

Copenhagen targets and Australia's climate commitment

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- The Copenhagen climate targets by major countries, including China and other developing countries, imply significant cuts in emissions intensity and relative to business-as-usual, and are remarkably similar across countries in these metrics. There is likely to be strong policy action in most of the major countries, despite the absence of a global climate treaty.
- 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. Carbon sequestration in soils and plants could usefully be addressed under a separate pledge.
- Cutting Australia's emissions cost-effectively will require carbon pricing, possibly starting with a fixed price permit scheme. Investments in emission reductions in developing countries are also likely to be part of a cost-effective approach.

Comparing the Copenhagen targets

The Copenhagen climate conference and subsequent developments have made it clear that a legally binding international climate agreement is out of reach for the time being. But the Copenhagen Accord delivered on something that until then seemed unattainable: unilateral commitments by all major emitters to cut or constrain their greenhouse gas emissions over the next decade.

Countries representing over 80 per cent of global emissions have announced actions and/or emissions targets for the year 2020. Although these targets are not binding, they are a clear indication of what countries are working towards, and there are many signs that key governments are taking their Copenhagen pledges seriously. Developed countries have also pledged significant amounts of climate change finance for developing countries.

Comparing the targets. Countries have framed their commitments in 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 pledges on a common footing and compares them across the different metrics (Jotzo 2010) shows that the pledges given by both major developed and developing countries imply significant effort, and

that on the whole they are broadly comparable across important metrics. This allows a cautiously optimistic assessment of the prospect for countries actually following through with their pledges

Absolute targets. The targets put forth by different countries imply very different trajectories of absolute amounts of emissions. Growth in emissions would continue in China, India and some other fast-growing countries, while decreases would occur in most developed countries and, notably, several developing and industrialising countries – assuming reasonable business-as-usual scenarios are applied. The differences are driven to a large extent by differing prospects for economic growth and structural change, differing levels of development, as well as differing emissions profiles. In aggregate, the main developed countries are targeting a reduction of around 15 per cent relative to 2005 levels.

Per capita targets. Converting targeted change in emissions over the period 2005-2020 to targeted change in emissions per capita significantly narrows the gaps between countries, in particular the differences between developed and developing countries. A number of countries that are substantially below the developed country average per capita emissions levels – and far below North America and Australia – are targeting sizeable reductions in their own per capita emissions.

Intensity targets. When converting countries' targets to the metric chosen by China and India, change in emissions intensity of GDP, the targets imply remarkably similar reductions across countries. For nine of the thirteen major countries analysed (Jotzo 2010), developed and developing alike, the targeted reductions in the ratio of carbon to GDP vary between 38 and 55 per cent, from 2005 to 2020. On average, the major developing countries are targeting stronger reductions in emissions intensity than the major developed countries.

The intensity metric directly reflects the ultimate aim of climate change mitigation policy – to achieve economic growth with fewer and fewer greenhouse gas emissions – and is therefore a useful point of comparison.

Business-as-usual targets. Targets can be compared in terms of the deviation from a baseline (business-as-usual) trajectory that they

require, and a number of developing countries have framed their targets in this way. While business-as-usual scenarios and the resulting comparisons are by their very nature contestable, a consistent set of assumptions applied to the major countries again shows remarkably similar targets across countries, ranging between 24 and 38 per cent below business-as-usual at 2020 for eleven out of thirteen countries. The average targeted reduction relative to business-as-usual for the major developing countries is the same as for the developed country average, at around one quarter. Developing countries account for almost two thirds of the overall pledged reductions, in this analysis.

China. A pivotal question for global climate policy 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. The comparative analysis shows that this pledge is in line with the targets by the major developed countries including the United States, both in terms of emissions intensity and relative to business-as-usual.

Studies using other methodologies to assess changes relative to business-as-usual (eg McKibbin et al 2010, Stern and Jotzo 2010) have shown very similar estimates of reductions relative to business-as-usual, between 20 and 25 per cent. Contrasting studies claiming that China's target implies little effort typically refer to projections that already assume significant policy action directed at lowering emissions intensity. Reaching the target will require replication of reduction rates achieved during the reforms of the 1990s which did away with much energy waste, and which were followed by increases during the early 2000s (Garnaut, Jotzo and Howes 2008).

Although China's target – as that of any other country – is not legally binding, the Chinese leadership has given strong indications that the pledge is being taken seriously. Policies to promote low-carbon energy sources, to improve energy efficiency and to shut down inefficient industrial plants are in place and have been strengthened. The prospect of carbon pricing and province-level emissions intensity targets has been raised.

Australia's 2020 target: the case for 15 per cent

The target range. Australia's Copenhagen pledge includes a range for the 2020 emissions target, depending on other countries' commitments: 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 CO₂-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'; and a reduction of 5 per cent, irrespective of other countries' commitments. This target range is in line with the recommendations by the Garnaut (2008) review. So far, the Australian government has remained with the 5 per cent unconditional cut, pending among other things clarity about other countries' commitments and actions.

The case for 15 per cent. A strong argument can be mounted that the Copenhagen pledges fulfill 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.

A 15 per cent target would have Australia playing its fair share in global action according to a variety of indicators. Australia's target would be toward the more ambitious end of the developed country spectrum on some metrics, but this needs to be seen against the backdrop of Australia as the highest per capita emitter among the major nations. According to the logic that a gradual transition towards equal per capita emissions allocations is the only truly viable climate equity principle or may in the long run be simply inevitable under strong global mitigation (Garnaut 2008, Stern 2008), a greater rate of reduction is warranted in Australia than in most other countries.

The case for settling the target soon. It is unlikely that countries' positions and pledges will change significantly over the next few years. Hence there is little reason for further delay in deciding Australia's 2020 target.

Australia's stated interest in strong global climate action – because of Australia's

disproportional exposure to climate change risks – calls for an Australian commitment that is seen as leading rather than lagging. Creating positive examples in ambition and implementation will be a crucial factor for other countries to follow through with their own pledges.

A separate pledge for sequestration. Carbon sequestration in soils and plants are important potential mitigation options for Australia, while reducing deforestation is a very large mitigation opportunity in Indonesia that may be open to investment from Australia. However, the extent of reduction opportunities and costs are in many cases unknown, measurement is uncertain, and permanence of sequestration is not necessarily assured. Under these circumstances, it may be advantageous to undertake sequestration programmes under a separate pledge, rather than wrapping them in with the headline national emissions target.

Such an approach might be dubbed a 'dual target'. The primary target could cover the same scope of emissions as under the Kyoto target. The secondary target, covering soil carbon and other forms of sequestration – possibly also support for international measures such as forest and peat land protection in Indonesia – would be an additional, non-binding pledge. Australia would pledge a range of policies and measures and indicate the expected magnitude of carbon that may be sequestered, but would not be in breach of commitment if the results fell short of expectations.

Meeting the target: ways of pricing carbon

Carbon pricing. Meeting a reduction target – be it 5, 15 or 25 per cent – will require significant mitigation effort in Australia. Carbon pricing is at the core of any cost-effective strategy to curb emissions, and modelling analysis has shown that early implementation of carbon pricing will cut the total cost over time of achieving a given reduction (Australian Treasury 2008).

A carbon price can be achieved through emissions trading, emissions taxation or a combination. The choice of instrument on the whole is secondary to the level of the price signal, and to design elements that provide for unimpeded incentives and that govern financial assistance to industry and households.

However, in the absence of widespread emissions trading internationally, and with industry preferences for price certainty, there is a clear case for starting carbon pricing with a fixed price, while creating a pathway for transition to a market based pricing system.

A fixed price permit scheme. This could readily be achieved by starting the scheme as a fixed price permit scheme, as suggested as a possibility by the Garnaut Review: emitters need to acquire permits for their emissions, but these permits are sold by government at a fixed price without a quantity limit. This contrasts with market-based emissions trading where permits are issued up to a predetermined cap and the price formed in the market. In the short term, this would have a broadly similar effect as the McKibbin-Wilcoxon (2002) scheme, though there are strong differences between the different proposals with regard to allocation of property rights to emission permits in the long term.

A fixed-price permit scheme could be transitioned gradually to a market-based emissions trading scheme. To do achieve this, government could start auctioning permits but provide lower and/or upper bounds on market prices, with the fixed price possibly becoming a price floor (Wood and Jotzo 2010). If and when a global carbon price emerges, the price bounds could be lifted to allow integration with international emissions markets.

International trading. A cost-effective strategy is likely to involve investment in emissions reductions overseas, especially in developing countries, where low-cost mitigation opportunities are plentiful but capital scarce. If an international climate treaty does not evolve over coming years, then such trades are likely to be of a bilateral nature, or within groups of countries that apply compatible rules and standards of accounting. They might occur at a government-to-government level or in private transactions.

Under this scenario, Australia may find that it is of mutual interest to it and developing countries in the region to enter arrangements for investing

and trading in emissions reductions. Prominent examples are large-scale financial support for measures to reduce deforestation in Indonesia, and for investment in clean energy technologies throughout the region.

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