

Environmentalists' Perspective on Emission Trading Programs

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ENGO Perspective on Emissions Trading

Introduction

ENGOS perspectives on emissions trading are increasingly dependent on the details of individual emissions trading programs and judgments of whether a program's particular environmental pros and cons outweigh the pros and cons of "command and control" alternatives. On the "pro" side of the emissions trading ledger, trading may help reduce costs of achieving a particular goal. This may, in turn, make more stringent environmental pollution goals more politically achievable, or may allow agencies to shift their attention to other problems. On the "con" side of the emissions trading ledger, there are many aspects of trading programs that need to be assessed. In particular, environmentalists are likely to pay particular attention to the following:

- the monitoring and enforcement regime under a trading program must be sufficiently strong to withstand new opportunities and incentives for non-compliance created by a trading program;
- a trading program must be accompanied by regulatory and planning changes which will help to ensure the correction of "market failures";
- the political difficulties in developing an emission allowance trading program, in particular, the politically sensitive issue of allowance allocation, may lead to a situation where real emission reductions are delayed;
- poorly designed trading programs may not safeguard environmentally sensitive areas or particular communities.

Adequacy of Enforcement and Monitoring

Emissions trading creates new incentives and opportunities for non-compliance. In a command and control system an emitter has no incentive to claim its emissions are far below allowable levels. However, in a

trading program an emitter can fraudulently claim lower emission levels and profit by selling bogus credits or ostensibly surplus allowances. The non-complying party's production of bogus credits or sale of non surplus allowances can potentially undermine the effectiveness of regulatory control among companies who are interested in achieving full compliance. Trading programs thus require improved monitoring and enforcement. It will no longer be sufficient to simply ensure that a facility operating at full capacity does not exceed maximum allowed emissions, or that a particular technology has been installed.

The need for strong enforcement and good monitoring is of particular concern in relation to emissions trading in Canada. First, monitoring infrastructure is generally much less developed in Canadian jurisdictions than in U.S. jurisdictions using trading. For instance, far fewer sources have continuous emission monitoring or totalizing fuel metres. Trading programs often rely on such equipment to allow after-the-fact verification of an emission reduction.

Second, most Canadian jurisdictions, unlike American jurisdictions, rely primarily on the criminal justice system to enforce environmental laws. The criminal justice system - with its requirements for proof beyond reasonable doubt, the defence of due diligence, and cumbersome procedural safeguards - make it an impractical mechanism for sanctioning the minor and moderate infractions which can undercut an emissions trading program's effectiveness.

Third, environmental enforcement agencies in Canada typically have far fewer resources than their American counterparts. The ratio of environmental enforcement officials to permitted sources is an order of magnitude higher in American locations such as the South Coast Air Quality Management District than Canadian locations such as the Greater Vancouver Regional District.

Nonetheless, in cap and allowance trading programs effective monitoring and enforcement can be achieved at relatively low costs to government, but doing so will require high levels of private investment in monitoring systems and changes to legislative enforcement provisions. When the South Coast Air Quality Management District adopted its cap and allowance trading program it imposed new monitoring requirements on emitters that cost an average of \$30,000 more per emitter than earlier monitoring requirements. Increased monitoring costs can lead, however, to much more effective programs. The U.S. *Clean Air Act* Title IV Acid Rain program combines tamper-proof continuous emissions monitoring systems with automatic administrative penalties of \$2,000 per ton. This program achieves 40% of emission reductions under the *Clean Air Act* while employing only 1% of EPA personnel. These sort of efficiencies are only achievable in a cap and trade program with automatic monitoring and penalties.

Open market trading programs, on the other hand, may require devotion of significantly more resources for enforcement. Although it may be possible to generate some credits through CEMs, the validity of most credits will only be ascertainable through audits of credits. The threat of audits will need to be sufficient enough to deter the creation of bogus credits. Open market and credit trading programs may also put increased onus on enforcement staff to analyze technologies and methodologies with which they are unfamiliar and to enforce projects at locations outside their normal purview.

The Continuing Need for Regulation and Planning

Trading programs are not a panacea, and will not overcome many hurdles to cost effective emission reductions. For instance, a carbon coupon trading program works largely by increasing the price of gasoline or electricity produced from fossil fuels and thus encouraging energy efficiency. However, because consumers are not always rational, profit-maximizers with full information as to their future costs, regulations to increase energy efficiency standards and demand side management programs aimed at overcoming informational and financial barriers to cost effective energy efficiency will be necessary to achieve emission reductions at the lowest cost. Similarly regulators cannot rely on the threat of future energy prices to drive decisions on issues like transportation infrastructure investment. Growth management regulation and full cost transportation planning will be necessary to ensure the lowest cost emission reductions over the long term.

Protection of Sensitive Areas and Protection from Localized Impacts

Regulation is also essential to protect against localized impacts. For instance, a volatile organic trading program aimed at reducing ground level ozone on a regional level cannot supersede regulations protecting residents from toxic volatile organics. Emissions trading programs must be designed to ensure that the pollutants do not become concentrated in local areas. The largest opposition to the U.S. *Clean Air Act* Title IV Acid Rain program was environmentalists concerned about the possibility of increased sulphur dioxide emissions upwind of pristine areas such as Adirondack Mountains. This concern could have been avoided by some restrictions on trading of allowances into areas upwind of the Adirondacks.

The Realpolitik of Trading versus the Realpolitik of Command and Control

Proponents of trading often note that the schedules for implementation of command and control air quality improvement plans are rarely met. They may be set back by an unwillingness to mandate technologies that appear less cost effective than initially thought, mandated technologies being less effective or regulations being unenforced of "sympathetic administration" by enforcement agencies. Trading, its proponents argue, helps overcome these barriers to achievement of environmental goals.

Although the tardy and failed implementation of plans for command and control regulation is a real problem, it must be weighed against difficulties in implementing an emissions trading program. First, the allocation of allowable emissions is an inevitably invidious and acrimonious task which is not easily resolved, especially where the sources of emissions are highly heterogeneous. Designing an allocation system which has broad political support may take many years. Second, the desire to achieve "political buy-in" to an allocation may lead to over-allocation. For instance, under RECLAIM, firms were given flexibility in determining historic production and emission levels that were the basis for the initial allowance allocations. Because all firms chose high production years and high emission levels, allowable emissions under RECLAIM increased by an estimated 16% to 50% over actual emissions during baseline years. Many environmentalists believe that although RECLAIM on paper lead to rapid emission reductions, the combined effect of difficulties in designing RECLAIM and the over allocation of allowances was to slow the achievement of air quality goals from what would have occurred under a command and control regime.

Additionality

In any credit trading program, environmentalists will be concerned that credits may be generated through projects which are not additional to what would have occurred in the absence of a credit program. If the environmental benefit of these business-as-usual improvements is used to offset non-compliance with a regulatory requirement, the effect of trading is to undercut the environmental effectiveness of the regulation.

This is particularly of concern where there are plentiful supplies of emission reduction opportunities that have negative costs. For local air pollutants in jurisdictions where governments has been working for many years to reduce emissions, there is less concern with regard to additionality of credit generating projects, but the problem of additionality is more significant for pollutants such as greenhouse gases which have been traditionally unregulated and for which most analyses show many emission reduction actions with a negative cost to the implementer.

The acceptability of a credit trading program will often depend on whether or not the regulatory standards which drive the demand for credits are sufficiently stringent that they "soak-up" the supply of non-additional emission reduction projects and ensure improvements in environmental quality. In order to achieve the same environmental goal, regulatory standards will need to be more stringent in a credit trading program than in the absence of such a program or credits will need to be discounted.

Conclusion

The environmental community's attitude to emission trading is driven by a range of pragmatic concerns. In some cases environmentalists may believe that these concerns can be dealt with through the proper design of a program. In other situations, however, the difficulty and chances of designing an effective trading program may lead environmentalists to continue advocating a "command and control" program in the expectation that it will be more environmentally effective.