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Analysis

Clean energy policy: Taxing carbon and the illusion of the equity objective

Neil Perry [a], Stuart Rosewarne [b,*], Graham White [b]

[a] The University of Western Sydney, Australia
[b] The University of Sydney, Australia

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ABSTRACT

The Australian government has passed legislation, the Clean Energy Future Policy, establishing a carbon-emission pricing scheme. While the scheme is represented as the most efficient and cost effective means of reducing emissions, the government has also committed to ensuring equity in burden sharing, particularly through the use of household compensation methods and by minimising the disadvantages faced by energy-intensive trade-exposed industries thereby committing to these industries' continued developments. Treasury modelling used to determine the required level of household compensation has remained relatively uncontested. We question the conclusion of equity in burden sharing on the basis of this modelling. The modelling reflects fairly standard conventional economic theory in terms of market structures, the determination of prices and outputs, and the characterisation of factor markets. The behavioural assumptions overstate the consumer and producer substitution possibilities, failing to consider the possibility of technical reswitching, and ignore the impact that oligopolistic market structures would have on price increases and infrastructure investment. The full ramifications of compensation for overall government expenditure and therefore the capacity of the government to continue to fund a range of elements of the social wage, the potential for unemployment and transitioning workers to less carbon-intensive industries, are also overlooked.

1. Introduction

The Australian government has passed legislation, the *Clean Energy Act 2011* (Australian Parliament, 2011), which will establish an emission pricing scheme as the centrepiece of a climate change policy to mitigate the nation's greenhouse gas emissions. In the culmination of a longstanding and impassioned debate on the need to respond to climate change, the scheme commits the government to reducing Australia's emissions by 5% by 2020 from the levels of 2000. It is based on setting emission reduction targets for the biggest emitting enterprises and putting a price on greenhouse gases, or CO_2-equivalent, initially by means of a carbon tax commencing in July 2012, and via an emissions trading system from July 2015. The emission pricing system is being represented as the most efficient and cost effective means of reducing emissions. In setting the emission reduction target the government also committed to ensuring that equity in burden sharing is an overarching principle defining carbon pricing.

Capping emissions and linking this to the establishment of an efficient market-based carbon pricing system alongside the ambition to ensure an equitable sharing of the burden of the costs associated with carbon pricing have been the key selling points of the *Clean Energy Future Policy* (Department of Climate Change and Energy Efficiency, 2011) (hereafter *CEFP* or *Policy*). These objectives are based on undertakings that, firstly, the tax, and then the more flexible permit trading system, will be revenue neutral, and; secondly, that all revenues raised would fund the equity objective by offsetting the additional household costs that will result from the introduction of a carbon price, especially for low-income households, and minimising the disadvantage that could be faced by energy-intensive trade-exposed industries competing in international markets not covered by a comprehensive global carbon pricing system, as well as providing some assistance for industry to support the transition to a low-carbon economy.

Notwithstanding the potential for this program of reallocating the carbon revenue to invite political contest, modelling undertaken by the Federal Treasury on the compensation package most likely to deliver on the equity objective has defined the tone and the parameters of what has been represented as a strictly economic discourse (Treasury, 2011). Treasury modelling was particularly concerned with determining the level of compensation required to ease the regressive impact of a carbon price on low-income families. Based on a general equilibrium model that canvassed the inflationary effects of the carbon price across different sectors, Treasury's analysis informed the magnitude of compensation required to offset the monetary disadvantage likely to be experienced by different, primarily low-income, cohorts within the community (Commonwealth of Australia, 2011). The proposed compensation package was broadcast as a crucial political selling point in the effort to garner community support for the Act.

* Corresponding author. Tel.: +61 2 9351 2492; fax: +61 29351 8596.
E-mail address: stuart.rosewarne@sydney.edu.au (S. Rosewarne).

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Despite some airing of concerns about the adequacy of the compensation by the conservative opposition party, the substance of which, incidentally, was never really articulated in its preoccupation with scoring political points by deriding the merits of the carbon price as nothing more than a 'Great Big New Tax on Everything' (ABC, 2011), the general response to the proposed compensation package has been quite positive. The public commentary and assessments have generally lauded the package as a positive, if not more than positive, initiative to counter the regressive effects of carbon pricing. Here we seek to reappraise the bases for the expressions of confidence in the capacity of the *CEFP* to successfully marry the goals of putting a price on the emissions externality and equity. We briefly outline the policy debate background and the fundamentals of the *CEFP*, although we do not directly comment on the adequacy of the *Policy* as a mitigation measure.[1] The paper then discusses the Treasury model before assessing the appropriateness of the modelling of energy pricing and how industry and household are expected to respond to price increases. The assessment then turns to the broader economic implications of the *CEFP* compensation program and the opportunity costs of the continuing commitment to the development of an energy-intensive economy.

2. Climate Change and the Evolution of Emissions Trading System Policy

Debate on the merits, and form, of climate policy in Australia has raged since the early 1990s when the federal Labor government introduced a number of measures in response to the concerns about greenhouse gas emissions and global warming raised at the Earth Summit in Rio de Janeiro.[2] Throughout the following years, the distinguishing feature of the focus on climate change was to view the challenge as an economic problem, a problem associated with the failure of markets to capture the costs associated with the increasing atmospheric concentration of greenhouse gas emissions. Accordingly, policy solutions invariably drew upon options advanced in conventional environmental economic theory.[3] Market-based approaches, and specifically emissions trading systems, have been foremost among these because they are reckoned to be the most effective and efficient.[4] This preoccupation most obviously framed the *Stern Review* (Stern, 2007) and was also reflected in the focus of Australia's equivalent evaluation, the 2008 *Garnaut Climate Change Review* (Garnaut, 2011) which was commissioned by the federal Labor government and its State and Territory counterparts.[5] The *Garnaut Review* informed the government's proposed policy, *the Carbon Pollution Reduction Scheme* (CPRS).[6] While the government of the day was unable to garner sufficient support in the Federal Parliament to enact the policy, a re-elected Labor government, with the support of the Greens Party and other independent parliamentarians, succeeded in passing the *Clean Energy Future Act*. The *Clean Energy Policy* was modelled on the *CPRS* architecture.

However, represented as a policy proposal based firmly on the principles derived from environmental economic theory, the *CPRS* was not entirely free of political considerations. Policy modifications to the design of the *Clean Energy Future Act* provided further evidence of the purchase of political forces. Aligning the objective of economic growth with minimising the economic disadvantage that a carbon price would have on different economic actors was the defining feature of the engagement with policy design. These objectives were reflected in the premise of both the *Stern Review* and the *Garnaut Review*: emissions mitigation effected through an emissions trading system was considered to be entirely compatible with maintaining the continued growth of the economy, and economic growth enhanced policy makers' capacity to better manage the distributional consequences of the introduction of a carbon price. Following the lead of the *Garnaut Review*, the *CPRS* also sought to address equity concerns by proposing to offset some of the costs and disadvantages with pricing carbon through a series of compensatory measures. The successive reviews and draft policy proposals highlighted the extent to which economic rationale was increasingly subject to political considerations. Indeed, this was a natural corollary of the debate around 'equity' considerations.

The *Garnaut Interim Report* (2008a) and the *Garnaut Draft Report* (2008b) had recommended that equity considerations demanded that following the introduction of emissions trading a case could be made for compensating some sections of the economic community, but that compensation arrangements should address the interests of two cohorts: the additional costs incurred by households, and particularly low-income households, should be offset, and; energy-intensive trade-exposed industries should be compensated for the competitive disadvantage they would experience in the absence of a comprehensive global carbon pricing agreement and that this should be restricted to the actual disadvantage that these industries could demonstrate. The *Interim Report* explicitly rejected any compensation for stationery coal-fired electricity generators on the grounds that this sector could either absorb or pass on any costs resulting from the introduction of a carbon price to customers in the domestic market (Garnaut, 2008a, 50). However, in response to intense industry lobbying, the *CPRS Green Paper* expanded the reach of compensation that would be provided. It canvassed a more liberal method of compensating the energy-intensive trade-exposed

[1] The question of the adequacy of the *CEFP* in reducing emissions is properly the subject of a separate paper, though in part the present paper addresses some aspects of this question implicitly.

[2] The then Labor government established several industry-focused sustainable development working parties. Many of the working parties' recommendations were drawn together and incorporated into *A National Greenhouse Response Strategy* to develop a national approach to reducing Australia's greenhouse gas emissions. The Australian Greenhouse Office was established as the vehicle to explore possible measures, and one of its first initiatives was the issue of three working papers in 1992 that canvassed the merits of an emissions trading system. Based on the conventional environmental economic theory, the Office concluded that an emissions trading system would be the most efficient and cost-effective instrument for containing emissions. The government research instrumentality, the Australian Bureau of Agricultural and Resource Economics, did some preliminary modelling to estimate the likely effects of an emissions price across the economy. Meanwhile, a *Greenhouse Challenge Program* was adopted that emphasised voluntary engagement with increased energy efficiency as the immediate pathway to reducing emissions (Hamilton, 2001).

[3] The Howard government, which held office over 1999–2007, opposed putting a price on carbon until a comprehensive global agreement was in place, and refused to ratify the Kyoto Protocol. However, increasing industry pressure eventually prompted the government to revisit the possibility of an emissions trading system, and the Howard government set up an Emissions Trading Taskforce in December 2006 to report to the government by the end of May 2007. The Taskforce recommended the introduction of an emissions trading scheme, subject to the establishment of a comprehensive global emissions trading system.

[4] These notions of efficiency and effectiveness in relation to an emissions trading system have been subject to trenchant criticism (Lohman, 2010; Perry, 2012b; Rosewarne, 2007, 2010; Spash, 2007; and Spash, 2010)

[5] The *Garnaut Review* was commissioned by the Labor Party when it was in opposition in the federal sphere. At the time, however, Labor held government office in every State and Territory and the commission of the *Review* was supported by each of these governments. Labor was elected to federal parliament in the elections held in November 2007, and the *Garnaut Review* became the commission of the federal government with State and Territory support. An *Interim Report* (2008a) was released in February 2008 and a *Draft Report* (2008b) was issued in June 2008 and the *Final Review* (2008c) in December 2008.

[6] The *Carbon Pollution Reduction Scheme Green Paper* was released in July 2008 for public discussion, and the *Carbon Pollution Reduction Scheme White Paper*, which was the basis of the Bill that was voted on in the parliament, was released in December 2008.