

# Carbon Trading : a brief introduction

by Oscar Reyes  
Monday, 07 September 2009

Carbon trading is allowing industrialised countries and companies to avoid their emissions reduction targets. It takes two main forms: "cap and trade" and "carbon offsetting".

What is cap and trade?

Under cap and trade schemes, governments or intergovernmental bodies set an overall legal limit of carbon emissions in a certain time period ("cap") and then grant industries a certain number of licenses to pollute ("carbon permits"). Companies that do not meet their cap can buy permits from others that have a surplus "typically, because they have been given an overly generous allowance in the first place. They can also purchase "offsets".

What are carbon offsets?

Carbon trading runs in parallel with a system of carbon offsets. Instead of cutting emissions themselves, companies, and sometimes international financial institutions, governments and individuals, finance "emissions-saving projects" outside the capped area to generate carbon credits which can also be traded within the carbon market. The UN's Clean Development Mechanism (CDM) is the largest such scheme with almost 1,800 registered projects in developing countries by September 2009, and over 2,600 further projects awaiting approval. Based on current prices, the credits generated by approved schemes will cost around \$35 billion by 2012.

Although offsets are often presented as emissions reductions, what these projects do at their hypothetical best is to stabilise emission levels while moving them from one location to another, normally from Northern to Southern countries. In practice, this "best case" scenario is rarely seen, with the result being that offsetting increases emissions whilst also exacerbating social and environmental conflicts.

So what's wrong with cap and trade?

There are fundamental theoretical flaws in the whole cap and trade scheme even before you look at the actual record of its implementation. This is because the scheme was never set up to directly tackle the key task of a rapid transition away from fossil fuel extraction, over-production and over-consumption, but sought instead to quantifying existing pollution as a means to create a new tradable commodity. Within this framework, traders invariably opt for the cheapest credits available at the time, but what is cheap in the short-term is not the same as what is environmentally effective or socially just.

Some of the key problems with the cap and trade approach are:

•

• The "trade" component does not reduce any emissions. It simply allows companies to choose between cutting the emissions or buying cheaper "carbon credits", which are supposed to represent reductions elsewhere

• The "cap" has too many holes and sometimes caps nothing. The cap is only as tight as the least stringent part of the whole system. This is because credits are sold by those with a surplus, and the cheapest way to produce a surplus is to be given too many credits in the first place ("hot air" credits as a result of caps being set too high). The aim of trading is to find the cheapest solution for polluting industry, and it is consistently cheaper to buy "hot air" credits than to actually reduce emissions.

Cap setting is a political process that is highly susceptible to corporate lobbying which means that there is invariable over-allocation of pollution permits. In fact, lobbying is encouraged through extensive industry "stakeholder" involvement

Offsets loosen the cap. While cap and trade in theory limits the availability of pollution permits, "offset" projects are given licence to print new ones. When the two systems are brought together, they tend to undermine each other " since one applies a cap and the other lifts it. An offset is essentially a permit to pollute beyond the cap. Most current and proposed "cap and trade" schemes allow offset credits to be traded within them " including the EU Emissions Trading Scheme (EU ETS) and the US cap and trade scheme (proposed in the 2009 American Clean Energy and Security Act, ACES)

Will markets concerned with growth be able to deliver reductions of carbon?

The other problem is that markets are by essence growth-oriented, so look for new sources of accumulation. In carbon markets, this is achieved by increasing their geographical scope and the number of industrial sectors and gases they cover. Yet this contradicts the essence of tackling climate change which is about reducing use of fossil fuels and consumption.

It is therefore not a surprise that introducing carbon as a commodity has resulted in new opportunities for profit and speculation. The carbon market is already developing the way of the financial market with the use of complex financial instruments (futures trading and derivatives) to hedge risk and increase speculative profit. This runs the risk of creating a "carbon bubble." This is not a surprise, as it was created by many of the same people at the Chicago Climate Exchange who created the derivatives markets that led to the recent financial crash.

What examples have there been of Cap and Trade schemes?

There have been a number of Cap and Trade markets " the EU ETS, the United States Acid Rain Program, the Los Angeles Region Clean Air Markets (RECLAIM), the Chicago Emissions Reduction Market System (ERMS) and the Regional Greenhouse Gas Initiative. The EU ETS, established in January 2005, is the largest cap and trade scheme in operation worldwide and is the best for illustrating how carbon trading has failed in practice.

Why does European Union Emissions Trading Scheme (EU ETS) consistently grant over-allocation of pollution permits?

Most cap and trade markets use projections of historical emissions provided by industry itself to calculate the initial caps. Industry has a clear incentive to overstate its past emissions to gain more credits. As a result, cap and trade markets start out with too many permits. This was true of the EU ETS which consistently awarded major polluters with more free pollution permits (called EUAs, European Union Allowances) than their actual level of carbon emissions. This means it gave them no incentive to reduce emissions, and as a result the price of the permits collapsed " ending 2007 at a  $-0.01$ . In phase I (2005-2007) as a whole, according to the EU's own data, major polluters had permits worth 3.4 per cent more than their actual level of emissions.

But didn't the second phase of the EU ETS (2008-2012) resolve this over-allocation?

The EU claims that it has learned from its mistakes and that the second phase of its scheme is working. Whilst it is true that for the first time in 2008, polluters were awarded fewer permits than their actual level of emissions, there is still over-allocation of permits:

The vast majority of factories and economic sectors are still over-allocated – it is only the power sector that needs to purchase credits

The impact of the EU-wide recession means that the ETS as a whole will again be over-allocated in 2009

Corporations get the same number of credits even if they temporarily close or scale down operations for short-term economic reasons

But isn't Phase II nevertheless leading to emissions reductions?

The EU claims emissions reductions of 3 per cent, or 50 million tons, in ETS sectors in 2008. The trouble is that at least 80 million tons of carbon offsets in the developing world were bought as part of the ETS in 2009 – more than the level the cap. So, again, the ETS does not require emissions reductions by companies in the EU.

Moreover there is also evidence that some of the supposed cuts are fake. One such example is Lithuania which claimed it would be forced to use coal-powered electricity as a result of the closure of Ignalina, a nuclear power plant. As a result it gained a large surplus of credits, which have been sold on and treated as emissions reductions elsewhere.

So who profited from carbon trading?

Companies receive most carbon credits for free. This is equivalent to a subsidy and with allocations made on the basis of historical emissions, the largest subsidy goes to the dirtiest industry (especially coal-fired power plants).

Windfall profits also arise from an accounting trick around opportunity costs. Power companies choose to do the cheapest thing to meet their ETS target which is usually buying Clean Development Mechanism (CDM) credits but passing on costs as if they were doing the most expensive actually reducing emissions. Even power companies receiving free credits from the ETS have nevertheless passed on the cost of these credits to consumers. Research by market-analysts Point Carbon and WWF calculated that the likely windfall profits made by power companies in phase could be between –23 and –71 billion, and that these profits were concentrated in the countries with the highest level of emissions.

ArcelorMittal, the world's largest steel company, is another typical example. It routinely receives a quarter to a third credits than it would have needed to even begin reducing emissions. The company is likely to have made over –2 billion in profits from the ETS between 2005 and 2008, with over –500 million of this achieved in 2008 alone yet has needed to make no proactive changes to its emissions to do so

What about phase III of the EU ETS?

EU ETS phase III runs from 2013 to 2020, and the debate in Brussels is focussed on the risk of carbon leakage. This relates to industry claims that strict regulations in one part of the world will encourage outsourcing to locations where regulations are weaker. It is already being used as a blackmail tactic by industry to reduce its targets or obligations within the EU ETS (and other proposed schemes in Australia and the US). Over half of the 258 industrial sectors in Europe being assessed for exposure to carbon leakage under the EU ETS will qualify for free emission allowances from 2013, according to an initial assessment by the European Commission.

So what is the problem with carbon offsetting?

Carbon offsets allow companies and countries to avoid cutting their own emissions by buying their way out of the problem with theoretical reductions elsewhere. There are both inter-government schemes – most famously the UN Clean Development Mechanism (CDM) - as well as voluntary programmes undertaken largely for purchase by individual consumers. Unfortunately both systems are deeply flawed:

• Selling stories. Offsetting rests on ‘‘additionality’’ claims about what ‘‘would otherwise have happened,’’ offering companies and financial consultancies the opportunity to turn stories of an unknowable future into bankable carbon credits. The EU admits that at least 40 per cent of these are bogus, while a survey by International Rivers found over 60 per cent of projects to be ‘‘non-additional.’’

• Offsets increase emissions. The net result for the climate is that offsetting tends to increase rather than reduce greenhouse gas emissions, displacing the necessity to act in one location by a theoretical claim to act differently in another. Moreover, it keeps delaying any real domestic action and allows the expansion of more fossil fuel extractions.

• Making things the same. The value of CDM projects is premised on constructing a whole series of dubious ‘‘equivalences’’ between very different economic and industrial practices, with the uncertainties of comparison overlooked to ensure that a single commodity can be constructed and exchanged. This does not alter the fact that burning more coal and oil is in no way eliminated (and certainly not in the same time frame) by building more hydro-electric dams, planting more trees or capturing the methane in coal mines.

Carbon offsets have serious negative social and local environmental impacts

The use of ‘‘development’’ rhetoric masks the fundamental injustice of offsetting, which hands a new revenue stream to some of the most highly polluting industries in the South, while simultaneously offering companies and governments in the North a means to delay changing their own industrial practices and energy usage.

In practice, carbon offset projects have most of the times resulted in land grabs, local environmental and social conflicts, the displacement of Indigenous Peoples from their territories, as well as the repression of local communities and movements.

Might reforestation programmes such as REDD work?

The inclusion of tree planting and other ‘‘sinks’’ projects in the CDM and cap and trade schemes is also under consideration.

These pose additional measurement problems, as many projects are not additional, are difficult to measure, do not include the upkeep of the trees and assume instant absorption of already released carbon – when in fact it will take thousands of years for the carbon to be absorbed. ‘‘Reforestation’’ also tends to count monoculture plantations as forests, but they are not as they lack biodiversity, and so contribute to soil degradation; and also require intensive synthetic fertilisers, which contribute significantly to climate change, pollute water and damage local peoples’ health.

Schemes for Reducing Emissions from Deforestation and Degradation (REDD) repeat the error of emissions trading by commodifying forests. They presume that deforestation happens because standing forests make less money than forests

that are cut down. In fact, the commodification of forests is what drives deforestation. This commodification includes the role of corporate and development bank investment in new infrastructure, mining and oil extraction projects; industrial logging; and land clearance to make way for monoculture plantations for the pulp and paper and palm oil industries. REDD is likely to fuel property speculation and so exacerbate land conflicts, dispossessing Indigenous Peoples and forest communities.

What impact will new trading schemes have on offsetting and forest carbon markets?

The most active buyers of offset credits in 2008 were European companies, which bought 80 million credits from the CDM or Joint Implementation projects (a similar UN scheme, operated in countries which have emissions reduction commitments under the Kyoto Protocol) as either a cheaper alternative to reducing their own emissions (under ETS), or for the purpose of speculation and re-sale. But this market is likely to expand massively if the American Clean Energy and Security Act (ACES) is passed, which proposes to allow US companies to purchase from 1 to 1.5 billion international offsets every year. This would spur on a massive increase in damaging offset projects, putting enormous pressure to reduce the already-inadequate checks on their environmental integrity.

What are sectoral credits?

Sectoral credits would introduce new offsets as part of what are called Nationally Appropriate Mitigation Actions (NAMAs) in the climate policy jargon. This is one of a number of proposals currently being debated for inclusion in a new UN climate treaty.

The basic idea is that developing countries should commit to reducing their greenhouse gas emissions "in an indicative range below business as usual," as the draft of the G8's L'Aquila declaration in July 2009 puts it. This deviation from an assumed future trajectory would be counted as a "reduction" (although it need be nothing of the sort) and traded to help industries in developed countries avoid reducing their own emissions. The private money flowing through these carbon markets could also be "double counted" as part of the financial commitment that the industrialised countries agreed to make at the UN Climate Conference in Bali.

But isn't carbon trading better than nothing?

No. As carbon trading helps to avoid change and even increases emissions while exacerbating local conflicts, it is not a question of alternatives to carbon trading but rather of taking measures that actually tackle climate change.

So what are the alternatives?

Carbon markets should be dismantled, starting with offsets. A clear intention to discontinue carbon markets can fatally undermine them even in advance of legislative action. Alternatives then need to be developed that are properly consulted and developed together with local communities to prevent a repeat of the dispossession and social injustice caused by offsetting schemes.

A range of different approaches will be needed but may include:

• Recognition of existing climate solutions. The vast range of solutions that already exist "which tend to be distinguished by their sensitivity to the local contexts in which they operate, are overlooked in favour of the accumulation of large-scale technological fixes" or market-based schemes

• Leave fossil fuels in the ground. Proposals to halt new coal power plants and the exploration of new and often

“unconventional” sources of oil extraction are at the frontline of the struggle for climate justice and should form part of a rapid transition to a post-fossil fuel economy

Rediscovering environmental protection. There are a broad range of environmental policy instruments that have proven to be more effective than market-based approaches ranging from efficiency standards for electrical appliances and buildings to feed-in tariffs for renewables. The rediscovery of such measures could form part of a solution

New revenues: tax and/or end currency and fuel speculation. Rather than a regressive carbon tax, revenue can be generated by a tax on currency speculation. A heavy tax or an end to speculation on fossil fuel prices would also help as a transitional measure. This should be accompanied by pro-active policy measures to tackle fuel poverty, such as a ban on pre-pay metering

Renewable energy should be supported but not uncritically with the involvement of local populations and not as basis for sustaining expansions in fossil use or support of unsustainable model of industrial expansion

Public energy research. Private research on energy alternatives and use favours “least cost” false solutions (eg. agrofuels, hydroelectric dams, nuclear power) rather than environmentally effective alternatives, so is less effective than public research. However, this would need to be allied with the democratic transformation of the institutions of “environmental governance,” the agenda for which currently tends to be set by transnational corporations

Re-estimating energy demand. Current models presume limitless growth and overstate future energy demand, which has encouraged oversupply and kept prices low which is, in turn a key structural driver of over-consumption.

The Transition Towns movement is going some way towards re-estimating demand with its “Energy Descent Action Plans”, but lacks a structural analysis of heavy industry use (or capitalist accumulation) and is often divorced from organising for more equitable distribution of energy

Changing economic calculations. Cost-benefit accounting either fails to take account of environmental or social costs, or is grossly reductionist in its assumptions.

Challenging the “growth” fetish. It is often claimed that continued GDP growth can go hand in hand with reductions in emissions. However, there is no evidence that “advanced” economies are significantly reducing their carbon footprints, or that such a transformation could happen quickly enough to reduce emissions. On the positive side, GDP is a very poor indicator of human-well being, so is not a condition for social improvement or a good life. If the obsession with economic growth is set aside, it becomes easier to see how tackling climate change and maintaining a sustainable and enjoyable life are far from contradictory goals.