

Carbon swap bank to beat climate change

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Australian researchers have suggested that nations should abandon the concept of carbon emissions trading in favor of a carbon swap bank that might lead to genuine reductions in the amount of carbon dioxide greenhouse gas entering the atmosphere and so provide a mechanism for reducing climate change. Details of the carbon swap bank are outlined in the journal *Interdisciplinary Environmental Review*.

Carbon emissions trading was to be the economic environmental solution to climate change. The original impetus of the Copenhagen Treaty in 2010 was to mitigate rising global average temperature by allowing nations that reduced their carbon emissions to trade with other nations and so motivate all nations to find ways of cutting pollution. The idea for an emission trading scheme first emerged in the 1960s in the USA. "Cap and trade" was essentially an invention of economists, and in particular, Canadian economist JH Dales in 1968. The first such cap-and-trade system was launched as part of the US Acid Rain Program in Title IV of the 1990 [Clean Air Act](#) but similar schemes have been mooted in the face of global warming.

Emissions trading became part of the [Kyoto Protocol](#) through the efforts of the Clinton Administration. Its success in reducing [sulfur dioxide emissions](#) and so reducing acid rain was seen as successful and inexpensive. The international adoption of cap-and-trade followed from the notion that, "We've found an effective tool, domestically, for controlling emissions, and let's try it internationally."

Unfortunately, economic solutions to scientific and engineering

problems rarely succeed especially once politicians become involved. Various proposed bills in the USA and Australia faltered because of agricultural issues and a failure to force those industries that produce the greatest tonnage of [carbon dioxide pollution](#) to alter their technologies. Moreover, carbon trading became nothing more than a financial vehicle with excessive derivatives, an uncontrolled offset market, and distortion of permits and taxes.

According to Carolyn Currie of Public Private Sector Partnerships, in Sydney, Australia, a carbon swap bank would allow direct deposits of sequestered carbon to be added and withdrawals of emission rights to be made. The process would not work like an investment futures market but would be facilitated by direct swap arrangements between a supplier of carbon sequestering technologies and methods, and those of the carbon polluter.

This approach gets around some of the major obstacles to [carbon trading](#), namely the accurate measurement of a nation's emissions and the regulation and enforcement of emissions controls internationally. More troublesome is the fact that emissions trading is not incentive compatible and so can result in perverse incentives whereby a polluting firm given emission permits has no incentive to reduce emissions further because future emissions permits might then be restricted. Similarly, regions, such as the European Union, could protect the industries within member states by allocating permits to reduce international competition from outside such a region.

There are five main advantages to a carbon swap bank over other carbon emission controls, according to Currie:

1. the macroeconomic significance of avoiding the free market flaws of volatility in price

2. mitigation of the uncertainty that an emissions trading scheme will actually induce significant changes in technology
3. the likelihood that changes will not be confined to the domestic economies of developed nations
4. the cost of a permit may be significantly higher than carbon swap arrangements when corruption of the permit process and the profiteering evident in the EU are taken into account
5. changes towards sequestration and emissions reduction can be identified and monitored and progress to lower carbon cap nationally assessed by listing all specific projects aimed to sequester carbon and reduce emissions.

While developed nations are now baulking at the implementation of carbon emissions trading schemes, a government could easily experiment with a carbon swap bank to benefit, for instance, its forestry and agricultural sectors, while reducing its emissions, based on the concept of increasing productivity in the sequestering sector, while preserving non-renewable resources for future generations; no international agreements would be needed and there would be no detrimental effect on national industry or competitiveness, and no potential for financial wizards to embroil carbon emissions in their vicious circle of boom and bust, concludes Currie.

More information: "A solution to climate change economics – a carbon swap bank" in *Interdisciplinary Environmental Review*, 2010, 11, 236-247

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