

# Green trading: opportunities for the

Peter Fusaro considers the growing concern over environmental issues and argues that a new and significant green trading global market is emerging.

The energy industry, the world's leading emissions polluter, will be the leading supplier of environmental solutions because it is good business. Today, the industry is at a turning point on global warming as carbon intensity continues to grow whilst time to stabilise carbon dioxide and other greenhouse gas emissions is limited. This issue goes far beyond the pitifully weak and flawed Kyoto Protocol on which many in the European Union and Asia have focused their efforts during the past decade.

The US accounts for 25 per cent of global greenhouse gas emissions and, like developing countries, now moving to coal-fired capacity to meet growing electricity demand, will never accept this flawed treaty. Rather than concentrating on these controversial issues, it is now more important to focus on what can be done and how it can be accomplished. Trading and markets offer a solution.

The oil industry has the financial strength, intellectual capital and global presence to provide these solutions. BP and Shell have already taken the lead but others are not far behind. The carbon footprint of the majors resonates globally with oil and gas production, refining, transportation and their involvement in the power industry continues to expand.

The solutions will include the use of more efficient, environmentally-benign technology but also basic changes in standard industry practices.

## A corporate financial issue

Environmental issues are becoming corporate financial issues. Greater financial disclosure of corporate environmental risks, including climate change, has raised the issue of environment as a corporate fiduciary responsibility. Increasingly, environmental and financial performance of companies is intertwined. This influences automobile manufacturers, electricity utilities, hydrocarbon groups, banks and insurance companies.

Auto makers are concerned about carbon dioxide emissions per vehicle and utilities now pay more attention to cutting their greenhouse gas (GHG) emissions as part of their air emissions reductions. Oil and gas companies are increasingly concerned about emissions as production, refining, transportation and distribution liabilities. Bank share valuations could fall if they lack adequate carbon risk management strategies. Insurance and re-insurance companies are now at the forefront of confronting these financial risks such as catastrophic risk for crop failure due to climate

change, and health-related risks due to the linkage of climate change and infectious disease. These new financial risks for insurance and re-insurance companies could prompt them to drop coverage for certain companies. These new financial risks and liabilities will prompt change and market creation.

This corporate financial issue is now exercising shareholders at annual meetings of, for example, the large oil groups. Innovent, the Green Moodys, has already shown that companies perceived to be more environmentally aware are also more successful financially. Groups, beginning to analyse financial risks, realise that there is a global issue requiring action. While the good deeds of BP, Shell, DuPont, Trans-Alta and AEP are important, it is now time for the second wave of corporate engagement. Projects and trades have already begun, much institutional money has flowed into project-based reductions and green trading is now underway.

## The new market

Energy trading began in 1978 with the first oil futures contract on the New York Mercantile Exchange. During the 1980s and 1990s, the IPE and NYMEX successfully launched



# oil industry

futures contracts for oil and gas. These successful futures exchanges survived the Enron *et al* energy trading debacles. Oil companies and financial houses now provide the necessary trading liquidity through market-making on both the established government-regulated futures exchanges and off-exchange energy derivatives markets which can clear on the futures exchanges. These companies know how to manage their financial energy risk and have the risk-management skills that will be deployed increasingly in the emerging global environmental markets. Financial risk will be managed on established energy futures exchanges because trading debacles taught the energy markets that financial performance is fundamentally important.

Environmental financial products for sulphur dioxide (SO<sub>2</sub>) and nitrous oxides (NO<sub>x</sub>) have been successful in controlling US pollution since 1995. A \$6 billion environmental market today pales compared to a \$2 trillion energy-derivatives market but the growth trajectory suggests that green trading markets today should be compared with 1978's oil markets. However, this time, maturation will be global and simultaneous as carbon trading regimes take root in the EU,

Asia, Australia and North America. Thus far, only a couple of hundred trades have taken place but estimates suggest that a \$3 trillion commodity market may emerge over the next 20 years. The dollar value of this market is enticing but the reality is that the global energy industry will be the primary supplier of liquidity to this market followed by the agricultural industry. Both industries are active in commodity trading.

Green Trading encompasses the convergence of the capital markets and the environment and includes not only trading in GHG emissions but in renewable energy and the financial value of energy efficiency. Cross-commodity arbitrage opportunities are self evident as oil, gas, coal and power, like weather derivatives, have environmental dimensions. Today, cross-border trades of carbon dioxide have been conducted between, for example, the US and Canada, Canada and Germany, Germany and Australia, and Australia and Japan. Developing countries will be fully engaged in this financial market as a mechanism to sell GHG credits and allowances as well as the need to provide technology transfer mechanisms through green trading.

Green trading provides a market-driven

solution to reduce pollution but it needs government sanctions to put the rules in place. The US SO<sub>2</sub> programme is a "cap and trade" programme that has a 55-year life with the retirement of pollution credits from 1995 through 2050. A GHG regime will require a 100-year life which should be put into place now, not in 15 years. Governments must also deal with the cross-border components of trading and trading rules need to be harmonised. Liquidity providers will include energy companies, banks, agricultural producers, insurance and reinsurance industry, and investment banks.

## 2005 – a crucial year

2005 could be the break-through year for this emerging market. Besides the vaunted EU Emissions Trading Scheme (ETS), there is significant movement in the US, at state level, to form a cap and trade market in the north east which will be in harmony with Canadian provincial governments' requirements in eastern Canada. This is the Regional Greenhouse Gas Initiative in which 10 north-eastern states have collaborated. There is also agreement to work with the California Climate Action Registry to have conforming standards between the states. The rules are now in place

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to begin GHG trading in the US. Moreover, after the next presidential election, the federal government, probably, will seek standardisation, to ensure harmony between the US energy industry and others and overseas administrations.

There will be two stages in the development of the international carbon market. Now, in stage one, carbon credits are being created. Trading covers many years because, thus far, there has not been an allocation of sufficient units to have a spot market and because these are project-based reductions. Capital is required and forward commitment cannot be banked. If the World Bank is buying a 10-year stream of reductions, a bank loan would usually be available to implement the project.

Consequently, there are still large volume structure trades. Early speculative trading and some risk hedging are taking place as is a transformation, in energy companies and energy end-user groups, from the environmental department to the risk manager as some major corporations treat the GHG issue as a financial issue. In this, the early stages of the market, carbon finance is playing a bigger role and, over the next year, a liquid spot market will develop.

Green trading is at a turning point. The existing market is characterised by opaque prices, little trading, few participants, poor liquidity, tremendous inefficiency, and wide arbitrage opportunities. These attributes are familiar because they occur in every new market. Having seen the emergence and maturation of oil, gas, power, weather and coal as fungible commodity trading markets, the environment is now well positioned to be the next financial commodity trading market.

Uniquely, it will develop dramatically simultaneously throughout the world. Similar to oil market developments circa 1978, the global carbon market (CO<sub>2</sub>) is emerging as a fungible commodity trading market. The second stage of development of the carbon market will be towards a mature and liquid market and, over the next 10 years, there will

be linked markets and then index markets. We shall see spot trading, high volumes, advanced brokerage, similar to the power and gas markets, and a growth in carbon finance.

Moreover, another unique aspect of this market is that this is a government-mandated market despite advocates of voluntary trading in the US. Arguably, the US created the carbon template: the trading regime of the sulphur dioxide (SO<sub>2</sub>) allowance market, which began in 1995, has vintage credits to the year 2030. A true carbon regime will have a span of 50 to 100 years. This is envisioned after 2012 for the Kyoto Protocol and work at the governmental level has begun to create the longer-term market.

While the private sector will take the lead on the development of emissions trading markets wherever it has a vested commercial interest in emissions reductions, compliance responsibility will rest with governments. Almost certainly, markets will form first, thus creating an emissions-trading marketplace and many contend that governments should not inhibit such growth. This new marketplace would motivate firms with surplus emissions rights to trade or supply those rights to the market.

Despite the risk of uncertainty on future rules, there are advantages in early action. Industry-driven schemes will probably be the key to the future as rules are more clearly defined. Thus, industry can create its own domestic and international portfolio of emissions allowances or credits.

Another emerging trend that may influence GHG emissions liquidity is the structured finance market, namely "green finance". A

move to greener and cleaner fuels, such as natural gas in preference to coal or oil, is becoming conventional in the project financing of new power stations. Because these plants have a useful life of 30-40 years, they will bring a stream of emissions credits that can be banked or used up-front. They are unlocking another avenue for market evolution. This type of thinking is just beginning at investment and commercial banks in New York, London, and Tokyo.

An environmental checklist is emerging in green or environmental finance, which is another area where financial engineering can prompt market development and liquidity. Ignoring past demons, forward-thinking and globally-based energy participants should embrace the inevitability that international policy on greenhouse gases is being set by both media and public perceptions. In this context, the rational response by enlightened industry participants is to develop and support market-based solutions to global pollution.

As almost all environmental financial contracts such as those in SO<sub>2</sub> or CO<sub>2</sub> are traded on the OTC markets, there is an opportunity for exchanges like IPE or NYMEX to offer OTC clearing which would effectively make them quasi-futures contracts under government oversight. This could help to make them more acceptable to risk managers. The IPE recognised this opportunity last April and has linked its platform to the Chicago Climate Exchange in order to trade emissions in the EU.

Green trading promises to be a \$3 trillion commodity market involving major energy company participation. It will have cross-commodity arbitrage opportunities with oil, gas, power and coal futures and OTC contracts. It will create new project development in the renewable energy and energy-efficiency sectors which will trade their environmental attributes. The global dimension of all this cannot be understated: it will be the first truly new global commodity market since the developments of the oil market. Next year could see the acceleration of the market's maturation.



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