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**From:** [REDACTED]  
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**Subject:** [REDACTED]

## **RECOMMENDED EMISSIONS REDUCTION GOALS**

### **1. The Authority is canvassing two options for Australia's emissions reduction goals, which include 2020 targets of 15 per cent or 25 per cent below 2000 levels (refer Chapter 11). Please provide comments.**

ARRCC argues that Australia should commit to 40% (or more) reduction in emissions below 1990 levels by 2020 for a range of compelling reasons.

The IPCC estimates that industrialised countries need to reduce their emissions by 25 per cent to 40 per cent on 1990 levels by 2020, if the world is to keep global warming less than two degrees Celsius above pre-industrial levels.

We accept the science behind this but ARRCC advocates for a 40 per cent or greater emissions reduction by industrialised countries. We support the call of many representatives of developing countries who consistently advocate that we keep global warming below 1.5 degrees Celsius and return carbon dioxide in the atmosphere to 350 parts per million. This recognises that a two degree Celsius increase would mean massive losses for the world's poor. Indeed, it is unknown when critical tipping points will be reached and it is quite possible that two degrees of warming may be enough to precipitate irreversible and catastrophic climate change.

We believe Australia has a responsibility to do much more than most other countries because:

(a) our per capita emissions are the highest among Organisation for Economic Co-operation and Development (OECD) nations, now greater than those of the US or Canada.<sup>[1]</sup>

(b) we have been able to develop our economy in large part because of our historically high use of fossil fuels

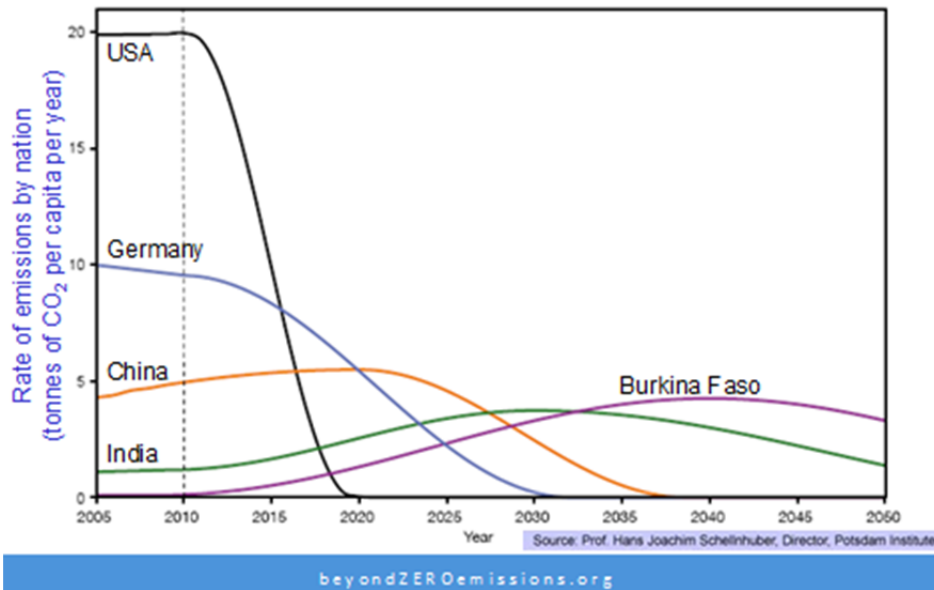
(c) we have the economic capacity to make significant emissions reductions possible and

(d) we have access to the technology.

We understand that many would view a 40 per cent target as too ambitious. If anything, we believe it is modest if one looks dispassionately at the facts and remains committed to equity. Consider recent research into the "carbon budget" within which the world must remain before 2050 to have a reasonable chance of staying under 2 degrees of warming. The global total of greenhouse gas emissions must remain between 500GtCO<sub>2</sub> and 900GtCO<sub>2</sub>, depending on which assumptions are made.<sup>[2]</sup>

The Potsdam Institute has researched what per capita emissions reductions are needed in selected countries, if these reductions are to be equitable. The Institute estimates that each country is entitled to a total of 110 t CO<sub>2</sub> emissions per capita over the period from 2010 to 2050, based on population data for 2010. The following graph shows approximate trajectories<sup>[3]</sup>:

## Per Capita Global Carbon Budget 2010-2050



Given Australia's per capita emissions are closest to those of the USA, then, if anything, the Potsdam Institute's conclusions would suggest that Australia reduce its per capita emissions by 100% by 2020.

Furthermore, scientists tell us that we need global emissions to start reducing as soon as possible (and by 2020 at the latest) for us to have the best chance for staying below 2 degrees Celsius and that emissions need to be reduced to nearly zero by 2050.<sup>[4]</sup> As Nauru has said in a statement to a United Nations Framework Convention on Climate Change meeting earlier in 2013, "scientists have warned that unless urgent and dramatic action is taken to reduce greenhouse gas emissions in the next few years, well before 2020,...the opportunity to avoid catastrophic global warming in excess of 2 degrees Celsius above pre-industrial levels — to say nothing of the below 1.5 degree threshold supported by over 100 countries — could be irrevocably lost."<sup>[5]</sup>

At any rate, ARRC agrees with the Climate Change Authority's view that Australia should work towards more ambition earlier, rather than starting with a low target which will be increased over time. The latter approach would be merely deferring the difficulty of effecting the necessary long-term changes.

All that is required is the political will. Embracing our international responsibilities in the short term would have added economic benefits in the medium to long term, through the strengthening of sustainable technology sectors of the economy and the creation of new employment opportunities.

### Justice and Australia's relationships internationally

Justice considerations, as well as scientific considerations, support our recommendation of emissions reduction targets of at least 40 per cent below 1990 levels by 2020.

A higher emissions reduction commitment by Australia would go some way to closing a gap between the pledges of most other comparable countries and our current ambition.<sup>[6]</sup> As the Climate Change Authority notes, "Compared with what other countries are doing, the 15 and 25 per cent targets are both broadly in line with the efforts of other key countries."<sup>[7]</sup> Yet it is acknowledged that even these are insufficient to keep global warming below two degrees Celsius. Hence a 40 per cent reduction is closer to meeting the requirements of the situation.

Internationally, we have a lot to gain by submitting much higher targets for emissions reductions:

- It would add to the international momentum towards the greater ambition necessary for a safer, more stable climate for Australia and other vulnerable countries in the future.
- It would help place Australia in a better position to work in international forums to pressure the major emitters to increase their reduction targets. This is in our national long-term interest.
- Adopting a more ambitious target will strengthen our relationships with the Alliance of Small Island States (AOSIS), many of which are in the Pacific, and add authenticity to our claim to regional leadership.
- It would strengthen bilateral relations with China, our major trading partner. China's per capita greenhouse gas emissions are only one-fourth of per capita emissions in the US, and 700 million of China's people still live in rural villages away from the prosperous cities. At the same time, they lead the world in investment in clean energy; and have committed to a 40 – 45 per cent emission intensity reduction target below 2005 levels.<sup>[8]</sup> Australia's insufficient commitments to reduce fossil fuel emissions mean we are not doing our "fair share" internationally, and we are undoubtedly perceived as such by China.

The calls for action will only become more compelling with time, and the condemnation of countries seen as slow to act will become more insistent. Already Australia's reputation has been eroded as was witnessed at the COP19 negotiations in Warsaw.<sup>[9]</sup>

As the effects of climate change are increasingly felt, the world is highly likely to move rapidly to much higher expectations of both ambition and action. Because all nations share the same atmosphere, unless Australia adopts greater ambition and takes more robust action, the international community will not be dispassionate in its judgement of Australia's slowness to act.

## **USE OF INTERNATIONAL EMISSIONS REDUCTIONS**

- 2. The Authority's draft recommendation is that the Government keep access to genuine and cost effective international emissions reductions available to use in meeting Australia's emissions reduction goals (refer Chapter 13). Please provide comments.**

### **Fair and defensible share**

With a small population, Australia is among the twenty highest polluting countries. Equity demands that Australia should cut its own emissions substantially and quickly. It is not ethical for Australia to seek to evade cutting domestic emissions, to effectively use our wealth to "pay" others to reduce theirs so we can continue in the manner to which we are accustomed.

As previously stated, we have a responsibility to cut domestic emissions because (a) our per capita emissions are the highest among OECD nations (b) our historically high use of fossil fuels (c) we have the economic capacity and (d) the technology.

In the long-term, to cut emissions domestically would mean the earlier development of alternative technologies within Australia, enabling a more rapid transformation to a low-carbon economy.

### **Use of surplus Kyoto units**

The report from the UN Environment Program in 2012 warned of a widening gap between the actions needed to keep global warming below two degrees Celsius and the emission cuts countries have pledged globally. Surplus permits from the first round of Kyoto were singled out as one of the biggest factors contributing to the emissions gap.

Australia's surplus of about 80 million tonnes of CO<sub>2</sub>-equivalent is not because of an over-achievement of policy. It was because our country was treated very generously under the Kyoto Protocol for the first commitment period and the impact of the GFC.

At last UNFCCC negotiations, there were strong feelings that carry-over and use of surplus units should be restricted. It would be immoral for Australia to seek to evade our global responsibilities further. Despite a significant minority of our population living in poverty, on a range of measures our economy is strong. Certainly it is strong enough for us to accept our fair share of international responsibility. Otherwise, we have zero credibility when asking other countries to cut their emissions, which is in Australia's long-term national interests.

## **AUSTRALIA'S PROGRESS TOWARDS ITS EMISSIONS REDUCTION GOALS**

**The Authority has assessed Australia's progress towards reducing and opportunities to further reduce emissions (refer Chapter 12 and Part D). Please provide comments.**

We question the claim that "Australia's emissions have remained relatively flat since 1990." The National Greenhouse Gas Inventory shows that total emissions have increased from around 417,700 carbon dioxide equivalent in 1990 to over 552,300 in 2011. That's an increase of 32% and the trend is upwards.<sup>[10]</sup> We are interested in your comment on this.

All the suggestions in the Climate Change Authority's draft report for reducing emissions in the various sectors are excellent and should be implemented.

In line with our view that emissions must fall far more rapidly than is proposed in the report, however, ARCC would further recommend that:

- Low-emissions electricity generation could be deployed much faster with the right policy settings. With the political will and prudent investment, Australia could create all its electricity requirements from renewable sources by 2020.<sup>[11]</sup>

For example, generous tariffs rapidly increased the take-up of rooftop solar in both Germany and some Australian States. Such tariffs in Germany made their solar industry viable, bringing down the cost of renewable energy so it is more competitive with dirty energy and created 250,000 jobs.<sup>[12]</sup>

Claims that renewable energy cannot provide base-load power are misguided. Using varied and sufficient sources, renewable energy has the potential to supply our base-load needs as well as peak demand.<sup>[13]</sup>

- Shipping and aviation should be included in Australia's target even if these are not yet covered under the Kyoto Protocol. Global annual aviation growth is currently estimated to be 4 to 5%. Improvements in energy efficiency have not kept pace with this growth, resulting in a net increase in global emissions.

Estimates vary regarding aviation's proportion of global emissions, from 2% to 6% or more, depending on who's counting. Confounding the calculations is the fact that burning fuel at high altitude has nearly three times the climate impact of burning the same fuel at ground level. Complexity is added because of the

creation of nitrous oxides which are 310 times more powerful than carbon dioxide, and the effects from condensation trails (contrails) which are difficult to quantify.

- The fastest way to reduce fugitive emissions is to stop the expansion of coal mining and export. Indeed, Australia should rapidly phase out coal exports rather than expand them. As the world's second largest exporter of coal, Australia not only profits from the further creation of emissions overseas. The fact that we sell coal cheaply undermines the competitiveness of clean, renewable energy internationally, thus hindering the transition to renewables and a safe climate. This is immoral.

ARRCC understands the justice implications for workers, however, in the shift away from coal. It would be unjust to expect that workers in the coal industry bear the cost of the changes needed by society as a whole, so they should be provided with income support, training and opportunities for alternative employment.

- ARRCC holds that alternatives should be created to the production of meat wherever possible. Ruminant livestock, particularly cattle and sheep, are a major source of methane, directly contributing over 10 per cent of Australia's greenhouse gas emissions.<sup>[14]</sup> Animal products make up a third of Australians' ecological footprint if all the factors are taken into account, for example, the amount of biologically productive land and water that is needed to supply resources for our consumption and to absorb our wastes.<sup>[15]</sup>

Again our reasons include both justice and scientific considerations. The planet could not sustain the widespread level of meat consumption that we currently consider normal in Australia.

The Climate Change Authority's draft report acknowledges the difficulty of reducing emissions from the enteric fermentation of livestock.<sup>[16]</sup> Therefore Australians should be encouraged to reduce their meat intake and shift towards more sustainable plant-based diets. Livestock farmers should be given incentives to increasingly engage in carbon sequestration, and should be offered training and resources to create alternative forms of income generation on their land.

- Much more could be done to reduce deforestation and land-clearing, including those associated with mining. Governments should stop the logging old-growth forests and existing laws against land-clearing should be strictly enforced. Alternative means of income generation should be created for communities affected. Small communities should not be burdened with disproportionate costs for decisions intended to benefit society as a whole.

Coal seam gas exploration and mining should be stopped in part because it often compromises the ecological integrity of forested areas. Again, there would be added benefits, such as the preservation of biodiversity and of water quality, and of industries such as tourism and agriculture.

## **Conclusion**

ARRCC's 40 per cent emissions reduction target on 1990 levels by 2020 may seem "extreme" when viewed from the perspective of the high-consumption lifestyles to which we are accustomed. ARRCC's position is that, from a scientific and ethical perspective, it is our high-consumption lifestyles which are extreme, and precipitating the potential for climate catastrophe.

The suggestions we make are "conservative" in the true sense. We would like to see the planet left to our children and grandchildren in a state that remains hospitable and is not excessively degraded compared to the planet we inherited. This means a more-or-less rapid return to the lower emissions which

characterized earlier generations. This can be achieved with the right policy settings, given the advances made in low-carbon technologies.

Those with vested interests will insist the kinds of measures we suggest will be economically disastrous. On the contrary, they have potential to create new employment opportunities and ultimately protect the ecosystems on which life itself depends. Indeed it can be reasonably argued that people may be happier.



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<sup>[1]</sup> *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review* draft report, Oct. 2013. P. 47

<sup>[2]</sup> *Unburnable Carbon, Australia's carbon bubble*, The Climate Institute, p.5.

<sup>[3]</sup> Original source: WBGU. Published at

[http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/sondergutachten/sn2009/wbgu\\_sn2009\\_en.pdf](http://www.wbgu.de/fileadmin/templates/dateien/veroeffentlichungen/sondergutachten/sn2009/wbgu_sn2009_en.pdf)

<sup>[4]</sup> Commonwealth of Australia. (2013) *The Critical Decade 2013: Climate Change Science, Risks and Responses*. Climate Commission. June 2013

<sup>[5]</sup> Statement by Nauru on behalf of the Alliance of Small Island States, Second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action, 29 April, Bonn, Germany. <http://aosis.org/wp-content/uploads/2013/05/Opening-Statement-UNFCCC-ADP-Bonn-May-2013.pdf>

<sup>[6]</sup> *Copenhagen Accord: Appendix I - Quantified economy-wide emissions targets for 2020*, www.unfccc.int

<sup>[7]</sup> *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review* draft report, Oct. 2013. P. 13

<sup>[8]</sup> *Is China being used as a scapegoat by countries which are unwilling to make significant cuts in their greenhouse gas emissions?* Monograph by Fr Sean McDonagh SSC, 2011.

<sup>[9]</sup> <http://www.theguardian.com/environment/2013/nov/18/australia-climate-change-un-warsaw>

<sup>[10]</sup> <http://ageis.climatechange.gov.au/NGGITrend.aspx>

<sup>[11]</sup> *Zero Carbon Emissions Stationery Energy Plan*, Beyond Zero Emissions, Melbourne, 2010.

<sup>[12]</sup> Environment Victoria website [www.environment.victoria.org.au](http://www.environment.victoria.org.au)

<sup>[13]</sup> *Heat: How to Stop the Planet Burning* by George Monbiot, London, 2007, chapters 6 & 7; also, *Climate Action*, by Mark Diesendorf, UNSW, Sydney, 2009, p. 95

<sup>[14]</sup> Australian National Greenhouse Accounts: National Inventory by Economic Sector, 2007, Department of Climate Change.

<sup>[15]</sup> Australian Conservation Foundation eco-footprint calculator, using data from the Integrated Sustainability Analysis method developed by the ISA team at the University of Sydney and ACF.

<sup>[16]</sup> See p. 144 of the draft report.