

Liz Bossley of CEAG explains how investors can get involved in emissions trading

CLEAN, GREEN, MONEY MACHINE

The market in CO₂ emissions is growing exponentially. From zero in 2003, the measurable market is expected to turn over more than €40 billion this year. Admittedly, compared with the bond market, for example, this is unimpressive, but the growth potential is exciting.

The market in CO₂ emissions may be viewed as a market in political risk: fundamental supply and demand for the commodity is determined by regulators, and buyers and sellers enter the market to avoid a penalty or gain a subsidy. The commodity itself is expressed in terms of allowances, each of which represents the right to emit one tonne of carbon dioxide equivalent (tCO₂e).

The legislation underpinning the market is the Kyoto Protocol. Kyoto uses the concept of cap and trade to achieve its result. Cap and trade requires a central authority set a limit on the permitted level of emissions (the cap), represented by a finite number of allowances. Kyoto binds 38 Organisation for Economic Co-operation and Development and CIS countries to cut their greenhouse gas emissions to, on average, 5.2 per cent below the levels experienced in 1990, the cuts to be achieved by 2008–2012: the first commitment period.

These capped countries are referred to as the Annex B countries. In a cap and trade scheme the allowances, or permits to emit, are either given for free or sold at auction by the central authority to the emitting sectors

targeted by the scheme. The cap must be set below current or business-as-usual emissions levels in order to ensure there is an overall shortage of allowances and to create a market.

The emitter is required to measure and have verified independently its actual emissions during the compliance period. At the end of the period the emitter must present – or surrender, to use Kyoto terminology – sufficient allowances to cover its verified emissions during such compliance period. Kyoto allowances are referred to as assigned amount units (AAUs).

Faced with a shortfall of allowances, the emitter can then:

- ◆ cut production of goods and services to emit less
- ◆ invest in clean technology to emit less per unit of output, at home and overseas
- ◆ buy in the market sufficient allowances to cover the shortfall of allowances versus the cap.

Those emitters who can cut their emissions easily and cheaply generate a surplus of allowances that can be sold to those who will struggle to comply. The higher the price of emissions allowances in the market, the more new clean technologies become cost effective.

Caps off to clean energy

The overseas investment option promotes least cost compliance. The capped Kyoto Annex B countries can invest in clean technology projects in developing countries that are not subject to a Kyoto cap, the ►

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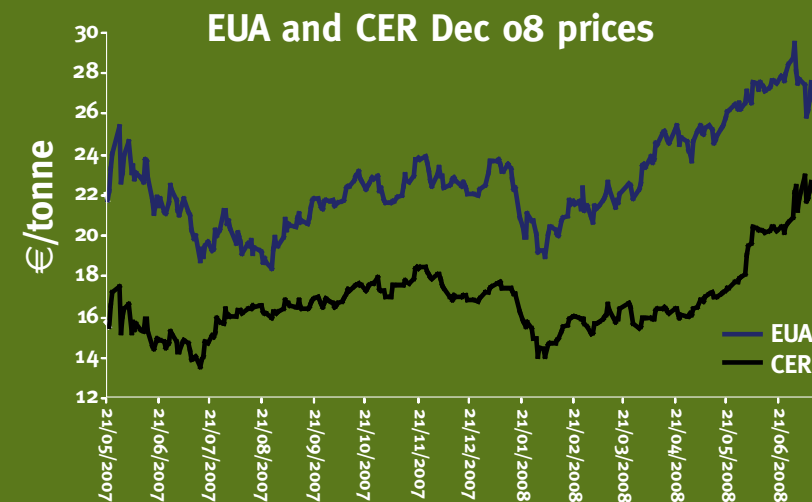
► so-called non-Annex 1 countries. This investment is rewarded with additional allowances, which can be surrendered by the Annex B country to meet its domestic cap. This is the clean development mechanism (CDM) and the allowances produced are known as certified emissions reductions (CERs).

Alternatively the capped Kyoto Annex B countries can invest in clean technology projects in another capped Annex B country. In that case the investor is rewarded by the project host, which converts some of its AAUs into emissions reduction units (ERUs) that can also be surrendered by the investing Annex B country to meet its domestic cap. This mechanism is referred to as Joint Implementation (JI).

CDM and JI projects are carried out by companies rather than by countries, but participants require the approval of the designated national authorities (DNAs) of the host and investing countries.

In practice, the CDM has been considerably more successful than JI: more than 1,000 CDM projects have been registered by companies and more than 165 million CERs have been issued. No ERUs have been issued so far. The CDM mechanism provides one method of direct participation in the emissions market available to investors.

Europe has ratified the Kyoto Protocol and in order to ensure its compliance in the first Kyoto commitment period, it staged a dress rehearsal in 2005–2007: phase one of the European Emissions Trading Scheme (EU ETS). It is now clearly



understood that Europe allocated too many allowances in phase one and the price of European allowances, called EUAs, fell to almost zero.

Phase two of the EU ETS coincides with the first Kyoto commitment period of 2008–2012. The Commission has succeeded in allocating considerably fewer allowances in phase two and creating a real shortage. The price of phase two EUAs has been trading between €25–30/tonne.

The future's green...

Investors can participate in the EU ETS by the simple mechanism of opening up a person-holding account in one of the emissions registries of the 27 European member states. There is no requirement to be a company involved in a business sector that is capped by the EU ETS.

Sellers and buyers of emissions allowances can give or take delivery by electronic transfer from one

registry account to another, akin to transferring funds online from one bank account to another.

Trade in AAUs is restricted to bilateral deals between Annex B countries, which is not transparent and probably not conducted at arm's length. However, there is an active market in EUAs and CERs, both over-the-counter and on a range of regulated exchanges.

Physical delivery is currently constrained by software issues involving the European allowance clearing mechanism, the community independent transaction log (CITL).

But these are expected to be resolved before the delivery deadline in the forward market, 1 December.

In the meantime, approximately 5 to 10 million allowances are transacted every day in the forward, futures and options markets and this asset class is expected to bloom for several years to come. ■

Liz Bossley is the CEO of Consilience Energy Advisory Group and has a 30-year career in international energy markets. She is the principal author of 'The Hole in the Barrel', 'Trading Natural Gas in the UK', 'Bossley's Guide to Energy Conversions', 'BFO: The Future Market', 'Project Finance Using the Forward Oil Curve', 'Climate Change and Emissions Trading: What Every Business Needs to Know' and 'Emissions Trading and the City of London'. Liz is a member of the UK Treasury's Carbon Market Expert Group, was a founding director of Carbon Markets Association and chairs the working group of the Environmental Industries Commission.