



Submission to Climate Change Authority (CCA) on its draft report *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review*

- (i) **The Climate Change Authority has a vital role** to play in taking the setting of targets and the review of the adequacy of climate change policy outside the political arena. We see it as essential that this role continue and we will be doing whatever we can to ensure that the Authority continues work.
- (ii) **Please make your final report unflinchingly honest** about the scope of the climate change problem and the required solutions. This may be the last opportunity the Climate Change Authority has to state the truth about climate change before the Abbott government moves to silence your independent voice.
- (iii) **The earth is already too hot.** With less than one degree Celsius of warming we are already seeing the impact of extreme weather events become yet more devastating - as they must with more heat in the oceans and atmosphere driving climate systems harder. Arctic sea ice is melting at an alarming rate, resulting in even more warming in the Arctic due to the loss of reflective white ice and snow. Arctic permafrost is also melting at an increasing rate, thus raising the possibility of out-of-control warming as methane adds to the already overheated greenhouse effect. The two degrees 'guardrail' was based on supposedly 'realistic' political objectives rather than good science. It is now clearer than ever that two degrees Celsius of warming is far from safe.
- (iv) **Hence our remaining carbon budget for a safe climate future is zero** and greenhouse gas emissions must be reduced to zero as fast as humanly possible. The Climate Change Authority should make this explicit in its recommendations to the Australian Government. We believe that a target of far more than 25% reductions by 2020 is required, plus a much tighter carbon budget. Anderson and Bows demonstrate in their 2008 and 2011 papers [as summarised by <http://www.climatecodered.org/2013/09/is-climate-change-already-dangerous-5.html#more>] that, even with optimistic assumptions about de-afforestation and food-related emissions:
 - a. Staying under 450 ppm CO₂e and two degrees of warming requires international energy emissions to be stabilised by 2015, then decline annually by 6-8 per cent for 2020–2040, with full de-carbonisation by 2050 and is impossible if emissions peak after 2025.
 - b. A five per cent annual reduction in emissions from a 2020 peak (and a 6–7 per cent annual reduction in energy and process emissions) would result in near 550 ppm CO₂e, or three degrees of warming. If the emissions reduction after a 2020 peak is three per cent, this would result in near 650 ppm CO₂e, or four degrees of warming.
 - c. If non-Annex 1 (developing) nation emissions grow three per cent a year to 2020 and then peak in 2025, there is no carbon budget available for Annex 1 (developed nations) after 2015, for the IPCC's low-emissions carbon budget.

- d. Research published in August 2013 finds that terrestrial ecosystems absorb approximately 11 billion tons less carbon dioxide every year as the result of the extreme climate events than they could if the events did not occur. That is equivalent to approximately a third of global carbon dioxide emissions per year. As extreme events increase in scale and frequency with more warming, this may negatively affect the amount of emissions available for the carbon budgets discussed above.
- (v) **The consequences of inaction are beyond price.** Professor Schnellhuber from the Potsdam Institute, advisor to German Chancellor Angela Merkel, has estimated that at four degrees Celsius of warming, the carrying capacity of the earth would be one billion people – implying the deaths of around seven billion people, together with the extinction of three quarters of species. It is impossible to put a price on such catastrophic loss and insane to gamble with the chance of catastrophic outcomes.
- (vi) **A carbon budget approach is far preferable to an approach to planning which is based on targets.** What matters is the total amount of greenhouse gases emitted not the percentage reduction. We recommend that longer term targets should be based on the carbon budget - not a trajectory to 80% by 2050. We need targets set for 2025 and 2030 as well as for 2020 but a 50% reduction by 2030 is insufficient.
- (vii) **Our targets must be based on what the climate science says is needed,** not on comparisons with other nations - and what the science is saying is that the reductions must be made as fast as humanly possible. Our emissions reductions must be as large as possible and go well beyond the 17% reduction proposed by Professor Ross Garnaut as in line with the actions of other developed nations.
- (viii) **Coal and gas must stay in the ground.** It is important that the implications for the fossil fuel industry are spelt out. Since our remaining carbon budget is zero, it makes no sense to continue exploring for new coal and gas deposits, opening new mines and risking our precious land and water with fracking for gas wells. We need a ban on all new fossil fuel mining and a rapid phase out of existing mines and fossil fuel power stations.
- (ix) **Australia can make a rapid transition to 100% renewable energy** and recent studies by researchers at the University of South Australia and the University of New South Wales suggest that this may cost no more than maintaining our dirty and damaging fossil fuel power. We have some of the best solar and wind resources in the world. Australia can and must lead the way.
- (x) **Emissions cuts should be made within Australia as a first priority.** The Climate Change Authority's shows that the cost to the economy of choosing a 25% target over a 15% target is equivalent to 0.02% of economic growth but this assumes the purchase of overseas permits from markets. Assistance to other countries to reduce their emissions should be in addition to reducing Australia's emissions to net zero not a substitute for local action. We must further develop and commercialise the technologies which will allow even less wealthy nations to rapidly make the transition.

Jane Morton and Carol Ride for **Darebin Climate Action Now**