# Submission to the Emissions Target Taskforce Department of Prime Minister and Cabinet

on

## Setting Australia's Post-2020 Target for Greenhouse Gas Emissions

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## Summary of submission

- It is imperative that Australia's post-2020 target for greenhouse gas emissions supports the international objective of limiting global temperature rise to within two degrees Celsius (2°C) of pre-industrial levels.

- An emissions reduction target of **60 per cent** based on **2000** levels by **2030** represents a fair contribution from Australia.

- By **2025**, an Australian emission reduction target of **at least 30 per cent** below **2000** levels (or 36 per cent below 2005), would put Australia's per-capita emissions on the same level as those of the United States (US).

- The proposed target would facilitate Australia's transition to a post-carbon economy. This is a transition that will positively impact Australia's long-term standard of living because avoiding dangerous climate change is in Australia's national interest.

- Setting a clear long-term pathway could accelerate investment in low-carbon energy, industrial production, energy efficiency, and forest and land management. Conversely, a lack of certainty and clarity in Australia's carbon pathway could increase long-term costs for Australians.

## Summary of recommendations

To protect Australia's national interests, it is recommended that the Australian Government:

1. submit an intended nationally determined contribution (INDC) to the UNFCCC that commits to an emissions reduction target of **60 per cent** based on **2000** levels by **2030**, and **at least 30 per cent** based on **2000** levels by **2025**.

2. reaffirm a commitment to a post-carbon economy through strong policy action, specifically by:
    a. investing in technology transfer and rigorous emission standards;
    b. re-introducing a carbon price mechanism; and
    c. preserving and strengthening Australia's existing Renewable Energy Target (RET).

3. complement the Government's Direct Action approach with the additional energy measures suggested above, and the implementation of adaptation policies based on the best available evidence across all sectors.

## International efforts to address climate change

**The Australian Government has formally recognised the international objective of limiting the global temperature increase to within 2°C of pre-industrial levels. Australia's post-2020 target should reflect this commitment.**

Established consequences of anthropogenic climate change, including sea level rise, ocean acidification and an increase in intensity and/or frequency of extreme weather events[1], have and will continue to negatively impact Australians if global warming progresses unabated.

As it stands, projections for Australia include a continued increase in the number of extremely hot days; decreased average rainfall in southern Australia coinciding with increased heavy rainfall across most parts of Australia; and continuing sea level rise[2]. The potential social, health and economic costs for Australians are significant if global warming exceeds 2°C[3].

As a developed country with the world's highest per-capita emissions, Australia has both the opportunity and a responsibility to 'catch-up' with other industrialised nations by reducing its per-capita emissions to similar levels. Going forward, Australia must shoulder its burden of responsibility for reducing emissions. Indeed, as a developed, wealthy country with a highly educated population it may reasonably be expected to take a leadership role in per-capita emissions reduction.

Of the global carbon budget for a 2°C world, 65 per cent has already been spent[4]. Limiting warming to within 2°C - or in fact any level - will ultimately require a phase-out of unabated fossil fuel emissions. After 2011, at current emission levels, the remaining 2°C-consistent carbon budget[5] of 1,000 $GtCO_2$ will be exhausted by 2035-2040. If, on the other hand, global carbon emissions are decreased linearly to zero, the budget will be spent by 2050-2060. Climate scenarios where global greenhouse gas emissions peak, then begin to reduce, and ultimately reach net-zero emissions by 2055-2075, retain a good chance of limiting global average warming to 2°C[6].

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[1] Intergovernmental Panel on Climate Change (2014), *Climate Change 2014 Synthesis Report: Summary for Policymakers*, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], Geneva, Switzerland: IPCC.

[2] Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation (2014), *State of the Climate 2014*, accessed 15 April 2015, <http://www.bom.gov.au/state-of-the-climate/>.

[3] Climate Change Authority (2012), 'Chapter 2: Science and impacts of climate change', in *Reducing Australia's Greenhouse Gas Emissions: Targets and Progress Review - Final Report*, Canberra: Climate Change Authority.

[4] IPCC (2014), *Climate Change 2014: Synthesis Report*, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)], Geneva, Switzerland: IPCC.

[5] Ibid.

[6] United Nations Environment Programme (2014), *The Emissions Gap Report 2014: A UNEP Synthesis Report*, accessed 21 April 2015, <http://www.unep.org/publications/ebooks/emissionsgapreport2014/portals/50268/pdf/EGR2014_LOWRES.pdf>.

## The Paris agreement and a long-term target

**As a fair commitment, Australia's post-2020 emissions reduction target should strive for a 60 per cent reduction on 2000 levels by 2030, supported by a target of at least 30 per cent by 2025.**

The Australian Government has acknowledged the UNFCCC's expectations that nations move beyond their current emissions reduction commitments when they submit their INDCs prior to international climate agreement negotiations in December 2015.

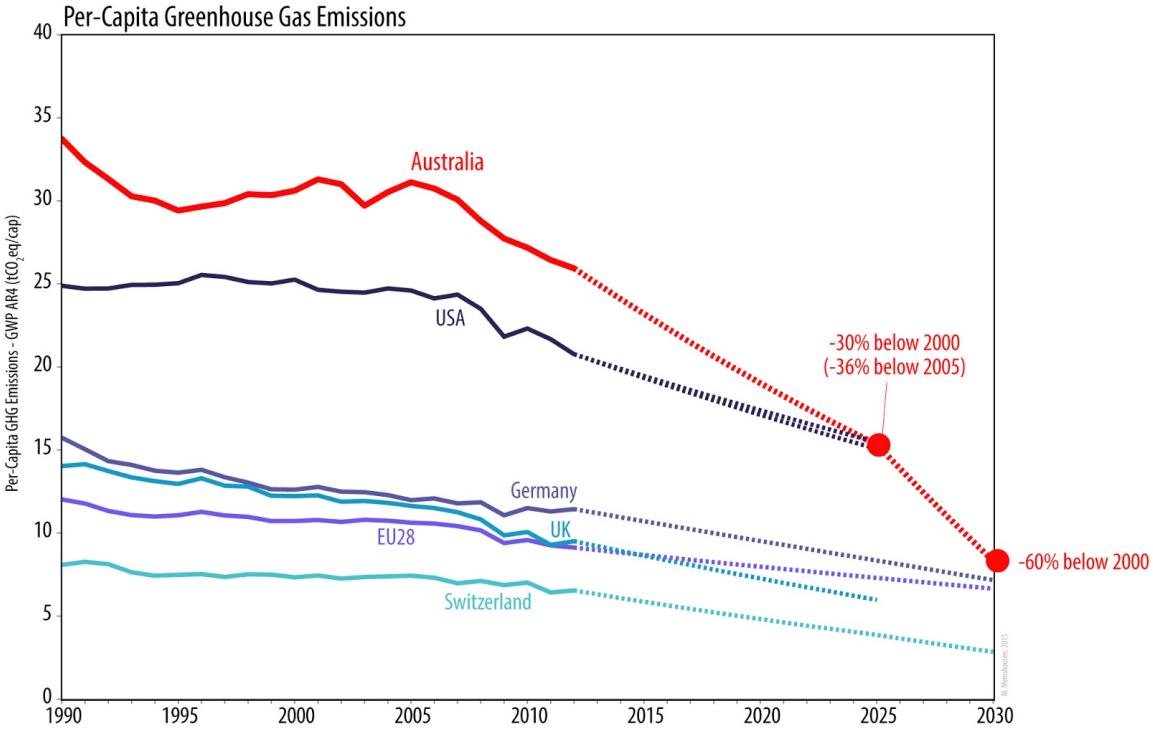


**Figure 1 | Per-capita greenhouse gas emissions for Australia and other industrialised countries historically (1990-2012) and projected under their respective 2025/2030 emission reduction INDCs and announcements (dashed lines)[7].**

A 30 per cent reduction based on 2000 levels (36 per cent below 2005) places Australia at around 15t$CO_2$eq per person by 2025, on par with the US (assuming the US reduces emissions by 26 to 28 per cent below 2005 levels, as announced)[8]. A reduction of 60 per cent of 2000 levels would enable Australia to 'catch-up' with the lower per-capita emission levels in other major industrialised countries, by 2030.

In addition to the post-2020 emissions reduction targets, countries will discuss a long-term target. It is in Australia's interests to support a long-term goal that

[7] Emission levels in Figure 1 are based on total national emissions reported by the countries to the UNFCCC, aggregated using AR4 GWPs, and excluding land use change (except for Australia, for which deforestation emissions are included in line with Australia's special rule Art. 3.7bis under the Kyoto Protocol). Population time series are taken from the UN historical estimates and a medium projection scenario (UN, 2012, <http://esa.un.org/unpd/wpp/unpp/panel_population.htm>).

[8] For announced post-2020 targets, refer to Table 4 on p.11 of the Climate Change Authority's *Special Review Draft Report* (2015) at <http://www.climatechangeauthority.gov.au/special-review/first-draft-report>.

embraces the inevitable: the full decarbonisation of the world's economy early in the second half of the 21st century.

### Australia's national circumstances

**While helping to stabilise global temperatures to within 2°C, Australia should participate in the global long-run strategy of fossil fuel divestment.**

Treasury's econometric modelling suggests that an early transition to a low-carbon economy reduces economic costs by around 15 per cent, while nations that transition later are burdened by costs that are approximately 20 per cent higher[9].

Supported by a strong economy, now is the time for Australia to introduce policies and incentives that will facilitate a long-term transition culminating in a post-carbon economy.

This will undoubtedly involve a significant transition for Australia's energy exports. However, by providing a clear and firm long-term pathway, industry will have adequate time to plan and adapt accordingly, and can harness Australia's economic potential as a resource-rich continent by focussing on minerals, solar, wind etc[10] - rather than gas and coal.

It is understood that the Renewable Energy Target (RET) constitutes one instrument to complement the Government's Direct Action approach. To assist Australia in meeting its emission reduction targets and its transition to a post-carbon economy, this submission supports the legislated, bipartisan large-scale renewable energy target (LRET) target of 41,000 GWh introduced by the Howard Government.

A fixed target of 41,000 GWh provides certainty for renewable energy investments. A welcome additional trend of reduced electricity consumption is no reason to lower the LRET target. In light of Australia's record-high per-capita emissions, and the job opportunities in the renewable energy sector, it is in Australia's interests to further support its progress towards a low-carbon electrical energy system[11].

### Australia's action on climate change

**Australia stands to gain from ambitious climate change action.**

There are significant benefits for Australia in pursuing an ambitious emissions reduction target and complementary climate policies:

- ➢ Reputationally, Australia stands to gain from ambitious climate action, particularly given Australia's current emissions target and mechanisms have recently been questioned by nations including the European Union, the United States, China and Brazil in March 2015 through the UNFCCC[12].

[9] Gruen, D (2008), 'The economic costs of reducing greenhouse gas emissions: understanding the Treasury modelling', Treasury *Economic roundup*, no.4, p.27.
[10] See, for example, the Australian Academy of Science's 2009 report, *Australia's renewable energy future*, <https://www.science.org.au/sites/default/files/user-content/ausrenewableenergyfuture.pdf>.
[11] Beyond Zero Emissions (2012), *Laggard to Leader: How Australian can Lead the World to Zero Carbon Prosperity*, accessed 22 April 215, <http://bze.org.au/laggardtoleader>.
[12] United Nations Framework Convention on Climate Change (2015), 'Session SBI42: A compilation of questions to - Australia', accessed 20 April 2015,

➢ Headlining the Direct Action approach, the Emissions Reduction Fund (ERF) requires attention. On its own, the ERF is insufficient to achieve Australia's emissions reduction targets. Economic modelling suggests that the current design and budget of the ERF would fund around 50 per cent of Australia's abatement commitments as specified under the Kyoto Protocol[13].

To meet the target suggested in this submission, the ERF needs expanding and strengthening. Alternatively, a more economically efficient option could be to replace the ERF with an emission trading scheme or other carbon pricing instruments supported by additional measures.

Specifically, the Australian Government could consider:

- enabling increased investment in, and transitional subsidies for, low-carbon and renewable energy technologies;
- more rigorous emissions and efficiency standards for vehicles[14]; and
- the re-introduction of a carbon pricing mechanism. Explicit carbon pricing has been shown to be a cost-effective abatement strategy[15].

➢ The Australian Government's decision to contribute $200 million over four years to the Green Climate Fund is welcomed. While this contribution will assist vulnerable countries in meeting their own mitigation and adaptation efforts, further contributions from Australia towards international climate finance goals could be scaled-up to be commensurate with Australia's international obligations as a wealthy developed nation, without reducing overseas development aid[16].

➢ In Australia, adaptation is being incorporated into some planning processes. However, implementation of specific adaptation policies is gradual and there are barriers to implementation that warrant attention[17]. Australia could benefit from the Government continuing to pursue strong adaptation policy development and implementation across all sectors, supported by the National Climate Change Adaptation Research Facility as well as other institutions and individuals with adaptation expertise.

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<http://unfccc.int/files/focus/mitigation/the_multilateral_assessment_process_under_the_iar/application/pdf/sbi42_australia_questions_web.pdf>.

[13] Clarke, H, Faser, I, Waschik, R (2014), 'How much abatement will Australia's Emissions Reduction Fund buy?', CCEP Working Paper 1416, Crawford School of Public Policy, Australian National University, accessed 20 April 2015, <https://ccep.crawford.anu.edu.au/sites/default/files/publication/ccep_crawford_anu_edu_au/2014-08/ccep1416.pdf>.

[14] ClimateWorks Australia (2014), *Improving Australia's Light Vehicle Fuel Efficiency*, accessed 22 April 2015, <http://www.climateworksaustralia.org/project/current-project/vehicles-emission-standards>.

[15] Productivity Commission (2011), *Carbon Emission Policies in Key Economies,* Research Report, Canberra.

[16] See the World Bank's Climate Finance Overview for estimates of international climate finance needs at <http://www.worldbank.org/en/topic/climatefinance/overview>.

[17] Reisinger, A, Kitching, R.L., Chiew, F, Hughes, L, Newton, P.C.D., Schuster, S.S., Tait, A, Whetton, P (2014), 'Australasia', in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros, V.R., Field, C.B., Dokken, D.J., Mastrandrea, M.D., Mach, K.J., Bilir, T.E., Chatterjee, M, Ebi, K.L., Estrada, Y.O., Genova, R.C., Girma, B, Kissel, E.S., Levy, A.N., MacCracken, S, Mastrandrea, P.R., White, L.L. (eds.)], Cambridge: Cambridge University Press.