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## A Gamble on Global Warming

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The United States is about to initiate a gamble with the global environment in a huge area of the world economy in the name of reducing accumulations of greenhouse gases by "emissions trading." This supposedly free-market approach is the centerpiece of the U.S. strategy for meeting its target for reducing greenhouse gas emissions under the global agreement known as the Kyoto Protocol. Negotiations on how the industrialized countries will meet their targets (there are none for the other countries as yet) resumed this week in Buenos Aires. The reductions in emissions are needed to mitigate the risks of catastrophic climate change.

Superficially, the U.S. proposal makes sense. The use of fossil fuels (coal, oil and natural gas) is the main source of carbon dioxide ( $CO_2$ ) emissions. It is often far less efficient in some countries, such as India, Russia or Brazil, than in Japan, the United States or Germany. Hence, free-market theorists argue, it would be efficient to concentrate investments first in those countries that present opportunities for the greatest reduction of  $CO_2$  emissions per dollar. But the devil, as they say, is in the details.

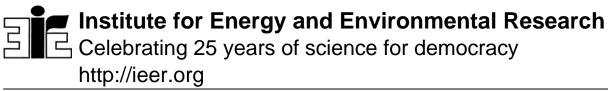
The extraction, processing and conversion of fossil fuels is a complex, \$2 trillion piece of the global economy (not including the homes, cars, and industries that use the resulting fuels and electricity). The introduction of a new economic element into the entire field through emissions trading should be based on sound data and analysis.

The world's governments would be setting up a new commodity within the fossil-producing and using industries by creating emissions quotas — limits on the amount of  $CO_2$  a country, person or industry would be allowed to emit. But there is no simple and fair way to allocate such quotas.

Should they be established by country, per person or by industry? Quotas by country would be unfair because they would reward the rich who use the most fossil fuel with the largest allocations, while depriving the poor, who need them the most, of their share. A global per capita allocation is the most equitable, but would result in a substantial de facto tax on the people of the industrialized countries, since they would have to make payments for the right to put out more  $CO_2$  than the world per-person average. Quotas by industry would reward inefficient polluters, because they emit more  $CO_2$  per dollar of output than efficient producers and would therefore get the right to continue to emit more.

Some permitted emissions trades might actually result in net increases in emissions. Consider, for example, one proposal by which the United States would take CO<sub>2</sub> credit for investing in the use of *bagasse* (the organic matter left after the juice is crushed out of sugar-cane stalks) to generate electricity in India. This idea fails to take into account that a large amount of bagasse is already used in a traditional industry that employs large numbers of people, to boil down sugar-cane juice into a lumpy brown sugar known locally as *gurdh*.

Emissions trading would cause bagasse to have a monetary value in scarce foreign exchange, drawing it



away from the local gurdh industry. The likely result would be an increase in the cutting of trees for fuel wood to use as a replacement in making gurdh, to the detriment of the local environment. The overall pattern of fuel-wood and bagasse use might even result in a net increase in  $CO_2$  emissions.

Emissions trading might achieve a useful niche, for instance, in replacing inefficient electric power plants with far more efficient ones, if the immense technical and political problems associated with it can be worked out. Until then, there are many other avenues for achieving substantial reductions in greenhouse gas emissions that do not involve trading.

For instance, a large amount of natural gas is wasted in areas as diverse as Alberta, Canada, and the Niger River delta in Nigeria. In fact, the energy

value of the natural gas that is flared in Nigeria approximately equals the commercial energy use of the entire country. Yet, the residents of the region from which the oil is extracted and the gas is flared must use wood for fuel because the Nigerian government and the multinational oil companies have failed to provide for the economic development of the region. More than three dozen countries now flare natural gas. Some of Canada's usable flared gas is within sight of Edmonton, one of the largest cities in western Canada.

Instead of taking to Buenos Aires a dubious proposal that could do more harm than good, the United States should take the lead in proposing innovative solutions to a pressing global problem. There are many economically attractive possibilities. For instance, landfills emit methane, a powerful greenhouse gas. It can be used to generate electricity or purified to provide cooking and heating fuel.

The emissions trading idea is premature and should be put on hold. The parties to the Kyoto Protocol should focus on preventing the gross waste of natural gas resources (with due attention to local economic development), on the creation of long-term markets for renewable energy sources such as wind power, and on encouraging critical new technologies such as fuel cells that can make the global economy more efficient.

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