COMMENTARY:

Australia's carbon price

Frank Jotzo

Australia's carbon pricing mechanism leads the way with innovative design in price management and revenue recycling but could fall victim to partisan politics.

Climate-policy-laggard Australia has adopted a carbon pricing mechanism, with an initial price well above that prevailing in the European Union (EU)'s Emissions Trading Scheme (ETS). The policy features broad coverage of emissions, managed prices while phasing-in emissions trading, and politically calibrated recycling of permit revenue including income-tax cuts. These features could serve as a model for other countries' emerging carbon pricing schemes. But Australia's carbon pricing mechanism lacks bipartisan support, casting doubt over its political durability.

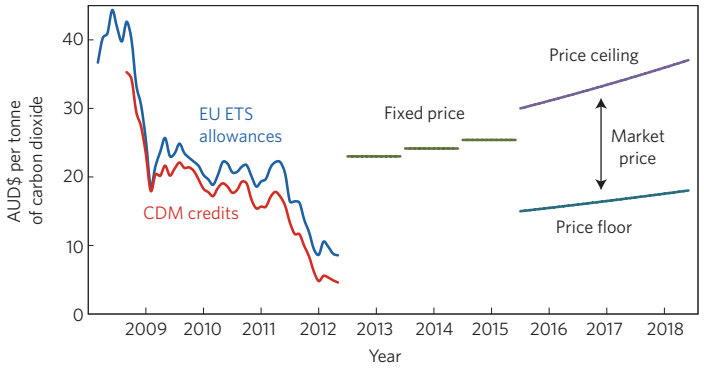

Figure 1 | EU allowance prices, CDM credit prices and Australia's carbon price. Amounts are expressed in nominal Australian dollars. A market price of AUD$10 per tonne of carbon dioxide for mid-2015 is assumed as a basis for the ceiling price. EU ETS allowance and CDM credit prices are monthly averages of spot market prices; the last data point is May 2012 (data taken from Bluenext.fr), converted at monthly average exchange rate (data taken from Reserve Bank of Australia).

Broad coverage

The centrepiece of the legislation, in force from 1 July 2012, is a carbon price covering around 60% of Australia's greenhouse-gas emissions. It includes carbon dioxide emissions from fuel use in electricity generation and industry, as well as households by way of upstream liability on fuel distributors. Greenhouse-gas emissions from industrial processes, mines and waste are also covered. An equivalent emissions price will be imposed on some uses of transport fuels through changes to fuel taxes, and on synthetic greenhouse gases through separate regulations.

Other notable features include an offset mechanism for agriculture and forestry[1], a strong role for independent institutions to advise on future changes to the scheme[2], and a AUD$10 billion facility for investments in low-carbon technologies.

The policy package is meant to underpin Australia's national commitment of a 5% reduction in emissions by 2020 relative to 2000, and up to 25% reduction depending on other countries' policies and progress on an international climate agreement.

A managed price

From mid-2012 to mid-2015, the scheme operates with a government-determined price starting at AUD$23 per tonne of carbon dioxide equivalent and rising to AUD$25.40 per tonne. Government will sell an unlimited amount of permits at this price, and neither international trading nor banking of permits is allowed. Thus, during the first three years the scheme acts like a carbon tax.

The fixed price model allowed the breaking of a deadlock in negotiations between the government and Greens party, who could not agree on Australia's national target and a quantitative cap for the permit scheme, but were able to agree on a price to get the scheme started[3]. It also makes fiscal revenues and impacts on price levels more predictable, and allows more time to prepare for market-based trading. Starting with a predetermined price may be an attractive option for emerging permit schemes in China, South Korea and Mexico.

In July 2015 emissions trading is to start, with a fixed number of permits sold at auction, international trading allowed and permits bankable. The price, however, is to be kept within a defined range for a further three years, with a floor price starting at AUD$15 per tonne and a ceiling price starting at AUD$20 per tonne above the expected international price (Fig. 1). The rationale for the price floor is to foster confidence for low-carbon investments and to achieve a minimum level of domestic effort, in the context of fragmented international carbon markets[4,5]. The rationale for the price ceiling is to eliminate the risk to emitters of unaffordable prices.

On current market expectations, the price floor would apply. The government has proposed implementation through a 'top-up' fee for the use of international units in the Australian scheme, but at the time of writing it was unclear whether the required regulations will be passed by Parliament. The Australian scheme allows up to half of the total liable emissions to be covered through international emissions units, including offset credits from the Clean Development Mechanism (CDM). The policy foresees future linking with the EU ETS and other schemes, subject to mutually acceptable mitigation commitments and compatible design.

Australia will probably be a net buyer in international emissions markets[6], although there are large empirical uncertainties[7]. Without a price floor or a tighter limit on CDM imports, Australia's domestic carbon price would fall to the CDM price level, which during the first half of 2012 has been around AUD$5 per tonne. Some observers and industry groups have argued in favour of this, on the grounds that it will minimize

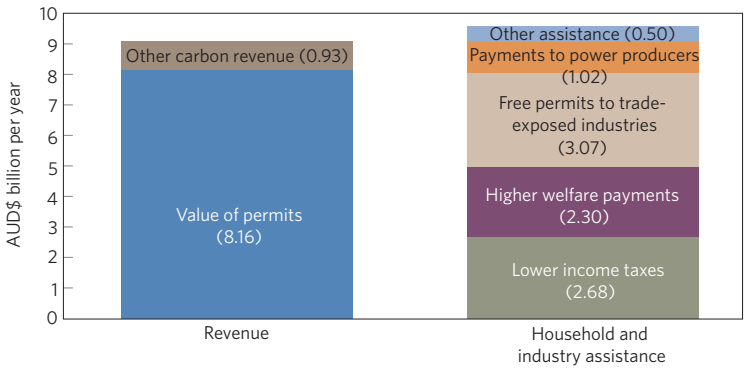

Figure 2 | Carbon pricing revenues and assistance payments. Projected revenue and budgeted payments, fiscal years 2012–2013 to 2014–2015. Includes early payments made in fiscal year 2011–2012. Data taken from ref. 8.

the immediate cost of complying with the national target. By contrast and as previously argued[5], if the objective is to help start a transition towards a lower-carbon economy, then Australia should maintain a domestic carbon price that is more in line with national mitigation ambition.

Recycling the revenue

Projections of the value of emissions permits are around AUD$9 billion dollars per year in the first three years[8]. Around AUD$5 billion per year will be returned to households in the form of lower income taxes and higher welfare payments. Most lower-income households will be overcompensated for the increase in living costs, whereas households in higher-income brackets will bear most of the net costs.

The income-tax cuts have been the government's trump card in its bid to rally public support for the policy. Targeting household assistance at lower-income groups directly tackles the most widespread concern about the scheme, namely increases in the costs of electricity. But communicating the effects of the reform has proved difficult.

Using carbon pricing revenue to cut other taxes can reduce the overall economic costs of mitigation policy[9]. Tax reform for greenhouse-gas emissions has rarely been used in practice, much less at this scale. Most cap-and-trade schemes have handed back the bulk of the revenue to emitters, missing out on efficiency benefits from tax reform.

Industry also receives substantial payments. Emissions-intensive trade-exposed industries (such as steel-making and aluminium smelting) will get free permits to the value of over AUD$3 billion per year during the first three years and phased-down over time, benchmarked by product category and linked to levels of output. The aim is to compensate them for losses in competitiveness, while giving these companies incentives for improving efficiency. Cash and free permits will also flow to the most emissions-intensive coal-fired power stations (AUD$5.5 billion over five years) and coal mines (AUD$1.3 billion over six years).

Assistance payments to industries do not rest on a strong economic case. Although measures to support international competiveness are valid in principle to prevent inefficient carbon leakage (relocation of production to other countries), the empirical case for shielding trade-exposed industries is very limited[10]. Payments for the power sector are essentially compensation for loss in asset value, for which there is no intrinsic economic justification. It stands to reason that payments to industry are primarily the result of lobbying pressure from business groups.

Politics and outlook

The road to carbon pricing was long and bruising. The first blueprints for emissions trading in Australia were developed in the 1990s[11]. Climate policy has contributed to the downfall of several prime ministers and opposition leaders since 2007 (ref. 12). The present legislation was passed by a minority Labor government supported by the Greens party and independent members of Parliament, an unusual constellation in Australia and one that appears increasingly unstable.

For ambitious climate change policy to be legislated is a remarkable development for Australia, the world's second-largest coal exporter and among the highest per capita emitters. A decisive factor was the growing awareness that Australia faces severe risks from climate change impacts. Australia's *Garnaut Climate Change Review*[13] in 2008 argued that Australia's national interest lies in strong global mitigation, with Australia playing its proportionate part. The government adopted this position, but public support has since fallen, amid a widespread misperception that few other countries are acting to cut emissions and following the end of a long period of drought in Australia[14].

Importantly, there is no bipartisan support for carbon pricing, resulting in continued policy uncertainty. Both sides of politics were broadly in agreement from 2007 to 2009, but the Liberal (conservative) opposition party changed their leader and position on the eve of a vote on an emissions trading scheme negotiated with the government. The opposition parties now reject carbon pricing, and their leader has pledged to repeal the legislation if and when in power. Repeal would be likely to face a drawn-out parliamentary process including a special general election after a change in government. It would also cause a budgetary shortfall from lack of emissions permit revenue, and would require either the imposition of less efficient non-pricing policies that carry high fiscal costs[15], or that Australia walks away from the national emissions-reduction target.

Nevertheless, the issue of carbon pricing has been turned into such a political touchstone that substantial change or repeal is a distinct possibility after the next election, which is due by late 2013. If so, Australia's carbon pricing mechanism might enter history as one of the best-designed yet shortest-lived policies for climate change mitigation. ❐

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Published online: 17 June 2012