



## **Energetics Submission**

### **Garnaut Climate Change Review**

### **Emissions Trading Scheme Discussion Paper**

18 April 2008



## **About Energetics**

Energetics thanks the Garnaut Climate Change Review for the opportunity to comment on its *Emissions Trading Discussion Paper*. The process of developing effective policy is made easier with a process that is open, consultative and draws on the expertise of individuals, groups and companies.

Energetics has been a keen participant in policy discussions about the solutions to climate change for over 20 years. The introduction of an emissions trading scheme in Australia is welcome and long overdue.

Our work with clients since 1984 to take action to reduce their emissions gives Energetics a unique insight into the design and implementation of policy to achieve the best results. Over the lifetime of Energetics we have advised over 850 clients on energy efficiency and other climate change response strategies.

We are currently servicing 125 companies in the manufacturing, commercial, mining/minerals, government, energy and water utility sectors. The majority of our clients are ASX200 companies, many of whom have achieved significant energy and emissions savings.

## **Achieving World's Best Practise**

Australia has the opportunity to develop a world's best practise emissions trading regime based on a robust methodology that considers the experience of other emissions trading schemes and improves upon them.

Key to the success of Australia's scheme will be:

- To learn from the lessons learned from the EU Emissions Trading Scheme (EU ETS) Phase 1 in terms of data integrity, the method of permit allocation and use of revenue to ensure the scheme delivers genuine greenhouse gas emission reductions in an economically efficient and fair manner;
- To acknowledge what can and can't be achieved by an Emissions Trading Scheme (ETS), and acknowledge that additional and complimentary measures will be needed; and
- To recognise the value that these additional, complimentary measures can have in improving the effectiveness and efficiency of the ETS.

## 1. Learning lessons to ensure good market design

The operation of pioneering international emission trading markets provides Australian policy-makers with useful models to learn from. The EU ETS is the world's largest carbon market and there have been a range of important lessons learned during its first phase of operation.

Our analysis of the operational experience of early carbon markets suggests that the following design elements are crucial to ensuring the AETS is efficient and effective:-

### 1.1 Data integrity

The way in which a scheme's baseline emissions and abatement data is determined is critical to the ongoing integrity of the market. If the method for establishing the baselines and the short-term targets is inaccurate the market will experience volatility and the emission reduction results will be poor.

Two recent examples that demonstrate the need for accurate data to be used for setting the market baseline are:

- The US based Regional Clean Air Incentives Market (RECLAIM) determined historical emissions using peak emissions over a four-year period. This led to a cap that was initially set too high, resulting in significant over-allocation. It resulted in an allowance distribution of around 40% above actual emissions at the start of the program in 1996. This contributed to market instability in 2000.
- The European Union Emissions Trading Scheme (EU ETS) determined its Phase I cap using inaccurate forward projections data and this inflated the new market's baselines. This then had a significant influence on the price crash experienced in 2006.

Learning from these policy experiences, it is possible for the Australian ETS to avoid the disruptions and poor emission results experienced by these carbon markets. The method used to gather historical emissions and abatement data must minimise the risk of biased information. To assist in removing the risk of bias, we recommend the use of averaged emissions data over a number of years.

The baseline calculations for the Mandatory Renewable Energy Target defined in Schedule 3 of the *Renewable Energy (Electricity) Regulations 2001* provide comprehensive guidance on setting baselines using multi-year data. In particular, the regulations address issues such as non-representative data and non-continuous operations during the baseline period.

We understand that the National Greenhouse and Energy Reporting Act 2007 (NGERA) was introduced to assist in the development of a robust baseline for the scheme. However at very most only one year of baseline data will be available prior to the commencement of the ETS. As such we recommend the use of existing information sets such as that already in OSCAR under the Greenhouse Challenge Plus Program to supplement the NGERA information set.

## **1.2 Permit allocation**

Energetics believes that auctioning provides the fairest method of setting the price of carbon permits, provided that the auction process results in permits being the same price for all participants.

The reverse auctioning system operating in the National Electricity Market for Settlement Residue Auction is an example of such an auctioning process that would lead to a fair result. All participants wishing to participate in this auction submit their bid for the desired quantity. The clearing price is set by the lowest bid required to take up the total allocations on offer.

Energetics agrees with the Review's observation that free allocation of permits could adversely penalise 'early movers' and new entrants, unless a complex set of rules was overlaid on top of the free allocation. Most of Energetics 800 plus clients over 20 years have been taking early action to reduce energy wastage and greenhouse gas emissions. We are a firm believer in ensuring the scheme does not penalise these significant voluntary actions that have taken place.

The experience in the EU ETS was that free allocation resulted in windfall profits to electricity generators, who passed the price of allowances through to end users at near full cost. It is clear from recent European Commission discussions that their intention is to improve their ETS system with the introduction of permit auctioning.

## **1.3 Setting the target**

Energetics believes that the ETS target needs to be set at a level that ensures Australia emissions are at least 60% below 1990 levels by 2050. Shorter-term targets will need to be set which logically create a smooth trajectory to the longer term target.

Energetics notes the Inter-governmental Governmental Panel of Climate Change (IPCC) recent findings that global emissions need to peak by 2015 – 2020 if the global temperature increase is to be maintained at the lower end of 2 – 2.4 degrees Celsius above the pre-industrial average. Many of our clients acknowledge that successful business can not operate in a world dealing with the effects of runaway global warming, which is more likely to occur at temperatures higher than this level.

If the target is too weak, the price signal on CO<sub>2</sub> will not be strong enough to drive a change in energy management practises.

## **1.4 Use of the revenue from permit auctions**

Energetics was disappointed to not see greater emphasis put on the use of auction revenue being allocated to energy efficiency projects. A recent European Commission Directive outlined the ways to improve and extend the EU ETS and it recommended that 20% of auction revenue be allocated to energy efficiency initiatives. This revenue will assist the EU to meet its target of increasing efficiency by 20% by 2020.

## **1.5 Links to regional offsets**

The Review's recommendations about inclusion of agricultural and forestry sectors and working in cooperation with developing countries in the region is based on a worthy goal - to use mechanisms to drive environmental improvement in neighbouring nations.

However Energetics urges the Review to undertake further investigation into the size of this potential credit market. If these credits flood the market they will compromise the impact that the ETS will have on the uptake of energy efficient technologies. Also of concern is the extent to which high quality measurement, monitoring and verification systems can be put in place to ensure the credits generated are credible.

## **1.6 Credit for early action**

Energetics supports the recognition of early emission reduction actions taken between June 2007 and the date of the introduction of the scheme. The early action credits should only be given for activities that have actually occurred, are additional, permanent, measurable and verifiable.

It is important that strict protocols are developed to provide detailed guidance on which early action credits are approved as part of the ETS. Given the short timeframe in which early action project can be developed before the start of the scheme, the use of existing protocols would be sensible. Protocols have been developed under other programs such as Clean Development Mechanism (CDM) and the NSW Greenhouse Gas Abatement Scheme (NGAS) and these may be appropriate to use.

The benefit of giving credit for early action will be to drive emission abatement activity prior to the start of the ETS. If action is significant it may also help keep the permit price down at the time of auction.

## **2. Filling the gaps – recognizing what an ETS will not achieve**

Around the world today there are multiple emission trading markets with varied drivers, targets and prices. The experience that has been learned from the operation of these markets is that an emissions trading scheme can not alone deliver the emission reductions that are required in the next decade. This is largely because a carbon price set by an ETS is not necessarily high enough to drive improvements energy efficiency to the extent that could be achieved.

Even with the best design elements, Energetics believes it is likely that an ETS scheme will only play one part in achieving an emission peak by 2015 – 2020, as recommended by the IPCC scientists. This is because the scheme will take time to get established and the initial carbon price signal is likely to be fairly weak.

The key to meeting this emission peak recommendation is to rapidly drive energy savings and demand management at the same time as the introduction of the ETS. A range of studies have shown that energy efficiency is the only approach that can substantially reduce emissions without any economic cost.

For example:

- The International Energy Agency's, *Energy Technology Perspective Scenario* (2006) found that energy efficiency measures could account for 31 – 53% of the total carbon dioxide emission reduction effort required to stabilise emissions at 2005 levels by 2050.
- A study for Vatenfall found that 35-45% of a 60% global emissions reduction target can be met by cost effective energy efficiency measures with a low carbon price (Vatenfall, 2006).

Given the importance of efficiency in meeting the emission reduction challenge it is concerning that energy consumption rates have been heading in the wrong direction in recent decades. Australia's annual growth in energy use is currently 2%.

The International Energy Agency (IEA) has found that between 1990 and 2004 the rate of energy efficiency improvement in IEA nations was less than 1% a year – compared to a much better rate of efficiency improvement of 2% a year in the period 1974 - 1990.

It is the view of Energetics that this mis-match between potential and reality is largely a failure of policy-makers to invest seriously in regulations and initiatives to drive efficiency. There is no coherent national dialogue on energy efficiency and because there is only a small energy efficiency industry, the obvious, and most cost effective solutions for climate change have had the lowest level of focus of all solutions.

### **3. Complimentary measures to increase energy efficiency can improve the operation of the ETS**

Stronger measures to drive efficiency will both reduce emissions, and also have a positive impact on the operation of an ETS. Energy efficiency incentives are anti-inflationary as they reduce the operating costs for companies which implement them. This is important if the ETS does add to inflationary pressure through an increase in electricity and fuel bills.

Efficiency measures funded before the introduction of the ETS, or from the auctioning of ETS permits will also ensure the overall impact of the scheme is lower on both households and business. Helping vulnerable communities and sectors to reduce their energy requirements when price of electricity increases will soften the impact of energy price rises on consumers. Industrial efficiency programs will also lower the need for allowances to be purchased by generators and large point sources of emissions, and therefore could lower the permit price.

For all of the above reasons Energetics is of the view that the Government must introduce significant new energy efficiency measures with the same level of priority as the new ETS system. We recommend the following new initiatives:

- **Energy efficiency target**

Establish a specific energy efficiency target for the period to 2020 (as has been done in Europe and Japan) with required tracking of efficiency gains against milestones – a small year on year target is a good model. Australia's target

could be to reduce energy use at 1-2% per annum instead of letting it continue to increase at 2% per annum.

Our analysis suggests that the savings available to business through achieving this goal will be some \$5 billion / year by 2020. Achieving this target will reduce business' greenhouse emissions by 60 million tonnes / year by 2020.

- **White certificates scheme**

A white certificates trading scheme will help meet this target. These schemes are now being introduced widely in Europe and the United States as a way to compliment and further drive efficiency. The scheme will need to define the operators who are bound to meet the target, the types of energy efficiency activities that will fall within this scheme and be additional to actions undertaken as part of the ETS.

- **Enhance Regulatory and Performance Standards & Measures**

Regulatory measures and performance standards should complement other approaches to achieving significant energy efficiencies. The scope should include, on a nationally consistent basis:

- improvements to national minimum mandatory energy efficiency standards in the building code for new and existing commercial buildings,
- expanded mandatory energy performance standards for domestic and commercial equipment,
- energy market reform and access for embedded generators,
- streamlining of states, commonwealth reporting requirements
- and demand management.

- **Business Efficiency Incentives**

Achieving economic growth while reducing energy consumption will require considerable facilitation by government. Experiences in Europe and North America demonstrate that incentives allied to appropriate market and regulatory mechanisms can be effective in leveraging significant energy efficiencies. Incentives aimed at encouraging implementation of marginally economic projects, innovation in application of efficient technologies, and developing the capacity and capabilities in the energy services market are recommended.

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