



**Submission to the Senate Select Committee on Climate  
Policy Inquiry into Policies Related to Climate Change**

April 2009

## Contents

1	Introduction & Background .....	2
1.1	EUAA Interest in Climate Change Policy.....	2
1.2	Modelling the Impacts on Energy Users .....	3
2	Choice of an ETS .....	5
2.1	Treasury Modelling of the Impacts of the CPRS.....	6
2.2	ETS or Carbon Tax? .....	6
2.3	CPRS Design Issues .....	8
2.3.1	Assistance to ‘Strongly Affected Industries’ .....	9
2.3.2	Compensation to EITE Industries and Carbon Leakage .....	10
2.3.3	Jobs and R&D.....	11
2.3.4	Australia’s Comparative Energy Advantage .....	11
3	Complementary Measures .....	12
3.1	20 Per Cent Renewable Energy Target .....	12
3.2	Research and Development .....	13
3.3	Energy Efficiency .....	14
3.4	Demand Management .....	15

# 1 Introduction & Background

The Energy Users Association of Australia (EUAA) welcomes the opportunity to provide a submission to Senate Select Committee on Climate Policy Inquiry into Policies Relating to Climate Change. The EUAA welcomes the Inquiry, including the broad remit as given by the terms of reference to consider:

- a) The choice of emissions trading as the central policy to reduce Australia's carbon pollution, taking into account the need to (i) reduce carbon pollution at the lowest economic cost; (ii) put in place long term incentives for investment in clean energy and low emission technology; and (iii) contribute to a global solution to climate change.
- b) The relative contributions to overall emission reduction targets from complementary measures, such as renewable energy, feed-in laws, energy efficiency and the protection or development of terrestrial carbon stores such as native forests and soils.
- c) Whether the Government's Carbon Pollution Reduction Scheme is environmentally effective, in particular with regard to the adequacy or otherwise of the Government's 2020 and 2050 greenhouse gas emission reduction targets in avoiding dangerous climate change.
- d) An appropriate mechanism for determining what a fair and equitable contribution to the global emission reduction effort would be.
- e) Whether the design of the proposed scheme will send appropriate investment signals for green collar jobs, research and development, and the manufacturing and service industries, taking into account permit allocation, leakage, compensation mechanisms and additionality issues.
- f) And any related matter.

The EUAA submission will focus on:

- 1) The choice of an emissions trading scheme
- 2) The environmental effectiveness of the Carbon Pollution Reduction Scheme (CPRS)
- 3) CPRS design issues
- 4) The carbon tax alternative
- 5) Complementary measures, and;
- 6) Australia's contribution to global climate change

## 1.1 EUAA Interest in Climate Change Policy

The EUAA is a non-profit organisation focused entirely on energy issues with membership of over 100. Members determine the EUAA's policy and direction, with our activities covering both national and state issues relating to electricity, gas and climate change. Our membership represents a wide spectrum of end users located in all states, and is predominantly comprised of large business users of energy with activities across all states and many sectors of the economy. This includes manufacturing, mining and service industries.

EUAA members have a strong interest in regulatory developments associated with climate change and emissions reduction policy. The majority of EUAA members have direct and growing obligations under mechanisms designed to address reduce Australia's carbon emissions, including the CPRS. The CPRS will add an additional compliance cost to EUAA members on top of the costs of compliance under other climate related measures. Over the past few years energy costs have escalated dramatically through higher spot prices in the National Electricity Market (NEM), higher electricity contract prices, and increased transmission and distribution charges. EUAA members report increases in electricity contract prices of an average of 50 per cent in the past few years. In addition, network tariffs have increased on average by as much as 12-15% percent depending on the service provider and their jurisdiction. Further increases are in prospect with transmission and distribution prices in New South Wales set to increase by 20-30 per cent over the next five years and transmission charges in Tasmania by over 60 per cent. Increases of this magnitude are already challenging the competitiveness of Australia's trade exposed energy users, even before new climate related measures such as the CPRS and Renewable Energy Target (RET) are implemented.

EUAA members also report that they are experiencing difficulty in contracting for power beyond 2010 with retailers unwilling to contract and most are therefore entering into short term contracts. This is believed to be a direct result of uncertainty about the CPRS and the carbon price.

The current global financial crisis and economic downturn, which seems to be gathering severity, including in Australia, is likely to make the timing of introducing the CPRS particularly difficult economically. Whilst an ETS should be seen as a policy with long term objectives, no-one wants to see it prolong or increase the severity of the economic downturn.

Some EUAA members are extremely energy intensive and exposed to international competition, including competitors from countries that do not have enforceable emission reduction goals domestically or under the Kyoto protocol. As such, EUAA members have a significant interest in the chosen policy instrument, and its efficiency in reducing greenhouse gas emissions at the lowest possible cost.

## **1.2 Modelling the Impacts on Energy Users**

The EUAA has recently commissioned its own modeling of the likely impacts of the CPRS and the 20 per cent RET on energy users. This will show impacts such as those on electricity prices and the electricity market, as well as more general economic effects. It will therefore provide a uniquely 'energy user perspective' on the CPRS and 20 per cent RET. It is expected that this study will shed light on how energy users will fare under joint implementation of a CPRS and a 20 per cent RET.

Unfortunately, this work is not complete and is therefore not available for inclusion in this submission, but we expect that it will assist us and energy users to be better able to determine the impacts that these two measures will have on them; and therefore to help the EUAA and energy users to determine their ultimate position on both measures. Once this work becomes available we intend to bring it to the attention of the Government and make it publicly available.

Meanwhile, our consultants have assisted us by providing input into this submission, including some perspectives based on the work that they have undertaken to date.

## 2 Choice of an ETS

Emission Trading Schemes (ETS) have been the preferred method – domestically and internationally – to reduce greenhouse gas emissions. They have apparently been preferred for a variety of reasons, including that:

- In theory they offer the possibility of finding the least cost path to lower carbon abatement;
- They provide a market based measure that is preferred over measures involving greater regulation;
- They provide a means of developing an international scheme to reduce carbon via international agreements, linking of different national schemes and trade in emissions between countries;
- A number of other countries, most notably the EU, already have operational ETSs;
- They have tended to receive support from business communities in different countries and have been strongly supported by the financial sector; and
- ETSs have been used to reduce pollution in other areas, although these have all involved localized environmental issues.

These factors probably give an ETS a ‘head start’ over alternatives when it comes to greenhouse gas abatement.

The EUAA believes that a policy instrument (or instruments) that is (are) economically efficient, transparent and as simple as possible ought to be used by Australia to apply to emissions abatement. Australia ought to also have regard to how its effort will contribute to the global issue of climate change and how its efforts will impact on the economy.

The EUAA has, however, emphasized that the introduction of any mechanism to address climate change could involve inequitable, distributional impacts as between energy suppliers and end users, and the risk that this uneven playing field could be perpetuated for as long as the policy exists. Such a policy would redistribute wealth from end users towards suppliers and put the competitiveness of Australian industry further at risk.

An objective of an ETS should be to eliminate the need for the current plethora of regulations relating to renewable energy, energy efficiency and voluntary reporting schemes so that the policy space is not congested with duplicative regulations. In the absence of this, an ETS would act as an extra layer of policy on top of disparate initiatives, which add transactions costs to consumers in general and businesses in particular. It should be remembered that an ETS will put a price on carbon and make energy more expensive, which will (in itself) act as an incentive for greater pursuit of energy efficiency and use of lower emission technology.

In an environment of greater community concerns about climate change, there are pressures to act and the emphasis at the political level has been on emissions trading as the most logical way to do so. Some have justified the support for an ETS with the argument that countries are converging on this as a common approach. Existing or proposed schemes include the established ETS in the European Union, the proposed targets for the United States announced by President

Obama (80% reduction below 1990 levels by 2050), the proposed cap and trade emissions trading scheme in New Zealand, and consideration of ETS approaches in California and ten north-east states in the US. However, other countries continue to explore or have implemented alternative policy instruments to control emissions. These options include taxes, emission limits, fiscal incentives, renewable energy targets and technology standards.

## 2.1 Treasury Modelling of the Impacts of the CPRS

Our main concern has been that the CPRS White Paper policy position has not been modelled thoroughly, and the full range of carbon price outcomes have not been adequately covered. The White Paper CPRS-5 policy position is to set an abatement target of 5 per cent below 2000 levels by 2020 in Australia regardless of international action. This differs from the Treasury modelled CPRS-5 policy that included what could be considered ‘optimistic assumptions’ about international action and technology responses.

The level of international action that will occur is still very uncertain, but the modelling shows that this outcome has a key weighting on the extent of the carbon price experienced in Australia. A range of outcomes is possible including one in which Australia moves fairly unilaterally in setting up the CPRS with lagged and uneven progress towards similar commitments in other countries. Such an outcome is consistent with the ‘Copenhagen Compromise’ Scenario modelled in the Garnaut Review, which describes the situation in which, by December 2009 (or in meetings that follow immediately afterwards), it has not been possible to secure a comprehensive agreement on emissions reductions. Nevertheless, developed countries endorse a successor agreement to the Kyoto Protocol. This Scenario was modelled in the Garnaut Review and lead to a domestic carbon price of \$52.60/t CO<sub>2</sub>e in 2020, compared with the Treasury’s CPRS-5 modelled at \$35.20/t CO<sub>2</sub>e in the same year (around a 50% increase).

## 2.2 ETS or Carbon Tax?

There are alternatives to the use of an ETS as the preferred mechanism for reducing greenhouse gas emissions. The most common one is to implement a carbon tax. Notwithstanding the preference of a number of countries for an ETS, other countries and a range of experts still advocate the use of a carbon tax.

Compared to an ETS, a carbon tax has the following features:

- It sets a price on carbon via the taxation system, whereas an ETS puts a cap on the quantity of emissions. A carbon tax therefore provides greater certainty about the price of emissions but less certainty about how much emissions will be reduced by this price. A carbon tax is therefore more certain in relation to its impacts on the economy but less certain about its environmental impacts. This could, for example, be important in the early years of a policy to reduce emissions, when the economic costs of such a policy may be less well known.
- A carbon tax should follow the principles of ‘good taxation’ in that it should be structured so that it is economically efficient, equitable and simple to administer. In theory, carbon taxes can be structured along these lines, although in practice, taxes can

also be economically distortionary, lack equity and become complex. On the other hand, ETSs are well known for their complexity, are not necessarily equitable and often involve distortions or compromises. Compromises can increase as the complexity of the scheme increases or as the number of countries involved increases. The effectiveness of the scheme in reducing carbon can also suffer as a consequence.

- ETSs can have side effects and higher transaction costs. For example, they involve the creation of a ‘new industry’, a market for carbon, which involves transaction costs through financial markets and new administrative/regulatory structures. A carbon tax would avoid some of these effects, but not all of them.

To illustrate, the early years of the EU ETS have been problematic and characterized by volatile permit prices that have fluctuated in the range of less than 30 euro/tonne CO<sub>2</sub>e to – 0.01 euro/tonne of CO<sub>2</sub>e, with large moves in the carbon price on a daily basis. In looking forward, the rhetoric of policy makers in the EU seems to be geared towards targeting carbon prices to drive the requisite amount of investment into lower emissions technologies.

As mentioned above, an ETS is designed to meet environmental objectives, with uncertainty around the price of carbon. Another option is the ETS with a ‘safety valve’ or price ceiling. The Australian Government is proposing a price of \$40/t CO<sub>2</sub>e, rising at 5 per cent real per annum, for the first five years of the scheme. This would be affected by a reserve of permits that would be released by the Government at the safety valve price.

The *Stern Review on the Economics of Climate Change* was released on October 30 2006. The Garnaut Review followed in 2008, and supported emissions trading as the appropriate mechanism especially as this approach has been the most widely supported mechanism.

In 1991 Sweden enacted a carbon tax, placing a tax on the use of oil, coal, natural gas, liquefied petroleum gas, petrol, and aviation fuel used in domestic travel. Industrial users paid half the rate and certain high-energy industries such as commercial horticulture, mining, manufacturing and the pulp and paper industry were fully exempted from these new taxes. The tax rate was increased in 1997 and again in 2007. Since the imposition of the carbon tax, carbon emissions in Sweden have been reduced. Between the years 1987 and 1994 carbon emissions decreased by between 6 and 8 million metric tons, a 13% decrease in emission levels.<sup>1</sup> Climate scientist James Hansen, stated that the only realistic way to reduce carbon emissions is through the carbon tax approach. The more favoured emissions trading requires international agreements and potentially ten years of negotiation and compromise which effectively undermines the objectives of the approach.<sup>2</sup>

Whether the carbon tax approach or the emissions trading approach is more effective in reducing emissions needs to be examined to ensure that Australia meets its potential international commitment to reduce carbon emissions in the most efficient and least costly way.

---

<sup>1</sup> Brannlund, Runar, *Can eco-taxation be effective in reducing carbon emissions?*, The Swedish Green Tax Commission, 1999.

<sup>2</sup> Hansen, James, ‘Carbon tax only way to keep planet cool’ *AFP*, March 12 2009



The EUAA is concerned that, despite the significance of the climate change issue and the substantial impacts on the economy, any real debate about other policy approaches, including the feasibility of an emissions tax have been largely bypassed. An examination of the different policy options to reducing emissions would have at least provided an informed basis to choosing the optimum policy approach.

The preference for emissions trading schemes has resulted in scant attention being paid to the costs of emissions trading schemes and how it compares to the carbon tax approach. As mentioned above, the EUAA prefers a scheme that imposes the least economic costs on energy users. The introduction of a carbon tax could potentially see reductions in the level of other taxes. A \$15 carbon tax could increase the income free tax threshold to \$10,000 or drop the top marginal tax rate to 30%. A \$30 carbon tax could fully offset all other fuel taxes.<sup>3</sup>

Modelling undertaken by ABARE in 2006 found that a carbon tax of \$47 in 2040 would result in a -1% impact on GDP and a \$77 carbon tax in 2050 would have a -1.75% impact on Australia's GDP.<sup>4</sup>

The Garnaut Review found that a \$34 carbon price under the 550 ppm scenario would have a -1.1% impact on GDP.<sup>5</sup>

The data provided by ABARE and the Garnaut Review generally find that both a carbon tax and an emissions trading scheme have an impact on GDP of between -0.5% and 1.5% out to 2050.

As there has been limited debate into the carbon tax versus emissions trading approach, a fair and transparent debate over the economic impact of these policy approaches needs to be undertaken so that the least cost, and most efficient and effective option can be chosen.

In addition, depending on how policy approaches in other countries proceed, the Federal Government may be confronted with alternatives in negotiations within a global framework, and should take this into account in domestic policy making on climate change policy. As mentioned above, from a business customer viewpoint, the price certainty feature of a carbon tax approach has some attractions.

## 2.3 CPRS Design Issues

The EUAA generally supports the design elements of the CPRS and believes that they are sound. In particular, we support:

- As broad a coverage as possible in terms of gases and sectors and expansion to cover sectors not covered initially as soon as practicable;
- The setting of targets and trajectories, and the use of gateways with as much notice as possible;

---

<sup>3</sup> Humphreys, John, 'Exploring a carbon tax for Australia' *Centre for Independent Studies*.

<sup>4</sup> ABARE 'Economic Impact of Climate Change Policy', July 2006.

<sup>5</sup> Garnaut Review *Targets and Trajectories* p.47

- A low initial cap in the absence of any international commitments;
- The use of an initial price cap;
- The auctioning of permits;
- Linking to other schemes once this is beneficial;
- The proposals on banking and borrowing, although we suggest that further consideration be given to the issue of the inter-relationship between the arrangements for banking, the price cap and the justification for not proceeding with international linkage from the start of the scheme;
- The use of an independent scheme regulator.

However, we do have a number of concerns with certain features of the CPRS. These concerns relate to:

- 1) Assistance to ‘Strongly Affected Industries’
- 2) Compensation to EITE Industries and carbon leakage
- 3) Green collar jobs
- 4) Australia’s comparative energy advantage

### **2.3.1 Assistance to ‘Strongly Affected Industries’**

The EUAA strongly opposes assistance to so-called ‘strongly affected industries’, which involves coal-fired electricity generators. Coal-fired generators likely to get compensation under the CPRS are not exposed to international competition and are well placed to pass on the costs of the CPRS. There have been suggestions that they will be able to pass on at least 80-90 per cent of these costs in the form of higher electricity prices. This is largely what happened in the EU, where coal-fired generators received free permits but priced up electricity by the cost of carbon anyway. We have seen little evidence to suggest that the situation in Australia would be any different.

There has been some suggestion that coal-fired generation plant may be retired early in the absence of assistance. The EUAA finds this argument difficult to sustain as electricity generation in the National Electricity Market (NEM) is dispatched upon a merit order basis whereby the lowest bids into the market are dispatched to meet the demand for a five minute period. This dispatch method will continue even with the CPRS. Coal-fired generators will not close until they are displaced, or undercut by lower emissions generators, such as gas-fired electricity generation. In the meantime, they will still continue to be dispatched, earn a return for their shareholders and operate as usual. They will not close down overnight as it takes time to build new plant to push them down the merit order. As the Government has established a low trajectory in the first ten years of the scheme, the speed with which coal-fired generation is affected is also muted.

Coal-fired generators have also argued that the introduction of a CPRS changes Government policy and that this creates a sovereign risk issue which they should be compensated for and which may affect future investment prospects. However, the record of Government’s compensating for policy shifts, even major ones, is mixed and it could be argued that the low trajectory in the first decade of the CPRS provides time for adjustment. The argument that

failure to compensate will adversely affect new investment in generation is difficult to support. The fact is that the CPRS will create greater certainty for investors focused on lower emissions generation.

Finally, coal-fired generators have argued that the CPRS could be barrier to the re-financing of their debt. The argument is that this could affect their ability to enter into sales contracts and so they would be forced to sell into the Pool, and that this would result in much greater volatility which would be bad for energy users. Any such argument ought to be put under rigorous scrutiny before it is accepted. From one point of view, existing owners of affected coal-fired generators could merely be forced to sell the affected assets to new owners who would continue to operate them and find contracting easier until such time as they were supplanted by lower emission generation. However, if the remaining life of this plant were very short, any sale could be affected.

We also note that compensation provided to coal-fired generators will reduce the amount of permit revenue available to compensate other, more deserving, cases. This includes households and businesses that are exposed to the CPRS but unable to pass on its costs.

### **2.3.2 Compensation to EITE Industries and Carbon Leakage**

The Emission Intensive Trade Exposed EITE provisions of the scheme are very ‘lumpy’ around eligibility and non-eligibility. These are largely formed on limited data and judgement calls around what type of activities will be the worst affected. It is inevitable that the criteria are somewhat arbitrary and subject to doubt as to their practical impact. EITE compensation is intended to avoid ‘carbon leakage’ and promote orderly adjustment for industries that are exposed to international competition from countries that do not have emission reduction schemes in place. The need to compensate EITE industries derives from the fact that Australia is moving to implement a CPRS when there is no international agreement on emissions reduction.

There has been some commentary that this proposal ‘rewards the polluters’. However, the EITE approach is sound if Australia is to avoid exporting carbon elsewhere. This is why the principal was supported by the Garnaut Review, albeit using a different method to that in the design of the CPRS.

It is inevitably that problems will emerge with such a complex proposal. One of our greatest concerns with the EITE approach is that it may create situations where exposed Australian industries are badly damaged but not eligible for EITE assistance because not enough is known about their circumstances. We believe this could become a significant issue over time. The CPRS appears to leave little room to adjust the scheme to reflect such developments, apart from the regular 5-yearly strategic reviews.

We are aware of companies that are highly exposed to international competition from countries that do not put a price on carbon but who will not qualify for any compensation under the CPRS proposals. Their exposure is a matter that needs to be watched carefully and we would recommend a monitoring system under the CPRS to do this.

### 2.3.3 Jobs and R&D

The EUAA has reservations about the notion that the CPRS will promote significant numbers of ‘green collar jobs’. Care should be taken not to exaggerate the extent of such benefits. They also need to be seen against the background of jobs being lost in the transition to a lower carbon economy.

The Climate Change Action Fund (CCAF) will provide \$500 million dollars toward renewable energy development; \$500 million towards a clean-coal fund; \$150 for solar and clean energy research; and \$240million to establish clean business in Australia.<sup>6</sup> Whilst these funds could be used to stimulate investment in lower carbon technologies, there are three important qualifiers: first, that ETSs only have a limited impact on the development of new technology as the price change needed to promote rapid technological change would have to be very large and certainly much larger than that proposed in the first decade or so of the CPRS; second, that funds need to be spent wisely and on sound projects; and third, that the CPRS proposes to spend only a fraction of permit revenue on technology.

As for other measures, particularly the 20 per cent Renewable Energy Target, essentially this mechanism will be geared toward wind powered electricity generation which is a mature technology and not labour intensive.

### 2.3.4 Australia’s Comparative Energy Advantage

Australia’s comparative advantage has been its reserves of natural resources, including abundant and low cost energy, which have allowed Australia to compete effectively with other trading nations. Many industries that have developed as a result of our natural resources are emissions intensive and trade exposed. Arguably a carbon constrained economy will have a greater impact on Australia than it would on economies that lack our large supplies of natural resources. It is important that the move to a lower carbon economy does not destroy our comparative economic strengths and that the economy is able to adapt and adjust in an orderly way.

---

<sup>6</sup> *Carbon Pollution Reduction Scheme, Australia’s low carbon future*, White Paper, Australian Government, December 2008

### 3 Complementary Measures

The Government is proposing to use several so-called “complementary measures” as well as the CPRS in its climate change response. These include renewable energy target, research and development, demand management and energy efficiency. Each of these is discussed below.

However, prior to doing so, it is worth pointing out that “complementary measures” should be just that and should not conflict with the goals of the CPRS. In its June 2008 submission to the Department of Finance and Deregulation’s *Strategic Review of Climate Change Policies* (Wilkins Review) the EUAA stated that:

*Our assessment of the various climate change initiatives against the assessment criteria suggested by the head of the Review concludes that the 20% RET, State based greenhouse abatement schemes (GGAS in New South Wales and GECs in Queensland) do not measure up well and they should be abandoned. The continuing need for separate energy efficiency obligations is also debateable and separate State obligations should be dropped. However, there is merit in financial assistance for lower emissions technology provided this is well targeted, not focused on picking ‘technology winners’ and efficiency administered. There is also merit in making use of demand management through the electricity market to compliment an ETS.*

#### 3.1 20 Per Cent Renewable Energy Target

The Government’s expanded 20 per cent Renewable Energy Target (RET) will result in more (relatively expensive) renewable energy being deployed, resulting in a higher cost to achieving a given level of emission constraint. Potentially under a scenario with emissions trading or carbon taxes to achieve the emissions reduction required, gas power generation would play a greater role in the generation mix as a transition fuel and it is cheaper than renewable sources of energy.

The EUAA is concerned that the RET is not consistent with a low cost approach to emissions mitigation, as it forces energy users to pay for higher cost renewable energy in electricity generation and to forgo other lower cost, low emissions abatement alternatives. A Garnaut Review discussion paper noted that RET would effectively cut across an ETS and impede its ability to deliver least cost abatement through carbon pricing. The EUAA also notes that the Productivity Commission has questioned whether the expanded RET would, in fact, be complementary to an ETS.<sup>7</sup>

The RET has implications for the generation fuel mix that will emerge with any ETS operating in concert with the RET. It is quite conceivable that up to 2020 the scheme will override the ETS and distort the structure of generation towards higher cost renewable technologies that will crowd out other lower cost and lower emissions technologies, e.g. gas fired generation and cogeneration. One perverse result may be that the life of coal-fired electricity is prolonged, which is more emissions intensive and would make our emissions reduction target more difficult to achieve. These impacts could be compounded if the RET can only be achieved by increasing

---

<sup>7</sup> Banks, G., *Riding the Third Wave: Some Challenges in National Reform*, Paper presented to the Economic and Social Outlook Conference, Melbourne, 27 March 2008.

use of wind farms that are less and less economic (e.g. due to the need to use poorer wind resources or develop plants in areas that are more remote from the electricity network), or into higher cost non-wind renewable energy technologies as the most economic wind resources are exhausted. The 20% RET will also make the power system less reliable and more difficult to manage due to the intermittent nature of wind and some other renewable technologies. This will impose additional costs on top of the direct costs of the scheme.

The EUAA considers it important that there be rigorous examination of the policy underpinning the RET as this has implications for not only the electricity price but also security of supply. An ETS, or carbon tax, approach has the virtue of being technology-neutral and allows the price of carbon to determine technology choices. Having both ETS and RET at the same time is a sub-optimal from an economic viewpoint, as it adds to the cost impost faced by business customers.

The EUAA has made various submissions to the Government on the 20 per cent RET. These point out, *inter alia*, that the scheme:

- Will be very costly to energy users, adding some \$8-9/MWh to the cost of electricity by 2020 and with an implicit subsidy of some \$23 billion from energy users to renewable energy developers over its life. This will effectively be on top of the carbon price.
- Will require some 8,000 MW of new wind generation, costing some \$50-60 billion. This is about equivalent to duplicating the entire Victorian electricity system and would require 4-5 times the total investment in new generation in the NEM over the past decade. These sorts of numbers caused us to question whether the target was even achievable, given the capacity of the local industry and the ability to finance it? If it is not achieved, what then? Will the Government impose the penalty rate? If so, will the revenue accrue to the Government? What would it do with the revenue?
- Will mean that Australia is unique in relying so heavily on a renewable energy quota to develop the renewable energy industry and require energy users to pay for this. Other countries follow a different course, with greater reliance on fiscal or tax incentives to develop their renewable sectors.

## 3.2 Research and Development

The EUAA believes that revenues generated from emissions prices or via carbon tax revenue should be directed towards developing low emissions technologies. The emergence of technologies, some of which offer zero or close to zero emissions, will be vital to a low cost and environmentally effective path to managing carbon. These technologies can be fossil fuel based (carbon capture and storage, clean coal, coal drying, oxy-firing, nuclear), or renewables based (hydro, biomass, wind solar, thermal, wave). The portfolio mix of the above technologies, and the time taken to progress their development would be a crucial determinant of the extent of the increase in energy prices.

There is still significant uncertainty around the question of how well an emissions trading scheme will stimulate the development of more nascent technologies. Technological progress is a key to reducing emissions as new technology can have a profound impact in the development of cleaner energy. Therefore, we consider that support for research and development should

continue to be an important part of a policy approach to assist low emissions technologies to reach a level of technological maturity that is required for them to be cost-effective. An important caveat to this is that Governments should not pick specific technology winners, or seek to fund an industry focused on particular technologies, especially those that increase energy costs substantially. Revenues generated via permit auctions or carbon taxes should be used to fund technological developments. However, care is needed to design an approach to funding that delivers good and timely outcomes, and avoids wasteful expenditure.

### **3.3 Energy Efficiency**

The introduction of an ETS should underpin energy efficiency efforts and the need for energy conservation. It can be argued that this should be used to encourage greater energy efficiency via a price signal rather than having separate energy efficiency regulations. Again auction revenue, or carbon tax revenue, could be used to address market failures that impede the take up rate of energy efficiency by consumers.

Greater involvement and investment in energy efficiency can save industry costs and at the same time contribute to the dual goal of using less energy and reducing emissions. At the large end user level, there are a number of schemes currently in place and in development that will mandate energy audits and some also mandate implementation actions. Provided such schemes are well designed and attuned to commercial reality, they can make a positive and lasting contribution to Australia using less energy, using it more efficiently and reducing emissions.

One significant problem, however, is that these schemes overlap and impose multiple obligations on energy users. The Federal Energy Efficiency Opportunity (EEO) Scheme is largely duplicated by the New South Wales Energy Action Saving Plans, the Victorian Energy and Resource Efficiency Plans and a similar Queensland scheme. Some EUAA members have overlapping obligations due to these schemes and must complete separate audits to satisfy each of the requirements. This is costly and wasteful. Such schemes are not complementary but create tension and conflicts.

Our members also report that these separate schemes create some perverse incentives, eg to undertake energy efficiency at sites in one State but not another, and that the requirements that mandate actions have created confusion about what needs to be done and when and what action will be taken if identified measures are not implemented? In a period of economic downturn, with significant cost constraints on many businesses, the availability of funds to implement identified energy savings can also be a challenge

There is a key need for rationalisation and focus at the national level, for example around the Energy Efficiency Opportunities scheme. The price effects of an ETS will render energy efficiency more attractive, and the State based energy efficiency schemes would benefit from assimilation into a national approach. An incentive mechanism is vital if Governments want to encourage the growth of energy efficiency measures. Incentives could include financial grants, energy efficiency research, development and deployment assistance or tax concessions. The revenues generated by the auctioning of ETS permits, or though a carbon tax, could provide a base for such incentives.

### 3.4 Demand Management

The EUAA has long argued the benefits of demand management to offset supply side dominance in electricity markets – and we believe that it has application in the emissions reduction policy framework as well. Activating demand side response through means such as facilitation efforts, capacity building, the introduction of smart meters (combined with price signals for peak use) would go some way to obviating the ever-increasing ‘need’ to build generation plant borne out of an unbridled growth in peak demand. In effect, demand management could reduce the size of the future investment needed for Australia’s stationary energy sector to keep pace and hence, contribute to reducing the stock of emissions.<sup>8</sup> The need to manage the demand for carbon emitting technologies is particularly important given that low emissions technology will take time to arrive. The EUAA has consistently argued that Governments need to take more seriously policies to incentivise demand management. Demand response at the large user level has a number of impediments to activation, such as the need to educate businesses that demand side response works and provide them with the means to make better use of it.

The role of Governments and regulators is critical to removing various impediments and to supporting measures to stimulate demand management. One can argue that had the NEM been designed to be inclusive of demand side responses, it might have contributed to Australia’s emissions reductions in the last ten years. The Review should consider the impact of the NEM design on emissions growth, and assess any lessons that could be learnt.

---

<sup>8</sup> See, for example, our report on a trial of a demand side response facility in the National Electricity Market (EUAA, *Trial of a Demand Side Response Facility for the National Electricity Market: Independent Consultant’s Report*, April 2004) and the follow up case studies with a number of sectors offering the potential for high take up (EUAA, *Demand Side Response in the National Electricity Market Case Studies*, April 2005).