Australia Should Pursue Ambitious Climate Change Mitigation Policies

https://www.e-ir.info/2014/06/15/australia-should-pursue-ambitious-climate-change-mitigation-policies/

ALEXANDER NAUELS, JUN 15 2014

From an international perspective, Australia's climate change policies have been all but consistent over the last decade. In 2004, when countries responsible for 55% of global carbon dioxide (CO2) emissions accepted the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), thus bringing the Protocol into force, Australia refused to do so. It was only in 2007 that Australia signed the Protocol, which was designed to reduce greenhouse gas emissions on a global scale. This occurred shortly after both major Australian parties, Labor and Coalition, made election promises to implement a national Emission Trading Scheme (ETS). Yet, it was not until 2011 that ETS legislation was finally passed by Parliament as part of the Clean Energy Act. And today, that ETS, as well as a myriad of other long-running climate and energy policies, face an uncertain future. Sadly, the current domestic push to dismantle major pillars of Australia's climate policies falls counter to evidence provided by the latest available science.

Global Action is Needed

The latest scientific data has recently been compiled and collated by the United Nation's Intergovernmental Panel on Climate Change (IPCC) in the third instalment of its 5th Assessment Report: *Climate Change 2014: Mitigation of Climate Change*. The report outlines the types of measures needed to avoid dangerous climate change. Despite having been approved by all governments in April this year as a document that represents one of the most comprehensive scientific assessments of relevance for political decision-making, it received surprisingly little attention in the media. Nothing in the more-than-one-thousand-page-long report supports a laissez-faire approach to climate change policy that would refrain from strong government incentives to reduce fossil fuel demand. The key headline is, in fact, very straightforward: in order to prevent dangerous levels of global warming, ambitious national and international efforts to reduce emissions are needed *now*.

This message, together with the finding that a continued delay in emission reduction efforts results in increasing financial damages, should in itself motivate country leaders around the globe to engage in constructive negotiations for ambitious international emission reduction efforts. What's more, even when the focus is purely on national interests, the IPCC report provides countless reasons why Australia should support ambitious climate policies.

The world has seen a rapid increase in CO2 emissions over the last decade (on average 2.2% per year between 2000 and 2010), mainly driven by an increase in per capita GDP. The burning of coal, by far the most carbon-intensive way of producing energy, represents an increasing share of the observed emissions growth. In order to successfully meet a UNFCCC target of limiting global warming to within 2°C above pre-industrial temperatures, energy sectors around the world will have to be transformed in a fundamental way. A wide array of technological measures, as well as major behavioural and institutional changes, is required to entertain a likely chance (more than 66% probability) of meeting this target. According to thousands of scenarios analysed by the IPCC for the 21st century and beyond, global greenhouse gas emissions need to be reduced by 40% to 70% by 2050, compared to 2010 levels. By 2100, they will need to reach near-zero levels. Depending on the success rate of global emission reduction efforts, even negative emissions—for example, through bio-energy with carbon capture and storage (BECCS)—may be required.

Australia's Fair Share: 30% by 2030

The newly founded Australian-German College of Climate and Energy Transitions recently hosted a public seminar that was particularly resourceful in capturing Australia's part of the equation in mitigating dangerous climate change.

Frank Jotzo, a climate change policy expert from the Australian National University, and one of over 200 lead authors of the IPCC assessment, presented the key findings of the report. According to Jotzo, for Australia to meet its fair share of the UNFCCC target, an emission reduction of around 30% by 2030 is needed, relative to 2010 levels. The seminar's speakers included another lead author: energy expert Damon Honnery of Monash University. He highlighted that the global share of renewable energy, a crucial element to achieving required emission reductions, increased from 6.8% to only 8.5% over the last 20 years. This, explained Honnery, is far from the target the global community (including Australia) should be aiming for. Currently, only 13% of Australia's electricity comes from renewable energy sources like solar and wind, despite the enormous potential Australia has in this respect.

Yet, around 90% of Australia's energy mix is still fossil fuel-based, a condition that cannot be changed quickly or easily. In the words of Sandra Kentish, carbon capture and storage (CCS) expert from the University of Melbourne and third speaker at the seminar, coal remains the 'elephant in the room'. Kentish was clear that CCS will play a crucial role in any Australian emission reduction effort. Coal-fired power plants equipped with CCS technologies allowing CO2 emissions to be pumped underground will be important in transforming Australia's energy system.

...And It Is Affordable

But could a major push to reduce emissions and a switch to clean energy be affordable? According to the latest IPCC estimates, costs do not need to be large. In an idealised policy setting, 2% to 6% of the global GDP in 2050 would be required to finance adequate mitigation efforts. This translates to less than 0.1% GDP per year for the respective scenarios. Jotzo stressed, however, that these calculations exclude the costs of damages related climate change impacts.

In the end, it is precisely the damage from projected climate change impacts that should be the fundamental driver for strong emission reduction efforts. As the final seminar speaker Ross Garnaut reminded us, Australia is exceptionally vulnerable to the physical and economic impacts of climate change. Garnaut, whose government-commissioned 2008 Garnaut Review and its subsequent update in 2011 served as important milestones towards more ambitious climate change policies in Australia, linked Australia's future to that of the Asia-Pacific region more generally. On the one hand, he warned that if climate change intensifies unmitigated, climate extremes, like droughts, rising sea levels, or the destruction of important natural assets like the Great Barrier Reef, will pose a serious threat to Australians, as well as severely restricting the country's potential to cope with such scenarios. On the other hand, Garnaut also highlighted that Australia is prone to face major economic risks related to climate change and noted that "The problems of our neighbours will be our problems", pointing to the complex economic interdependencies in the region.

Main Barrier Is Political

A successful transformation of the energy system needed to avoid dangerous climate change will ultimately depend on the will of society to vote for a political agenda that comprises a plurality of efficient climate policy instruments. Such policy instruments will, amongst other things, rely on cost-effective market mechanisms, such as a carbon pricing scheme. Weak short-term proposals, like the Direct Action Plan proposed by the current Australian government, are very unlikely to be effective or adequate.

It is in the best interests of the Australian society and economy to prevent severe long-term damage caused by ignoring the threat of dangerous climate change. Let alone, it doesn't even have to be a painful transition; the science tells us that it is very much affordable. As Garnaut concluded during the seminar, Australia has the potential to be a global superpower in renewable energies as much as it currently is a fossil fuel superpower. What is currently lacking is will power.

A full recording of the seminar “IPCC Working Group III: What’s in it for Australia?” by the Australian-German College of Climate and Energy Transitions is available at this link.

About the author:

Alexander Nauels studied Geography in Berlin, Germany, and Climate Science in Bern, Switzerland. Before starting his PhD at the Australian-German College of Climate and Energy Transitions, University of Melbourne, he worked at the IPCC Working Group I Technical Support Unit during the Fifth Assessment cycle. Currently working on synthesizing knowledge about long-term sea level rise projections, Alex hopes to contribute to a better understanding of the physical implications of different climate futures.