

30 JUNE 2023

ACF Submission: Setting, Tracking and Achieving Australia's Emission Reduction Targets

Introduction

The Australian Conservation Foundation (ACF) welcomes the opportunity to provide input into the Climate Change Authority's (CCA's) consultation on setting, tracking, and achieving Australia's emissions reduction targets.

ACF is Australia's national environment organisation. We are 700,000 people who speak out for the air we breathe, the water we drink, and the places and wildlife we love. We are proudly independent, non-partisan and funded by donations from our community.

ACF believes that Australia and the world face an unprecedented climate and mass extinction crisis caused first and foremost by digging up and burning fossil fuels like coal, oil, and gas. The planet is moving dangerously close to tipping points and the window of opportunity to forestall the worst impacts of climate change is rapidly closing.

The ambition of our emissions reduction targets including our upcoming 2035 Nationally Determined Contribution (NDC) under the Paris Agreement sets the course for national policy and action, sends important signals to investors, plays a key role in the speed at which our economy transitions to zero emissions, and influences the global perception of Australia as either a laggard or a leader on climate action.

Australia has many reasons to be an ambitious climate leader in this critical decade -- much to gain from the opportunities presented by the global movement to net zero emissions, and much to lose if climate change is not kept within Paris Agreement temperature guardrails.

We welcome the breadth of this consultation and the connections that have been made across the 4 areas of focus including two topics requiring advice and two reviews of legislation:

- Advice on emissions reduction targets for Australia's next NDC under the Paris Agreement
- Advice for the Minister for Climate Change and Energy's Annual Climate Change Statement, i.e. the 2023 Annual Progress Report
- Review of the [Carbon Credits \(Carbon Farming Initiative\) Act 2011](#) (CFI Review)
- Review of the [National Greenhouse and Energy Reporting Act 2007](#) (NGER Review).



Given the extensive coverage, however, ACF will focus our submission on a selection of the questions asked in the CCA's Issues Paper. A summary of our recommendations is below.

Summary of Recommendations

Strategic Framework

- In addition to the enablers and actions proposed in the Strategic Framework, ACF encourages consideration of the importance of social licence as an enabler, support for community transition as an action, and equity as a core principle.

Target-setting Framework

- To achieve the ambition that is required by 2035, and to accord with the urgency of climate action, it is highly recommended that the CCA provide advice to government that includes consideration of an increased 2030 target consistent with a carbon budget approach and the analyses that have been done in recent years by the Climate Targets Panel, the Climate Council and Climate Resource. These analyses all conclude that Australia's 2030 target should be around 75 per cent based on 2005 levels by 2030.
- Australia's 2035 target should be to achieve net zero emissions.
- Australia's 2035 target should reflect the latest science on climate change; Australia's commitments under the Paris Agreement including to pursue a limit of 1.5°C of global warming; a fair-share carbon emissions budget; and the principle of common but differentiated responsibilities and capabilities.
- As above, when considering this target, ACF recommends that domestic considerations include a thorough assessment of the likely costs and risks of insufficient ambition on Australians including the most vulnerable in our society; our health and wellbeing; our precious natural environment including critical eco-systems, biodiversity, and natural icons; and our future economy--including the heavy costs of inaction.
- Domestic considerations should also include the substantial advantages that Australia has in meeting the climate challenge including world-class renewable energy resources and critical minerals; significant investment wealth; technological know-how; and ambition already set in motion by states and territories.

Leading indicators

- Leading progress indicators vary by sector, but in all cases should represent progress toward real abatement and maximum ambition. For every sector, a shift away from fossil fuels toward zero emission renewable energy, electrification, and energy performance (energy efficiency, demand response, fuel-shifting) are key opportunities that should be represented in leading progress indicators.

Sectoral Pathways

- Factors considered by the CCA in developing sectoral decarbonisation pathways should include ensuring maximum ambition for each sector; achieving **genuine** emission reduction; carefully addressing issues



related to social licence, nature protection and rapid renewable energy build; prioritising demand side solutions such as energy efficiency, demand response, fuel-shifting and electrification; avoiding false solutions such as the need for more gas, nuclear energy and carbon capture and storage; prioritising the shift away from coal and gas; and embedding equity and fairness as key principles.

- Households and businesses should be supported to take advantage of the significant opportunities available through getting off gas and shifting to renewable energy, maximising energy efficiency, and electrification.
- For transport, we encourage rapid implementation of strong fuel efficiency standards for light vehicles (i.e., that align with similar economies including the EU and US); setting a national target for all new light vehicles to be zero emissions by 2035; and development of a National Clean Transport Strategy that covers active and public transport, trucks, buses and heavy vehicles; mode shifting from road to rail; shipping; and aviation.
- For the built environment, we encourage using the next update to the National Construction Code to move Australia toward zero carbon homes; and improved mandatory disclosure of energy efficiency ratings including for rental properties.
- To further assist with energy efficiency opportunities, expand coverage of Greenhouse and Energy Minimum Standards (GEMS), keep them up-to-date and aligned with similar economies.

Contributing beyond Australia's borders

- To replace fossil fuels for domestic energy use, Australia needs a national transition plan that addresses both coal closure and a phase out of gas. This should not replace AEMO's Integrated System Plan (ISP). Rather the ISP should align more closely with a 1.5°C pathway and be coupled with a clear fossil fuel phase out plan.
- To replace fossil fuel exports Australia needs a comprehensive national renewable exports strategy that brings together the many opportunities that are tied to a phase out of fossil fuels and a phase up of new clean manufacturing and export opportunities.
- Rapidly phase out fossil fuel subsidies and make fossil fuel exporters and producers contribute significantly more to the public purse while they are still in operation. These funds should be directed toward transitioning Australia's domestic energy and exports to clean, climate-friendly options.

Are Kyoto-era schemes fit for the Paris Agreement era? What do you see as the strengths and weaknesses of the NGER scheme? How could it be improved?

- Require measurement and reporting of scope 3 emissions under the NGER scheme to bring exported emissions into consideration as Australia plans and manages a fair, fast transition from fossil fuel exports to clean, renewable exports.
- To ensure that Australia's methane reporting accounts are accurate, the NGER Measurement Determination should require fossil fuel companies to conduct direct emissions measurement at the source and site level (in line with the Oil and Gas Methane Partnership 2.0 (OGMP 2.0) reporting framework for oil and gas facilities and equivalent standards for coal). New NGER-covered facilities should comply from 1 July 2023, and existing facilities should comply within three years of that date.



- To help verify accurate measurement and reporting of methane emissions, aerial and satellite technologies should be explored for incorporation into the NGER scheme. Independent verification of coal mine measurement and reporting should also be implemented including aerial flyovers and use of satellite data.
- The NGER scheme should require more robust and transparent reporting of methane emissions from closed coal mines with a view to better informing closure requirements and more rapid rehabilitation requirements. Direct and site-specific measurement standards for all closed and abandoned coal mines should be implemented.
- Australia should apply the 20-year Global Warming Potential of methane when considering policy and regulatory responses, and this should also be required in NGERs reporting requirements.
- Reporting on methane emissions and mitigation efforts should be clear, transparent, and publicly accessible.

Carbon Credit Integrity

Following adoption of the Chubb Review recommendations, what concerns about ACCU integrity remain?

- Strict limits should be applied to the use of offsets as soon as possible, they should only be allowed as a last resort after efforts to avoid and mitigate, and their use should be narrowed to hard-to-abate industries. Until stronger restrictions on offset use are set or phased in (e.g., through the next Safeguard Mechanism review) implementation of buffers should be applied to help with offset risks.
- ACF remains concerned that integrity issues particularly related to Human Induced Regeneration and Avoided Deforestation methods have not been fully addressed and that existing projects under these methods risk generating further ACCUs that will lack integrity. We encourage the NGER Act to be updated with clear requirements for reporting ACCU provenance and further scrutiny of HIR projects, which should not generate ACCUs unless they have transitioned onto a new method that limits eligibility to forest areas that have previously been comprehensively cleared and where pre-existing mature trees and shrubs are required to be excluded from the areas that are credited.
- We recommend ensuring transparency by adding requirements to the CFI Act that mandate the disclosure of offset reports, audit reports, carbon estimation areas, data submitted as evidence of compliance with eligibility requirements and all data relied on by the Carbon Abatement Integrity Committee in evaluating and endorsing methods.
- We recommend allowing projects to be removed from low integrity methods prior to the completion of their crediting period through amendment to the CFI Act.
- We recommend that open standing provisions be implemented that allow third parties to seek judicial review of administrative decisions made under the CFI Act.

How should a buffer be applied (e.g. government purchase, supply-side reserve, demand-side correction, other)?

- Offsets should not be prioritised for government purchase. Implementation of a buffer would be better as a demand-side correction. The SGM threshold of 30 per cent ACCU use should be applied above which each offset is discounted, preferably by a reduced emissions reduction value of 0.5 tonnes (two ACCUs required for one tonne of abatement). A sliding scale could be added that applies a decreasing offset value as larger shares of ACCUs are used.



International Units

What role should international carbon markets have in Australia?

- International carbon markets should have no role in meeting legislated or regulated emissions reduction requirements in Australia and only a very limited role in meeting voluntary commitments.
- ACF recommends against efforts to set up policy infrastructure for international offsets, as flagged through SGM reform, and instead would encourage the government to focus efforts on limiting use of ACCUs, ensuring ACCU integrity, and pursuing biodiversity/nature positive benefits alongside carbon outcomes from our domestic offsets market.

STRATEGIC FRAMEWORK

WHAT ACTIONS AND ENABLERS BEYOND THOSE IDENTIFIED IN THE STRATEGIC FRAMEWORK COULD HELP AUSTRALIA PROGRESS TOWARDS A PROSPEROUS AND RESILIENT NET ZERO FUTURE? WHAT ARE YOUR HIGHEST PRIORITIES?

The CCA's Strategic Framework, including the six actions and enablers, provides a useful foundation for driving progress towards a prosperous and resilient net zero future. ACF supports the CCA's framework but recommends several additional considerations.

Social licence must be addressed as an enabler

The sheer number of new renewable energy facilities and the many kilometres of new transmission infrastructure required to fully transition Australia to 100 per cent renewable energy will have impacts on nature, communities, culture, and individual landowners. This transition cannot be achieved without establishing social licence. That means inclusive planning; free, prior and informed consent of First Nations people and communities; taking the utmost care in avoiding and minimising adverse impacts to our natural environment; and ensuring appropriate compensation where needed. There is growing tension between the need for moving rapidly yet ensuring projects proceed with appropriate care, consultation, and involvement. Balancing these demands effectively will be a key aspect of progressing Australia towards a resilient net zero future.

Supporting community transition is an important action

Support for communities that will be impacted by transition will play a key role as an enabler. The ACF has advocated for the creation of a new Authority to ensure a just transition for communities impacted by Australia's net zero transition, which must see coal and gas phased out for domestic energy and exports. The Net Zero Transition Authority, which has been committed by the Commonwealth government, will have an important role



to play in helping communities and individual workers seize new opportunities as we move to a net zero economy. The work of the Authority, which will act as a key enabler, will require sufficient budget and a clear scope of work. Its work should connect to the analysis and advisory functions of the Climate Change Authority in helping to progress Australia towards a prosperous and resilient future.

Equity considerations should be built into the framework as a core principle

Equity considerations should be factored into both actions and enablers. For example, actions such as switching fuels or electrification will be much more difficult for low-income households and advice to government about how those actions should be taken should ensure that those most vulnerable in our society including First Nations peoples and communities get the assistance they need. While there are costs that must be incurred to achieve emissions reduction, those costs should not be passed on to those most vulnerable in our community or used as an excuse for weaker climate action.

Recommendation:

- In addition to the enablers and actions proposed in the Strategic Framework, ACF encourages consideration of the importance of social licence as an enabler, support for community transition as an action, and equity as a core principle.

TARGET-SETTING FRAMEWORK

HOW COULD THE AUTHORITY BEST STRIKE A BALANCE BETWEEN AMBITION, DOMESTIC CONSIDERATIONS AND THE INTERNATIONAL CONTEXT IN ITS 2023 NDC ADVICE?

WHAT DO YOU THINK AUSTRALIA'S 2035 TARGET SHOULD BE AND WHY?

Climate science should be a priority consideration in the CCA's advice to the Commonwealth government on its 2035 Nationally Determined Contribution. That includes the latest scientific understanding regarding the progression of climate change globally, the implications of exceeding 1.5°C, and the extent to which each fraction of a degree matters. Domestic considerations including climate impacts in Australia and across our region; economic impacts including the projected costs of inaction; and social justice considerations including the heightened impacts of unchecked climate change on those most vulnerable in our society are all important related considerations that broadly re-enforce the level of action that climate science indicates is required.

Prioritise climate science

Climate science is clear and well documented, including in the Intergovernmental Panel on Climate Change's (IPCC's) AR6 Synthesis Report, released in March 2023. The AR6 Synthesis Report covers the content of reports on the Physical Science of Climate Change; Impacts, Adaptation and Mitigation of Climate Change; and 3 special



reports: Global Warming of 1.5 degrees, Climate Change and Land, and The Ocean and Cryosphere in a Changing Climate.

The core findings of this work are indisputable. Human-induced climate change is unequivocal. It is heating our oceans, land, and atmosphere and is already causing extreme weather events, bushfire, drought, and floods. The IPCC makes it clear that continued greenhouse gas emissions will lead to increased global warming and every increment of global warming will intensify multiple and concurrent threats.¹ The IPCC also makes it very clear that the extent to which current and future generations will experience a hotter and different world depends on choices we make now (see graphic below showing how impacts will continue to intensify).

¹ https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf

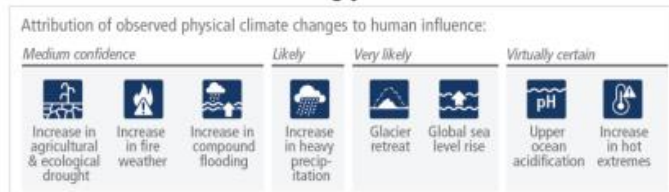


Adverse impacts from human-caused climate change will continue to intensify

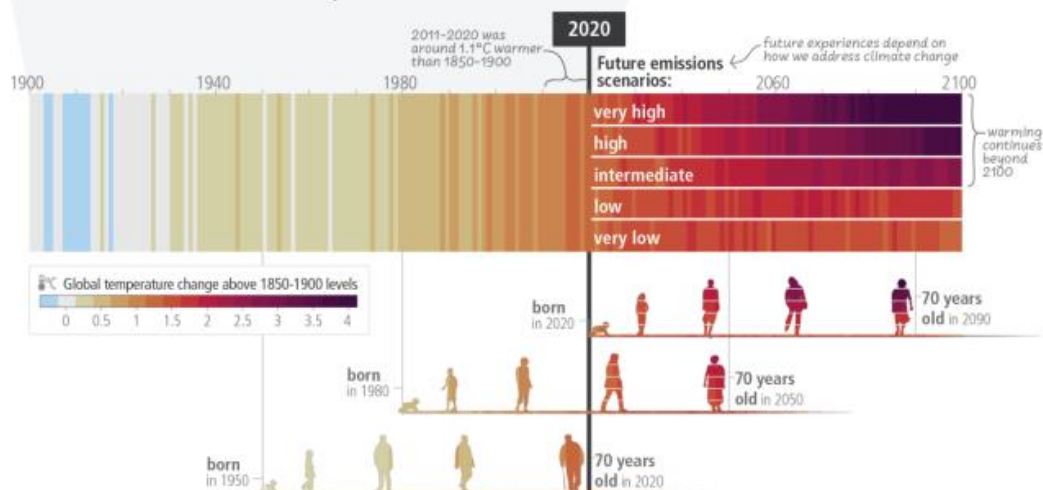
a) Observed widespread and substantial impacts and related losses and damages attributed to climate change



b) Impacts are driven by changes in multiple physical climate conditions, which are increasingly attributed to human influence



c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term



Source: IPCC AR6 Synthesis Report, accessible here: https://report.ipcc.ch/ar6synr/pdf/IPCC_AR6_SYR_SPM.pdf



The IPCC has confirmed that to avoid the worst impacts and highest costs of climate change, we need to limit warming of average surface temperatures to no more than 1.5°C above pre-industrial levels. Yet, current global commitments have us rapidly moving far beyond this temperature range. According to the UN Secretary General: “We are hurtling towards disaster, eyes wide open.”

According to many climate scientists, limiting global temperature rise close to 1.5°C is still possible but will require stronger commitments to reduce carbon emissions by 2030. Current global policies are projected to lead to a 2.8°C temperature rise by the end of the century (at least), which “spells catastrophe”². There are many projections that indicate a much more devastating trajectory.

There is a significant difference between 1.5°C of warming and 2.0°C of warming, and it is critical that the Climate Change Authority’s targets advice acknowledges the many devastating impacts that a 2.0°C pathway would have for Australia’s future.

The graphic below, assembled by the Climate Council, provides a comparison of impacts related to 1.5°C and 2.0°C of warming. For example, 2.0°C of warming would mean a 99 per cent decline in coral reefs, 2.6 times more heat extremes, and 2-3 times more species loss, amongst other devastating indicators. As committed through the Paris Agreement, Australia needs to do all that it can to pursue a limit of 1.5°C.

² <https://news.un.org/en/story/2023/06/1137747>





Source: The Climate Council, from [IPCC \(2018\)](#).

The World Meteorological Organisation (WMO) has made dire warnings about the pace of global temperatures if action on climate change is not taken urgently. The [WMO's Global Annual to Decadal Climate Update for 2023-2027](#) found that:

- The annual mean global near-surface temperature for each year between 2023 and 2027 is predicted to be between 1.1°C and 1.8°C higher than the average over the years 1850-1900.



- The chance of global near-surface temperature exceeding 1.5°C above preindustrial levels for at least one year between 2023 and 2027 is more likely than not (66%).
- The chance of at least one year between 2023 and 2027 exceeding the warmest year on record, 2016, is very likely (98%).
- The chance of the five-year mean for 2023-2027 being higher than the last five years (2018-2022) is also very likely (98%).

Recent reports reveal that the global average air temperature, relative to 1850-1900, exceeded the 1.5°C Paris Agreement threshold in March this year and again in June. This last happened in 2020, and before that during the powerful 2015-16 El Niño.³ This time, however, the temperature increase occurred **before** a forecast El Niño event in the Pacific, rather than during one. The potential impacts of a likely El Niño period are already getting global headlines including predictions that 2024 will be the world's hottest year on record. In Australia that could mean another catastrophic fire season, more coral bleaching and dangerous heat extremes.

To avoid truly catastrophic impacts, deep, rapid, and sustained reductions in greenhouse gas emissions must occur. ACF believes that recognition of this fact is a critical starting point for considering Australia's 2035 climate target.

This also means that direct (absolute) emissions reduction must occur and must not be replaced by offsets. As covered later in this submission, reliance on offsets is extremely risky and untenable. Offsets, particularly from the land sector, are not permanent or equivalent to direct emissions reductions. Even if Australia's offsets market were to achieve full integrity, the permanence of every project generating offsets cannot be guaranteed. Carbon emissions released into the atmosphere will far outlast any land-based project's ability to sequester carbon.⁴

ACF strongly encourages the Climate Change Authority to emphasize the importance of absolute emissions reduction in meeting Australia's climate targets and the importance of ensuring that offsets are only used when necessary and by genuinely hard-to-abate sectors. We provide additional information about offset use further in this submission.

Domestic considerations

The most recent Lowy Poll states that 56% of Australians see climate change as a serious and pressing problem and want stronger climate action even if it means significant costs. A full 89% of Australians view climate change as a critical (59%) or important (30%) threat to Australia's vital interests.⁵

³ <https://theconversation.com/global-average-sea-and-air-temperatures-are-spiking-in-2023-before-el-nino-has-fully-arrived-we-should-be-very-concerned-207731>

⁴ https://climateanalytics.org/media/why_offsets_are_not_a_viable_alternative_to_cutting_emissions.pdf

⁵ <https://poll.lowyinstitute.org/report/2023/>



Australians are already feeling the impacts of climate change, while getting frequent reports that it is set to get much worse at an alarming pace.

Australia is one of the most vulnerable countries in the world to the impacts of climate change. Notably, the most vulnerable people and communities in Australia are set to experience the worst impacts of climate change but will be least equipped to deal with them.

Australia should be leading from the front when it comes to global action because we have so much to lose if the world does not act with sufficient speed and ambition. As a result of unchecked climate change, Australia will experience even more extreme heat waves, droughts, flooding, and catastrophic bushfires. Our natural environment, biodiversity, and the places we love will suffer along with our wellbeing as a nation.

As noted by the Australian Academy of Science, “Australia’s natural resources are directly linked to our wellbeing, culture and economic prosperity.”⁶ Global temperature increase that has already occurred is having severe consequences for thousands of species and this is set to get much worse:

- Heat stress has impacted marine and coastal ecosystems, destroying habitats and reducing biodiversity.
- Land-based environments have been affected by drought, fire, extreme heatwaves, invasive species and disease, leading to large-scale mortality of trees, birds and tree-dwelling mammals.
- Rising sea levels are amplifying storm impacts, damaging coastal ecosystems such as coral reefs and mangrove forests, and causing increasing issues for human health and wellbeing in coastal areas.”⁷

Costs of inaction

The costs of extreme weather to everyday Australians are projected to increase enormously. The Insurance Council’s 2022 report, *The Cost of Extreme Weather*, and Insurance, *Catastrophe Resilience 2021-2022* report,⁸ projected that by 2050 Australian households will be paying \$35.24 billion every year (in 2022 dollars) for the direct costs of extreme weather. They also found that since 2005, Commonwealth expenditure on disaster relief was \$24 billion while spending on disaster resilience was just \$500 million – or around two per cent of all expenditure.⁹ Climate-related costs are predicted to rise steeply, and Australia has not invested sufficiently in disaster resilience or climate adaptation. Further, as noted above, these impacts are set to hit the most vulnerable Australians hardest.¹⁰

⁶ <https://www.science.org.au/files/userfiles/support/reports-and-plans/2021/risks-australia-three-deg-warmer-world-report.pdf>

⁷ <https://www.science.org.au/files/userfiles/support/reports-and-plans/2021/risks-australia-three-deg-warmer-world-report.pdf>

⁸ https://insurancecouncil.com.au/wp-content/uploads/2022/09/20683_ICA_Final_WebOptimised.pdf

⁹ <https://insurancecouncil.com.au/resource/new-research-shows-every-australian-pays-for-extreme-weather/#:~:text=By%202050%2C%20Australian%20households%20will,direct%20costs%20of%20extreme%20weather>

¹⁰ <https://www.climatecouncil.org.au/resources/uninsurable-nation-australias-most-climate-vulnerable-places/>



Deloitte Access Economics has projected that climate change-related disasters will cost Australia \$73 billion a year by 2060, even if action to curb emissions is taken now. If nothing is done to tackle climate change, that figure will grow to \$94 billion a year by 2060.¹¹

Analysis by Professor Tom Kompas estimates climate change will cost the economy at least \$584 billion by 2030 and \$762 billion in 2050 under the current trajectory for a 2°C temperature rise on pre-industrial levels. These estimates are conservative and only include impacts reliably modelled (e.g., reduced agricultural and labour productivity, loss of arable land due to sea-level rise and losses from infrastructure). They do not include impacts such as floods, bush fires, pollution and biodiversity losses. Professor Kompas estimates the Black Summer fires alone cost \$110 billion.¹²

Further forecasts indicate that **failure to rapidly cut emissions this decade will lead to exponential climate cost increases. Global economic losses are estimated at A\$24.1 trillion per year by 2100. For Australia, the figure is A\$129 billion per year.**¹³

In addition to the direct financial cost of climate-related disasters and other impacts, Australia faces terrible losses related to eco-systems, biodiversity, and precious natural icons such as the Great Barrier Reef.¹⁴ There are projected impacts on agricultural production and our ability to grow food.¹⁵ In addition, heat extremes will take lives and make parts of Australia uninhabitable.¹⁶

Strong mitigation targets are essential and must be accompanied by effective policy and investment in solutions including new technologies to assist hard-to-abate industries; household and business electrification and energy performance; nature-based solutions; and development of the projects and infrastructure needed to achieve a 100 per cent renewable energy grid. Mitigation efforts must also be accompanied by measures to adapt and build resilience to climate impacts that cannot be avoided.

Australia's economic and jobs opportunity

Australia has many natural advantages that support setting strong targets to address the challenge of climate change, and which will also help create a prosperous future in a global net zero economy.

¹¹https://www.iaq.com.au/sites/default/files/Newsroom%20PDFs/Special%20report%20_Update%20to%20the%20economic%20costs%20of%20natural%20disasters%20in%20Australia.pdf

¹²<https://www.smh.com.au/politics/federal/a-real-hail-mary-experts-say-net-zero-2050-plan-fails-to-account-for-billions-in-climate-costs-20211116-p599dv.html>

¹³<https://www.climatecouncil.org.au/resources/markets-moving-economic-costs-australias-climate-inaction/>

¹⁴<https://www.barrierreef.org/news/blog/the-great-barrier-reef-is-a-victim-of-climate-change-but-it-could-be-part-of-the-solution#:~:text=At%20%20degrees%2C%20coral%20reefs,the%20ocean%20as%20a%20whole>

¹⁵https://farmersforclimateaction.org.au/wp-content/uploads/2022/03/Fork-in-the-Road_V5.pdf

¹⁶<https://www.news.com.au/technology/environment/climate-change/three-aussie-towns-set-to-become-unliveable-due-to-extreme-heat/news-story/a96b36d1be5054d9fe3282ebf18c3431>



Global investment in emissions reduction technology and clean energy resources will accelerate into the trillions as countries set a pathway to net zero. Australia is well placed to reap enormous benefits, but early action is needed. Multiple reports calculate the economic and jobs opportunity available through strong policy and action to drive down emissions and commit Australia to become a clean export superpower.

- **Sunshot: Australia's opportunity to create 395,000 clean export jobs.** Commissioned by ACF, BCA, ACTU, and WWF-Australia. This report by Accenture analyses 6 of Australia's major renewable export opportunities and delivers recommendations for how we unlock hundreds of thousands of jobs along with \$89 billion into our economy by 2040. The analysis demonstrates how cutting our exported emissions and providing the leadership to scale the technologies of the future will bolster Australia's prosperity and ensure a safe climate.¹⁷
- **Export Powerhouse: Australia's \$333 billion opportunity.** Beyond Zero Emissions shows Australia can pursue an ambitious 'Go for Gold' scenario and secure a significant share of the global market for growth commodities, such as green steel, renewable hydrogen, renewable ammonia, and green aluminium.
- **A New Choice: Australia's Climate for Growth.** Deloitte Access Economics reveals a fundamental flaw in the debate on climate change – i.e., viewing the costs of action against an economic future that assumes the economy will keep growing with unconstrained emissions.¹⁸
- **Transgrid's Energy Vision:** Underpinned by detailed scenario modelling. Transgrid partnered with independent experts, CSIRO, ClimateWorks Australia and The Brattle Group, to model the implications of a range of futures for Australia's energy system out to 2050. It finds that deep decarbonisation of Australia's economy would require 41,000 Australian electricity sector jobs on average over the next 10 years (full time equivalent), 45 per cent more than projected in current trends. In the following two decades, a clean energy superpower future would support 68,000 electricity sector jobs, more than twice the level of jobs projected in current trends.¹⁹

International context

Australia has for many years been one of the world's largest fossil fuel exporters and one of the highest per capita greenhouse gas emitters. Our contribution to climate change has been significant, and if Land Use, Land Use Change and Forestry (LULUCF) were removed from our national greenhouse gas inventory, our emissions

¹⁷ https://www.acf.org.au/factsheet_sunshot_report

¹⁸ <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-dae-new-choice-climate-growth-051120.pdf?nc=1>

¹⁹ https://www.transgrid.com.au/media/x4mbdody/transgrid_energy_vision.pdf



reduction since 2005 will have been minimal. In 2021, analysis revealed that if the land sector were removed from our emissions calculations, Australia's emissions would have gone **up** since 2005.²⁰

As a wealthy country with many climate solutions available - including world-class renewable energy resources, Australia has a global advantage with a range of opportunities available to reduce emissions. If compared against other similar economies, Australia's current emissions reduction target for 2030 is low.

Australia also faces economic risks related to reliance on coal and gas exports as key importing countries such as Japan and South Korea accelerate action to achieve net zero targets and decarbonise their economies.

Finally, there is a global race underway, with massive investment occurring by countries wanting to lead on decarbonisation technologies and become renewable energy superpowers. Australia can be a leader in this race, but not as a climate laggard. Leadership will be built off climate ambition, targeted investment, and a dedicated effort to transitioning our economy. Other competing countries have made notable commitments:

- President Biden signed a massive A\$532 billion clean energy stimulus package to make America a leader on clean energy transition.
- The European Commission recently finalised its A\$410 billion 'Green Deal Industrial Plan,' and a Joint EU-US Taskforce on the *Inflation Reduction Act (IRA)* was established.
- South Korea added A\$90 billion to its 'Green New Deal'.
- Japan intends to issue A\$220 billion in green transition bonds.
- Saudi Arabia plans to invest A\$400 billion to become a world leader in renewable hydrogen exports.

Australia's 2030 emissions reduction target is not ambitious enough

Despite committing to the Paris Agreement and its temperature goals, Australia's current 2030 target is not consistent with the globally agreed goal of pursuing efforts to limit warming to 1.5°C. While ambition can, and must, be significantly increased for 2035, allowing the 2030 target to remain at its current level (i.e., 43% reduction on 2005 levels) will delay higher ambition and make alignment with 1.5°C more difficult later.

Research and analysis to inform Australia's climate targets has benefitted from the work of notable climate policy experts including the Climate Targets Panel (Professors Will Steffen, Lesley Hughes and Malte Meinshausen), which in 2021 applied the methodology used by the Climate Change Authority in 2014 to provide updated advice on a fair carbon budget and appropriate emissions reduction targets. The Climate Targets Panel's expert analysis

²⁰ <https://australiainstitute.org.au/post/new-analysis-australia-doing-less-than-other-countries-on-climate/>



found that to align with a 50% chance of limiting warming to 1.5°C, **Australia's targets would need to be at least 74% below 2005 levels by 2030 and net zero emissions by 2035.**²¹

These results were re-confirmed by several additional analyses. The Climate Council released "Aim High, Go Fast: Why Emissions Need to Plummet This Decade" in April 2021, which also provided a science-based targets analysis albeit with a slightly more conservative global carbon budget due to consideration of carbon cycle feedbacks. This analysis determined that there was a very low probability of limiting warming to 1.5°C without substantial overshoot. Their analysis determined that **global** emissions need to be at least halved by 2030 and reach net zero by around 2040. Applying this to Australia, (noting Australia's very high level of emissions and huge renewable energy potential), the Climate Council concluded that to do its fair share of the global emissions reduction task, **Australia should aim to cut emissions by 75% below 2005 levels by 2030 and reach net zero emissions by 2035.**²² This was based on a global carbon budget that aligned with a 67% chance of limiting warming to 1.8°C.

Analysis was also done by Climate Resource (Associate Professor Malte Meinshausen and Dr Zebedee Nicholls) in 2022, which found that "for a 50 per cent chance of limiting warming to 1.5°C, a 2030 emissions reduction target of 74 per cent (compared to 2005 emissions levels) and net zero by 2035 is consistent with the latest climate science. For a greater than 50% chance of limiting warming to 1.5°C, reductions even stronger than those presented here are required."²³

This analysis was recently updated²⁴ to reflect increased certainty in the amount of warming that occurred in the early decades of the industrial revolution and how much warming is caused by emissions from international aviation and shipping. As a result, they determined that the share of the global emissions budget allocated to all countries had increased along with Australia's share -- and this extended the timeframe to achieve net zero under their analysis to 2038 and determined that Australia's minimum contribution by 2030 would need to be at least 67% reduction in emissions relative to 2005 levels for 50% chance of limiting warming to 1.5°C.²⁵

Recommendation:

- To achieve the ambition that is required by 2035, and to accord with the urgency of climate action, it is highly recommended that the CCA provide advice to government that includes consideration of an increased 2030 target consistent with a carbon budget approach and the analyses that have been done in

²¹ Climate Targets Panel, "Australia's Paris Agreement Pathways: Updating the Climate Change Authority's 2014 Emissions Reduction Targets," January 2021, accessible here: <https://www.climatecollege.unimelb.edu.au/files/site1/docs/%5Bmi7%3Ami7uid%5D/ClimateTargetsPanelReport.pdf>

²² Climate Council, "Aim High, Go Fast: Why Emissions Need to Plummet This Decade," April 15, 2021, <https://www.climatecouncil.org.au/resources/net-zero-emissions-plummet-decade/>.

²³ https://www.climate-resource.com/reports/wwf/WWF_March2022_a.pdf

²⁴ Climate Resource, "Comparison between Australia's 2030 and 2050 Emission Reduction Targets and 1.5°C Pathways," March 2022

²⁵ Climate Resource, "Updated Assessment of Australia's Emissions Reduction Targets and 1.5°C Pathways, June 2023



recent years by the Climate Targets Panel, the Climate Council and Climate Resource. These analyses all conclude that Australia's 2030 target should be around 75 per cent based on 2005 levels by 2030.

What do you think Australia's 2035 target should be and why?

Australia's 2035 target should be to achieve net zero emissions. This is because, as above, Australia's 2035 target should be based on climate science as a priority. It should line up as closely as possible with our commitment to pursue a 1.5°C limit to global warming, it should be based on a fair and equitable share of the global carbon emissions budget, and it should represent a reasonable chance of limiting warming to 1.5°C.

Further, as required by the Paris Agreement, Australia must abide by the principle of "common but differentiated responsibilities and respective capabilities." As a wealthy, developed country that has made a significant contribution to the global climate problem, particularly through domestic and export reliance on coal and gas, and with enormous potential for zero emissions solutions, Australia has an obligation to set the highest possible ambition for 2035.

Finally, it must be noted that in assessing Australia's fair emissions budget, previous analyses including the Climate Change Authority's 2014 targets analysis, and the analyses outlined above, allowed Australia a much larger emissions budget (.97%) than Australia's population deserves. If calculated on a per person basis, our share of the global population would be .33%. The .97% emissions budget applied to all of the targets analyses outlined is a very generous emissions budget, which has given Australia extra time to achieve net zero under a fair share 1.5°C scenario.

Recommendations:

- Australia's 2035 target should be to achieve net zero emissions.
- Australia's 2035 target should reflect the latest science on climate change; Australia's commitments under the Paris Agreement including to pursue a limit of 1.5°C of global warming; a fair-share carbon emissions budget; and the principle of common but differentiated responsibilities and capabilities.
- As above, when considering this target, ACF recommends that domestic considerations include a thorough assessment of the likely costs and risks of insufficient ambition on Australians including the most vulnerable in our society; our health and wellbeing; our precious natural environment including critical eco-systems, biodiversity, and natural icons; and our future economy--including the heavy costs of inaction.
- Domestic considerations should also include the substantial advantages that Australia has in meeting the climate challenge including world-class renewable energy resources and critical minerals; significant investment wealth; technological know-how; and ambition already set in motion by states and territories.

CROSS-CUTTING ISSUES

LEADING INDICATORS



WHAT ARE SOME LEADING INDICATORS OF PROGRESS TOWARDS NET ZERO EMISSIONS?

WHAT ARE SOME LEADING INDICATORS OF PROGRESS TOWARDS PREPARING FOR AND ADAPTING TO CLIMATE CHANGE?

Leading indicators of progress towards net zero emissions

Significant emissions reduction opportunities are available across a range of sectors. Transforming our energy sector to a clean, 100 per cent renewable grid sits at the heart of Australia's broader decarbonisation and offers a range of leading indicators. However, all sectors will need to pursue the greatest emissions reduction possible as part of Australia's pathway to net zero emissions.

Despite the goal being defined as 'net' zero, the transformational shifts needed to achieve a climate safe future will require genuine action and genuine emissions reduction. It must be acknowledged that the 'net' in 'net zero' was only included so that offsets could be applied as a last resort where necessary. Key indicators must therefore be based on actions that achieve real abatement and should not be related to the use of offsets. Potential lead indicators for progress toward net zero across key sectors are outlined below.

Energy indicators

- Reduction (and phase out) of coal and gas for electricity generation.
- Scale up of zero emissions electricity generation, including:
 - Investment in new transmission infrastructure
 - Time required to achieve transmission approvals/proceed with new transmission projects
 - Additional renewable energy capacity (based on annual increase)
 - Scale-up of energy storage and demand management.
- Household and business energy efficiency outcomes.
- Household and business electrification.
- Rate of industrial electrification and improvement in energy efficiency.
- Energy performance across the economy.

Transport indicators

- Uptake of zero emissions vehicles (ZEVs) as a percentage of new vehicle purchases (progress toward 100 per cent ZEVs).
- Conversion of trucks and heavy vehicles to zero emission vehicles.
- Rate of shift to low carbon modes of public and active transport including buses, trains, walking, and cycling.
- Roll out of charging infrastructure/closure of charging gaps.
- Guaranteed reliable access to safe and modern mobility.

Methane/Fugitive emissions indicators

- Implementation of global best practice monitoring, reporting and verification.
- Reduction of methane fugitive emissions from coal, oil and gas operations.
- Scheduled closures of coal mine and gas operations.



- Number and percentage of closed coal mines that are fully rehabilitated.

Exports indicators

- Reduction in Australia's scope 3 emissions.
- Growth in the contribution of renewable exports to Australia's economy.
- No approvals for new or expanding coal mine or gas projects.

Industrial processes

- Annual production of green hydrogen.
- Industry average emissions intensity.

Hard-to-abate industries

- Commercialised solutions for greening cement, steel.
- Carbon intensity per tonne of cement and steel produced.

Finance indicators

- Level of public finance and investment for climate solutions.
- Private finance for climate solutions.

Recommendation:

- Leading progress indicators vary by sector, but in all cases should represent progress toward real abatement and maximum ambition. For every sector, a shift away from fossil fuels toward zero emission renewable energy, electrification, and energy performance (energy efficiency, demand response, fuel-shifting) are key opportunities that should be represented in leading progress indicators.

SECTORAL PATHWAYS

WHAT FACTORS SHOULD THE AUTHORITY CONSIDER WHEN DEVELOPING SECTORAL DECARBONISATION PATHWAYS?

WHAT ARE THE RISKS AND OPPORTUNITIES FOR HOUSEHOLDS, BUSINESS, WORKERS AND COMMUNITIES AFFECTED BY THE TRANSITION?

ARE THERE SUPPLY CHAIN PRESSURE POINTS?

WHAT IS THE ROLE FOR GOVERNMENT IN REDUCING THESE RISKS AND ASSISTING HOUSEHOLDS, BUSINESS, WORKERS AND COMMUNITIES TO REALISE THE OPPORTUNITIES?

What factors should the Authority consider when developing sectoral decarbonisation pathways?



As noted in the discussion of progress indicators above, every sector should be working to its maximum ambition based on available emissions reduction solutions. The Authority should focus on **genuine** abatement regardless of sector, noting that decarbonisation pathways will differ, and some sectors will have more readily available solutions than others. However, all sectors have solutions that are either immediately available or rapidly emerging.

The energy sector will play a central role in Australia's decarbonisation efforts and will need to be an ongoing priority. That includes new renewable energy supply and the elements that enable new supply such as storage and the roll-out of transmission infrastructure. When considering this roll-out, the tension between the speed of the build and its impacts on nature and biodiversity, culture, communities and landowners will need to be carefully and collaboratively managed.

Demand side solutions, such as energy efficiency, demand response, fuel-shifting and electrification are enormous opportunities, relevant to almost every sector and should be a priority in all decarbonisation pathways. Australia has not made the most of demand side solutions and will not reach our net zero emissions goals without their help.

We strongly encourage the Authority to avoid any acceptance or promotion of false solutions when considering decarbonisation pathways including that more gas is needed to achieve our net zero goals; that nuclear energy is an acceptable climate solution for Australia; or that Australia can continue to open new fossil fuel developments as long as their emissions are captured through carbon capture and storage.

Carbon capture and storage cannot be a replacement for avoiding or directly mitigating emissions and should not be considered a climate solution for the fossil fuel industry. The role CCS could play in reducing Australia's emissions is extremely limited. It is only relevant to capturing process emissions from cement, iron, and steel production within the industrial sector.²⁶ Yet even in industry, most of the sector's emissions can be reduced through other means such as renewable energy, electrification, energy efficiency, the application of 'circular economy' principles (reducing waste and the emissions in production and consumption of products) and 100 per cent renewable hydrogen.

When developing sectoral decarbonisation pathways, priority should be placed on shifting all sectors away from coal and gas as rapidly as possible.

Finally, Australia's transition must be fair and fast - equity should be an ongoing consideration for the CCA.

Recommendation:

- Factors considered by the CCA in developing sectoral decarbonisation pathways should include ensuring maximum ambition for each sector; achieving **genuine** emission reduction; carefully addressing issues related to social licence, nature protection and rapid renewable energy build; prioritising demand side

²⁶ <https://www.industry.gov.au/sites/default/files/2021-05/nggi-quarterly-update-december-2020.pdf>



solutions, such as energy efficiency, demand response, fuel-shifting and electrification; avoiding false solutions such as the need for more gas, nuclear energy and carbon capture and storage; prioritising the shift away from coal and gas; and embedding equity and fairness as key principles.

What are the risks and opportunities for households, business, workers and communities affected by the transition? What is the role for Government in reducing these risks and assisting households, business, workers and communities to realise the opportunities?

Across the board - for households and businesses -- renewable energy is the cheapest form of energy and energy efficiency should be the 'first fuel' pursued. Every unit of energy that is not used is energy that does not need to be generated or transported. A 100 per cent renewable grid will be a key enabler of all decarbonisation pathways. As such, renewable energy, energy efficiency and electrification are clear opportunities that should be pursued but are not equally available to all households or businesses. Major barriers including upfront costs mean that many will miss out without sufficient, targeted support.

Renewable energy, energy efficiency and electrification for households and businesses

ACF recently made a detailed submission on the government's National Energy Performance Strategy, which covers risks and opportunities and makes a range of recommendations. We encourage the Authority to review this submission for further detail on opportunities related to energy performance.²⁷ A few points from the submission are outlined below.

- We encourage additional federal government support for a large scale retrofit program, prioritising water heating, cooking, space heating and cooling including active (e.g., heat pumps) and passive (e.g., insulation, shading, and ventilation) heating and cooling, and refrigeration. As part of this, households and businesses should be encouraged and supported to get off gas including to shift from gas to electric heat pumps for space and water heating.
- The built environment offers significant opportunities related to households and businesses. These include further updates to the National Construction Code. The most recent update (the first in a decade) raised the minimum Nationwide Home Energy Rating Scheme (NatHERS) energy efficiency ratings for new homes from 6- to 7-stars. The next update should legislate to reach zero carbon homes by 2030 (i.e., once efficiency gains have been maximised). Other opportunities include mandatory disclosure of energy efficiency ratings for rentals including apartments; establishment of an education program for apartment

²⁷ ACF Submission to the National Energy Performance Strategy, 2023 is available here: https://assets.nationbuilder.com/auscon/pages/21632/attachments/original/1675805466/230202_Submission_National_Energy_Performance_Strategy.pdf?1675805466



building owners and managers; and further retrofit programs specifically focused on low-income households.

- The Greenhouse and Energy Minimum Standards (GEMS) is one of the biggest drivers of energy efficiency in Australia, saving the average household up to \$220 per year²⁸ and has an estimated cost-benefit ratio of between 1.7 and 5.2 for the period 2014-2020.²⁹ However, delays in the introduction of new standards have had a significant impact. To mitigate any further delays the federal government should commit to:
 - Introduce a streamlined approval process for new or amended standards, with the Ministerial Energy Council endorsing an overall business case for standards and the Office of Best Practice Regulation (OBPR) or another body simply reviewing a pre-determined set of criteria for individual proposals for new standards.
 - Keep standards up-to-date and harmonise them with leading economies to lower costs for industry, via a mandate on GEMS administrators and OPBR.
 - Expand the number of products that are covered by standards and labels.
 - Properly resource the development and enforcement of GEMS.

Transport

Transport is a growing source of emissions in Australia and a significant cost to households and businesses, particularly due to our reliance on fossil fueled vehicles. Transport is also a source health-impacting air pollution, and fuel insecurity.

A shift to clean (zero emissions) light vehicles is partially underway with initial support for EV purchases and commitment to a fuel efficiency standard for light vehicles.³⁰ This will help to unleash greater EV selection in the Australian market, lower costs, and higher EV uptake. But, cleaning up transport must go much further - i.e., to policy and investment that supports active and public transport and conversion of government fleet vehicles, urban trucks and buses, heavy trucks, rail, shipping, and aviation.

The government has consulted on a National Electric Vehicle Strategy and on a Fuel Efficiency Standard for light vehicles. These targeted commitments are welcomed, but a full decarbonisation strategy is still needed for

²⁸ Australian Government 2019b. The Independent Review of the GEMS Act 2012 Final Report.

https://www.energy.gov.au/sites/default/files/gems_review_-_final_report-accessible.pdf

²⁹ DataBuild, 2015. Greenhouse and Energy Minimum Standards (GEMS) review.

https://www.energyrating.gov.au/sites/default/files/documents/GEMS_Review_2015_Final_Report_0.pdf

³⁰ <https://minister.dcceew.gov.au/bowen/media-releases/joint-media-release-australias-first-national-electric-vehicle-strategy-drive-cleaner-cheaper-run-vehicles>



Australia's transport sector. We encourage the CCA to support development of a National Clean Transport Strategy that brings together the full range of clean transport opportunities available to entirely decarbonise Australia's transport sector.

Workers and Communities

ACF has welcomed the government's commitment to a Net Zero Transition Authority. We encourage a very localised approach working collaboratively with impacted communities on a shared vision for their economic future; on a structural adjustment plan that will generate good, lasting jobs; and on helping individual workers with the support they need to transition to new opportunities. A well-resourced Net Zero Transition Authority can play an important role in assisting workers and communities in addressing transition risks and taking advantage of opportunities.

Recommendations:

- Households and businesses should be supported to take advantage of the significant opportunities available through getting off gas and shifting to renewable energy, maximising energy efficiency, and electrification.
- For transport, we encourage rapid implementation of strong fuel efficiency standards for light vehicles (i.e., that align with similar economies including the EU and US); support setting a national target for all new light vehicles to be zero emissions by 2035; and support development of a National Clean Transport Strategy that covers active and public transport, trucks, buses and heavy vehicles; mode shifting from road to rail; shipping; and aviation.
- For the built environment, we encourage using the next update to the National Construction Code to move Australia toward zero carbon homes; and improving mandatory disclosure of energy efficiency ratings including for rental properties.
- To further assist with energy efficiency opportunities, we encourage expanding coverage of Greenhouse and Energy Minimum Standards (GEMS) and keeping them up-to-date and aligned with similar economies.

CONTRIBUTING BEYOND AUSTRALIA'S BORDERS

WHAT ARE THE MOST IMPORTANT THINGS TO CONSIDER WHEN ASSESSING THE ADEQUACY OF A COUNTRY'S NDC?

WHAT DO YOU SEE AS THE CHALLENGES AND OPPORTUNITIES FROM A PHASE OUT OF FOSSIL FUEL PRODUCTION? WHAT SHOULD THE GOVERNMENT CONSIDER WHEN DETERMINING A PLAN FOR THE PHASE OUT OF FOSSIL FUELS?



What are the most important things to consider when assessing the adequacy of a country's NDC?

As covered earlier, NDCs should be aligned with climate science and based on a science-based, fair-share portion of the global emissions budget. NDCs should be consistent with Paris Agreement temperature goals, and the principle of common but differentiated responsibilities and capabilities. They should take into account the country's contribution to climate damage and resources available to rapidly address climate emissions. They should represent the highest ambition possible.

An adequate NDC covers all the above, and also commits to reduce **absolute** emissions. NDCs should not rely on offsets or false solutions such as carbon capture and storage to achieve progress.

In our view, the two worst offenses when it comes to false solutions are:

1. Accepting the view that solutions such as carbon capture and storage can be an acceptable means of addressing climate damaging emissions from new or expanding fossil fuel projects or prolonging the life of existing fossil fuel projects. We believe that CCS should never be considered a solution that allows climate pollution to be **added** to the atmosphere from new or expanding fossil fuel projects.
2. Accepting offsets as equivalent to emissions reduction to achieve NDCs.

NDCs should also cover commitments to resilience building and adaptation, both domestically and in relation to climate finance and broader support for developing countries that desperately need to prepare and build resilience to current and future climate impacts. Adaptation support should make up 50% of Australia's international climate assistance.

What do you see as the challenges and opportunities from a phase out of fossil fuel production? What should the Government consider when determining a plan for the phase out of fossil fuels?

Australia's phase out of fossil fuels will need to occur on two fronts: as a source of energy for our domestic use and as a key part of our exports.

Our domestic energy transition is underway. The government has committed to achieve 82% renewable energy by 2030, and public investments are being made to help modernise the electricity grid, ensure firming capacity and support workers and communities impacted by the energy transition. Further, ministerial commitment to update the National Electricity Objective (NEO) with an added emissions reduction objective will play an important role making sure decisions related to the National Electricity Market (NEM) take greenhouse emissions into account.

There is a roadmap for Australia's energy transition, updated every three years by AEMO (i.e., the Integrated System Plan (ISP)) but it is not yet fully aligned with a 1.5-degree scenario and that alignment is important. ACF has recommended that AEMO undertake additional modelling to support 1.5-degree pathways and to help plot



the course to a 100 per cent renewable grid. The ISP is a critical roadmap that has identified Renewable Energy Zones and supporting infrastructure and has already helped bring investment interest into these areas.

On the other side of the transition - the fossil fuel phase out, there has never been a national coal closure plan in Australia or a national plan to phase out gas and this has made managing the phase-out more difficult, more dependent on state and territory governments and less certain than it would be with overarching national plans.

Our old coal-fired generators are failing, unreliable and unable to compete with low-cost renewable energy. All coal-fired generators must close well before 2035 for Australia to stay on a 1.5°C emissions reduction pathway, and some have already moved forward their closure dates. Greater certainty around closure dates would help with planning the transition process and should be pursued, preferably through a national closure plan and more rigorous advance notification requirements.

The real issue, however, is accelerating the renewables, energy storage and transmission build. There are several key hurdles that are making this difficult. One of the biggest challenges is avoiding, minimising, and addressing the impacts this build could have on our natural environment and local communities. As noted earlier, gaining social licence will require an inclusive, consultative approach, a dedicated effort to minimise impacts wherever possible, and fair compensation where it's not. This is an issue also requiring collaboration between federal, state, territory and local governments.

Planning for the phase out of fossil fuels for export will require a clear vision of the new opportunities that will make up our future economy. Dedicated planning and investment will be needed to create a diverse clean export industry that maximises Australia's clean energy, critical minerals, land use, skills, and other advantages.

The government included \$5.6 million in the recent budget "to analyse the implications for Australia of intensifying global competition for a clean energy industry, and to identify actions before the end of 2023 to further catalyse clean energy industries, ensure Australian manufacturing competitiveness and attract capital investment." In addition, a Critical Minerals Strategy 2023-2030 was recently released that sets out the government's vision to grow Australia's critical minerals sector.³¹

ACF is advocating as part of cross-sector group of organisations (i.e., the Sunshot consortium), for government commitment and funding to develop a national renewable exports strategy that brings the many opportunities together in a clear national plan.

³¹ <https://www.industry.gov.au/publications/critical-minerals-strategy-2023-2030>



End fossil fuel subsidies

Alongside planning and support for clean export industries, we encourage the CCA to support turning off the tap on all public money that is subsidising the fossil fuel industry. Rather than **receiving** public funds, fossil fuel exporters should be **contributing more** to Australia's economy and helping to pay for our energy transition while they are still in operation. The Petroleum Resource Rent Tax (PRRT) increase was long overdue, and consideration should be given to increasing it further. The long-running Diesel Fuel Tax Rebate, which for years has been a drain on budget revenue should be rapidly phased out, possibly with very narrow exceptions (e.g., for small farmers) that should not extend to fossil fuel mining companies. In addition, a levy on fossil exports and/or coal, oil and gas production should be considered with the revenue generated dedicated to either supporting our renewables and storage build, or to a National Climate Disaster Fund (as proposed by The Australia Institute³²).

Recommendations:

- To replace fossil fuels for domestic energy use, Australia needs a national transition plan that addresses both coal closure and a phase out of gas, particularly as a baseload energy source. This should not replace AEMO's Integrated System Plan. Rather the ISP should align more closely with a 1.5°C pathway and be coupled with a clear fossil fuel phase out plan.
- To replace fossil fuel exports Australia needs a comprehensive national renewable exports strategy that brings together the many opportunities that are tied to a phase out of fossil fuels and a phase up of new clean manufacturing and export opportunities.
- Rapidly phase out fossil fuel subsidies and make fossil fuel exporters and producers contribute significantly more to the public purse while they are still in operation. These funds should be directly toward transitioning Australia's domestic energy and exports to clean, climate-friendly options.

ARE KYOTO-ERA SCHEMES FIT FOR THE PARIS AGREEMENT ERA?

WHAT DO YOU SEE AS THE STRENGTHS AND WEAKNESSES OF THE NGER SCHEME? HOW COULD IT BE IMPROVED?

The NGER scheme plays an important role in Australia's emissions reporting - serving both domestic policy and international reporting functions. High quality data at the facility, company and national level are critical to tracking, understanding, and addressing emissions from our large emitters and the key sectors that make up Australia's overall emissions profile.

³² <https://nb.australiainstitute.org.au/climatedisasterlevy>



Key opportunities to improve the NGERs scheme include increasing transparency and availability of NGER data; extending coverage to scope 3 emissions; strengthening requirements to achieve more accurate measurement, reporting and verification of fossil fuel methane emissions; and improving measurement and reporting of Land Use, Land Use Change and Forestry (LULUCF).

Require Measurement and Reporting of Scope 3 Emissions

Australia does not currently require reporting of scope 3 emissions and that omission is apparent in the NGERs Act and regulations. Although reporting scope 3 emissions is not a formal requirement under international climate change obligations, the absence of scope 3 reporting masks Australia's actual greenhouse gas footprint and full contribution to climate change.

Australia is currently the world's largest metallurgical coal exporter, amongst the world's top two liquefied gas exporters and the world's second largest thermal coal exporter. By carbon content, Australia is the world's third largest fossil fuel exporter.³³

Through these enormous coal and gas exports Australia sends emissions and climate damage overseas. When burnt, the emissions from these fuels enter the atmosphere creating just as much damage as they would if burnt domestically, yet we effectively ignore them. Australia's fossil fuel exports represent **more than twice the emissions that Australia emits domestically**.³⁴

The NGER scheme reporting is intended to support evidence-based policymaking and ensure mitigation measures are implemented to reduce Australia's carbon footprint accurately and adequately. NGER reporting should inform Australia's approach to the regulation of our downstream emissions and approval of new resource extraction projects. Neither can be adequately informed unless scope 3 emissions are measured and reported, and that reporting should be required under the NGER Scheme.

Reporting of scope 3 emissions is growing globally. It is understood by that scope 3 emissions often represent the largest source of emissions and present the most significant opportunities for emissions reduction. For example, under the Science-Based Targets Initiative Corporate [Net Zero Standard](#), absolute targets **must include scope 3 emissions** and offsets can no longer be accepted as a substitute for real world emissions reductions. The Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) also recently updated its

³³ ERI, Monitoring, Reporting and Verification of Fossil Methane in Australia, March 2023

³⁴ https://australiainstitute.org.au/wp-content/uploads/2020/12/P667-High-Carbon-from-a-Land-Down-Under-WEB_0_0.pdf



recommendations, and now encourages scope 3 reporting. Movement is clearly in favour of scope 3 reporting and there are long-established global protocols to support scope 3 reporting processes.³⁵

Until our biggest emitters are required to measure and report their scope 3 emissions, they will avoid accountability for the emissions they send overseas, and those emissions will remain entirely disconnected from policy and transition planning.

The Clean Energy Regulator provides a definition for scope 3 emissions and confirms that while not reported under the NGER scheme, scope 3 **can be used** under [Australia's National Greenhouse Accounts](#).

Further, the Treasurer's recently released Climate-related Financial Disclosure consultation paper proposes a scope 3 requirement: 'Disclosure of material scope 3 emissions would be required for all reporting entities from their second reporting year onwards. Scope 3 emissions disclosures made could be in relation to any one-year period that ended up to 12 months prior to the current reporting period'. The consultation paper also notes the importance of scope 3 reporting, stating that:

"Scope 3 emissions are important to determine the level of interconnectedness for transition risk, including whether and where risks sit within a company's supply chain, which if realised, could have significant flow on effects to the reporting entity and broader financial system."³⁶

To take Australia's global climate responsibilities seriously, we will need to consider our role in exporting climate damage and hence the need to rapidly transition to clean exports.

The Climate Change Authority can play an important role in advising the government to include mandatory scope 3 reporting in the NGER Act so that our exported emissions have a more visible role in informing our clean exports planning processes, transition goals and related policy. This reporting requirement could be phased in to allow time for facilities to improve their scope 3 measurement and reporting expertise.

Recommendation:

- Require measurement and reporting of scope 3 emissions under the NGER scheme to bring exported emissions into consideration as Australia plans and manages a fair, fast transition from fossil fuel exports to clean, renewable exports.

³⁵ These include the GHG value chain protocol available at: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf and GHG protocol scope 3 calculations guidance, available at: https://ghgprotocol.org/sites/default/files/standards/Scope3_Calculation_Guidance_0.pdf

³⁶ <https://treasury.gov.au/sites/default/files/2023-06/c2023-402245.pdf>



WHAT ASPECTS OF METHANE MEASUREMENT, REPORTING AND VERIFICATION SHOULD THE AUTHORITY FOCUS ON AS PART OF THE NGER REVIEW?

Australia has signed the Global Methane Pledge to reduce methane emissions at least 30 per cent on 2020 levels by 2030. It now must be a priority to require more accurate reporting of fossil methane emissions from industrial emitters and to accelerate methane emissions reduction.

Australia has a large and growing fossil methane problem, a pipeline of proposed new coal and gas projects that could make the problem much worse and gaps in our reporting that have been identified by international organisations such as the International Energy Agency (IEA).

Availability of new and improved technologies that detect and measure methane emissions, including satellite technologies, will make this issue increasingly hard to ignore.

Fossil methane emissions have not been regulated with the strength and urgency they require, and as a result methane leaks are not plugged with enough urgency and methane abatement technology is not sufficiently implemented. Failure to apply abatement technology occurs even where it is proven to be cost effective.

Why methane must be a priority

Immediate global action to eliminate methane emissions would rapidly deliver temperature benefits. Due to its global warming potency, particularly over a short time horizon, climate scientists have indicated that cutting methane from fossil fuels is one of the most powerful levers we can pull over the coming crucial decade. According to the IEA, avoiding the worst of climate change requires fossil fuel methane emissions from developed countries to fall 75 per cent below 2020 levels by 2030.³⁷

Alongside methane's potent impact is Australia's outsized contribution to fossil methane emissions. The National Greenhouse Gas Inventory states that Australia's fugitive emissions have increased 14.1% or 6.1 Mt CO₂-e since June 2005, and that fugitive emissions have increased strongly due to the growth of the LNG industry. Fugitive methane emissions are now responsible for 10.5% of Australia's annual GHG emissions³⁸. Satellite-based analyses indicate that these numbers are likely to be underestimated due to inaccurate reporting.³⁹

According to global analysts, Australia is responsible for a greater share of global methane emissions than many major developed economies including France, Germany, Great Britain and Italy and many major fossil fuel producers including Saudi Arabia, Canada, Norway, Qatar, and Poland.⁴⁰

³⁷ <https://www.iea.org/reports/curtailing-methane-emissions-from-fossil-fuel-operations/executive-summary>

³⁸ <https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-gas-inventory-quarterly-update-december-2022>

³⁹ <https://pubs.acs.org/doi/full/10.1021/acs.est.1c03976>

⁴⁰ Gütschow, J.; Pflüger, M. *The PRIMAP-Hist National Historical Emissions Time Series (1850-2021) v2.4*; Dataset; 2022. <https://zenodo.org/record/7179775>



Increasingly, other countries are shifting to measurement-based reporting. For example, the US is already requiring measurement-based reporting. The European Union will likely add the requirement through its upcoming methane laws.⁴¹

Measuring methane pollution can be done cost-effectively and with available technologies. The Oil and Gas Partnership has over 100 companies as members that have committed to update their reporting to a measurement-based approach. The UN is working with the coal industry on a similar standard for measuring emissions from coal mining, known as the 'Metcoal Methane Partnership'. Both efforts can help guide Australia's movement to measurement-based reporting.

Direct measurement must replace estimates

Fossil methane reporting in Australia (except for underground coal mines where it's a health and safety issue) is largely based on estimates, and those estimates are based on simple equations and emissions factors. In some cases, the emissions factors are outdated and were developed without sufficient rigour. It is not surprising that the resulting estimates can be inconsistent with what is being observed.

The IEA has estimated that Australia underreports its methane emissions **by over 60 per cent**.⁴² This is equivalent to the fossil methane emissions of Germany, the United Kingdom and France combined.⁴³

The IEA has also indicated that methane emissions from coal mining in Australia **could be twice as high** as is currently reported and some coal mines may have released **over ten times as much methane** as they have reported. This inaccurate reporting may be responsible for faulty inputs into policy development. For example, it is likely that methane emissions released from existing facilities covered under the Safeguard Mechanism are higher than has been reported, and therefore responsible for the under-representation of methane emissions in the Safeguard Mechanism carbon budget and emissions caps. This definitely should not result in an expansion of the carbon budget or a lifting of the caps but could indicate that more of the SGM's carbon budget is being used up by existing fossil fuel facilities than was calculated.

Kayrros SAS, a geo-analytical firm that analyses observations from the European Space Agency's Sentinel-5P satellite, has identified large methane releases in Australia's Bowen Basin region. Their analysis has indicated that

⁴¹ <https://www.reuters.com/markets/commodities/eu-lawmakers-look-methane-curbs-europes-fossil-fuel-imports-2023-04-26/>

⁴² International Energy Agency. *Global Methane Tracker 2023*; 2023.

<https://www.iea.org/reports/global-methane-tracker-2023>. Reported here: <https://www.theguardian.com/environment/2023/feb/23/methane-from-australian-coal-and-gas-could-be-60-higher-than-estimated>

⁴³ Department of Climate Change, Energy, Environment and Water. *Australian Greenhouse Emissions Information System (AGEIS)*. <http://ageis.climatechange.gov.au>



an average of 7.5 kilograms of methane is released for every tonne of coal produced, which is 47 per cent higher than the average global methane intensity estimated by the International Energy Agency.⁴⁴

New and more precise methane tracking satellites are on the horizon. MethaneSat, for example, will soon be the most advanced methane tracking satellite in space. It is set to launch in early 2024 with data to follow shortly after.⁴⁵ MethaneSat's single mission is to motivate and enable urgent action to reduce methane emissions. Satellite methane trackers will make data publicly available in a timely and accessible fashion enabling more public and global scrutiny and playing a greater role in exposing inaccurate methane reporting. As such, efforts to improve methane measurement, reporting and verification via the NGER scheme is both timely and critical.

Case Study - Hail Creek Coal Mine

A great proportion of Australia's fugitive methane comes from the Bowen Basin in Queensland. We know that underground mines, by virtue of monitoring emissions at their vents/exhausts/drainage units, report fugitive methane far more accurately than open cut mines. It follows that open cut mines are responsible for a significant proportion of Australia's reporting 'gap'. This is borne out in the data. A 2021 study using TROPOMI focussed on six mines in the Bowen Basin identified as 'super-emitters'. The analysis showed that Oaky Creek and Grasstree (Capcoal) emitted 3.75 MtCO₂-e of methane and Broadmeadow (Goonyella), Grosvenor and Moranbah North emitted 4.75 MtCO₂-e of methane.

The scope 1 emissions reported in the closest relevant period under the Safeguard Mechanism roughly accords with these figures (within 10 per cent). These mines are either combined complexes or underground mines. On the other hand, Hail Creek—an open cut mine—was shown in the analysis to have emitted 5.7 MtCO₂-e and only reported 0.5 MtCO₂-e under the Safeguard Mechanism.

ACF has significant concerns about the emissions estimation methods that are resulting in such gaps. Method 1 is a blunt and overly simplistic instrument. If it were to be improved to accurately reflect the fugitive methane emissions at Hail Creek, it would likely produce overreported emissions at other facilities and still would not capture idiosyncratic methane events.

Method 1 should be abolished. All black coal miners (Queensland and elsewhere) should be required to (at least) employ methods 2 or 3. However, methods 2 and 3 should also be reviewed and updated (see recommendation below), and the incorporation of aerial, satellite and direct measurement technologies should be explored for incorporation into the NGER scheme.

⁴⁴ <https://www.afr.com/policy/energy-and-climate/coal-mines-seen-belching-worst-australia-methane-cloud-this-year-20211112-p598a1>

⁴⁵ <https://www.methanesat.org/>



While they can report emissions using a back-of-napkin estimate, there is no incentive for operators of open cut mines to explore research and development options for methane mitigation and they cannot be held accountable for climate impacts. We need to properly understand and report methane emissions before Australia can, in earnest, map a pathway to reducing them.

Case Study - Methane emissions from mothballed coal mines

ACF investigations have examined methane emissions from closed coal mines. A close examination has revealed ongoing methane leakage from mothballed mines, despite an end to production. For example, Glencore's Ravensworth underground coal mine in NSW, leaked methane equivalent to more than a million tonnes of CO₂ in the first seven years after operations were suspended. That means the mothballed Ravensworth coal mine, which has not produced any coal since 2014, was nonetheless emitting as much climate pollution every year as 33,000 cars on the road.⁴⁶ Australia-wide, fewer than 30 mines have ever been fully closed, rehabilitated, and relinquished. As more and more coal mines are forecast to close in Australia, requirements related to closure and rehabilitation are more crucial than ever -- and need to be updated to ensure they do not continue contributing to our methane emissions long after they have closed. Mine rehabilitation and closure are primarily regulated by state and territory governments; however, the Federal Government also has a role to play. One important element is to require and ensure transparent, robust reporting of post-closure emissions.

The Climate Change Authority can assist by shining a light on the role that closed coal mines play in Australia's methane emissions and through better reporting requirements, help to accelerate rehabilitation efforts.

Methane's 100-year Global Warming Potential is not fit for purpose

Methane measurement, reporting and policy responses are all seriously impacted by the way methane is converted to carbon dioxide equivalent (CO₂-e). Methane's equivalency is currently based on its 100-year global warming potential (GWP), which in 2019-20 was updated by the Clean Energy Regulator from 21 times as greenhouse intensive as carbon dioxide to around 28 times as greenhouse intensive. Using a 100-year GWP masks methane's extremely high short-term global warming impact, which over a 20-year time horizon is up to 84 times more greenhouse intensive than carbon dioxide.⁴⁷ The real climate impact of coal mine and gas facility emissions is underestimated over the critical decade to 2030. This problem is not unique to Australia's reporting, but nonetheless if we care about accuracy and rigour of our reported data, Australia should apply the 20-year GWP of methane when measuring and reporting methane emissions.

⁴⁶ ACF, Methane: Creating a Stink for Australia and the Climate Crisis (2021). Available at: https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/19192/attachments/original/1628732203/Methane_report_Aug_2021.pdf?1628732203

⁴⁷ <https://www.iea.org/reports/methane-tracker-2021/methane-and-climate-change>



Recommendations:

- To ensure that Australia's methane reporting accounts are accurate, the NGER Measurement Determination should require fossil fuel companies to conduct direct emissions measurement at the source and site level (in line with the Oil and Gas Methane Partnership 2.0 (OGMP 2.0) reporting framework for oil and gas facilities and equivalent standards for coal). New NGER-covered facilities should comply from 1 July 2023, and existing facilities should comply within three years of that date.
- To help verify accurate measurement and reporting of methane emissions, aerial and satellite technologies should be explored for incorporation into the NGER scheme. Independent verification of coal mine measurement and reporting should also be implemented including aerial flyovers and use of satellite data.
- The NGER scheme should require more robust and transparent reporting of methane emissions from closed coal mines with a view to better informing closure requirements and more rapid rehabilitation requirements. Direct and site-specific measurement standards for all closed and abandoned coal mines should be implemented.
- Australia should apply the 20-year Global Warming Potential of methane when considering policy and regulatory responses, and this should also be required in NGERs reporting requirements.
- Reporting on methane emissions and mitigation efforts should be clear, transparent, and publicly accessible.

CARBON CREDIT INTEGRITY

FOLLOWING ADOPTION OF THE CHUBB REVIEW RECOMMENDATIONS, WHAT CONCERNS ABOUT ACCU INTEGRITY REMAIN?

WHAT ARE THE RISKS TO INTEGRITY THAT SHOULD BE BUFFERED AGAINST?

HOW SHOULD A BUFFER BE APPLIED (E.G. GOVERNMENT PURCHASE, SUPPLY-SIDE RESERVE, DEMAND-SIDE CORRECTION, OTHER)?

WHAT ROLE SHOULD GOVERNMENTS AND USERS OF OFFSETS HAVE IN ENSURING DEMAND-SIDE INTEGRITY?

WHAT PROTECTIONS ARE NEEDED TO ENSURE THE INTEGRITY OF CARBON TRADING MARKETS AND EXCHANGE PLATFORMS?

Integrity issues that prompted the Chubb review still require vigilance

Independent analysis by The Australian National University (ANU) and the University of New South Wales, Canberra (UNSW) Emissions Reduction Fund (ERF) research team suggests there are major problems with the offset scheme's three main methods: landfill gas, avoided deforestation and human-induced regeneration. These



three methods account for approximately 75% of the ACCUs issued to date.⁴⁸ Some of these concerns were addressed through the Chubb review, but concerns with ACCUs generated by existing projects under these methods still exist.

According to these researchers, “there is strong evidence that at least 30% of ACCUs issued to landfill gas projects, 90% of the ACCUs issued to avoided deforestation projects and 90% of the ACCUs issued to human-induced regeneration projects are ‘high risk’ (or low integrity) credits, in the sense that they are unlikely to represent abatement that is real and/or additional.”⁴⁹

These sorts of integrity concerns prompted the Chubb review along with specific issues related to governance and other matters. Specifically, the ‘review’s purpose was to ensure that ACCUs and the carbon crediting framework maintain a strong and credible reputation supported by participants, purchasers, and the broader community.’

The Chubb review’s 16 recommendations were useful, and should make a difference moving forward, but the Chubb review was not able to fully address integrity concerns of all existing methods or the projects that will continue to generate ACCUs under these methods.

There are many *existing* projects under the three main methods noted above that will continue to generate ACCUs, and a large percentage of them are likely to be high risk ACCUs. Additional work by ANU researchers (see Figure below) has further verified concerns.⁵⁰ Existing projects under these 3 methods are conservatively estimated to generate over 60 million ACCUs between 2022 and 2030. In effect, that means 34% of the entire abatement being pursued by the reformed SGM (i.e., 34% of 205 Mt CO₂-e) could be covered off with low integrity ACCUs that do not represent one tonne of carbon dioxide equivalent (t CO₂-e) stored or avoided.

During the Safeguard Mechanism reform consultation, ACF noted that for the SGM to have integrity, all ACCUs surrendered to acquit obligations under the SGM must have integrity -- i.e., ACCUs must represent real and additional abatement. If they do not, they allow covered facilities to increase their emissions above their baseline, without there being an offsetting reduction in emissions elsewhere.

ACF advocated strongly throughout the SGM reform for limitations on use of ACCUs to acquit SGM emissions reduction obligations and we remain concerned that despite a new reporting requirement to explain excessive ACCU use if a facility hits a 30% threshold, there are no requirements to ensure absolute emissions are reduced and no limitations on offsets.

⁴⁸ Clean Energy Regulator (2023) ‘Emissions Reduction Fund project register’. Commonwealth of Australia, Canberra. Available at: <https://www.cleanenergyregulator.gov.au/ERF/project-and-contracts-registers/project-register> (18 January 2023).

⁴⁹ Implications of the Independent Review of Australian Carbon Credit Units (ACCUs) and low integrity ACCUs for Australia’s Safeguard Mechanism

⁵⁰ https://law.anu.edu.au/sites/all/files/impact_of_low_integrity_accus_on_the_sgm_final_150223.pdf



The following recommendations have been made by ANU researchers, and are supported by ACF:⁵¹

Require greater disclosure: Require facilities covered by the SGM to disclose the provenance of the ACCUs they use to meet their liabilities. In particular, the Emissions Reduction Fund project number should be required for all ACCUs surrendered. We encouraged that this be done through changes to the NGER Act under annual reporting requirements. As part of the SGM reform, it was agreed that ACCU use and ACCU methodology would be added to facility reporting requirements and we encourage this to include specific provenance including the ERF project number.

Qualitative restrictions. Prohibit facilities that are covered by the SGM from meeting their liabilities using ACCUs from existing projects registered under the Human Induced Regeneration (HIR), landfill gas, or avoided deforestation methods.

We note that following SGM negotiations, the Government directed the Clean Energy Regulator to prevent HIR method projects from creating future credits until they comply with the entirety of Chubb Review recommendation 8. That was a welcome intervention, but unfortunately concerns still exist about the integrity of HIR projects. These concerns are documented by Carbon Integrity⁵² and will likely continue to plague the offsets market. As such, ACF remains of the view that these projects should not be generating ACCUs, with a few exceptions listed below:

- Existing HIR projects if they have transitioned onto a new method that limits eligibility to forest areas that have previously been comprehensively cleared and where pre-existing mature trees and shrubs are required to be excluded from the areas that are credited.
- Plantation projects involving either the establishment of new plantations on land that was previously used for other non-forest purposes or the conversion of short-rotation plantations to long-rotations, provided they have 100-year permanence periods.

Make ERF carbon offset scheme changes that include the following:

- **Guarantee transparency.** Ensure the panel's recommendations for greater transparency are fully implemented by including requirements in the CFI Act that mandate the disclosure of offset reports, audit reports, carbon estimation areas, any data submitted to evidence compliance with eligibility requirements and all data relied on by the Carbon Abatement Integrity Committee in evaluating and endorsing methods.
- **Mandatory transitions from low integrity methods.** Amend the CFI Act to allow projects to be removed from low integrity methods prior to the completion of their crediting period. At present, once projects are

⁵¹ [Implications of the Independent Review of Australian Carbon Credit Units \(ACCUs\) and low integrity ACCUs for Australia's Safeguard Mechanism](#)

⁵² <https://www.carbonintegrity.au/carbon-offsets-and-australias-safeguard-mechanism>



registered, they are allowed to stay on a method until the end of their crediting period, regardless of whether the method is subsequently found to have integrity flaws. The crediting periods range between 7 and 25 years. This means that projects can knowingly receive low integrity ACCUs for several decades. This reform would address this issue by ensuring the Minister has the power to force proponents off methods that are found to have integrity problems.

- **Access to justice.** Amend the Carbon Credits (Carbon Farming Initiative) Act (CFI Act) to include open standing provisions to allow third parties to seek judicial review of administrative decisions made under the Act and to seek injunctions to restrain breaches of the Act.

Recommendations:

- ACF remains concerned that integrity issues particularly related to Human Induced Regeneration and Avoided Deforestation methods have not been fully addressed and that existing projects under these methods risk generating further ACCUs that will lack integrity. We encourage the NGER Act to be updated with clear requirements for reporting ACCU provenance and further scrutiny of HIR projects, which should not generate ACCUs unless they have transitioned onto a new method that limits eligibility to forest areas that have previously been comprehensively cleared and where pre-existing mature trees and shrubs are required to be excluded from the areas that are credited.
- We recommend ensuring transparency by adding requirements to the CFI Act that mandate the disclosure of offset reports, audit reports, carbon estimation areas, data submitted as evidence of compliance with eligibility requirements and all data relied on by the Carbon Abatement Integrity Committee in evaluating and endorsing methods.
- We recommend allowing projects to be removed from low integrity methods prior to the completion of their crediting period through amendment to the CFI Act.
- We recommend that open standing provisions be implemented that allow third parties to seek judicial review of administrative decisions made under the CFI Act.

What are the risks to integrity that should be buffered against?

The risks covered above that relate to the integrity of specific ACCU methods should be addressed directly (see recommendations).

A further set of risks relate to the integrity of Australia's climate action more broadly, which is impacted by allowing fossil fuel companies to access unlimited offsets to acquit their existing emissions reduction obligations, and to give a green light to new coal and gas production. This leads to a continued rise in actual emissions and threatens Australia's ability to meet our climate targets.

In ACF's view, offsets should not be allowed to enable emissions from new fossil fuels projects and should be strictly limited for existing projects so that they are only available for a limited time and for hard-to-abate industries that do not have feasible technology options. The globally endorsed hierarchy regarding offset use should be applied, which is to avoid, minimise, mitigate, then offset as a last resort. Offsets should never be the first order option for emissions reduction.



Purely based on the science, one ACCU, particularly a land-based offset, is very unlikely to do the same job as **not** emitting a tonne of greenhouse emissions in the first place.⁵³

Key concerns related to offsets as an alternative to cutting emissions include:

- Offsets generated from activities in the land sector are known to be reversible and are particularly susceptible to integrity issues, specifically regarding the genuineness of purported emission reductions, their additionality, and their permanence. Therefore, using them to offset fossil fuel emissions is risky.
- Carbon sequestered in forests and soil can be lost back to the atmosphere for several reasons. For forests this includes fire, disease, adverse weather events, and damage from wildlife in their early stages of growth. For soil, this includes a cessation of sequestration practices, fire, erosion, and dust storms.
- The ability of land to take up carbon is limited. It is ultimately determined by climate and local soil and topographic considerations, is limited to the amount previously depleted by land use and appears likely to be reduced as a consequence of climate change.
- Worsening drought and extreme fire conditions are already affecting forests in Australia and are likely to reduce the ability of forests and soil in Australia – and in other parts of the world – to uptake, store and hold carbon. Hotter, and drier Australian landscapes will absorb less carbon in trees and soil.
- Fossil fuel emissions have a very long lifetime in the atmosphere. Each tonne of carbon released into the atmosphere is long-lived, with around 40 per cent remaining after 100 years, 20-25 per cent remaining after 1,000 years, and up to 20 per cent after 10,000 years. Land-based offsets do not and cannot guarantee such long-term sequestration.⁵⁴

Government policy - particularly the recent Safeguard Mechanism reform, has not set limits on offset use or established buffers to address risks and equivalency concerns. Limits are still needed, and we encourage the CCA to recommend limits on offset use in the next SGM review. In addition, significant buffers should be considered.

Recommendations:

- Strict limits should be applied to the use of offsets as soon as possible, they should only be allowed as a last resort after efforts to avoid and mitigate, and their use should be narrowed to hard-to-abate industries.

⁵³ https://climateanalytics.org/media/why_offsets_are_not_a_viable_alternative_to_cutting_emissions.pdf

⁵⁴ https://climateanalytics.org/media/why_offsets_are_not_a_viable_alternative_to_cutting_emissions.pdf



Until stronger restrictions on offset use are set or phased in (e.g., through the next Safeguard Mechanism review) implementation of buffers should be applied to help with offset risks.

How should a buffer be applied (e.g. government purchase, supply-side reserve, demand-side correction, other)?

Given the concerns outlined above, ACF's view is that strict limits (with a few narrow exceptions) should be prioritised over buffers, and we encourage the CCA to advise government that offsets should not be treated as the equivalent of direct, on-site emissions reduction. Unlimited offset use should be reconsidered during the next SGM review.

However, until the issue is addressed, and while facilities have unlimited access to ACCUs, use of offsets should include a correction.

Government purchase: In ACF's view, offsets should not be prioritised for government purchase. Instead, public investment should focus on a step change in support for clean energy industries and clean technologies that will have lasting emissions reduction impacts and support the growth of a clean economy. The government has already provided resources to purchase ACCUs (primarily via the Emissions Reduction Fund) and has committed to a price cap of \$75 for facilities covered by the SGM so presumably some of the ACCUs purchased will be held to ensure provision of ACCUs at the capped price if needed. In terms of a buffer, government purchase would only be useful if ACCUs were purchased specifically to be torn up (i.e., not applied to emission reduction targets). That has been a feature of some voluntary action outside of government. It would, however, require public funds to be spent on offsets, which could be applied more effectively elsewhere to invest in direct emissions reduction.

Demand-side correction: Various proposals have been floated to apply a demand-side correction. Such a correction could be useful to add extra incentive to invest in on-site abatement (until use of offsets is limited). The Safeguard Mechanism (Crediting) Amendment Bill proposed an option to 'discount' the abatement value of offsets by requiring large offset users to surrender a higher ratio of units to cover their excess emissions. The extra ACCUs surrendered would also add to the SGM buffer, which was set to avoid exceeding SGM emissions caps. If, for example, a four-fifth rule were applied, each additional ACCU surrendered would only reduce the facility's liability by "four-fifths" of a tonne (e.g., the benefit of the unit would only represent 0.8 tonnes of CO₂-e, not 1 tonne). An appropriate threshold to trigger this discounted value could be the 30 per cent threshold set during the SGM reform, which requires facilities using offsets for 30 per cent or more of their SGM liability to explain why they are not investing in more on-site abatement.

A more reduced emissions reduction value - for example, of 0.5 tonnes (two-to-one) would be more impactful. ACF would encourage consideration of this level of discounting. Our next preference would be a sliding scale, which would mean decreasing the emissions reduction value of each offset as larger shares of offsets are used to meet a facility's liabilities.

The extra cost incurred due to a discounting approach would make excessive ACCU use less attractive and potentially incentivise more investment in onsite abatement.



Recommendation:

- Offsets should not be prioritised for government purchase. Implementation of a buffer would be better as a demand-side correction. The SGM threshold of 30 per cent ACCU use should be applied above which each offset is discounted, preferably by a reduced emissions reduction value of 0.5 tonnes (two ACCUs required for one tonne of abatement). A sliding scale could be added that applies a decreasing offset value as larger shares of ACCUs are used.

INTERNATIONAL UNITS**WHAT ROLE SHOULD INTERNATIONAL CARBON MARKETS HAVE IN AUSTRALIA?**

In ACF's view international carbon markets should have no role in meeting legislated or regulated emissions reduction requirements in Australia and only a very limited role in meeting voluntary commitments.

To the extent that international units are used to acquit **voluntary** commitments by corporations, they should be transparently reported, have their integrity audited and verified, and only be used where there are no technological solutions or domestic offsets available.

For policies such as the Safeguard Mechanism, the government should focus on ensuring high integrity domestic offsets and pursuing biodiversity and nature protection outcomes from domestic offsets rather than turning attention to policy infrastructure for international offsets.

International offsets are not needed, their integrity cannot be fully assured, their lower costs encourage facilities to release and offset emissions instead of investing in abatement technology; and purchase of international offsets does not support domestic sequestration projects --or offer the opportunity to derive positive biodiversity outcomes from the offsets market.

Recommendations:

- International carbon markets should have no role in meeting legislated or regulated emissions reduction requirements in Australia and only a very limited role in meeting voluntary commitments.
- ACF encourages the CCA to advise the government against efforts to set up policy infrastructure for international offsets, as flagged through SGM reform, and instead to focus efforts on limiting use of ACCUs, ensuring ACCU integrity, and pursuing biodiversity/nature positive benefits alongside carbon outcomes from our domestic offsets market.



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