NYT, SCIENCE DESK

Cheapest Protection of Nature May Lie In Taxes, Not Laws

By PETER PASSELL (NYT) 1908 words
Published: November 24, 1992

COULD the exploding cost of environmental protection, widely seen as part of America's productivity problem, become part of the solution?

A new generation of environmental researchers, as comfortable with the theories of Adam Smith as they are with those of Darwin or Mendel, thinks taxes that penalize polluters could make the economy fitter and leaner, even as it makes the environment cleaner. Their case is outlined in a report from the World Resources Institute, by no coincidence released last week to gain maximum attention from the nascent Clinton Administration.

The institute could hardly have picked a more propitious moment to advance "green taxes" as the cure to ailments ranging from global warming to traffic congestion to the scarcity of places to dump garbage. President-elect Clinton is likely to be attracted by environmental strategies that minimize the cost to consumers while yielding tens of billions of dollars in revenue. So, too, are recession-battered state and local governments, which are under the gun to sustain services and improve the quality of life without raising income, property or sales taxes.

Even conservatives, who worry that more government revenue will mean more government, soften at the prospect. After all, notes William Niskanen, the head of the Cato Institute, "it's better to tax 'bads' than to tax goods."

The idea of green taxes has been kicking around university seminars since it was proposed in the 1920's by the English economist Arthur Pigou. He warned that prices determined by competitive markets would not reflect the full cost of making goods if some of those costs were not borne by producers. If, for example, smoke from a steel mill fouled the paint on nearby houses, steel would sell at a price below the true cost to society.

Pigou argued that the problem could be remedied by imposing a tax equal to this "externality." Once polluters were charged for their mess, they would have incentives to raise prices and reduce production, or shift to less polluting technologies. Either way, producers (and thus consumers) would pay the full cost to society.

What works on a blackboard, however, may not work as well in practice. Externalities are often hard to measure (how much damage did that car horn cause by waking the baby in Apt. 2C?). And they can be even harder to assess (just jot down the license plate number and have the city mail out a bill . . .). That explains, in part, why the political

impulse is to regulate away externalities rather than to ask offenders to internalize the cost -- and why horn-blowing is usually illegal in cities, except in emergencies.

More important, pollution is rarely viewed as simply a sin that can be erased by the payment of the secular equivalent of an indulgence. If it is bad enough to worry about, the reasoning goes, it can hardly be made socially acceptable by offsetting it with fees. Indeed, hardly anything makes traditional environmentalists madder than the idea that businesses should be allowed to pay to pollute.

It should not be surprising, then, that America's sweeping environmental laws governing air, water, solid waste and wildlife preservation leave little room for market-based environmentalism. Standards are generally set according to what is deemed safe, aesthetic and technologically feasible. And they are enforced with civil and criminal sanctions intended to deter, not to offer the polluter a chance to pay and play. Why the Sudden Enthusiasm?

Why, then, the born-again enthusiasm for environmental regulation that puts a price tag on pollution? One reason, argues Paul Portney, an economist at Resources for the Future, a Washington research group, is that scientists are growing more sophisticated about the implicit trade-offs between cost and risk in modern life. It is surely worth a few thousand dollars to save a child from lead poisoning or to prevent a case of lung cancer from radon gas. But just as it doesn't pay to reduce highway deaths by lowering the speed limit to 25 m.p.h., it may not be worth billions of dollars to prevent every possible death from, say, airborne toxic chemicals.

Another reason, suggests Robert Hahn of the American Enterprise Institute, is that the enormous costs of "command and control" environmental regulation are beginning to hit home. A study published in March 1992 issue of Environment Magazine estimated the current cost at $120 billion a year. And by almost everyone's reckoning, the number is bound to grow far more rapidly than the economy for decades to come.

The Clean Air Act of 1990 mandates the outlay of billions of dollars annually to curb acid rain, brighten urban skies and wipe out emissions of toxic industrial gases. Tens of billions have already been spent on the clean-up of toxic waste, and the process has hardly begun. Note, too, that candidate Clinton pledged to roll back carbon emissions to 1990 levels by the year 2000 -- a promise that may force spectacularly expensive shifts in industrial technology and in the mix of fuels consumed. More Bang for the Buck

While environmental goals may eventually be scaled back to meet cost concerns, there will surely also be pressure on government to get more bang for an environmental buck. And that is where Robert Repetto, the chief economist of the World Resources Institute, thinks green taxes fit in.

Take the big enchilada of environmental challenges, the limitation of carbon emissions to slow or stop global warming. Environmental strategy-as-usual would require a bureaucratic redesign of energy use, dictating which fossil fuels could be burned in what

industrial processes, subsidizing non-fossil energy sources like windmills and setting efficiency standards for everything from cars to power plants.

The environmental economists' alternative is to charge fees that discourage carbon emissions, raising the prices of fuels according to their carbon content. This is obviously easier in administrative terms: the taxes could be collected from producers and importers. And however tough the goal, the carbon tax route is likely to be less of a drag on the economy because carbon emitters themselves are in the best position to calculate the least-cost fix. Traffic Congestion

Or consider what Mr. Niskanen of the CATO Institute calls the "biggest externality of modern life," traffic congestion. America (and the rest of the world, save Singapore) rations scarce space on roads at rush hour the way the Soviet Union used to ration sausage: with lines. The World Resources Institute report notes that the technology now exists for charging vehicles according to their location and to the time of day. And it cites estimates that by the year 1999 fees ranging from a penny to 36 cents a mile could induce enough drivers to stay off the road at rush hour to save some $21 billion annually in time, fuel and accidents.

Not everyone, though, is convinced that green taxes are unalloyed virtue. Lynn Scarlett, director of research for the libertarian Reason Foundation in Los Angeles, argues that they could prove to be "a fast train in the wrong direction" -- a seductively efficient means for achieving goals that may not be worth achieving. That argument hardly applies to traffic congestion, where the waste in time and fuel is obvious. But it certainly raises questions on global warming, where scientists are still arguing about the likely consequences of carbon emissions.

Those who are sure they know which direction the train should be heading still worry about how far it should go: a green tax, after all, is no better than the estimate of the "externality" it is meant to offset. And all too often, says Dale Jorgensen, an economist at Harvard, "the practical problems of estimation are enormous." Once again, global warming illustrates the problem. Some Cost Estimates

William Nordhaus, the Yale economist whose article in the Nov. 20, 1992, issue of Science is probably the most sophisticated integration of the climatology and economics of global warming ever attempted, estimates that the optimal carbon tax would start at about $5 a ton and gradually rise to $20. But he also estimates that the tax required to meet Mr. Clinton's campaign promise would exceed $200 a ton by the middle of the next century, with a cumulative cost of $5 trillion in lost economic output.

Another concern is who pays. James Poterba, an economist at M.I.T., found that a carbon tax is likely to take a relatively bigger bite out of the living standards of the poor. By the same token, taxes on traffic or household garbage or pollutants from auto exhausts could also prove regressive. But Mr. Repetto counters that a disproportionate share of the benefits of a cleaner environment are likely to go to those smaller incomes. "Only poor people," he points out, "live near landfills and busy highways." And in any case,

revenues could be recycled in ways that offset the maldistribution.

While there may be some muddle over the incidence or appropriate magnitude of green taxes, it is no mystery why politicians are attracted to them. Like any other taxes, green taxes would meet certain resistance from groups and regions most adversely affected. Lester Lave, an economist at Carnegie-Mellon University, notes that a carbon tax would add roughly four cents to the price of coal for every penny it added to the price of oil or natural gas. And judging from past donnybrooks over curbing sulfur emissions from coal-fired power plants, the coal lobby in Congress would not go gentle into that dark night. Taxes or Regulation?

But unlike most taxes, green taxes can be sold as user fees that advance environmental goals that would otherwise have to be met with direct regulation -- regulation that could prove far more costly to consumers. Commuters might initially be furious about paying an extra $5 to get to work. But their anger might quickly dissipate if the commuting time were cut in half, or if the congestion fees were presented as the alternative to mandatory car-pooling.

What's more, green taxes could prove to be terrific cash cows. The World Resources Institute estimates that congestion fees set at efficient levels could have generated a whopping $98 billion for states and localities in 1989. A relatively modest $30-a-ton national carbon tax (about 10 cents per gallon of gasoline) would bring home $35 billion.

How one views this potential flood of revenue depends on what one expects would be done with the dollars. The World Resources Institute sees green taxes as substitutes for income taxes that undermine incentives to work and save, and could thus increase measured output as well as cleaning the environment. That also seems to be the thrust of Mr. Clinton's thinking: His campaign pamphlet on the economy called for "revenue-neutral market incentives" to "penalize polluters and energy wasters." And Paul A. Volcker, who is rumored in line for Secretary of the Treasury, offers a variation on the same theme. In a television interview in June he called for a carbon tax as the least offensive tax for closing the budget deficit.

But Mr. Hahn, a former adviser to President Bush on environmental economics, worries that it could presage an unwanted growth in government. When he left the White House, he left behind a memo on the revenue potential of green taxes -- a memo he titled "Pandora's Box."

Photo: "A Traffic Jam of Potential Polluters" From 1970 to 1989, the total number of miles traveled by car increased by 90 percent and vehicle registrations increased by more than 70 percent. But urban road capacity increased by less than 4 percent. Some economists advocate charging road-space consumers more during peak travel times, as phone calls and electricity cost more in periods of peak use. The technology exists to monitor road use with electronic devices in cars and sensors in the road. (pg. C1); Robert Repetto of the World Resources Institute is a leading proponent of "green taxes." (World Resources Institute) (pg. C8) Chart: "Taxing Drivers to Cut Traffic" Advocates of a

"green tax" on traffic say it would unclog stopped-up roads and produce revenue. Potential impact: At 1,661,724 million vehicle miles traveled annually, a toll of 0 to 21 cents on each mile could reduce that by 7 percent, to 1,545,952 million miles. Other benefits: By 1999 the fee could cut peak-hour delays, for added savings of about $8.1 billion annually. Even higher tolls, reflecting the social cost and delays caused by accidents, could save as much as $21.3 billion annually. (Source: World Resources Institute) (pg. C1) Chart/Diagram: "Taxing Carbon: Why, How and Whom" Some economists say that making fossil fuels more expensive would alter, the use of capital, energy and other economic resources and help meet emission goals set to prevent global warming. In essence, they believe it would put a price tag on pollution, shifting energy use to less-taxed and less-polluting fuels. Such a tax would be somewhat regressive, falling more heavily on those in lower income groups. Some retooling would be needed to counter this problem, but defenders say the poor would also benefit disproportionately from a smaller pollution burden. (Sources: U.S. Council of Energy Awarness (energy sources); World Resources Institute (tax figures); James M. Poterba (costs for income classes) (pg. C8)