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Emissions Trading Faces Daunting Goals

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Putting a lid on carbon dioxide emissions thought to cause global warming is a daunting task. Even though the Kyoto Protocol has yet to take effect, three nations are planning to build 850 new coal plants that would increase such emissions by a factor of five. China, India and the United States may emit 2.7 billion tons of carbon dioxide by 2012—far more than the 483 million tons that the Kyoto Protocol requires of its participating nations.

Those statistics were compiled by the *Christian Science Monitor*, which says that if all those plants come to fruition then there would be an additional 327,000 megawatts of coal-fired generation in 2012. Certainly, all those facilities won't be built and those that are—at least in the United States—will be equipped with modern technologies that limit emissions. Those tools include coal gasification that drain off carbon dioxide (CO₂) before it goes out the smokestack.

Still, the global economic engine is purring and much of the grist necessary to run it will likely remain coal. No doubt it is a dirty fuel source. But, natural gas prices are sky-high and drilling rights remain limited, at least in the United States. Meanwhile, nuclear energy is emissions-free but highly contentious and therefore risky to pursue. Green energy is promising. But, it supplies a fraction of the fuel needed to run generation and it is unlikely to gain significant market share anytime soon.

What to do? Clearly, there's no magic bullet. But certain tools currently exist to curb emissions such as CO₂, including fuel switching, conservation and emissions trading. In fact, the World Bank says that 71 million tons of CO₂ equivalents were traded in 2003.

Emissions trading largely eschews command-and-control regulations and uses instead market-based solutions for critical ecological issues. Despite opposition from some environmental groups, it is winning praise from a wide group that includes business, key Democrats like the Clintonites and some green groups such as the Environmental Defense. As government continues to restrict pollution levels, emissions trading exchanges will sprout up and play a role in environmental policy.

The thinking is that by trading credits, a "price" for emission levels is established that will send the proper investment signals to those who have to decide how they will reduce harmful pollutants. The price of one credit that can be banked or sold is contingent on several factors that include not just the supply and demand of credits but also the technologies that are implemented to reduce pollution.

A "well-structured emissions trading program can assist companies in managing and reducing capital expenditure requirements to comply with legal requirements to reduce harmful emissions, while at the same time not hampering the achievement of environmental goals," says Fitch Ratings in a recent study.

Schemes Vary

According to the Council on Foreign Policy, the eventual size of the CO₂ trading market is \$2.5 trillion to \$3 trillion. At that volume, such a "commodity" could be traded on the New York Stock Exchange and the Chicago Mercantile Exchange.

Under a trading system, a cap is placed on carbon dioxide emissions. Businesses that discharge less can sell, bank or transfer those "credits." Companies that are pushing the limit can either take steps to cut their pollution by implementing new technologies, by switching to a cleaner-burning fuel, or by buying "credits" from another business. As the ceiling on emissions is gradually lowered, pollution levels drop. Countries could buy and sell those credits among each other.

Despite the fact that President Bush does not endorse the Kyoto Protocol, about 40 U.S. companies created a trading market for CO₂ emissions at the Chicago Climate Exchange where 65 companies now participate. They have all agreed to reduce their CO₂ emissions by 1 percent a year from 2000 levels. At present, American Electric Power and TECO Energy are the only utilities to participate. Meanwhile, eight mega-companies that include Dupont, Entergy and Shell, are establishing a trading system among each other and have vowed to cut their CO₂ emissions by 80 million metric tons no later than 2010.

Similarly, the European Union, which supports the Kyoto Protocol, is intent on reducing such emissions by as much as 8 percent below 1990 levels by 2012. Emissions trading is a key to achieving that goal. Each country has written allocation plans under the emissions trading scheme. They outline emission goals for each plant in each country. Trading is to begin this month.

Prices are now about \$1 to \$2 per ton—“unrealistically low due to the uncertainty of the terms of any future U.S. carbon law,” says Fitch. In the case of the Chicago Climate Exchange, the credits are “bankable.” The practical effect of that is that the value of those credits would increase if CO2 were to be regulated here. Right now, the voluntary reductions are relatively easy to meet. Companies can therefore meet such standards while at the same time save their credits for a “rainy day.”

Trading exchanges have functioned well when it comes to other emissions. The United States, for example, has a similar program for sulfur dioxide. Altogether, such emissions were 15.7 million tons in 1990. By 2000 that number had dropped to 11.2 million tons and by 2010 the U.S. Environmental Protection Agency expects it to fall to 8.95 million tons. The recent news out of the World Bank shows that such techniques might also work for CO2 emissions credits.

“While the U.S. is not part of Kyoto, American multinational companies are now wrestling with how to comply with E.U. standards and an emerging U.S. trading regime,” says Peter Fusaro, chairman of Global Change Associates, an energy and environmental consulting firm.

The Kyoto Protocol, which has been approved by more than 160 nations, provides the framework by which all nations will reduce their greenhouse gas emissions. The emissions trading component of that accord is a vehicle countries can use to reach their goals, whether they be voluntary or mandated by a regulatory scheme. As long as targets are ambitious and rigorously monitored, an emissions trading system should have a guaranteed environmental outcome.

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