

# A Global Carbon Market?

EPRG Working Paper 1608

Cambridge Working Paper in Economics 1615

## Michael G. Pollitt

This paper explores the prospects for a global carbon market as the centrepiece of any serious attempt to reach the ambitious goal for GHG reductions set by climate scientists. My aim is to clarify the extent to which we know what policy might best support global decarbonisation.

My starting point is that the policy solution to excessive emissions of GHGs is actually well established in theory as well as in very large-scale experiments, specifically the European Union's Emissions Trading System (EU ETS). These give some confidence that carbon emissions reduction policy based around restricting the quantity of emissions permits to the level suggested by climate scientists would be the most sensible approach to delivering the depths of emissions reductions that is required.

The paper proceeds as follows. First, I discuss what I mean by a global carbon market and its theoretical properties. Next, I discuss the EU ETS experience and the recent experience with the Australian carbon tax. I then go on to assess the evolving carbon market initiatives in the US and in China.

I conclude that the idea of using the market to deliver carbon reductions is a potent one relative to the alternatives (notably regulatory controls through technology and performance standards, or incentives for low carbon technologies through subsidies and price supports). Carbon emissions permit trading is a globally popular form of carbon pricing. A global carbon market is highly desirable as a low cost way of delivering emissions reduction: indeed a reasonably comprehensive carbon market should be the economic centre-piece of any quantity based target for global GHG emissions, especially in the early stages towards deep cuts in global emissions.

We are still a long way from trading carbon in significant volumes across borders, but once again, there are encouraging signs that this is happening. The EU ETS has achieved transboundary trading of carbon in a wide geographic area. This scheme is capable of being linked globally and has helped create a significant market for CDM CERs from developing countries. Carbon does thus have an opportunity cost in many countries as a result of the EU ETS.

Australia provides a cautionary tale on the steady progress of carbon pricing mechanisms. Clearly, distributional issues need to be addressed within countries, as do the substantial leakage issues associated with the potential impact on traded sectors. However, there are encouraging signs in both the US and China on the potential future direction of carbon markets within those countries. In the US case (but also in China), the association of carbon abatement with local and regional clean air impacts is a powerful and potentially potent way of widening the political support and resolve for domestic action on GHGs by making the national cost benefit case for action.

Is it possible that the creation of a global market can be consistent with the principles of a 'good' energy policy? A 'good' energy policy should address the multidisciplinary issues around: the perception of the policy; the appropriate use of quantification in its justification; its impact on human well-being; its ability to garner public trust; the appropriate roles for state and non-state actors; whether it is capable of being delivered competently; and whether it exhibits consistency with other policy areas such as healthcare. I would argue that a market for carbon arising from quantitative national GHG quantity reduction allocations actually is capable of being a 'good' policy when looked at in the light of these issues.

*Perception* issues can be addressed and *quantitative justification* can be convincing as the progress with introducing national and regional carbon markets demonstrates. The recent association, by the EPA in the US, of GHG reductions with 'clean' air is a good example of an attempt to address negative perception issues around 'climate change' and 'global environmental problems', while being specific and salient in the area of the link to *human well-being* and making a direct link with *healthcare*. Experiments demonstrate that *public trust* in the operation of carbon markets can be fostered, and that carbon markets do much to set an appropriate *role for the state* in setting a framework within which both the private sector and other non-state actors can make meaningful and verifiable contributions to cutting emissions. Markets for carbon can be *delivered competently* in many jurisdictions, especially where there a possibility exists for small jurisdictions to join a larger regional trading area.

There is still a long way to go before we see emergence of anything like a comprehensive system for pricing of carbon externalities. There is still considerable doubt as to whether the piecemeal actions of individual governments with respect to emissions will ever add up to the necessary amount of emissions reductions that climate science claims to be necessary. While establishing the amount of emissions required and dividing it up acceptably between countries requires an enormous scientific and international negotiations effort, the economic instruments to deliver the agreed targets are readily at hand.

Contact	m.pollitt@jbs.cam.ac.uk
Publication	March 2016
Financial Support	CEEPR, MIT