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Cap-and-Trade Is Beginning to Raise Some Concerns

By JAMES KANTER

BRUSSELS — Manufacturing a gas commonly used for cooling and air-conditioning turns out to produce another unwanted gas that can contribute inordinately to the warming of the planet.

This byproduct from making refrigerants has several thousand times the potential of carbon dioxide — the most common greenhouse gas — to trap heat in Earth's atmosphere.

As climate regulation spreads, destroying the gas, known as HFC-23, has become a lucrative business, and over the past five years, financiers and industrial companies have begun turning those streams of waste into hefty returns.

That business was made possible by the Kyoto Protocol, which was agreed upon in 1997 and which encourages investors from the developed world to offset their own emissions by paying for reductions in developing countries.

China has been among the biggest beneficiaries by generating offsets under a program known as the Clean Development Mechanism that is overseen by the U.N. climate office in Bonn.

Critics have warned for years that this form of offsetting would encourage profiteering, with little or no value in efforts to curb [climate change](#).

More recently, opponents of offsetting have likened the system to the kind of financial engineering on Wall Street that helped precipitate the recent banking crisis.

The business works as follows: Factories producing refrigerants install equipment to transform the waste gas so it has less warming potential and then apply to the United Nations for permission to sell credits.

The factories sell credits in proportion to the overall amount of gas destroyed to buyers that include governments, banks, trading companies and utilities. Buyers can sell the

credits again on **emissions trading** markets or use them to meet their legal or voluntary obligations to cut emissions.

Most of the demand for those credits is in the **European Union**, where polluters have operated under a mandatory cap-and-trade system since 2005.

Europe dominates a market for greenhouse gases worth \$144 billion worldwide in 2009.

About 12,000 factories and installations in Europe must meet annual requirements to cap their emissions.

If those factories and installations undershoot their quota, they can trade in their surplus. But if they overshoot, or if they anticipate producing more emissions in the future, one of the cheapest ways to make up the difference is to invest in these international offsets.

Many climate experts say encouraging the trade in HFC-23 offsets makes economic and environmental sense. One molecule of HFC-23 that is allowed to vent into the atmosphere has the potential to trap about 12,000 times as much heat as a molecule of CO₂.

Last year, companies operating in the European Union used credits from HFC-23 projects worth €552 million, or \$703 million, to meet their obligations under the bloc's Emission Trading System, according to calculations by the Environmental Investigation Agency, a London-based nonprofit organization.

HFC-23 credits also make up about half the supply of international offsets approved by the United Nations to date.

But in March, another nonprofit organization, CDM Watch, which is based in Brussels, raised allegations with the United Nations' climate office that some plants were producing more refrigerant than they needed to meet market demand to cash in on credits for HFC-23.

CDM Watch also contended that some plants were failing to improve their processes to avoid unnecessary production of HFC-23.

This month, apparently in response to those allegations, the United Nations stopped issuing further offsets from five chemical plants in China while it investigated their practices and assessed whether the rules needed to be revised.

As part of its inquiry, which is continuing, the United Nations has asked for a decade's worth of data on the gases from the plants in China.

The controversy over offsetting is the latest blow to emissions trading, which has been racked by a spate of problems in Europe including cyberattacks, tax fraud and recycling of used credits.

Even so, the latest brouhaha is not entirely bad news.

The price of international offsets has risen about 12 percent, and the price of E.U. permits has risen by about 9 percent since mid-August because of concerns about future supplies of offsets, according to Emmanuel Fages of Orbeo, a carbon-trading unit in Paris owned by the French bank [Société Générale](#) and the French chemical company Rhodia.

“There is some good, as this gives a more meaningful price to carbon at a time when everyone was complaining it was too low,” Mr. Fages said. “But that benefit is largely outweighed by the bad because, once again, we’ve seen doubts cast over the way that carbon markets are working.”

Some buyers of HFC-23 offsets are concerned that the suspension by the United Nations is creating uncertainty in the market. Others, like the [World Bank](#), responding to allegations by CDM Watch, said projects in which they participated had strictly followed U.N. rules.

The bank — which guarantees funds to buy credits from one of the contested projects on behalf of [Deutsche Bank](#), Tokyo Electric Power and a number of other companies — said there was no indication that offsetting was driving production of excess refrigerants in China, partly because of huge and growing demand for air-conditioning and refrigeration systems.

The bank also said contentions that plants were producing unnecessarily large amounts of HFC-23 had been “refuted by scientific reports.”

CDM Watch had based its analysis “on a narrow and simplistic approach drawing from selected parameters” that excluded operating conditions and technical capacity, according to a fact sheet issued by the bank’s Carbon Finance Unit in early August.

CDM Watch had not offered “sufficient evidence to support the allegations,” the bank said.

The activists remain adamant that the market needs to be investigated and that changes are needed.

“The World Bank’s position is both scientifically and morally indefensible,” said Clare

Perry, a senior campaigner for the Environmental Investigation Agency. “It would be far cheaper and more effective to directly finance the factories to deal with the HFC-23 problem rather than use this kind of byzantine financing.”