



Climate Council of Australia

Submission to: Updating the Authority's Previous Advice on
Meeting the Paris Agreement

Addressed to: Climate Change Authority

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

23 August 2019

About the Climate Council

The Climate Council is an independent non-profit organisation funded by donations by the public. Our mission is to provide authoritative, expert advice to the Australian public on climate change.

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

Executive Summary

The Climate Change Authority's unwillingness to investigate adjustments to Australia's 2030 target means that the entire review is fundamentally misguided. Unless Australia has targets that are commensurate with Australia's fair share of the global carbon budget for 1.5°C then other goals, such as resilient infrastructure, cannot be met.

If the CCA is not prepared to recommend science-based targets, then it must advise that infrastructure planning decisions are designed for a +3°C world. Making Australia's infrastructure resilient to such climate disruption could cost trillions of dollars, once you include direct costs as well as the knock-on effects to the rest of the economy.

In 2015, the Authority recommended a science-based target of Australia reducing its emissions between 40% and 60% below 2000 levels for a global temperature goal of 2°C above pre-industrial levels. Yet this advice was not accepted by the Federal Government and the CCA has since accepted a woefully inadequate 26% emissions reduction by 2030.

The Authority has a clear mandate to provide independent, objective, expert advice to the Federal Government, it is important that the Authority remain true to its role.

The Climate Council is dismayed that there is currently no climate science expertise among the members of the Authority. Given the Authority's role, this glaring deficiency must be addressed as a priority.

The world is experiencing a climate crisis and Governments must ratchet up their commitments to effectively tackle climate change. The Federal Government's failure to act is placing Australian lives, our economy and the natural environment that underpins our life support systems at risk.

Until the 2030 emissions reduction target is fixed and scientifically robust then there is no point in assessing a fundamentally flawed policy.

If, however, the 2030 climate target is reconsidered and aligned with the science, then the Climate Council's submission to this review would focus on four of the questions from the consultation paper.

First, in response to question 1 of the consultation paper, we note that the past advice of the Authority in its 2014 review of targets and progress in emissions reduction in Australia found that the pre-conditions for Australia's soon-to-be-binding 2020 target had been met. There is one crucial aspect of that important work which we would like to highlight. Even before the *Paris Agreement* came into existence, the Authority recommended that the pre-conditions for our conditional target 2020 target is now at least 15% below 2000 levels. This is vitally important for our post-2020 goal. The target trajectory for Australia's nationally determined contribution under the Paris Agreement is drawn from the end of the second commitment period of the Kyoto Protocol. This decreases, by more than 10%, Australia's emissions allocation for the period 2021–2030, even if carryover is allowed. If circumstances have changed in the time since that advice was offered, it is only in favour of greater ambition. Any criticisms of the original advice are addressed by the existence of the *Paris Agreement*.

Second, in response to question 4, we find consistent with recent public statements from the Reserve Bank, APRA and ASIC, climate change poses significant risks to the macroeconomic security of the nation. While there are encouraging shifts occurring in corporate decision-making, these will require further specialist guidance from those who are familiar with climate science and policy. At the same time, acting on climate change will present considerable opportunities for the Australian economy.

Third, in response to question 9, we find that climate change is a pervasive risk to infrastructure. Given the long operating lives of major infrastructure, it is necessary to embed climate resilience as a priority in design and development of new and upgraded infrastructure. This includes updating standards to ensure that infrastructure is designed for the worst credible case, which our current emissions trajectory suggests is warming of at least 3°C by 2100.

And finally, in response to question 13, we find that the claims that Australia might use excess allocations from the Kyoto Protocol's commitment periods toward our post-2020 goal utterly without merit. We note that the Paris Agreement is not related to, or beneath the architecture of the Kyoto Protocol and so there is no mechanism for the use of this purported credit. We also find that even if the Paris Agreement were related to the Kyoto Protocol, which is certainly is not, the previous period surplus reserve would mean that 128 Mt CO₂-e worth of our claimed credit could not be used toward our post-2020 goal. Even if both of these points were wrong, which they certainly are not, the advice provided by the Authority itself in its 2014 review, indicating that Australia's target is at least 15% below 2000 levels, means that the vast majority of our claimed credit will in fact have already been used toward expected shortfalls in meeting our 2020 target.

Recommendations

Recommendation 1: The CCA must consider recommending a revised, science-based 2030 emissions reduction target, otherwise this consultation process is futile.

Recommendation 2: If a 2030 science-based target is not established, then Australia must prepare for a +3°C world, recognising that this could cost trillions of dollars.

Recommendation 3: The Climate Change Authority currently has no climate science expertise on its panel. This is a major deficiency and if the CCA is to pursue its mandate then it must attract and retain world class climate science expertise on its advisory panel.

If the 2030 climate target is re-considered, then the Climate Council proposes, in relation to this consultation process, the following:

Recommendation 4: Australia's target for the second commitment period of the Kyoto Protocol should now be at least 15% below 2000 levels in 2020.

Recommendation 5: Australia's financial regulators recognise the risks posed by climate change as a central concern for the economy and financial stability, with knock-on implications for macroeconomic policy. The CCA must provide science-based advice to the Federal Government that leads to the implementation of credible climate policy that rapidly and deeply reduces Australia's greenhouse gas emissions, thereby alleviating climate risk.

Recommendation 6: In order to ensure that major infrastructure investments remain resilient, the Federal Government should lead a reform agenda focused on ensuring that infrastructure can withstand the expected conditions brought about by our current emissions trajectory of at least 3°C of warming by 2100. At the same time, the government should lead a reform agenda focused on reducing emissions to net zero before 2050, through clear and coordinated policy leadership.

Recommendation 7: The use of carryover credits should be disallowed for meeting emissions reduction targets, thereby keeping with the spirit of the Paris Agreement, international cooperation and global climate action.

Detailed response to selected questions

Question 1. What aspects of the Authority's previous recommendations remain valid and why? What has changed since this advice was given and how should the advice be updated to account for those changes?

There is much in the past work of the Climate Change Authority with which we would agree, but there are aspects of two past Authority reviews that we feel are especially important to whether we will meet our 2030 goal. These are:

- *Australia's Future Emissions Reduction Targets: Final Report (2015)*
- *Reducing Australia's Greenhouse Gas Emissions—Targets and Progress Review: Final Report (2014)*

These will be discussed below.

The need to reconfirm the CCA's 2014 advice on Australia's conditional 2020 target

The Climate Change Authority's advice that Australia's target for the second commitment period of the Kyoto Protocol should now be at least 15% below 2000 levels in 2020 is still reliable based on the commitments Australia has made to the international community. This increases the abatement required to meet our target under the Paris Agreement.

The Consultation paper for this Review ruled out revisiting the 2030 emissions reduction target for the Paris Agreement. We feel that this is unwise, for the reasons discussed in the executive summary. Previous advice from the Climate Change Authority noted that a target of 45% to 65% below 2005 levels in 2030 was aligned to the science and considered necessary for Australia to contribute its fair share to reducing emissions in line with a global target of 2°C.¹

We also note that even before the issue of carryover credits for the Kyoto Protocol, to be more completely unpacked under Question 13, the nationally determined contribution submitted by Australia is not at all compliant with that recommendation. This is a grave concern, both in terms of our international reputation and, more importantly, in terms of ensuring that one of the world's highest per capita emitters brings itself back to a reasonable threshold.

The advice offered by the Climate Change Authority in 2015 has proved accurate for a fair allocation of a global carbon budget for 2°C. In light of the

¹ Climate Change Authority 2015

Intergovernmental Panel on Climate Change's Special Report on 1.5°C,² the recommendations of the CCA in 2015 re-emphasised and ambition increased.

As independent advisors to the Federal Government, it is concerning that the Authority should choose to simply accept the terms as given to them by the Government when the Government's chosen targets are manifestly inadequate both in comparison to similar countries, and in comparison to the risks of failing to mitigate climate change. The Climate Council also notes with concern that CCA does not have any climate scientists on its panel. For this advisory body to provide authoritative advice to the Federal Government it must have world class climate science represented.

Concerning the issue of Australia's 2020 target.

In its 2014 review of Australia's targets and progress toward meeting existing goals, and setting goals for the post-2020 period, special attention was paid to the conditional nature of Australia's international commitments as part of its Copenhagen pledge—later turned into our commitment under the Doha Amendment to the Kyoto Protocol.

Australia's pledge for the second commitment period of the Kyoto Protocol, originally made as a pledge to the Copenhagen Accord, was an unconditional target of 5% below 2000 levels in 2020, but had certain conditional targets attached as well. If 'substantive measurable, reportable and verifiable commitments' were made by major developing countries and the aggregate range for developed country targets was 15–25%, Australia committed to increase its target to 15% over the same period.

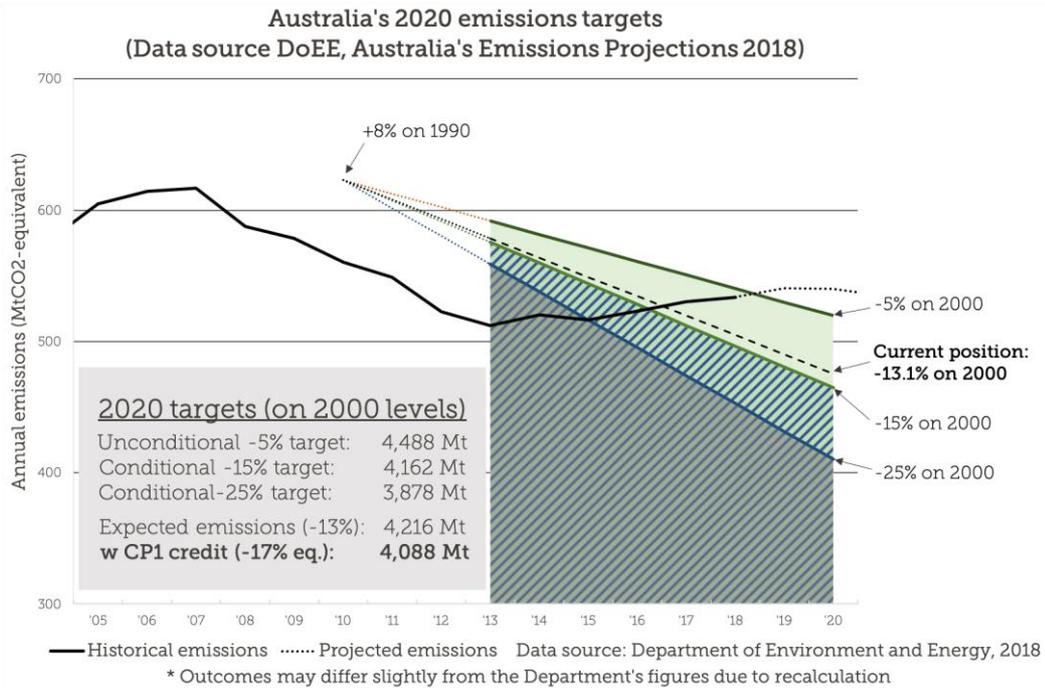
In the targets and progress review,³ the Climate Change Authority advised that the conditions for increasing Australia's 2020 target had been met. The Authority advised that under the conditions set by Australia at the 2010 Conference of the Parties to the UNFCCC in Cancun, Australia's 2020 target should be at least 15% below 2000 levels in 2020. In the event, the Climate Change Authority advised that Australia's target should be 19% below 2000 levels in 2020, in keeping with a global carbon budget for 2°C above pre-industrial temperatures.

Importantly, this advice was made before the Paris Agreement was solidified in late 2015. Since that time, it has become even more clear that the pre-conditions Australia set for raising its 2020 ambition have been met.

In the event, our emissions over the 2013-2020 period are expected, using the Department of Environment and Energy's projections, to be equivalent to a trajectory for 13.1% below 2000 levels in 2020. As shown below:

² Rogelj 2018

³ Climate Change Authority 2014



Though Australia has emitted more than its allocation under a 15% target, the use of carryover credit between the Kyoto commitment periods is legitimised by this international agreement in a way that is not for the Paris Agreement.

According to our True-Up Reports for the first Kyoto commitment period, we have approximately 128 Mt CO₂-e worth of excess allocations from the first commitment period. For a 15% goal, Australia emitted an excess of 54 Mt CO₂-e in the second commitment period and so there is ample excess credit available.

While the shift may not affect our performance under the second commitment period for the Kyoto Protocol, it has a considerable bearing on the scale of emissions reductions required under our post-2020 commitments.

Similar to the manner in which the allocation for our second commitment goal is calculated, Australia's 2030 target is drawn with a linear progression from the end point of the second Kyoto commitment period (5%, 15% or 25% below 2000 levels in 2020) to our 2030 goal of 26%–28% below 2005 levels in 2030. The sum of all years below that baseline from 2021 to 2030 becomes the total allocation for the period.

This calculation, as presented in the Department of Environment's most recent emissions projections report, is shown below:

Figure 4 Australia's emissions trends, 1990 to 2030

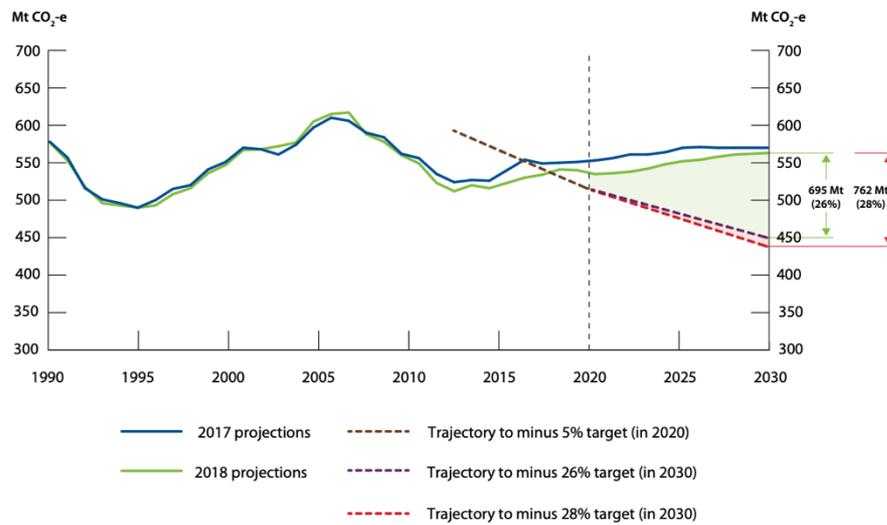


Figure source: Department of Environment and Energy, *Australia's Emissions Projections 2018*, p12.

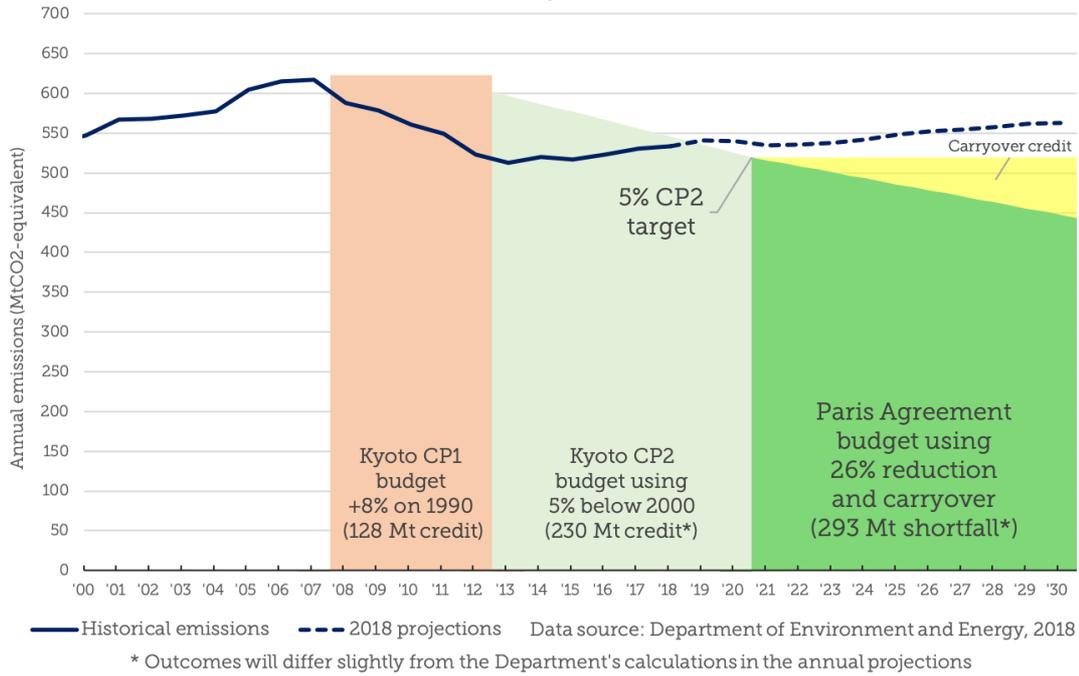
Since late last year, the Federal Government has been clear that it intends to use credit carried forward from 'over-accomplishments' in the Kyoto commitment periods toward meeting that goal. While we will speak in detail to the problematic nature of Australia claiming that it can use excess allocations from the Kyoto Protocol under the Paris Agreement, for the time being, we will give the benefit of the doubt.

The use of Kyoto credit under Paris shifts Australia's target from being 26% below 2005 levels in 2030 to a *de facto* goal of only 15% over the same period. This is because the purported credit permits us to emit 367 million tonnes⁴ more in the decade to 2030.

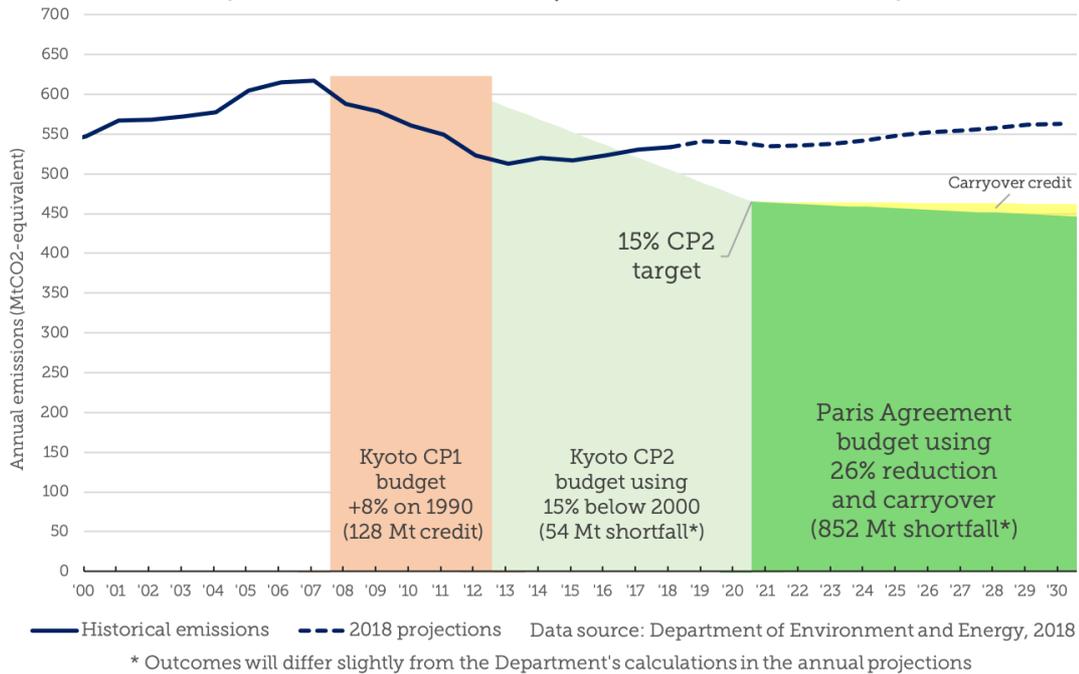
If Australia is held to its conditional, though binding, target for 2020, it has the following effects on our 2030 allocation:

⁴ This is the Government's calculation of the carry-over credit. The charts below, which are entirely re-calculated, come to a different total (358 million tonnes) due to shifts in how past emissions are calculated.

**Australia's emissions reduction targets under Kyoto and Paris
(5% below 2000 in 2020, 26% below 2005 in 2030)**



**Australia's emissions reduction targets under Kyoto and Paris
(15% below 2000 in 2020, 26% below 2005 in 2030)**



Shifting the 2020 target to 15%, in line with the Climate Change Authority's 2014 advice, shifts the total allocation for Paris in two ways.

First, by changing the start point for the 2021–2030 allocation, it reduces that allocation by 259 million tonnes.

Second, if the 15% target is enforced, Australia is expected to miss its 2013–2020 goal by 54 million tonnes. In this instance, it can—legitimately—draw on credit from the first Kyoto commitment period to meet that goal, but it leaves very little for the more spurious task of using that same credit after 2020. Increasing Australia’s 2020 ambition reduces the total purported credit by almost 300 million tonnes, to a mere 74 million tonnes.

This shift—again, one that is binding on Australia should the Doha Amendment come into force—triples the outstanding abatement task for the period from 2021–2030. It sees Australia’s *de facto* Paris allocation revised down by more than 10%.

The rest of the world has noticed. At the most recent meeting of the UNFCCC’s Subsidiary Body for Implementation, pointed questions were asked by the European Union about the 15% commitment.⁵ Australia did not answer the core of the question, a fact which it can be assumed was also noticed.

The Doha Amendment to the Kyoto Protocol has not yet become law, however, it is very likely to soon. When it does, this is a binding commitment on Australia and will have serious consequences for our predicted performance under the Paris Agreement.

Nothing in the Authority’s previous advice on the 2020 target has become unsound, indeed, it has become significantly more sound because of the *Paris Agreement*.

Question 4. What is the role of prudential regulation and macroeconomic policy in assisting the Australian economy transition?

As noted in recent announcements of the Reserve Bank of Australia, the Australian Prudential Regulatory Authority and the Australian Securities and Investments Commission, climate change is a core macroeconomic risk. While there are movements within industries and corporations, there is the potential that, without adequate information as to these risks, these shifts will be too slow. Conversely, acting on climate change is a considerable opportunity for a country such as Australia.

There are few forces affecting the Australian economy that match the scale, persistence and systemic risk associated with climate change. Direct macroeconomic shocks will arise from the impacts of climate change on housing, temporary or permanent contractions of some industries and subsequent reductions in employment, commodity price adjustments, and damages and disruption to critical infrastructure that provide essential services and facilitate economic activity. Australia’s financial regulators have

⁵ Subsidiary Body on Implementation of the United Nations Framework Convention on Climate Change 2019

recently made a call for action to deal with climate change, with the Reserve Bank of Australia (RBA), the Australian Prudential Regulation Authority (APRA) and the Australian Securities and Investment Commission (ASIC) citing risks posed by climate change as a central concern for the economy and financial stability, with knock-on implications for macroeconomic policy⁶.

Extreme weather and climate events pose macroeconomic and regulatory risks because they can lead to supply shocks that reduce output, cause unemployment and increase prices and inflation⁷. Climate change is increasing both the frequency and severity of many extreme weather events. Climate change is also increasing the probability of compound events, where two or more extreme weather events combine to produce impacts that are worse than the effects of each event independently (e.g. coincident droughts and heatwaves worsening bushfires).⁸

The agriculture sector is particularly sensitive to climate and weather, and extreme weather and climate events that disrupt the agriculture sector can have negative effects for national GDP and inflation. Droughts in the 1980s, 1990s and 2000s each reduced national GDP growth by about 1% in the years they occurred (compared to the GFC in 2008-9 reducing GDP by 2%)⁹. During the 2002-3 drought, rural exports declined by 23% (\$2 billion), whilst overall food prices rose by 4.4%, twice the rate of the Consumer Price Index¹⁰. Extreme weather events can also generate supply shocks that push up commodity prices and increase inflation. For example, Tropical Cyclone Yasi drove up banana prices, boosting inflation by just under 1%¹¹. The prospect of near permanent supply shocks driven by climate change poses threats to economic resilience. The cumulative loss of wealth for Australia from the impacts of climate change on agricultural and labour productivity is expected to reach \$4.2 trillion by 2100.

Climate change also presents broad risks to other sectors. In particular, climate change poses major risks to the property sector, which has a larger “footprint” on the Australian economy than any other industry¹². The market for residential properties is valued at around \$6.6 trillion (significantly larger than the Australian Stock Exchange and about three times larger than the superannuation industry). Activities involved in facilitating the property industry (e.g. construction, architecture and engineering, banking, insurance and property and business services) directly contribute around 11.5% to GDP. The property industry also contributes around 16% to revenues of governments at all levels via taxes, rates and levies. The industry employs around 1.17 million Australians and at least 14.1 million Australians also

⁶ Debelle 2019

⁷ Climate Council 2019

⁸ Climate Council 2019

⁹ Commonwealth of Australia 2005; RBA 2006; World Bank 2015

¹⁰ Quiggin 2007

¹¹ Debelle 2019

¹² AEC Group 2015

have a stake in the industry via their super funds¹³. The total estimated damage-related loss of property value from extreme weather and climate events – excluding any disruptions to productivity – is expected to rise to \$571 billion by 2030, \$611 billion by 2050 and \$770 billion by 2100¹⁴.

Climate change can also erode the productive capacity of the economy. Funds may be diverted towards recovery and away from investments in new technology, machinery or research, leading to long-term reductions in productivity growth. For example, federal drought assistance since 2000 has totalled around \$6 billion, preventing these funds being invested in productive purposes such as research and development, innovation or infrastructure. Estimates of future drought frequency and impacts suggest an effective lowering of GDP by 1% every year¹⁵.

Macroeconomic policy that acknowledges the risks climate change poses to financial stability in Australia and throughout our region will play an important role in mitigating these circumstances. Reducing emissions to net zero by 2050 or earlier, through clear and coordinated policy leadership, is a crucial element of assisting the Australian economy to transition and avoiding the worst of the economic impacts outlined above. Ideally, the ‘earlier’ in the previous sentence should be read as **considerably** earlier.

It is essential that the Federal Government establishes a policy and regulatory framework that helps position Australia’s economy to avoid risks associated with carbon-intensive economic activities, and capitalise on industries that can produce the goods and services that society needs with low embedded carbon. While there are a range of policy options, at the moment, many businesses have implemented shadow carbon prices as a way to manage macroeconomic risk. Having a well-designed and standardised carbon price that is set at the right price to drive decarbonisation of the economy, and that can be ratcheted up over time, would be one of the simplest and most cost-effective ways for the Australian Government to establish policy settings to drive the transition. In the case that the government cannot see a way to introduce a general policy on carbon pricing, the government should recognise bilateral trades between companies who find that this is the best way for them to acquit their carbon liabilities.

Australia has the potential to transition to a global renewable energy super power; however, this will only occur with a sound macroeconomic and regulatory policy framework from the government that supports this transition. The longer we delay swift and decisive action, the more it will cost the Australian economy, both in direct costs and lost opportunities.

¹³ AEC Group 2015

¹⁴ Climate Council 2019

¹⁵ Carroll et al. 2007

Question 9. How should the Government ensure that major infrastructure investments remain resilient to future climate change impacts and policies?

Climate change risks are pervasive and affect significant infrastructure investments. Given the long operating life of major infrastructure, and the known risks from climate exposure, it is imperative that decision-making for new and upgraded infrastructure have climate resilience as a key goal of design and development.

Recent research by the Climate Council and partners found that significant costs can arise from the impacts of extreme weather on infrastructure¹⁶. It is expected that around \$17 billion (in present value terms) will need to be spent between 2015 and 2050 on rebuilding critical infrastructure following natural disasters¹⁷.

Beyond direct damages to infrastructure that necessitate repair or rebuilding, significant flow-on costs arise from temporary disruptions to the functioning of infrastructure. Interdependencies between different types of essential urban infrastructure increase exposure to supply chain disruptions. For example, utilities such as electricity, telecommunications and water are necessary for the functioning of a range of other infrastructure.

There are already many examples of infrastructure failures due to the impacts of extreme weather events. In 2017, heatwaves caused 3,600 MW of power to fail in South Australia, New South Wales and Queensland during a critical demand period (14% of the total coal and gas fired power supply to these states)¹⁸. A major storm in South Australia in 2016 caused damage to electricity transmission infrastructure in the state (including bringing down 22 electricity transmission towers), which combined with other factors resulted in a cascading failure of the network and a power outage across most of South Australia.

The exposure of coastal assets to sea-level rise associated with climate change is widespread and will increase in the future. More than \$226 billion (in 2008 dollars) in commercial, industrial, road and rail, and residential assets are exposed to flooding and erosion hazards at a sea-level rise of 1.1 m¹⁹. Coastal assets at risk from the combined impact of inundation and shoreline recession include: between 5,800 and 8,600 commercial buildings, with a value ranging from \$58 to \$81 billion (2008 replacement value); between 3,700 and 6,200 light industrial buildings, with a value of between \$4.2 and \$6.7 billion (2008 replacement value); and between 27,000 and

¹⁶ Climate Council 2019

¹⁷ Deloitte 2017

¹⁸ Ogge and Aulby 2017

¹⁹ Climate Council 2019. Note: this is considered to be a 'high-end scenario' for 2100 based on projections from the IPCC's 2007 Fourth Assessment Report (AR4). However, this 'high end' projection is still highly plausible.

35,000 km of roads and rail, with a value of between \$51 and \$67 billion²⁰. Other national infrastructure within 200 meters of the coastline include: 120 ports, five power stations, 258 police, fire and ambulance stations, 75 hospitals and health services and 44 water and waste facilities²¹.

Some of these assets can be protected by coastal protection measures such as seawalls, but this will come at a cost. There is a lack of detailed and comprehensive research on what coastal protection measures are the most cost-efficient and effective for protecting assets along different areas of Australia's coastline, what these will cost, and how these can be financed, though some estimates exist for global coastal protection costs²². Between now and 2100, population growth and poor urban planning could more than double the value of exposed assets and people at risk of impacts from shoreline erosion, storm surges and permanent inundation. Winds and intense rainfall associated with storms and cyclones also pose independent and linked threats to coastal infrastructure.

In order to ensure that major infrastructure investments remain resilient, the Federal Government should lead a reform agenda focused on ensuring that infrastructure can withstand the expected conditions brought about by at least 3°C of warming by 2100. It is imperative that standards are updated to ensure that infrastructure is designed for the worst credible case.

At the same time, the Federal Government should lead a reform agenda focused on reducing emissions to net zero by 2050 or earlier, through clear and coordinated policy leadership. As recommended in a recent report by the Climate Council and partners²³, specific policies that could assist in protecting Australian infrastructure from the impacts of extreme weather and climate events include:

- Ensuring building designs are fit-for-purpose to cope with increasingly frequent and severe climate-influenced hazards. This includes engaging with the insurance industry to ensure that these new infrastructure standards are insurable given the expected conditions brought about by our current trajectory of at least 3°C of warming;
- Adopting risk-appropriate national land use planning guidelines that prevent new buildings and infrastructure being constructed in areas that are, or will be, highly exposed to climate change hazards, and that help facilitate the reduction of emissions across the transport and buildings sectors; and

²⁰ DCCEE 2011

²¹ DCC 2009

²² e.g. Hinkel et al. 2014

²³ Climate Council 2019

- Upgrading and constructing new infrastructure (including infrastructure specifically designed to mitigate disaster risks), informed by a national assessment.

Question 13. The role of carryover credits after 2020

It is not legitimate to use Kyoto-era credit for Paris. There are many threads to this argument, but in short, they do not exist, but even if they did, Australia has none to apply to its post-2020 goals.

As noted above, late last year Australia made clear that it intends to use credit from purported over-accomplishments in the Kyoto commitment periods to reduce the outstanding abatement task for the decade to 2030.²⁴

Under the Kyoto Protocol, parties had a limited ability to carry forward over accomplishments from one period into the next. Australia has 128 million tonnes worth of excess allocations from the first commitment period of the Kyoto Protocol (covering 2008–2012 inclusive). There, Australia’s target was 8% above 1990 levels across the whole period.

While they came close, Australia’s emissions never reached such a height, the advent of the Global Financial Crisis (GFC) cause an unprecedented drop in Australia’s emissions. While Australia rode out the GFC with minimal economic impacts, our emissions dropped for several years afterward, with the bulk of this drop in emissions being from decreased land clearing activity. Notably, this was not a result of any change in Federal Government policy.

If the most recent Projections put together by the Department on Environment and Energy prove correct, the Federal Government claims that its over-achievements in the second commitment period (covering 2013–2020) will allow for even more credit to be banked. This is estimated to be a further 240 million tonnes worth of excess allocations.

Due to rounding, the total of this purported credit comes to approximately 367 million tonnes worth of emissions that could have been made, but were not.

The Government claims in that same report that these can be counted as credit toward meeting our Paris Agreement goal. In short, they cannot for a variety of reasons.

First among these is that the Paris Agreement is not, legally or otherwise, a successor to, or dependent upon, the Kyoto Protocol. The rules as they applied in the Kyoto Protocol’s commitment periods do not apply to the Paris Agreement. While excess allocations from one period were able to be

²⁴ DoEE 2018

banked and applied to future commitments in the Kyoto Protocol, there is no such provision in the Paris Agreement.

While Australian media reporting has indicated that the Ukraine might be planning to use this credit,²⁵ the Climate Council can find no official confirmation that they will do so. This means that Australia may well be alone in the entire world in claiming that this supposedly legitimate artefact of Kyoto Protocol accounting applies under the Paris Agreement.

However, even if the Paris Agreement did function as a third commitment under the Kyoto Protocol, despite being entirely separate under international law, a significant proportion of the claimed credit could not be used toward our post-2020 goal.

By virtue of the ‘previous period surplus reserve’ under the Doha Decisions for the Kyoto Protocol,²⁶ surplus credits from one period could be applied to meeting the commitment period immediately following, but could not be applied to subsequent periods. As well, allocations could not be carried out of one period if allocations from the previous period had been used.

The effect of this is to rule out any application of the 128 million tonnes worth of excess allocations from the first Kyoto commitment period to the Paris Agreement. Under the rules of the Kyoto Protocol, it could be applied to the second commitment, but could not be applied beyond that.

This has the effect of reducing our claimed 367 million tonnes worth of excess allocations to a mere 240 million tonnes.

However, even if this credit can be claimed—**which it cannot**—and even if the previous period surplus reserve did not exist—**which it does**—as noted in question 1, Australia’s target for the second commitment period of the Kyoto Protocol rests on a series of conditions, which are no less binding for being conditional.

This target, at least 15% below 2000 levels in 2020, has not been met. As such, there is no remaining credit to apply to the Paris Agreement, and the target is precisely as it is written in our nationally determined contribution with no special carve-out available.

²⁵ Hannam 2019

²⁶ Paragraphs 23 to 25, decision 1/CMP.8, UN Doc FCCC/KP/CMP/2012/13/Add.1.

References

AEC Group (2015) Significance of the Property Industry in Australia. Report commissioned by the Property Council of Australia. Accessed at: https://www.propertycouncil.com.au/downloads/prosignificance/AUS_Full.pdf

Carroll N, Fritjers P and Shields MA (2007) Quantifying the costs of drought: new evidence from life satisfaction data. *Journal of Population Economics* 20:445-461.

Climate Change Authority (2015) Australia's Future Emissions Reduction Targets (Final Report).

Climate Change Authority (2014) Reducing Australia's Greenhouse Gas Emissions—Targets and Progress Review (Final Report).

Climate Council (2019) Compound Costs: How Climate Change is Damaging Australia's Economy. Accessed at: <https://www.climatecouncil.org.au/wp-content/uploads/2019/05/costs-of-climate-change-report-v3.pdf>

Commonwealth of Australia (2005) Trends in Australian Agriculture: Productivity Commission Research Paper. Accessed at: <https://www.pc.gov.au/research/completed/agriculture/agriculture.pdf>

DCC (Department of Climate Change) (2009) Climate Change Risks to Australia's Coast: A First Pass National Assessment, Canberra. Accessed at: http://www.climatechange.gov.au/sites/climatechange/files/documents/03_2013/cc-risks-full-report.pdf.

DCCEE (Department of Climate Change and Energy Efficiency) (2011) Climate Change Risks to Coastal Buildings and Infrastructure. Supplement to the first pass national assessment. Accessed at: <https://www.environment.gov.au/system/files/resources/0f56e5e6-e25e-4183-bbef-ca61e56777ef/files/risks-coastal-buildings.pdf>.

DoEE (Department of Environment and Energy) (2018) Australia's Emissions Projections 2018.

Debelle G (2019) Climate Change and the Economy, Speech by Guy Debelle, Deputy Governor of the Reserve Bank of Australia. Accessed at: <https://www.rba.gov.au/speeches/2019/sp-dg-2019-03-12.html>.

Deloitte (2017) Building Resilience to Natural Disasters in our States and Territories. Accessed at: http://australianbusinessroundtable.com.au/assets/documents/ABR_building-resilience-in-our-states-and-territories.pdf.

Hannam P (2019) “Huge Gamble’: Coalition Faces \$18b Hole If Climate Plan Trips Up. *Sydney Morning Herald*. Accessed at: <https://www.smh.com.au/politics/federal/huge-gamble-coalition-faces-18b-hole-if-climate-plan-trips-up-20190516-p51o4i.html>.

Hinkel J, Lincke D, Vafeidis AT, Perrette M, Nicholls RJ, Tol RSJ ... Levermann A (2014) Coastal flood damage and adaptation costs under 21st century sea-level rise. *Proceedings of the National Academy of Sciences*, 111(9), 3292–3297. <https://doi.org/10.1073/pnas.1222469111>.

Ogge M and Aulby H (2017) Can’t stand the heat: The energy security risk of Australia’s reliance on coal and gas. Accessed at: <http://www.tai.org.au/sites/default/files/P454%20Can%27t%20stand%20the%20heat%20FINAL%202.31.pdf>.

Quiggin J (2007) drought, climate change and food prices in Australia. Australian Conservation Foundation. accessed at https://www.acfonline.org.au/sites/default/files/resources/Climate_change_and_food_prices_in_australia.pdf.

RBA (Reserve Bank of Australia) (2006) Statement on monetary Policy – November 2006, Canberra, ACT, Australia, 59 pp.

Rogelj, Joeri, Drew Shindell, Kejun Jiang, Solomon Fifita, Piers Forster, Veronika Ginzburg, Collins Handa, et al. “Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development.” In *Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, edited by Valérie Masson-Delmotte, Panmao Zhai, Hans-Otto Pörtner, Debra Roberts, Jim Skea, Priyadarshi R Shukla, Anna Pirani, et al. Geneva, Switzerland: World Meteorological Organization, 2018. <https://www.ipcc.ch/sr15/>.

Subsidiary Body on Implementation of the United Nations Framework Convention on Climate Change. “A compilation of questions to—and answers by—Australia”. 11 June 2019. https://unfccc.int/sites/default/files/resource/SBI50_AUS_MA_QA.pdf#page=15

World Bank (2015) GDP growth (annual %). Accessed at: <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?page=1> .