



# EERHPOLICYBRIEF

## *"Yes we can ..."* : Adjusting Australia's climate target Frank Jotzo<sup>1</sup>

*The Copenhagen pledges by major developed and developing countries imply significant effort, and they fulfil Australia's stated conditions for an up to 15% emissions reduction at 2020.*

The Copenhagen Accord is a political agreement. It falls well short of a new international climate treaty – it skirts around some issues that will need to be resolved for any comprehensive post-Kyoto global climate agreement. Yet, for the first time, all major countries have pledged action through emissions reductions or limitations. The Accord has shown what cooperation regarding climate change is politically feasible.

Countries representing over 80 per cent of global emissions have now announced specific actions and greenhouse gas emissions targets for the year 2020. Although these targets are not binding, they are a clear indication of what countries are prepared to work towards. Developed countries have also pledged climate finance for developing countries. But what does the Accord mean for Australia's climate target?

### **Australia's position**

Australia has set a range for its 2020 emissions target, depending on other countries' commitments. The conditions, set out in May 2009 and reiterated in Australia's formal submission to the Copenhagen Accord in January 2010, are:

- a reduction of 25 per cent below year 2000 levels 'if the world agrees to an ambitious global deal capable of stabilising ... at 450 parts per million CO<sub>2</sub>-eq or lower'
- a reduction of up to 15 per cent 'if there is a global agreement which falls short of [450] and under which major developing countries commit to substantially restrain emissions and advanced economies take on commitments comparable to Australia's'
- a reduction of 5 per cent, irrespective of other countries' commitments.

However, the government has separately stated that for now it will not increase Australia's emissions reduction target above 5 per cent, pending among other things clarity about other countries' commitments and actions.

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## Global ambition

Typical estimates of the possible long-term warming under a Copenhagen trajectory range are between 2.4 and 3.5 degrees (for an overview see Jackson and McGoldrick, 2010).

Such analyses are highly contingent on assumptions made about emissions levels after 2020. Nevertheless, it is clear that the possibilities for limiting climate change risks are being closed off. It is difficult to construct scenarios in which post-2020 emissions fall quickly enough to limit expected temperature increases to 2 degrees, a widely discussed goal. A '450' stabilisation could be achieved only after substantial overshooting.

## Comparing 2020 emissions targets

Countries have framed their commitments in very different terms. Developed countries have expressed their targets as percentage reductions in 2020 emissions relative to historical levels, but have chosen different base years. China and India have pledged a reduction in the emissions intensity of their economies (the ratio of carbon emissions to GDP), over the period 2005 to 2020. A number of industrialising and developing countries – among them Brazil, Indonesia and South Africa – have pledged percentage reductions in emissions relative to (in many cases still undefined) business-as-usual scenarios at 2020.

An analysis that puts the different commitments on a common footing and compares them across the different metrics (Jotzo, 2010) shows that the pledges given by both developed and developing countries imply significant effort, and that their impact is comparable between countries on several metrics.

## Three metrics for comparison

For absolute emissions levels, the targets imply very different trajectories. Growth in emissions would continue strongly in China, India and a number of other countries, while moderate decreases would occur in most developed countries and some developing countries. This reflects strongly differing prospects for economic growth and structural change. It also reflects differing levels of development and energy use, with India's per capita emissions, for example, only around one-tenth of the average across rich countries. In aggregate, the main developed countries are targeting a reduction of around 15 per cent relative to 2005 levels. The pledges of the main developing countries imply limiting their emissions growth on average to around 40 per cent over the same period.

For emissions intensity, however, the targets imply similar reductions across countries. For most major countries (developed and developing alike) the targeted reductions in the ratio of carbon to GDP are clustered between 35 and 50 per cent, from 2005 to 2020. The intensity metric directly reflects the ultimate aim of climate change mitigation policy – to achieve economic growth with fewer and fewer greenhouse gas emissions. Developing countries generally have an advantage in that faster growth means more opportunities to install more efficient equipment. The similarities in targeted reductions are nevertheless striking.

Business-as-usual reductions are more difficult to establish. These reductions involve assumptions about what would have happened in the absence of dedicated policies. Nevertheless, on plausible assumptions, targeted reductions pledged by developing countries are broadly comparable with those implicit in the targets set by developed countries.

The most comprehensive metric for comparison would be the economic costs imposed by reaching each country's target. However, such a comparison is inevitably model-based; the difficulties in estimating business-as-usual are compounded by the need for a host of assumptions about abatement costs and economic flow-on effects.



### China

A pivotal question for the international community is: what ambition is implied by China's pledge to cut the emissions intensity of its economy by between 40 and 45 per cent, from 2005 to 2020? Detailed quantitative analysis (for example, Stern and Jotzo, 2010) shows that without policy effort future emissions intensity would be much higher. In fact, China's total targeted reductions relative to business-as-usual, with continued fast carbon emissions growth, could be larger than the total targeted reductions in developed countries.

China's existing policies to cut energy use and expand renewable energy sources will need to be continued and complemented by new policies. The potential policy package is not yet known and China is unwilling to enter a binding international commitment. But it is clear that China's political leadership is determined to follow through with the target it has set itself.

### Implications for Australia

The Copenhagen targets fulfil Australia's stated conditions for an 'up to 15 per cent' reduction target: major developing countries have committed to substantially restrain emissions, while advanced economies have taken on commitments comparable to an Australian 15 per cent target.

With Australia's stated interest in strong global climate action, the logical next step would be to take on a 15 per cent reduction target.

This would need a significant mitigation effort for Australia, as well as investment in reductions in developing countries (Treasury, 2008). Any reduction target must take into account the fact that Australia's emissions are already well above year 2000 levels – and likely to continue growing, in the absence of a dedicated policies. Even a 5 per cent reduction target implies significant reductions relative to unconstrained emissions growth.

The recent shelving of plans for an emissions trading scheme (or carbon pollution reduction scheme) will make it much more costly for Australia to cut carbon emissions in the future. Every year that goes by without carbon pricing prolongs investment uncertainty in major industries, and delays progress towards cleaner energy systems and new carbon sequestration technologies. Regulatory policies may be successful in specific sectors, but they will inevitably be patchy. They also come with a much higher economic price tag than comprehensive emissions pricing.

### Further reading

- Jackson, E. and McGoldrick, W. (2010). *Climate Policy Post-Copenhagen: A New Multilateralism?* The Climate Institute, Melbourne, April.
- Jotzo, F. (2010). *Comparing the Copenhagen Climate Targets*. Crawford Seminar, Australian National University, Canberra, March.
- Stern, D. and Jotzo, F. (2010). *How Ambitious are China and India's Emissions Intensity Targets?* Environmental Economics Research Hub Research Report No. 51, Canberra.
- Treasury (2008). *Australia's Low Pollution Future*. Canberra.

This work has been funded through the Commonwealth Environment Research Facilities (CERF) Program, an Australian Government initiative supporting world class, public good research. The views expressed in EERH Policy Briefs are those of their authors and not necessarily those of the Commonwealth Government.

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