
The Forgotten Issues of Climate Change Policy: A CEDA policy perspective

The government is considering implementing a carbon tax on production in Australia from 1 July, 2012. The intent of the current proposal is to reduce Australia's contribution to global greenhouse gas emissions, referred to collectively as 'carbon'.

While all policy details are yet to be determined, it is anticipated the carbon tax will last for a three to five year period with the price increasing annually at a pre determined rate. At the end of the fixed price period, the intent is for the system to convert to an emissions trading scheme (ETS). The ETS will operate in a manner similar to the previously proposed Carbon Pollution Reduction Scheme (CPRS).

The CEDA report *A Taxing Debate: Climate policy beyond Copenhagen* (2009) raised a series of questions about the CPRS that remain unaddressed. Three of the most critical questions are:

- What is the right base for carbon reduction policies?
- What is the best way to engage market forces in reducing carbon emissions? and
- Is a price or quota mechanism most appropriate for dealing with carbon emissions?

In the following three chapters, Geoff Carmody, Dr Michael Porter and Professor William Nordhaus address important aspects of the global climate change policy that are currently missing from the debate. The paper by Carmody offers new perspectives on the current debate while those by Porter and Nordhaus are reproductions of their original papers from 2009.

Among other issues, Carmody addresses the efficiencies of a carbon tax and how it could be applied in an Australian context, Nordhaus details the complications arising from the political nature of an ETS, while Porter discusses the issues associated with variability of the ETS as a financial derivative.

An overview of the key elements of their chapters is below.

National emissions consumption versus production focus

Greenhouse gas emissions caused by humans are associated with, and embedded in, economic activity. Attempts to reduce the carbon emissions intensity of economic activity can be focused on domestic production or domestic consumption. The first, measured by gross domestic product (GDP), includes exports and excludes imports. The second, measured by gross national expenditure (GNE), includes imports but excludes exports.

Policies designed to limit carbon emissions by focusing on domestic production (GDP) are only effective when undertaken in a harmonised global context. Unfortunately, the 1997 Kyoto Protocol (and Rio before it) envisaged non-harmonised national action, at least between developed and developing countries.

The inefficiency of production focused climate change policies has been highlighted in a number of studies. One, by Peters, Minx, Weber and Edenhofer (2010), found the European Union reduced annual domestic production of CO₂ emissions by 280 mega tonnes between 1990 and 2008. However, in 2008 the EU had an additional 181 mega tonnes of CO₂ embodied in its imports when compared with imports at 1990 levels. This meant that 65 per cent of the carbon removed from the EU economy was simply released elsewhere.

A similar pattern has emerged throughout the world. While many industrialised countries have stabilised domestic carbon emissions, those in developing nations have doubled since 1990. Meanwhile, the net emissions transfers via international trade from developing to developed countries increased from 0.4 gigatonnes of CO₂ in 1990 to 1.6 gigatonnes of CO₂ in 2008, exceeding the Kyoto Protocol emission reductions.

As a net energy exporter, Australia will be particularly penalised by a production focused carbon emissions abatement policy. Peters et al (2010) found Australia had 56 mega tonnes of carbon embodied in its exports, representing over 15 per cent of the nation's annual production of carbon. Much of the carbon embodied in Australian exports has the potential to displace higher carbon emissions sources elsewhere. For instance, Australia's LNG projects have the potential to abate approximately 40 to 50 million tonnes of carbon a year. A further 20 million tonnes can be abated from coal seam methane exports.

A carbon tax based on the domestic production of carbon would penalise Australia's energy exports and may make more carbon intensive energy sources more competitive, indirectly increasing global carbon emissions.

If policies to reduce carbon emissions are to be meaningful, in the absence of a harmonised global agreement, then they must address imports. Australia can be a world leader on climate change by showing how effective policy can be adopted to mitigate carbon emission regardless of international agreement. This can occur if the carbon tax is applied to domestic consumption of embodied carbon. Such a tax could be applied in a similar manner to the Goods and Services Tax (GST).

A political construct, not a market

A fundamental problem with an ETS is that it does not represent a real market but a political construct developed to create artificial scarcity over the right to emit carbon dioxide. The value of this right is entirely dependent on political decisions that control the level of supply to the market.

The inevitable uncertainty over the cost per tonne of carbon emissions will create considerable variability in prices for carbon emission permits. Professor Garnaut (2011) states that:

“As soon as the parameters of the scheme are settled, business will focus on making money within the new rules, rather than on securing rules that make them money. That makes it essential that the rules really are settled.”

This is accurate for exogenous risks. However, the political nature of the ETS market means businesses have the continuing ability to influence the rules of the market, and politicians have the capacity to adjust them over time. As the right to emit carbon is restricted it will become increasingly valuable, creating greater incentives for businesses to lobby government to achieve favourable market structures. This has the potential to embed a culture of lobbying whereby vested interests will attempt to extract favourable conditions from the political process.

The intention to allow the ETS to import 'carbon credits' will significantly expand political risk given the variability that exists between different governments around the world in terms of honesty, transparency and effective administration.

A direct carbon tax, with a clear escalation schedule, would provide the certainty business requires to continue investing in Australia. A carbon tax that is applied in

a similar manner to the GST, which has been successfully implemented in the past, would remove much of the justification for industry compensation and would reduce incentives for businesses to engage in political lobbying.

The significant advantage of a consumption based carbon tax is that it would enable the widest possible group of market participants to engage in minimising their carbon footprint. The clear price signal of a carbon tax, which could be stated on every invoice in a similar manner to the GST, would be explicit for market participants at all stages of the production process. This would enable them to take concerted actions to reduce their carbon footprint.

Quotas versus price

How to effectively deal with climate change depends on the nature of the costs and benefits of mitigation. When environment benefits are highly non-linear compared to costs, then quantity regulation is the most effective method of achieving a desirable outcome. However, when costs are non-linear compared with benefits, then a price mechanism is the optimal policy choice for achieving a desired outcome (Weitzman 1976).

The bipartisan climate change policy support that does exist is to reduce Australia's annual carbon emissions by 5 per cent by 2020 from 2000 levels. This represents a quota based approach to carbon emissions. Unfortunately, the environmental challenge of climate change has a very strong non linear relationship between costs and benefits. The benefits from mitigation relate to the stock of greenhouse gases, which have accumulated since industrialisation. In contrast, the costs of mitigation are related to today's flow of emissions.

This implies that the marginal costs of emissions reductions are highly sensitive to the level of reductions while the marginal benefits of emissions reductions are insensitive to the current level of emissions reductions.

The ETS may be attractive as it represents a 'tangible' contribution without a quantified financial cost. Unfortunately, if the costs of an ETS applied quota result in mitigation costs significantly disproportionate to benefits, then long term community willingness to support the program would be problematic. Australia's climate change policy should use price mechanisms to achieve an efficient outcome.

Australia's fair share

Professor Warwick McKibbin and David Pearce provided important context for climate change policy in the original *A Taxing Debate: Climate policy beyond Copenhagen* (2009):

"When Australia's climate policy starts to bear fruit, today's political leaders will be distinguished elder statespeople, and the prime minister will be someone who hasn't been born yet... based on the typical life cycle of large firms, the current big players in the market won't exist."

Given the long term implications of climate policy, it is critical that it is done well regardless of how long it takes. Unless climate change policy addresses the issues raised in the three attached papers it will not be successful.

The proposed Australian carbon tax and ETS on production will undermine Australia's international competitiveness, act like a "GST from hell," fail to make an efficient contribution to the global climate change problem, and encourage other countries not to mitigate their own emissions.

A carbon tax, levied on consumption and implemented in the same manner as the GST, would incentivise the maximum number of market participants to reduce their carbon footprint. It would quantify Australia's contribution to global climate change mitigation and show a way forward for nations to take meaningful action independent of an international agreement.

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References

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