



A credit to the environment: emissions trading

By Adam Shepherd and Eric Knight

With the increasing international consensus that greenhouse gas emissions are negatively affecting the climate, the global community's focus is shifting from asking whether or not there is a problem, to asking how to address it.

This evolution in attitude is driving the rapid emergence of environmentally conscious business and lifestyles initiatives. Emissions trading, in its various forms, is one such concept. It aims to contribute to the immense task of reducing global greenhouse gas emissions to sustainable levels.

WHAT IS EMISSIONS TRADING?

Greenhouse gas emissions trading is a key policy instrument used by governments to reduce the carbon emissions of businesses and trading participants within their jurisdiction. At present, there are a number of existing and emerging emissions trading schemes at the international and national level. The primary purpose of an emissions trading scheme is to allow its participants to reduce greenhouse gas emissions in the most efficient and cost-effective way. Emissions trading schemes generally fall into two categories: mandatory schemes and voluntary schemes.

Mandatory emissions trading schemes place obligations on participants to reduce their greenhouse gas emissions. The most common type of mandatory scheme is a 'cap-and-trade scheme'. This limits or 'caps' the volume of emissions that participants are allowed to emit, and permits them to trade

in emission reduction units in order to avoid exceeding the cap. Participants are issued a number of permits or allowances, each operating as a licence to emit a certain amount of carbon. One allowance generally equates to a right to emit one tonne of carbon dioxide equivalent. In order to avoid exceeding a cap, a participant may purchase additional allowances from other participants to offset their excess emissions. These extra allowances are generally known as 'carbon credits', and become available for sale on the emissions trading market when a participant emits less than its cap. In some cases, the requirement to purchase carbon credits to cover a participant's excess emissions is accompanied by a penalty, as is the case in the European Union.

A domestic cap-and-trade scheme is regulated by the national laws of the relevant jurisdiction, so it is enforceable under those laws. For example, the laws might provide that a national regulator decides on the quantity of allocated allowances to be issued to participants under the scheme. Where participants exceed their allocated emission allowances and fail to purchase carbon credits, they may be penalised.

As their name implies, voluntary schemes are those where participants volunteer to reduce their carbon emissions.

Participants choose freely to purchase carbon credits to offset their carbon emissions. The voluntary trading market is rapidly expanding as private businesses, public authorities, NGOs and individuals purchase carbon credits to offset their emissions. Motives for voluntary emissions trading vary – some businesses are attracted to the positive marketing and promotional value, others are purchasing carbon credits to hedge against future environmental risks, while others choose simply to create an environmentally sustainable business.

Carbon credits under a voluntary scheme are generally known as verified emission reductions (VERs). VERs are contractual rights that are traded privately. The key to the integrity of a VER lies in its verification – that is, the scientific process that confirms the authenticity of the carbon credit. VERs are generally verified by accredited independent entities in accordance with a voluntary standard. The two most common standards for VERs in the voluntary market are the Gold Standard and the Voluntary Carbon Standard.

EXISTING EMISSIONS TRADING SCHEMES

A number of emissions trading schemes currently exist, providing binding obligations on participants to reduce their carbon emissions. A brief overview of each of these schemes has been included below:

United Nations Framework Convention on Climate Change and the Kyoto Protocol

The United Nations Framework Convention on Climate Change (UNFCCC), the first international measure to address the concern of climate change, was adopted in May 1992 and came into force in March 1994. It obliges all its state parties to establish national programs for reducing greenhouse gas emissions and to submit regular reports. It also provided the ambitious target that industrialised signatory countries (Annex 1 parties), but not developing countries, should endeavour to stabilise their greenhouse gas emissions at 1990 levels by the year 2000.

In Kyoto, Japan, in December 1997, the parties to the UNFCCC signed the Kyoto Protocol, under which they agreed to improve upon the emission reduction targets set out in the UNFCCC. Countries listed in Annex B to the Kyoto Protocol (essentially the same industrialised countries listed in Annex 1 to the UNFCCC) would reduce or limit their greenhouse emissions based on their 1990 levels by the end of the first compliance period (from 2008 until 2012).

Each Annex B country agreed to accept a specific binding emission reduction target during this period. Those countries not listed in Annex B (or non-Annex I, and therefore essentially developing countries) also agreed to the emission limitation and reduction objectives of the Kyoto Protocol, but, under the principle of 'common but differentiated responsibilities', did not undertake binding obligations to achieve set emission reduction targets.

To help the Annex B Parties to achieve their targets, the Kyoto Protocol incorporated three 'flexible mechanisms' – joint implementation (Article 6), the clean development mechanism (Article 12), and emissions trading (Article 17).

The clean development mechanism (CDM) is an important

flexibility mechanism in the Kyoto Protocol. It was created so that non-Annex 1 parties – developing countries – could host emissions reduction projects and generate certified emissions reductions (CERs), that could be sold to Annex 1 parties (to be used to meet those countries' emission reduction obligations).

The CDM has two basic objectives: firstly, to help developing countries to achieve sustainable development; and to help Annex 1 parties to comply with their Kyoto Protocol emission reduction commitments in a more cost-effective manner. Once a CDM project is registered by the CDM executive board, CERs from that project can be generated. CERs can be used in the first compliance period or banked for use in subsequent compliance periods. Both governments and private companies can participate in CDM projects.

The joint implementation (JI) mechanism, the second of the Kyoto Protocol's flexibility mechanisms, allows Annex 1 parties to host emissions reduction projects that generate emission reduction units (ERUs) and then sell those ERUs to other Annex 1 parties. JI thus also helps Annex 1 parties to achieve compliance with their emission reduction commitments in a more cost-effective manner.

European Union Emissions Trading Scheme

The European Union Emissions Trading Scheme (EU ETS) is the largest emissions trading scheme in the world. It is a multinational cap-and-trade scheme that has operated since 2005, although the first phase of obligations runs from 2008 to 2012. The operation of the EU ETS is a principal component of the European Union's commitment to meet its emission reduction targets under the Kyoto Protocol.

Under the scheme, installations to which the scheme applies are required to hold a greenhouse gas emissions trading permit. All member states of the EU stipulate a carbon emissions cap for any covered installations within their jurisdiction, and issue allocated allowances to each installation. In order to guarantee that the number of allowances issued by each member state is reasonable, they must each prepare a national allocation plan (NAP). This sets out the relevant calculations regarding the volume of allocated allowances for each phase of the EU ETS. The NAPs are then approved by the European Commission.

Where a participant to a mandatory trading scheme exceeds their allocated allowances, they are obliged to offset their excess emissions by purchasing carbon credits. The EU ETS permits carbon credits to be purchased from the two major project-based mechanisms under the Kyoto Protocol: JI and the CDM.

NSW Greenhouse Gas Abatement Scheme

The NSW Greenhouse Gas Abatement Scheme is the oldest mandatory full-scale greenhouse gas emissions trading scheme in the world. GGAS, as it is termed, has operated since 1 January 2003. It principally applies to retailers and large users of electricity. The scheme does not bind small businesses or domestic customers.

Unlike the EU ETS, GGAS is not a true cap-and-trade scheme because participants are not required to obtain and >>

surrender allowances under an emissions cap. Rather, GGAS operates using a system of benchmarks. Scheme participants are required to purchase or create NSW greenhouse gas abatement certificates (NGACs) in order to meet their benchmark. A penalty is imposed if a participant's emissions exceed its benchmark.

NETS

The Council for the Australian Federation has proposed a national emissions trading scheme (NETS), releasing a discussion paper setting out a proposed framework in August 2006. Like the EU ETS, NETS is a cap-and-trade system, permitting a limited number of allowances to be issued. Participants must reduce their emissions to meet their cap, or purchase allowances to offset any excess.

The discussion paper was opened to submissions from the public and has undergone a consultation process. A preferred scheme is due to be recommended later this year. The prime minister has also established a taskforce, which is considering a national emissions trading scheme.

Other regional trading schemes

New emissions trading schemes have recently evolved, such as the Regional Greenhouse Gas Initiative in the US. In February 2007, the governors of Arizona, California, New Mexico, Oregon and Washington signed an agreement to reduce carbon emissions through a collective cap and a regional trading system.

To date, the preliminary planning stages towards this scheme have included a commitment to set a regional emissions reduction goal within 6 months, and to design a plan to meet that goal within 18 months. If this trading scheme were to take effect, it would cover states that account for more than 10% of all US carbon emissions.

Voluntary markets

Voluntary carbon markets exist when carbon credits are bought and sold in the absence of any regulatory regime for compliance. Voluntary markets have grown significantly since 2004, from trading volumes of about 4 million tonnes of CO₂ equivalent to somewhere between 20 and 50 million tonnes in 2006.¹ In 2007, the volume of voluntary carbon credits traded is estimated to reach 100 million tonnes of CO₂e.

A major centre for voluntary market trading has been the Chicago Climate Exchange in the US, which has traded 11 million tonnes of emission reductions since it began in 2003. Demand has mainly come from North American companies, as well as state and local government agencies.

OPPORTUNITIES FOR AUSTRALIAN COMPANIES

Australian companies have been quick to seize opportunities arising from emerging carbon markets globally. Companies based in Australia are able to establish trading accounts within the jurisdiction of existing trading markets in order to take advantage of speculation in carbon prices in the secondary market. This is in spite of the fact that they may not be directly liable to reduce their emissions under any of these schemes.

Participation in the CDM

Despite the fact that Australia has not yet ratified the Kyoto Protocol, Australian companies are able to participate in its CDM. In order to participate, an Australian company would need to be authorised by an Annex 1 country (a developed/industrialised country that has ratified the Kyoto Protocol). The Australian company would then be able to purchase carbon credits generated from CDM projects and sell them under the EU ETS. Alternatively, an Australian company could operate as a project developer in joint ventures in developing countries listed under the Kyoto Protocol to develop projects that generate carbon credits. To date, a number of Australian companies have engaged in a number of CDM projects including renewable energy, energy efficiency, and landfill gas flaring, among others. Broad opportunities exist for Australian companies to supply technology, equipment and intellectual property in these kind of projects because of the relative lack of experience in developing countries.

Participation in the voluntary carbon market

Besides mandatory trading schemes, some Australian businesses have been active in the voluntary market. Opportunities exist both in developing projects to provide voluntary credits, and trading voluntary credits from accredited providers. Companies such as Easy Being Green and CO₂ Australia have been particularly active in this area.

In addition, Australian companies have been active in voluntarily purchasing carbon credits to offset their emissions. This has been partly driven by their desire to reduce their ecological footprint and present a carbon neutral profile to the public. It has also been motivated by an attempt to pre-empt future regulation. These businesses hope that their voluntary activities would be recognised under any future regulation coming into effect within Australia.

CONCLUSION

Emissions trading is not the answer to climate change. It is one of many environmental initiatives that can help us to reduce greenhouse gas emissions. The opportunity to trade in carbon credits creates an incentive for business and industry to pursue solutions that are operationally and cost-efficient. A true credit to the environment. ■

Note: 1 Estimates from the Climate Group on Carbon Positive Website: <http://www.carbonpositive.net/viewarticle.asp?articleID=594> (accessed 3 May 2007).

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