting depends on the quality of National Greenhouse and Energy Reporting (NGER) emissions estimates. Recent Australian airborne studies in the Bowen Basin found good agreement between top-down and reported estimates for underground mines, but a systematic positive bias for open-cut mines whose causes are still being investigated. The Department is reviewing NGER Method 2 for open-cut mines, and the Expert Panel on atmospheric measurement of fugitive methane will advise government in 2027 (DCCEEW, 2026b). ATSE's view is that post-2030 baseline arrangements for coal should be sequenced with these NGER method improvements. The hybrid weighting should not be locked in beyond 2030 until improved open-cut methods are in place, and any increase in reported emissions arising from a change in estimation method should be treated as a measurement correction, not as headroom, real emissions growth, or a change in the sector's proportional share, with transitional provisions that preserve consistency of baselines across years.

Recommendation 4: Sequence post-2030 coal mining baseline arrangements with improvements to National Greenhouse and Energy Reporting (NGER) fugitive methane estimation methods and ensure

method-driven changes in reported emissions are handled as measurement corrections rather than as headroom or emissions growth.

Improving Trade Protection in the Safeguard Mechanism

Trade-exposed baseline adjustments (TEBA) give the most exposed facilities a reduced baseline decline rate: a floor of 1% instead of 4.9% per year. This is intended to temporarily provide eligible facilities with relief from full compliance from the Safeguard Mechanism. Eligibility is based on a facility's Safeguard Mechanism costs relative to earnings (Clean Energy Regulator, 2026). There are two problems. First, as on-site abatement reduces Safeguard Mechanism costs it can eliminate eligibility for TEBA. This can disincentivise facilities to reduce emissions. Second, if ACCU prices rise, or discounting is applied to new facilities, more facilities will become TEBA-eligible. A producer facing carbon leakage risk can sit just below the TEBA threshold while those facing no such risk qualify for TEBA. An option to address this is to re-base TEBA eligibility on sectoral carbon-leakage risk drawing on the leakage-risk categorisation in the Carbon Leakage Review (DCCEEW, 2025).

When applying any reforms to the TEBA concessions, a key consideration is the total Safeguard Mechanism target emissions reduction budget. As the sum of all facility baselines should equal the Safeguard targets, this necessarily limits TEBA concessions. Anchoring the TEBA concession to a benchmark would support the Safeguard Mechanism to realise its purpose of driving down emissions. A cap-reconciliation device (analogous to the correction factor the EU uses to reduce allocations that would breach the cap) is one option to ensure concessional baselines cannot exceed the budget.

ATSE agrees with the proposal to explore a Border Carbon Adjustment to protect trade-exposed industries while encouraging decarbonisation. Ideally, adoption timing should harmonise with similar plans amongst Australia's trading partners.

Recommendation 5: Base eligibility to trade-exposed baseline adjustment (TEBA) on carbon leakage risk and not on the Safeguard Mechanism emissions cost.

ATSE thanks the Department of Climate Change Energy, the Environment and Water for the opportunity to respond to the Safeguard Mechanism Review 2026. For further information, please contact academypolicyteam@atse.org.au.

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