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Outsize Profits, and Questions, in Effort to Cut Warming Gases

By [KEITH BRADSHER](#)

QUZHOU, China — Foreign businesses have embraced an obscure [United Nations](#)-backed program as a favored approach to limiting [global warming](#). But the early efforts have revealed some hidden problems.

Under the program, businesses in wealthier nations of Europe and in Japan help pay to reduce pollution in poorer ones as a way of staying within government limits for emitting climate-changing gases like carbon dioxide, as part of the Kyoto Protocol.

Among their targets is a large rusting chemical factory here in southeastern China. Its emissions of just one waste gas contribute as much to global warming each year as the emissions from a million American cars, each driven 12,000 miles.

Cleaning up this factory will require an incinerator that costs \$5 million — far less than the cost of cleaning up so many cars, or other sources of pollution in Europe and Japan.

Yet the foreign companies will pay roughly \$500 million for the incinerator — 100 times what it cost. The high price is set in a European-based market in carbon dioxide emissions. Because the waste gas has a far more powerful effect on global warming than carbon dioxide emissions, the foreign businesses must pay a premium far beyond the cost of the actual cleanup.

The huge profits from that will be divided by the chemical factory's owners, a Chinese government energy fund, and the consultants and bankers who put together the deal from a mansion in the wealthy Mayfair district of London.

Arrangements like this still make sense to the foreign companies financing them because they are a lot less expensive, despite the large profit for others, than cleaning up their own operations.

Such efforts are being watched in the United States as an alternative more politically attractive than imposing taxes on fossil fuels like coal and oil that emit global-warming gases when burned.

But critics of the fast-growing program, through which European and Japanese companies are paying roughly \$3 billion for credits this year, complain that it mostly enriches a few bankers, consultants and factory owners.

With so much money flowing to a few particularly lucrative cleanup deals, the danger is that they will distract attention from the broader effort to curb global warming gases, and that the lure of quick profit will encourage short-term fixes at the expense of fundamental, long-run solutions, including developing renewable energy sources like solar power.

As word of deals like this has spread, everyone involved in the nascent business is searching for other such potential jackpots in developing countries.

As for more modest deals, like small wind farms, "if you don't have a humongous margin, it's not worth it," said Pedro Moura Costa, chief operating officer of EcoSecurities, an emissions-trading company in Oxford, England.

The financing of the chemical factory's incinerator here and other deals like it are now drawing unfavorable attention. Canada's environment minister, Rona Ambrose, announced in October that her government would withdraw from the trading program.

"There is a lot of evidence now about the lack of accountability around these kinds of projects," she said.

Another concern is that the program can have unintended results. The waste gas to be incinerated here is emitted during the production of a refrigerant that will soon be banned in the United States and other industrial nations because it depletes the ozone layer that protects the earth from ultraviolet rays.

Handsome payments to clean up the waste gas have helped chemical companies to expand existing factories that make the old refrigerant and even build new factories, said Michael Wara, a carbon-trading lawyer at Holland & Knight in San Francisco.

Moreover, air-conditioners using this Freon-like refrigerant are much less efficient users of electricity than newer models. The expansion of large middle classes in India and China has led to soaring sales of cheap, inefficient air-conditioners, along with the building of coal-fired plants to power them, further contributing to global warming and the depletion of the ozone layer.

The program is at the forefront of efforts to address the most intractable problem in climate change: how to limit soaring emissions from the largest developing countries. Sometime in 2009, China's total emissions of carbon dioxide, the most important global warming gas, are expected to surpass those from the United States, according to the International Energy Agency.

While the challenge of addressing global warming is daunting, so are the consequences of inaction. Scientists warn that rising concentrations of carbon dioxide and other global warming gases could result in more severe storms, wide crop failures, the spread of tropical diseases and rising sea levels endangering some coastal cities.

Programs like the one the United Nations supports are increasingly common in Europe. In general, they allow companies to buy rights on the market to exceed their limits on global warming gases from other companies prepared to reduce emissions elsewhere at a lower cost. Many economists consider emissions-trading systems, which are driving participants to the cheapest cleanups with the biggest impact, as the most efficient way to address pollution.

But a study commissioned by the world organization has found that the profits are enormous in destroying trifluoromethane, or HFC-23, a very potent greenhouse gas that is produced at the factory here and several dozen other plants in developing countries. The study calculated that industrial nations could pay \$800 million a

year to buy credits, even though the cost of building and operating incinerators will be only \$31 million a year.

The situation has set in motion a diplomatic struggle pitting China, the biggest beneficiary from payments, against advanced industrial nations, particularly in Europe. At a global climate conference in Nairobi, Kenya, in November, European delegates suggested that in the case of Freon factories now under construction in developing countries, any payments for the incineration of the waste gas should go only into an international fund to help factories retool for the production of more modern refrigerants that do not deplete the ozone layer.

But the Chinese government blocked the initiative, insisting that money for Chinese factories go into the government's own clean energy fund. Negotiators ended up setting up a group to study the issue.

Even as hundreds of millions of dollars from the program are devoted to the refrigerant industry, countries in sub-Saharan Africa, which were originally envisioned as big beneficiaries of emissions trading, are receiving almost nothing. Just four nations — China, India, Brazil and South Korea — are collecting four-fifths of the payments under the program, with China alone collecting almost half.

Two-thirds of the payments are going to projects to eliminate HFC-23.

Those payments also illustrate conflicting goals under Kyoto and the Montreal Protocol, a 1987 agreement that requires the phasing out of ozone-depleting substances. The problem is that the trading program backed by the United Nations, known as the Clean Development Mechanism, is helping support an industry that another international organization is trying to phase out.

And while ozone depletion is a separate problem from global warming, some gases, like HFC-23, make both worse. The separate secretariats under the protocols have little legal authority to resolve this quandary.

"It's tricky in that we don't have a mechanism other than the Security Council, and who cares there about HFC's?" said Janos Pasztor, the acting coordinator of the organization that oversees the program.

In the end, officials say, there should be more projects aimed at providing renewable energy and sustainable economic development for the world's poorest people.

"If people only do HFC-23 projects, then they miss the whole idea," Mr. Pasztor said.

Richard Rosenzweig, chief operating officer of Natsource, a company in Washington arranging emissions deals between poor and rich countries, said it was not fair to look only at incineration costs and compare them with the size of payments from industrial nations. The administrative costs of the program are high, he said, and at least disposal of the waste gas is taking place.

If the world tried to reduce emissions through an outright ban or regulation alone, as many environmentalists recommend, it might not happen at all, he said. The United Nations-favored program may have flaws, he added, but "it's a pilot phase — this is a 100-year problem."

Environmental groups say that governments in developing countries should either require factories to incinerate the waste gas as a cost of doing business, or receive aid from wealthier countries to cover the relatively modest cost of incinerators.

“Couldn’t we pay for the cost, or even twice the cost, of abatement and spend the rest of the money in better ways?” Mr. Wara asked.

[DuPont](#) produces HFC-23 as part of its output of Teflon, but has routinely burned the colorless, odorless waste gas without compensation for many years, even though it is not required by law to do so, a DuPont spokeswoman said.

The secretariat of the Clean Development Mechanism estimates that a ton of HFC-23 in the atmosphere has the same effect as 11,700 tons of carbon dioxide. James Cameron, the vice chairman of Climate Change Capital, which organized the chemical factory deal here, said there were considerable costs and risks in setting up plans that required elaborate certification by consultants, acceptance by developing-country governments and approval by a United Nations secretariat.

For small projects involving less than \$250,000 worth of credits, fees for deal makers, consultants and lawyers can far exceed the cost of installing equipment to clean up emissions.

Even the Chinese government, the main seller of carbon credits and a defender of the program, is expressing some misgivings.

“We do not encourage more HFC projects,” a statement by Lu Xuedu, deputy director of the Office of Global Environment Affairs at the Ministry of Science and Technology, said. “We would prefer to have more energy efficiency and renewable-energy projects that could help alleviate poverty in the countryside.”

But for now, the projects involving industrial gases like HFC-23 are where most of the action is.

“You can do those quickly,” Mr. Rosenzweig of Natsource said, “and it’s worth the investment.”

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