

# A E T F *review*

Australasian Emissions Trading Forum

[www.aetf.net.au](http://www.aetf.net.au)

## Trading Progress Continues

*A common theme of the articles in this issue of the Review is that progress with trading is continuing.*

*In the UK, the first year of its trading scheme has been completed. Although the scheme has had its teething troubles, it is achieving its objectives of immediately reducing greenhouse gas emissions and familiarising UK companies with operating in an emissions constrained environment. Trading volumes have been significant and participants in the scheme have largely remained in compliance.*

*New Zealand continues to develop its emissions abatement policies and is drawing on the UK experience and policy model. Policy is being designed to progressively expose the economy to the international price of emissions. NZ's emissions charge plays a similar role to the UK's climate change levy, with negotiated greenhouse agreements playing a similar role to climate change agreements.*

*When this experience is placed alongside that in Canada, reported in the last issue of the Review, and the steady progress in developing the EU trading scheme, last reported on in the last but one issue, a picture of significant and sustained progress in the development of emissions trading emerges.*

*In Australia progress has been less marked than elsewhere in the Commonwealth. The federal government has been slow to accept the case for emissions trading. The States, however, led by NSW, are showing more enthusiasm. Australian companies are taking greenhouse seriously as witnessed by the Greenhouse Friendly project announced by AGL and the interest in the newly launched AETF Business Roundtable. MG*

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# The First Year of the UK Scheme

Malcolm Gray, AETF

According to its website, the UK emissions trading scheme (ETS) is “the world’s first economy-wide greenhouse gas emissions trading scheme”. It recently completed its first full year. A number of reports on its operation are now available.<sup>1</sup> This article draws on that material to offer a review of this first year.

## Background

The October/November 2001 issue of the AETF Review contained an article describing the policy framework of the UK ETS.<sup>2</sup>

It commenced with the opening of the registry on 1 April 2002. In the first stages of the ETS there are two kinds of participants: Climate Change Agreement Participants (CCAP) and Direct Participants (DP). Some participants have targets set in absolute terms and others relative to their levels of output or as energy efficiency targets. Trading from the absolute to the relative sector is unrestricted. Trading in the other direction is controlled by a “gateway” that ensures that there is never net trade from the relative to the absolute sector.

The instrument traded is the allowance, which comes in various vintages, essentially corresponding to its year of issue, and confers the right to emit a tonne of CO<sub>2</sub>e in the vintage or any subsequent year. Allowances may be freely banked until 2007, when special arrangements will apply to facilitate the transition into the first commitment period under the Kyoto Protocol. Anyone can open a registry account and trade allowances on a speculative basis.

## Climate Change Agreement participants

CCAPs come into the ETS by becoming parties to a CCA. This offers an 80% rebate on the climate change levy in return for acceptance of an emission reduction or energy efficiency target. In milestone years, when its performance is measured, a CCAP can meet its agreed targets either by actually achieving the full amount of the required emission reduction or by offering allowances equal in volume to any shortfall in the emission reduction achieved. Alternatively, a CCAP achieving a reduction in

excess of its target may claim allowances equal to the extent of any such over-achievement. Such allowances may then be traded or held against the possibility of a future shortfall in emission reduction performance.

There are around 5,000 CCAPs in the UK ETS. The first milestone year commenced between October and December 2001 and finished between September and December 2002.<sup>3</sup> The reconciliation deadline for all participants was 17 February 2003. The 88% of participants that achieved their targets were re-certified to receive their climate change levy discount for a further two years.

## Direct participants

DPs entered the ETS via the auction held to allocate the financial incentive of £215m allocated by the UK government to stimulate emission abatement activity. Emitters were invited to tender abatement targets to be achieved in equal instalments over a five year period. The incentive was to be paid in five equal instalments conditional on each annual target being achieved.

The “descending clock” auction to allocate the incentive, described below, was held in March 2002. The first target year was 2002. The auction yielded 34 winners, offering abatement totalling 4,028,176 tCO<sub>2</sub>e at a price of £53.37/tCO<sub>2</sub>e. Two of the original winners subsequently withdrew from the ETS. This together with other changes has resulted in a small reduction in the abatement contracted to 3,960,150 tCO<sub>2</sub>e. All but one of the remaining DPs complied with the requirements of the ETS and have received the first instalment of the incentive payment together with their allowance allocations for 2003.<sup>4</sup>

## The auction

The auction commenced at a price of £100/tCO<sub>2</sub>e. At this price, 38 organisations tendered emission reductions totalling 4.9 mtCO<sub>2</sub>e. Since this would have required more than double the funding provided, the price was progressively reduced over nine auction rounds until total tenders came within

<sup>1</sup> The results so far published are described as preliminary and it is suggested that further analysis will be required before firm conclusions can be drawn..

<sup>2</sup> Back issues of the AETF Review can be accessed by going to [www.aetf.net.au](http://www.aetf.net.au) and clicking on “Review”.

<sup>3</sup> A CCAP could choose to start its first milestone year on any date between 1 October 2001 and the beginning of 2002.

<sup>4</sup> DPs that are in compliance receive an allowance allocation equal to their emission target for the year at the beginning of each year.



budget, which occurred at a price of £53.37/tCO<sub>2</sub>e.<sup>5</sup> A total of 34 organisations submitted successful tenders. The largest tender was for 805,635 tCO<sub>2</sub>e, or 20% of the total and the maximum permitted by the auction rules. Over half, or 19 bids, were for amounts less than 1% of the total.

A follow-up survey of auction participants indicated that 16 of the successful bidders would have dropped out if the price had fallen below £50/tCO<sub>2</sub>e. The bidding schedules suggest that most auction participants used a simple bidding strategy, maintaining their tender as long as the offered price stayed above their average cost of abatement. Four organisations made gradual reductions in their tenders as the price fell, while a further four made one-off step reductions. In the follow-up survey only about half of those questioned had conducted some kind of analysis of their abatement costs and these largely concentrated on volumes achievable rather than how this might vary with price.

### Trading activity

Care must be taken in interpreting the available data on trading activity. While all transfers of allowances are done through the UK's central

registry, there is no centralised exchange for the buying and selling of allowances. This creates two problems. First, it is not possible to be certain which transfers represent trades, rather than, eg, transfers between areas within an organisation or between related organisations. Second, there is no single authoritative source for price information, although several brokers advertise current prices and some analysts have assembled data series.

Spot trading only became possible when allocations of allowances were made to market participants. In the case of DPs, this occurred once their base period (1998-2000) emissions had been verified. This took some time to achieve. By October 2002, only 12 of the 34 successful bidders in the auction had verified their baselines and been allocated their 2002 allowances. This restricted the rate at which allowances became available to the market. CCAPs that over-achieve their targets can receive allowances to the extent of that over-achievement but not until their emissions have been verified, ie at the end of their milestone year.

By 31 March 2003, 30.23m vintage 2002 allowances had been allocated to DPs and 1.3m to the 123

CCAPs that over-achieved their targets. Thus a total of 31.58m vintage 2002 allowances were allocated to accounts in the UK registry. Excluding allocations, retirements and cancellations, the registry had recorded 2001 transfers by March 2003, involving 7.22m allowances in parcels from one to 220,000.

DPs are required to retire one allowance for each tonne of CO<sub>2</sub>e emitted. For the 2002 year, the DPs still active in the ETS retired 25.92m allowances. This left some 4.31m 2002 allowances not required for compliance purposes by DPs in the 2002 year. Such allowances can be sold or carried forward and used for compliance purposes in future years. A total of 743 CCAPs made use of the ETS to acquire some 0.57m allowances to retire, thereby reducing the

volume of emission reduction required to meet their targets.

The volume of trading climbed sharply over the year with over three quarters or 1637 transfers taking place in the March quarter of 2003. Reference has already been made to the delay in allowances becoming available for trade. In addition, it is likely that many CCAPs would only have become

aware of their emissions performance against target towards or after the end of their milestone year.

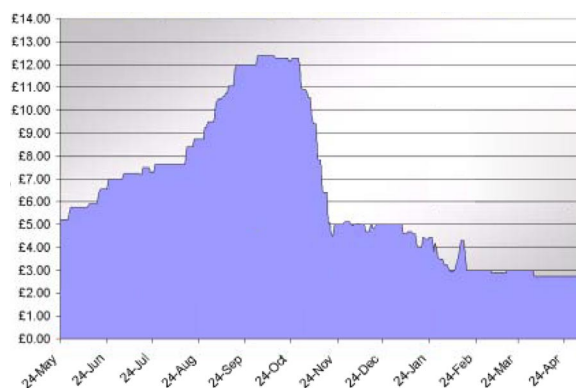
### Prices

As can be seen in the chart, trading opened at around £5/tCO<sub>2</sub>e, climbing to about £8/tCO<sub>2</sub>e over the first three months of trading. Prices then rose more rapidly to peak at around £12/tCO<sub>2</sub>e in October 2002. This peak was relatively short-lived with prices falling rapidly in the first half of November to back around £5/tCO<sub>2</sub>e. In the first month and a half of 2003 prices slipped further to settle a little below £3/tCO<sub>2</sub>e. Current quotes are at around £2.30/tCO<sub>2</sub>e.

For the reasons explained earlier, supply was heavily constrained at the beginning of the period and probably contributed to the September/October price peak. Most transfers took place between January and March and it seems likely, therefore, that most trading occurred at prices around £3-5/tCO<sub>2</sub>e.

The relatively depressed level of prices currently being experienced is associated with reports of limited market activity. CCAPs have completed their

Volume Weighted Prices of 2002 UK ETS Allowances<sup>6</sup>



<sup>5</sup> As explained in the earlier article, for comparison with allowance prices, the auction price must be divided by three.

<sup>6</sup> This graph is reproduced in simplified form from the ETS website. It is credited to JEmmanuelETS@aol.com, but attempts to contact this address have been unsuccessful.



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first milestone year and their next compliance date is in 2005 for emissions occurring over 2004, so they be absent from the market. DPs seemed to comply with their first year targets relatively comfortably and, although the task becomes progressively more difficult, strong demand from this group at this stage seems unlikely.

### **Conclusions**

The first year of the UK ETS has been successfully

concluded. The overwhelming majority of CCAPs and all but one DP were in compliance. Trading experience was strongly influenced by this being the first year of the ETS and by the timing of the compliance obligations of the CCAPs. The number of trades at around 2,000 compares very favourably with estimates of 80-90 for the number of international trades in 1996-2000.

*The ETS website is [www.defra.gov.uk/environment/climatechange/trading/ukets.htm](http://www.defra.gov.uk/environment/climatechange/trading/ukets.htm)*

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# A New Zealand Update

Stuart Frazer, Frazer Lindstrom Limited

### **Introduction**

New Zealand formally ratified the Kyoto Protocol on 19 December 2002. In the first commitment period (CP1) NZ is obligated to reduce greenhouse gas emissions to 1990 levels. NZ has an advantageous position as, through the increase in forestry development post 1990, it will be a net seller of carbon.

The government is looking beyond CP1 however, and is setting policies to progressively expose the economy to the international price of emissions. The policy package, as outlined in the April/May 2002 AETF Review, was (with few changes) approved by cabinet in October 2002. Climate change policy in New Zealand is now managed by the Climate Change Office (CCO) within the Ministry for the Environment. This article focuses on elements of the Price Based Measures work programme.

### **Emissions Charge**

The introduction of an emissions charge in 2007 is still planned. This charge will be set at the international price of carbon but capped at NZ\$25/tCO<sub>2</sub>.

This charge will apply to:

- Emissions from energy supply and use;
- Process emissions; and
- Fugitive energy emissions.

Synthetic gas emissions, agricultural methane and nitrous oxide, and methane from the waste sector will not be subject to the charge.

Design of the emissions charge is ongoing amidst much concern from industry as to how it will integrate with the market mechanisms for electricity pricing. Similarly the mechanisms for revenue recycling are still to be determined.

### **Emissions Trading**

The government's position on emissions trading is still to "retain the option to introduce private sector emissions trading if conditions permit".

Policy implementation with potential linkage to emissions trading has progressed rapidly in two areas; Negotiated Greenhouse Agreements (NGAs) and Projects.

### **Negotiated Greenhouse Agreements**

An NGA is a contractually binding agreement between a firm (or sector) and the government. The core of such an agreement is a firm's commitment to be on a pathway to world's best practice (WBP) in emissions management, in return for a full or partial exemption from the emissions charge.

The Government has introduced NGAs to prevent the risk of economic production moving (or "leaking") from New Zealand to countries with less stringent climate change policies. Such leakage could occur if the emissions charge reduced the international competitiveness of some firms or industries relative to producers in other countries, which do not face similar climate change requirements.

The first and to date only NGA was signed in April this year by The NZ Refining Co Ltd, which owns and operates the country's only oil refinery. This agreement was completed in parallel with policy finalisation due to project deadlines arising from the Government's fuel specification review.

Applications from a further dozen firms for eligibility assessment were submitted in July/August 2003, with an announcement mid November that four of these had been processed through to the negotiation stage.

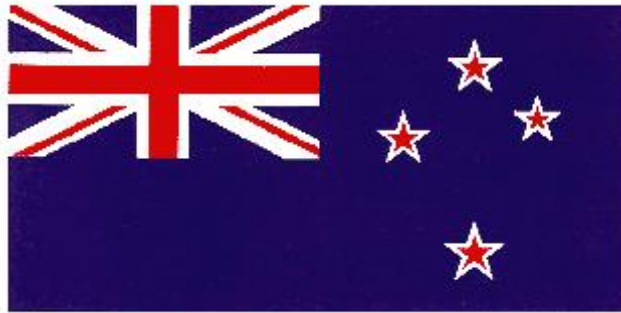
### **Eligibility Test**

To be eligible to negotiate an NGA, firms must



satisfy the Government that there is a significant risk that their international competitiveness would be adversely affected by the imposition of an emissions charge. The test is summarised below:

- A. More than 20% of the firm's expenses arise from energy use (excluding the emissions charge); or
- B. The application of a \$25/tCO<sub>2</sub> charge would decrease profitability (EBIT) by more than 10%; or
- C. The application of a \$25/tCO<sub>2</sub> charge would reduce the rate of profit below the appropriate industry weighted average cost of capital.



Those firms deemed eligible to date are Newmont Waihi and GRD Macraes (gold mining), ACI (glass) and Norske Skog Tasman (pulp & paper).

Other applicants include firms in the base metals, cement, dairy, steel and forest products sectors.

#### **Agreement Parameters**

##### *1. Coverage and level of exemption*

The government's intent is only to protect those elements of a business that are truly at risk from import substitution or in export markets.

The extent of an exemption will be negotiated taking into account this coverage issue and also the extent to which a firm is committing to move towards WBP emissions management.

##### *2. WBP Determination*

In an NGA a firm commits to a pathway for emissions performance over time with a start point of current performance and an end point of WBP. The measure will typically be on an intensity basis (i.e. emissions per unit output).

The determination of WBP should ideally be based on international benchmarking of comparable firms, but taking into account what is technically and economically feasible for NZ industry. The WBP assessment is therefore a key element of the negotiation, with firms striving to ensure an appropriate benchmarking peer group is chosen and local factors are recognised.

In some cases no such benchmarking will be possible. Here the policy indicates "challenging targets (shall) be agreed by negotiation".

##### *3. Monitoring and Enforcement*

NGA firms will be required to submit annual and milestone reports (typically 5 yearly in line with Kyoto commitment periods). The latter will be an

assessment of actual versus pathway emissions for the milestone period. They therefore form the basis on which a firm remedies excess emissions or achieves value from over-achievement.

#### *4. Flexibility Provisions*

If a firm has excess emissions it may remedy by:

- investing in offsite projects to offset emissions; and/or
- purchasing emission units; or
- paying an equivalent charge if there is no functioning market; or
- carrying over excess emissions to a future milestone period.

If a firm has over-achieved its target, it can achieve value for those reductions through:

- selling its overachievement (emission units); or
- banking the emission units for a future milestone period.

#### *5. Penalties for non-compliance*

Failure to report provides the government with right of termination, exposing the firm to the full emissions charge.

Failure to remedy excess emissions will attract an additional 30% excess emissions penalty in the 1st instance and ultimately termination of the agreement.

#### **Conclusion on NGAs**

The NGA policy has addressed some of industry's concerns on ratification ahead of NZ's main trading partners.

The policy has been criticised by some as overly complex and the government recognises that NGAs are probably most appropriate for large firms. Policies for small and medium enterprises are still being developed.

#### **Projects Mechanism**

The Projects Mechanism policy was formally announced in April 2003, with the objective of providing an incentive to generate greenhouse gas emission reductions that go beyond business-as-usual.

Prior to this announcement, in March 2003, the government supported two proposed new wind farms (Trustpower 36MW and Meridian 40-80MW) through the issue of promissory notes for emission units, the allocation being dependent on the final amount of generation involved.



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### **Implementation**

Implementation of the Projects Mechanism took place in mid September 2003 with a formal tender round for 4 million emission units. Tenders closed 24 October with first agreements to be signed in December.

The emission units on offer are Assigned Amount Units (AAUs) although where requirements under Article 6 of the Kyoto Protocol (JI) are met, transfer of Emission Reduction Units (ERUs) may be requested.

Despite the tight timetable, 45 bids were made from a range of large and small organisations.

### **Eligibility**

The emission reduction project:

- must be in New Zealand (overseas funding/ ownership is allowed);
- must not be a forest sink, sequestration by land use change, or land management activity project;
- must not be part of an NGA commitment;
- should provide a minimum reduction of 10,000 tCO<sub>2</sub>e, over CP1;
- must not be a “business-as-usual” project;
- would not be carried out but for the incentive of the transfer of emissions units;
- must be feasible, viable and free from unacceptable risk.

### **Ranking**

Should the tender round be oversubscribed (as seems likely), those projects contributing to the near-term security of New Zealand’s electricity supply and delivering emissions reductions prior to 2008 will be prioritised.

### **Conclusion on Projects Mechanism**

This first tender round has attracted a strong response from bidders. The government stated that this was to be an exploratory round, the learning points of which will be captured in any future rounds. One area that will likely receive focus is the assessment of economic additionality in the absence of standardised tender parameters such as fuel pricing. Announcement of the successful tenderers is expected in early December.

### **Overall Conclusion**

One of the NZ Government’s overall climate change policy objectives was to:

*“set a pace of adjustment for the NZ economy that allows NZ’s obligations to be met at least cost/ greatest benefit, promotes business opportunities and minimises adverse impacts, and positions NZ for the future”*

The implementation of NGA and Projects policies are a pragmatic first step towards this goal.

*For more information see the NZ government’s web site: [www.climatechange.govt.nz](http://www.climatechange.govt.nz)*

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## **AGL Extends Green Balance**

Malcolm Gray, AETF

In August 2002, AGL became the first Australian energy company to offer electricity certified as Greenhouse Friendly under the Australian Greenhouse Office (AGO) program. Colonial First State Property (a wholly owned subsidiary of the Commonwealth Bank) purchased 87,000 MWh of power over three years to reduce the emissions associated with operating the Commonwealth Bank’s head office in Martin Place, Sydney and a range of other bank premises. This was the first Greenhouse Friendly transaction in the national electricity market and fully supported the AGO’s Greenhouse Challenge program.

The product was called AGL Green Balance. The Greenhouse Friendly program requires that the

emissions from Green Balance be 100% fully offset by approved abatement. To meet the terms of the program, AGL reduced emissions by 73,000 tCO<sub>2</sub>e per year through methane gas flaring projects in Victoria, New South Wales (NSW) and Western Australia.

### **Initiative extended**

In August 2003, AGL began to offer AGL Green Balance power to residential and small business customers in NSW, South Australia and Victoria, becoming the first electricity company to offer a Greenhouse Friendly product in this market.

AGL Green Balance offers residential and small business customers the opportunity to offset either 50% or 100% of the emissions associated with their



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consumption of electric power. To achieve the 50% offset, customers pay an extra 0.55 c/kWh and to achieve 100% 1.1 c/kWh.

The average household in Victoria consumes about 6,500 kWh of electricity each year. A consumer purchasing 100% AGL Green Balance would pay an extra \$71.50 per year for their electricity but reduce emissions by 9.54 tCO<sub>2</sub>e. The 50% option would be half as costly and reduce emissions by half the amount. The emission reduction achieved with the 100% option is equivalent to taking two standard vehicles off Victoria's roads..

### Minister welcomes

In welcoming the initiative federal Environment Minister, Dr David Kemp, said, "Businesses can help their market position, and the environment, through Greenhouse Friendly". He noted that the program "provides an opportunity for everyday businesses to take on that enhanced stewardship role".

AGL Green Balance joins the BP Ultimate fuel product, also certified under the Greenhouse Friendly program, in offering Australian consumers an immediate opportunity to reduce Australia's greenhouse gas emissions.

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## NSW to Move on National Trading

Tony Beck, AETF

The federal government's rejection of Kyoto ratification and national emissions trading has prompted the New South Wales (NSW) Premier Bob Carr to renew his drive for ratification and, "in partnership with the other States and Territories, make a decisive push for a national emissions trading scheme based on our successful benchmark scheme". The Premier will write to the other Premiers and Chief Ministers calling for their support.

In a speech at a recent Total Environment Centre event Bob Carr suggested a national emissions trading scheme would have a range of benefits:

- emission reduction targets could be applied across a number of sectors such as waste management, manufacturing, forestry and farming, as well as energy
- it could provide an 'opt-in' provision for large energy users to develop their own benchmarks, with provision for banking, borrowing and trading of carbon credits
- the government would be confined to a regulatory and oversight role, leaving the maximum possible scope for the private sector to design and run a carbon credit system
- targets could be set initially at a modest level that still manages to set a national price signal for greenhouse emissions
- the costs of not meeting targets could be set to

ensure that abatement is always a cheaper option, giving a "ceiling price" to carbon credits

- carbon credits under an Australian national emissions trading scheme could be eligible to be traded internationally.

The NSW push on trading is one of several moves underway to strengthen the sustainability agenda in the state. These include establishing a NSW Greenhouse Office and a new Department of Energy, Utilities and Sustainability.

### NSW Greenhouse Office

The NSW Greenhouse Office will be established early in the new year, reporting directly to the Premier. It will lead the development and review of greenhouse policy across government and will develop a NSW Greenhouse Strategy within the first twelve months of its operation. The strategy will identify what needs to be done at a state and national level to reduce greenhouse emissions including stronger linkages between public and private sectors.

The NSW Greenhouse Office will be supported by an independent greenhouse panel to advise the office on broad policy and program directions. This mirrors the model used in previous work on assessing the implications of ratification of the Kyoto Protocol.



A key responsibility of the Greenhouse Office will be to administer a new Greenhouse Innovation Fund to support innovative research and technologies particularly in areas outside the energy sector such



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as waste, industrial processes, transport, forestry, and land use. The Fund will be supported by an allocation of \$6 million a year.

A further priority for the Greenhouse Office will be establishing a taskforce on an energy demand management fund. The Independent Pricing and Regulatory Tribunal recommended such a fund as part of the solution to managing peak load demand noting there are substantial cost-effective opportunities to use demand management in NSW.

## Department of Energy, Utilities and Sustainability

This new department will include SEDA's demand management, energy efficiency and renewables programs. It will work closely with the Greenhouse Office and agencies such as the Department of Infrastructure Planning and Natural Resources and the Department of Environment and Conservation to ensure cross-government coordination.

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# AETF Business Roundtable Inaugural Meeting

The newly formed AETF Business Roundtable held its inaugural meeting at the ASX in Sydney on Thursday, 27 November.

The Business Roundtable aims to provide a range of services and information to companies that have a particular interest in the future of greenhouse gas emissions trading and are seeking a more interactive involvement with other emissions market stakeholders and policy makers.

The formation of the Roundtable is timely in the light of growing business interest in emissions trading and the rapid development of trading and related economic policy instruments both internationally and domestically. Indications are that this trend will continue towards a more comprehensive and integrated international market. For many companies this growing market will

present a range of challenges and opportunities.

Topics covered at the inaugural meeting included

- The objectives of the Roundtable
- National and international policy developments
- Emissions related market activity and opportunities
- The forward program of the Roundtable

The meeting involved a number of brief presentations, which stimulated lively discussion.

The Roundtable aims to meet quarterly through 2004. *MG*

*Companies interested in finding out more about the Roundtable should go to [www.aetf.net.au/BR](http://www.aetf.net.au/BR).*



**Tony and Malcolm would like to thank our sponsors and all those who have contributed to the AETF Review over the last year, helping us to achieve our objective of providing commentary of the highest quality on emissions trading related issues. We would also like to thank all our readers, who we know are located in many parts of the world, for their support.**

**Finally may we wish all of you the compliments of the season.**

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