



Climate Council of Australia

Submission to: Setting, tracking and achieving Australia's emissions reduction targets

Addressed to: Climate Change Authority

Submission from: Climate Council of Australia Ltd
8 Short Street, Surry Hills, NSW 2010
Tel: 02 9356 8528
Email: info@climatecouncil.org.au

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About the Climate Council

Climate Council is Australia's own independent, evidence-based organisation on climate science, impacts and solutions.

We connect decision-makers, the public and the media to catalyse action at scale, elevate climate stories in the news and shape the conversation on climate consequences and action, at home and abroad.

We advocate for climate policies and solutions that can rapidly drive down emissions, based on the most up-to-date climate science and information.

We do this in partnership with our incredible community: thousands of generous, passionate supporters and donors, who have backed us every step of the way since they crowd-funded our beginning as a non-profit organisation in 2013.

To find out more about the Climate Council's work, visit www.climatecouncil.org.au.

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1. Introduction and Summary of Recommendations

The Climate Council welcomes the opportunity to provide this submission on setting, tracking and achieving Australia's emissions reduction targets, and thanks the Climate Change Authority for its comprehensive and inclusive approach to this consultation.

As Australia continues our journey through this make-or-break decade for climate action, the importance of bold, independent, and science-based advice to Government, business and the community cannot be overstated.

The world has reached a precipice. After decades of inaction there is only a narrow path to securing a liveable future (IPCC 2023). The moment demands focused action at massive scale to achieve swift and genuine emissions reductions and build the clean and resilient economy of the future. Australia, as a major emitter with unmatched opportunities for clean energy solutions, can play a major positive role in efforts to tackle the global climate crisis.

The Authority has a uniquely important role to play in guiding Australia's decarbonisation journey. There will be many voices inserting politically or commercially motivated advice on targets into the national debate, working to protect particular interests, or hold back action. Success therefore depends on the provision of strong and unfiltered, science-based advice that never shies from communicating the true scale of the task and Australia's responsibilities, nor the immense opportunities with which Australia is blessed.

The world and Australia have crossed an economic, social and political tipping point on climate action. The Australian community is already experiencing the harmful effects of a changing climate, and this is driving strong momentum for action. Nonetheless, while there is strong support for more action, the risk of delay and false solutions is real and potentially catastrophic. The Climate Council is particularly concerned about governments and businesses using 'net' emissions targets as a licence to continue polluting, and avoiding genuine emissions reductions through use of carbon offsets. We urge the Authority to focus above all on genuine, science-based emissions reductions.

The world and Australia have reached a precipice. The moment demands focussed action at massive scale. The Climate Change Authority has a uniquely important role to play.

While debate over targets tends to focus on domestic emissions reductions, the Climate Council recognises that Australia, as one of the world's largest fossil fuel producers, has a much larger global footprint. Further, Australia has the potential to play a major positive role in global decarbonisation efforts through our abundant untapped renewable energy potential. We therefore welcome the Authority's focus on international cooperation, and strongly support the setting of targets to recognise and address Australia's international scope 3 emissions.

The Climate Council also recognises that while targets matter, it is action that will get us to these targets - enabled by smart policies, regulation, incentives, transparency and coordination across the community, private sector and all levels of government. We therefore welcome the opportunity to share some of the Climate Council's recommendations for transforming our energy and transport systems, and for practical steps to support households and businesses with electrification and energy efficiency.

Importantly, it is the scale and pace of action now and through the 2020s that will largely determine whether we can substantially limit future climate harm. Global emissions need to be roughly halved by 2030 to avoid catastrophic temperature rise. Australia, as an advanced economy with very high emissions per person and unrivalled opportunities for climate solutions, should be aiming to reduce emissions by 75% by 2030 (Climate Council 2021b). Therefore, in preparing advice on Australia's 2035 target, we urge the Authority to also maintain a focus on opportunities to drive deeper emissions reduction this decade and so improve Australia's 2030 target.

We have made a number of recommendations throughout this submission in response to the many important questions raised in the issues paper. A summary of our most important recommendations, which represent some recurring themes, is below.

While there is strong support for more action, the risk of delay and false solutions is real and potentially catastrophic. Success depends on the provision of strong, independent and science-based advice.

Summary of Recommendations

Recommendation 1

The Authority's Strategic Framework must have science at its heart. The Authority must at all times provide independent, science-based advice free from political or commercial interests.

Recommendation 2

Australia should set a target of net zero emissions by 2035. This should be achieved primarily through absolute (gross) emissions reductions.

Recommendation 3

As part of the 2035 target setting process, the Authority should provide advice on an updated 2030 target for Australia. Based on the latest science and our obligations under the Paris Agreement, Australia should aim to reduce our emissions to 75% below 2005 levels by 2030.

Recommendation 4

At all times, priority must be placed on genuine emissions reductions, with use of offsets minimised and accounted for separately. In its advice on targets, the Authority should specify the amount by which emissions need to be concretely reduced, place a strict limit on what can be offset, and set separate targets for carbon removals.

Recommendation 5

The Authority's advice should cover Australia's role beyond our borders and the full extent of Australia's responsibility to support international climate cooperation. This should include advising on targets for reducing fossil fuel production and export, and on the provision of international support for mitigation, adaptation and addressing loss and damage.

2. Frameworks

2.1 Strategic Framework

Question 1: 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?

Having considered carefully the Strategic Framework and its six actions and six enablers, the Climate Council believes it provides a solid foundation for driving collective action. We offer the following suggestions which can further enhance the framework and sharpen the Authority's strategic direction.

1. Start with the science.

The Authority has a uniquely important role in providing science-based advice to the Australian Government, businesses and the wider Australian community. Rules, planning, investment and other enablers should all be grounded in the best available science. The Climate Council strongly encourages that this be reflected in the Strategic Framework, by explicitly including science as an enabler.

2. Apply an equity lens, in accordance with the guiding principles set out in the *Climate Change Act 2022* and *Climate Change Authority Act 2011*.

Specifically, the word "equitably" could be added to some of the actions as follows: "Produce efficiently and equitably", "Deploy technology solutions equitably", and "Manage climate risk equitably".

The Climate Council recognises that for climate solutions to be durable, effective, and implemented at the necessary scale, they must leave no one behind and enable communities to move forward together. When equity is embedded as a guiding principle, this materially affects the plans, investments and technologies deployed as we transform our energy, transport, food, industrial and other systems. It can help ensure we maximise the opportunities not only for emissions reductions but for building stronger, healthier and more resilient communities.

3. Include carbon drawdown.

Beyond sequestering residual emissions from activities that we are not yet able to fully decarbonise, we also face the challenge of removing large amounts of accumulated carbon dioxide and other greenhouse gases from the atmosphere (IPCC 2023). The framework could accommodate this by changing “Sequester the residual” to “Sequester residual and historic carbon”.

4. Include research and development.

While many climate solutions are ripe for rapid and large-scale deployment, others require further research and development. This is particularly true for many industrial processes and for drawdown options. We suggest including “Research and development” as an additional enabler within the framework.

5. Support collaboration and coordination.

Achieving steep emissions reductions and building resilient communities will require stronger collaboration and coordination between different levels of government (Cities Power Partnership 2023), as well as between governments, civil society, research organisations, non-government organisations and private actors. We therefore suggest including “collaboration and coordination” as an additional enabler within the framework.

6. Measure and evaluate progress.

Lastly, the Authority plays an important role in monitoring Australia’s progress towards our emissions reduction targets. This is an important enabler of stronger action and accountability. While we recognise that there is a separate and standalone framework for measuring progress, the Authority could consider including “Measuring and evaluating progress” as part of its overall strategic framework.

Recommendation

The Strategic Framework should have science at its heart and explicitly include science as one of the enablers. The Authority should also consider including equity across several of the actions in the strategic framework; including historic carbon drawdown as an action; and adding research and development, collaboration and coordination, and measuring and evaluating progress as additional enablers.

2.2 Progress Framework

Question 3: What should the authority measure or assess to determine progress towards a just transition and improved wellbeing?

The Climate Council welcomes the Authority's recognition of the different ways in which people and communities are affected by climate change depending on their circumstances and attributes, as well as the different strengths that groups and individuals bring to solutions. We particularly welcome the recognition of:

- First Nations peoples' knowledge in responding to climate change.
- The disproportionate impact of climate change upon First Nations peoples.
- The opportunity to better include First Nations peoples in government decision making.
- The importance of working with Indigenous-led organizations and incorporating Indigenous experience into the Authority's advice.

In that regard, we encourage the Authority to consider the principles and guidance provided by the First Nations Clean Energy Network (2022).

In late 2022 and early 2023, the Climate Council undertook a landmark study into the impacts of climate change upon the mental wellbeing of Australians (Climate Council 2023a). In our national survey of more than 2,000 people, the majority (80%) reported having experienced some form of extreme weather disaster since 2019. More than half (51%) of these respondents felt their mental health had suffered as a result. Many participants in the study also expressed that their mental health issues, including symptoms of anxiety and depression, were strongly exacerbated by the knowledge that not enough was being done to limit future harms by reducing greenhouse gas emissions and moving beyond fossil fuels. Conversely, respondents highlighted that working together in their communities to build climate resilience had brought important benefits for their mental health.

Recommendation

Recognising that climate change is a clear and present threat to the mental health of Australians, the Climate Council encourages the Authority to explicitly include mental health among its key dimensions of wellbeing.

Question 5: What are the other challenges and opportunities the global context presents Australia with in responding to climate change?

The Climate Council concurs strongly with the statement in the Authority's 2021 paper *Paris Plus: Cost to Competitive Advantage*, echoed on page 19 of the issues paper, that "it no longer makes sense to think about lowering carbon emissions as a cost. It is a source of competitive advantage".

The world has undergone a profound change since the Authority last provided advice on targets, in 2014. Major economies are now in a race to decarbonise and secure their share of the future clean economy (Climate Council 2023c). In particular, the US *Inflation Reduction Act 2022* (IRA) has marked an inflection point in the world's energy and industrial transformation and significantly changed Australia's operating environment (Climate Council 2023c, Independent Expert Panel for the Victorian 2035 Emissions Reduction Target 2023). When the world's largest economy makes a decisive move, it changes the game for everyone. The largest climate spend in US history, the IRA has already encouraged other major economies including the European Union, Japan and Korea to increase their investments in renewable energy and clean manufacturing (Climate Council 2023c).

In addition to the scientific imperative to reduce emissions as fast as possible, Australia's new global context provides additional motivation to aim high and go fast, both in our domestic emissions reductions and our shift from global fossil fuel giant to clean energy powerhouse. Australia's untapped renewable energy potential, reserves of critical minerals, and potential to develop prosperous new clean industries - including green metals - provide us with an enviable comparative advantage to other nations. This comparative advantage is both an opportunity to secure Australia's future economic prosperity and, most importantly, an opportunity to play a major positive role in the world's decarbonisation journey, thereby helping protect communities in Australia and worldwide.

A number of recent studies have attempted to quantify Australia's potential to help lower global greenhouse gas emissions through future clean industries. A study by researchers at the Australian National University estimated that Australia could reduce emissions from the Asia-Pacific region by about 8.6 percent if current high-carbon exports were replaced by green alternatives (Burke et al. 2022). Similarly, Professor Ross Garnaut has estimated that Australia could help lower global emissions by 8 percent through becoming a major supplier of low- and zero-carbon goods, in

particular the supply of green metals to China (Garnaut 2022). Doing so would add substantially to national income (EY 2023), and a portion of this revenue could be used to further support domestic and global decarbonisation efforts, fund climate change adaptation, and help address loss and damage from climate change.

Recommendation

The Authority's advice should reflect the challenges and opportunities of our fast changing global context, recognising that the ground has shifted and that Australia must work fast to realise our full potential to contribute to global decarbonisation efforts while securing our economic future.

Question 7: When is it appropriate for the Government to regulate something?

Government actions, including legislation, regulation and compliance measures, are essential for protecting Australians and communities worldwide from climate harm.

Climate change is a collective action problem and governments exist in a large part to solve these types of problems. It is therefore a responsibility for governments to regulate whenever this can achieve an emissions reduction or adaptation outcome that is stronger, faster, fairer, and/or more wide-reaching than would be achieved in the absence of regulation.

Widespread acceptance of the dangers of climate change and the need to rapidly reduce emissions can be traced back at least 30 years, to the establishment of the UN Framework Convention on Climate Change in 1992. Successive assessment reports from the Intergovernmental Panel on Climate Change have revealed an increasingly dire and urgent situation. Nonetheless, for most of those three decades, Australia's emissions continued to skyrocket, demonstrating business and industry will not drive the necessary transformation on their own.

The plummeting costs of renewable energy, the need to maintain social licence, and the multiple co-benefits of acting on climate change such as reducing costs through greater energy efficiency, have nudged more industries and businesses to start reducing their emissions. Nonetheless, Australia remains woefully behind the scale and pace of action necessary if we are to protect communities and environments from climate harm, and play our part in limiting warming in line with our obligations under the Paris Agreement.

Put simply, decades of inaction mean we are now minutes to midnight. Securing a liveable future demands governments, corporations and communities work together and take every possible measure to avoid and reduce emissions, thereby limiting future harms. At the same time, we must work together to adapt to the impacts of climate change that can no longer be avoided.

Every positive action towards reducing emissions and building community resilience will be measured in a safer, healthier and more prosperous future. Conversely, every missed opportunity today is increasing the dangers and hardships for future Australians and communities worldwide.

There are a range of widely established and tested regulatory measures for achieving rapid emissions reductions in an efficient and equitable manner, including carbon pricing, industrial and home energy efficiency standards, fuel efficiency standards, and land use policies. The Authority can play a vital role in advising on the best mix of regulatory options for achieving Australia's emissions reduction targets, in combination with market- and community-led solutions.

Recommendation

The Authority should provide frank and independent advice on the range of regulatory options which can reduce emissions and build community resilience. This advice should not be influenced by political considerations or industry preferences, as these considerations are not within the Authority's remit.

In particular, the Authority will need to be clear on the need to cease investment in new and expanded fossil fuel production while at the same time helping to map out credible plans and timelines for the phase out of existing fossil fuel usage.

The Climate Council has provided a number of specific recommendations for government regulations and investments in our answer to Question 22.

2.3 Target Setting Framework

Question 8: How could the Authority best strike a balance between ambition, domestic considerations and the international context in its NDC advice?

Fundamentally, the Authority must be focussed on providing independent, non-political advice based on the best available science, the scale of action required to protect communities and ecosystems, Australia's obligations under the Paris Agreement, and Australia's unique national circumstances and opportunities for climate solutions. Further information on the factors that should inform Australia's Nationally Determined Contribution (NDC) are provided in our answers to Questions 9 and 14.

As explored in our answer to question 14, Australia has one of the weakest 2030 emissions reduction targets in the developed world, meaning we are lagging our peers and the global trend towards much stronger action. Climate Action Tracker, an independent scientific project that tracks countries' climate commitments and actions against the goals of the Paris Agreement, assess Australia's current NDC to be "insufficient" as a fair share towards global efforts to limit warming to 1.5°C. According to this assessment, if all countries were to follow Australia's approach, warming would reach over 2°C and up to 3°C – a truly catastrophic level of warming that would be far beyond what we have any hope of adapting to (Climate Action Tracker 2022).

Australia will need to do far more to maintain our standing with global partners; and do our fair share to address harmful climate change. On the domestic front, Australians are already paying a heavy price for past inaction, with escalating extreme weather events including worsening fires and heatwaves, and worse to come in years ahead. The primary domestic consideration is to limit this harm.

In short, it should not be considered a matter of balancing domestic considerations against our international context: both provide an overwhelming imperative for stronger action. Compromise is not an appropriate response to an emergency.

The Climate Council recognizes that there will be many voices working to insert politically or commercially motivated targets into the national debate on NDCs. The Authority has a unique and important role, which is to provide rigorous, authoritative and science-based advice. The credibility and integrity of this advice will be essential in cutting through the noise to

inform the setting of a strong NDC by the Government, and through this, stronger national action to limit future climate harms.

Recommendation

The Climate Change Authority must focus above all on providing independent, non-political advice, based on the best available science. It must focus on limiting further harms to communities in Australia and worldwide that will otherwise occur through worsening fires, heatwaves, rising seas and other impacts. In the international context, it must focus on ensuring Australia catches up with our peers and helps build the wave of global action.

Question 9: What do you think Australia's 2035 target should be and why?

Australia's 2035 target should be net zero emissions. This should be achieved primarily through absolute (gross) emissions reductions.

Prioritise genuine emissions reductions

To secure a liveable future, emissions must really go down. Genuine emissions reduction is the priority we must focus on now, and governments and businesses must be accountable for achieving this. Australia's actual emissions must be substantially lower by 2035 than they are today. This will require clear and transparent accounting for emissions genuinely avoided or reduced ('gross' emissions reduction), and those accounted for by the use of offsets and removals ('net' carbon accounting). The Climate Council urges the Authority to incorporate this distinction between net and gross emissions reduction into its advice to Government, as part of establishing a clear hierarchy prioritising genuine emissions reductions over offsets and removals.

Further discussion on the need to prioritise genuine emissions reductions, and how the right kind of targets and accounting can support this, is included in our answer to Question 20.

Focus on action this decade

Our collective future depends on far steeper emissions reductions *this decade*. The Climate Council recognises that remaining within any reasonable carbon budget for Australia, and having a credible pathway to net zero by 2035, will require us to achieve far steeper emissions reductions this decade than the Government's current target of 43% below 2005 levels by 2030. We therefore encourage the Authority to provide advice on an updated 2030 target for Australia, and to stress that action by government, business and communities must be accelerated now to get us onto this much steeper trajectory. Based on the latest science and our obligations under the Paris Agreement, Australia should aim to reduce our emissions to 75% below 2005 levels by 2030.

Take a science-based, precautionary approach

The single most important factor in determining the adequacy of emissions reduction targets is alignment with climate science and the pace of action necessary to limit future harms as much as possible. We should adopt a precautionary approach - one that is fully cognisant of the extreme risks we face due to climate change, and which does everything possible to mitigate these risks.

Over the years, as our understanding of human impact on the climate system has continued to develop, the situation has become progressively more urgent. Projected impacts are occurring at lower temperature rises than previously expected, and the pathway to avoiding catastrophe looks increasingly narrow.

For example, when the Intergovernmental Panel on Climate Change (IPCC) first introduced the idea of tipping points in the Earth System over two decades ago, these 'large-scale discontinuities' were only considered likely if warming exceeded 5°C. Today, it is clear that abrupt and irreversible changes such as the collapse of major ice sheets or the rapid decline of coral reefs could be triggered at a much lower temperature rise (Climate Council 2021b).

Moreover, we have come to better understand the connections between these tipping elements and how the tipping of one or two, such as the loss of Arctic sea ice or the rapid thaw of permafrost, could contribute to the destabilising of others, creating a 'tipping cascade' (Climate Council 2021b, Liu et al. 2023, Wunderling et al. 2023, Willcock et al. 2023). If such a scenario were to be set in motion, the Earth System would continue to warm until it reached a new stable state, regardless of our efforts to rapidly reduce greenhouse gas emissions. That new state would be much hotter than the climate of the past several thousand years, during which time our complex human societies have developed, and upon which they depend (Steffen et al. 2018, Lenton et al. 2019, Climate Council 2021b.)

Alarmingly, today, with around 1.2°C of warming, it is clear that we are already at risk of triggering abrupt and irreversible changes in the climate system (Climate Council 2021b). Indeed, some tipping points may already have been transgressed. The Black Summer fires of 2019-2020, when around 10 times the amount of forest burned than during a typical fire season, suggest we may already have crossed a tipping point for Australia's broadleaf and mixed forests (Boer et al. 2020, Climate Council 2021a). The succession of severe mass coral bleaching events along the Great Barrier Reef is another likely example of a tipping point being crossed (Climate Council 2021a). At time of writing, polar scientists are sounding the alarm about an unprecedented decline in sea ice globally (WMO 2023). Collectively, these changes have profound implications for our climate, our security, our food systems, and our ability to maintain well-functioning human societies over the long-term.

The starting point for setting science-based targets should be the latest Assessment Report of the IPCC. However, by its nature, the exhaustive multi-year assessment process of the IPCC can lag behind some of the latest

developments in climate science. In our 2021 report *Aim High, Go Fast: Why emissions need to plummet this decade*, the Climate Council calculated our own carbon budgets that took account of new science on carbon cycle feedbacks, including melting permafrost, emissions from the Amazon rainforest and emissions from boreal forests. From this analysis we concluded it was no longer possible to limit warming to 1.5°C without a substantial overshoot, and instead provided a budget for a 67% probability of holding warming to below 1.8°C.

The Climate Council's budget for peak warming of 1.8°C requires global emissions to be at least halved by 2030 and reach net zero by around 2040. Based on our current high level of emissions, our natural advantages, and responsibilities under the Paris Agreement as a developed country - explored further in the next section - the Climate Council assesses that Australia should aim to achieve net zero emissions by 2035, and reduce emissions by 75% below 2005 levels by 2030.

In its Sixth Assessment Report, the IPCC deals with the aforementioned possibility of abrupt and/or irreversible changes, such as a more rapid rise in sea level, or the collapse of major ocean circulations and currents that distribute heat and rainfall around the globe. While these may be considered "low-likelihood outcomes", they are associated with "very large adverse impacts", and their likelihood increases with every increment of further warming (IPCC 2023). Such changes, were they to occur, would have an almost unfathomable impact upon human societies. Their very possibility demands we do everything possible to mitigate against them.

Alignment with the Paris Agreement

"Highest possible ambition"

The Paris Agreement commits all countries to making the maximum possible effort towards achieving the temperature goal and to limiting the impacts of climate change as much as possible. Specifically, it requires countries' NDCs, including their emissions reduction targets, to reflect their "highest possible ambition" (Article 4.3). A country should not set a target at a level that it expects to comfortably meet and improve on, but rather aim to cut emissions as far and as fast as possible.

Common But Differentiated Responsibilities and Respective Capabilities

It is a principle of the Paris Agreement that a country's target must reflect its "common but differentiated responsibilities and respective capabilities, in light of different national circumstances" (Article 4.3). More specifically, it makes clear that "developing country parties should continue taking the

lead” (Article 4.4). These key articles build on Article 3.1 of the UN Framework Convention on Climate Change.

The principle of ‘CBDR’ is fundamental to global cooperation on climate change. It recognizes that while all countries have a crucial role in tackling climate change, they have varying levels of responsibility for its causes and, perhaps more importantly, differing capacities and opportunities when it comes to reducing emissions.

There are multiple factors that could be considered relevant in determining a country’s ‘fair share’ of the global emissions reduction task. These include a country’s ‘cumulative emissions’ (that is, the total amount it has emitted since a given date), its current level of emissions per person, its overall economic strength, and various elements of ‘national circumstances’, including levels of poverty, the makeup of its national economy, and its potential to generate renewable energy. These considerations also guide how soon any given country should be expected to reach net zero emissions.

The Climate Council recognises that while many different formulas and methodologies have been proposed, there is no universally accepted way of translating the global emissions reduction task into targets for each country. There are a multitude of ways in which the relevant factors may be interpreted and weighted. Nonetheless, it is clear by any approach that Australia is obliged to reduce its emissions at a significantly faster rate than the required global average, and achieve net zero emissions sooner than most of the rest of the world.

Australia has built considerable wealth off the back of fossil fuels, meaning we both bear disproportionate responsibility for the greenhouse gases that are driving climate change, and have reached a level of development and economic strength that means we are well placed to take strong action on climate solutions. A country like Australia can and must cut emissions faster than a ‘less developed country’, which will typically be responsible for a far lower proportion of the emissions already in the atmosphere, continue to have a much lower level of emissions per person, and have more limited options for immediate and deep cuts to emissions.

Through our cumulative domestic emissions alone, Australia bears disproportionate responsibility for climate change. That responsibility becomes much larger still if we factor in the cumulative emissions from fossil fuels exported from Australia.

Regarding Australia’s ‘national circumstances’, the key factor here is Australia’s significant natural advantages when it comes to clean energy and

developing new clean industries. We are blessed with some of the world's best potential for renewable energy and other climate solutions and face an easier path to net zero emissions than many other countries. Our national circumstances therefore lend themselves towards a more ambitious NDC.

Based on the physical science (the global carbon budget) and on applying these equity principles, a target for Australia of net zero emissions by 2035 - after reducing emissions by 75% below 2005 levels by 2030 - emerges as an appropriate science-based and Paris-aligned target for Australia.

The Climate Council notes that applying the methodology used previously by the Authority leads to a very similar conclusion. In 2021, a group of Australia's top climate scientists including Will Steffen, Lesley Hughes and Malte Meinshausen applied the same 'modified contraction and convergence' methodology used by the Authority in 2014 to provide updated advice on what Australia's emissions reduction targets should be. The group concluded that to align with a 50% chance of limiting warming to 1.5°C, Australia should reduce our emissions to 74% below 2005 levels by 2030 and reach net zero by 2035 (Climate Targets Panel 2021).

This advice was updated again in June 2023 by Malte Meinshausen and Zebedee Nicholls. Working from a slightly larger global emissions budget, this latest application of the Authority's own methodology concluded that Australia will need to reduce emissions by at least 67% below 2005 by 2030 and achieve net zero by 2038. Along with the updated advice from the Climate Targets Panel, and the Authority's original 2014 advice, this analysis allocates Australia a generous 0.97% of the remaining global carbon budget, despite Australia accounting for only around 0.3% of the global population. This means that the respective net zero dates of 2035 and 2038 are arguably very generous to Australia, making our carbon budget allocation under this methodology about three times higher than if the remaining global carbon budget were allocated on an equal per capita basis. Moreover, these analyses have been based on a less stringent global carbon budget than that used by the Climate Council, taking less account of carbon cycle feedbacks.

Recommendation

Australia's emissions reduction targets should be based on the latest science and a precautionary approach to the extreme risks posed by escalating climate change. They must align with the Paris Agreement's requirement for "highest possible ambition" and the principle of "common but differentiated responsibilities and respective capabilities".

Recommendation

Australia should set a target of net zero emissions by 2035. This should be achieved primarily through absolute (gross) emissions reductions.

Recommendation

As part of the 2035 target setting process, the Authority should also provide advice on an update to Australia's 2030 target. Based on the latest science and our obligations under the Paris Agreement, Australia should aim to reduce our emissions to 75% below 2005 levels by 2030.

3. Cross-cutting Issues

3.1 Leading Indicators

Question 10: What are some leading indicators of progress towards net zero emissions?

The single most important measure of progress towards net zero emissions is the amount of *genuine* emissions reduction achieved. When dealing with net emissions targets, it is important to separate out the reporting of emissions reductions from emissions sequestered. We explore this matter in more detail in our response to Question 20.

While targets matter, it is practical actions that will get us there. The Climate Council therefore suggests that a number of other indicators can be used to measure progress on national emissions reduction. These include but are not limited to:

Electrification, efficiency and moving beyond fossil fuels

- Decline in domestic and commercial gas use.
- Changes in international demand and purchasing of Australian fossil fuel exports.
- Renewable energy project pipeline - committed and proposed projects.
- Scheduled closure dates for coal and gas fired power plants.
- Energy efficiency improvements in the built environment.

Decarbonisation of transport

- Reduction in private car journeys and increase in active and public transport (mode shift).
- Uptake of private and commercial electric vehicles.

Industrial decarbonisation

- Investment in and rollout of new low- and zero-carbon solutions for steel, cement and other high-emitting industrial processes.

Land use changes

- Amount of land restored for purposes of carbon drawdown.
- Change in land use more generally; for example, moving from livestock grazing to other purposes.

Local government data

- Progress in reducing operational and community emissions at a local government level.

Recommendation

In addition to tracking progress in genuine emissions reductions (separate from offsets and removals), the Authority could use a variety of indicators to measure progress in practical action, scheduled coal and gas closures, transport mode shift, progress at the local government level, and the rollout of zero carbon industrial process.

3.2 Sectoral Pathways

Question 12: What factors should the Authority consider when developing sectoral decarbonisation pathways?

Sectoral pathways should seek to achieve the maximum possible abatement for the given sector. The Climate Council recognises that some sectors face an easier journey to full decarbonisation than others. Some must be expected to achieve genuine zero emissions - or very close thereto. Others will need to be carbon negative; and some will continue to produce emissions, at least for the foreseeable future.

In the case of energy, transport and the built environment, the technologies already exist to achieve near or absolute zero emissions. As these sectors have the most readily available opportunities for emissions reductions right now, sector pathways should see them cut emissions first and fastest. In the case of agriculture, it is possible for Australia to develop a productive and net negative agricultural sector, though this will require substantial changes to current practices, in particular when it comes to reducing enteric methane (Meyer et al. 2020) (see also answer to Question 22). For many industrial processes, including cement and steel making, low- and zero-carbon solutions exist though are less mature than today's energy and transport solutions. They may take longer to scale-up and require greater government support (Climate Council 2023b).

In addition to the ready availability of technologies, the energy sector must also be prioritised on the basis that it accounts for such a large share of Australia's emissions, and because a decarbonised energy system is an enabler of emissions reductions across other sectors. However, expected reductions in energy emissions - such as through the upcoming closure of Australia's remaining coal-fired power plants - should not lead to lesser efforts to reduce other sources of emissions.

Notably, some sectors may ultimately be easier to decarbonise as they require less coordination. For example, steelmaking involves a small number of large companies and facilities. Decarbonising steelmaking therefore requires big changes but from a small number of actors. Other sectors, such as personal transport, involve individual actions and choices from a very large number of people. This challenge of collective action - of many people needing to do something together - links to the need for government action and regulation, explored in the answer to question 7.

For all sectors, the priority must be achieving genuine emissions reductions as rapidly as possible, with no or minimal use of offsets.

Lastly, in addition to advice on sectoral pathways, the Authority must be clear on the need for an integrated, whole-of-government approach. At present, different sectors can be 'siloed' within distinct ministerial portfolios and government departments. For example, energy transformation is largely dealt with by the Minister for Climate Change and Energy while agriculture and land use is seen as the responsibility of the Minister for Agriculture, Fisheries and Forestry, and the Minister for the Environment and Water. The Authority can help to ensure a coordinated, integrated and whole-of-government approach that transcends these divisions and maximises opportunities across and between all sectors.

Recommendation

The Authority should prioritise driving down emissions from our largest sources, with a particular focus on decarbonising all energy sources. Sectoral pathways should reflect the maximum abatement possible for that sector, and prioritise genuine emissions reductions.

Recommendation

The Authority should encourage an integrated, whole-of-government approach that maximises emission reduction and new industry opportunities across and between sectors.

Question 13: What is the role for Government in reducing these risks and assisting households, business, workers and communities to realise the opportunities?

Through our recent research and advocacy, the Climate Council has made many recommendations for ways that governments can assist Australian households, communities, businesses and industries to decarbonise. These are summarised below.

Electrifying homes and improving their energy efficiency

Through getting off gas and improving energy efficiency, households can save on energy bills, make their homes healthier, and reduce emissions (Climate Council 2022c, Climate Council 2023d).

Gas appliances – including stovetops, heaters and hot water systems – are expensive to run and a source of greenhouse gas emissions. Moreover, recent years have seen mounting evidence of the impact of gas appliances on health. For example, using a gas stove indoors without proper ventilation can have a comparable impact on childhood asthma to living in a household with a smoker (Climate Council 2021c). Analysis by the Climate Council has shown it would be cheaper for households in all Australian capital cities to be fully electric (Climate Council 2022c).

Up to eight million Australian homes were built before the introduction of any minimum energy standards, and the vast majority of these still have poor energy ratings. Readily available options for improving the thermal efficiency of homes include draught sealing; insulation in walls, ceilings and under floors; secondary glazing; and external shading (Climate Council 2023d).

By combining both electrification and practical efficiency upgrades, Climate Council analysis shows an average Australian household would save between \$1,119 and \$2,872 each year (Climate Council 2023d).

Incentives including zero-interest loans for home upgrades can play an important role in encouraging climate-smart consumer choices. Meanwhile, regulations including minimum energy efficiency standards for rental properties are important for ensuring that the benefits of electrification and energy efficiency are available to all.

Recommendation

Governments can support Australians to upgrade the energy performance of their homes with zero-interest loans.

Recommendation

The National Construction Code should be updated to require new residential properties to be all-electric.

Recommendation

Governments should require that from 2025, domestic gas appliances be replaced with efficiency electric alternatives when they reach end of life.

Recommendation

All levels of Australian government should collaborate to develop a well-designed system of energy efficiency targets. Local government in particular must be included in the development and implementation of the National Energy Performance Strategy.

Recommendation

Sellers should be required to disclose the energy efficiency rating of properties.

Recommendation

State and territory governments should implement and coordinate minimum energy efficiency standards for rental properties.

For detailed information and evidence supporting these recommendations see [*Smarter Energy Use: How to cut energy bills and climate harm*](#). (Climate Council 2023d)

Working towards a 100% renewable grid

Alongside electrification and improved efficiency, shifting to a grid powered by 100% renewable electricity will be fundamental to ensuring Australia's emissions plummet this decade and reach net zero as soon as possible. Australia should aim to reach 100% renewable electricity by 2030, including a 40% increase in overall capacity to support the electrification of transport and industrial processes.

The Climate Council has welcomed the establishment of the Net Zero Authority - an important step towards supporting communities in transition and upskilling Australians for new clean trades. The Climate Council recognises that the shift to a 100% renewable energy grid requires

coordination, planning and strategic government investments, in particular when it comes to rollout of transmission lines and other enabling infrastructure (Climate Council 2022a).

Recommendation

Through the Rewiring the Nation Corporation, the Australian Government should focus on enabling transmission to support 100% renewable electricity, in line with the Australian Energy Market Operator's 'Strong Electrification' pathway.

For detailed information and evidence supporting these recommendations see [Power Up: 10 climate gamechangers](#). (Climate Council 2022a)

Decarbonising transport: fleet transformation and mode shift

Achieving steep reductions in personal transport emissions depends first and foremost on substantially reducing the number of journeys undertaken by private vehicles (Climate Council 2023e). For journeys that still require a private vehicle, as many as possible need to be undertaken by electric vehicle.

Recommendation

Governments should structurally shift investment to drive a major increase in investment for active and public transport infrastructure and services.

Recommendation

Governments should review and reform road pricing, public transport fees and other transport pricing to ensure it is equitable, affordable and encourages mode shift.

Recommendation

Governments should aim to electrify all public transport by 2035 at the latest, and ideally by 2030.

Recommendation

In supporting the uptake of electric vehicles, governments should prioritise regional and rural areas, where longer distances and less public transport mean fewer options for mode shift.

Recommendation

The Australian Government should implement strong fuel efficiency standards that incentivise manufacturers to bring more affordable zero emissions vehicles to Australia and ensure all new vehicle sales are zero emissions by 2035 at the latest.

Recommendation

The Australian Government should develop a National Transport Decarbonisation Plan, including an emissions reduction trajectory for the entire transport sector, and an aim of radically reducing car dependency.

For detailed information and evidence supporting these recommendations see [Shifting Gear: the path to cleaner transport](#). (Climate Council 2023e)

Supporting industrial decarbonisation, and growing clean domestic and export industries to replace fossil fuel production

Industrial decarbonisation is fundamental to achieving Australia's emissions reduction targets and securing our future prosperity in a world rapidly heading to net zero emissions.

There are already many readily available opportunities for industrial decarbonisation, and more solutions are emerging and likely to be scalable within the next five to 10 years. The key opportunities available right now include:

- Shifting to renewable energy in the production of aluminium.
- Using renewable hydrogen to replace fossil gas in chemical processes. This is particularly promising for the ammonia and steel making industries.
- Switching out diesel trucks and heavy machinery for zero-emissions alternatives.
- Recycling, efficiency, and circular economy measures

While acknowledging the recent reform of the Safeguard Mechanism as an important step forward, the Climate Council recognises that much tighter restrictions need to be set on the use of offsets. The Safeguard Mechanism will also need to be further strengthened over time in line with upward revisions to Australia's national emissions reduction target, and to ensure that industry plays its part in achieving these goals.

As explored in our answer to Question 5, major economies including the US, European Union, Japan and Korea are investing heavily in green industrial production (Climate Council 2023b). Recognising that this has changed the operating environment for Australian industries, the Climate Council has recommended the Australian Government deliver a major package of initiatives explicitly aimed at developing Australian green export industries and replacing exported fossil fuels (Climate Council 2023c).

Recommendation

The Safeguard Mechanism will need to be further strengthened over time in line with upward revisions to Australia's national emissions reduction targets. It will also need to place much stricter limits on the use of offsets.

Recommendation

The Australian Government should develop a comprehensive package of measures aimed at developing green export industries. This should focus on the areas where strategic government support is necessary to drive innovation or to overcome barriers to rapid scale up solutions.

For detailed information and evidence supporting these recommendations see [*Australia's clean industry future: making things here in a net zero world*](#). (Climate Council 2023b)

3.3 Contributing Beyond Australia's Borders

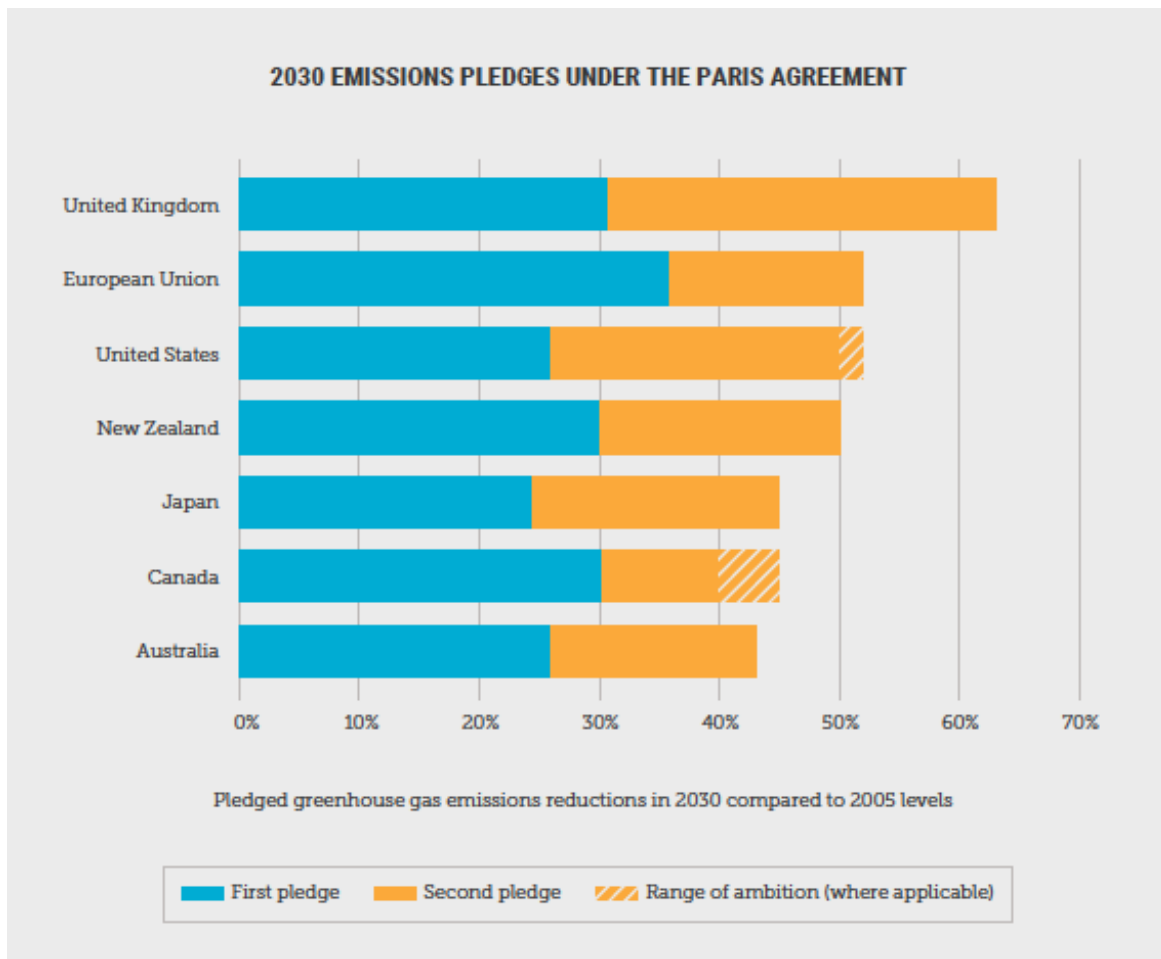
Question 14: What are the most important things to consider when assessing the adequacy of a country's NDC?

For a detailed discussion of setting and monitoring an adequate NDC, please see our answer to Question 9. As outlined in that section, key principles for assessing the adequacy of a country's NDC include:

- Emissions reduction targets should be based on the latest science and a precautionary approach to the extreme risks posed by escalating climate change.
- They must align with the Paris Agreement's principles of "highest possible ambition", "common but differentiated responsibilities and respective capabilities", and that "developed country parties should continue taking the lead".

One additional factor for the Australian Government to consider is the country's reputation as a potential future COP President. If Australia is to preside over the UN climate negotiations in 2026 - in partnership with the Pacific - we will be expected to set a target that helps drive stronger global action.

Notably, Australia has one of the weakest NDCs in the developed world (Climate Council 2022d). The Government will need to set a strong example ahead of COP30 in 2025, both with respect to strengthening 2030 targets and setting sufficiently strong targets for 2035, if it is to be effective in driving greater global action.



Source: Climate Council 2022d.

The Climate Council notes that a country's NDC should not only include strong emissions reduction targets, but also concrete plans for climate change adaptation and resilience building; commitments to international climate finance (see answer to Question 20); and commitments to supporting vulnerable communities with addressing loss and damage from climate change.

Lastly, the Authority can help ensure that state, territory and local government contributions are better incorporated into Australia's NDC. Incorporating a shared approach to climate action and governance, and clearly establishing the role and responsibilities of each tier of government, will improve accountability and make clear what is required from all actors to meet the emissions reduction target.

Recommendation

The Australian Government will need to lead by example if it is to co-host a future round of UN climate negotiations with the Pacific. This means setting a credible target in line with what's required to protect communities and fulfil our international obligations.

Recommendation

In addition to a strong emissions reduction target, Australia's next NDC should incorporate plans for adaptation, commitments to international climate finance, commitments to addressing loss and damage from climate change, and multilevel governance.

Question 15: How could Australia partner with other nations to accelerate global progress towards meeting the Paris Agreement goals?

Tackling the climate crisis is a collective global challenge and meeting the goals of the Paris Agreement depends on strong partnerships among nations. The Climate Council recognises there are many opportunities for Australia to help accelerate global progress through our existing partnerships and through forging new ones. Here we focus on four specific opportunities.

India and other fast developing economies

The Climate Council is encouraged by the Australian Government's efforts to strengthen clean energy trade and cooperation with India. As the world's largest country by population and one of its fastest growing economies, deepening cooperation with India will be essential to realising Australia's full potential to support global decarbonisation. It will also help strengthen and diversify clean energy supply chains (Climate Council 2023c).

Indonesia

Indonesia is a very large, fast growing and highly coal-dependent country. As a close neighbour with deep existing ties, Australia is well positioned to support Indonesia's transition from fossil fuels to a future clean economy. In November 2022, Indonesia entered into a landmark Just Energy Transition Partnership with a group of leading economies, targeting an ambitious and equitable transition for Indonesia's power sector. The initiative is the second partnership based on this model, the first having been announced at COP26 in Glasgow to support South Africa's energy transition. A third, supporting Vietnam, was announced in December 2022. These Just Energy Transition Partnerships are supported by an International Partner Group consisting of Japan, the USA, Canada, Denmark, France, Germany, Italy, Norway, the EU, and the UK. Australia is not currently a member.

By providing financial and technical support for energy transitions in heavily coal-dependent countries, Australia can help open up new markets for our future clean exports, provide investment opportunities for Australian companies, support regional security, and enable very substantial reductions in emissions. Australia's proximity to Indonesia, well-established ties, and the two countries' similarities as major fossil fuel producers that must accelerate their transitions to clean energy, make for an obvious partnership and untapped opportunity.

The Pacific

Pacific island countries, through their determined diplomacy, leadership by example, and considerable moral authority, have exerted significant positive influence over international climate negotiations (Climate Council 2022b).

Australia is bidding to host the COP26 UN climate negotiations in partnership with Pacific island countries. This is a welcome step, and one that could help to cement Australia's place in the Pacific family.

Australia will need to work with Pacific countries to drive an ambitious agenda for the UN climate talks. Pacific island nations see climate change as their key security threat. To remain the region's security partner of choice, Australia must work with Pacific leaders to make sure COP31 strengthens global climate action.

Working together, Australia and the Pacific can be a major force for good in international climate cooperation. This will first require Australia to align our domestic actions with the longstanding priorities of the Pacific, in particular through committing to steeper emissions reductions and the phase out of fossil fuels.

United States

The United States is Australia's key security ally. The Australia-US alliance was not established with a warming planet in mind, but the climate crisis is now recognised as a national security threat in both Australia and the United States. Both nations also formally recognise climate action as a 'third pillar' of the alliance - alongside defence and economic cooperation.

Australia should work with the US to strengthen global efforts to cut emissions. This will require a concerted diplomatic strategy - working with like-minded countries to drive much steeper cuts to emissions this decade, and strengthening the global rules-based order to meet the challenge. Australia and the US should work together to reinforce collective action through the Paris Agreement and put pressure on nations not doing enough to pivot away from fossil fuels.

The US *Inflation Reduction Act* (IRA) is a gamechanger, signalling the world's largest economy is serious about transitioning to a clean energy future. Through the IRA, the US is investing heavily in the production of electric vehicles, batteries and renewable energy infrastructure. Australia can play a supporting role by supplying critical minerals and component parts that are crucial for clean energy technologies. Australia should press the US for support to move up the value chain - from not only mining but also processing critical minerals for export.

Australia should also work together with the US to diversify clean energy supply chains in the Indo-Pacific.

Recommendation

Australia should deepen partnerships with the fast growing economies of the Indo-Pacific, in particular India and Indonesia, with the goal of supporting swift and just transitions from fossil fuels to renewable energy.

Recommendation

Australia should embrace the opportunity to work with the Pacific to help catalyse stronger global action. This requires Australia first align our actions with the longstanding priorities of the Pacific, in particular the rapid phase out of fossil fuels.

Recommendation

Australia should work together with the US to diversify clean energy supply chains in the Indo-Pacific and to strengthen global efforts to cut emissions through reinforcing collective action through the Paris Agreement.

Question 16: 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?

A phase out of fossil fuel production is not only necessary but inevitable. The IPCC has concluded that existing fossil fuel infrastructure is more than enough to push the world beyond 1.5°C of warming:

“Projected CO2 emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C. (50%) (high confidence).” (IPCC 2023).

The International Energy Agency (IEA) is clear that there can be no new investment in coal, oil and gas projects if the global energy sector is to reach net zero by 2050 (IEA 2021).

Achieving the goals of the Paris Agreement and limiting future climate harms therefore demands both an end to *new* fossil fuel developments and a managed phase-out of existing facilities. The Climate Council recognizes these two needs are often conflated in public conversation, leading to suggestions that the former is impossible, when the actual issue of concern is the latter. Similarly, the acknowledgement that some gas-fired power generation will be required as Australia transitions to a fully renewable electricity system is often used to falsely justify wholly new gas developments.

We therefore encourage the Authority to be as precise in its advice about fossil fuels as possible. This means being clear on the need to cease investment in new and expanded production while at the same time helping to map out credible plans and timelines for the phase out of existing fossil fuel usage. In the case of gas, the national conversation would be significantly aided by a better understanding of how much is genuinely required during Australia’s transition to a fully renewable electricity system, and how quickly it can therefore be phased out altogether.

A particular issue that should be front of mind for the Authority and governments in planning for the end of fossil fuel expansion is the ‘long tail’ of new and expanded projects. New and expanded fossil fuel projects require the investment of significant upfront capital. To provide corporations and their investors with a return on that capital, fossil fuel extraction projects are generally planned to run for decades. This means that fossil fuel projects developed today may still be producing their harmful products well into the 2040s and 2050s, beyond when Australia and the world need to be reaching

net zero. There is also a significant risk that new and expanded fossil fuel projects could become stranded assets, as international demand for fossil fuels shrinks in coming decades.

Protecting Australians from escalating climate harm while achieving our commitments under the Climate Change Act and Paris Agreement requires planning and policy development on a longer time horizon than governments have traditionally considered. But decisions made today can jeopardize our ability to reach net zero in the years ahead, so governments should be explicitly considering the long tail of fossil fuel projects when determining plans for the phase out of these fuels.

A broad coalition of countries are pressing for a global fossil fuel phaseout to be agreed as part of the UN climate talks. At the COP26 in Glasgow, countries agreed to a global “phase-down” of coal. At COP27 in Egypt a grouping of more than 80 countries pressed for a fossil fuel phase-out to be considered by negotiators, but it was not on the formal agenda. Many nations are again pressing for a fossil fuel phase-out to be on the negotiating agenda at this year’s COP28 talks. During intersessional climate negotiations in Bonn in June 2023, UN secretary general Antonio Guterres explained: “The world must phase out fossil fuels in a just and equitable way - moving to leave oil, coal and gas in the ground where they belong” (UNSG 2023). The United Arab Emirate’s COP28 President told the same meeting that a phasedown of fossil fuels is inevitable (Alkousaa 2023). It is likely a matter of time until a global fossil fuel phase out becomes a key plank of UN climate negotiations, and Australia should have a national plan to phase out fossil fuel production well in advance of being forced to by international markets.

As the world shifts toward a net zero emissions global economy, it is clear that Australia’s fossil fuel industry has a limited future. Major economies across Asia have set dates for achieving net zero emissions, and in doing so, have effectively called time on Australia’s fossil fuel exports. China, South Korea and Japan alone account for two-thirds of Australia’s fossil fuel exports (Kemp et al 2021). Each of these countries have set a goal of achieving net zero emissions by mid-century, and have strengthened policy for interim emissions reduction targets as well. The question now is how Australia will manage an inevitable decline in fossil fuel export demand. Alongside determining a plan for the phase out of fossil fuels production, the Authority should work closely with government, business and civil society in advising on clearer plans for the development of new clean industries, including clean exports.

Australia, with our abundant renewable energy potential and reserves of critical minerals, can play a major role in the world’s transition to net zero

emissions while securing our own economic future. To take just one example - Australia is today the world's biggest supplier of lithium, a key component in batteries. Global demand for Australian lithium is growing as production of batteries and electric vehicles surges. Recent estimates suggest the value of Australia's lithium exports will equal the value of thermal coal exports as soon as 2028 (Department of Industry, Science and Resources 2023).

Australia has a once-in-a-century opportunity to become a clean energy powerhouse. Clean energy commodities and critical minerals could drive investment and jobs at a scale comparable to the recent mining boom. By conservative estimates, Australia's clean energy exports have the potential to generate 400,000 jobs by 2040 - with many of these jobs in the same regions and communities which are currently home to fossil fuel production (ACF, ACTU, BCA, WWF 2023).

The Climate Council recognises, however, that a very large and rapid expansion of renewable energy generation and critical minerals mining poses a range of environmental and social challenges, including potential impacts on biodiversity and heritage. Success also depends on meaningful partnerships with local communities and Traditional Owners, and on careful planning that ensures benefits are shared, harms minimised, and communities left stronger.

The Authority can play a valuable role in ensuring Australia's move from fossil fuels to new clean industries is just, equitable and inclusive. For example, by helping ensure all decision makers and affected communities - including First Nations peoples - have good access to information on opportunities, challenges, and potential tradeoffs. This may include working with others to identify the best parts of the continent to concentrate new developments such that social benefits can be maximised and any environmental costs minimised as much as possible.

Lastly, while the Authority can play an important role in setting the agenda, the implementation will require a high degree of coordination with industry and with other agencies, including the Net Zero Authority, Clean Energy Finance Corporation, National Reconstruction Fund, Northern Australia Infrastructure Facility, and Australian Renewable Energy Agency.

Recommendation

The Climate Change Authority should provide guidance and indicative timeframes for a phase-out of fossil fuel production - such guidance should inform the work of the newly established National Net-Zero Authority.

Recommendation

Australia's transition from fossil fuel production to new clean industries must be just, inclusive and equitable. The Authority can play a valuable role by ensuring all decision makers and affected communities including First Nations peoples have good access to information on opportunities, challenges and potential tradeoffs.

3.5 Targets

Question 20: What types of targets do you see as important and/or problematic and why?

The Climate Council recognises that the way in which targets are framed and formulated is essential for ensuring genuine and steep reductions in emissions, protecting communities, and playing our part in tackling the global climate crisis.

Alongside an economy-wide emissions reduction target, additional targets - including for phasing out fossil fuel production and scaling up Australia's provision of international climate finance - are valuable tools for driving progress and ensuring we meet our full suite of international responsibilities.

Important: Points targets, interim targets, and emissions budgets

With impact on the climate being a function of cumulative emissions, the Authority's advice should be based on an emissions budget, as has been past practice. This emissions budget should be the basis for both a point target and a series of interim targets, to help ensure that our national emissions remain within that budget. As outlined elsewhere in this submission, the focus must be squarely on achieving genuine emissions reductions, with minimal reliance on offsets.

Important: Targets on international scope 3 emissions

The Climate Council welcomes the Authority's focus on Australia's larger contribution to global climate change, beyond our domestic emissions - in particular the emissions from Australian fossil fuels burned overseas. We recognise that these emissions are more than double Australia's domestic emissions (Climate Council 2023b), and that by shifting from a global fossil fuel giant to a renewable energy powerhouse, Australia can substantially limit climate harms and play a major positive role in global efforts to tackle the climate crisis.

Targets for dealing with international scope 3 emissions should focus on reducing the *sources* of these emissions. For example, aiming for a percentage reduction in fossil fuel production and exports. This offers a simple and direct approach that can guarantee a real decrease in Australia's contribution to emissions overseas. A target for scope 3 emissions themselves could prove more complicated. Such a target would need to

ensure the focus is on genuine emissions reductions rather than offsets; would need to consider whether to deal with scope 3 emissions from non fossil-fuel exports separately; and would offer a less direct approach to measuring and tackling the problem.

Setting targets and timeframes for reducing Australia's fossil fuel production and exports will bring greater visibility to Australia's overall contribution to global emissions and our potential to support global decarbonisation efforts. More importantly, backed by appropriate policies and investments to drive Australia's clean energy and industrial transformation, such targets and timeframes can help accelerate Australia's transformation.

Important: Climate finance targets

The adequate provision of international climate finance is fundamental to international cooperation on climate change. As an advanced economy, Australia has an obligation to provide our fair share of assistance to developing countries for building clean economies, adapting to the impacts of climate change, and addressing loss and damage from climate change. Moreover, doing so is squarely in our own national interest, as a vital investment in reducing global emissions and building regional security. Australia's past contributions to international climate finance have, for the most part, been well targeted. Australia's international climate finance has focussed on supporting vulnerable communities with building their resilience to the impacts of climate change, bucking a global trend that has seen only a small portion of climate finance flow towards adaptation and resilience-building efforts. It has been based on grants rather than loans, and so has not saddled countries with further debt (Climate Council 2021d).

However, the contribution has been small in global terms and a long way short of a fair contribution towards the shared commitment from developed countries to mobilise US\$100 billion a year (Hardefelt, Bungcaras et al. 2022). Climate Action Tracker continues to assess Australia's overall contribution to international climate finance as "critically insufficient" (Carbon Action Tracker 2022). Developed countries will likely be expected to further scale-up their contributions when a new global climate finance goal comes into force in 2025.

Australia will need to lead by example to be viewed as a worthy COP President in 2026, alongside the Pacific. This includes with regard to climate finance. The Climate Council encourages the Authority to advise the Government on appropriate targets for climate finance, based on a fair share towards international goals. This should include setting separate targets for financial support for mitigation, adaptation, and loss and damage.

Problematic: Conditional targets

While there may still be a case for developing economies to set targets that are conditional on the adequate provision of international support, it makes no sense for an advanced economy like Australia to be setting conditional targets. Doing so would continue an outdated mode of thinking that saw Australia lose many years when it could and needed to be taking stronger action. As acknowledged by the Authority, lowering carbon emissions should not be regarded as a cost but as a source of competitive advantage. In this context, setting targets that are conditional on others taking action is needlessly constraining the strength of our action at a time when Australia and the world need to be setting our sights as high as possible.

Problematic: Net emissions reductions (including net zero and net negative targets)

The concept of 'net zero' is inherently vulnerable to misuse by those who wish to prolong the life of fossil fuels and avoid making the genuine reductions in emissions required to tackle the climate crisis.

While net zero targets are now ubiquitous, they remain a relatively recent innovation in climate policy. Work to ensure the integrity of these commitments and safeguard against 'greenwashing' is only beginning. The Authority could pioneer a world-leading move towards greater integrity in climate action by encouraging that net emissions reduction targets, including Australia's 2035 national target, consist of separate and clearly stated targets for the quantity of emissions reduced at source, and the quantity of residual emissions sequestered to achieve the net reduction.

The inherent problem with net emissions targets stems from pervasive false assumptions about our ability to sequester large amounts of greenhouse gas emissions, either by way of on-site efforts to capture and store emissions from fossil fuel burning and industrial processes, or efforts to 'offset' emissions, typically through storing more carbon in vegetation and soils. In the case of offsets, there is a fundamental difference between one tonne of carbon released into the atmosphere through burning fossil fuels, and one tonne sequestered in vegetation and soils (Morgan 2023).

Burning fossil fuels permanently alters the Earth's natural carbon cycle and the balance of carbon across different elements of the Earth System. It introduces vast quantities of new carbon into the 'active' part of the carbon cycle: the exchange of carbon between the atmosphere, ocean and organic matter. Carbon sequestered through planting trees is not returned to

long-term, stable storage underground, except through geological processes that take place over millions of years. Rather, it remains part of the active carbon cycle, and may not stay stored in the land for long. Forests may be destroyed by fire, disease, floods and droughts – all of which are increasing with climate change – returning the carbon to the atmosphere (Morgan 2023).

In the case of carbon capture and storage (CCS) and carbon capture, utilisation and storage (CCUS) technologies, there remains no prospect of these technologies being able to deal with the vast majority of emissions that would result from continued dependence on fossil fuels. Therefore, while these technologies may play a limited role in capturing residual emissions from essential industries such as steel and cement while low- and zero-emissions alternatives are still being developed and scaled-up, they can never be a substitute for determined efforts to accelerate the phase out of fossil fuels (Climate Council 2023f).

In light of these realities, the United Nations' High Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities (2023) assessed that “non-state actors cannot claim to be net zero while continuing to build or invest in new fossil fuel supply”, as “net zero is entirely incompatible with continued investment in fossil fuels”. The same principle must apply when setting and considering national emissions reductions targets. The Climate Council therefore encourages the Authority to make clear that Australia's commitment to net zero is *inconsistent* with new fossil fuel approvals and investments.

Beyond the setting of national emissions reduction targets, many government initiatives can be strengthened by ensuring the focus is squarely on the achievement of genuine emissions reductions. For example, Climate Active - a certification program and partnership between the Australian Government and businesses - could adopt criteria that encourages businesses to make all reasonable efforts to reduce emissions, with either no or minimal use of offsetting. Similarly, the Safeguard Mechanism could be further tightened over time to prioritise genuine emissions reduction by covered entities, and explicitly limit the use of offsets.

Recommendation

The Authority's advice on emissions reduction targets should be based on an emissions budget.

Recommendation

Regarding international scope 3 emissions, the Authority should provide advice on targets for reducing fossil fuel production and exports.

Recommendation

The Authority should provide advice on climate finance targets, including separate allocations for mitigation, adaptation, and loss and damage.

Recommendation

Targets for net emissions reductions, including net zero targets, should include separate targets for the quantity of emissions reduced at source, and the quantity of residual emissions sequestered to achieve the net reduction.

Recommendation

The Authority should affirm that a commitment to net zero emissions is incompatible with new fossil fuels approvals and investments.

Recommendation

The Authority should encourage that all Government initiatives, including the Climate Active program and the Safeguard Mechanism, focus on genuine emissions reductions over offsetting.

Question 22: What aspects of methane measurement, reporting and verification should the Authority focus on as part of the NGER review?

Reducing methane emissions is one of the most effective ways to limit warming in the near term, and is a vital part of responding to the climate crisis. While the urgent need to reduce methane emissions has recently received much more attention globally, it continues to be neglected in Australia.

Effective action to reduce methane emissions begins with better identifying and monitoring sources. At present, methane emissions from fossil fuel facilities in Australia appear to be vastly underestimated. Analysis by the Institute for Energy Economics and Financial Analysis (IEFFA), based on data compiled by the International Energy Agency, concludes that “fugitive methane emissions from coal mining and oil and gas supply have likely been grossly underestimated to date – by about 80% for coal and 90% for oil and gas” (IEFFA 2023). Independent estimates of methane from unconventional gas extraction, including coal seam gas using fracking, also suggest that methane leakage from these activities is much higher than typically registered through Australia’s National Greenhouse and Energy Reporting (NGER) scheme (Luhar et al. 2020).

Companies should be required to undertake direct and site-specific measurement of their methane emissions. This should include post-mining and abandoned mining facilities. Measurements should be independently verified, for example through aerial flyovers and/or satellite data.

The Authority should support reforming the NGER framework to require methane measurement, and provide emission reduction targets for methane, as well as opportunities for reducing methane emissions.

While the fossil fuel sector remains the most problematic source of methane emissions, the Authority must also consider the need to tackle methane from agriculture.

At present the Australian Government has signed the Global Methane Pledge but has not outlined concrete plans to meet this commitment. Given that there are multiple sources of methane emissions, driving down Australia’s methane emissions will require a whole-of-government approach and emissions reduction targets and plans for each relevant sector, including fossil fuels, agriculture and waste.

Recommendation

The Authority should work to raise awareness among decision makers of the critical importance of reducing methane emissions, support the direct measurement of methane emissions from all fossil fuel facilities in Australia, and advise the Government on appropriate methane emissions reduction targets for different sectors and how they can be achieved.

3.7 Carbon Credit Integrity

Question 25: Following adoption of the Chubb Review recommendations, what concerns about ACCU integrity remain?

As an organisation grounded in climate science, the Climate Council is concerned that the Australian Government and Australian companies are relying far too heavily on the false promise of carbon crediting and offsets. As explored in our answer to Question 20, we believe there remains a lack of understanding about the nature of offsets vis-à-vis genuine emissions reductions, and their limited role in preventing climate harm. In short, one tonne of fossil fuel emissions cannot be truly offset by one tonne of nature-based uptake (Morgan 2023). Therefore, separate from any ongoing concerns about the integrity of ACCUs, there is an ongoing and arguably greater problem, which is the scale of their use.

Carbon credits should only be used as a last resort to deal with the small share of emissions from a company or organisation's operations which cannot be avoided and reduced, like residual industrial emissions from manufacturing essential products and some livestock agriculture. They should not be used as a primary tool, or to offset fossil fuel projects. Doing so risks prolonging the life of fossil fuel industries, which is incompatible with tackling the climate crisis and protecting communities and ecosystems. When offsets *are* used, it should be for a limited time while companies transition to using other technologies.

In addition, and recognising again that one tonne of fossil fuel emissions is not the same as one tonne of nature-based uptake, there should be different categories of ACCUs based on sources, with their use restricted accordingly. For example, ACCUs generated from nature-based emissions reductions should only be used to offset nature-related emissions, such as land clearing or agricultural methane.

The quality and integrity of offsets is important, but even the best offsets are no substitute for genuine, deep emissions reductions.

The Authority can play a valuable role in improving understanding among decision makers, businesses and the public about the inherent limitations of offsets, independent of concerns about integrity.

Recommendation

In its advice to Government, business and the public, the Authority should seek to improve understanding of the limitations of carbon crediting and offsetting, consistently emphasise the importance of genuine emissions reductions, and discourage use of offsetting in all but the limited number of circumstances where low and zero-carbon alternatives are not yet widely available.

Recommendation

The Climate Council recommends that there be different categories of ACCUs based on sources, with their use restricted accordingly.

3.8 International Units

Question 30: What role should international carbon markets have in Australia?

Australia's abundant renewable energy potential provides us with an easier pathway to net zero emissions than many other countries. Since it is possible to achieve steep and rapid emissions reductions onshore, there is little case for using international carbon markets to achieve Australia's emissions reduction goals.

International credits should not be used at all under legislated and regulated schemes - including the Safeguard Mechanism. By strictly limiting the use of offsets overall, and allowing only the use of Australian credits, these schemes can ensure that when organisations and companies are formally required to reduce their emissions, making genuine cuts is the better choice economically than paying for offsets.

For voluntary schemes, the Climate Council believes the Authority should set a very high bar for any use of international carbon credits. International markets should only be used if all reasonable options for onsite abatement have been exhausted, along with options for accessing high quality domestic offsets. Any international units must be of the highest quality and integrity, guaranteeing genuine and durable emissions reductions, and safeguarding against negative environmental and social impacts.

Australia has an important role to play in helping reduce emissions in other countries, including through providing our fair share of international climate finance (see answer to Question 5). However, such reductions must be additional to efforts to reduce Australia's domestic emissions as far and fast as possible, not a substitute.

Recommendation

International carbon markets should have a minimal role in meeting Australia's emissions reduction goals.

3.9 Other Matters

Question 31: What else should the authority be considering in its advice to Government?

While the urgency of the climate crisis cannot be overstated, nor can the opportunity to reimagine our future and to build a stronger, fairer and healthier Australia, while supporting the wellbeing and security of communities worldwide.

Renewable energy, active and public transport, climate-smart agriculture, and new clean industries all offer the promise of reduced inequality, better health, good jobs, and greater resilience to the impacts of climate change that can no longer be avoided.

The Climate Council encourages the Authority to be bold in its vision, fearlessly communicating the science while helping paint the path to a vibrant, climate smart future.

Recommendation

The Authority should ensure that advice consistently reflects both the scale of action required and the many co-benefits for health, equality, security, and future prosperity that stronger action on climate change can provide.

4. Conclusion

Our world has changed significantly since the last time the Authority provided advice to the Australian Government on targets. We are now living in an age of climate consequences, with communities in Australia and worldwide paying a heavy price in the form of increasing severe and frequent weather extremes. The path to avoiding climate catastrophe has narrowed. At the same time, technological developments, the plummeting costs of renewables, and momentum in international action has dramatically altered our operating environment. The rapid phase out of fossil fuels is not only essential to limiting climate harms, but offers a pathway to Australia's future economic prosperity.

Our decisions this year and through the make-or-break decade of the 2020s will profoundly impact the kind of future in which young people alive today, and generations to come, find themselves. Every tonne of avoided emissions is an investment in a brighter and safer future, with every missed opportunity to reduce emissions measured in greater dangers and hardships down the line.

The Climate Council again commends the Authority on its comprehensive and inclusive approach to this important consultation. We recognise that independent, authoritative, science-based advice is fundamental to a fair and effective response to the climate crisis, and that the Authority plays a hugely important role in accelerating Australia's response to the crisis. We look forward to continued engagement with the Authority in the vital work that lies ahead.

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