



## Emissions trading is here to stay

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After years of planning and discussion, the first commitment period of the Kyoto Protocol - 2008 to 2012 - is at last underway and, despite acrimonious international debate about its future, the cap-and-trade schemes it has spawned are not going to go away.

### A recap on the caps

The Kyoto Protocol is a cap-and-trade scheme. By ratifying the protocol, 37 developed, or so-called Annex 1, countries have committed to cap their greenhouse gas (GHGs) emissions at on average 5.2% below their 1990 levels during this five-year period.

The body of the UN Framework Convention on Climate Change ('UNFCCC') has set a limit ('cap') on permitted emissions level during 2008-2012 at a percentage of 1990. It has then granted free permits to emit GHGs, called Assigned Amount Units (AAUs), to each country equivalent to its cap. At the end of the first commitment period, each country must surrender enough AAUs to the UNFCCC to cover its actual emissions during 2008-2012, the latter of which may be greater or less than its cap.

In theory, if each country took no steps to reduce its emissions it would be short of allowances, because economic growth would take actual 'business as usual' emissions to above the capped level. Faced with a shortage of allowances, the countries concerned must then:

- cut production of goods and services to reduce their emissions; or,
- invest in clean technology at home or abroad (the latter using the Clean Development Mechanism (CDM) or Joint Implementation project (JIP) mechanisms) to reduce their emissions per unit of output; or,
- buy in the market sufficient AAUs to cover its shortfall of allocations compared with its cap. This is where the 'trade' part of cap-and-trade comes in.

Countries that are short of allowances are unlikely to voluntarily cut production to contain emissions, so the decision is one of whether to invest in cleaner technology or buy AAUs from a country that can cut its actual emissions more easily or cheaply than the country facing the shortage. Which of these options is chosen depends on the price of AAUs. The higher the AAU price, the more will investment in clean technology prove economically viable.

In practice, the total number of AAUs granted by the UNFCCC is much greater than the likely level of actual emissions during 2008-2012. Based on the reports of the 37 countries of their actual emissions in 2005, the latest year for which consistent data for all countries has been reported, there will be about 3 billion AAUs surplus out of a total of 53 billion AAUs likely to be granted during the first commitment period, i.e. the Kyoto market is 6% long.

This is before taking into account an additional 2.7 billion allowances likely to be created to reward overseas CDM projects in developing (or non-Annex 1) countries, allowances called Certified Emissions Reductions (CERs), during 2005-2012, taking the surplus to about 11%.

Economic growth in the 37 countries between 2005 and the end of 2012 is likely to eat up some of this surplus. Nevertheless it is improbable that the price of AAUs will be high enough to make investment alternatives, such as clean coal or carbon capture and storage, look attractive.

The picture is not as bleak as these numbers suggest. Countries with a surplus of AAUs in 2008-2012, mainly the Former Soviet Union (FSU) states with Russia and the Ukraine standing out as the biggest 'longs' by far, can carry them forward into the second Kyoto commitment period to be used to cover larger emissions resulting from future economic growth. Furthermore, the countries who are short, mainly Japan and Canada, have said that they will not buy surplus AAUs from the FSU as they have been generated by the economic collapse since 1990 when the USSR broke up, rather than by a conscious effort to clean up emissions.

If the AAU surplus will be dumped in the market or carried forward for future use depends on whether or not there will be a second Kyoto commitment period, post 2012. What is clear is that, despite the not inconsiderable achievement of getting the Kyoto measurement and monitoring methodologies, the investment mechanisms, the allowance transfer infrastructure and the traded market instruments up and working, the first Kyoto commitment period is unlikely to achieve much by way of mitigating climate change.