Submission

Senate Inquiry into the Government's Direct Action Plan

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INTRODUCTION

Established in late 2005, The Climate Institute (TCI) is a non-partisan, independent research organisation that works with community, business, and government to catalyse and drive the change and innovation needed for a low-pollution economy and culture. Our vision is of a resilient Australia prospering in a zero-carbon global economy; participating fully and fairly in international climate-change solutions.

TCI welcomes the opportunity to submit its views to the Senate inquiry into the Government's Direct Action Plan.

AUSTRALIA'S EMISSION GOALS AND THE NATIONAL INTEREST

The Government, along with over 190 other nations, agrees that collective global action should put the world on a path to avoid an increase in global temperature of 2°C above pre-industrial levels.

Numerous assessments have demonstrated that global warming above 2°C would lead to substantial costs to Australia's economic, human and natural systems and would exceed the adaptive capacity of key Australian industry sectors. [i,ii,iii,iv]

For example, a report to Treasury by one of Australia's leading climate experts indicated that a 3°C increase in global temperature could result in the following impacts on Australia: [v]

- Natural ecosystems: Total realignment of ecosystems across Australia, with risks to ecosystem services. Total loss of coral reef and alpine environments, major incursions of pests, weeds and diseases.
- Water availability: Dangerous water shortages. Provision of water becomes a serious limiting factor in population growth, production of food and protection of natural ecosystems.
- Coastal communities: Coastal inundation and erosion requires abandonment of some coastal developments or the construction of sea walls. Impacts are significant for low-lying regions (e.g. Cairns, Gold Coast).
- Agriculture: Substantially reduced production capacity. Natural and agricultural systems will show little resemblance to current systems, with some serious risks. Coping capacity may be tested in a number of regions or sectors.
- Human health: Risks to human life from flooding, disease, storms. Coping capacity severely tested in some areas, with some public health interventions essential.
- Major Infrastructure: Infrastructure destruction from flooding, soil erosion, siltation, inappropriate infrastructure, loss of livestock, crops, and human life. Requires enhanced emergency services, insurance and building regulation.
- International pressures: International militancy and conflict. Water shortage for half the world's people, and hundreds of millions facing food shortages and coastal inundation. Demand for humanitarian aid grows and regional security is jeopardised.

The technological feasibility of avoiding 2°C has been tested in numerous studies.[vi] Avoiding a rise in mean global temperature of this magnitude is economically and technologically feasible. The critical factors are political will, the participation of all major emitters in emission reductions, and the deployment of a broad range of pollution reduction technologies.

This modelling also shows excluding technological options generally does not preclude meeting the goals but it does may increase the cost of achieving the targets. The exception is access to technologies that allow for negative emissions (e.g. bioenergy with carbon capture and storage, afforestation) and the large-scale deployment of energy efficiency. The inclusion of these options appears to be a precondition for avoiding a 2-degree world.[vii]

Australia's international commitments

Australia has made a number of international commitments to contribute to avoiding climate change of greater than 2°C. One of its commitments isto reduce emissions by up to 25 per cent on 2000 levels by 2020. The conditions for moving to stronger emission targets have been clearly outlined to the international community in a number of forums[viii] and supported by the Coalition since 2009.[ix]

Recent statements by the Government have cast doubt on Australia's intentions to act in good faith in respect of these agreements. For example, the Prime Minister appears to have indicated that Australia is to step back from previously bipartisan-supported conditions for stronger targets that have been provided to other nations in various work programs under the UNFCCC. The Government is yet to formally clarify its position on these matters internationally or domestically and maintained these commitments in international agreements at the recent Warsaw UNFCCC meeting.

Policy credibility

The real tests of any credible emission reduction policy are its ability to achieve the full range of Australia's emission reduction commitments and its scalability to deliver even greater emission reductions in the years after 2020. It is clear that Australia's 5 per cent target is inadequate and the Government's agreed conditions for moving above the minimum commitment have been satisfied. [x]

Stronger emission targets are justified not only by advances in international action and the risks to Australia from even moderate levels of climate change but also by the high economic costs and risks of delaying deeper emission cuts until after 2020.

The Climate Change Authority (CCA), for example, has noted that "A 5 per cent target would leave such large reductions for later that future Australians would either face a very large emissions reduction task or have to abandon the long term national emissions budget. This is inequitable in the first case and against Australia's national interest in the second." [xi] The CCA also noted that the 5 per cent target "requires an implausibly rapid acceleration of effort post 2020 to remain within the long term [carbon] budget" consistent with a 2°C goal.

Carbon budgets: A critical element of credible climate policy

Carbon budgets are an important concept in climate policy. The magnitude of climate change is not determined by emissions in any given year, but the cumulative total level of emissions released over time. The word 'budget' is used deliberately. If we save less now we have to save more later and vice versa. The longer you delay action the more you pay to catch up.

While carbon budgets have been used internationally for many years to define commitments under international agreements like the Kyoto Protocol, and to assess the long-term risk to fossil fuel investments from emission constraints, they have had only limited application in Australian policy-making. [xii]

This changed with the implementation of the current Clean Energy Future Act. The legislation stipulates that the CCA must consider an global carbon budget in setting emission goals. For the first time, the law opened up the possibility of a way to link short- and long-term emissions reduction targets to a scientifically robust carbon budget for the nation.

The principal strength of setting a long-term carbon budget to 2050 for Australia is that provides a transparent and direct link to a desired climate outcome such as avoiding a 2°C increase in global temperature.

It also provides a clearer, longer-term investment signal to guide investment decisions on emitting activities (for example, encourage greater research and development investment in innovative technologies). For this reason, the use of long-term carbon budgets has also garnered business support from companies like AGL and Westpac and industry associations like the Australian Industry Group and the Investor Group on Climate Change.

In its draft report, the CCA has recommended a 2013-2050 carbon budget for Australia of approximately 10 billion tonnes. This is roughly 1 per cent of a global carbon budget consistent with a 67 per cent change of avoiding a 2°C increase in global temperature.

In its submission to the draft report of the CCA, TCI has advised that, given the severe risks associated with warming above 2°C, the CCA should base its carbon budgets on a 75 per cent chance of avoiding this level of climate change.[xiii]

Regardless, setting an Australian carbon budget to 2050 is central in making short- and medium-term emission targets and budgets more credible. This would:

- link Australia's action more directly to its national interest in avoiding 2°C in global warming
- lower costs by providing greater policy certainty and an early indication of future goals
- increase government accountability and transparency in setting short-term and medium-term emission targets and carbon budgets

These points are particularly pertinent for the setting of Australia's 2020 and 2030 targets in line with 2013–2050 carbon budgets.

Table 1 compares the change in emissions from 2020 to 2030 based on the 'traffic light' framework outlined in the CCA's Table 11.1 and 11.2 (p.122-124). As in the CCA table, red shading suggests this option is undesirable or not feasible, amber indicates an option that creates tensions or may be challenging to achieve; and green indicates a feasible option. The five percent reduction target is also included as per the CCA's report.

The CCA considers emission reductions in the order of 45 per percentage points as undesirable or not feasible.

As the table illustrates, the 5 per cent target would likely rule out Australia playing its fair part in global efforts to avoid 2°C. Only the 25 per cent reduction target leaves open the option to adjust our policy settings in the future to a carbon budget consistent with a high chance of avoiding 2°C.

Increasing focus on post-2020 contributions

At Warsaw's UNFCCC COP19, Australia agreed with other governments to initiate or intensify domestic preparations for their intended nationally determined contributions towards the new 2015 agreement, and that governments will communicate these new offers for the period beyond 2020 by the first quarter of 2015. [xiv]

It should also be noted that a number of Ministerial dialogues on pre- and post-2020 ambition will occur in 2014; the Government will need to decide whether it accepts the UN Secretary General's invitation to the Prime Minister to attend the world leader's summit on climate ambition with a 'bold' new offer in September that year. The Government will also need to decide whether it signals its intentions, in April 2014, to increase its 2013–2020 emissions ambitions under the Kyoto Protocol.

Collectively, these international processes will focus attention on the credibility of Australia's pre- and post-2020 goals. This scrutiny will be heightened by Australia's attempts to remove the current carbon legislation. The credibility of Australia's emissions goals will play a role in shaping the ambitions of the 2015 agreement. If they are transparent and consistent with avoiding 2°C, Australia's pre- and post-2020 emission goals can weight the 2015 outcome towards more ambition and our national interest. [xv]

Figure 1 compares a number of possible 2030 emission reduction contributions to avoiding a 2°C increase in global temperature for Australia and indicative targets for comparable countries.

Australia's 2030 targets are based on the CCA's draft report. The two different carbon budgets are based on higher and lower probabilities of avoiding a 2°C increase in global temperature and the CCA's assessment of Australia's fair contribution to this goal (~1 per cent of the global carbon budget). As noted above, the 5 per cent by 2020 target would very likely rule out Australia making a fair contribution to global action to avoid 2°C.

The CCA's calculated 2030 targets are compared to a broader range of studies that examine the different contributions different regions would need to make to play their fair part in global action consistent with agreed global goals. The broad range of possible contributions is based on a more diverse range of fair contribution to global action methods than used by the CCA. These methods include equalised costs between nations, different measures of historic responsibility, and countries' capacity to reduce emissions.[xvi]

The key conclusion highlighted by this graph is that Australia's fair and reasonable contribution to global action in 2030 would need to be much greater than the current 2020 target range. A policy that cannot achieve this scale of emission reduction ends at the beginning.

Table 1. *Percentage point change in emissions from 2020 to 2030.*

	CCA trajectories *(67% probability of avoiding 2°C)*			**Change trajectory in 2020** *(75% probability of avoiding 2°C)*	
2020 target (percentage change on 2000 levels)	5	15	25	15	25
Approximate change in emissions from 2020 to 2030 (percentage point difference between 2020 and 2030 targets)	45 percentage points	35 percentage points	25 percentage points	45 -50 percentage points	35 percentage points

Figure 1. *2030 emission reduction target comparisons. The Climate Change Authority's proposed emission reduction goals are compared to other studies of 2030 targets for a range of comparable regions consistent with a ~67 per cent chance of avoiding 2°C.*

Source: The Climate Institute analysis based on CCA, 2013 and N. Höhne, M. Den Elzen, D. Escalante, 2013. Non-CCA target estimates are based on 400 ppm CO_2 stabilisation scenarios and equality, staged and capability allocation frameworks. Frameworks that see emissions increase or produce negative emissions in this time frame (e.g. equal cumulative per captia emissions) are excluded as they are not viewed as credible.

ASSESSMENT OF THE EMISSION REDUCTION FUND

Attached to this submission is The Climate Institute's qualitative and quantitative assessment of the Government's proposed emission reduction framework[xvii], and the Institute's submission to the Terms of Reference to the Emission Reduction Fund (ERF).[xviii]

International assessment of the current legislative framework

The Climate Institute has also published a separate overview and analysis of the current legislated policy settings in partnership with the World Resources Institute and the international Open Climate Network (attached).[xix]

That report found that current policy settings allow Australia to meet its agreed emission goals of up to a 25 per cent reduction in emissions from 2000 levels by 2020. The report also highlighted that the degree to which this relies on the purchase of international permits as opposed to emissions reduction within Australia depends on a range of factors. These include the influence of European carbon permit prices on Australia's carbon price, the maintenance of the large-scale Renewable Energy Target, the winding back of state-based land-clearing laws and the implementation of policies under investigation such as light vehicle emission standards and a national energy saving initiative.

The assessment also found that Australia is exposed to volatility in international carbon prices, which may slow the transition needed to achieve longer-term emission reductions. Direct policy interventions to reduce domestic emissions and boost energy efficiency (for example, stronger vehicle emission standards, regulatory approaches to limit fugitive emission increases, energy efficiency obligations on large energy users) would reduce these risks.

The quantitative assessment of the Emission Reduction Fund is based in large part on detailed modelling undertaken by SKM–MMA and Monash University's Centre of Policy Studies (CoPS).

At the time of writing, the Government is yet to announce details of key elements of its policy. To capture a range of possible policy options a number of scenarios were evaluated, including weakening or strengthening the Renewable Energy Target, changing the way large emitters are penalised for exceeding emission baselines, or giving firms access to international markets to achieve emission reductions.

The modelling was also based on a number of generous assumptions about how the policy will work in practice and therefore likely overestimates the emission reductions that can be achieved under the proposed policy framework.

The key conclusions of the qualitative analysis are that:

+ **No independent analysis to date has shown that the policy framework as outlined can achieve Australia's international obligations and emission commitments**: A number of reviews of the Coalition's policy by Ernst and Young, the law firm Allens, Treasury and others, have identified several potential weaknesses in the proposed policy framework. In particular, concerns have been raised by industry and economic analysts that there is considerable uncertainty as to whether the policy can achieve its stated goal of achieving at least a 5 per cent reduction of emissions on 2000 levels by 2020. Experts have noted that the policy creates significant uncertainty for business over the medium and long term, that administrative costs will be high and that, in the absence of a carbon price, other measures such as the Renewable Energy Target will have to play a greater role in emission reductions.

+ **International and Australian experience bears out concerns that a central policy mechanism of the nature proposed by the Government will not drive substantial absolute emissions reductions**: Mechanisms of the nature proposed have not achieved substantial absolute emissions reductions in Australia or in other nations. They do have a role in supporting broader regulations and/or carbon pricing mechanisms.

The quantitative modelling by SKM MMA and CoPS found that:

+ **Under all scenarios Australia's emissions continue to increase to 2020 and beyond**: Additional emissions range from +8 to +10 per cent above 2000 levels by 2020. This is the equivalent of doubling Australia's car fleet over this period. Even with ongoing and increasing budgetary outlays in the order of $88 billion dollars from 2014 to 2050, emissions continue to rise by around 45 per cent over this timeframe. By comparison, domestic emissions under the current legislation scenario increase to a lesser extent but the increase is offset by the use of international emissions units to meet our international obligations.

Overall, SKM MMA finds that, assuming 5 to 10 year payment streams occur under the ERF at an average effective carbon pricing of around $25/tonne to 2020, the ERF does not deliver the required levels of emission reductions required to achieve even Australia's minimum emission budget through domestic activity alone.

More recently released modelling by the Treasury for the CCA gives a similar result. The CCA modelling shows that, at the price incentives required by the budget constraints on the ERF the Government has announced (around $5-8/tonne), abatement would fall well short of that required to achieve Australia's emission budgets. [xx] The CCA conclude that 'an effective carbon price rising to over $65/t CO2-e by 2020 would be required to achieve the minimum 5 per cent target through domestic reductions alone.' At these prices, this equates to spending $8.5 billion in 2020 alone to achieve the minimum emission commitment.

+ **The current legislation drives substantially more domestic emission reductions than the Government's policy scenarios**: To 2020, the domestic emission reductions achieved under the current carbon and clean energy laws are around 40 per cent greater than those achieved under the Government's scenarios. The Government's policy achieves around 200 million tonnes of domestic emission reductions. This compares to around 290 million tonnes under the current legislation.

+ **To achieve domestic emissions reductions that would deliver the 5 per cent target the Government's policy requires additional taxpayer expenditure of at least $4 billion to 2020**: Weakening the Renewable Energy Target increases emission reduction costs by around another $250 million. If the Government relaxed its ban on international emission reduction credits the cost of achieving the target would be substantially reduced to around $190 million. If the restriction on international permits is not relaxed, achieving the 25 per cent emission target would require around $15 billion in additional expenditure.

Overall, the Government's climate change policy, as it is currently outlined or can be reasonably foreseen, is unlikely to position Australia to support our national climate interest of avoiding a 2°C increase in global temperature. If other countries followed the same route as the Government's policy, The Climate Institute's estimates indicate that the world would be on track to warming of 4.5–6.5°C by 2100. This degree of climate change is projected to affect Australia as follows: [xxi]

+ Widespread water shortages in urban and rural areas limits population growth and food production
+ Droughts in southern Australia occur up to five times more often
+ Major increase in injury and death from extreme climate events
+ Murray-Darling Basin agriculture falls up to 90% and Australia's ability to meet its food demands would be in doubt
+ Great Barrier Reef largely destroyed and extensive shift and deterioration of ecosystems across Australia
+ Coastal inundation, storm surges, and erosion requires abandonment of some coastal developments (e.g. Cairns and Gold Coast)

Based on qualitative and quantitative analysis, The Climate Institute has concluded the core challenges confronting the Coalition are that the current proposed policy framework.

Increases emissions and lacks scalability

Beyond the practicality of implementing the proposed policy framework, the core issue remains that the Government's policy constrains budget expenditure but does not constrain emissions. In line with all independent analyses to date, we find that even under a variety of scenarios the money available is insufficient to reduce Australia's emissions in line with the bipartisan target range, let alone drive greater emission reductions over the longer term.

Does not make emitters responsible for their pollution, effectively subsidising high carbon activities

The Government's policy currently does not include a broad-based price on carbon emissions. Instead the yet-to-be-determined carbon penalty is applied only to emissions above yet-to-be-determined 'business as usual' baselines. This implicitly subsidises current emitting activities and does not create a broad-based incentive for firms and individuals to invest in low emission technologies and behaviours.

Based on a similar approach to that used by the International Monetary Fund[xxii], which factors in a conservative estimate of the climate damage of every tonne emitted, The Climate Institute calculates that this subsidy totals around $50 billion to 2020. This prolongs an unfair and market-distorting advantage for emission intensive activities an over cleaner technologies.

Risks undermining Australia's recent positive climate diplomacy, undermining global action

The credibility and ambition of Australia's domestic policy settings will become more important under the new 2015 agreement currently being negotiated. Our

credibility comes into sharp relief in 2014 as international processes – including a world leader gathering – will focus on building the pre-2020 emission reduction ambitions of all major emitters. A policy that can meet stated international targets is central to strengthening the emerging architecture, building global ambition, and avoiding negative responses from other major economies. Policies that cannot demonstrably meet such goals risk institutionalising a return to an obstructionist or unhelpful climate diplomacy. Regardless, international scrutiny and trends global action would continue to put pressure on the Government to implement emission trading or other more credible decarbonisation signals in 2015 or soon after.

Given these strong concerns around the proposed policy framework and in response to the terms of reference for the design of the Emission Reduction Fund TCI recommended that:

1. **Objectives**: To ensure the policy is grounded in Australia's national interest, the legislated objectives of the policy should be to help reduce Australia's carbon emissions by 5-25 per cent below 2000 levels by 2020; support the development of an effective global response to climate change, consistent with Australia's national interest in ensuring that average global temperatures increase by not more than 2°C above pre-industrial levels; and support Australia's obligations and undertakings under the UNFCCC and the Kyoto Protocol.

   Recent comments by the Government have cast doubt on Australia's international commitments. The Government should clearly explain to the Australian and international community if it is withdrawing from the conditions for strengthening Australia's emission budgets and targets previously inscribed in numerous international agreements and declarations.

   The 25 per cent reduction target represents a credible short-term contribution to our national interest goal of avoiding 2°C above pre-industrial levels. However it must also be seen as part of ongoing emissions reduction efforts that will need to be around 60 per cent below by 2030.

2. **Cost Effectiveness**: The current Emission Reduction Fund (ERF) White Paper process should involve the Productivity Commission and/or Treasury undertaking an independent analysis of emission reductions associated with proposed ERF frameworks. This should examine scenarios to expand the scope and scale of the ERF to include Government purchase of credible international emissions units to ensure Australia's international emission budget obligations are achieved and the policy can be scaled to achieve emission budgets consistent with up to 25 per cent reductions on 2000 levels by 2020.

3. **Governance arrangements**: Australia has a track record of highly politicized approaches to climate policy. This has produced policies that have often been inefficient and continually readjusted, which in turn has resulted in significant business uncertainty, higher costs associated with investments and inadequate emissions reductions.

   To achieve the sustained emissions reductions consistent with its national interest, Australia needs its climate policies to be based on a sound foundation of evidence rather than a political agenda. As an independent statutory authority, the CCA, is a cornerstone of this policy foundation.

   Its role as a rigorous reviewer of existing policies, along with the government's legislated requirement to respond publicly to the CCA's recommendations, ensure that the process of climate policy development and adjustment maintains a level of impartiality and transparency that would not otherwise be present if these functions were brought within a federal department.

   To help ensure key policy decisions are not arbitrarily made and to preserve community and business confidence in the independence, impartiality and transparency of climate policy reviews the CCA should be maintained, as should its responsibility for reviewing key federal climate policies.

4. **Regulatory approaches**: There is little evidence that the ERF can obtain emissions reductions consistent with even the minimum 2013-2020 carbon budgets and longer-term emission reductions. Substantial additional regulation is therefore required to ensure these obligations are achieved. Alongside the development of any ERF a number of important direct regulatory approaches should be maintained or implemented. These would include but are not limited to:

   a. *The Renewable Energy Target*: The proposed 2014 review of the RET, which TCI does not support, should clearly examine the impact of policy changes to this mechanism on the achievement of Australia's short-term and long-term emission budgets. If necessary the RET should be enhanced to ensure these goals are achieved and the electricity sector is transformed in line with the

longer-term emission pathways required to meet international commitments to contribute to avoiding a 2°C increase in global temperature.

b. *HFCs phasedown*: In advance of the formal agreement under the Montreal Protocol Australia should implement domestic regulations to ensure that HFC imports and use are phased down to levels consistent with the proposed amendments by the USA, Canada and Mexican proposals to this treaty.

c. *Vehicle standards*: Australia should implement ambitious emissions or efficiency standards for vehicles equivalent to United States standards by 2015 and European standards by 2020.

d. *Land clearing regulations*: Land-clearing laws should be re-introduced and tightened to avoid increases in emissions from this sector. The Commonwealth should play an oversight role in this regard and should exercise constitutional power to legislate should states continue to wind back these laws.

e. *Energy efficiency regulations*: Important flagship policies include building codes and using the new national framework for regulating Minimum Energy Performance Standards (MEPS) to drive more ambitious equipment standards. One method would be to adapt Japan's "Top Runner" program, where continually higher performance standards are set by the most energy efficient products.

f. *Power generator standards*: Alongside or instead of emission baselines for the power sector the Government should consider setting clear regulatory standards for the power sector in line with the longer-term emission pathways required to meet international commitments to contribute to avoiding a 2°C increase in global temperature.

5. **Credible international emission reductions**: The Government should:

    a. Consider apportioning some of the ERF to credible Kyoto Protocol-compliant emission units as an insurance policy against the risk that domestically sourced abatement is not available at the scale or price required to achieve Australia's international carbon budget obligations. This insurance fund could also be used to help meet the stronger emission targets that are in our national interest.

    b. Consider allowing entities captured by the mechanism applied to emissions above baseline to use credible Kyoto Protocol compliant emission units as part of the make good process in meeting obligations.

6. **Independent review of mechanism**: The Government has stated that it will review 2020 targets and post-2020 targets and policies in late 2015. The Government needs to be flexible on this timeline as it is currently misaligned with international processes and commitments. This review should be undertaken by an independent statutory body (such as the CCA) and must have regard to Australia's national interest in avoiding a 2°C increase in global temperature above preindustrial levels; Australia's international obligations under international climate change agreements; undertakings relating to the reduction of carbon emissions that Australia has given under international climate change agreements; global action to reduce emissions; estimates of the global carbon budget likely to be consistent with avoiding a 2°C increase in global temperature above preindustrial levels; and an Australian carbon budget consistent with a fair contribution to this global carbon budget.

ENDNOTES

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