

Gearing up for the new financial market in air pollution credits

By Wayne Visser

In November 2000, the eyes of the world will be on The Hague in The Netherlands, where the United Nations Framework Convention on Climate Change (UNFCCC) sixth Conference of Parties (COP-6) is being held. Now, you would be forgiven for thinking that this sounds like just another global talk-shop, a political “pow-wow” with no greater outcome than meaningless statements of good intention. The difference is that the design of a new multi-billion dollar global financial market is at stake.

Not just your run-of-the-mill financial market, mind you. This new market is for the trading of greenhouse gas (GHG) emissions reductions- air pollution credits in other words! Sound a bit far fetched? Not at all. In fact, in addition to there being sound environmental economics theories about market-based instruments for regulating pollution, emissions trading markets in sulphur dioxide (SO₂) and nitrous oxides (NO_x) are already well established in the USA.

What is revolutionary is that, through the emerging market in GHGs (especially carbon dioxide), this kind of regulatory instrument is going mainstream. Governments around the world are setting themselves up to trade and companies are preparing to get in early and capture windfall profits. There will be seriously big winners and equally significant losers. ... But I am getting ahead of myself. Let me backtrack for a moment and talk briefly about where this market has come from.

First, a few facts. The average annual anthropogenic carbon emissions between 1850 and 1950 was less than 2 billion tons. During the 1980s it was 7.1 billion tons and, if our current behaviour does not change, in 2010 it will be 8 billion tons and in 2020, 9.8 billion tons. Emissions from the developing countries were about 60% of those from the industrialised countries in 1990, but by 2010 will surpass them. This increase in anthropogenic carbon emissions is largely associated with an increase in world energy consumption, from 207 quadrillion British Thermal Units (Btu) in 1970 to 375 quadrillion Btu in 1996 and projected to reach 612 quadrillion Btu in 2020.

Energy use from the developing countries was about 40% of industrialised countries in 1996, but is projected to surpass them by 6% in 2020.

It does not take a genius to realise that, if these numbers are even partially correct, we could be in a lot of trouble if no decisive action is taken as a global society. And it was for this reason that, at COP-3 in 1997 in Kyoto, the UNFCCC was given some “teeth” in the

form of the Kyoto Protocol. The Kyoto Protocol was adopted as a legally binding agreement which sets targets for developed countries (Annex I parties) to reduce their collective anthropogenic GHGs by 5.2% below 1990 levels. The GHGs in question, which overwhelming scientific evidence suggests contribute to climate change, include CO₂ (carbon dioxide), CH₄ (methane), N₂O (nitrous oxide), HFCs (hydrofluorocarbons), PFCs (perfluorocarbons) and SF₆ (Sulphur hexafluoride).

Although yet to be fully ratified, the agreement as it stands is remarkable. And the reason it has progressed this far is due to the inclusion of three so-called “flexible mechanisms”. In effect, these Mechanisms allow countries to co-operate to jointly achieve their pollution reduction commitments. The three mechanisms are: ■ Emissions Trading, whereby developed countries (Annex I) can trade “emission reduction units” with each other as a financial commodity on a competitive open market between 2008 and 2012. Simply put, if one country exceeds its emission reduction target, it can sell that surplus to another country which has been unable or unwilling to reach its national target; ■ Clean Development Mechanism (CDM), whereby a developed country can assist a developing country (non-Annex I) to reduce its GHGs and claim in return the “certified emission reductions” towards its national target. Since developing countries do not have any binding targets, they stand only to gain by selling credits in exchange for inward investment in clean technology or capacity transfer; and ■ Joint Implementation, which operates the same as the CDM, but occurs only between developed countries.

Companies are interested for a number of reasons. They face the threat of government imposed targets or taxes, such as the Climate Change Levy planned for the UK or energy taxes in Germany. They fear loss of market share as consumers shift towards non-carbon or lower-carbon based products or energy sources, such as natural gas and solar energy over oil and coal. And they see both opportunities and threats associated with participating directly in the Mechanisms, such as national emissions trading schemes, which are already being set up or planned in Australia, Canada, Denmark, the European Union, New Zealand, Norway, the UK and the USA.

If nothing else, companies are interested because the potential costs or revenues to their business could be enormous. As an example, in Australia GHG policy reforms are predicted to cause a 12% hike in the price of aluminium, A\$5 billion of additional costs for the power industry; and A\$70-350 million for the oil refineries. On the other hand, the International Energy Agency estimates that \$30 billion of GHG credits will be on the market for trading in 2008.

For every loser (buyer), there has to be a winner (buyer)!

As a result, we have seen the full range of corporate response. Some still deny the scientific basis for climate change. Others, notably the carbon-dependent industries, huddle in anti-lobbies such as the Global Climate Coalition, although these have seen widespread defections from their ranks over the past two years. A few companies have tackled the challenge head on.

Take BP for example, which has adopted its own GHG reduction targets, set up an internal emissions trading system and begun to redefine its business as “beyond petroleum” - they are now one of the largest producers of solar energy and have invested heavily in forests as carbon sinks. Other proactive companies have hedged their bets by doing early trades at discounted prices - already these deals involve over 10 million tons of carbon dioxide equivalent emission reductions.

Given that South Africa is a non-Annex I country in terms of the Kyoto Protocol, industry should be gearing up to take advantage of what is predicted to be a massive opportunity for CDM investment in cleaner technologies and processes. Some estimates put the value of the world market in CDM at over \$20 billion. However, most South African companies are either uninformed on the issue, or are playing the risk-averse waiting game - until the “rules of the game” are clarified and the Kyoto Protocol is ratified. Sounds like good business logic, but is it really?

The fact of the matter is that the climate change issue is not going to go away. 181 countries, including South Africa, have ratified, accepted or approved the UNFCCC, which obliges their governments to take action to mitigate against climate change. If the Kyoto Protocol flops, there will be something else to take its place - a global carbon tax perhaps? Reducing air pollution and GHGs specifically is in line with Agenda 21, sustainable development, and all the other good things countries have embraced in their national environmental policies and legislation.

Reducing GHGs is also consistent with most responsible companies’ environmental policies and related voluntary initiatives such as ISO 14001. Even chartered accountants, in their standards, recognise that this imposes a “constructive obligation” on companies to take appropriate action to meet these stakeholder expectations which have been created. Beyond just being “the right thing to do”, numerous emissions trading simulations and pilots have shown that this “free-market” approach is one of the most efficient and cost effective way to achieve GHG reductions within a company.

Accepting then that companies will be required, sooner or later, to reduce their GHG impacts, it is important to recognise that this is an iterative process. Typically, the process, as illustrated in the diagram below, will involve the following steps: 1 Formulation of a GHG corporate strategy and targets; 2 Writing detailed GHG reporting protocols / guidelines; 3 Implementing reliable and verifiable GHG data collection and reporting systems; 4 External reporting of verified GHG performance data; and 5 GHG trading - through internal emissions trading, or the Kyoto Mechanisms.

As the company moves up this ladder of implementation, so the level of assurance or confidence over the GHG data increases, until they become tradable units. Given that these building blocks all need to be in place before companies will be able to take advantage of the Kyoto Mechanisms, the widespread wait-and-see approach is clearly short sighted and counter-productive. After all, the lead time on getting to reliable GHG management and data systems can be between three and five years. Meanwhile,

competitors in this global market which are more prepared – companies in other non-Annex I countries – are already catching the CDM worm of investment.

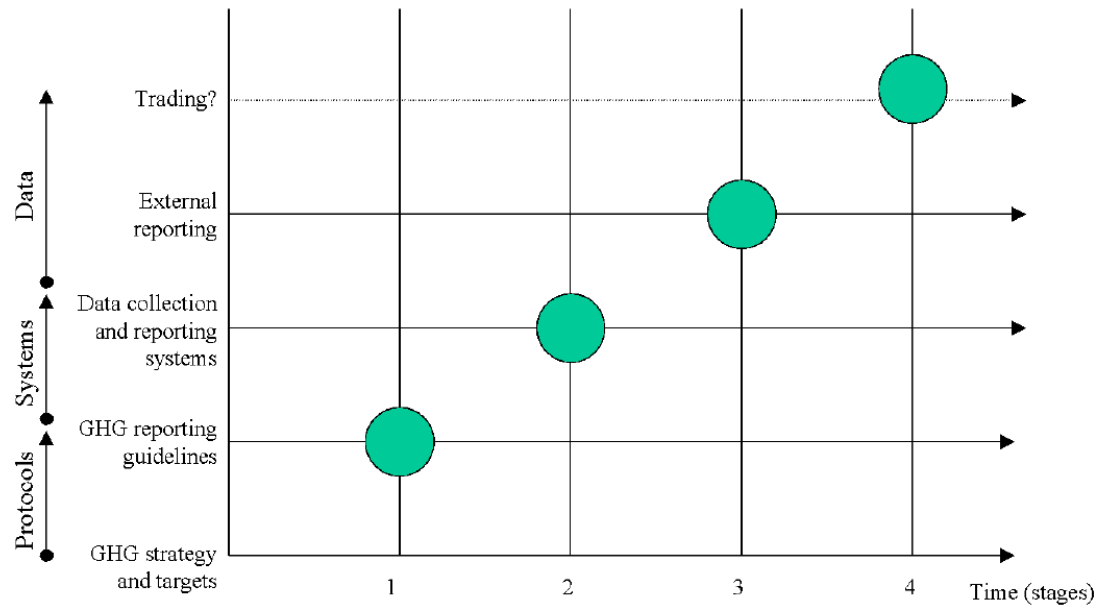
The take-home message for South Africa's private sector is that environmental issues, and air pollution in particular, are fast becoming line items on the profit and loss account. The polluter pays principle is coming home to roost and those who invest now will save later. This is only bad news for companies which are stuck in the past and unprepared to change. For most corporate leaders, it is good news, especially the fact that a market-based approach is being favoured over heavy-handed command and control regulation. It gives them an opportunity to attract investment, to differentiate themselves from their competitors and to demonstrate to their stakeholders that they are accountable for the impacts of their operations.

So, the business case is clear. There is every good reason for companies to take early action.

What should be equally compelling, however, is the society's case. Climate change is already having devastating effects on agriculture, communities and whole economies, through droughts, floods and unseasonable temperature fluctuations. Ultimately, we will all be affected. And when our children or grandchildren ask what we did to make a difference, to reverse the trend, what will we say? "It was not profitable to do anything?" "The p/e ratio was not at the right level to make the required investment?" No, I trust we will all be able to say: "We did what we had to do, and we can all breathe a little easier today as result".

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The corporate action ladder for climate change and greenhouse gases (GHGs)



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