# THE AUSTRALIAN CARBON POLLUTION REDUCTION SCHEME: WHAT ROLE FOR COMPLEMENTARY EMISSIONS REDUCTION REGULATORY MEASURES?

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It has been suggested[1] that where governments do commit to reducing greenhouse gas ('GHG') emissions, the following policy choices are available to them:

- information and education campaigns;
- various forms of regulations or standards, including renewable energy, energy efficiency and greenhouse gas reporting measures;
- fiscal measures, including grants, subsidies and rebates; and
- market-based instruments, including carbon taxes and emissions trading.

As the author has noted elsewhere,[2] the reason that an emissions trading scheme ('ETS') has been preferred over a carbon tax by all liable parties under the *Kyoto Protocol to the United Nations Framework Convention on Climate Change*[3], is that it is regarded as providing a theoretically optimum means of internalising environmental costs. Parties with obligations under an ETS will determine the most cost–effective means of reducing their GHG emissions. An ETS is deliberately technology–neutral, apparently allowing the market to

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1 See Department of Prime Minister and Cabinet, *Prime Ministerial Task Group on Emissions Trading Task Group Report* (2001) <http://pandora.nla.gov.au/tep/72614> at 15 August 2008. This report was prepared by a joint government–business Task Group on Emissions Trading on behalf of the former Prime Minister of Australia, John Howard.

2 See, eg, Rosemary Lyster, 'Chasing Down the Climate Change Footprint of the Public and Private Sectors: Forces Converge – Part II' (2007) 24 *Environmental Planning and Law Journal* 450; Rosemary Lyster, 'Separating the Wheat from the Chaff: Regulating Greenhouse Gases in a Climate of Uncertainty' (2007) 2 *Carbon and Climate Law Review* 87.

3 Opened for signature 16 March 1998, 37 ILM 22 (entered into force 16 February 2005) ('*Kyoto Protocol*').

discover the least cost opportunities for complying with emissions caps.[4] It is also likely to produce price signals that encourage an optimal mix of greenhouse sensitive energy services at the lowest cost to consumers.[5] Where the cost of energy services does increase as a result of an ETS, price signals should also encourage household and industrial users of electricity to adopt appropriate emissions reduction strategies. Theoretically then, market–oriented ETSs provide market-based drivers for the development and adoption of energy sources that are less greenhouse intensive.[6]

While emissions trading is emerging as the optimal strategy for reducing GHG emissions, there seems to be a difference of opinion as to whether other emissions reduction measures should, or indeed could, coexist with an ETS.[7] When the Stern Review Report recommended the establishment of a carbon price, it also emphasised the importance of policies to stimulate the development of low carbon technologies,[8] and the removal of barriers to behavioural change.[9] Stern concluded that leaving out any one of the recommended elements for dealing with climate change will significantly increase the costs of any action which is taken to reduce GHG emissions. This article highlights the complementary measures which currently exist or are under development in Australia, and considers various perspectives on whether they are needed to reduce emissions from the stationary energy sector.

## I THE CARBON POLLUTION REDUCTION SCHEME

The author has written elsewhere about the design of emissions trading schemes.[10] Here, the design principles contained in the Rudd Government's Green Paper on the Carbon Pollution Reduction Scheme ('CRPS'), expected to commence in 2010, are discussed briefly before analysing whether

4 See National Emissions Trading Taskforce, *Possible Design for a National Greenhouse Gas Emissions Trading Scheme* (2006) <http://thecabinetoffice.clients.squiz.net/__data/assets/pdf_file/0011/2018/Discussion_Paper_-_Preliminaries.pdf> at 15 August 2008. This report was prepared on behalf of the State and Territory governments in Australia to assist them with designing an inter-jurisdictional emissions trading scheme in the absence of federal regulation by the former Howard Government.

5 See David Mills, 'Reducing Greenhouse Gas Emissions Through Electricity Industry Reform: A Market–Oriented Emissions Reduction Scheme' (2000) 12 *World Resources Review* 58, 72.

6 See Jennifer Yelin-Kefer, 'Warming up to an International Greenhouse Gas Market: Lessons from the US Acid Rain Experience' (2001) 20 *Stanford Environmental Law Journal* 221.

7 See, eg, Productivity Commission, *What Role for Policies to Supplement an Emissions Trading Scheme?: Submission to the Garnaut Climate Change Review* (2008) <http://www.pc.gov.au/research/submission/garnaut> at 15 August 2008.

8 Sir Nicholas Stern, *Stern Review on the Economics of Climate Change: Executive Summary* (2006) HM Treasury <http://www.hm-treasury.gov.uk/media/4/3/Executive_Summary.pdf> at 15 August 2008.

9 Ibid xx.

10 Lyster, above n 2.

complementary measures are desirable.[11] The Australian Government is committed to achieving a 60 per cent reduction in GHG emissions by 2050. The 2020 target will be released in the Government's White Paper[12] in accordance with the work of the Garnaut Climate Change Review ('Garnaut Review') and modelling undertaken by the Treasury. Garnaut has recently proposed that Australia's most important task is to secure a global agreement to limit emissions to no more than 550 parts per million $CO_2$-e. Under this scenario, Australia should commit to a 10 per cent reduction (or 30 per cent in per capita terms) by 2020 and an 80 per cent reduction (90 per cent per capita) by 2050 from 2000 levels. If the international community agreed to stabilise emissions at 450ppm, which Garnaut regards as unlikely, Australia's emissions would need to be reduced by 25 per cent by 2020 (40 per cent per capita), falling to 90 per cent by 2050 (95 per cent per capita). However, if high income countries and China do not reach an international agreement on GHG emissions reduction targets, Australia should commit to an emissions reduction target of 5 per cent by 2020 (25 per cent per capita), and 60 per cent by 2050.[13]

Depending on the target adopted by the Government, scheme caps will be set for five years in advance in order to gradually achieve the target and will be extended by one year, every year, in order to maintain a constant five-year cap horizon. Beyond the five-year period of scheme caps, 'gateways' will be proposed to extend for 10 years beyond the scheme caps, and to be extended by another five years, every five years. As a transitional measure, the Government will provide an indicative national emissions trajectory for 2010–13 in the White Paper, taking into account the state of international negotiations. Similarly, in 2010 the Government will announce a further two years of the trajectory up to and including 2014–15, or to the end of any new international commitment period, whichever is longer.

The Green Paper proposes that the following sectors be covered by the Scheme: stationary energy; transport (indirect fuel use); fugitive emissions; industrial processes; waste; and forestry (on an opt-in basis). The threshold for liability is the emission of 25 000 tonnes of $CO_2$-e. The agricultural sector is currently excluded, although it is proposed that this sector might be included in 2015 with a final decision to be made in 2013.

Permits must be surrendered to discharge Scheme obligations, and may be traded. As with any environmental regulation, the question is whether an

11 Australian Government Department of Climate Change, *Carbon Pollution Reduction Scheme Green Paper* (2008) ('*Green Paper*') <http://www.climatechange.gov.au/greenpaper/report/pubs/greenpaper.pdf> at 15 August 2008 ('*Green Paper*').

12 To be released in early December 2008.

13 See Garnaut Climate Review, *Targets and Trajectories – Draft Supplementary Report: September* (2008) <http://www.garnautreport.org.au/reports/Garnaut%20Review%20-%20Targets%20and%20trajectories%20-%20Supplementary%20Draft%20Report%20-%205%20Sept%202008.pdf> ' at 14 September 2008. See also Ross Garnaut, *Garnaut Climate Review*: *Final Report* (2008) <http://www.garnautreport.org.au/reports/Garnaut%20Climate%20Change%20Review%20-%20Final%20Report%20-%2030%20September%202008%20(Full%20version).pdf> at 3 October 2008.

appropriate penalty should be imposed to encourage compliance, bearing in mind that with an ETS, the level of the penalty must be set at least as high as the marginal cost of abatement, taking into account any transaction costs associated with compliance. Otherwise, liable entities would find it cheaper to pay the penalty than to comply with the regulations. The Government has indicated that it intends to impose a price cap which is higher than the carbon price until 2015, although details will only emerge with release of the proposed legislation in December 2008.

Permits will be auctioned four times in each financial year on the basis of an ascending clock auction. Permits from several years may be auctioned at any of these auctions. Compensation, probably by way of a free allocation of permits, will be provided to emissions–intensive trade–exposed industries, coal-fired power stations and the agriculture sector when, and if, they are included in the Scheme. Around 30 per cent of available permits will be allocated to emissions–intensive trade–exposed industries on a sliding scale as follows: 90 per cent compensation for companies which have an emissions intensity above 2000 tonnes $CO_2$-e and 60 per cent for those with an emissions intensity between 1500–2000 tonnes $CO_2$-e. Once and for all compensation to coal-fired power stations will be calculated on the basis of generation capacity and whether the generator uses brown or black coal. Compensation to coal-fired generators is controversial and was not recommended by the Garnaut Review. According to Garnaut,[14] generators will be in a position to pass on the permit price. The unlimited banking of permits will be allowed, while up to 5 per cent of required permits may be borrowed from future years.

It is proposed that the offset credits[15] generated from *Kyoto Protocol* compliant Clean Development Mechanism, Joint Implementation, and Land Use, Land Use Change and Forestry projects will be recognised. However, the proposed broad coverage of the Scheme means that the generation of domestic offset credits can only occur in the uncovered sectors such as forestry and agriculture (until perhaps 2015). In addition, the Government is concerned that offset schemes are administratively complex, and that the considerable judgment required to determine baselines[16] is inherently subjective, with the resultant risk that ETSs fail to achieve genuine abatement.

Meanwhile, carbon emissions reduction activities resulting from carbon capture and storage projects may be 'offset' or 'netted out' by liable coal-fired generators, although liability for fugitive emissions through transporting carbon

14 Garnaut Climate Change Review, *Interim Report to the Commonwealth, State and Territory Governments of Australia* (2008) <http://www.garnautreview.org.au/CA25734E0016A131/WebObj/GarnautClimateChangeReviewInterimReport-Feb08/$File/Garnaut%20Climate%20Change%20Review%20Interim%20Report%20-%20Feb%2008.pdf> at 15 August 2008.

15 An offset credit, generated from various emissions reduction activities, can be surrendered to make up the difference between the total allowable emissions by a liable party, and the number of permits that it holds at the end of a compliance period.

16 Offset credits can only be generated for emissions below the 'baseline', that is, GHG emissions reductions that would have occurred even in the absence of a project.

to the storage facility would be imposed on the operator of the carbon capture and storage facility.

Two new funds will be established under the Scheme. They are: a Climate Change Action Fund which will assist businesses to adjust to a low carbon economy by funding investment in low carbon technologies, industrial energy efficiency, and education and awareness for small to medium size businesses; and an Electricity Sector Adjustment Scheme, to provide assistance to coal-fired generators. It should also be remembered that under the National Clean Coal Fund, established under the 2008–9 Budget, $50 million will be allocated to demonstrate carbon capture and storage.[17]

It is assumed that the New South Wales Greenhouse Gas Abatement Scheme ('GGAS') and the Queensland 13 per cent Gas Scheme[18] will discontinue with the commencement of the CPRS.[19]

## II THE ROLE OF COMPLEMENTARY MEASURES

The Productivity Commission has stated that additional measures could significantly increase abatement costs, yet would provide no additional emissions reductions unless they are carefully conceived.[20] In its view, an ETS could shoulder much of the abatement effort, meaning that other policies are only needed to fill the gap.[21] This is because the market is likely to achieve an efficient outcome through the decentralised price–responsive actions of everyone in the economy. Similarly, the Garnaut Review states that the CPRS is expected to deliver the required emissions reductions and that other policies to reduce emissions can have no useful role once the emissions trading scheme is in place.[22]

With respect to whether complementary measures to the CPRS are needed to achieve GHG emissions reductions from the stationary energy sector, regulatory measures targeting energy efficiency and renewable energy will be assessed. Here, the activities of the Ministerial Council on Energy (under the auspices of the Council of Australian Governments) and the Australian Energy Market Commission, the Australian Government and State government initiatives will be discussed.

17 See Australian Government, *Budget Paper No. 2 Budget Measures 2008–09* (2008) <http://www.budget.gov.au/2008-09/content/bp2/html/expense-06a.htm> at 15 August 2008.

18 For a more comprehensive discussion of the GGAS see Rosemary Lyster, 'Chasing Down the Climate Change Footprint of the Public and Private Sectors: Forces Converge' (2007) 24 *Environmental Planning and Law Journal* 281.

19 *Green Paper*, above n 11, 426.

20 Productivity Commission, above n 7, xiii.

21 Ibid.

22 Garnaut Climate Change Review, *Draft Report: June 2008* (2008) <http://www.garnautreview.org.au/CA25734E0016A131/WebObj/GarnautClimateChangeReview-FULLDraftReport,4July2008/$File/Garnaut%20Climate%20Change%20Review%20-%20FULL%20Draft%20Report,%204%20July%202008..pdf> at 15 August 2008.

## III DEMAND–SIDE MANAGEMENT AND ENERGY EFFICIENCY

The International Energy Agency ('IEA'), in its advice to the 2008 G8 meeting, has identified energy efficiency as the principal strategy for achieving the global GHG emissions reduction target of 50 per cent below 1990 levels by 2050.[23] Energy efficiency alone will deliver 54 per cent of the necessary reductions by 2050. The IEA proposes energy efficiency policy actions across seven priority areas, under which 25 specific actions are recommended.[24] The IEA states that a cohesive and full suite of measures must be implemented by governments because the barriers to energy efficiency are pervasive, dispersed and complex, and no single policy will be effective. The IEA recommends National Energy Efficiency Strategies and Energy Efficiency Goals for each sector of the domestic economies. Furthermore, governments, by establishing the necessary legal and institutional infrastructure, should ensure that both voluntary and mandatory energy efficiency policies are adequately monitored, enforced and evaluated so as to ensure maximum compliance.

Here the various initiatives to achieve demand–side management[25] and energy efficiency in Australia are discussed in the context of evaluating whether they are needed to supplement the CPRS.[26]

### A Desirability of Energy Efficiency Measures

The Productivity Commission believes that although price increases resulting from the CPRS will strengthen incentives for greater energy efficiency, there may be some potential for additional policies addressing barriers so as to reduce abatement costs.[27] In particular, the Productivity Commission is supportive of mandatory energy–efficiency labelling and is not opposed to energy efficiency target schemes, such as those mentioned below, even though they overlook the fact that the CPRS will raise prices and this is the best mechanism to encourage efficiency.[28]

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23 In contrast, carbon capture and storage is likely to contribute 19 per cent, nuclear 6 per cent and renewables 21 per cent: see International Energy Agency, *IEA Work for the G8: 2008 Messages* (2008) <http://www.iea.org/G8/2008/G8_IEAwork_2008.pdf> at 15 August 2008.

24 See International Energy Agency, *In Support of G8 Plan of Action: Energy Efficiency Policy Recommendations* (2008) <http://www.iea.org/G8/2008/G8_EE_recommendations.pdf> at 15 August 2008.

25 Demand–side management refers to technologies, products and programs that involve deliberately reducing buyer demand for electricity by substituting conservation on-site for fuel use. Demand–side management programs cover a variety of policies under which utilities have been directed to subsidise or otherwise encourage customers to install appliances that use less electricity to perform their functions. This will conserve fossil fuels, limit the environmental externalities caused by their use, and limit the need to build new power plants.

26 See Timothy Brennan, *Demand–Side Management Programs Under Retail Electricity Competition* (1998) Resources for the Future <http://www.rff.org/documents/RFF-DP-99-02.pdf> at 15 August 2008.

27 See Productivity Commission, above n 7, xviii.

28 Ibid 36–40.

The Garnaut Review, meanwhile, recognises that as a result of misplaced incentives, and externalities in gathering and analysing information, there are market failures in end-use efficiency. In this case, government intervention is justified in subsidising the provision of information related to reducing the demand for energy, and adopting regulatory responses where these are the most efficient means of correcting market failures in information.[29]

The most recently released report to assess the need for energy efficiency measures is that produced by the Allen Consulting Group[30] and commissioned on behalf of the Ministerial Council on Energy. It seems to refute the Productivity Commission's claim that price rises associated with the CPRS will result in energy efficiency. The Allen Consulting Group was asked to provide a cost–benefit analysis of the possible implementation of a mandatory energy efficiency program focusing on large energy users. The report states that under an ETS, energy price increases over the next decade are unlikely to direct behaviours towards energy efficiency improvement in the business sector. In addition, energy consumption is relatively unresponsive to price changes. In the absence of complementary measures, the Allen Consulting Group predicts that energy investment behaviour is likely to exhibit similar inertia.[31] The report notes that electricity price increases, associated with emission prices in the $25–$30 range by 2020, are likely to be around 10 per cent in the eastern States and 30 per cent in the west. Over a ten year time frame, this is likely to see the share of energy in total costs for the majority of Australian businesses shift from 6 per cent to 7 or 8 per cent, apart from in the aluminium smelting, paper manufacturing and chemical production sectors where the share of energy in total costs is typically 20 per cent. The question, therefore, is whether relatively insignificant changes in energy prices obviate the need for more focused energy efficiency measures aimed at overcoming information and innovation barriers within business.[32]

### B Activities of the Australian Government

One of the Howard Government's initiatives on energy efficiency was the enactment of the *Energy Efficiency Opportunities Act 2006* (Cth) which requires businesses using more than half a petajoule of energy per year to assess their energy efficiency opportunities and report publicly on their assessments. They are also required to submit assessment plans every five years. The Howard Government also introduced the *National Greenhouse and Energy Reporting Act 2007* (Cth) which establishes a single, national framework for reporting GHG

29 See International Energy Agency, above n 24, 355.

30 The Allen Consulting Group, *Potential Mandatory Energy Efficiency Investment Requirements: Cost Benefit Analysis of Program Options* (2008) <http://www.allenconsult.com.au/publications/download.php?id=325&type=pdf&file=1> at 28 August 2008.

31 Ibid vii.

32 Ibid 85.

emissions, abatement actions and energy consumption and production by corporations from 1 July 2008.[33]

Meanwhile, a private member's Bill entitled 'National Market Driven Energy Efficiency Target Bill 2007 (Cth)' is currently before the Australian Parliament. The Bill seeks to amend the *Renewable Energy (Electricity) Act 2000* (Cth)[34] by imposing an obligation on retailers of electricity to purchase and surrender energy efficiency certificates.

## C Activities of the Australian Energy Market Commission and the Ministerial Council on Energy

### 1 *Australian Energy Market Commission Considers Demand–Side Participation Rule Change*

On 6 November 2007, the Total Environment Centre proposed a rule change to the National Electricity Rules, which govern the National Electricity Market, to encourage demand management within the transmission networks.[35] The Total Environment Centre believes that cost effective demand management should be the priority consideration for meeting energy demands rather than inefficient network augmentation, and that incentives for demand management should be subject to national regulation instead of being left to the discretion of States. On 16 May 2008, the Australian Energy Market Commission ('AEMC') released an Issues Paper for public consultation on Stage Two of the Review of demand side participation in the National Electricity Market.[36]

### 2 *Ministerial Council on Energy's National Framework for Energy Efficiency*

In November 2002, the Ministerial Council on Energy ('MCE') endorsed the development of a National Framework for Energy Efficiency promoting demand–side management in the residential, commercial and industrial sectors,

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33 Note that in a joint press release Federal Resources and Energy Minister Martin Ferguson and Climate Change Minister Penny Wong announced proposed amendments to the *Energy Efficiency Opportunities Act 2006* (Cth) to enable participating companies to streamline reporting requirements for the *Energy Efficiency Opportunities Act 2006* (Cth) and the *National Greenhouse and Energy Reporting Act 2007* (Cth): Martin Ferguson and Senator Penny Wong, 'New system to streamline energy reporting' (Press Release, 26 April 2008) <http://www.environment.gov.au/minister/wong/2008/pubs/mr20080428a.pdf> at 1 September 2008.

34 See National Market Driven Energy Efficiency Target Bill 2007 (Cth).

35 Total Environment Centre, *Rule Change Package: Demand Management and Transmission Networks* (2007) Australian Energy Market Commission <http://www.aemc.gov.au/pdfs/reviews/Demand%20Management/proposal/000Total%20Environment%20Centre%20Rule%20change%20proposal.pdf> at 15 August 2008.

36 AEMC, *Review of the Demand–Side Participation in the National Electricity Market: Stage 2: Issues Paper* (2008) <http://www.aemc.gov.au/pdfs/reviews/Review%20of%20Demand-Side%20Participation%20in%20the%20National%20Electricity%20Market/aemcdocs/004Stage%202%20-%20Issues%20Paper.pdf> at 15 August 2008.

and also seeks to overcome the barriers and challenges to energy efficiency measures. The National Framework is divided into Stage One[37] and Stage Two.[38]

### 3 *MCE Roll-out of Smart Meters*

Following its cost–benefit analysis of the roll-out of smart meters,[39] the MCE has resolved that there should be a national regulatory framework for smart meters, with distribution network service providers being exclusively obliged to roll out smart meters to residential, and other small customers in mandated jurisdictions. Distribution network tariffs should enable the distribution network service providers to recover the costs associated with the roll-out and pass on any resulting cost efficiencies to customers. NSW and Victoria will begin to deploy smart meters over the next few years while other jurisdictions will conduct further reviews and assessments of the matter, with a further national review of deployment timelines to be conducted in 2012.

## D Activities of State Governments

### 1 *Energy Efficiency Obligations on Corporations*

In 2005, the New South Wales Government inserted a new Part 6A into the *Energy and Utilities Administration Act 1987* (NSW) which establishes the 200 companies in New South Wales which consume the most energy as 'designated energy users', requiring them to prepare an energy savings action plan.

The *Clean Energy Act 2008* (Qld) requires 'a participating business' to register, undertake an energy audit and prepare an energy savings plan which must be published in a way that is accessible to the public.[40] A 'participating business' is a person which consumes between 10–500 terajoules of energy per annum.[41]

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37 Stage One has resulted in the development of integrated policy packages covering: residential and commercial buildings; commercial/industrial and government energy efficiency; appliance and equipment energy efficiency; trade and professional training and accreditation; commercial/industrial sector capacity building; and consumer and finance sector awareness; see National Framework for Energy Efficiency, *NFEE Stage One* (2004) <http://www.nfee.gov.au/about_nfee.jsp?xcid=66> at 15 August 2008.

38 In December 2007, the MCE agreed on the following Stage Two package: expanding and enhancing the Minimum Energy Performance Standards program; a heating, ventilation and air conditioning high efficiency systems strategy; the phase-out of inefficient incandescent lighting; government leadership though green leases; and the development of measures for a national hot water strategy; see National Framework for Energy Efficiency, *NFEE Stage Two* (2004) <http://www.nfee.gov.au/about_nfee.jsp?xcid=67> at 15 August 2008.

39 MCE, *Smart Meters: Information Paper on the Development of an Implementation Plan for the Roll-Out of Smart Meters* (2007) <http://www.mce.gov.au/assets/documents/mceinternet/SmartMetersInfoPaper20070123163300.pdf> at 15 August 2008.

40 *Clean Energy Act 2008* (Qld) s 16.

41 *Clean Energy Act 2008* (Qld) s 6.

## 2 *Energy Efficiency Obligations on Retailers*

Under the *Victorian Energy Efficiency Target Act 2007* (Vic), gas and electricity retailers with at least 5000 customers, are required to surrender energy efficiency certificates to meet their emissions targets. The Scheme commences on 1 January 2009 and expires in 2030. For the first three years, the target is a reduction of 2.7 million tonnes of $CO_2$-e per annum. Energy efficiency certificates, which represent one tonne of $CO_2$-e, may be generated by an accredited person if the activity will result in a reduction in GHG emissions that would not otherwise have occurred if the activity was not undertaken. These include: the modification of an appliance, structure or equipment; the replacement of a system or equipment; or the purchase and/or installation of an appliance or equipment that will result in reduced GHG emissions. A consumer may assign the rights to create the certificates to another person, such as an energy retailer or an appliance retailer. The Act establishes a market-based scheme in which energy retailers are able to trade the energy efficiency certificates they generate. Retailers who fail to acquire sufficient certificates must purchase certificates from other retailers or they will be liable for a shortfall penalty. The Act empowers the Essential Services Commission to administer and ensure compliance with the requirements under the Act. In March 2008, the Commission released the *Victorian Energy Efficiency Target Scheme Guidelines: Framework Paper* for discussion.[42]

A similar scheme has been proposed by the South Australian Government with the release of a consultation paper entitled *South Australian Residential Energy Efficiency Scheme* in February 2008.[43] This Scheme will also place energy efficiency obligations on retailers.

Meanwhile, although the NSW Government intends to terminate the non-energy efficiency elements of the GGAS upon the commencement of the CPRS, it has decided to maintain and enhance the energy efficiency component of GGAS, as the Demand–Side Abatement component of GGAS has been successful in delivering low cost energy efficiency activity.[44]

## 3 *The Future of Residential Price Regulation*

Although the Allen Consulting Group does not believe that the increase in electricity prices associated with an emissions trading scheme is likely to impact significantly on business, there is still the belief that more expensive electricity is

42 Essential Services Commission, *Victorian Energy Efficiency Target Scheme Guidelines: Framework Paper* (2008) <http://www.esc.vic.gov.au/NR/rdonlyres/51CCBAD3-B541-4812-BB72-0FBD14ED2633/0/DDPVEETGuidelinesFrameworkPaperfinalpdfversion20080304.pdf> at 15 August 2008.

43 Government of South Australia Department for Transport, Energy and Infrastructure, *South Australian Residential Energy Efficiency Scheme: Consultation Paper* (2008) <http://www.transportsa.com.au/alt-host/assets/pdf_file/0016/23344/energy_efficiency_scheme_consultation_paper.pdf> at 15 August 2008.

44 New South Wales Government Department of Water and Energy, *NSW Energy Efficiency Trading Scheme* (2008) <http://www.dwe.nsw.gov.au/energy/sustainability_greenhouse_gas_forum.shtml> at 15 August 2008.

likely to reduce demand in the domestic sector. However, the question is what the role of price regulation will be under the CPRS, given that such regulation might prevent retailers, facing increased electricity costs, from passing on the full cost to consumers. While each State and Territory has introduced retail competition, all have maintained a retail price cap for residential consumers.[45] On 2 June 2006 the MCE requested the AEMC to review the effectiveness of retail competition in electricity and gas retail markets in each jurisdiction (except Western Australia), and to report publicly on the results.[46] Importantly, where the AEMC finds that competition is effective, it must provide advice on ways to phase out retail price regulation. The AEMC has completed its review of Victoria and recommended the cessation of regulation of standing offer retail prices for residential customers as of 1 January 2009.[47] On 4 July 2008, the AEMC announced that it is beginning consultation on this issue in South Australia.[48] Presumably, the cessation of retail price regulation and the price rises associated with the CPRS will result in some energy efficiency responses in the residential sector.

## IV RENEWABLE ENERGY OBLIGATIONS

While the Productivity Commission and the Garnaut Review have some sympathy for energy efficiency measures standing alongside the CPRS, they are less supportive of measures which mandate a percentage of renewable energy in Australia's fuel mix. With regards to a Renewable Energy Target ('RET'), the Productivity Commission believes such a measure is not well–targeted to developing new renewable energy technologies because the quota is filled with least-cost technologies which are already mature, such as wind. Furthermore, a federally mandated RET of 20 per cent by 2020, discussed below, could have a substantial impact on abatement costs and reduce incentives to abate emissions in ways that do not meet the eligible technology criteria. As well, a RET would displace other energy generation sources, particularly gas, which in turn has abatement cost implications.[49] The Productivity Commission concludes that a RET combined with the CPRS would not encourage any additional abatement,

45 See Lynne Chester, 'Who Benefits From the Restructuring of the Australian Electricity Sector?' (2007) 41(4) *Journal of Economic Issues* 981, 984.

46 Note also that the MCE Standing Committee of Officials is currently tasked with establishing a single national framework for regulating the retail supply of energy (both electricity and gas) to customers – a National Energy Customer Framework.

47 See Australian Energy Market Commission, *Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in Victoria: Second Final Report* (2008) <http://www.aemc.gov.au/pdfs/reviews/Review%20of%20the%20Effectiveness%20of%20Competition%20in%20the%20Electricity%20and%20Gas%20Retail%20Markets%20in%20Victoria/second%20draft%20report/aemcdocs/000Second%20Final%20Report.pdf> at 15 August 2008.

48 See Australian Energy Market Commission, *AEMC Starts Consultation on the Effectiveness of Energy Retail Competition in South Australia* (2008) <http://www.aemc.gov.au/media.php?article=>.

49 For example, by 2010, natural gas combined cycle generation (with less than the 1/2 emissions of black coal) is projected to cost $35–45 per mWh. Renewable generation is projected to cost $55–85 for wind and $240–400 per mWh for photovoltaics.

but would impose additional administration and monitoring costs. Furthermore, a RET would result in electricity prices that are higher than without a RET, and market coordination about the appropriate time to introduce low emissions technologies would be overridden.[50]

Similarly, the Garnaut Review prefers the CPRS over a RET, because, while the CPRS may lead to increased investment in renewable energy production, it may also lead to fuel switching and the deployment of energy efficient operating practices. The CPRS, rather than a RET, may deliver emissions reductions at the lowest cost to the community and business. The Garnaut Review will consider the likely impacts of a RET on permit prices and mitigation under the CPRS in a supplementary draft report. [51]

### A Australian Government Initiatives

As is well known, the Howard Government introduced a Mandatory Renewable Energy Target under the *Renewable Energy (Electricity) Act 2000* (Cth). The object of the Act is to encourage an *additional* 2 per cent generation of electricity from renewable sources by 2010. The Rudd Government has increased the target to 20 per cent by 2020. In July 2008, a discussion paper entitled *Design Options for the Expanded National Renewable Energy Target Scheme*[52] was released. It proposes to merge all of the State-based renewable energy targets under amended legislation to be enacted in mid-2009. The expanded scheme will provide interim stimulus for renewables-based electricity during the early years of a CPRS, and will be phased out between 2020 and 2030, as electricity prices rise under an ETS to allow renewables-based electricity to compete without the price support provided by the RET. The existing NSW Renewable Energy Target of 15 per cent end-use consumption by 2020 with an interim target of 10 per cent by 2010, and the Victorian Renewable Energy Target which requires 10 per cent renewable end-use consumption by 2016 will be subsumed within the National Renewable Energy Target.

In addition, the Renewable Energy (Electricity) Amendment (Feed-in-Tariff) Bill 2008 (Cth) was introduced into the Senate on 15 May 2008. A new part 3A prescribes that electricity retailers must permit the feeding-in of electricity into the grid by owners of qualifying generators.

### B State Government 'Feed-In' Initiatives

The South Australia and Victorian Governments have introduced 'feed-in' legislation to assist renewable energy generators to compete in the energy market, and the ACT government is considering following suit. In Victoria, a

50 See Productivity Commission, above n 7, xvii.

51 See International Energy Agency, above n 24, 352–3.

52 See COAG Working Group on Climate and Water, *Design Options for the Expanded National Renewable Energy Target Scheme,* (2008) Australian Government Department of Climate Change <http://www.greenhouse.gov.au/renewabletarget/consultation/pubs/ret-designoptions.pdf> at 15 August 2008.

new Division 5A has been inserted into Part 2 of the *Energy Legislation Act 2000* (Vic) by the *Energy Legislation Amendment Act 2007* (Vic). The Act requires retailers to purchase electricity from small wind, solar, hydro and biomass energy generation facilities and to publish the prices and terms and conditions of the purchase (feed-in tariffs) in the Government Gazette and on the retailers' websites.[53] A small generating facility is one which has an installed or name plate generating capacity of less than 100kWs.[54] The Essential Services Commission can review the prices, upon the Minister's request, if the Minister believes that the prices offered by a retailer are unfair or unreasonable.[55] In March 2008, the Commission issued a Guidance Paper entitled *Methodology for Assessment of Fair and Reasonable Feed-In Tariffs and Terms and Conditions*.[56]

The South Australian 'feed-in' legislation was enacted under the *Electricity (Feed-In Scheme – Solar Systems) Amendment Act 2008* (SA).[57] This places an obligation on holders of a distribution network licence, which distributes electricity to more than 10,000 customers, to allow customers to feed into the network excess electricity generated by a small photovoltaic generator. This means a photovoltaic system with capacity up to 10kVA for a single phase connection, and up to 30kVA for a three phase connection. The account of the customer must be credited at the rate of $0.44kWh for any electricity fed into the network. Similar legislation is currently under consideration in the ACT by virtue of the Electricity Feed-In (Solar Premium) Bill 2007 (ACT).[58]

The *Clean Energy Act 2008* (Qld), meanwhile, amends the *Electricity Act 1994* (Qld) by inserting a new section 44 to provide that a distribution entity must credit any electricity that is produced by a qualifying generator and being supplied to the network by a small customer in excess of his or her usage, against the charges payable by a small customer at the rate of $0.44 per kilowatt hour. It also inserts a new section 55DB to prescribe that a retail authority must reduce the amount payable by a small customer by any credit given by the distribution entity under the new section 44. Finally, it prescribes matters relating to the feed-in solar electricity scheme, including that it is a condition of a special approval that the holder must comply with sections 44 and 55DB, and that both provisions will expire on 1 July 2028.

53 *Energy Legislation Amendment Act 2007* (Vic) s 40G.
54 *Energy Legislation Amendment Act 2007* (Vic) s 40F.
55 *Energy Legislation Amendment Act 2007* (Vic) s 40J.
56 See Essential Services Commission, *Methodology for Assessment of Fair and Reasonable Feed-In Tariffs and Terms and Conditions* (2008) <http://www.esc.vic.gov.au/NR/rdonlyres/DB03BC1F-DBDA-4FF2-BEF1-DA971CA438AB/0/FeedinTariffsFinalGuidancePaper20080219.pdf> at 15 August 2008.
57 See Electricity (Feed-In Scheme-Solar Systems) Amendment Bill 2008 (SA).
58 See Electricity Feed-In (Solar Premium) Bill 2007 (ACT).

## V CONCLUSIONS

There are a number of reasons for the patchwork arrangement of measures which may now be regarded as complementary to the CPRS. First, in the absence of a carbon price signal being imposed by a domestic ETS during the Howard Government era, state governments took it upon themselves to develop ETSs, renewable energy targets, renewable energy 'feed-in' schemes and energy efficiency targets. Also there has been ongoing reform of the National Electricity Market.[59] This has resulted in bodies like the MCE assessing the barriers to embedded generation and energy efficiency. As has been discussed, the AEMC is also currently considering a rule change to require greater energy efficiency in the transmission sector of the National Electricity Market. Finally, although the Howard Government refused until very late in the day, to introduce a domestic ETS, it did require an additional 2 per cent uptake of renewable energy under the *Renewable Energy (Electricity) Act 2000* (Cth), which is now being expanded by the Rudd Government.

This article has attempted to give a comprehensive overview of all of these measures in order to consider their relevance in the face of a CPRS. What seems clear is that advisors to the Government, including the Productivity Commission, the Garnaut Review and the Allen Consulting Group, acknowledge the positive complementary role of various types of energy efficiency measures. This is just as well given the IEA's conclusion that energy efficiency will deliver 54 per cent of GHG reductions by 2050. They are less supportive of the continued existence of a RET, and presumably 'feed-in' laws. However, the Australian Government has made it clear that a RET is an intrinsic part of its GHG emissions reduction strategy, until it is phased out between 2020–30 once emissions trading matures and prices become sufficient to ensure that a RET is no longer required.[60] It is worth remembering at this point that the European Union, which has an established emissions trading scheme, has adopted an integrated energy and climate change policy package which includes: cutting greenhouse gases by 20 per cent (30 per cent if international agreement is reached); saving 20 per cent of energy consumption through increased energy efficiency and boosting renewable energy sources by 20 per cent, all by 2020.

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59 See Rosemary Lyster, 'The Implications of Electricity Restructuring for a Sustainable Energy Framework' (2003) 20(5) *Environmental Planning and Law Journal* 359; Rosemary Lyster, 'Electricity Privatisation in New South Wales: What are the Climate Change and Broader Sustainability Implications' (2008) 25(4) *Environmental Planning and Law Journal* 229.

60 See COAG Working Group on Climate Change and Water, above n 52, 4.

In the lead-up to the proposed establishment of the CPRS, and during the operation of the Scheme, it will be very interesting to observe which complementary measures survive and which are regarded as superfluous to the CPRS.