



climateactionmoreland.org

John Englart
Climate Action Moreland
P.O. Box 381
Fawkner, Victoria 3060

Submission from Climate Action Moreland Setting Australia's post-2020 target for greenhouse gas emissions

Thankyou for this opportunity for discussing what Australia's post 2020 emissions reduction target should be. The science is clear that human emissions are causing climate change and it requires a major rapid global response, according to the IPCC Assessment report 5ⁱ.

It is equally clear that Australia's emissions are the worst on a per capita basis among Western nations due in large part to our heavy reliance on coal fired stationary energy.ⁱⁱ Because of this high per capita rate of carbon emissions, Australia has a duty to take action and decarbonise faster than most other nations. We also have a rapidly aging fleet of highly inefficient coal fired power stations that will need to be replaced over the coming decades. Our coal power stations are one of the most carbon intensive and least efficient in the world. With electricity providing 33 per cent of greenhouse gas emissions, it is a key sector to transform through the phased closure of coal power.ⁱⁱⁱ

There were signs that carbon pricing was starting to transform the electricity sector with demand and emissions from coal fired power stations falling. But since the carbon price was abolished in July 2014 coal based emissions have again been rising, providing profits for energy companies.

In 2014 Australia was ranked 57 out of 61 countries for its poor efforts to slow global warming and reduce it's emissions.^{iv}

Carbon dioxide is cumulative in the atmosphere. Every molecule emitted adds to the greenhouse effect and global warming. The earlier we reduce emissions, the greater effect we have on the level of carbon dioxide in the atmosphere. Large reductions earlier will have a proportionally larger effect and minimise damage and disruption in years to come.^v

Discussion of Australia's 2020 greenhouse gas emissions reduction targets

The scientific recommendations for emission reduction pathways have been around for many years. In December 2007 the IPCC 4th assessment report recommendation of 25 to 40 per cent reduction on 1990 levels by 2020 by Industrialised countries was adopted as a footnote of the Bali roadmap agreement of the Kyoto Protocol.^{vi} Australia as an industrial country should have adopted this target and be well on the path to decarbonising our economy.

At least Australia attended and signed on to the Kyoto Protocol in 2007, although with an allowance to actually increase our emissions by 8 per cent and very favourable conditions on land use and deforestation emissions with a special clause that was colloquially called the 'Australia clause'.^{vii}

Our question is why didn't we keep to this scientific recommendation and adopt these scientific targets?

Instead our baseline has slipped from 1990 to using 2000. Our base commitment at Copenhagen in 2009 was for a very unambitious 5 per cent reduction on 2000 levels by 2020. This was part of a negotiating range of 5 to 25 per cent reduction with higher levels conditional on comparable action by the global community. But if no-one leads it leaves us all worse off. Australia is just as much to blame for the policy debacle of Copenhagen as any other nation.

According to Professor Frank Jotzo at the Centre for Climate Economics and policy, Crawford School of Economics and Government at ANU writing in 2010, he highlighted that major countries including China and the USA were already starting to make significant emission cuts with regulatory and carbon price signals. He said "The extent of other countries' pledges justifies a stronger commitment from Australia than the 5 per cent offered. A national emissions target of 15 per cent at 2020 relative to 2000 would see Australia doing its fair share in global action, and there is no strong reason to delay the decision."^{viii}

The Labor Government under Julia Gillard was negligent in not moving to increase the target to the mid-range of Australia's Copenhagen commitment.

The Climate Change Authority in their March 2014 report also found that the international conditions had been met to increase our 2020 target to 15 per cent plus an additional 4 per cent we have managed to save under Kyoto Protocol for a total 19 per cent reduction.^{ix} But the Abbott Government has refused to budge on the minimal and unambitious target that places us near the bottom of countries acting on climate change.^x

While the international situation has changed so that a 19 per cent reduction on 2000 levels is comparable with many other nations, it still only places Australia as one of the pack and not leading in emissions reduction. To be at the international forefront of climate action we should be adopting the scientific recommendation of 25 to 40 per cent reduction on 1990 levels by 2020.

Imperative that we transition from coal

Bill McKibben's Rolling Stone article on Climate Maths made it clear that we cannot burn all the known reserves of fossil fuels: coal, oil and gas, and have a safe climate.^{xi} There are five times as much in known reserves as needed to push the climate past 2 degrees Celsius.

Further research has included analysing which reserves should be best left in the ground untouched. For Australia, McGlade and Ekin (2015) detailed that for a 2 degree target without carbon capture and storage, that 2.7 billion barrels of oil (46 per cent), 2 trillion cubic metres of gas (51 per cent) and 85 Gigatonnes of coal (95 per cent) should remain in the ground, untouched, unburnt.^{xii}

This would imply that the Australian Government should tightly regulate and restrict mining exploration and development so that the 2 degree global warming limit is not exceeded and Australia restricts development in accordance with meeting globally agreed climate targets.

Mining communities should be assisted to ensure a just transition of their economies.

What should Australia's post-2020 target be and how should it be expressed?

Climate Action Moreland advocates Australia should go back to those 2007 IPCC 4th Assessment report targets and shift Australia's **2020 target to 25 per cent on 1990 levels**. Yes this does sound onerous, but it is in accord with what the scientific advice demands as our fair share.

For 2025 we should reduce greenhouse gas emissions by 40 per cent reduction on 1990 levels. Norway has already committed to this target.^{xiii}

For 2030 we should reduce greenhouse gas emissions by at least 50 per cent reduction on 1990 levels. Switzerland has already committed to this target. While Australia is responsible for about 1 per cent of global emissions at 18.3 tonnes per capita, Switzerland by comparison is responsible for 0.1% of global greenhouse gas emissions with 6.4 tonnes per capita.^{xiv} Europe submitted it's target as 40 per cent reduction in emissions on 1990 levels by 2030.^{xv}

We should aim to be carbon neutral by 2050, after which Australia should try to be carbon negative through soil carbon farming initiatives, afforestation, development of blue carbon sinks, and technological filtering the air of carbon dioxide. This is in accord with the negotiations that took place at Lima in December 2014, that articulated that "an aim of zero net emissions by 2050".^{xvi}

Global decarbonisation by 2050 is feasible

These targets will not be easy to achieve. A 2013 report by Ecofys investigated whether global carbon neutrality was possible to achieve by mid century and concluded it was technically and physically feasible as long as we rapidly escalate decarbonisation.

"While more research is needed, existing scenarios show that it is technically and economically feasible to reduce emissions to zero for roughly 90% of current sources of GHG emissions with technological options that are available today and in the near future. A nearly complete phase-out of net emissions by 2050 is possible with additional innovation and offsetting residual emissions by sinks. A net phase-out by 2050 would ensure a very high likelihood of meeting the agreed 2°C goal and a 50% chance of staying below 1.5°C by the end of the century. Initial steps taken to decarbonise need to be amplified drastically. The longer we wait to act, the more expensive change becomes. Whether a phase-out is politically feasible will be determined in the coming years." said the Ecofys report.^{xvii}

In the words of Nelson Mandela "It always seems impossible until it's done."

The decarbonisation transition would be disruptive and challenging, but also open up many new economic opportunities and growth areas. It should be up to our governments to ensure the transition is regulated and controlled with adequate transition and retraining plans.

A landmark report by prominent researchers found that deep decarbonisation for Australia by mid century without endangering economic prosperity was quite feasible.

"The analysis shows that deep decarbonisation requires neither substantial lifestyle changes nor large changes in Australia's economic structure."^{xviii}

Substantial health benefits and reduced costs to public health

One of the greatest benefits of this transition would be the substantial saving in health impacts with the reduction of coal mining and combustion. Currently these are external costs to coal fired power in Australia, yet are largely born by the Australian public and taxpayer. There have been two reports published this year to quantify these external costs: one from the Hunter Valley and another looking at coal in Victoria.

In the Hunter Valley it is estimated that the pollution from five coal fired power stations causes \$600 million per annum in health costs. Another \$47 million in health costs was ascribed to PM2.5 particulate pollution from coal mines and coal combustion in Singleton, and \$18.3 million from PM2.5 particulates in Muswellbrook. Newcastle has \$13 million in health costs from PM10 particulates from coal sources passing through the port of Newcastle. In addition to these health costs are the social costs of carbon from Hunter Valley coal when it is burnt, estimated to be \$16 billion to \$66 billion per annum.^{xix}

For Victoria the annual health costs are estimated at \$831.5 million and the annual social carbon costs at \$2.882 billion.^{xx}

Transitioning from coal would produce large benefits in increased community health and in environmental health. Coal combustion also utilises large amounts of cooling water while many of the replacement renewable energy have little or much lower water usage.

Coal mining communities should be assisted in determining and transitioning to new economic plans for their regions as phased closure and decommissioning of coal mines and coal fired power stations is undertaken followed by appropriate mine rehabilitation.

Which further policies complementary to the Australian Government's direct action approach should be considered to achieve Australia's post-2020 target and why?

The Emissions Reduction fund has its place as a mechanism for reducing emissions. But it should be the only tool utilised by the government.

Emissions Trading Scheme or Carbon Tax:

We recommend that Australia re-implements a full Emissions Trading Scheme or a carbon tax, with incremental rises in value, to provide a firm market based price signal. Such an Emissions Trading Scheme should be linked to similar schemes in Europe, California and China.

Introduce Vehicle fuel efficiency and carbon emissions standards

This would drive emission reduction in the transport sector, both in passenger vehicles and commercial vehicles, and would result in fuel saving, a cost benefit to consumers.^{xxi}

End Fossil Fuel Subsidies

These are estimated at \$7 to \$10 billion a year and distort the market to the advantage of mining exploration and development at the cost of further Greenhouse gas pollution.^{xxii}

Abolish Diesel fuel rebate

This primarily favours the mining industry and again provides a substantial market distortion.^{xxiii}

Increase Industrial and manufacturing pollution emissions standards.

We should be increasing the pollution standards so that heavy polluters in manufacturing or energy production are forced to upgrade their pollution filters to prevent costs to community and public health and environmental degradation and destruction. The release of the discussion paper *Working towards a National Clean Air Agreement* is a start, but rapid progress needs to be made with national emission standards introduced.^{xxiv} I would recommend a one year transition to new pollution standards, after which any non-compliant plant would be threatened with closure.

Increasing Renewable Energy target to 90 per cent by 2030.

Rather than pairing back the Renewable Energy Target, I recommend increasing the target to 90 per cent for the new date of 2030. This is to encourage large scale renewable energy growth, mainly wind farm and utility sized solar, to replace the aging coal plants that need to be shut down and phased out as quickly as possible. This was a policy of the Greens at the 2013 election and was costed by the Parliamentary Budget Office.^{xxv}

Geothermal power

Offer transitional incentives for retooling mining exploration into exploration and development of geothermal power (hot rocks) in Australia

Ocean Energy

Fund further research, development, pilot and commercial rollout of ocean energy systems for contribution to the National Electrical Market and potential for export internationally.

Carbon Farming Initiative

Continue promoting development of soil carbon farming and reafforestation, and implement a ban on deforestation of native forests.

Blue Carbon Farming

Fund further research, development and coastal environment restoration to restore and develop blue carbon sinks which not only effectively sequester carbon dioxide in long term deposits, but also provides major environmental and social benefits for coastal ecosystems.^{xxvi}

Provide and fund transition plans for communities exposed to negative

Communities negatively affected by closure or scaling down of carbon-intensive industries should receive tailored assistance to develop new and more diverse economic opportunities.

Whole of government approach to ensure transition to a low-carbon economy

Government at all levels should consider in policy implementation whether new projects and policies are harmonised with a low carbon future. This approach will save expensive rework in the future (for example retrofitting of buildings) and help develop Australia's industry on the 'bleeding edge' of low-carbon technology and services.

Conclusion

In my wide reading of climate science and climate policy, it is imperative that we reduce emissions rapidly to avoid greater costs of damages, mitigation and adaptation. Australia is likely to feel the impacts of climate change more severely than other regions.

With every economic transition there are winners and losers. We should not try to provide advantages to the companies that benefit most from continuing to be able to pollute and not include the extensive social costs in their pricing of production. Just ten companies are responsible for one third of Australia's greenhouse gas emissions, according to research done for the Australian Conservation Foundation. Seven of those companies are energy companies and three are mining companies.^{xxvii}

These companies should be given every encouragement to change their business models as good corporate citizens to take advantage of the transition. If they do not, the government should not subsidise their continued profitability at the social expense of the community. Transitions also bring opportunities and those businesses that use sustainable low carbon business models should be given every encouragement. Over the next decade we could transform our energy and transportation systems to low carbon energy. The cost of solar continues to fall, electric cars are starting to come of age, battery storage technology is improving and will provide important backup for local grids and renewables.^{xxviii}

The launch of the Beyond Zero Emissions stationary energy report in 2010 showed that a 100 per cent renewables grid with current technology was both possible and achievable to build within a decade, if we made it a priority.^{xxix} Two other studies, including one by AEMO, have since confirmed with modelling that such a grid is achievable.^{xxx}

It is time we started seriously transforming Australia to be a low carbon economy and society.

John Englart
on behalf of Climate Action Moreland

Endnotes: Climate Action Moreland Submission on Australia's Post 2020 Climate Targets

- i See IPCC 5th Assessment Report 2014 <https://www.ipcc.ch/report/ar5/>
- ii Millman, Oliver, The Guardian, 19 November 2013. Australia worst carbon emitter per capita among major western nations.
- iii Andrew Stock, Climate Council, 16 June 2014. Australia's Electricity Sector: Ageing, Inefficient and Unprepared. <https://www.climatecouncil.org.au/australia-s-electricity-sector-ageing-inefficient-and-unprepared>
- iv Climate Change Performance Index 2014 <http://germanwatch.org/en/7677>
- v Climate Change Authority, Targets and Progress Review – Chapter 9 Australia's 2020 and 2030 goals. <http://www.climatechangeauthority.gov.au/reviews/targets-and-progress-review/part-c/chapter-9-australia-%E2%80%99s-2020-and-2030-goals>
- vi Olive Heffernan, Nature.com, 17 December 2007 Was the Science sidelined in Bali (updated) http://blogs.nature.com/climatefeedback/2007/12/was_the_science_sidelined_in_b_1.html See COP13 agreement http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_act_p.pdf
- vii Rodney Tiffen, Sydney Morning Herald, 24 October 2009. The Australia Clause bites back <http://www.smh.com.au/federal-politics/political-opinion/the-australia-clause-bites-back-20091023-hda9.html>
- viii Frank Jotzo, Policy Brief, October 2010, Copenhagen targets and Australia's climate commitment. https://ccep.crawford.anu.edu.au/sites/default/files/uploads/ccep_crawford_anu_edu_au/2014-02/20101025_copenhagen_targets.pdf
- ix Climate Change Authority, Targets and Progress Review, March 2014. <http://www.climatechangeauthority.gov.au/reviews/targets-and-progress-review-3>
- x John Englart. Nofibs.com.au, 28 September 2014. Australia is a climate leaner, not a lifter: @takvera comments on #Climate2014 <http://nofibs.com.au/2014/09/28/australia-is-a-climate-leaner-not-a-lifter-takvera-comments-on-climate2014/>
- xi Bill McKibben, Rolling Stone, 19 July 2012 Global Warming's Terrifying New Math <http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>
- xii Christophe McGlade & Paul Ekins (2015) The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. Nature 517, 187–190 (08 January 2015) doi:10.1038/nature14016 <http://www.nature.com/nature/journal/v517/n7533/full/nature14016.html>
- xiii See official Norwegian media release, 27 March 2015, Norway's climate target for 2030 <https://www.regjeringen.no/en/aktuelt/innsending-av-norges-klimamål-til-fn/id2403782/> "At least 40% reduction of greenhouse gas emissions by 2030, compared to 1990 levels"
- xiv See official Swiss media release, March 2015. Switzerland targets 50% reduction in greenhouse gas emissions by 2030 <http://www.admin.ch/aktuell/00089/index.html?lang=en&msg-id=56394>
- xv Submission by Latvia and the European Commission, 6 March 2015 http://ec.europa.eu/clima/news/docs/2015030601_eu_indc_en.pdf
- xvi Graham Readfearn, The Guardian, 9 December 2014. Goal to end fossil fuels by 2050 surfaces in Lima UN climate documents <http://www.theguardian.com/environment/planet-oz/2014/dec/08/goal-to-end-fossil-fuels-by-2050-surfaces-in-lima-un-climate-documents>
- xvii Niklas Höhne, Pieter van Breevoort, Yvonne Deng, Julia Larkin, Gesine Hänsel. Ecofys. 2 October 2013. Feasibility of GHG emissions phase-out by mid-century <http://www.ecofys.com/files/files/ecofys-2013-feasibility-ghg-phase-out-2050.pdf>
- xviii Climate Works, ANU, CSIRO, Victoria University. September 2014 Pathways to Deep Decarbonisation in 2050. How Australia can prosper in a low carbon world. http://www.climateworksaustralia.org/sites/default/files/documents/publications/climateworks_pdd2050_initialreport_20140923.pdf
- xix Climate and Health Alliance, February 2015. Coal and Health in the Hunter: Lessons from one valley for the world http://caha.org.au/wp-content/uploads/2015/02/CAHA.CoalHunterValley.Report.FINAL_.Approvedforprint.pdf
- xx Jordan Ward and Mick Power, February 2015, Cleaning up Victoria's Power Sector: the full social cost of Hazelwood power station, Report released by Environment Victoria. See Tom Arup and Adam Morton, The Age, 19 April 2015. The hidden cost of the Hazelwood coal power plant <http://www.theage.com.au/victoria/the-hidden-cost-of-the-hazelwood-coal-power-plant-20150418-1mnmdf.html>
- xxi See Australian Parliament Parliamentary Library, 28 June 2013, Background Notes: Vehicle fuel efficiency standards. http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2012-2013/VehicleFuelStandards#_Toc360193164 See also Anna Mortimore, The Conversation, 10 April 2015 Could Australia become a dumping ground for high-emission vehicles? <http://theconversation.com/could-australia-become-a-dumping-ground-for-high-emission-vehicles-38299>
- xxii See Australian Conservation Foundation. Fossil Fuel Subsidies. <http://www.acfonline.org.au/be-informed/climate-change/fossil-fuel-subsidies>. Also the Australia Institute. Why do we subsidise industry?

Endnotes: Climate Action Moreland Submission on Australia's Post 2020 Climate Targets

<http://www.tai.org.au/node/451>

xxiii Leith van Onselen, Macrobusiness, 17 February 2014. Is the diesel rebate really a subsidy?

<http://www.macrobusiness.com.au/2014/02/is-the-diesel-rebate-really-a-subsidy/>

xxiv See Dept of Environment National Clean Air Agreement <http://www.environment.gov.au/protection/air-quality/national-clean-air-agreement>

xxv Australian Parliament Budgets Office - Costing - election caretaker period. 21 August 2013 - Clean Energy Roadmap - The Greens <http://www.aph.gov.au/~/media/05%20About%20Parliament/54%20Parliamentary%20Depts/548%20Parliamentary%20Budget%20Office/Greens%20Costings/Costings/PBO%20-GRN007%20-%20Clean%20Energy%20Roadmap.pdf>

xxvi Catherine Lovelock, Justine Bell, Kerrylee Rogers. The Conversation. 8 May 2013 Carbon farming could restore Australia's southern coastal wetlands <http://theconversation.com/carbon-farming-could-restore-australias-southern-coastal-wetlands-13521> See also John Englart, 23 May 2012, Seagrass meadows are key carbon sinks for combatting climate change <http://takvera.blogspot.com.au/2012/05/seagrass-meadows-are-key-carbon-sinks.html>

xxvii Australian Conservation Foundation. Australia's top 10 climate polluters. March 2015.

https://www.acfonline.org.au/sites/default/files/resources/ACF_Biggest_Polluters_Report_FINAL_V1.2.pdf

xxviii Giles Parkinson, RenewEconomy, 20 March 2015. Why battery system costs may fall 3x faster than solar PV

<http://reneweconomy.com.au/2015/why-battery-system-costs-may-fall-3x-faster-than-solar-pv-84344>

xxix John Englart 15 July 2010 How to achieve zero carbon emissions by 2020.

<http://takvera.blogspot.com.au/2010/07/how-to-achieve-zero-carbon-emissions-by.html>

xxx Ben Elliston, Iain MacGill, Mark Diesendorf (2013) Least cost 100% renewable electricity scenarios in the Australian National Electricity Market

http://www.ies.unsw.edu.au/sites/all/files/profile_file_attachments/LeastCostElectricityScenariosInPress2013.pdf