

Introduction



Conquering carbon is the greatest challenge we face in the early 21st century. We need to tackle climate change, to cut the emission of greenhouse gases into our atmosphere, if we are to prevent, or even slow, the advent of global warming.

It's a controversial subject. Not everyone agrees that global warming is a problem and, while awareness of the issues has become more mainstream in the last few years, a great deal of confusion, argument and misunderstanding remain. The underlying science is complex and the analysis ever changing. At the same time, many of those involved in the debates have very specific agendas, from the industrial to the overtly political. This book is an attempt to explain what is actually going on, how we might be affected and how the carbon markets might help us to solve the problem.

Many people have an 'out of sight, out of mind' attitude towards climate change, believing that it's a problem that only affects others. It's certainly true that countries with the least responsibility for emission of greenhouse gases over the last 200 years – the developing economies – are likely to feel its effects most strongly. However, if climate change theories prove accurate, we are facing fundamental changes in supplies of food, fuel and clean water on a global scale. Anyone who thinks of this as someone else's problem is deluding themselves.

Concern about climate change has focused our attention on the need to move away from a dependence on carbon-emitting fossil fuels. This makes finding a way to control our carbon emissions

significant to the development of a modern society on two levels: as a step towards removing carbon from our supply chains, as well as a model of how to effectively control and conserve global resources.

Conquering carbon provides us with an opportunity to use climate change policies to address wider global environmental and equitable challenges. How we manage man-made emissions is a test for how we can begin to address issues of access to, and global allocation of, resources in the coming century. For years environmentalists have been warning that we're running out of oil, water, food and even land. With a global population expected to hit 9 billion by 2050, there is no question that we have finite resources that may not be able to serve the expanding global population.

We need to balance supply and demand and sustainability is high on both the political and corporate agenda. The only realistic option that we have is to adapt our models of production and consumption sufficiently to change the way we use our resources. This places us on the cusp of a fundamental transformation of how our economy functions. Successfully addressing the issues of climate change and environmental decline will demand a cultural shift in our expectations of consumption, as well as our expectations of comfort.

This opportunity could potentially transform our economic framework, enshrining the concept of equity and responsibility at the heart of our economy. Whatever route we take, our next steps are going to have an impact on every aspect of modern consumer society, in ways that are likely to accelerate as the consequences of delayed action become ever more clear. We live in a capitalist society and, while the financial disaster of the credit crunch and failing banks may have shown us the flaws of our current economic model, capitalism remains the philosophy that underlies most of the world's economies. That means that we need to take a closer look at the the explicit costs that we're facing – not just the climate changes potentially on the horizon, but the potential cost to all of us if we fail to avert it. Once we accept those costs are real, we can look at methods of using price to change behaviour. By putting a price on carbon we hope to discourage and curb its emission.

The introduction of an international carbon market is one way of doing this. The carbon market has a critical role to play in alleviating the worst effects of climate change; carbon offsets are far more than an opportunity for the developed world to offload their responsibility to cut pollution onto the developing world. For many, these last two statements are even more controversial than any about climate change. The carbon markets were set up as a global public good, part of the first attempt to put a price on the consequences of our actions in the hopes of changing behaviour. Many believe, however, that it has failed to achieve its goals, arguing that alternative approaches have a greater chance of successfully cutting emissions.

The creation of the carbon offset, the reduction or avoidance of greenhouse gases (GHGs) in one place to 'offset' emissions occurring elsewhere, has been accused of providing an opportunity for companies and individuals to offload their responsibility for cutting carbon emissions to the third world. The reality is that the carbon markets are the best hope we have to change the framework of our economy to a low carbon basis and in this book we're going to explore why and how.

The trading of carbon credits is a simple concept in theory. Every emitter of carbon dioxide is given a number of credits equal to an agreed level of emissions. That number of credits, or certificates giving the right to emit one tonne of carbon, must be surrendered to authorities at the end of the year. If they don't have enough, they have to buy more from others who have managed to cut their emissions. This adds to the cost base of those who need more credits, making their carbon emitting behaviour more expensive, while those who are able to sell extra credits are rewarded for having cut their emissions.

The system of traded credits should provide an incentive for companies to cut their emissions, to cut their cost base and generate revenue from the sale of extra credits. It was also intended to provide a means of transferring technology and funds to the developing world through investment in offsets. Using such a market to establish

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proper incentives to improve global carbon emissions levels could benefit both developed and developing economies, thus contributing to a reduction of global emissions at a lower total cost.

The original idea was that the cost of implementing carbon saving measures would be offset by funds generated from the later sale of credits. This has become a complex area, as there are regulated and voluntary markets, and a plethora of different credits available for sale. At the same time, early attempts to set up such markets have been clearly flawed and we'll look at what we've learned in how to better structure such a market.

The concept of the carbon market is enshrined within the Kyoto Protocol, the current international agreement on addressing the causes of climate change. We'll take a look at the framework of the agreement, its strengths and weaknesses, as well as at what needs to be agreed for an international treaty to succeed it in 2012. While a successor to the current Kyoto Protocol is a vital part of the process in bringing people together to address climate change, there is also an argument for unilateral and individual action. We'll explore how emissions reductions are being tackled outside the framework of a global treaty, and what we as consumers, corporations, communities and countries can really do to make a difference.

Many believe that cutting carbon from our economy will require a move to an earlier level of subsistence living, or at the very least the creation of new technological approaches to managing the problem. The reality is that we can transform our consumption patterns with technologies available today, and still maintain a level of comfort that should more than suffice to support a decent quality of life. We'll also look at the technological and cultural transitions that we may need to make if we are to achieve a transformation to a low carbon economy.

The carbon markets offer us an opportunity to transform our economic framework and bring a connection between rights and responsibilities back into the marketplace. We have the means to change the way the world works, if we understand the stakes, implement the mechanisms correctly and take the decision to act.