Climate Energy Finance
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CLIMATE ENERGY FINANCE

Submission: Safeguard Mechanism Review Consultation

Climate Energy Finance (CEF) submission to the public consultation of Department of Climate Change, Energy, the Environment, and Water (DCCEEW) on the Safeguard Mechanism Review

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Climate Energy Finance Submission

Climate Energy Finance (CEF) welcomes the opportunity to provide a submission to the 2026-27 Review of the Safeguard Mechanism by the DCCEEW. CEF is an Australian based, philanthropically funded think tank established in 2022. CEF conducts public interest financial analyses, research and advocacy on mobilising capital at the speed and scale needed to accelerate decarbonisation and the energy transformation consistent with the climate science.

CEF conducts research and analyses on global financial issues related to the energy transition, from fossil fuels to clean energy, as well as the implications for the Australian economy, with a key focus on the risks and opportunities for Australian investments, regional employment and value-added exports. CEF is independent and works collaboratively with partners in the corporate and finance sectors, NGOs, government and the climate movement.

CEF thanks the DCCEEW for the opportunity to provide recommendations to the Department for the Safeguard Mechanism Review, and looks forward to continued engagement and discussion on these critical policies. If DCCEEW would like to discuss any elements further, please do not hesitate to contact CEF for any further information.

Regards,

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Introduction: Australia's Imperative to Facilitate Industrial Decarbonisation and Nature Repair

CEF's submission to the Safeguard Mechanism Review is grounded in enhancing the existing policy framework and improving the effectiveness of the integrated structure of the Safeguard Mechanism, Australian Carbon Credit Unit (ACCU) Scheme, and Nature Repair Market to build investor confidence in deploying:

- Capital into on-site abatement for industrial facilities under Safeguard; and
- Patient capital into nature-based solutions that deliver critical co-benefits in nature repair.

CEF sees it as imperative that industry, regulators, investors, landholders and the academic community focus on enhancing the standard and integrity of this structure, and not on abandoning this model. Markets work best with a price signal, and 'polluter pays' is a long standing core market principle Australia needs to enhance, not discard.

Australia currently faces a two-fold climate crisis where the costs are currently almost entirely externalised onto the community rather than borne by the entities profiting. A crisis that requires a significant step change in government intervention and market formation, reforming and shaping the regulatory landscape of climate, energy and industry policy. These sectors will require an estimated >$400bn in new capital in Australia alone over the coming decade to accelerate the electrification and decarbonisation of industry and mining, as well as direct capital at speed and scale into nature repair, maintenance and conservation.[1] With the right settings, a clear progressively rising (in real terms) carbon pollution price trajectory and a stepped-up level of ambition, the ACCU Scheme, the Safeguard Mechanism, the Nature Repair Market and strengthened environmental protection laws, can operate as essential mechanisms and form the complementary foundational pillars of a coordinated, national climate and nature strategy.

The impacts and effects of human-induced climate change are not a future problem for the post-2050 world to manage and adapt to, but are already having widespread effects on global ecosystems, economies and populations. The scientific evidence is unequivocal: climate change is a threat to human wellbeing and the health of the planet. Any further delay in concerted global action will miss the window to secure a liveable future. The magnitude and rate of climate change and its associated risks depend strongly on near-term mitigation and adaptation actions as projected adverse impacts, losses and damages escalate with every increment of global warming.[2]

Worldwide, natural disasters caused losses of US$224bn in 2025, vs US$368bn in 2024. Weather catastrophes were responsible for 92% of overall losses and 97% of insured losses in 2025, with 17,200 people losing their lives as a result of natural disasters. The global insurance and reinsurance industry majors all consistently highlight the rapidly accelerating global economic costs of insufficient action on climate and nature repair.[3]

The degradation and decline of Australia's natural capital, as well as the rapid rise in human-induced GHG emissions, has been the product of systemic economic, policy and regulatory failures resulting from a lack of policy ambition, integrity and stability. To reverse these trends, Australia must employ both regulatory and economic solutions to jointly address nature decline and climate change.

Governments have a responsibility to address market failures through targeted interventions, primarily through enacting regulatory frameworks that capture externalities of economic activity, as well as providing a pricing mechanism to reward economic actors that generate spillover benefits.

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[1] AFR, $400b: McKinsey Reveals High Price of Ambitious Climate Action, 04 September 2025

[2] IPCC, AR6: Climate Change 2023 Synthesis Report, 2023

[3] MunichRe, Climate Change Presses On: Devastating Wildfires and Intense Thunderstorms Exacerbate Losses for Insurers, 13 January 2026

The urgent need to correct the unsustainable decline in Australia's nature capital

Nature is an asset, just as produced capital (e.g. infrastructure, the built environment and industry) and human capital (e.g. health, knowledge and skills) are assets. Individuals, businesses, industries and governments are all asset managers, managing through consumption and investment decisions. However, the world has collectively failed to manage natural capital assets sustainably for centuries.

In Professor Sir Patha Dasgupta's final report to the UK Government on the Independent Review on the Economics of Biodiversity in 2021 (Dasgupta Review), Dasgupta identified that between 1992 to 2014, global produced capital per capita has doubled, and human capital per capita has risen 13%. However, over the same time frame, natural capital per capita has fallen nearly 40%, with produced and human capital accumulating at the expense of natural capital.[4]

In 2020, the World Economic Forum (WEF) determined US$44 trillion of economic value generation was moderately or highly dependent on nature and its services and, as a result, exposed to risks from nature loss. Construction, agriculture and food supply chains are the world's largest industries dependent on the state of nature, either directly from the extraction of resources from land or oceans, or the provision of ecosystem services, such as healthy soils, clean water, pollination and a stable climate. In 2023, PWC, in partnership with WEF, determined the total economic value that was moderately or highly dependent on nature had risen US$14 trillion to US$58 trillion, equivalent to 55% of global GDP.[5]

Without urgent intervention, the trajectory of the destruction of natural capital beyond critical tipping points will have grave and lasting impacts on the world, including on national security, economic resilience and human wellbeing. Since 1954, the rate of biodiversity loss due to human activity has been larger than any time in human history, driven by habitat loss from infrastructure and agriculture, over-exploitation, pollution, invasive species and climate change.[6]

Since 1970, the average size of wildlife populations has collapsed 73%, with freshwater populations suffering the largest declines of 85%, followed by terrestrial (69%) and marine populations (56%) across ~5,500 species of amphibians, birds, fish, mammals and reptiles.[7] Since 2000, 7.7 million hectares of threatened species habitats have been destroyed, 93% of which were not regulated under national environmental law. Australia's biodiversity has experienced large and rapid declines since European colonisation, primarily through:

- Habitat destruction and fragmentation due to land clearing for agriculture and urbanisation;
- The introduction of invasive plants, animals and diseases;
- The disruption of First Nations Peoples' practices in caring for Country, including fire management; and
- Debilitation of freshwater habitats through the modification of rivers and wetlands.[8]

As the National Climate Risk Assessment laid bare in September 2025, Australia faces 56 nationally significant climate risks to First Nations systems, communities, defence and national security, economy and trade, health, infrastructure, the built environment, nature, primary industries and our food system.[9]

Without urgent intervention into policy settings to drive industrial decarbonisation and fossil fuel abatement as well as drive capital into nature repair, Australia risks:

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[4] UK Government, The Economics of Biodiversity: The Dasgupta Review (Abridged Version), 02 February 2021
[5] PWC, Managing Nature Risks: From Understanding to Action, 19 April 2023
[6] UN Environment Programme, State of Finance for Nature 2023, 09 December 2023
[7] WWF, Living Planet Report 2024, 10 October 2024
[8] Biodiversity Council, The Major Causes of Nature Loss in Australia, 24 January 2024
[9] Australian Climate Service, National Climate Risk Assessment, 15 September 2025

- Annual disaster costs from floods, bushfires, storm surges and tropical cyclones under a 1.5°C scenario that could reach A$43bn by 2050;
- Losses in property values increasing to A$611bn by 2050;
- An estimated 700,000-2.7 million additional lost days of work each year by 2061 due to higher frequency and intensity of heatwaves, particularly impacting agriculture, construction, manufacturing and mining;
- Decreases in labour productivity that would reduce annual economic output by between A$135-423bn; and
- Increasing insured losses from climate-related catastrophes, having already risen from a historical 0.2% of GDP to 0.7% of GDP in 2020-24, equal to $4.5bn per annum.[10]

Australia's biodiversity crisis has been primarily driven by systemic inadequacies in legislation, policy and planning laws and processes that have failed to protect natural capital. Climate change is increasingly exacerbating the effects of these practices in Australia.

Australia's emissions reduction trajectory across resources and industry is lagging

From 2005 to 2024, Australia's national GHG inventory has declined 184MtCO_2-e (29%) from 631MtCO_2-e to 447MtCO_2-e - see Figure 1.[11] However, the land use, land use change and forestry (LULUCF) sector has been responsible for 91% of Australia's emissions reductions, at an average annual reduction of over 8.7MtCO_2-e pa. Since 2015, Australia's LULUCF sector has shifted from a carbon source to a carbon sink, sequestering a net 74MtCO_2-e in 2024.

Figure 1: Australian Annual Emissions by Sector, MtCO_2-e

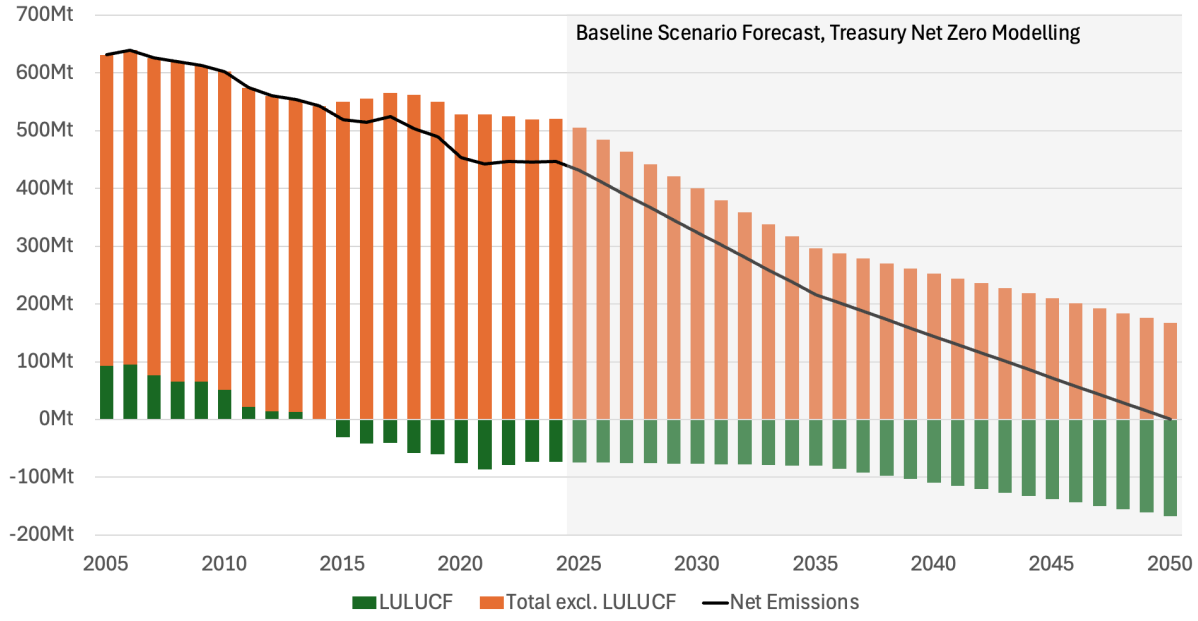

Chart: Climate Energy Finance
Source: DCCEEW (2025),[12] Treasury (2025)[13]

Excluding LULUCF, Australia's national emissions have only fallen 17MtCO_2-e from 2005 to 2024, at an average annual reduction of just 0.92MtCO_2-e. Across all economic sectors outside of LULUCF, electricity emissions have realised the largest emissions abatement, declining 47MtCO_2-e to

[10] Australian Climate Service, National Climate Risk Assessment, 15 September 2025
[11] DCCEEW, National Greenhouse Gas Inventory Quarterly Update: June 2025, 27 November 2025
[12] DCCEEW, National Greenhouse Gas Inventory Quarterly Update: June 2025, 27 November 2025
[13] Treasury, Australia's Net Zero Transformation: Treasury Modelling and Analysis, 18 September 2025

152MtCO_2-e in 2024, relative to 2005. Conversely, the transport, industrial process, fugitive emissions, and stationary energy sectors have risen materially since 2005.

The Climate Change Authority (CCA)'s 2025 Annual Progress Report identified emissions reductions as having averaged an 8MtCO_2-e annual decline across the previous five years to 2024. As a result, to achieve Australia's 2030 target, annual reductions need to more than double to 18MtCO_2-e pa. Furthermore, to achieve the top of Australia's 62-70% emissions reduction range for 2035, annual reductions must triple to 20-25MtCO_2-e over the next decade.

However, Australia's emissions reduction progress has slowed in recent years, not accelerated. Following a negative shock in transport emissions in 2020 during COVID-19, which have since recovered, Australia has only averaged a 4MtCO_2-e annual emissions reduction since 2020.

For Australia to achieve its interim emissions reduction targets, reforms must be made to the dynamics of Australia's market-based industry decarbonisation policies sufficient to drive decarbonisation across electricity, agriculture, transport, industry and resource sectors.

The ACCU Scheme, Australia's environmental protection and biodiversity conservation laws, and its industrial decarbonisation strategy, the Safeguard Mechanism, must harmonise to simultaneously improve the state of nature, as well as reduce the risks and impacts on nature of industrialisation and climate change. Stronger environmental and planning laws are critical to mitigating the impact of further urbanisation and industrialisation while a Safeguard Mechanism that drives emissions reduction and onsite abatement activity is critical to alleviating human-induced climate change and the progressive decline of natural capital.

To achieve this, industrial emitters must be exposed to a sufficiently high price on carbon to drive investment into the deployment of marginal abatement technologies.

Similarly, there are significant uncertainties surrounding the scale and composition of land-based carbon sequestration under development, driven in part by uncertainties on long-term market dynamics and revenue streams that incentivise landowners to repurpose their land to build resilience, biodiversity and embodied carbon, as well as financial institutions that provide long-term financing facilities to develop these projects. Low and stagnating carbon credit prices mean investors lack sufficient incentive to mobilise the readily available domestic and international capital standing by, available for solving this vital need. Setting a minimum, progressively rising carbon price in real terms would give a clear long term signal to polluters and investors to crowd-in private capital to deploy technologically proven solutions to gain alignment greater with the climate science.

Investors and landholders need to have confidence in the long-term that policies will drive a rising price on carbon to underwrite investment into the land sector — particularly given the rising compliance costs of monitoring, reporting, and verification of land-based sequestration.

Enhancing the integrated model, not abandoning it

Following the 2023 reforms that introduced declining baselines and removed headroom in facility baselines, Safeguard facilities surrendered 7.1 million ACCUs in 2023-24, more than double that of all ACCUs surrendered under the previous iteration of the mechanism.

The forward policy expectations by industry of the Safeguard Mechanism reforms drove record investment into the purchase of ACCUs to lower cost of abatement prior to compliance obligations under the new scheme. As a result, ACCU prices have materially risen above that of Emissions Reduction Fund (ERF) contract prices. **Expectations of a rising price on carbon catalysed significant investments into abatement credits**, as prices at the time were well below that of investments into marginal emissions abatement technologies. Forward expectations of rising real prices above marginal abatement costs for on-site deployment of low-emissions and zero-emissions technologies enables investment into these technologies over higher cost of compliance carbon credits.

The introduction of the Safeguard Mechanism in 2016 provided a legislative framework to build upon, strengthen, and reform into a central component of Australia's climate policy. Industry and the Federal Government did not abandon the Mechanism when its framework was not working as effectively as possible, but evolved the Mechanism to align economic incentives and penalties with Australia's climate obligations.

Similarly, the iterative nature of the ACCU Scheme means method development, uncertainty and risk management and market dynamics are constantly improving to enhance the efficacy, integrity and transparency of the Scheme to drive emissions reductions and direct investment into land conservation and rehabilitation.

The ACCU Scheme is a significant driver of financing innovation in measurement, verification and land management. As a result, the ACCU Scheme functions as both a compliance instrument and an innovation engine. Its effectiveness depends not only on methodological integrity but on administrative stability, predictable governance and investor-grade regulatory processes.[14]

A key advantage of Australia's ACCU Scheme compared to other global voluntary and regulated carbon market schemes is the regulation and management of the Scheme by independent regulators and statutory authorities, providing significant investor confidence in the integrity of the Scheme relative to other markets. Furthermore, the integration of carbon credits with the Safeguard Mechanism provides long-term offtake and demand diversification that mitigates project risks from a concentrated market.

Building social licence and confidence in the iterative nature of environmental markets is critical to deployment of capital at speed and scale into solutions. We consider the 'anti-offsets' arguments lobbed at forest conservation activity and ACCU issuance for projects covered under vegetation methodologies as an own goal from parts of the environment sector, driving nature conservation out of climate conservations and sidelining nature repair in the zeitgeist of fossil fuel climate action.[15]

Integrity and management of uncertainty in nature-based carbon is a continual process rather than a fixed end point. The foundations of early methods in the ACCU Scheme were often untested, leading to high degrees of uncertainty on additionality and permanence of abatement through measurement, baseline determination and practices. As investor confidence in the long-term effectiveness of Australian carbon markets grew, this facilitated investment and interest in technological improvement in measurement and verification, and increased scrutiny and application of improving scientific methods. Current methods are a significant improvement and enhancement of additionality and permanence relative to the Scheme's first methods. This improvement was a product of active participation by proponents, demand-side actors, regulators and state and federal governments.

Australia has an incredible opportunity to harness the scalability of compliance carbon markets to build a world-scale structure to sustainably generate significant positive outcomes that restore, conserve, and protect Australia's natural capital, and simultaneously create the critical investment signal of a rising price on carbon, supported by fundamentals that will drive such market conditions, catalysing large-scale capital deployment into on-site abatement in industry.

Australia's opportunity, and challenge, is in forming market conditions, improving investor confidence and market participation, and ensuring system integrity and stakeholder buy-in. This is key to ensuring the integration of the ACCU Scheme with the Safeguard Mechanism to incentivise high-quality abatement and investment into nature-based solutions while simultaneously not limiting or hindering onsite emissions reductions at industrial facilities.

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[14] CCA, AgriProve Submission to CCA 2026 ACCU Scheme Review, December 2025

[15] Penny Van Oosterzee, The Forest For the Trees, The Monthly, September 2025

To incentivise high-quality abatement, Australia's regulators and statutory authorities must ensure market dynamics are reformed such that supply and demand reflect conditions that translate to a progressively rising price. A ratcheting up of ambition and scope in the Safeguard Mechanism is critical to catalysing demand for ACCUs as the vehicle to expose emitters to a carbon price under the polluter pays principle. This market-based approach for nature-based solutions with participation from industrial emitters through high integrity compliance mechanisms has been key to rising prices in the ACCU Scheme that have shifted investment cases in land-based carbon projects.

The 2023 reforms of the Safeguard Mechanism provided significant directional price signals for industrial emitters that captured facilities will be exposed to an increasing carbon penalty through the reduction of emissions baselines. In alignment with the Chubb Review, building confidence in the Safeguard Mechanism and ACCU markets requires future value expectations and long-term price signals that the integration of these schemes will realise a progressively rising real price on carbon for emitters, and incentives for nature-based solutions.

Summary of Policy Recommendations Regarding Key Consultation Questions

Question 3.1.2: Domestic Offsets

Are new policy measures for ACCU use needed to accelerate industrial decarbonisation?

If policy measures are needed, what would be the best way to reduce reliance on ACCU use without unduly disrupting the carbon market and when should any such measures start?

Question 3.2.4: Cost Containment Measure

Is the current design of the cost containment measure sufficient to allow businesses to manage upside price risk?

Could the current cost containment measure price deter investments in emissions reduction activities?

As mentioned above, CEF sees enhancing the existing policy framework and improving the effectiveness of the integrated structure of the Safeguard Mechanism, ACCU Scheme, and Nature Repair Market as critical to building investor confidence across these mechanisms.

Australia currently faces a two-fold climate crisis. A crisis that requires a significant step change in government intervention and market formation, reforming and shaping the regulatory landscape of climate, energy and industry policy. Under the right settings and a stepped-up level of ambition, the ACCU Scheme, the Safeguard Mechanism, the Nature Repair Market and strengthened environmental protection laws can operate as essential mechanisms and form the complementary foundational pillars of a coordinated, national climate and nature strategy.

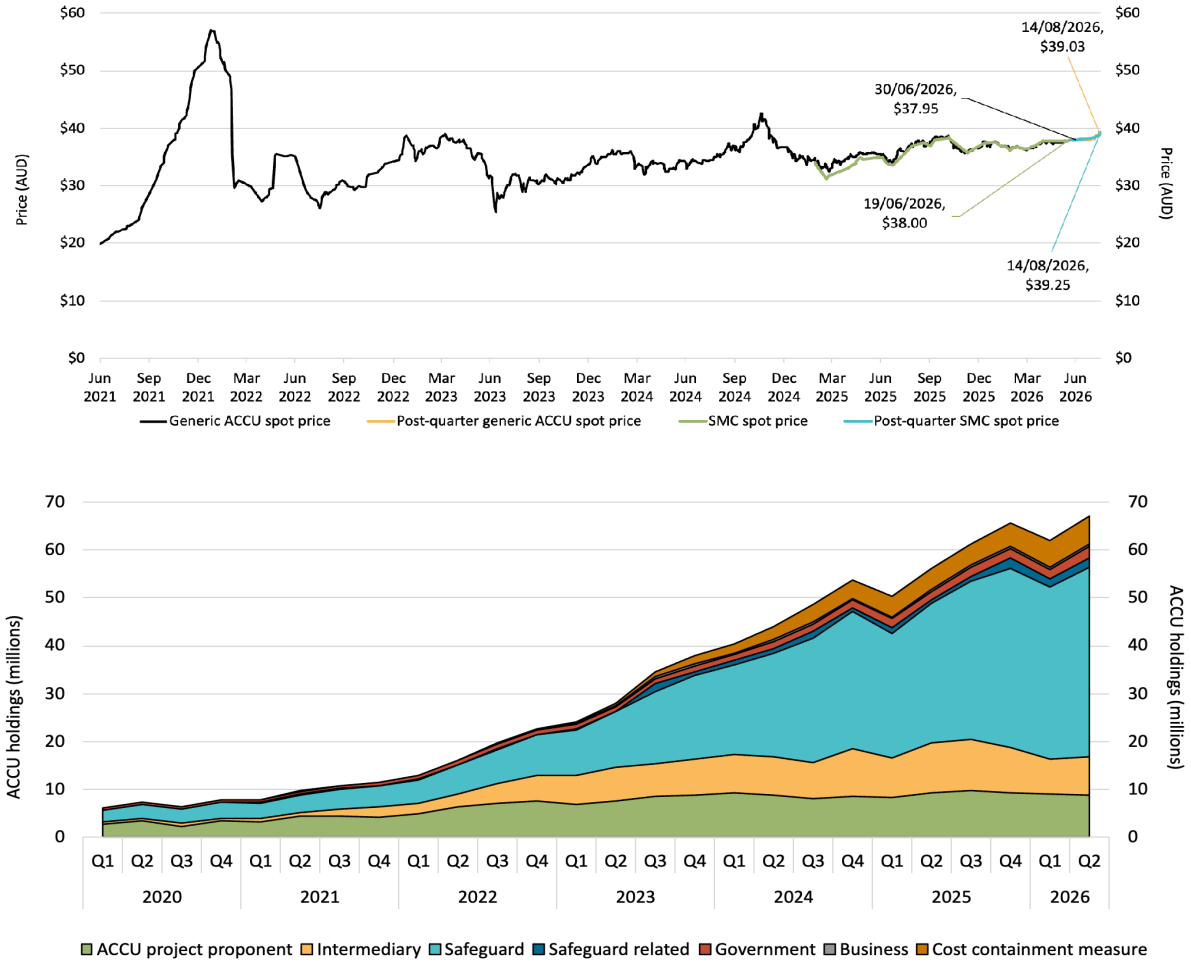
As a result, CEF sees it as imperative that industry, regulators, investors, landholders and the academic community focus on enhancing the standard of the harmonised structure, and not on abandoning this model.

For Australia to achieve its interim emissions reduction targets, reforms must be made to the dynamics of Australia's market-based industry decarbonisation policies sufficient to drive decarbonisation across electricity, agriculture, transport, industry and resource sectors. To achieve this, industrial emitters must be exposed to a sufficiently high price on carbon to drive investment into the deployment of marginal abatement technologies.

Increasing demand for Safeguard Mechanism Credits (SMCs) and ACCUs will elevate the effective carbon cost exposure to industrial facilities through greater volumes purchased and surrendered, but also drive upwards price pressure in the secondary market.

Under current policy settings, the $35-40 unit price[16] on eligible ACCUs and SMCs for Safeguard Mechanism compliance remains below the marginal cost of abatement for much of the captured facilities. Furthermore, as carbon credit surrenders only apply to emissions exceeding that of a facility's baseline, the effective price on carbon applied on a facility's whole Scope 1 emissions profile remains a fraction of the traded price on the secondary market. Furthermore, ACCU holdings by Safeguard-captured facilities hit record highs in the June quarter of 2026, reaching 39.6 million units. Exposure to higher prices traded on the secondary market does not directly translate to increased compliance costs for facilities that exceed baselines given the high degree of banking of credits — see Figure 2.

Figure 2: Generic ACCU and SMC Volume-weighted Average Spot Price and ACCU Holdings by Market Participation, June Quarter 2026



Source: CER (2026)

As mentioned above, both industrial emitters and land sector-based investors and landholders must have confidence in the long-term market dynamics of integration of the Safeguard Mechanism and ACCU scheme, with future expectations of a rising price on carbon to simultaneously drive investment into the deployment of marginal abatement technologies, as well as underwrite investment into the land sector.

[16] CER, Quarterly Carbon Market Report — June 2026, 09 September 2026

To complement the design of the Safeguard Mechanism's Cost Containment Measure — implemented to provide higher compliance price risk management for captured entities — **CEF sees a critical opportunity of the 2026 Review to introduce an equivalent real price floor mechanism for compliance credits.**

A direct or indirect real price floor in Australia's compliance carbon market would provide critical certainty on price direction. This is needed to both underwrite new investment into high-integrity, nature-based carbon sequestration that can deliver material benefits to Australia's biodiversity; as well as underwrite long-term onsite abatement investment for large industrial emitting facilities. Downside protection and rising future price expectations are critical to project de-risking and securing the necessary private capital flows to realise Australia's climate and nature targets.

The Federal Government should underwrite a price floor through purchase options for nature-based solutions that deliver tangible, verifiable co-benefits in-line with a supply-demand balance that translates to a consistent, rising price on ACCUs — and thus a rising price on carbon placed upon industrial emitters.

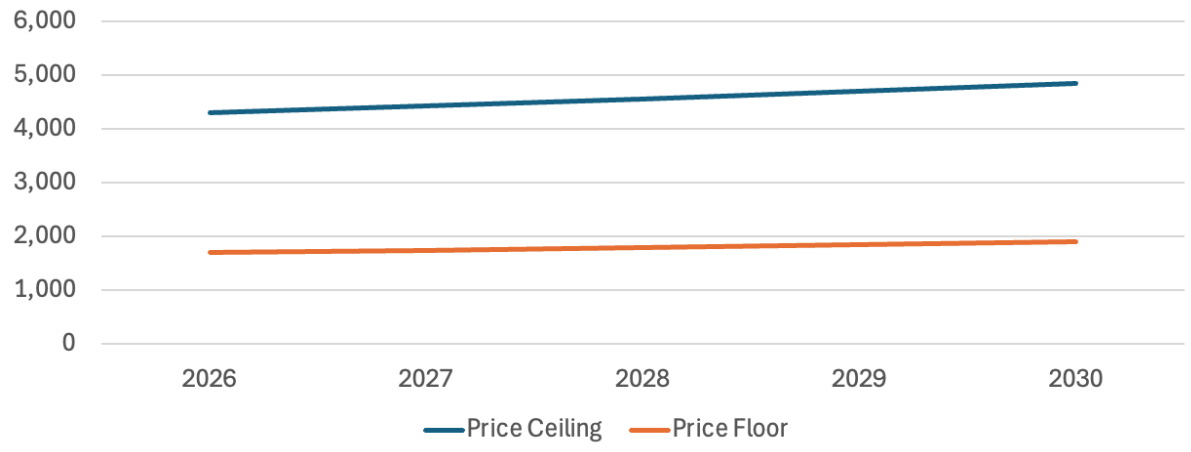
Globally, compliance carbon markets have already seen the implementation of a price floor mechanism.

The **New Zealand Emissions Trading Scheme** (NZ ETS) has a price floor and cost containment reserve (CCR) built into its primary auctions. The price floor sets the minimum accepted bid at auctions, ratcheting up over time. The price floor is set at NZ$71/tonne in 2026, rising to NZ$87/tonne by 2030. The CCR comprises two tranches. If auctioned allowances are exhausted, the first tranche is released at a higher price than the auction price floor (NZ$203). If the CCR tranche 1 is exhausted, the second tranche is released at a higher price (NZ$254). To support allowance reduction over time, the volume of allowances in the CCR reduces, from 6.5 million in 2026 to 3.9 million in 2030.

While the NZ ETS's secondary market price is driven by supply-demand dynamics, and remains the key driver of the traded market price (NZ$44), the auction price floor signals the bounds of expected and acceptable prices in the ETS, signalling to investors the planned future emissions cost curve to employ in cost-benefit analyses of investments into low-emissions technologies or practices.

Similarly, as of April 2026, the **Japan Green Transformation Emissions Trading System** (GX-ETS) has now shifted from a voluntary baseline-and-credit ETS into a compliance carbon market for the power and industrial sectors, as well as other smaller sectors. As part of the shift to a compliance mechanism, Japan has introduced an allowance price floor and ceiling measure — see Figure 3.

Figure 3: Japan GX-ETS Price Floor and Ceiling (Real 2026 JPY)



Source: METI

In the first compliance period, METI has set the emissions allowance price floor and ceiling at JPY 1,700 (A$15.4) and JPY 4,300 (A$39) respectively for 2026, with the floor and ceiling ratcheting up annually at CPI + 3%. Therefore, in real 2026 terms, the GX-ETS's price floor and ceiling will reach JPY 1,913 (A$17.4) to (A$43.9) by 2030. To manage the target price range for exposed industry, Japan has introduced the GX Acceleration Agency, a regulatory authority to centralise the provision of financial support for green transformation projects, the operation of the GX-ETS, the operation of the fossil fuel surcharge (GX-Surcharge), and the promotion of research and collaboration on GX policies and practices. This includes the **utilisation of reverse auctions to buy back emissions allowance units** from the market if prices sustain below the floor to increase demand for circulating allowances.

Absorbing the lessons of other carbon market developments with similar operating designs to the Safeguard Mechanism, CEF has put forth a reform recommendation to address the below consultation questions:

- Are new policy measures for ACCU use needed to accelerate industrial decarbonisation?
- If policy measures are needed, what would be the best way to reduce reliance on ACCU use without unduly disrupting the carbon market?

Policy recommendation to introduce a price floor in the Safeguard Mechanism and cap ACCU/SMC surrender above 30% of facility baseline

1. **Introduce a price floor in the ACCU market, purchasing high-quality land-sector credits with verified co-benefits.**

CEF recommends the Federal Government establish a progressively rising price floor mechanism in the ACCU market through a purchasing option or reverse auction structure to increase demand when secondary market prices fall below a rising price floor.

As the Federal Government underwrote early-stage investments into the ACCU market through long-term carbon abatement contracts, the Government can play a critical market formation role in the development of valuing critical nature-based or social-based co-benefits. As projects register for co-benefit or nature-positive outcomes within Nature Repair Market methods that are integrated with ACCU projects, the Government can provide the necessary early critical mass on demand-side participation for realising pricing differentiation, providing a foundation for voluntary market participation to be crowded-in with price discovery through integration with the compliance carbon market.

There is already precedent in Australia for governments taking an active role in market formation for measurable and verifiable co-benefits delivered from carbon credit projects. The Queensland Government's $500m Land Restoration Fund (LRF), launched in 2017, was designed to invest in market development, scientific development and innovation within the land-sector by supporting carbon credit projects that deliver clear environmental, social and economic co-benefits. The LRF purchased credits at market premiums that generated variable additional benefits in wetlands and coastal ecosystem restoration, biodiversity and threatened species protection, and social and economic sustainability – including positive First Nations outcomes.

As the Nature Repair Market is introduced on a national level, nature-based co-benefits can be independently verified and regulated through the Clean Energy Regulator (CER), with the ability to generate transparent price differentiation by leveraging the Regulator's blockchain infrastructure. There is a significant opportunity for the Federal Government to replicate successful market development strategies from its development of the ACCU market.

A rising price floor, designed to increase at a fixed indexation rate + CPI — analogous to the design of the Cost Containment Measure — can provide vital downside risk management protection for both land-based solution investors and landholders for long-term carbon sequestration projects, as well as investments into on-site abatement for captured Safeguard facilities.

2. **For Safeguard Mechanism facilities surrendering credits to meet compliance obligations for exceeding baseline by more than 30%, require purchase of credits from the Government at a premium over the purchase price paid through price floor auctions.**

CEF recommends the Federal Government introduce a significantly greater carbon price liability for entities that exceed their Safeguard baselines by more than 30% through the purchasing of credits from the Government at a significant market premium.

CEF's proposal of increased carbon cost liability above the 30% baseline exceedance threshold is designed to establish a clear distinction between the legitimate use of ACCUs as a compliance mechanism within reasonable variation of a declining baseline, and the continued operation of facilities materially above their declining Safeguard Mechanism baseline. Under this proposal, exposed entities retain access to the ACCU market to manage compliance requirements within the normal range of their operations. However, where an entity's emissions exceed its baseline by more than 30%, the emissions above this threshold would be subject to a separate compliance requirement, under which the entity would be required to acquire the necessary ACCUs from the Government at a premium, suggested at 3-4x that of the secondary market price. This would ensure ACCUs can still effectively be integrated into the design of the flexible compliance nature of the Safeguard Mechanism, but reduce the economic case for its use as an unrestricted substitute for investment into on-site emissions reduction. This recommendation is centred upon:

a. Creating a substantial financial incentive for regulated entities to undertake on-site abatement without unduly disrupting the carbon market.

   The premium would increase the marginal cost of continued emissions above the 30% threshold while allowing entities that invest in emissions reduction to avoid this additional cost. In this respect, the mechanism would shift cost-benefit analyses for entities from purchasing credits to that of investing in energy efficiency and process improvements, electrification, and renewable energy deployments. The premium, therefore, would function as a targeted mechanism to create a disincentive towards persistent high-emissions energy consumption or production processes rather than as a general increase in the cost of Safeguard Mechanism compliance.

b. Strengthening the effectiveness of progressively declining baselines.

Declining baselines are intended to establish a predictable pathway for emissions reduction, but their effectiveness depends on regulated entities having a sufficiently strong economic incentive to reduce emissions as baselines tighten. Without a sufficient incentive, entities may increasingly rely on the purchase of ACCUs to accommodate the gap between their emissions and their declining baseline. The proposed 30% threshold would help mitigate this risk by increasing the cost of continued reliance on ACCUs as an entity moves materially beyond its baseline. This would provide greater certainty to businesses and investors regarding the long-term economic value of investment in abatement and further align the compliance framework more closely with the Government's objective of achieving sustained reductions in industrial emissions and equitable contribution of industry towards its nationally determined contribution (NDC) targets under the Paris Agreement.

3. Use revenues generated from above to support the deployment of critical renewable energy infrastructure.

The above recommendations could generate a source of public revenue to fund public investment in the broader energy transition, as is evidenced in the EU. These revenues could then be recycled into complementary measures that accelerate emissions reduction or targeted support for new renewable generation in lagging areas — such as large-scale on-shore wind capacity. In particular, recycling the revenue into wind projects could improve project economics and investment certainty, creating a policy mechanism in which the financial consequences of persistent high emissions are directly used to support the development of additional low-emissions electricity supply.

Question 3.3.3: Trade-exposed Baseline Adjustments

Do current arrangements that link TEBA eligibility to scheme cost impacts create equity concerns among competing facilities or discourage uptake of on-site abatement?

Feedback is sought on options for improving TEBA that would continue to effectively manage carbon leakage, and deliver Safeguard Mechanism objectives, including emissions targets and incentives for on-site abatement.

Question 3.3.4: A Potential Carbon Border Adjustment Mechanism

Should a border carbon adjustment be introduced for cement and clinker?

If a BCA is implemented, what elements should be included in any process for considering and consulting on the inclusion of further commodities over time?

Should TEBA provisions for a commodity be removed once a BCA is fully implemented for that commodity?

What would the appropriate timing and mechanics be for removing TEBA provisions for a commodity covered by a BCA?

The Federal Government's Net Zero Industry Plan's principal policy driver over the medium-term (through 2035) for driving decarbonisation across industry is the Safeguard Mechanism. The Department of Industry, Science and Resources (DISR) emphasises that the Safeguard Mechanism gives industry the clearest and most direct signal to reduce emissions in line with Australia's climate targets, supporting long-term investment certainty and operational planning as well as encouraging investment in commercially viable abatement technologies and alternative inputs.

However, analogous to the designs of the EU, Korean, and Chinese emissions trading schemes (ETS), the Safeguard Mechanism has concessions for covered facilities whose main product is trade exposed and who face an elevated risk of carbon leakage. Under Safeguard rules, trade-exposed baseline-adjusted (TEBA) facilities have reduced baseline reduction targets for 3 years based on an assessment of the cost impact of the Safeguard Mechanism on a facility relative to the facility's revenue in a financial year. For TEBA facilities, the baseline reduction is 1% pa.

Australia's iron and steel, alumina, aluminium, and fertiliser producers have received full TEBA concessions in the first two years of compliance following the 2023 reforms, effectively nullifying the Safeguard Mechanism's ability to drive industrial decarbonisation in Australia's most emissions-intensive manufacturing facilities.

Case Study of TEBA Concession: BlueScope Port Kembla Steelworks

BlueScope's Port Kembla Steelworks is the most emissions-intensive producer of steel in Australia and the largest emitter of Scope 1 GHG emissions of any manufacturing or industrial facility within the Safeguard Mechanism, and third largest Scope 1 emitter in Australia behind only Gorgon and Ichthys offshore LNG processing facilities. In FY2025, Port Kembla Steelworks emitted over 6MtCO_2-e in Scope 1 emissions.

As a result of the massive concessionality of the Safeguard Mechanism's TEBA measures, the first two years of ratcheting baselines have been at 1% pa, well below the 4.9% benchmark annual baseline decline. As a result, BlueScope received over 289,000 Safeguard Mechanism Credits (SMCs) in 2024-25, building on the more than 230,000 credits it received in 2023-24. At average traded prices of SMCs over 2023-25, the combined half a million in credits would have generated **carbon emissions revenues of $18.7m as a result of concessionality** within the Safeguard Mechanism for making next-to-no cuts.

Figure 4: BlueScope Port Kembla Steelworks Case Study: Impact of TEBA Concessions on Decarbonisation Signal for Manufacturing Sector

Port Kembla	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ERC	-	-	-	-	0.99	0.98
Baseline	11,040,213	11,040,213	6,920,344	6,875,761	6,176,914	6,350,820
Covered Emissions	6,103,130	6,260,763	6,198,685	6,138,128	5,946,306	6,061,526
ACCUs/SMCs Surrendered	-	-	-	-	-	-
SMCs Issued	-	-	-	-	230,608	289,294
Excess Emissions	**-4,937,083**	**-4,779,450**	**-721,659**	**-737,633**	**-230,608**	**-289,294**
Carbon Price Exposure without TEBA Concessions:						
Updated ERC					0.951	0.902
New Baseline					5,933,581	5,845,347
New Exceedance					**12,725**	**216,179**

Source: Clean Energy Regulator, Climate Energy Finance calculations

Conversely, if BlueScope was not provided with TEBA concessions within Safeguard, facing ratcheting baselines in-line with benchmark values, BlueScope would have exceeded its baseline by more than 216,000tCO_2-e in FY2025. At current traded compliance credit values, this would have generated a carbon price exposure of $7.8m. If BlueScope maintained its production-adjusted emissions of 2024-25, BlueScope would not face a carbon penalty until FY2030 if its TEBA concessions continued.

The primary objective of the Safeguard Mechanism is to create a regulatory framework that exposes Australia's largest industrial emitters to a progressively rising carbon price that enables and underwrites investments into onsite abatement through the deployment of low-emissions technologies or the adoption of low-emissions production processes. The abatement of embedded fossil fuels by the industrial base of Australia that results in an equal contribution to achieving Australia's 2030 NDC was the intention behind the 2022-23 reforms of the mechanism.

However, the third largest emitter captured within the Safeguard Mechanism will not be exposed to any material carbon price pressure through 2030 as a result of the TEBA concessions provided to the Steelworks. Port Kembla Steelworks is the only facility in the top 7 largest Scope 1 GHG emitters in the Safeguard Mechanism — emitting a combined 39Mtpa CO_2-e — to have baseline concessions.

Policy recommendation on phasing out TEBA concessions with the introduction of an Australian CBAM

As the 2025-26 Carbon Leakage Review identified, the number one recommendation of the Carbon Leakage Review was for an Australian carbon border adjustment mechanism (CBAM) to be introduced or considered for a select group of commodities that have a particular risk of carbon leakage, including cement and clinker, lime, hydrogen, ammonia, iron and steel, and glass.

Were the Federal Government to adopt the recommendations of the Carbon Leakage Review, Professor Frank Jotzo outlined that an Australian CBAM should:

- Mirror domestic emissions policy settings for imports to provide a level playing field. As a result, the liability should be assessed on Scope 1 emissions above benchmarks set in line with Safeguard Mechanism baselines and effective carbon prices embodied in imported products.
- **Remove TEBA concessions for commodities and facilities once an Australian CBAM is fully implemented**.
- Introduce measurement, reporting and verification requirements for a CBAM that minimise administrative burdens on importers and exporters.

The Carbon Leakage Review also urged the Federal Government to actively engage in multilateral and plurilateral initiatives that support the implementation of CBAMs, such as the development of interoperable standards and approaches to default emissions intensities or measurement, reporting and verification of embodied emissions. The Review also recommended that potential revenues generated from the introduction of border carbon adjustments could, in part, be directed towards emissions monitoring, reporting and verification capacity building in trade partner developing countries.

CEF recommends the Federal Government introduce an Australian CBAM for product variables currently most associated with TEBA concessions to level the playing field for trade-exposed commodities without hindering the decarbonisation of industry and limiting new, low-emissions manufacturing and value-adding capacity to compete in the domestic market with emissions-intensive counterparts. Public capital support should be accelerated to assist these facilities invest in pivoting to a sustainable business model.

Question 3.5: Coverage

Should the Safeguard Mechanism cover a larger portion of national emissions?

Yes, CEF recommends the Safeguard Mechanism be expanded more effectively to the electricity sector to accelerate the phase out of fossil fuel-based generation and support the deployment of critical renewable energy generation — in particular, onshore wind capacity. This should be aligned with policies to provide greater certainty on coal power closure timetables.

For the electricity sector in Australia, the Safeguard Mechanism applies a single, sectoral baseline for all electricity generators that are connected to the main electricity grids, including the National Electricity Market (NEM), South West Interconnected System (SWIS), and the North West Interconnected System (NWIS). Individual generators are not covered as long as total sector emissions do not exceed the baseline. The baseline is set at 198 Mt CO2-e, well above the total grid-connected electricity emissions of 139 Mt CO2-e recorded in 2022-23.[17]

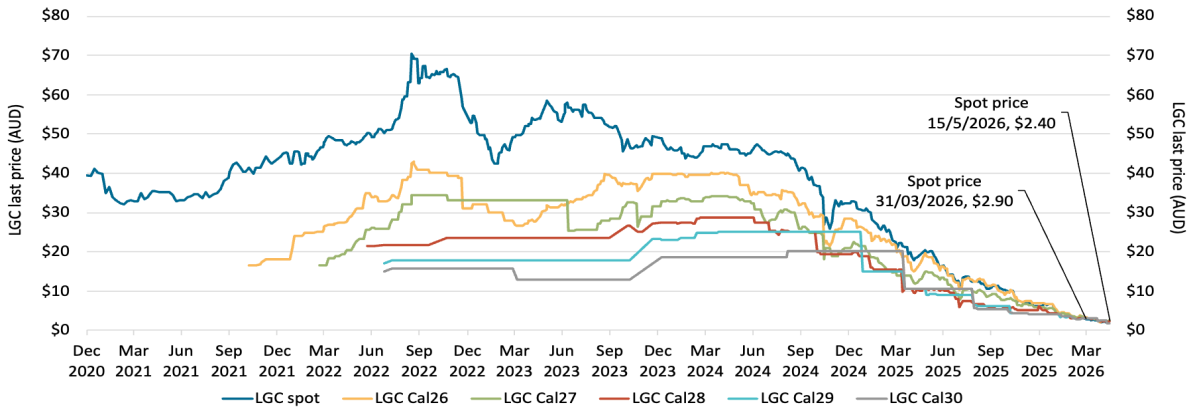
As large-scale generation certificates (LGCs) phase out to 2030 with the introduction of the Guarantee of Origin Scheme, DCCEEW should recognise the fundamentally different nature of Australia's electricity markets. Incentives must shift from pricing in spillover benefits (LGCs) to pricing in negative externalities (carbon pricing) in the electricity sector. This ensures a level playing field as LGCs phase out between renewable energy and thermal power generation by explicitly valuing emissions.

The Renewable Energy Target (RET) and Large-scale Generation Certificate (LGC) mechanisms were highly effective at driving investment into zero-emissions electricity capacity through forming a market mechanism to provide incentives for renewable generation and penalties for liable emitting generators via a compliance purchasing scheme — the RET. As renewable energy capacity has scaled and fossil generation declines, further supported by the rapid deployment of distributed solar

[17] CER, Electricity Sector Emissions and Generation Data 2022-23, 04 April 2024

generation and battery storage capacity, LGC prices have significantly contracted, trading at less than $3 a unit, well below their $70 unit price highs in 2022 — Figure 5.

Figure 5: LGC Spot and Forward Prices



Source: CER

Electricity retailers and high-energy consumers are required to offset emissions-intensive energy generation to meet compliance obligations under the RET. This provided an additional revenue stream for renewable energy developers and a financial incentive for avoiding emissions by supporting zero-emissions generation over that of new emissions-intensive generation. However, LGC prices have collapsed to near zero, with no future expectations of prices rising or remaining at current levels. The Federal Government must now examine policy options to introduce a carbon constraint on the electricity sector to raise funds on carbon polluters so as to level the playing field for renewable energy producers.

While the Safeguard Mechanism has introduced a 'sectoral baseline' for the electricity sector, it does not place an adequate carbon constraint or penalty on emissions-intensive generators. Under the current settings, as more renewable energy generation enters the grid and end-of-life thermal generators are turned off, remaining facilities have no carbon constraint.

The Grattan Institute has recommended the Federal Government use the 2026-27 Safeguard Mechanism Review to analyse benefits and costs of activating the Mechanism effectively to the electricity sector.[18]

CEF believes the design of an effective Safeguard Mechanism measure that is applied to the electricity sector beyond a broad sectoral baseline target is a critical policy mechanism missing from Australia's climate and energy policy that could be aligned to ensure replacement zero emissions generation capacity is brought online ahead of time so as to underpin and ensure coal plant closure certainty.

Benchmarking against international best practice in integrating electricity sector in carbon pricing mechanism

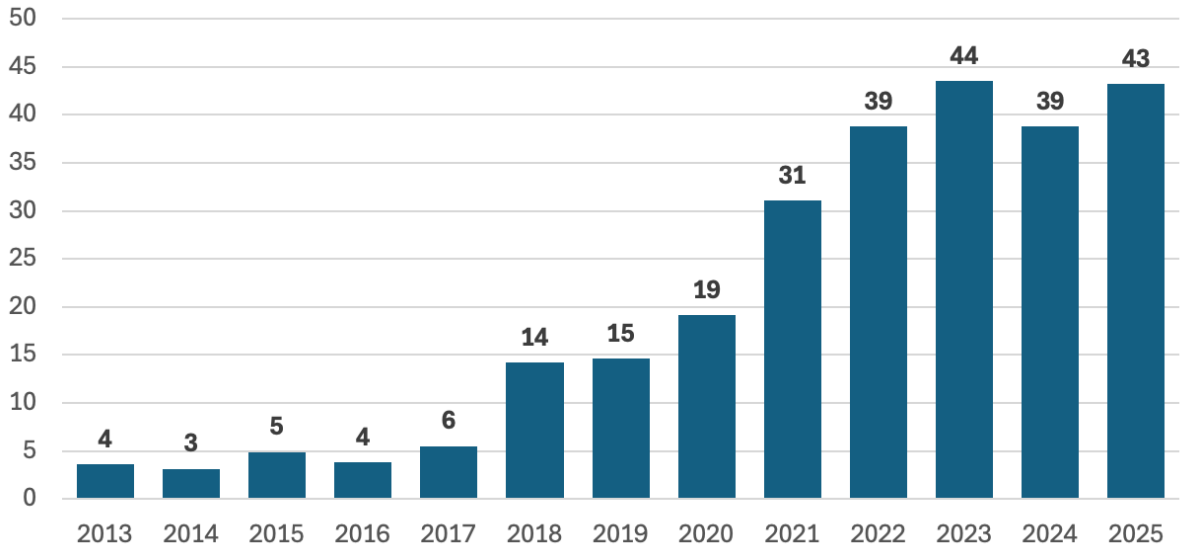
European Union ETS

Alongside industry, domestic aviation, and the maritime sectors, the **EU ETS covers the domestic electricity sector**. Since the commencement of Phase 3 of the EU ETS in 2013, the electricity sector has mandated the auctioning of emissions allowances for power installations with a capacity greater than 20MW. From 2013 to 2025, the EU ETS has generated over EUR 260bn in revenues from

[18] Grattan Institute, Bills Down, Emissions Down: A Practical Path to Net-Zero Electricity, October 2025

allowance auctioning, primarily to the power sector, and generated EUR 43bn in 2025 alone — see Figure 6.[19]

Figure 6: EU ETS Revenues Generated from Allowance Auctioning (EUR bn)



Source: ICAP (2026)

In 2024, 80% of all emissions allowance revenues generated from auctioning was deployed directly into domestic renewable energy supply, grids and storage, industry, road transport, public transport and active mobility. Since 2023, all ETS revenue must be spent on climate and energy related investments and expenditure.[20] EU ETS revenues capitalise multiple investment vehicles for clean energy, including the EU Modernisation Fund, Innovation Fund, and the Resilience and Recovery Facility — all designed to support investments in cleantech innovation and deployment, accelerate the energy transition and enhance energy security across the EU.

Since its launch in 2005, the EU ETS has helped drive down emissions from electricity and heat generation and industrial production by 50% in 2024, relative to a 2005 baseline, and is on track to achieve its 2030 target of 62% reduction. The power sector was the primary contributor to the overall emissions reduction in the EU ETS in 2024, driven by substantial increases in the share of variable renewable energy and nuclear and a reduced reliance on coal and methane gas. Latest available data provided in the annual European Commission review of the functioning of EU carbon markets reported renewable energy output expanded 7.6% year-on-year in 2024, complementing an 11.9% decline in coal-based generation and an 8.1% decline in methane gas-based generation.

In summary, the EU ETS model internalises the cost of emissions generated from fossil fuel-based electricity production, then directs the income flows into supporting the development and deployment of clean energy technology.

South Korean ETS

Under the South Korean ETS's Phase 4 iteration (2026-2030), the ETS has bifurcated the design of the system — including auctioning, free allocation, benchmarking, transition finance, etc. — into the power sector and the non-power sector. In November 2025, the South Korean regulating entities approved the Phase 4 (2026-2030) National Emission Allowance Allocation Plan, setting a total Phase 4 cap that ratchets down annually. The Plan also introduced new linear reduction factors

[19] ICAP, EU Emissions Trading Scheme Data, accessed September 2026
[20] European Environment Agency, Use of Auctioning Revenues Generated Under the EU ETS, 17 December 2025

differentiating the power generation sector and non-power sectors, and introducing sectoral reduction targets.[21]

By 2035, the Korean ETS is targeting an emissions reduction of 69-75% in the power generation sector. To support this, the Government will increase the rate of emissions allowance auctioning in the power sector from 15% in 2026 to 50% in 2030, while sectors at risk of carbon leakage (i.e. steel, petrochemicals, cement, and semiconductors) will continue to receive 100% free allocation. Following the announcement of a tightening overall cap in the Korean ETS in November 2025 — with a rapid expansion of auctioning in the power sector, and a shift from grandfathered free allocation to output-based emissions benchmarking in industrial sectors — the secondary market price for Korean Emissions Allowances jumped 176% from KRW 10,450 (A$11) to KRW 28,800 (A$30) in June 2026.

Figure 7: Korean ETS Allowance Prices (KRW)

Note: Shaded section represents market period following the Allocation Plan for Phase 4 of ETS.
Source: ICAP (2026)

Korea is steadily increasing the scale, scope and harmonisation of a broad suite of climate, energy, and industrial policies to effectively drive the energy transformation. In addition to improving the economic viability of renewable energy through the implementation of emissions auctioning in the power sector, Korea is scaling its incentive and support measures for the deployment of renewable energy directly.

In April 2026, South Korea's Ministry of Climate, Energy and Environment (MCEE) announced the 'Energy Transition Plan of the People's Sovereignty Government' — an energy and national security policy package aiming to comprehensively transform the nation's energy system by reducing dependence on fossil fuels and advancing electrification centred on renewable energy.[22] The Plan emphasised that existing energy security strategies, including further diversification of crude oil supply chains, are no longer effective, and therefore demand the establishment of a new energy security framework by expanding domestically produced renewable energy.

As part of the Plan, the South Korean government aims:

- To accelerate the deployment of its target of 100GW of renewable energy to 2030, expanding renewable energy's share of generation to 20%. This represents a significant uplift from the 37GW installed as of 2025.

[21] ICAP, Korea Approves Phase 4 K-ETS Allocation Plan for 2026-2030, 20 November 2025
[22] Korean MCEE, Shift to Renewables to Break Free from Fossil Fuel Dependence, 06 April 2026

- Develop a roadmap to phase out 60 currently operating coal-fired power plants by 2040.
- Heat energy, currently utilising methane gas, will be transitioned to renewable heat. The Plan emphasises that despite accounting for 48% of all domestic final energy consumption, it has lacked a national-level management framework.

The Korean ETS model demonstrates the capability and possibility of bifurcating the design of its emissions trading scheme by sector to best support its sectoral targets.

China National ETS

China's national ETS is the largest emissions trading scheme in the world by covered emissions, developed to initially cover the nation's electricity sector. The Chinese national ETS freely allocates allowances to coal and methane gas power plants up until a benchmark emissions intensity. Figure 8 below highlights the emission intensity benchmarks for thermal power plants' production-adjusted baselines for the current compliance period's 2022 to 2026. Since 2022, output-based benchmarked emissions allocation has reduced every compliance period through 2026.

Figure 8: Benchmark Values for Allowance Allocation in Power Sector in National ETS

Power Plant Type	Benchmark (tCO_2/MWh)				
	2022	2023	2024	2025	2026
Conventional Coal (>300MW)	0.8177	0.7950	0.7910	0.7902	0.7894
Conventional Coal (<300MW)	0.8729	0.8090	0.8049	0.8017	0.7985
Unconventional Coal	0.9303	0.8285	0.8244	0.8162	0.8080
Methane Gas	0.3901	0.3305	0.3288	0.3288	0.3288

Source: China Ministry of Ecology and Environment (2026) [23]

In comparison, the average emissions intensity for black coal-fired and brown coal-fired power stations operating in Australia in 2025-26 was 0.954tCO_2-e/MWh and 1.463tCO_2-e/MWh respectively. Relative to benchmarked emissions allocations in the Chinese national ETS, Australia's coal power plants emissions intensities are 21% and 85% for black and brown coal respectively. Similarly, combined cycle gas turbines (CCGT) and open cycle gas turbines (OCGT)'s average emissions intensity of 0.463-0.600tCO_2-e/MWh are 41-82% higher than output-based benchmarking for free emissions allocation for gas-fired power stations covered by the China ETS.[24]

In September 2025, China's highest authorities — the General Office of the CPC Central Committee and the General Office of the State Council — issued a policy direction on advancing the green and low-carbon transformation and strengthening the national ETS. The plan establishes clear medium- and long-term objectives, including the further expansion of the national ETS beyond power, cement, steel, and aluminium to cover all major industrial emitters, as well as transition to a cap-and-trade system with an absolute cap across the ETS.

China's national ETS originally started as, effectively, a baseline-and-credit ETS — providing free allocation to covered facilities and its total cap calculated using a bottom up approach of the aggregate production-adjusted emissions of captured facilities. However, starting as early as 2027, sectors with relatively stable emissions profiles will be subject to absolute cap controls. At that

[23] MEE, Notice on Issuing the "National Carbon Emissions Trading Market 2025 and 2026 Power Generation Industry and 2026 Steel, Cement, and Aluminium Industry Quota Totals and Allocation Scheme", 02 September 2026

[24] All emissions intensity figures are derived from NEM data published by Open Electricity.

point, increases in production by covered entities will no longer automatically result in higher allowance allocations.[25]

The transition to a cap-and-trade system — as well as **introducing a combination of auctioning and allocation, supported by a voluntary carbon credit market that is transparent, widely participatory, credible and aligned with international standards** — marks a significant advancement in harmonised carbon and environmental market development, with mechanisms and sub-sector regulation aligned with sector-specific objectives.

Policy recommendation on Safeguard exposure to the electricity sector

CEF recommends the Federal Government build on the electricity sectoral baseline by phasing in emissions allowance auctions for emissions-intensive generators, transitioning the sector into a specific cap-and-trade system. Additionally, revenues generated from the auctioning of Electricity Emissions Allowances (EEAs) should be directed into support for the deployment of critical renewable energy generation, storage, and transmission infrastructure investment.

International best practice in the EU ETS, as well as lessons from our key trading partners in China and Korea, demonstrate the possibility of sector-specific carbon pricing mechanisms to achieve sector-specific environmental and economic outcomes. As highlighted above, financial incentives must shift from pricing in spillover benefits (LGCs) to pricing in negative externalities (carbon pricing) in the electricity sector. This ensures a level playing field as LGCs phase out between renewable energy and thermal power generation by explicitly valuing emissions.

Our key trading partners have also demonstrated this is possible in far more economically complex and emissions-intensive manufacturing exposed economies. While Australia's manufacturing sector represents just 5% of GDP in 2025, China's manufacturing sector contributes 25% to its national GDP and 19% and 27% in Japan and South Korea respectively. Failure to price-in emissions in the electricity sector on the basis of weakening competitiveness of Australia's manufacturing sector is not an adequate justification to fall behind the ambition and progression of our key trading partners.

The introduction of auctioning in a sector-specific cap-and-trade system for the electricity sector, progressively phased in over time, can provide a long-term investment signal for renewable energy deployment, as well as create a potentially critical revenue stream for government to deploy into the onshore wind sector, which is currently priced out of the investment pipeline. Designed effectively, the cross-subsidisation of new renewable energy capacity would offset the cost increase of emissions allowances passed through to consumers from fossil fuel generators.

Question 3.5.1: Coverage Threshold

Should the Safeguard Mechanism threshold be lowered and, if so, when?

Analysis by RepuTex, commissioned by the Productivity Commission (PC), identified that nearly 25% of facilities currently captured by the Safeguard Mechanism will no longer be regulated by the policy by 2035 as a result of falling below the current 100,000tpa threshold.[26] Without a deepening of the Safeguard Mechanism through a lowering of the threshold, more than 50 facilities will likely drop below over the coming decade. In its final report delivered in December 2025, the PC recommended a deepening of the Mechanism through threshold reduction to 25,000tpa.[27]

Analysis by Naru Research identified the impact of the 100,000tpa threshold in driving industrial decarbonisation as already a concern for the efficacy of the Safeguard Mechanism. From its first two years of operation post the 2023 reforms, the topline gross emissions reduction across captured

[25] ICAP, China Issues Landmark Guidelines to Transition to Absolute Cap and Expand Scope in National ETS, 29 September 2025
[26] AFR, Big Emitters Could 'Fall Out' of Key Climate Policy, 18 January 2026
[27] PC, Investing in Cheaper, Cleaner Energy and the Net Zero Transformation, 10 December 2025

facilities was a 2.4% decline to 132.8Mtpa CO_2-e. However, accounting for facilities exiting the scheme and new entrants into the scheme, the net result of facilities dropping below the threshold was 2.8MtCO_2-e, accounting for 85% of the headline aggregate emissions reduction figure. In aggregate, continuing facilities across 2023-25 saw covered emissions drop less than 500,000tCO_2-e, equivalent to a 0.4% year-on-year emissions reduction.[28]

The deepening of the Safeguard Mechanism ensures facilities remain captured by the Mechanism when marginal emissions reduction investments are implemented and residual emissions below 100,000tpa continue to be priced and regulated.

Furthermore, the reduction in the threshold allows facility baselines to decline below 100,000tpa over time, exposing captured facilities with a higher carbon penalty. Future expectations of greater carbon liabilities shift investment decisions higher up the marginal emissions abatement cost curve, underwriting longer-term on-site abatement capital outlays sooner and driving demand in the interim for compliance carbon credits, translating to positive and necessary upwards pressure on ACCU and SMC prices.

Analysis provided in the DCCEEW consultation paper for the Safeguard Mechanism review highlights that a shift to 80,000tpa CO_2-e baseline threshold does not introduce any new sectors into the Safeguard Mechanism, with new sectors beginning to be introduced at a 75,000tpa threshold. However, the analysis emphasised most new facilities are in sectors that are already covered by the Safeguard Mechanism and would likely use existing production variables, with the largest increase in facility numbers in metal ore mining and oil and gas extraction — see Figure 9.

Figure 9: DCCEEW Analysis on Impact of Deepening Safeguard Mechanism

2024-2025	Above 100ktCO_2-e	Above 90ktCO_2-e	Above 80ktCO_2-e	Above 75ktCO_2-e	Above 50ktCO_2-e	Above 25ktCO_2-e
Covered emissions	132.8	134.3	136.2	136.9	140.6	147.0
New covered emissions	N/A	1.5	3.4	4.1	7.8	14.2
Number of facilities	208	224	247	256	316	499
Additional facilities	N/A	16	39	48	108	291
New sectors	N/A	Nil	Nil	1	5	18

Source: DCCEEW Safeguard Mechanism Consultation Paper

CEF sees the deepening of the Safeguard Mechanism to 75,000tpa as an efficient extension of the Safeguard Mechanism to implement as early as possible. CEF would want to see the progressive deepening of the Safeguard Mechanism threshold down to 25,000tpa over time, noting the significant expansion into new sectors and the subsequent development of product variables. However, entities at this threshold may also be covered by other climate and energy policies already implemented in other areas of the economy.

An accelerated shift to a 50,000tpa threshold is possible with sufficient policy certainty for future expansion to allow for capacity building and development of product variables within the expanded scope for both the regulator and captured facilities.

[28] Naru Research, Reflections on the Operation of the Safeguard Mechanism after Two Years of Public Data, 26 April 2026

Question 3.1.1: Emissions Reduction Technologies

Are Safeguard policy settings and Government support mechanisms suitable for developing and deploying emissions reduction technologies for the industrial sectors? Are there any remaining barriers to undertaking on-site abatement, including sector-specific barriers?

Investigate Carbon Contracts-for-Difference to Unlock Investment

To accelerate investment into decarbonisation capital expenditure and operational expenditure for captured facilities — where the current cost of compliance for Safeguard is met from ACCUs and SMCs as the lowest-cost abatement method — **CEF recommends the Federal Government investigate the potential introduction of Carbon Contracts-for-Difference (CCfD).**

Carbon Contracts-for-Difference

CCfDs are a subsidy agreement between a granting authority and a beneficiary to help reduce GHG emissions generated from their industrial activity by financially derisking decarbonisation projects. Under a two-way CCfD structure, a CCfD ensures a fixed value (strike price) for every tonne of CO_2-e the beneficiary avoids emitting. If the market price of carbon (e.g. EU ETS allowance price, SMC price, etc.) is lower than the strike price, the granting authority pays the difference to the beneficiary. Conversely, if the market price is higher than the strike price, the beneficiary pays back the difference between market price and strike price.[29]

CCfDs were modelled on private sector risk management contracts — with hedging contracts typically used to reduce risk from uncertainties in interest rates, foreign exchange rates, commodity prices, etc. By providing long-term price certainty for CO_2 reductions, CCfDs help de-risk high-cost decarbonisation investments — such as hydrogen, electrification, and carbon capture — making them financially viable despite higher capital or operational expenses.

German Industrial CCfD

In May 2026, the European Commission approved the €5bn CCfD industry decarbonisation scheme for Germany.[30] The European Commission identified that the introduction of Germany's CCfD:

- Is necessary and appropriate to support decarbonisation in sectors covered by the ETS, in line with European and national environmental targets.
- Has an incentive effect, as the beneficiaries would not carry out such investments in decarbonisation without the public support.
- Has a limited impact on competition and trade within the EU. In addition, it is proportionate and any negative effect on competition and trade in the EU will be limited in view of the design of the competitive bidding process, which will ensure that the amount of aid is kept to the minimum.
- Is committed to ensure that the aid delivers overall CO_2 reductions and that it does not merely displace the emissions from one sector to another.

Under the German CCfD, reverse auctions will be held with industrial facilities to secure 15-year CCfD contracts. Projects will be selected through a competitive bidding process based on their cost efficiency, measured as the aid requested per tonne of avoided CO_2 emissions. Projects must deliver substantial emission reductions, including at least 50% within four years and 85% by the end of the contract period in 15 years. Such reductions will be assessed against reference systems reflecting the most efficient conventional production technologies in the relevant sectors.

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[29] EU Competition Policy, Carbon contracts for difference schemes for industrial decarbonisation under the CEEAG – State aid Guidance for Member States, 17 July 2026

[30] European Commission, Commission Approves €5bn German State Aid Scheme to Support Decarbonisation of Industry, 07 May 2026

The annual funding provided to CCfD contract recipients is calculated as (simplification of the official methodology) the difference between the base contract carbon price and the effective carbon price realised in the EU ETS, multiplied by the annual specific GHG emissions reduction achieved in real terms, multiplied by the annual production volume achieved.

The volume of emissions allowances received per unit of production is a critical aspect of the design of an effective CCfD. Under the German model, the verified emissions produced from the decarbonised or lower-emission plant after undertaking the decarbonisation investment is benchmarked against that of a comparable reference system for the same planned or actually realised production volume. A comparable reference system is an efficient conventional source production technology available for the respective product at the time of the funding call.

The industrial facility that has undertaken investments into decarbonisation is able to receive emissions allowances in the EU ETS to the level of the comparable reference system. As the EU CBAM phases in, and free allocation for emissions-intensive, trade-exposed facilities progressively declines, the volume of emissions allowances generated for the decarbonised plant also reduces proportionally.

The German Government views the implementation of such measures as critical to support investment into decarbonisation, while supporting existing industry from carbon leakage that simultaneously does not throttle investments into low-emissions capacity entering the domestic market. According to the German Government: “Germany must become more attractive for investment. This applies in particular to energy intensive industries. Their capital stock has been declining over the last decade. In the current geopolitical climate, their challenges have become even greater. Added to this are the requirements of European and national climate legislation, which necessitate a fundamental change in production methods. It is now important to safeguard these industries and make them fit for the future.

“The Carbon Contracts for Difference (CCfD) funding programme addresses energy-intensive industries and is intended to enable companies to decide today to invest in forward-looking and low-emission production processes. It increases planning security in an uncertain investment environment.”

Application of CCfDs in the Australian Context

A challenge for a number of Safeguard Mechanism captured facilities to decarbonise is the misalignment of capital outlay to that of investment returns. Most viable industrial abatement options — such as electrification, fuel switching, CCS, and process innovation — require significant upfront capital investment with long payback periods. Conversely, under mechanisms like the Safeguard Mechanism, investment returns are back-ended, where facilities begin earning credits at a sufficient price well after the project delivers verified abatement, creating significant investment delays surrounding cash flow risks.

For companies looking to undertake significant capital investments into decarbonisation, the current settings of Safeguard Mechanism create challenges in:

- Revenue uncertainty — with future value of SMCs uncertain.
- Regulatory uncertainties with the pace of baseline reductions moving beyond 2030, and the strength of carbon market conditions also depending on political decisions.

These factors combine to increase risk and undermine the ability to raise finance. As a result, many firms choose to delay investment until technologies are clearly cost-competitive or regulatory certainty improves. In the meantime, entities meet compliance obligations by purchasing ACCUs or SMCs and delaying on-site abatement.[31]

[31] Pollination, WWF, CEF, Carbon Contract for Difference to support abatement under the Safeguard Mechanism — Appendix of Submission to NSW Net Zero Commission 2025 Consultation, 24 July 2025

Introducing an instrument such as CCfDs into the Safeguard Mechanism has the potential to unlock industrial abatement by providing long-term price certainty for carbon abatement.

Australia's Safeguard Mechanism already has the emissions allowance allocation policy architecture in place with the design of the SMC. A facility that reduces emissions below a comparable reference system, is eligible to receive SMCs to that of their declining baseline. The application of a CCfD in the context of the Safeguard Mechanism, therefore, is securing long-term contracts for the value of SMCs above the current market price.

Australia's own Capacity Investment Scheme(CIS) demonstrates the potential for CfD-like structures to accelerate clean energy deployment. Under the CIS, the Commonwealth underwrites minimum revenue for renewable energy projects competing in electricity markets against fossil fuel-based generation. The CIS has now undertaken multiple auctions, securing gigawatts of new renewable capacity, while reducing investment risk and catalysing private capital flows into the sector.

Similarly, a well-designed industrial CCfD would offer price certainty for the marginal abatement value of capital-intensive decarbonisation projects, enabling industrial facilities to compete in carbon-intensive commodity markets.

Interaction of Safeguard Mechanism and Fuel Tax Credit Scheme

One of the largest opportunities for policy settings reform necessary to facilitate the deployment of emissions reduction technologies is for the Federal Government to **address the interaction of the Safeguard Mechanism with the Fuel Tax Credit Scheme**.

A number of fossil fuel producers and industry representative organisations within the minerals and resources sector have urged against fuel tax credit reform. A key point consistently elevated is that Australia has now introduced an implicit carbon pricing scheme that covers the main industrial emitters, which includes the FTC Scheme's largest beneficiaries, via the Safeguard Mechanism. The assertion is that as a result, fossil fuel subsidy reform is unnecessary, burdensome, and duplicates regulatory restrictions for large operators in Australia's resource sector.

The marginal carbon price for excessive diesel consumption is represented as the price of an SMC or ACCU. ACCU prices are determined by market dynamics, with average prices maintaining ~$30-40/t since 2022. This is way below the global best price, with emissions penalties realised through the EU ETS of €80-90/tonne (A$130-146/tonne).

At the FY25 weighted-average fuel tax rate, fuel tax credits provide an implicit carbon emission subsidy of $190/tCO2-e. As a result, for the Safeguard Mechanism to provide a marginal carbon price to eliminate the implicit carbon subsidy via the FTC Scheme, the price of SMCs or ACCUs would have to rise to $190 a unit. However, with average ACCU prices fluctuating between $30-40 in recent years, the carbon subsidy provided by fuel tax credits is over 5x greater than the carbon penalty paid under the Safeguard Mechanism on marginal emissions above a Safeguard facility's baseline.

As currently designed, the FTC Scheme disincentivises FTC recipients from investing into the decarbonisation of diesel-consuming assets. By entrenching the burning of vast quantities of imported fossil fuels, it significantly counteracts and undermines the effectiveness of the Safeguard Mechanism.

With the marginal cost of emissions abatement for Australia's industrial emitters low as a result of the market rates for ACCUs and SMCs to meet Safeguard Mechanism compliance, final investment decisions into electrification and decarbonisation are primarily a function of the economic differential between continued fossil fuel-based architecture and mine operation, and building out the enabling renewable energy infrastructure required to electrify mining.

Under the current policy landscape, major consumers of diesel have little to no incentive to invest into decarbonisation from an economic perspective. Liquid fuel-intensive facilities must see

incentive structures shift such that the unit cost of electrification falls below that of the unit cost of fossil fuels.

Treasury modelling published in September 2025 on Australia's net zero transformation models a baseline scenario in which Australia builds on existing climate and energy policies to achieve its emissions reduction targets and net zero by 2050. In Treasury's baseline scenario, Australia's 43% reduction by 2030 target is achieved, and national emissions reduce by 65% by 2035, in alignment with Australia's latest NDC under its Paris Agreement obligations of 62-70% by 2035.

This scenario determines the required pathway Australia must follow in order to meet its emissions reduction targets, including declines in fossil fuel consumption and industrial decarbonisation, as well as the growth in Australia's land sector and carbon removals to achieve such objectives. Treasury modelling does not demonstrate the probable pathway for Australia but clearly shows current policies are insufficient to deliver the emissions reductions necessary to meet our targets.

If Australia is to reach its climate and decarbonisation goals, the FTC Scheme is overdue for substantial reform. The FTC Scheme is misaligned with Australia's climate ambitions and undermines the Safeguard Mechanism, as well as Australia's energy independence.

From 2005 to 2024, Australia's national GHG inventory has declined 184MtCO2-e (29%) from 631MtCO2-e to 447MtCO2-e. However, the land use, land use change and forestry (LULUCF) sector has been responsible for 91% of Australia's emissions reductions, at an average annual reduction of over 8.7MtCO2-e pa. Excluding LULUCF, Australia's national emissions have only fallen 17MtCO2-e from 2005 to 2024, at an average annual reduction of just 0.92MtCO2-e. Transport, industrial process, fugitive emissions, and stationary energy sectors have risen materially since 2005.

The CCA's 2025 Annual Progress Report identified emissions reductions as having averaged an 8MtCO2-e annual decline across the previous five years to 2024. As a result, to achieve Australia's 2030 target, annual reductions need to more than double to 18MtCO2-e pa. Furthermore, to achieve the top of Australia's 62-70% emissions reduction range for 2035, annual reductions must triple to 20-25MtCO2-e over the next decade.

However, Australia's emissions reduction progress has slowed in recent years, not accelerated. Following a negative shock in transport emissions in 2020 during COVID-19 that have since recovered, Australia has only averaged a 4MtCO2-e annual emissions reduction since 2020.

A key enabling policy for the rise in transport and mining emissions has been the FTC Scheme. From 2006-07 to 2024-25, it subsidised over 815 MtCO2-e GHG emissions from the burning of diesel and petrol by industry, largely coal and iron ore mining. Australia's 15 largest diesel consumers burned almost 6 billion litres in FY24, receiving $2.9bn in tax concessions to emit 16.2 MtCO2-e.

The continued subsidisation of diesel used by Australia's largest consumers massively undermines the Safeguard Mechanism and climate-industry policies that encourage decarbonisation. Reform of the FTC Scheme is critical to achieving Australia's interim emissions target to 2030, and will support a significant step-change in ambition for Australia's 2035 NDC target.

Reform proposal to enhance the efficacy of the Safeguard Mechanism

CEF calls for the urgent reform of the FTC Scheme towards a 'cap-and-reinvest' fuel taxation model, introducing a **Transition Tax Incentive** (TTI) initiative to accelerate the electrification and decarbonisation of Australia's mining industry.

CEF has previously proposed the introduction of a $50m pa cap, per consolidated corporate entity, to the FTC Scheme. FTC receipts above the $50m cap are returned as a conditional investment tax incentive, a **Transition Tax Incentive**, to the extent that a miner invests into defined investment classes that will enable the phase-out of fossil refined petroleum. While CEF advocates for the return

of 100% of receipts to give a budget neutral outcome, the return of the majority — for example 80% — of receipts would allow some budget repair as well.

Consolidated entities would retain the value of the TTIs if a commensurate investment into mine electrification and decarbonisation capex has been made in the relevant financial year, with eligible infrastructure and technology investments defined by a common sustainable finance taxonomy, including but not limited to enabling electrification infrastructure, e.g. transmission and distribution networks, charging networks, renewable energy generation and firming capacity, or electrified heavy mobile equipment procurement to replace diesel fleets.

The TTI initiative would provide a major financial incentive to accelerate the deployment of decarbonisation capex without taxpayer cost, as the TTC proposal is, at worst case scenario, revenue-neutral for the Federal Government.

To ensure there is no P&L loss in the respective financial year, CEF recommends the return of fuel tax credits up to $50m per consolidated group (but CEF would suggest considering using a higher $60-70m now CPI inflation has increased FTC unit values higher to ensure only major mining entities are covered) as per the current iteration of the FTC Scheme, with additional receipts provided as a transition tax incentive under the same crediting mechanism established by the Australian Taxation Office (ATO). To implement the transition tax incentive, Federal Treasury, the ATO and Department of Climate Change, Energy, Environment and Water (DCCEEW) would coordinate the classification of eligible assets under the TTI, requiring the annual reporting of the consolidated entities to demonstrate, and provide evidence, of their investments into decarbonisation capex in the respective compliance period.

The TTI could be phased in over time to ease the transition from a diesel incentive to decarbonisation incentive. CEF recommends that either the TTI is introduced to its full extent initially, or that the Treasury introduce a banking period of TTIs in its first 3 years, such that the value of the TTI can be carried forward in the first two years and deployed in the third compliance year. This mechanism would allow captured entities to invest now under the TTI Scheme, but also provide entities the ability to generate investment pipelines for large-scale renewables and enabling infrastructure to deploy in future periods.

In addition, as the TTI is funded via fuel excise, the TTI would phase out as the investments into the defined asset classes would result in a real reduction of fossil diesel used in mining operations. Once sufficient energy infrastructure is operational to enable full electrification and/or decarbonisation, the TTI is self-terminating with no imported diesel consumption, and thus, no fuel excise paid.

CEF recognises the trend for Australian mining entities to prioritise energy decarbonisation through corporate power purchase agreements (PPAs) as opposed to internal ownership of renewable energy infrastructure assets. This has been characterised by the PPAs signed by Rio Tinto to decarbonise its Gladstone alumina and aluminium assets, BHP Mitsubishi Alliance's (BMA) PPAs with CleanCo to decarbonise its existing electricity demand at its Queensland coal operations, and BHP's PPA for its Olympic Dam copper assets in South Australia.

CEF supports the inclusion of binding PPAs as eligible investment criteria provided the renewable energy asset passes the final investment decision in the corresponding compliance period. The initial concessional TTI banking period articulated above can enable captured entities to accelerate PPA partnerships with developers and accommodate longer lead times and due diligence in project development without limiting decarbonisation momentum of other captured entities. A binding PPA to be eligible would require the capital expenditure of the renewable energy asset to be equal to or greater than the value of the TTIs for the captured entity to retain the benefit.

From CEF's analysis, the introduction of **the TTI could have mobilised almost $2.2bn pa into decarbonisation alone just in FY24** under a federal government revenue-neutral approach. As fuel excises continue to rise through indexation, the annual value of the TTI proposal would rise

materially. **If the TTI proposal was implemented from the current forward estimates period, CEF forecasts over $13.6bn of decarbonisation capex could be mobilised, or returned to the government from just the entities covered from FY24.** As fuel excise is indexed, more large-scale consumers of diesel would be captured by the scheme.

CEF also recommends the additional revenues to the government through TTI clawback be ring-fenced and directed into a **Diesel Decarbonisation Fund** that could then provide budgetary assistance to mining firms that are not captured over the $50m cap to the FTC Scheme.

This mechanism can provide an economic incentive to decarbonise large-scale mining operations through the TTI, as well as provide an economic incentive to smaller mining entities without the loss of the current value of fuel tax credits. This would enable and support a whole-of-industry buy-in approach that provides additional support for smaller miners and entities and reduces budgetary assistance to the largest firms that benefit significantly from economies of scale.

This reform would instantaneously reshape one of Australia's worst climate and industry policies to become a major tailwind to electrification, accelerating regional investment in the deployment of infrastructure to leverage Australia's abundant and world-leading renewable energy resources to embed decarbonisation into value-added exports, and permanently build a global competitive advantage of both zero emissions and low cost energy. A win-win-win, for the environment, for Australia's energy security and terms of trade, and for a 'Future Made in Australia' (FMIA).

Australia has a world leading mining sector, and if we applied a 'Team Australia' approach to become an early global leader in electrification and decarbonisation technology deployments, collectively the demand for replacement and new mining equipment could be mobilised to build world-leading onshore EV assembly capacities in partnership with world-leading EV technology original equipment manufacturers (OEMs) – be that Caterpillar, Liebherr, Komatsu and/or XCMG Group – along with the upskilled workforce and battery supply chains the FMIA envisages.

The most economically-efficient and optimal reform of government incentives would be the introduction of an economy-wide carbon pricing mechanism. CEF sees the progression towards this as imperative to drive structural pivot from fossil fuel consumption across all economic sectors in Australia, strengthening rather than undermining the Safeguard Mechanism. CEF's TTI proposal is a transitional measure that can be effectively deployed now to align economic incentives with Australia's industrial decarbonisation objectives targeted to Australia's largest consumers of fossil liquid fuels that would permanently improve Australia's energy security and independence in the process.