EMISSIONS TRADING – TRAPS FOR NEW PLAYERS

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The Australian Federal Government plans to commence a National Emissions Trading Scheme (NETS) in 2010.¹ The scheme falls within the Kyoto Protocol’s (the Protocol) framework now that the Australian Federal government has ratified the Protocol. This is an important initiative for Australia which has lagged behind other countries in providing a meaningful national emissions trading scheme. Now that a national framework is taking shape, stakeholders need to be aware that there are many traps for new players as the European Union Emissions Trading Scheme (EU-ETS) demonstrates following the first trading period that ran from 2005-2007.

This article examines the pros and cons of emissions trading by looking at a number of schemes operating overseas and outlines the traps that NETS needs to avoid in order to ensure its success. In particular it analyses the problems experienced by the EU-ETS in its first phase and the measures it plans to take in order to ensure the success of future trading periods. It also examines why various emissions trading schemes in the United States, such as the Acid Rain initiative, have been so successful. Because NETS will be based on a cap and trade model, the focus of this article is on existing cap and trade schemes.

While accepting that emissions trading cannot solve the problem of global pollution it is acknowledged that such schemes assist in the overall goal of mitigating greenhouse gas emissions. In company with renewable energy technologies and energy efficiency initiatives, emissions trading can force deep cuts in the industrial sector. Emissions trading facilitates pollution control price signals through the reporting of emissions and the establishment of regulatory mechanisms organized at government levels. Emissions trading schemes to date have been limited in scope to stationary energy emissions. Non-stationary energy emissions are excluded because they present a major challenge for accurate monitoring. However this will need to change in the future as non stationary energy emissions are growing rapidly thus

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contributing significantly to overall greenhouse gas emissions.\(^2\) As emissions trading schemes become more sophisticated they will be extended so as to include road and air transport.

Essentially emission trading schemes (ETS’s) are an alternative to traditional environmental regulation. The term emissions trading is somewhat confusing because emissions are not actually traded but the schemes facilitate a right to emit a particular quantity of greenhouse gas through a permit, credit or allowance.\(^3\) ETS’s are burden sharing arrangements designed as a cost effective method to reduce greenhouse gas emissions. Environmental objectives are achieved by giving emitters the right to emit a quantity of specified substances over a definite period of time. As each country’s economic and industrial position is unique, emissions trading schemes have to take into account the types and number of polluting industries that need to be involved. Australia for example relies on agriculture, mining and resource processing industries which are greenhouse gas intensive.\(^4\) A target is given to each emissions source by the regulator and not the market. If an emitter undercuts its allowance, it can sell surplus allowances in the market place, but if it overshoots, it is required to buy allowances on the market and in so doing is dependent on the current market price. The Australian Task Group investigating the introduction of emissions trading in Australia recommends a national framework for reducing greenhouse gases where the market sets the carbon price.\(^5\) As Australia is a federation, such a scheme would have similar characteristics to that set up by the European Union, though in Australia’s case, each state would negotiate its respective emissions target.\(^6\)

An optimum emissions trading scheme is a market based mechanism that ensures there is a meaningful target and that the target is achieved. An overall emissions cap encompasses a pre determined group of emitters and allowances are issued that equal the pre-determined cap. Emitters must surrender allowances equal to total emissions. An emitter will need to decide whether to buy or sell allowances on the market. This is a matter which individual emitters need to address on a cost analysis basis.\(^7\) Emitters generally endeavor to remain below the target and make a profit out of selling on allowances.\(^8\) For any such scheme to be successful the relevant market place must have enough buyers and sellers. Those who fail to operate successfully

\(^2\) For example in China 1,300 new vehicles came onto the roads each day. New vehicles added in the first quarter of 2008 are up 13.34 per cent more than the same period in 2007. Wan Hongjiang ‘Beijing’s vehicle population up 13% in 1st Quarter’ Window of China’ China View <www.zinhuanet.com/english/2008-04-02/content_7906974.htm> 6 June 2008.


\(^5\) Ibid.

\(^6\) European Union Emissions Trading Scheme (EU-ETS).


\(^8\) Ibid.
are penalized and required to buy allowances from other sources. The main problem with the EU-ETS scheme in the first trading period was that too many permits were issued on a grandfathering basis resulting in a flooding of the market place which caused the price of permits to crash. This was due to member states generously setting their own allocation with the result that emission permits plummeted in price from 32 euros/te of carbon dioxide (CO2) to less than 1 euros/te CO2 in a matter of weeks.9

ARGUMENTS FOR AND AGAINST EMISSIONS TRADING SCHEMES

There are, as could be expected, many arguments for and against emissions trading. Arguments in favour of such schemes are that emissions trading is more effective than environmental taxation because it provides a positive environmental outcome whereas taxation does not. Emissions trading can reduce compliance costs as industry can take advantage of reduction opportunities thus reducing its cost factor as well as turning emissions reduction from a burden into a business.10 An added benefit is the ability of a carbon market to provide a forum that fosters the development and distribution of new technologies to developing countries who are now emerging as the greatest polluters and who are not obliged to reduce emissions under the Protocol. This is particularly the case for China and India.

As with any environmentally focused scheme there are downsides. Foremost is the philosophical view that such schemes undermine the need for a globally shared approach to emissions reduction because emissions trading favours wealthy nations.11 The Protocol has only a mediocre effect on emissions cutting aggregate emissions by 5 per cent from 1990 levels by 2008-2012.12 The emissions trading scheme set up in the EU has not resulted in the necessary deep cuts that are needed in order to move towards stabilizing greenhouse gas emissions. The Protocol allows developed nations to obtain permits outside their own national boundaries so as to remain within emission target limits rather than reducing emissions at the national level. This is achieved by setting up clean development projects (CDM’s) in developing countries.13 In the second phase of the EU-ETS, CDM’s are permissible but are likely to result in investment in projects that would have occurred in any event and therefore do not achieve credible emission cuts. A further criticism of the EU-ETS scheme is that the polluter does not pay for the right to pollute because of grandfathering permits. Polluters only pay when they exceed their allocated permits with the result that a commodities market is created rather than a scheme that forces major polluters to cut emissions.

10 Opt cit n3 p123-4.
12 Article 3.1.
13 Article 12 Kyoto Protocol.
Emissions trading fails to promote a move to technological development within the national operations of developed countries. There is also the problem of ‘hot air’ where vast surplus credits are created and sold off to countries in need of credits resulting in emissions levels which do not result in any net reduction. For example, as Russia and the Ukraine have set their emissions levels far below the allocated base levels; surplus credits could potentially flood the EU-ETS.14

TYPES OF EMISSIONS TRADING SCHEMES

There are two main types of emissions trading schemes operating globally: cap and trade and baseline and credit. Those with an absolute target are cap and trade regimes, whereas those with relative targets are baseline and credit schemes.

Under a cap and trade scheme, a designated authority, usually governments, set a cap on the amount of a specific atmospheric pollutant that can be emitted over a specified period of time. Companies or sectors involved are allocated allowances called credits which give the right to emit. Allowances are allocated on different premises:

- grandfathering where permits are free
- benchmarking where permit allocation is based on historical output
- auctioning which provides a market value and is the most efficient method for market operation but can affect company balance sheets
- permits are purchased at a fixed price.

In order to comply with the scheme, emitters must surrender allowances equal to their total emissions. Once allowances are allocated a company is free to buy and sell from others in the market place. If a member of the scheme goes over their allocated emission allowances, a penalty is imposed for non compliance. Company’s need to consider whether it is in their financial interests to lower emissions before considering trading on the carbon market. The end result is a policy instrument that reduces greenhouse gas emissions at low cost.

Various controls can be incorporated into the design of the scheme such as the type of greenhouse gas covered, the threshold for entry into the scheme, whether offsets can be used through other flexibility mechanisms and the method used to allocate allowances. An absolute cap provides some level of certainty about the volume of emission allowances in the market. Supply and demand determines the value of credits on the carbon market.15

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15 Op cit n9.
Under a baseline and credit scheme emission rights are not awarded by a designated authority but have to be earned. Businesses establish a baseline of emissions which occur in the ‘business as usual’ scenario. This is then validated by a competent authority. Individual emitters are assigned an emission baseline which represents a schedule of allowable emissions over time. Emitters are exempt from liability for emissions up to a baseline level which is less than actual emissions. The only allowances that can be traded are those that deviate from the initial allocation. The main difference between a baseline and credit scheme and a cap and trade scheme is emission intensity. When emission rates per unit of activity (that is energy input or output of energy or produce) exceeds the baseline level, emitters can increase their total emissions without being required to buy more allowances as long as the emissions result from increased activity rather than a change in emission intensity. If emissions are higher than the baseline, additional credits need to be purchased. If there is a reduction in emissions the difference between the baseline and actual emissions will be converted into emission credits which can be traded.\footnote{Op cit n9.}

Absolute trading schemes are more attractive to policy makers and environmental groups as they provide certainty on the environmental outcome. The cap determines the total amount of emissions from the sectors involved and the market determines where the necessary reduction in emissions takes place. The main difference between a baseline and credit scheme and cap and trade scheme is that under the former scheme, the intensity baseline is set in advance but the actual amount of production and the emission intensity of production are not known until the end of the year or the period used. This results in emitters not knowing the extent of their liabilities or benefits until the end of the trading period. Whereas under a cap and trade scheme, the cap is known in advance so allowances can be allocated with certainty at the start of the emissions period. One major downside of this scheme is that it requires a proportion of the cap to be set aside for new entrants which can create perverse incentives to keep inefficient plants running at low output. By contrast the baseline and credit scheme does not require a new entrant reserve.\footnote{Op cit n9.}

Baseline and Credit Scheme - Greenhouse Gas Abatement Scheme New South Wales (GGAS)

An example of a baseline and credit scheme is the GGAS, the world’s first carbon emissions trading scheme. In December 2002 the NSW Parliament passed an amendment to the Electricity Supply Act 1995 placing an obligation upon electricity retailers and certain entities including large electricity users to meet mandatory targets for the emission of greenhouse gases from electricity production and use. In 2003 the Greenhouse Gas Abatement Scheme (GGAS), a Kyoto compliant scheme, which sets an absolute limit on greenhouse gas emissions, was introduced in NSW. The participants in the scheme are:

\footnotetext{16}{Op cit n9.} \footnotetext{17}{Op cit n9.}
• NSW retail electricity suppliers
• NSW electricity generators prescribed by the regulations
• Market customers in respect of an electricity load over a certain size for use in NSW
• A large customer who has made an election to be subject to a greenhouse gas emissions benchmark
• A person engaged in carrying out significant development that has made an election to be subject to a greenhouse gas emissions benchmark.18

Annual benchmarks for electricity generators are established statewide. Individual participants comprised of electricity wholesalers and retailers must base their allocation of the greenhouse gas benchmark on their share of NSW electricity demand. The participants meet their allocation by surrendering abatement certificates created from project based emission reduction activities.

Of value in this scheme is the ability of participants to offset emissions through the purchase of forest sequestration credits. Other areas that can result in abatement certificates are generation which is the reduction of greenhouse intensity of electricity purchased from generators through low emission generation of electricity including co-generation or improvements in emissions intensity of existing generation activities such as a move to gas-fired and/or renewable electricity generation away from coal generation. Demand side abatement improves energy efficiency through activities that result in the reduced consumption of electricity.19 The scheme recognizes activities that reduce or promote the reduction of greenhouse gas (GHG) emissions and the enabling of trading in and the use of certificates created as a result of those activities for the purpose of meeting GHG benchmarks.

Each individual participant’s benchmark is calculated by:

• Multiplying the state’s population for a year by the state’s GHG benchmark per head of population to determine the electricity sector benchmark
• Determining the proportion of the total electricity demand in the State that was used by the participant for that year and
• Applying the proportion to the electricity sector benchmark to calculate the number of tonnes of CO2 that is the participant’s benchmark.20

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19 Ibid.
20 Ibid.
Though the designers of the scheme considered a cap and trade scheme for NSW, it was not implemented because it would have placed liability on electricity generators rather than retailers. NSW generators would have been put at a disadvantage because generators in other states could have undercut them as they would not have been subject to the extra burden. Also if the State of Victoria had been permitted to provide extra electricity to NSW it would have resulted in a national increase of greenhouse gas emissions because Victoria relies on the use of brown coal for its power stations.

The number of tonnes of abatement for which a participant is responsible is determined by multiplying the total amount of electricity supplied, purchased or used by the participant in that year by the NSW pool coefficient for GHG emissions and subtracting from that figure the number of tonnes of GHG emissions actually abated by the participant. Non-compliance results in a certificate shortfall and the incurrence of a penalty unless sufficient abatement certificates can be produced to account for the shortfall. If a benchmark is not met, a penalty of AUD$10.50 is imposed for each tonne of CO2e.21

One of the main problems with the scheme has been poor reporting and high transaction costs as most abatement certificates resulted from only a few types of activities and further only five corporations were responsible for creating almost 80 per cent of the 2003 certificates.22 In 2004 changes were made to attract other providers and new abatement projects.

THE AMERICAN EXPERIENCE

Though the United States is not a signatory to the Protocol it has a number of carbon markets operating. Emissions trading schemes at the sub federal level have been in existence in the United States for some time. A particularly successful scheme emerged following the passing of the 1970 Federal Clean Air Act (CAA). Under this Act the US Federal Environmental Protection Agency (EPA) can identify air pollutants that damage people’s health. The EPA sets air quality standards by setting limits on concentrations of atmospheric sulphur dioxide (SO2), nitrous dioxide (NO2), lead, particulate matter, ozone, and carbon monoxide.23

Under the auspices of this Act, the Acid Rain Program was introduced in order to lower the emission of SO2. This was the first emissions permit trading scheme in the US that used unlimited trading within an overall cap, as the only method of reaching specified emission limitations.24 The Program was set up in two phases,

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22 Op cit n18 p266.
each designed to restrict emissions from fossil fuel fired power plants. Phase 1 began in 1995 and covered 263 units at 110 electric utility plants, most of them coal-burning, in 21 Eastern and mid-Western states. Another 182 units joined as ‘substitution or compensating units’ resulting in the coverage of 445 units.25

Phase II began in 2000 reducing annual emission limits of large high emitting plants and setting restrictions on ‘smaller, cleaner’ plants that use coal, gas and oil, covering more than 2,000 units.26 The program applies to existing utility plants serving generators that have an output capacity of over 25 megawatts and includes new utility units.27 SO2 emissions have fallen from 11.87 million tonnes of SO2 in 1995 to 10.6 million tonnes of SO2 in 2001. The cap for 2010 has been set at 8.95 million tonnes.28 The programme design gives participants an allocation of allowances calculated on their historic fuel consumption and a specific emissions rate.29 Each allowance permits the utility to emit 1 tonne of SO2 over the period of a year.30 Allowances under the programme can be traded or banked and participation is unrestricted. The Act provides that a unit cannot emit at levels that would violate federal or state limits.31 Included is an ‘Opt-in Program,’ whereby sources that emit SO2 can voluntarily join the programme. The Opt-in programme offers a financial reward to those who voluntarily cut SO2 emissions. If the voluntary participant reduces its emissions so that it has unused allowances, and if the price obtained from selling the allowances is greater than what it costs to reduce emissions, the voluntary participant will make a profit.32 A penalty of $2000 adjusted for inflation, must be paid for every tonne of SO2 that is emitted in excess of the allowances that a unit holds. The unit must then offset any excess SO2 emissions with equal allowances. The utility that emits excess emissions can surrender its allowances immediately or submit a plan to the EPA that details how cutbacks will be achieved.33 Sources of emissions may also use a mixture of measures, such as using cleaner burning fuel or energy efficiency measures, to comply with targets.34

27 Ibid.
29 Op cit n26 p 3.
30 Op cit n26 p 3.
31 Title 1 of the Clean Air Act 1970.
32 Op cit n25 p1.
34 Op cit n25 p 6.
The design of the programme has been crucial to its success. An annual reconciliation occurs at the end of the year during a 60-day grace period where units can ensure that they have enough allowances to correspond with SO2 emissions experienced in the previous year.\footnote{Op cit n25 p 1.} The EPA has an electronic record keeping and notification system called the Allowance Tracking System which tracks allowance transactions and the status of the allowance account. From this tally the EPA can determine compliance with emission allowances. The accounts contain information on unit account balances and the serial numbers of each allowance. As the system is computerized it allows the flow of data to assist in the development of a market for allowances.\footnote{Op cit n25 p 1.} The cap and trade scheme was chosen as the EPA took the view that the flexibility under this type of scheme achieves emission reductions at the lowest cost available.\footnote{Op cit n25 p 1.}

The Chicago Climate Exchange (CCX) is a ‘greenhouse gas emission registry, reduction and trading system’ and the first scheme in the world to include all six greenhouse gases.\footnote{Carbon Dioxide (CO2) Methane (CH4), Nitrous Oxide (N20), Chlorofluorocarbons (CFC’s) Hydro fluorocarbons (HCF’s) Perfluorocarbons and Sulfur Hexafluoride (SF6) (the latter three gases are often referred to as halogenated bases).} It is a self-regulating, ‘rules-based’ exchange designed and controlled by its members on a voluntary and legally-binding basis.\footnote{About CCX, Chicago Climate Change’ 2004 <http://www.chicagoclimatex.com/about/> June 2008.} Phase I of the scheme ended in December 2006. At that time, all members had reduced their direct emissions by 4 percent below the baseline period 1998-2001.\footnote{Ibid.} Phase II extends the scheme through to 2010 requiring its members to reduce emissions 6 percent below the baseline level.\footnote{Ibid.}

The success of the CCX market is due to the fact that it can be accessed via the internet enabling trading between CCX Registry Account Holders. The system provides daily and monthly statements to members, and supports traders that are ‘exchange-cleared’ thus allowing anonymity and permitting trading by private negotiations. A member registers its emissions with the CCX Registry and is allocated a ‘Carbon Financial Instrument’ contract in line with the established baseline and reductions schedule of the CCX. Reports and tools are made available to members that will help them manage their GHG emissions, and ‘Carbon Financial Instrument’ contract holdings.\footnote{Ibid.} Each member must have a ‘Carbon Financial Instrument’ (CFI) contract in the CCX Registry account equal to its verified emissions for the year. Each CFI contract is taken to be the equivalent of 100 metric tons of CO2. The success of this programme was reflected in the first emission reduction compliance period for the calendar year 2003 where the total
amount of emissions of its members was 8 percent under the emission reduction commitment.43

THE EUROPEAN EMISSIONS TRADING SCHEME - EU-ETS

The EU-ETS represents a major undertaking that provides a framework for a community wide compulsory carbon dioxide (CO2) allowance trading scheme involving all 27 EU member states. The 12 members that have joined since 2004 are not covered by the scheme as they already had their own commitments under the Kyoto Protocol.44

In order to comply with its obligations under the Kyoto Protocol the EU has elected to reduce its overall greenhouse gas emissions by 8 percent over the period 2008-2012 by taking into account annual average emissions over this period as compared to levels recorded in 1990.45

The EU-ETS is designed to run in phases. The initial commitment period that ran from 2005 – 2007 was considered a trial period referred to as the ‘learn by doing phase’. In this phase only CO2 was included.46 The second phase which runs in the first Kyoto commitment period covers a period of 5 years running from 1 January 2008 to 31 December 2012.47 In the second phase running from 2008, the scheme will involve not only the 27 EU member states but also three members of the European Economic Area – Norway, Iceland and Liechtenstein.48

Member States have their emission obligations set by their individual governments in consultation with the EU Commission resulting in a burden sharing agreement. A portion of the target is assigned to installations participating in the EU with the remainder of the national target available for emission schemes outside the EU-ETS.49 Member States have to decide how much of their allowable Kyoto emissions would be assigned to sectors included in the EU-ETS and then spread the targets between the sectors involved. The European Parliament’s resolution OJC197/219&400 in 2000 determined that the trading regime would be based on

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47 Op cit n44 p7.
48 Ibid p4.
quantified greenhouse gas abatement targets set in advance by individual countries and sectors.\footnote{EU Parliament Resolution 26 October 2001 [2001] OJC197/219 & 400.}

The initial drafting of the scheme began in January 2001. In March of that year it was clear the USA would not ratify the Kyoto Protocol. Commissioner Wallstrom felt that a signal should be sent to the world that the Kyoto Protocol had to be implemented.\footnote{Op cit n3 p104-5.} Working Group 1 was set up to hold meetings with different stakeholders to get ideas on how the scheme would operate. The introduction of the scheme required a strong enforcement framework in order to be effective. For the EU, the main question at the initial stages of discussions was whether enforcement would be at the community or national level. As could be expected the lead up to the final directive witnessed many disagreements. Non-governmental organizations as well as industry wanted an emissions trading instrument to combat climate change. Non-governmental organizations wanted robust environmental effectiveness with strict targets, monitoring, verification and compliance functions that would be exercised at community level whereas industry did not want an emission trading scheme that would put European businesses at a competitive disadvantage.\footnote{R Dornau ‘The Emissions Trading Scheme of the European Union’ in D Freestone and C Streck ‘Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work’ Oxford University Press 2005 p418.} Some industries wanted voluntary agreements rather than a firm trading system. This was based on the concern that industry might bear the burden whereas transport sectors and households would not.

The drafting of the Directive took approximately three years to complete. It began with the ‘Green Paper on Emissions Trading’ produced by the European Commission in March 2000 which pointed out the economic benefits and benefits for the internal market of applying emissions trading at the EU level rather than the national level only.\footnote{Op cit n3 p47.} It addressed the issue of the allocation of allowances between sectors and individual sources and set out various options for the issuing of permits. This included auctioning permits as well as different approaches to the free allocation of permits known as grandfathering. It considered whether the allocation methods should be assigned to Member States or whether a degree of harmonization should be introduced.\footnote{Op cit n3 p 264.}

It was not until the Bonn Agreements were adopted in July 2001 that the proposal pushed ahead.\footnote{Decision 5/CP.6 Bonn Agreements on the Implementation of the Buenos Aires Plan of Action FCCC/CP2001/5, 36-49; Directive 2003/87/EC.} On 23 October 2001 the Commission published its proposal for a Directive establishing the EU-ETS.\footnote{Ibid.} It came into force in October 2003 setting out
in detail the terms of the EU-ETS.\textsuperscript{57} The scheme covers four sectors; production processing of iron and steel and minerals such as cement glass or ceramic production, energy i.e. electric power and direct emissions from oil refineries and pulp and paper. The regime covers around 13,000 installations.\textsuperscript{58} It allows for links with other Kyoto Parties thus permitting a global trading scheme. The EU allowed emission allowances to be free initially and thereafter with up to 5 percent being auctioned in the first period and 10 percent in the second period.\textsuperscript{59}

The Directive requires each member state to impose binding caps on emissions of CO2 from installations above a certain production capacity or output threshold. An installation is defined as a stationary technical unit where one or more activities listed in Annex 1 are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site that could have an effect on emission and pollution.\textsuperscript{60}

The Linking Directive 2004/101EC amending directive 2003/87/EC\textsuperscript{61} was agreed to on April 20 2004 to regulate the purchase of the Protocol emission quotas. This links the EU emissions trading scheme with Joint Implementation Projects (JI’s) and Clean Development Projects (CDM’s) though under articles 6 and 7 of the Kyoto Protocol their use must be supplemental to domestic action. The credits generated from these projects are part of the official ‘Kyoto currency’ and eligible for compliance with Kyoto targets. Member states can use credits generated by


\textsuperscript{58} See summary table of national allocation plans of the EU25. <europa.eu.int/comm/environmental.climat/emission_plans.htm> 6 June 2008.

\textsuperscript{59} First phase runs from 2005 - 2007 second phase 2008 - 2012.

\textsuperscript{60} Article 30(a) Annex 1 of the Directive covers the following areas:-

\textit{Energy activities}

- Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations);
- Mineral oil refineries; Coke ovens
- Metal ore (including sulphide ore) roasting or sintering installations
- Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting with a capacity exceeding 2.5 tonnes per hour

\textit{Mineral industry}

- Installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns with a production capacity exceeding 50 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day
- Installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day
- Installations that manufacture ceramic products by firing, in particular roofing tiles, bricks refractory bricks, tiles stoneware or porcelain with a production capacity exceeding 75 tonnes per day and /or a kiln capacity exceeding 4 m\textsuperscript{3} and with a setting density per kiln exceeding 300kg.m\textsuperscript{3}.

\textit{Other activities}

- Industrial plants for the production of: Pulp form timber or other fibrous materials; Paper and board with a production capacity exceeding 20 tonnes per day.

\textsuperscript{61} COM2003/0403.
CDM’s i.e. certified emission reduction units (CER’s) and JI’s, Emission Reduction Units (ERU’s) to comply with their allowances under the EU-ETS. Their use is limited to an assigned percentage of the total amount of allowances to be allocated in the relevant trading period and stated in the National Allocation Plan of each Member State. Thereafter the European Commission makes a final decision on allocations. The reason for this is that such credits are assumed to be cheaper than reductions within the EU-ETS scheme. CER’s and ERU’s from nuclear and land use and land use change and forestry (LULUCF) projects cannot be used for compliance in the EU-ETS. Linking is only possible if a mechanism is put in place to convert units from one scheme into units of the other. Trading can also occur through brokers and financial institutions.

Under the EU Emissions Trading Directive 2003/87/EC each EU member state is required to develop a National Allocation Plan (NAP) in which emission rights are allocated to operators of installations for activities described in Annex 1 of the Directive. Operators covered by the scheme must hold a greenhouse gas emission permit. This specifies the monitoring and reporting requirements and sets out an obligation to surrender a number of allowances equal to the total verified emission of the installation in the previous calendar year.

An operator is ‘any person who operates or controls an installation or where this is provided for in national legislation to which decisive economic power over the technical functioning of the installation has been delegated’. Where an operator carries out several activities in the same installation the allowances are aggregated. An allowance is a permit to emit one tonne of CO2e during a specified period. A penalty rate of 100 euros per tonne for emissions over the allowance was set, well above the market price along with make good provisions.

Not surprisingly the EU-ETS has experienced a number of problems in its first non-Kyoto period running from 2005-7.

WHAT WENT WRONG?

Phase 1 accounted for about 45 percent of the EU’s total CO2 emissions. In 2005 allowances exceeded emissions by about 80 million tonnes of CO2 about 4 percent of the EU’s intended maximum emissions. This was due to both over-allocation of permits and a response to the price of allowances in 2005. The EU has been heavily criticized for handing out excess free emissions allowances in the absence of a

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63 Article 3(f).
64 Article 3(a).
Kyoto constraint. Only a small portion of permits were actually auctioned. Because of the over-allocation of allowances emission credits fell from around 30 euros to 8 euros but as some large energy firms did not receive enough quotas the market survived so that in May 2005 carbon prices settled at around 15 euros. When in July the Polish register of carbon credits was launched, an over-allocation of emission credits resulted in the flooding of the market with the price of credits falling to about 12 euros.

Overall, EU Member States failed to set ambitious emission limits in the energy and manufacturing sectors and rules at national levels were not sufficiently well designed to provide incentives to channel investment into cleaner plants and processes. The other problem was that some Member States and some sectors decided on emission projection levels before verified emissions data became available and this too caused an over-allocation of allowances. Large variations in prices of allowances reduced the incentives for long-term investment to reduce emissions. A further problem was that the EU allowed member states to set their own emission allocations through each NAP. At the same time there was a windfall of profits for electricity generators in the UK in the region of 1 billion euros because power companies raised prices to reflect the market value of the ETS allowances even though they had them for free and as power companies they had little international competition. As a result of this mistake the EU has stated that in Phase 11, all power sector permits will be auctioned so as to prevent windfall profits. Another problem arises from strong support for new emitters with free allocations of allowances for new entrants e.g. new coal-fired power plants which again affect the market price of permits.

The Europa website sums up the problems as follows:-

‘Besides underlining the need for verified data, experience so far has shown that greater harmonization within the EU-ETS is imperative to ensure that the EU achieves its emissions reduction objectives at least cost and with minimum competitive distortions.’

It also states that:

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66 Ibid.
69 Ibid.
71 Ibid.
‘The first two trading periods also show that widely different national methods for allocating allowances to installations threatens fair competition in the internal market. Furthermore greater harmonization clarification and refinement are needed with respect to the scope of the system, access to credits from emission reduction projects outside the EU, as the conditions for linking to emissions trading systems elsewhere and monitoring, verification and reporting requirements.’

The second phase runs from January 2008 – 2012 and coincides with the Kyoto Commitment period. It expands the scope of the EU-ETS. During this period all 27 EU Member States are included as well as three members of the European Economic Area. The Commission has capped national emissions from EU-ETS sectors at an average of around 6.5 percent below 2005 levels to help ensure that the EU as a whole and Member States individually, deliver on their Kyoto commitment. CDM and JI credits will be introduced in this phase through the Linking Directive. Aviation emissions may be included from 2010.

Phase II is adopting a stricter allocation process by rejecting the first NAP’s submitted by most member states. This has resulted in a rise in permit prices to around 20 euros/te CO2. The EU is creating a credible cap together with a credible system of registration and monitoring. The cap cannot be too lenient and/or open to manipulation otherwise the operation and credibility of the ETS will be undermined. Phase I and II rely mainly on grandfathering or the free allocation of emissions to existing players based on historical emissions with some permits set aside for new entrants.

**Future Amendments to the Directive**

There is a proposal to amend the Directive which established the EU-ETS so that the period beyond 2012 will be strengthened and a target set for a reduction in emissions of at least 20 percent by 2020 compared with 1990. This is provided other industrialized countries commit to comparable efforts. This was endorsed in March 2007 by the European Council and the decision to draw up the agreement taken in Bali and the UN climate change conference in December 2007.

The main changes proposed are:

- There will be an EU wide cap on the number of emission allowances instead of 27 national caps. The cap will decrease along a linear trend line which will continue beyond the end of the third trading period from 2013 -2020.

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74 Ibid.
75 2004/101EC.
A much larger share of allowances will be auctioned instead of being the subject of free allocations
- Harmonized rules governing free allocations will be introduced
- Part of the right to auction allowances will be redistributed from Member States with a high per capita income to those with lower ones in order to strengthen the financial capacity of the latter
- A number of new industries will be introduced i.e. aluminum and ammonia producers
- Two further gases will be introduced: nitrous oxide and perfluorocarbons
- Member states will be allowed to exclude small installations from the system provided they are subject to equivalent emission reduction measures.
- NAP’s will no longer exist

PROPOSED FRAMEWORK FOR AUSTRALIA’S NATIONAL EMISSIONS PROGRAMME AND TRAPS TO BE AWARE OF

Now that Australia has ratified the Kyoto Protocol it is committed to a target of 108 percent of 1990 emissions over the 2008-2012 period. The NETS is integral to mitigating greenhouse gas emissions in this country. In advance of the scheme the National Greenhouse Energy Regulating Act (NGER) came into force in 2007 requiring around 700 large energy generator and energy users which cover 70 per cent of Australian emissions, to report emission and energy use from 1 July 2008. NGER will underpin the future of the Australian Emissions Trading Scheme.

The future design of the NETS hinges on the forthcoming Garnaut Report, though the interim report released in February 2008 gives an indication of the design of the scheme. Four specific target periods are proposed. The first period up to 2012 will be based on Australia’s Kyoto commitment. The other three periods will see increased levels of commitment. The NETS will cover all green-house gases. The scheme proposes to cover emissions from stationery energy, industrial processes, fugitives, transport and waste at the outset with agriculture and forestry to be included as soon as viable. Land clearing and deforestation are not included. Though the Task Group on Emissions Trading recommends a mixture of free allocation and auctioning of emission permits, the Garnaut Interim Report supports the auctioning of permits arguing that the free allocation of permits would not in any event prevent an increase in the price of energy. The Report considers that grandfathering is not a suitable method of allocating permits and allowances should be sold either through auctioning or at fixed prices. Member states in the EU-ETS

77 Ibid.
80 Ibid. and op cit n4.
81 Op cit n4 p122.
were over generous in their allocations resulting in a price crash in the carbon market. If Australian states are given the right to create their own national allocation permits strict controls would be needed at a national level so as to avoid the experiences of the EU-ETS where EU members were over generous with allocations on a national level. Another important factor to be taken into consideration is that a major benefit to be gained from auctioning of permits is that the revenue obtained can usefully be spent on improving the productive or adaptive capacity of the economy consistent with reducing greenhouse gas emissions. Transitional assistance to trade exposed emission intensive industries such as steel and aluminum that cannot pass on the cost of the carbon price to consumers would be supported under the scheme.

The Task Force recognizes a comprehensive system of emission measurement reporting and verification is essential. Though the Task Force takes the view that Australia has lengthy experience in successfully monitoring emissions such as in the Greenhouse Challenge Plus Programme where firms responsible for 50 percent of national emissions self-report, this has not been the experience in the EU as discussed above. Though Australia is in a different position to that of the EU, it being one country, self-reporting tends to lessen accountability. In the case of the EU-ETS, established monitoring continued on the same basis and resulted in the scheme failing to obtain overall accurate emissions data. It is therefore critical that an ETS has to be designed in such a way that emissions data and monitoring processes are credible. A further requirement is the setting of a cap that reflects an effective and worthwhile scheme. Strong guarantees of transparency and public access to information are essential.

Part of the income from the sale of allowances must be returned to the companies that are emitters or large users of electricity in order to support investment in energy efficient plants and to foster the transition to renewable energy. Emission limits should be met without relying on JI’s and CDM’s unless a cap is placed on the percentage of credits that can be obtained from these measures. Credits obtained from CDM’s and JI’s must come from high quality projects that are subject to both Federal government and UNFCCC approval. The aviation and navigation industry should be included once the scheme is up and running successfully.

The governance of the scheme must be undertaken through an independent regulator with the power to accurately monitor emissions and report back to emitters on a regular basis similar to that in existence in the US Acid Rain Programme. It is only via good corporate governance that the scheme will be

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82 Op cit n4 p122.
83 Op cit n4 p122.
84 Op cit n4 p122, the Green Paper released by the Rudd government in July 2008 contains a proposal that aluminium companies that export goods will receive permits covering up to 90 percent of their emissions. Electricity generators will also receive assistance.
85 Op cit n4 p83.
supported by industry and the general public. Finally, the penalty rate for non-compliance must be an effective deterrent.

In summary emissions trading schemes such as the Acid Rain Programme in the US can be effective and successful. However they must be supplemented with other measures that are not prone to market failures such as the phasing out of coal, interim clean coal initiatives and state measures that promote mandatory energy efficiency. The move to renewable energy must not be stifled by any idea that emissions trading will solve the problems of atmospheric pollution because to date this has not occurred. Emissions trading therefore should be part of a conglomeration of schemes and projects that will mitigate the effects of greenhouse gas emissions and sooner rather than later.