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**Climate Change:  
Why the U.S. is Still the Leader!**

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The launch of the EU Emissions Trading Scheme on Jan. 1, 2005, and the implementation of the Kyoto Protocol on Feb. 16 have become truly a “wake-up” call to corporate America. Multinational corporations in the United States and Canada and around the world are starting to realize that they have compliance issues at many locations. The consensus that is emerging in the United States is that a climate change regime will be in place in the next two to three years.

Contrary to what many believe in Europe because of the inordinate amount of press attention devoted to the beginning of carbon trading there, the U.S. has active environmental financial markets for carbon dioxide as well as sulfur dioxide and nitrous oxides. Additionally, environmental financial risk is rising as an issue in corporate America as most sanguine companies have internal greenhouse working groups inventorying their corporate carbon footprint. The issues of environmental financial liabilities and the emergence of climate change risk have made companies extremely nervous on proceeding forward in market development with such near term uncertainty and potential impact to their bottom line. Recently, Fitch Ratings on Dec. 7, 2004, issued the first report of a ratings agency on emissions trading as this becomes a corporate financial issue in America as emissions trading is now on the balance sheet. Clarity is starting to come to the issue of climate change in the U.S.

## The Market Experience and Knowledge

The U.S. existing environmental financial markets for sulfur dioxide (SO<sub>2</sub>) and nitrous oxide (NO<sub>x</sub>) are the most developed and most stringent global emissions standards mandated and they are continuing to ratchet downward with the next round of reductions until 2015 with the recently issued rules by the U.S. EPA under the Clean Air Interstate Rules. The U.S. will also have the first mercury emissions trading market and that forebodes well as another market-based trading solution to reduce pollution. Trading mechanisms have been proven to work.

The EU did not invent emissions trading as the apparent collective amnesia of the news media would have you believe! The U.S. began trading emissions for sulfur dioxide in **March 1995** under the tutelage of the U.S. EPA and added NO<sub>x</sub> trading in 1999 as a federal program. Emissions trading was made in America, and proposed by the U.S. delegation at the Rio Climate Convention Treaty in 1992. The U.S. has the most advanced emissions trading markets in the world, trading \$3 billion in notional value SO<sub>2</sub> allowances each year as current prices have touched \$800 per ton. The U.S. has the most advanced nitrous oxide markets in the world as well with allowances trading at up to \$40,000 per ton last summer in the Houston/Galveston area, which is required to reduce its NO<sub>x</sub> levels by 80 percent by 2008. Additionally, the California RECLAIM market for southern California air quality has active SO<sub>2</sub> and NO<sub>x</sub> markets. These market-based solutions are now being embraced by several green hedge funds trading SO<sub>2</sub>, NO<sub>x</sub>, carbon and renewable energy credits as well as emitters. After all, emissions trading is also about speculation.

The long-term impact of these market-based solutions has been to reduce pollution in a cost-effective manner and accelerate the introduction of more environmentally benign technologies. It has also given industry time to implement new, cleaner technology and fuel sources with minimal economic disruption to the capital intensive energy industry, as well as other industrial sources of pollution, and in the agricultural industry. The markets have actually created concrete and measurable emissions reductions for American business. This is what is beginning to occur now for carbon dioxide on a global level, but also in the U.S., although the news media turns a blind eye to it.

Emissions trading markets are not true commodity markets as they are “cap and trade,” which means that emissions are ratcheted down over time. For the U.S. SO<sub>2</sub> markets, it is a 35-year regime of reductions and more stringent standards until the year 2030. For CO<sub>2</sub> and other greenhouse gas reductions, we will need a 100-year program that engages the entire world and sets quantifiable long-term benchmarks to reduce GHG emissions not the **four year Kyoto accord**.

Kyoto implementation began on Feb. 16, 2005, and is a modest first step to global emissions reductions, but the larger question is will there be significant carbon dioxide reductions in the next two decades to meet carbon stabilization in the atmosphere? The reality is that the entire world is in this together for the long haul. This is no quick technological fix as long as the world is addicted to fossil fuels whose consumption is still rising. That habit is not going to change as evidenced in the past year with record oil, coal and natural gas consumption despite significantly higher prices. The solution is that

we need a climate change regime that will aggressively reduce global carbon intensity, including both stationary and mobile sources, accelerate technology transfer, and increase energy efficiency. The United States will lead in this effort.

Already, commodity CO<sub>2</sub> is used for enhanced oil recovery in Texas and Wyoming and is now married to carbon sequestration efforts in those states. Using naturally depleted geologic formations to store CO<sub>2</sub> emissions is being pushed forward by the oil industry and the U.S. Department of Energy. Again, the United States is leading in these green efforts.

Turning to mobile sources of pollution, hybrid gasoline/electric vehicles that reduce both CO<sub>2</sub> tailpipe emissions and increase fuel economy are now being embraced by the U.S. public as well as in other nations. Tailpipe emissions will be regulated in 2009 in California and subsequently adopted in New York and other states, despite legal challenges of the automobile industries. Once again the first standards in the world! And we now also have many energy efficiency devices that reduce building loads from both commercial and residential buildings. Building energy consumption contributes to greenhouse gas emissions.

### **It's Time for Federal Action**

What has been lacking in America is the mandate of the federal government. That is now beginning to change. Federal government mandated standards are needed to create fungible commodity markets so that the rules bring a realistic financial value to emissions reductions, i.e. not \$2 per ton as shown on the Chicago Climate Exchange. The point is that both the SO<sub>2</sub> and NO<sub>x</sub> programs are mandated and have financial penalties for noncompliance. The low carbon prices of today reflect the market valuation of “voluntary” standards. Companies would rather sit on their carbon inventories today as prices will surely appreciate tomorrow.

Another driver behind the GHG market is that we now have institutional shareholders forcing corporations to acknowledge the environmental risk on their books. This has been done by pension funds mostly and is similar to the strategy that was taken in tobacco litigation, which was quite effective. There are also several litigation efforts to get the U.S. federal government to change its present oppositional position.

Nevertheless, global environmental markets are beginning, with GHG trades valued at about \$2 billion in notional value so far. We have seen already 15 million tons traded since the inception of the EU ETS on Jan. 1, 2005, through mid-February. The European program is a company-to-company cap and trade program, and the tradable unit is EU allowances. We have seen more than 2.5 million tons traded on the Chicago Climate Exchange with more than 60 companies participating, and carbon trading at about \$2 per ton. However, many larger trades, including a 1 million ton trade done by electric utility Entergy in December 2004, have been traded on the OTC markets. And we have seen the emergence of several green hedge funds that will actually trade carbon and renewable energy credits speculatively.

## **The Banks Step In**

Besides the usual suspects such as electric utilities, oil companies and automakers, financial houses will be needed as market makers to make these environmental financial markets work more effectively. Today, Morgan Stanley is the largest SO<sub>2</sub> emissions trader in North America, and now Goldman Sachs has a 4,000 MW portfolio of renewable energy projects with its recent purchase of Zilkha Energy. Wall Street can ramp up for emissions trading very fast with the talent and the balance sheet to make markets. In London, Barclays Capital, Calyon Financial, Rabobank and others are making a concerted effort to make carbon markets in Europe. We are witnessing a market transformation similar to oil market developments in the late 1970s, i.e. opaque price discovery and little liquidity. But the good news is that this time it is happening all over the world at the same time. We are now positioned for the beginning of a liquid spot market instead of the one-off trades that have occurred to the present time. On April 22, the European Climate Exchange, sister of the Chicago Climate Exchange, launches.

## **Where We Are Going in the U.S.**

Today, 28 state greenhouse gas programs are in place or taking shape. We see shareholder pressure. We see U.S. multinational companies worried about dual environmental standards in the U.S. and the rest of the world. The federal government will now have to act, and it will move faster than imagined as it must be re-emphasized that the EU and, for that matter Japan, are just starting out on the learning curve of environmental financial markets. The U.S. is now into its eleventh year contrary to the uninformed public perception perpetrated by an indolent news media that nothing is being done. The fact is that more stringent standards are being implemented for SO<sub>2</sub> and NO<sub>x</sub>. It is only a matter of time until the carbon regime takes place and that will be sooner rather than later.

Already U.S. utilities are moving forward since they are most severely impacted but the economic pain will be shared and is not as disruptive as claimed. Every American wants clean air and clean water. A small price for human health is not much of a sacrifice for a country that gobbles up 20 million barrels per day of oil and has more than 900,000 MW of peak generation capacity. The surprise to many will be that, as the emissions markets continue to roll forward, many companies will bite the bullet and make the plant investment in new, cleaner technologies that are also more energy efficient. That means that less coal will be used to make the same MWhs, and it will include gasified coal. Just like the hybrids that use less fuel and reduce emissions, so will new power generation equipment. It will boost investment in an underinvested sector and create jobs.

The U.S. is still well positioned to lead on environmental financial market development with its entrepreneurial culture, risk capital and knowledge base in trading. Don't be too surprised as it assumes its leadership role again. This may be the best thing that happened to America as new jobs are created in emissions trading, clean technology and energy efficiency. At today's high prices, it's now or never.

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Global Change recently released the latest and most comprehensive report available titled *GreenTrading™ Markets: How Environmental Financial Markets Work* by Peter C. Fusaro, Cindy Wilson & Gary M. Vasey, Ph.D. It is available for purchase at [www.energymediagroup.com](http://www.energymediagroup.com)

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