



CLIMATE POLICY NOTE

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THE FIRST STEP TOWARD EMISSIONS TRADING

Emissions trading is much admired, but it raises difficult issues of equity for which there are no obvious answers.

Everyone recognizes that emissions trading would reduce the cost of meeting the greenhouse gas emission limits in the Kyoto Protocol, but little attention is given to the domestic pre-conditions for robust emissions trading. One of the most important of these pre-conditions is an agreeable allocation of the newly limited (and thus, valuable) rights to emit greenhouse gases. This Policy Note reviews what is involved in taking this first step toward emissions trading.

A Knotty Issue Raised by Emission Limits

Emissions trading would greatly reduce the cost of meeting the greenhouse gas (GHG) emission limits proposed in the Kyoto Protocol, particularly if instituted on a global basis to include developing countries, where the cost of reducing emissions is relatively low. Such trading presumes that industrialized nations take steps to limit their GHG emissions and thereby create demand for cheap emission reductions abroad to substitute for more expensive reductions at home. Moreover, limiting GHG emissions invokes an unavoidable domestic problem in industrialized nations, and one of the biggest issues in developing a global emissions trading system: deciding who within these nations will receive the newly limited rights to GHG emissions.

The national caps on GHG emissions proposed in the Kyoto Protocol are effectively initial allocations to industrialized nations of the capacity of the earth's atmosphere to absorb heat-trapping gases. Since these caps are below current emissions, the previously free

use of the atmospheric sink as a repository for these gases becomes limited. This limitation raises questions of allocation among alternative domestic uses. All would agree that access should be reserved for the most highly valued uses. The only issue is: which current uses are to be allowed and which are to be curtailed? A related and even more difficult problem is that of determining who gets the payments, or rent, associated with the use of a now scarce and valuable entity.

Regulations and administrative decrees. The most common means of allocating scarce environmental resources is for government to limit the resources' use through some type of regulation or administrative decree. The government sanctions some level of emissions, subject to conditions imposed by the new regulation. In so doing, the government bestows a nontradable right to emit the regulated substance. That right has a value, which is appropriated in one manner or another—usually in the higher value of the asset to which the right attaches. In that case, the right and the

ownership of its commercial value are decided simultaneously, although the rent may be well hidden and the right itself be nontradable.

Since the emission rights are not traded, costs will be higher than if these rights were reallocated to what are deemed to be their most valued uses.

Taxes and auctioning permits. Another common and frequently advocated means of allocating scarce emission rights is for government to impose a charge, either by a tax or by auctioning permits. In this case, the government does not have to decide who uses the now limited right, and changes are accommodated automatically, since no one would pay the tax or bid a price for the permit higher than the value of present or future use.

Even though allocation to the most highly valued uses is assured by such measures, however, a problem remains. An unspoken assumption is that the nation as a whole owns the rights for which the charge is proposed. The inconvenient fact is that existing emitters are actively exercising these rights, and can be expected to view any limitation as an unwarranted infringement of rights established by time-hallowed use and adverse possession. From an existing emitter's viewpoint, regulation is much preferred, regardless of its inefficiency, because it recognizes and retains the incumbents' incipient rights, albeit in lesser quantity.

Grandfathered permits. Yet another means of allocating scarce emission rights, grandfathered permits, combines elements of regulation and taxes. As would be done in regulation, existing rights are recognized by the grant to incumbents of tradable rights in limited number. As would be the case with taxes on emissions or auctioned permits, receipt of the rent is not tied to

use of the emissions right, thereby ensuring allocation to the most highly valued uses.

Nevertheless, an explicit grant of the permit and its associated rent can attract fierce opposition. The charge will be made that not only is "a license to pollute" being issued, but the existing "polluter" is also being rewarded. Both charges apply equally to regulation, but this facile rhetoric obscures a deeper issue raised by grandfathering, which concerns the identity of the incumbent. Who along the vertical chain of existing use has superior claim to the right to emit carbon into the atmosphere and enjoy the accompanying rent? Is it:

- the coal miner or driller who wrests the carbon from the earth in the form of coal, oil, or natural gas?
- the factory or power plant that, in producing widgets or electricity by using fossil fuel, emits the CO₂ into the atmosphere?
- the consumer of the carbon-based good whose final demand sets the whole vertical chain of production into motion?

All will be affected by the new limit in some manner, and each may be expected to assert a claim to the rent.

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A Necessary First Step

No "correct" formula exists for deciding who is to have the newly limited right to use the atmospheric sink. Creating a scarcity, as implied by the Kyoto targets, imposes costs and creates rents, thereby raising preeminently political issues of equity and the definition of rights that are fundamental to any society. Although rarely faced forthrightly—perhaps because doing so makes the political solution harder—solving the allocation problem at home is a necessary first step in realizing the potential cost savings from global emissions trading.

Source: A. Denny Ellerman, "Obstacles to Global CO₂ Trading: A Familiar Problem," in *Climate Change Policy: Practical Strategies to Promote Economic Growth and Environmental Quality* (Charles E. Walker, Mark A. Bloomfield, and Margo Thorning, eds.), Monograph Series on Tax, Trade, and Environmental Policies and U.S. Economic Growth. American Council for Capital Formation, Washington, D.C. (1999). Also published as Joint Program Report #42 <<http://web.mit.edu/afs/athena.mit.edu/org/g/globalchange/www/rpt42.html>>.