

The Climate Institute



A National Agenda for Climate Action

Global action to address climate change is growing. Currently, Australia's climate policy is not set up for the long-term — it is not designed to either manage carbon risks or maximise opportunities. Climate, energy and other key policies are in conflict and urgently need to be integrated.



A National Agenda for Climate Action

Climate change.

To many, these words inspire dread. To others, they invite hope – hope that we can, collectively, develop social and technological innovations; hope that we can take the action required to effect the changes that will avert catastrophe and build a safer world.

Dread stems from the real human and environmental threats that a warming world presents. In Australia, we know all too well the risks posed by extreme weather and a changing climate. Bushfires and floods have destroyed our homes and shattered lives and communities. More extreme droughts have challenged our farmers and water supplies. Ever increasing temperatures are damaging our natural treasures, like the Great Barrier Reef, and stressing our health systems and infrastructure with more frequent and extreme heat waves. Dread also stems from the political turbulence and division that has accompanied this issue for so long.

For others, the shoots of hope can be seen around the world. On the back of action to rein in pollution and modernise industries, investments in power generated from the wind, rain and sun now far outstrip investment in fossil-fuelled electricity production from, for example, burning coal and gas. Many large businesses, investors and governments are now developing strategies for a world without carbon emissions. Here and overseas, leaders from business, welfare, union and environment groups now agree on the shared goal of achieving net zero emissions of carbon dioxide and other heat-trapping gases.

People and communities are putting solar and other clean energy sources on their homes, schools and offices. Technologies, like electric vehicles and storage batteries, are beginning to revolutionise energy and transport markets.

In December 2015, at the UN Climate Change Conference in Paris, all countries provided a great boost to hope when they forged an historic agreement to build on these actions and create a path to a net zero emission world – a world where emissions from industry and agriculture are greatly reduced: a world where we have not only stopped loading the atmosphere with dangerous heat-trapping greenhouse gases, but started to remove them.

This hope is real and justified.

Global action is now unstoppable. Australia must choose to participate or be pulled reluctantly along by the actions of others.

This *National Agenda for Climate Action* outlines the things Australian policy makers need to do if we are to look after communities, workers and our competitiveness in this inevitable shift to a clean energy economy. It will require genuine, overdue, integration of climate, energy and other policies. It will also require much improved responses to the climate impacts that are hitting us right now – so that we can manage the growing cost burdens on individuals, farmers and communities, as well as our natural and built environment assets like the Great Barrier Reef and our coastal homes.

There are three key steps:

- + set a credible pathway to net zero emissions;
- + ensure investor, business and community confidence in clean energy, and;
- + integrate climate costs and opportunities into mainstream decision-making.

This *National Agenda for Climate Action* is not easy. But it is necessary. It is necessary if we are to become a resilient, innovative, safer Australia, prospering in a zero carbon global economy – fully and fairly participating in international climate solutions.

“The longer we wait, the harder it will be and the more it will cost us.”

CEOs of AGL, BHP Billiton, GE, Mirvac, Santos, Unilever, Wesfarmers and Westpac

“Paris is not the end of the journey. It is a step along the way to achieving a net zero emissions world. That is what we need to do in order to safely arrest global warming.”

Prime Minister Malcolm Turnbull

Loading the atmosphere

Since the Industrial Revolution, globally, we have burned enough coal, oil and gas to discharge over 1,400 billion tonnes of carbon dioxide into the atmosphere. To give some idea of scale, this is roughly equivalent to the weight of the steel in 27 million Sydney Harbour bridges.

The carbon dioxide and other greenhouse gases we have already released have thickened the atmospheric blanket around the Earth, trapping heat and causing the climate to change. We continue to emit around 35 billion tonnes of carbon dioxide a year from the burning of coal, oil and gas.

With global warming already around 1°C, the planet is experiencing deadly and dangerous climate impacts with increasingly fierce bushfires, stronger storms and rising seas. Now, scientists have worked out the amount of additional emissions we can release before we load the atmosphere enough to warm the planet by 1.5, 2, 3°C or more – this is commonly called a carbon budget.

By way of comparison, a household or business budget is the limit of outgoings we are permitted after spending is balanced against income. Most simply put, a carbon budget is the net amount of emissions when balanced against activities that take carbon dioxide and other greenhouse gases out of the atmosphere (such as tree planting programs and other, technologically based, carbon absorption initiatives).

These carbon budgets are so important because they define a total limit for the overall amount of emissions that can be released between now and 2050 (see page 7). This has big implications for climate change action because, if we emit more now, we use up more of the budget, leaving us with much less room to move later.

If we delay credible, sensible action until 2030 (a Paris Agreement deadline), emissions will need to fall much faster if we are to remain within the carbon budget. If we start credible, sensible action earlier, the transition from a high emissions economy to a net zero one will be smoother and more manageable. And, if we meet our carbon budget and continue the good work, we will end up absorbing more than we emit and continue to clean up our atmosphere as time goes on.

In the objectives of the Paris Agreement, countries agreed to limit global warming to 1.5-2°C above the levels that existed before the start of the Industrial Revolution in 1750. The carbon budget that provides a high chance of limiting warming to well below 2°C, and an even chance of limiting warming to 1.5°C, is around 700 billion tonnes of carbon dioxide between now and 2050. Even to achieve this carbon budget, we are going to have to implement large scale carbon absorption activities and processes by and after 2050. But more importantly, if we continue at current rates of emissions, this carbon budget will be used up in less than 20 years (see Figure 2, page 8).



Australia's part in the world

Nearly all countries — large and small — have now announced emissions targets that will guide the implementation of their domestic policies to limit emissions. The key test of the credibility of any of these targets is whether they are consistent with limiting warming to 1.5-2°C. Some are and others are not. In 2018, countries will begin the process of updating their targets and assessing our progress towards these shared objectives.

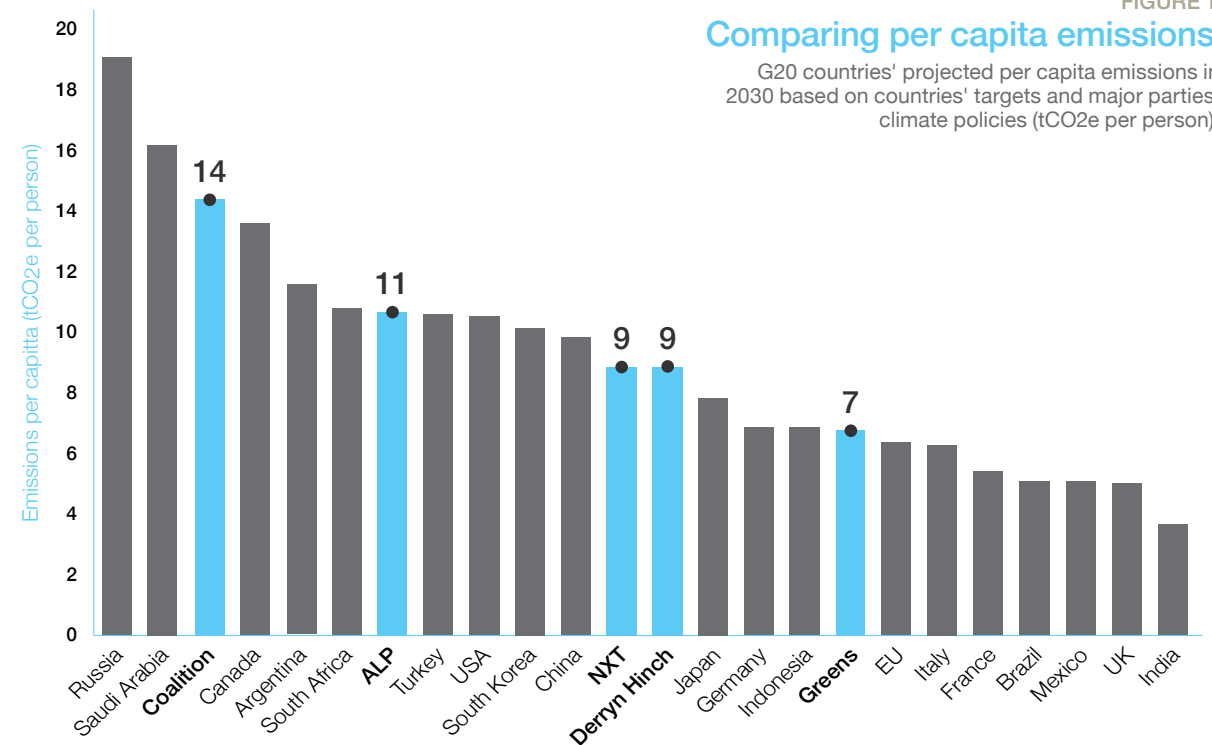
Both major Australian political parties have committed to different emissions reductions targets for 2030: the Coalition to a 26-28 per cent reduction on 2005 levels, and the ALP to at least 45 per cent reduction on 2005 levels. The Coalition's target is actually equivalent to a level of global action that would result in 3-4°C of global warming. The ALP's target closes the gap, but is still not in line with limiting warming to 1.5-2°C.

If both parties had agreed to the stronger 2020 emissions targets they had both previously considered, the job ahead would now be easier.

Meeting the government's 2030 target could see our per capita emissions fall to 14 tonnes — this is still much higher than other developed countries, and the highest of any G20 country other than Russia and Saudi Arabia. The ALP's target would deliver per capita pollution of 11 tonnes per person — closer to other countries like the US.

FIGURE 1
Comparing per capita emissions

G20 countries' projected per capita emissions in 2030 based on countries' targets and major parties' climate policies (tCO₂e per person).



Short term action with vision

We have just a handful of decades to make the transition to reach net zero emissions. However, unless we start making the transition now, we will increase the risks of a rapid adjustment later. This will be more costly and have bigger impacts, not only on people who currently work in high emitting industries, and their communities, but also on the broader economy.

The same is true for managing climate impacts. Unless we start factoring a more hostile climate into the decisions we make, we risk, for example, continuing to build homes and infrastructure in places that will become more and more vulnerable to floods, fires and droughts of longer duration and greater intensity.

If we are to manage the risks and maximize the opportunities of climate change, the action we take should achieve three things:

1. Set a credible pathway to net zero emissions

If you don't know where you want to arrive, it is fairly difficult to define the best way to get there. Perhaps surprisingly, political, business and other leaders across the spectrum have acknowledged a shared objective of net zero emissions. The best scientific and economic estimates show we need to be there before 2050.

Setting a bipartisan target to achieve net zero emissions before 2050 would provide the community and business with a stronger basis for making longer term decisions. Making sure we have a credible pathway to get there is also essential. If you exhaust most of your carbon budget that aligns with a 1.5-2°C world in the early years, you will be forced to crash carbon emissions in the later ones. This would have massive impacts on jobs and communities, as well as electricity security and prices (Figure 2).

2. Ensure investor, business and community confidence in clean energy

Australia has a history of boom-bust cycles in renewable energy and other zero emissions technologies. During 2013, total investment in clean energy in Australia was around \$A7.1 billion. During 2014, this investment collapsed by 35 per cent, to \$A4.6 billion, due to political wrangling over national climate change and energy policy. Investors became uncertain and, therefore, were not prepared to back billions of dollars of new industry investment in clean energy. Yet, globally, investments in clean energy are increasing rapidly, with 2015 global renewable energy investment more than doubling investments in coal, oil and gas electricity.

A failure to integrate climate and energy policies is now causing serious issues for electricity supply, employment and prices. Inflexible and aging coal burning power plants, old fashioned networks and out of date rules have struggled with the inevitable shift to modern, smart and clean energy. It is vital that inclusive economic and community strategies are put in place to steadily replace coal fired power stations and boost investor and business confidence in clean energy.

3. Integrate climate costs and opportunities into mainstream decision-making

Governments, companies, central bankers and investors around the world are starting to include the risks and opportunities of climate change as mainstream aspects of their policy-making. In their policy decisions, governments are also starting to account for the expected damage to the climate system. They are estimating the impacts of climate change and using this to assess the benefits of action.

At the same time, defense agencies like the Pentagon are increasingly building climate impacts, and the associated national security implications, into long-term planning. Regulators of the financial system are looking at how banks, insurers and other parts of the investment chain may be impacted by climate change and the policy responses to it.

In Australia, we are just starting to scratch the surface. For example, infrastructure developers are confronting climate change impacts on an ad hoc basis: the water industry is the best prepared and the electricity sector is the worst. There has been no official examination of the risks climate change poses to our financial system, through impacts on property values and markets or other exposed sectors. Little consideration is given to the impact of increasing global action to reduce emissions, which will impact our fossil fuel exports. These are just a few examples of policy makers turning a blind eye to climate change in mainstream policy making.

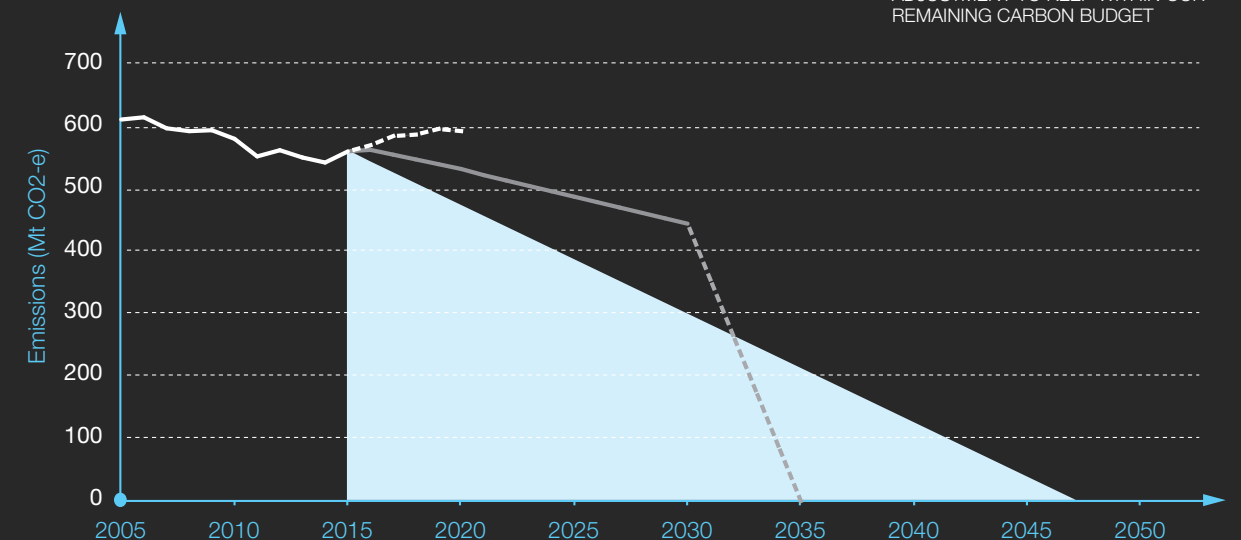


FIGURE 2

Reaching net zero emissions in a 1.5-2°C world

Our carbon budget is the amount of carbon we can emit between now and 2050 if we are to limit global warming to 1.5-2°C. We should therefore set credible, sensible emissions targets so we can decrease our emissions in an orderly manner over that period. If we don't, we will have too little of our carbon budget left to get us there. Then, assuming we stick to our carbon budget, we will have no option but to make sudden, extremely rapid decreases that will force us to reach net zero emissions in a short period, and cause massive disruption in power prices, employment and our economy in general.

OUR CARBON BUDGET
OUR HISTORIC EMISSIONS PATH
BUSINESS AS USUAL
PATH WITH GOVERNMENT'S EXISTING 2030 TARGET
ADJUSTMENT TO KEEP WITHIN OUR REMAINING CARBON BUDGET





Inclusive strategies for Australia

The Climate Institute's National Agenda outlines the federal policies Australia needs to put in place to ensure we can manage some of the risks climate change presents while, at the same time, maximising the opportunities that will flow from action.

The Climate Institute can provide further details about all these policy options. State and local governments, as well as businesses and communities also need their own roadmaps to net zero emissions and below. In fact, each of us, as individuals, can strive for carbon neutral lives through the actions we take and the purchasing decisions we make.

Critically, in addition to being effective, any climate policy suite must be fair and inclusive. A true national response to climate change, and any response to reduce emissions, must ensure those individuals and communities most vulnerable to climate change and policy impacts are supported and that they are able to take part in national solutions. Policies should also seek to minimise unnecessary costs to business.

Ultimately, to be sustainable, the policy suite should have bipartisan support and demonstrate its ability to deliver a credible pathway to net zero emissions well before 2050. Without this, Australia risks heading down the wrong road once more, only to find we need to make expensive and very disruptive changes in order to deliver a safer and prosperous nation for us all.

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The National Agenda for Climate Action

1 Set a credible pathway to net zero emissions by:

- + delivering, based on independent advice, an emissions reductions pathway to meet a carbon budget consistent with a credible contribution to limiting global warming to 1.5-2°C.

Achieve:

- + net zero emissions (or below) well before 2050
- + reduced emissions by 45 per cent on 2005 levels, by 2025, and 65 per cent by 2030.

2 Ensure investor, business and community confidence in clean energy by:

- 1 removing the explicit and implicit subsidies that encourage emitting activities
- 2 implementing policies for fossil fuels that are: stable, have bipartisan support, assist early movers and best practice, and reduce the risks associated with investing in clean technologies
- 3 including strategies that minimise impacts on vulnerable people, and communities, while providing opportunities for all to participate in solutions.

Implement:

- + a plan to replace the existing coal generation fleet with clean energy by 2035 and provide employee and community support through the transition.

Establish:

- + policies which ensure that clean energy accounts for more than 50 per cent of national electricity generation by 2030 while doubling Australia's energy productivity at the same time
- + a clear, long-term carbon price signal or penalty consistent with sustained decarbonisation of major emitting sectors.

Evolve:

- + the energy market to integrate climate and energy policy, and allow improved market responses to new zero carbon technologies.

3 Integrate climate costs and opportunities into mainstream decision-making by:

- 1 accounting for the benefits of avoiding climate change impacts in decision-making
- 2 stress testing and managing climate change impacts and policy risks in mainstream policy design and evaluation
- 3 ensuring that financial sector policy promotes transparency around carbon risk, and physical climate risk, so we can build a resilient economy.

Evaluate:

- + emissions policies by explicitly examining the benefits of avoiding climate change damages (e.g. factoring in the social cost of carbon in planning – the UK, Canada and US have examples)
- + climate change and carbon policy risk assessments in the development of the Intergenerational Report, and in relevant national policies (e.g. energy, health, infrastructure, national security, disaster response)
- + finance sector climate risk to ensure it minimises exposure to loss from climate change effects and carbon policy risk from potential global and domestic actions to avoid 1.5-2°C warming.

Implement:

- + a national adaptation strategy for a climate that will result from: the objectives agreed to in Paris (1.5-2°C); the result of our existing policies (3-4°C); and for the lesser likely, but catastrophic, events that scientists consider possible. The impacts on vulnerable people and ecosystems, as well as critical infrastructure, should be a priority.

Notes

The following sources were referenced in writing the *National Agenda for Climate Action*:

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Credits

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We have bold and ambitious goals. But we have a track record of getting difficult things done through our strategic partnerships as well as our research.

Please support our work.

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